بورصة عمان
Amman Stock Exchange

2022 / 105 / 854

2022 / 6 / 30

1 / ذو الحجة / 1443

تعميـــم

رقم (79)

السادة أعضاء شركة بورصة عمان المحترمين

تحية طيبة وبعد،

لاحقاً لتعميم شركة بورصة عمان رقم (4) تاريخ 2022/1/6، بخصوص تمديد مهلة توفيق الأوضاع لشركات الوساطة الأعضاء والتي تنتهي بتاريخ 2022/6/30.

أرجو إعلامكم بأنه استناداً إلى أحكام المادة (24) من نظام العضوية في شركة بورصة عمان لسنة 2018، فقد قرر مجلس إدارة البورصة الموافقة على التمديد الأخير للمهلة الممنوحة لشركات الوساطة لتحقيق متطلبات العضوية والمتطلبات الواردة في وثيقة المتطلبات الإدارية والفنية الواجب توفرها حتى تاريخ 2022/12/31. كما قرر المجلس الموافقة على أسس فرض الغرامات في شركة بورصة عمان، والدليل الاسترشادي للمخالفات والعقوبات لشركات الوساطة الأعضاء في شركة بورصة عمان، وذلك استناداً إلى أحكام المادة (12/ج) من تعليمات التحقيق والتدقيق والتفتيش في شركة بورصة عمان لسنة 2018.

علماً بأنه سيتم تطبيق أحكام أسس فرض الغرامات المالية على الشركات المخالفة ابتداءً من تاريخ 2023/1/1. راجياً من جميع أعضاء البورصة تصويب أوضاعهم وفقاً لنظام العضوية في شركة بورصة عمان لسنة 2018، ووثيقة المتطلبات الادارية والفنية الواجب توفرها لدى أعضاء البورصة.

وتفضلوا بقبول فائق الاحترام،،،

مازن نجيب الوظائفي

المديـــر التنفيـــذي

*مرفق:- أسس فرض الغرامات في شركة بورصة عمان.
- الدليل الاسترشادي للمخالفات والعقوبات لشركات الوساطة الأعضاء في شركة بورصة عمان.
- وثيقة المتطلبات الادارية والفنية وملحقاتها.

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2022

أسس فرض الغرامات في شركة بورصة عمان

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صادرة بالاستناد لأحكام المادة (12/ج)

من تعليمات التحقيق والتدقيق

والتفتيش في شركة بورصة عمان، والمقرّة

بموجب قرار مجلس الإدارة رقم

(2022/38) تاريخ (2022/6/16)

أسس فرض الغرامات في شركة بورصة عمان

صادرة استناداً لأحكام المادة (12/ج) من تعليمات التحقيق والتدقيق والتفتيش في شركة بورصة عمان لسنة 2018، والمقرة من قبل مجلس الإدارة بموجب قراره رقم (2022/38) تاريخ 2022/6/16

المادة (1):

تسمى هذه الأسس **"أسس فرض الغرامات في شركة بورصة عمان"** ويعمل بها من تاريخ 2023/1/1.

المادة (2):

يكون للكلمات والعبارات الواردة في هذه الأسس المعاني المخصصة لها في التشريعات الصادرة عن البورصة.

المادة (3):

تسري أحكام هذه الأسس على الجهات التالية:

أ- أعضاء البورصة.

ب- مصدري الأوراق المالية المدرجة في البورصة.

المادة (4):

يراعى عند فرض الغرامة على أي من الجهات الخاضعة لأحكام هذه الأسس, ما يلي:

أ- طبيعة المخالفة المرتكبة ودرجة جسامتها وتكرارها.

ب- أن لا تقل عن 50 ديناراً ، ولا تتجاوز 25 ألف ديناراً.

المادة (5):

يجوز للجهات الخاضعة لأحكام هذه الأسس الاعتراض على عقوبة الغرامة المفروضة عليها, وذلك وفقاً لأحكام تعليمات التحقيق والتدقيق والتفتيش في شركة بورصة عمان النافذة.

المادة (6):

تلتزم الجهات الخاضعة لأحكام هذه الأسس بتسديد الغرامات المفروضة عليها, وذلك خلال 20 يوم عمل من تاريخ فرض الغرامة أو تاريخ البت في الاعتراض إن وجد.

المادة (7):

أ- تتخذ البورصة الاجراءات القانونية اللازمة تجاه الجهات الخاضعة لأحكام هذه الأسس في حال عدم التزامها بتسديد الغرامات المفروضة عليها.

ب- لمجلس الإدارة في الحالات المبررة، قبول التسويات من الجهات الخاضعة أو إعفاءها من دفع الغرامات أو أي جزء منها.

المادة (8):

يتخذ المدير التنفيذي جميع القرارات اللازمة لتنفيذ أحكام هذه الأسس ما لم يرد نص بخلاف ذلك.

المادة (9):

يتخذ مجلس الإدارة القرارات اللازمة لمعالجة الحالات غير المنصوص عليها في هذه الأسس.

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المقر بموجب قرار مجلس الإدارة رقم

(2022/38) تاريخ (2022/6/16)

الدليل الاسترشادي للمخالفات والعقوبات لشركات الوساطة الأعضاء في بورصة عمان*

الرقم	المخالفة	عقوبة المخالفة الأولى	عقوبة المخالفة الثانية فأكثر	ملاحظات
		نظام العضوية		
1	عدم تعيين مدير عام أو مدير مالي أو معتمدين متفرغين.	1. اشعار الوسيط بالمخالفة وطلب تصويبها خلال مدة شهرين. 2. غرامة مقدارها 50 دينار لكل يوم عمل وطلب تصويب المخالفة خلال مدة شهرين وإعلام البورصة خطياً بذلك. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. اشعار الوسيط بالمخالفة وطلب تصويبها خلال مدة شهرين. 2. غرامة مقدارها 50 دينار لكل يوم عمل وطلب تصويب المخالفة خلال مدة شهرين، وإعلام البورصة بذلك. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	

* أقر هذا الدليل من قبل مجلس إدارة بورصة عمان بموجب قراره رقم (2022/38) تاريخ 2022/6/16، ويبدأ العمل به اعتباراً من تاريخ 2023/1/1.

2	عدم وجود مقر لدى الوسيط لممارسة أعماله يكون مستوفياً للشروط التي تحددها البورصة.	إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	
3	استخدام برنامج التداول الخاص بالبورصة من قبل أشخاص غير الوسطاء المعتمدين.	1. التنبيه، وطلب تصويب المخالفة فوراً. 2. غرامة مقدارها 250 دينار، وطلب تصويب المخالفة فوراً.	غرامة مقدارها 500 دينار، وطلب تصويب المخالفة فوراً.	
4	عدم تنظيم الوسيط أعماله بشكل مسؤول وعدم توفير الموارد البشرية والفنية والمالية الكافية لتنفيذ أعماله بما يتفق مع التشريعات الصادرة عن البورصة.	1. إنذار، وطلب تصويب المخالفة خلال مدة ثلاثة شهور. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	1. إنذار وغرامة مقدارها 5,000 دينار، وطلب تصويب المخالفة خلال مدة شهرين 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
5	عدم قيام الوسيط بوضع إجراءات عمل خطية ملائمة لممارسة أعماله و/أو	1. تنبيه، وطلب تصويب المخالفة خلال مدة شهر.	1. غرامة مقدارها 2,500 دينار، وطلب تصويب المخالفة خلال مدة شهر.	

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	إجراءات خطية تضمن توفير بيئة رقابية داخلية ملائمة.	2. إنذار، وطلب تصويب المخالفة خلال مدة شهر 3. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال شهر 4. إيقاف عن العمل لمدة خمسة أيام عمل	2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	
6	عدم تصرف الأشخاص المرتبطين بالوسيط وفق الصلاحيات المنوطة بكل منهم، وعدم معرفة الوسيط بالعمليات المنفذة لصالح الأشخاص المرتبطين به وأقاربهم.	1. تنبيه، وطلب تصويب المخالفة خلال مدة شهر. 2. إنذار، وطلب تصويب المخالفة خلال مدة شهر. 3. غرامة مقدارها 2,500 دينار، وطلب تصويب المخالفة خلال مدة شهر 4. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	1. إنذار، وطلب تصويب المخالفة خلال مدة شهر. 2. غرامة مقدارها 5,000 دينار وطلب تصويب المخالفة خلال مدة شهر. 3. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل	مخالفات جوهرية يجب العودة مرة أخرى للتفتيش عليه خلال السنة.

7	قيام الوسيط بالتصرف بحسابات عملائه والتداول بالأوراق المالية الخاصة بهم خلافاً لأحكام التشريعات الصادرة عن البورصة وأحكام الاتفاقية المبرمة معه.	1. إنذار وغرامة بقيمة تتراوح ما بين 5,000- 25,000 دينار، وطلب تصويب المخالفة خلال مدة خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار وغرامة مقدارها 25,000 دينار وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	يتم التصويب وفقاً للآلية التي سيتم الاتفاق عليها بين الوسيط والعميل على أن يتم إعلام البورصة خطياً.
8	قيام الوسيط باستخدام الأوراق المالية المودعة لديه في الحفظ الأمين أو بأسماء العملاء لتحقيق مصلحة خاصة.	1. إنذار وغرامة بقيمة تتراوح ما بين 5,000- 25,000 دينار، وطلب تصويب المخالفة خلال مدة خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار وغرامة مقدارها 25,000 دينار وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	يتم التصويب وفقاً للآلية التي سيتم الاتفاق عليها بين الوسيط والعميل على أن يتم إعلام البورصة خطياً.

9	استخدام أموال العميل لتنفيذ عمليات التداول لصالح العضو أو لصالح الغير.	1. إنذار وغرامة بقيمة تتراوح ما بين 5,000- 25,000 دينار، وطلب تصويب المخالفة خلال مدة خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار وغرامة مقدارها 25,000 دينار وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	يتم التصويب وفقاً للآلية التي سيتم الاتفاق عليها بين الوسيط والعميل على أن يتم إعلام البورصة خطياً.
10	قيام الوسيط بتحريك محافظ العملاء لمجرد الحصول على عمولات التداول فقط.	1. تنبيه، وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إنذار، وطلب تصويب المخالفة خلال خمسة أيام عمل. 3. غرامة مقدارها ضعف مبلغ العمولة التي يحصلها الوسيط نتيجة تحريك محافظ العملاء وبحد أدنى 100 دينار وطلب تصويب المخالفة خمسة أيام عمل.	1. غرامة مقدارها ضعف مبلغ العمولة التي يحصلها الوسيط نتيجة تحريك محافظ العملاء وبحد أدنى 100 دينار، وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إيقاف العضو عن العمل لحين تصويب المخالفة ودفع الغرامات.	يقصد بالتصويب هنا إعادة العمولة على العميل، وعدم تكرار هذا السلوك، وتزويد البورصة بما يفيد ذلك.

		4. إيقاف العضو عن العمل لحين تصويب المخالفة ودفع الغرامات.		
11	عدم قيام الوسيط المرخص لمزاولة أعمال مدير الاستثمار بالتداول لصالح عملائه وفقاً لاتفاقية إدارة الاستثمار المبرمة بينهما.	1. إنذار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 2. غرامة مقدارها 2,500 دينار، وطلب تصويب المخالفة خلال خمسة أيام عمل. 3. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. غرامة مقدارها 5,000 دينار وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. إيقاف عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
12	عدم قيام الوسيط المرخص لمزاولة أعمال مدير الاستثمار بإرسال كشف للعميل بالعمليات المنفذة على حسابه وأرصدته من الأوراق المالية مرة واحدة على الأقل	1. تنبيه، وطلب تصويب المخالفة خلال خمسة أيام عمل. 2. غرامة مقدارها من 100-500 دينار، وطلب تصويب المخالفة خلال خمسة أيام عمل.	3. انذار، وطلب تصويب المخالفة خلال خمسة أيام عمل. 4. غرامة مقدارها من 100-1,000 دينار، وطلب وتصويب المخالفة خلال خمسة أيام عمل.	

	كل شهر ما لم تنص الاتفاقية المبرمة بينهما على مدة أقل.			
13	قيام الوسيط بتنفيذ أي عملية لصالحه او لصالح عملائه الذين يدير استثماراتهم على ورقة مالية معينة قد شرع ذلك الوسيط في إعداد استشارة مالية لتلك الورقة المالية قبل نشر الاستشارة المالية للجمهور و/أو قبل مرور يوم عمل كامل على نشر تلك الاستشارة	غرامة مقدارها ضعف الربح المتحقق أو الخسارة المتجنبة من العملية وبحد أدنى 1,000 دينار.	غرامة مقدارها ضعف الربح المتحقق أو الخسارة المتجنبة من العملية وبحد أدنى 2,000 دينار.	
14	عدم احتفاظ الوسيط بالسجلات والوثائق المنصوص عليها في التشريعات المعمول بها، بما في ذلك السجلات والوثائق	إنذار، وطلب تصويب المخالفة فوراً.	غرامة من 1,000- 25,000 دينار، وطلب تصويب المخالفة فوراً.	

	الخاصة بالتعاملات التي ينفذها في البورصة.			
15	عدم تمكين فريق تفتيش البورصة بإجراء التفتيش في مقر عمل الوسيط أو في أي مكان خاص بعمله.	1. إنذار، وطلب تصويب المخالفة خلال يوم عمل واحد. 2. إيقاف العضو عن العمل لحين الانتهاء من عمليات التفتيش وصدور قرار عن البورصة بإعادته إلى العمل.	1. إيقاف العضو عن العمل لحين الانتهاء من عمليات التفتيش وصدور قرار عن البورصة بإعادته إلى العمل.	
16	عدم تزويد البورصة بالمعلومات والوثائق والسجلات والتقارير التي تطلبها ضمن المدة المحددة.	1. إنذار، وطلب تصويب المخالفة خلال يومي عمل. 2. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال يومي عمل. 3. إيقاف العضو عن العمل لحين تزويد البورصة بالمعلومات والوثائق المطلوبة وصدور قرار عن البورصة بإعادته إلى العمل	1. غرامة مقدارها 5,000 دينار وطلب تصويب المخالفة خلال يومي عمل. 2. إيقاف العضو عن العمل لحين تزويد البورصة بالمعلومات والوثائق المطلوبة وصدور قرار عن البورصة بإعادته إلى العمل	

17	تزويد البورصة بمعلومات ووثائق غير صحيحة.	1. غرامة من 100 -10,000 دينار، وطلب تصويب المخالفة خلال يوم عمل واحد. 2. إيقاف العضو عن العمل، لحين صدور قرار عن البورصة بإعادته إلى العمل.	1. غرامة من 1,000- 25,000 دينار، وطلب تصويب المخالفة خلال يوم عمل واحد. 2. إيقاف العضو عن العمل، لحين صدور قرار عن البورصة بإعادته إلى العمل.	يقوم فريق التفتيش مباشرة بعد اكتشاف المخالفة بالتفتيش بشكل تفصيلي على الوسيط المخالف، وللبورصة الاستعانة بأي جهة خارجية للتحقق من صحة معلومات ووثائق الوسيط، وتقديم تقرير أصولي بذلك
18	تقاضي الوسيط عمولات تتجاوز الحدود المقررة بموجب التشريعات المعمول بها.	غرامة بحد أدنى 1,000 دينار، وطلب تصويب المخالفة فوراً.	غرامة بحد أدنى 2,000 دينار، وطلب تصويب المخالفة فوراً.	
19	عدم استيفاء الحد الأدنى من عمولة التداول المقررة بموجب التشريعات الخاصة بالبورصة لقاء تنفيذ عمليات بيع الأوراق المالية التي تتم	1. إشعار الوسيط بالمخالفة وطلب تصويبها خلال يوم عمل واحد.	1. إشعار الوسيط بالمخالفة وطلب تصويبها خلال يوم عمل واحد.	

	بأمر من المحاكم أو الجهات الرسمية المختصة.	2. غرامة بحد أدنى 100 دينار، وطلب تصويب المخالفة خلال ثلاثة أيام عمل .	2. غرامة بحد أدنى 100 دينار، وطلب تصويب المخالفة خلال يوم عمل واحد.	
20	افشاء الوسيط الأسرار الخاصة بعملائه، وعدم الحصول على تعهد مكتوب من الشركات المزودة لأنظمة المعلومات التي يستخدمها بما يضمن سرية المعلومات التي تتطلع عليها تلك الشركات.	إنذار، وطلب تصويب المخالفة خلال خمسة أيام عمل.	غرامة بحد أدنى 1000 دينار، وطلب تصويب المخالفة خلال خمسة أيام عمل.	
21	قيام الوسيط بالمساس بسمعة البورصة أوالانتقاص منها أو بسمعة أي عضو آخر.	إنذار، وطلب تصويب المخالفة فوراً.	غرامة بحد أدنى 1000 دينار، وطلب تصويب المخالفة فوراً.	

22	قيام الوسيط والأشخاص المرتبطين به بتلقي هدايا أو هبات أو منح من شأنها التأثير على التزامات المانح أو المتلقي .	إنذار، وطلب تصويب المخالفة فورا.	غرامة بحد أدنى 500 دينار، وطلب تصويب المخالفة فوراً.	
23	القيام بأي عمليات لا تتفق مع الممارسات السليمة في البورصة أو التي لا تتفق مع أسس السوق العادل والشفاف, أو القيام بأي عمليات لا تتماشى مع أحكام التشريعات الصادرة عن البورصة.	من تنبيه إلى إيقاف العضو عن العمل، وطلب تصويب المخالفة خلال المدة التي تحددها البورصة.	من تنبيه إلى إيقاف العضو عن العمل، وطلب تصويب المخالفة خلال المدة التي تحددها البورصة.	
24	عدم التقيد بتنفيذ عمليات بيع الأوراق المالية التي تتم بأمر من المحاكم أو الجهات الرسمية المختصة.	1. انذار، وطلب تصويب المخالفة خلال يوم عمل واحد. 2. غرامة مقدارها 1,000 دينار.	غرامة مقدارها 2,000 دينار.	يتم فرض العقوبة والانتقال إلى الوسيط الذي يليه في الدور لتنفيذ العملية.

25	الاتفاق على سعر يخالف ما ورد في عقد التداول.	غرامة مقدارها ضعفي الفرق في السعر وبحد أدنى 5,000 دينار.	غرامة مقدارها ضعفي الفرق في السعر وبحد أدنى 10,000 دينار، و وقف العضو عن العمل لمدة ثلاثة أيام عمل.	
26	عدم تسديد الرسوم والعمولات والبدلات المترتبة على العضو ضمن الأوقات المحددة في التشريعات المعمول بها.	1. التنبيه، وطلب تصويب المخالفة خلال شهر. 2. غرامة مقدارها 250 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل . 3. إيقاف العضو عن العمل لحين دفع المبالغ المترتبة عليه وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار، وطلب تصويب المخالفة خلال شهر. 2. غرامة مقدارها 250 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين دفع المبالغ المترتبة عليه وصدور قرار عن البورصة بإعادته إلى العمل.	
27	عدم اتخاذ الإجراءات التي تضمن تحقيق مصلحة العميل في حال وجود تضارب في المصالح، على سبيل المثال عدم ابلاغ العميل إذا كان العضو أو أي من الأشخاص	انذار، وطلب تصويب المخالفة فوراً.	غرامة مقدارها 1,000- 5,000 دينار، وطلب تصويب المخالفة فوراً	

	المرتبطين به و/أو ممثلي الأشخاص الاعتباريين في مجلس إدارته طرفاً في العملية المنفذة لصالح العميل.			
28	عدم تزويد البورصة بالتقرير السنوي خلال المدة المحددة في نظام العضوية .	1. إنذار، وطلب تصويب المخالفة خلال مدة شهر. 2. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال مدة شهر. 2. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
29	عدم تزويد البورصة بالتقرير نصف السنوي خلال المدة المحددة في نظام العضوية.	1. إنذار، وطلب تصويب المخالفة خلال شهر. 2. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال شهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار	1. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال شهر. 2. غرامة مقدارها 2,000 دينار، وطلب تصويب المخالفة خلال شهر.	

		عن البورصة بإعادته إلى العمل.	3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
30	عدم إعلام البورصة بالأمور المنصوص عليها في المادة (20/ب) من نظام العضوية فور حدوثها. وهي: 1. التغييرات التي تتم على شروط الانتساب لعضوية البورصة والبيانات التي تضمنها طلب الانتساب. 2. أي وقائع أو ظروف أو تغييرات يكون من شأنها التأثير في الشكل أو التنظيم القانوني للعضو أو أنشطة التداول الخاصة به في البورصة.	من تنبيه إلى إيقاف العضو عن العمل وطلب تصويب المخالفة خلال المدة التي تحددها البورصة.	من إنذار إلى إيقاف العضو عن العمل وطلب تصويب المخالفة خلال المدة التي تحددها البورصة.	

	3. ظهور بوادر تعثر أو تصفية أعمال. 4. تعيين أو انتهاء عمل أي من موظفي العضو ممن لهم علاقة بالنشاط المتعلق بالأوراق المالية. 5. انتخاب أعضاء مجلس إدارة أو هيئة مديرين أو أي تغيير يطرأ عليهم. 6. أي قرارات تتعلق بزيادة رأس ماله أو تخفيضه أو تصفيته أو إفلاسه. 7. أي دعاوى مرفوعة عليه وأي حادث أو واقعة تؤدي إلى تأثير جوهري على وضعه المالي.			

تعليمات التداول في شركة بورصة عمان			
1	عدم إبرام الوسيط اتفاقية للتعامل بالأوراق المالية مع عملائه.	1. تنبيه، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة مقدارها 2,000 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
2	عدم تضمين الوسيط في اتفاقياته مع عملائه للمعلومات والشروط التي تتطلبها التشريعات الصادرة عن البورصة	1. تنبيه، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة	1. إنذار، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة مقدارها 2,000 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة	

		وصدور قرار عن البورصة بإعادته إلى العمل.	وصدور قرار عن البورصة بإعادته إلى العمل.	
3	عدم حصول الوسيط على تفاويض خطية أو صوتية أو إلكترونية من عملائه تخوله التصرف بالأوراق المالية نيابة عنهم.	غرامة مقدارها 100- 5,000 دينار، وطلب تصويب المخالفة فوراً.	غرامة مقدارها 500- 10,000 دينار، وطلب تصويب المخالفة فوراً.	يعتمد على عدد العملاء الذين لم يحصل على تفاويض منهم. ووجود أو عدم وجود أدلة أو معززات تشير إلى علم العميل بالعمليات المنفذة.
4	عدم تضمين الوسيط في تفاويض البيع والشراء المعلومات والشروط التي تتطلبها التشريعات الصادرة عن البورصة.	تنبيه، وطلب تصويب المخالفة فوراً.	غرامة من 100- 1,000دينار، وطلب تصويب المخالفة فوراً.	
5	عدم التحقق من صحة التفاويض الواردة للوسيط وفقاً لاجراءات عمله الداخلية.	تنبيه، وطلب تصويب المخالفة فوراً.	إنذار، وطلب تصويب المخالفة فوراً.	

6	عدم مراعاة تسلسل استلام التفاويض عند إدخالها إلى نظام التداول.	تنبيه، وطلب تصويب المخالفة فوراً.	غرامة من 1,000- 5,000 دينار، وطلب تصويب المخالفة فوراً.	
7	عدم إبلاغ الوسيط أوامر البيع والشراء المنفذة لصالح العميل فور تنفيذها أو حسب الاتفاقية المبرمة بينهما.	تنبيه، وطلب تصويب المخالفة فوراً.	إنذار، وطلب تصويب المخالفة فوراً.	
8	عدم إبلاغ الوسيط أوامر البيع والشراء غير المنفذة لصالح العميل فور انتهاء مدة سريان التفاويض المقدمة من العميل.	تنبيه، وطلب تصويب المخالفة فوراً.	إنذار، وطلب تصويب المخالفة فوراً.	
9	عدم التزام الوسيط بمتطلبات وشروط تقديم خدمة التداول عبر الانترنت بصورة مستمرة.	1. تنبيه، وطلب تصويب المخالفة خلال مدة شهر. 2. غرامة حدها الأدنى 500 دينار، وطلب تصويب المخالفة خلال مدة شهر.	1. إنذار، وطلب تصويب المخالفة خلال مدة شهر. 2. غرامة حدها الأدنى 500 دينار، وطلب تصويب المخالفة خلال مدة شهر.	

		3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	
10	عدم استمرار الوسيط الحاصل على موافقة البورصة على تقديم خدمة التداول عبر الانترنت بنشر بيان إفصاح المخاطر .	1. تنبيه، وطلب تصويب المخالفة خلال مدة 5 أيام عمل. 2. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	1. إنذار، وطلب تصويب المخالفة خلال مدة 5 أيام عمل. 2. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	
11	عدم قيام الوسيط بإعلام البورصة بالأعمال المحظورة التي يرتكبها عملاؤه مستخدمو خدمة التداول عبر الإنترنت خلافاً لأحكام القانون والانظمة والتعليمات والقرارات الصادرة بمقتضاه.	تنبيه، وطلب تصويب المخالفة فوراً.	إنذار، وطلب تصويب المخالفة فوراً.	

12	عدم التزام العضو ببدل تقديم خدمة التداول عبر الإنترنت المتفق عليه بموجب الاتفاقية الموقعة مع العميل.	1. تنبيه، وطلب تصويب المخالفة خلال مدة شهر. 2. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	1. غرامة مقدارها 500 دينار، وطلب تصويب المخالفة خلال مدة شهر. 2. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	
13	عدم التزام الوسيط بالشروط الدنيا التي يجب توفرها في العميل والمحددة بموجب اتفاقية التداول عبر الإنترنت.	تنبيه، وطلب تصويب المخالفة خلال مدة شهر.	إنذار، وطلب تصويب المخالفة خلال مدة شهر.	
14	عدم توريد البدلات المستحقة للبورصة لقاء المعلومات المقدمة لعملائه مستخدمي خدمة التداول عبر الإنترنت (وفقاً لاتفاقية نشر المعلومات الموقعة معه).	1. تنبيه، وطلب تسديد البدلات خلال مدة عشرة أيام عمل. 2. غرامة تتراوح من 500- 1,000 دينار، وطلب تسديد البدلات خلال مدة عشرة أيام عمل.	1. إنذار، وطلب تسديد البدلات خلال عشرة أيام عمل. 2. غرامة من 500- 1,000 دينار، وطلب تسديد البدلات خلال عشرة أيام عمل.	

		3. إيقاف الخدمة لحين دفع المبالغ المترتبة عليه وصدور قرار عن البورصة بإعادتها.	3. إيقاف الخدمة لحين دفع المبالغ المترتبة عليه وصدور قرار عن البورصة بإعادتها.	
15	تخفيض عدد مستخدمي خدمة التداول عبر الإنترنت في التقرير الشهري الذي يرسله إلى البورصة (وفقاً لاتفاقية نشر المعلومات الموقعة معه).	1. تنبيه، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة من 500- 1,000 دينار، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها	1. إنذار، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 2. غرامة من 500- 1,000 دينار، وطلب تصويب المخالفة خلال مدة عشرة أيام عمل. 3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها	
16	قيام الوسيط بإيقاف خدمة التداول عبر الإنترنت عن عملائه دون إعلام البورصة مسبقاً بذلك.	تنبيه، وطلب تصويب المخالفة فوراً.	إنذار، وطلب تصويب المخالفة فوراً.	
17	تعديل أو إلغاء أوامر العملاء المدخلة من خلال شاشات	1. تنبيه، وطلب تصويب المخالفة خلال شهر.	1. إنذار، وطلب تصويب المخالفة خلال شهر.	يتم تصويب المخالفة وفقاً للآلية التي يتم

بورصة عمان
Amman Stock Exchange

	البورصة أو نظام إدارة الأوامر أو من خلال خدمة التداول عبر الإنترنت دون طلبهم أو الحصول على موافقتهم على ذلك.	2. غرامة حدها الأدنى 1,000 دينار، وطلب تصويب المخالفة خلال مدة شهر. 3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها	2. غرامة حدها الأدنى 2,000 دينار، وطلب تصويب المخالفة خلال مدة شهر. 3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها	الاتفاق عليها بين الوسيط وعميله وإعلام البورصة خطياً بذلك.
18	إجراء أي تعديلات على برنامج التداول عبر الإنترنت دون الحصول على موافقة البورصة المسبقة.	1. إنذار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 2. غرامة مقدارها 100 دينار عن كل يوم عمل يتأخر فيه العضو عن تقديم طلب لتصويب المخالفة. 3. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	1. غرامة مقدارها 100 دينار عن كل يوم عمل يتأخر فيه العضو عن تقديم طلب لتصويب المخالفة. 2. إيقاف الخدمة لحين تصويب المخالفة وصدور قرار عن البورصة بإعادتها.	التصويب: تقديم طلب للحصول على موافقة البورصة

أسس تقديم معلومات التداول الفورية			
1	عدم قيام العضو بدفع البدلات المالية المستحقة عليه في المواعيد المحددة لذلك.	1. تنبيه، وطلب تصويب المخالفة خلال عشرة أيام عمل. 2. غرامة مقدارها 500 دينار، وطلب تصويب خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. إنذار، وطلب تصويب المخالفة خلال عشر أيام عمل. 2. غرامة مقدارها 1,000 دينار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
2	تعديل أو استبدال نظام إدارة الأوامر دون الحصول على الموافقة الخطية المسبقة من البورصة.	1. إنذار، وطلب تصويب المخالفة خلال عشرة أيام عمل. 2. غرامة مقدارها 100 دينار عن كل يوم عمل يتأخر فيه العضو عن تقديم طلب لتصويب المخالفة.	1. غرامة مقدارها 100 دينار عن كل يوم عمل يتأخر فيه العضو عن تصويب المخالفة. 2. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	تصويب المخالفة: تقديم العضو طلب الموافقة.

		3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.		
3	استخدام الوسيط لشاشات التداول الخاصة بالبورصة دون وجود طارئ يستدعي ذلك.	1. تنبيه، وطلب تصويب المخالفة فوراً. 2. غرامة مقدارها من 100-1,000 دينار.	1. إنذار، وطلب تصويب المخالفة فوراً. 2. غرامة مقدارها من 500-5,000 دينار.	وذلك اعتباراً من التاريخ الذي يصبح فيه استخدام نظام ادارة الاوامر (OMS) إجبارياً.
4	تفعيل عدد مستخدمين على نظام إدارة الأوامر يزيد على ستة شاشات (محدد في الأسس) دون إعلام البورصة ودفع البدلات المستحقة.	1. تنبيه، وتصويب المخالفة خلال عشرة أيام عمل. 2. غرامة مقدارها 50 دينار عن كل أسبوع يتأخر فيه العضو عن تصويب المخالفة.	1. إنذار، وطلب تصويب المخالفة عشرة أيام عمل. 2. غرامة مقدارها 100 دينار عن كل أسبوع يتأخر فيه العضو عن تصويب المخالفة.	

وثيقة المتطلبات الإدارية والفنية				
1	المتطلبات الفنية/ عدم الالتزام بالمدد الزمنية لتحقيق المتطلبات ذات الأولوية رقم (1) .	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 500- 5,000 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 500- 5,000 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
2	المتطلبات الفنية/ عدم الالتزام بالمواصفات الفنية المطلوبة بموجب الأولوية رقم (1).	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 100- 2,500 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 100- 2,500 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	

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3	المتطلبات الفنية/ عدم الالتزام بالمدد الزمنية لتحقيق المتطلبات ذات الأولوية رقم (2).	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 500- 5,000 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة. وصدور قرار عن البورصة بإعادته إلى العمل.	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 500- 5,000 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	
4	المتطلبات الفنية/ عدم الالتزام بالمواصفات الفنية المطلوبة بموجب الأولوية رقم (2).	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 100- 2,500 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	1. تنبيه، وطلب تصويب المخالفة خلال ثلاثة أشهر. 2. غرامة تتراوح بين 100- 2,500 دينار، وطلب تصويب المخالفة خلال ثلاثة أشهر. 3. إيقاف العضو عن العمل لحين تصويب المخالفة وصدور قرار عن البورصة بإعادته إلى العمل.	

أحكام عامة:

1. إذا تكررت المخالفة المرتكبة من قبل الوسيط لأكثر من ثلاث مرات فيتم فرض العقوبات التي تلي عقوبة الغرامة المالية والواردة ضمن تعليمات التحقيق والتدقيق والتفتيش.
2. لغايات احتساب تكرار المخالفات المرتكبة من الجهات الخاضعة ، لا يعتد بأي عقوبة من العقوبات المفروضة على الوسيط إذا مضى عليها مدة سنتين من تاريخ إيقاعها عليه.
3. يعتبر عدم التزام العضو بتصويب المخالفة المرتكبة من قبله على الرغم من منحه مهلة للتصويب، مخالفة إضافية تستوجب التدرج في فرض العقوبات عليه إلى أن يقدم ما يثبت تصويب المخالفة الأصلية.
4. تبدأ فترة تصويب الأوضاع الممنوحة للأعضاء بموجب الدليل من تاريخ تبلّغ العضو بالعقوبة ما لم يعترض عليها، وفي حال اعترض العضو على العقوبة فتبدأ فترة تصويب الأوضاع –إن وجدت- من تاريخ تبلّغ العضو بالبت في الاعتراض.
5. في حال ارتكاب العضو لأكثر من مخالفة فتفرض عليه العقوبة الأشد إذا كانت المخالفات مرتبطة ببعضها البعض، وفي حال كانت المخالفات غير مرتبطة ببعضها فيتم فرض عقوبة عن كل مخالفة على حده.
6. للبورصة أن تتجاوز العقوبات الواردة في دليل المخالفات والعقوبات وفرض العقوبة المناسبة أو الأشد وفقاً لتعليمات التحقيق والتدقيق والتفتيش إن رأت لذلك مبرراً في ضوء طبيعة المخالفة وجسامتها ومدى تأثيرها على السوق.
7. في حال ارتكاب العضو مخالفة غير منصوص عليها في هذا الدليل، للبورصة الحق في فرض العقوبة المناسبة وفقاً لتعليمات التحقيق والتدقيق والتفتيش.
8. للبورصة الحق في فرض عقوبتين على المخالفة الواحدة إن رأت مبرراً لذلك مع الأخذ بعين الاعتبار طبيعة المخالفة المرتكبة ودرجة جسامتها.

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الرقم : 451/ع.أ/9/8

التاريخ : 2022/04/10

الموافق : 8/رمضان/1443

تعميـــم
رقـم (42)

السادة أعضاء شركة بورصة عمان المحترمين،
تحية طيبة وبعد،

لاحقاً لتعميمنا رقم (18) تاريخ 2022/02/17 بخصوص المهلة الممنوحة لشركات الوساطة لتوفيق أوضاعها وفقاً لنظام العضوية في شركة بورصة عمان لسنة 2018، وتعميم رقم (145) تاريخ 2021/12/02 بخصوص النسخة المعدلة من وثيقة المتطلبات الفنية والإدارية الواجب توفرها لدى شركات الوساطة.

وحيث أن البورصة في المراحل النهائية لاختبار أنظمة إدارة الأوامر المقدمة من شركات الوساطة، وذلك للتحقق من تلبيتها للمتطلبات الفنية والوظيفية، فقد قرر مجلس إدارة البورصة في اجتماعه المنعقد بتاريخ 2022/03/24 **تمديد المهلة الممنوحة لتشغيل نظام إدارة الأوامر** لحين استكمال الإجراءات اللازمة لدى البورصة للموافقة على تشغيل هذه الانظمة لدى شركات الوساطة.

ومما يجدر ذكره، أن مجلس إدارة البورصة قرر بذات الإجتماع المشار إليه أعلاه تعديل وثيقة المتطلبات الفنية والإدارية الواجب توفرها لدى شركات الوساطة، **بحيث يكون تقديم شركة الوساطة لخدمة التداول عبر الإنترنت اختيارياً.**

وتفضلوا بقبول فائق الاحترام.

مازن نجيب الوظائفي
المديـــر التنفيـــذي

نسخة: هيئة الأوراق المالية
مرفقات: - وثيقة المتطلبات الفنية والإدارية الواجب توفرها لدى شركات الوساطة نسخة رقم (3) تاريخ 2022/04/07
- تعاميم رقم (18)، رقم (145).

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الرقم: 8/9/ت.م/194
التاريخ: 17/2/2022
الموافق: 16 رجب /1443

تعميـــم
رقـم (18)

السادة أعضاء شركة بورصة عمان المحترمين،

تحية طيبة وبعد،

لاحقاً لتعميم البورصة رقم (4) تاريخ 2022/1/6 بخصوص تصويب شركات الوساطة أوضاعهم وفقاً لنظام العضوية في شركة بورصة عمان لسنة 2018، وتعميم رقم (145) تاريخ 2021/12/2 بخصوص المهلة الممنوحة لشركات الوساطة.

أرجو التأكيد على أن **المهلة الممنوحة لتوفيق الأوضاع وتحقيق المتطلبات الفنية الواردة في الوثيقة المشار إليها أعلاه تنتهي بتاريخ 2022/3/31 لتشغيل نظام إدارة الأوامر (OMS)**. راجيا من جميع أعضاء البورصة الالتزام بتحقيق المتطلبات الفنية في موعد أقصاه التاريخ المشار إليه أعلاه.

وتفضلوا بقبول فائق الاحترام،

مازن نجيب الوظائفي
المديـــر التنفيـــذي

نسخة هيئة الأوراق المالية

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الرقم: ١٤٨٦/٤/١/٩/٨
التاريخ ٢٠٢١/١٢/٢
الموافق ٢٧/ربيع الآخر/١٤٤٣

تعميم
رقم (١٨٥)

السادة أعضاء شركة بورصة عمان المحترمين،
تحية طيبة وبعد،

لاحقاً لتعميم البورصة رقم (122) تاريخ 2021/10/26 بخصوص المهلة الممنوحة لشركات الوساطة لتوفيق أوضاعها وفقاً لنظام العضوية في شركة بورصة عمان لسنة 2018، وتعميم رقم (94) تاريخ 2021/08/16 بخصوص النسخة المعدلة من وثيقة المتطلبات الفنية والإدارية الواجب توفرها لدى شركات الوساطة،

أرجو التأكيد على أن المهلة الممنوحة لتوفيق الأوضاع وتحقيق المتطلبات الإدارية الواردة في الوثيقة المشار إليها أعلاه تنتهي بتاريخ 2021/12/31. أما بالنسبة للمتطلبات الفنية، فأرجو التأكيد على تحقيقها ضمن الأطر الزمنية المحددة لها في ذات الوثيقة ضمن جدول الأولويات. ومنها تلبية متطلبات تشغيل واستخدام نظام إدارة الأوامر قبل تاريخ 2022/03/31، وتقديم خدمة التداول عبر الإنترنت قبل تاريخ 2022/12/31.

وسعياً من البورصة نحو تخفيض الكلف المالية المترتبة على شركات الوساطة لتحقيق المتطلبات الفنية المشار إليها أعلاه، فقد قرر مجلس إدارة البورصة في اجتماعه المنعقد بتاريخ 2021/11/25، تعديل "أسس تقديم المعلومات الفورية إلى أعضاء بورصة عمان"، بحيث تستحق الرسوم السنوية لغاء الربط ببوابة تبادل المعلومات ونظام بث المعلومات الفورية للتداول بما يتناسب مع عدد الأشهر التي سيتم تشغيل نظام إدارة الأوامر فيها خلال السنة.

وسنداً لأحكام المادة (11) من الأسس المذكورة أعلاه، فإن استخدام شاشات التداول الخاصة بالبورصة PAM يكون مقتصراً على حالات الطوارئ التي تحول دون تمكن شركة الوساطة من تشغيل نظام إدارة الأوامر لديها. وعليه، ولغايات تفعيل شاشات التداول PAM لشركة الوساطة المعنية لاستئناف عملية التداول لديها، فيترتب عليها في مثل هذه الحالات الاتصال فوراً بموظفي دائرة العمليات على الأرقام الفرعية من 1250 إلى 1253 لإبلاغهم بذلك، وتزويدهم بالنموذج المرفق عبر البريد الإلكتروني marketoperations@ase.com.jo، مع التأكيد على إعلام البورصة خطياً عند تصويب الأعطال التي تعرض لها نظام إدارة الأوامر.

وتفضلوا بقبول فائق الاحترام

مازن نجيب الوفائي
المدير التنفيذي

السادة شركة الوسيط المالي
مرفق نسخة من التعميم للمعلومات الفنية في أعضاء بورصة عمان
نموذج طلب تفعيل شاشات PAM في حالات الطوارئ لدى شركات الوساطة
- تعاميم رقم (122)، رقم (94).

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المتطلبات الإدارية والفنية الأساسية الواجب توفرها في شركة الوساطة

نسخة الإصدار	التاريخ
3.0	7-April-2022
عدد الصفحات	بورصة عمان
21	

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مقدمة

استناداً لأحكام نظام العضوية في شركة بورصة عمان لسنة 2018، والذي ألزم شركات الوساطة بأن تتوفر لديها مجموعة من المتطلبات الإدارية بالإضافة إلى البنية التقنية والأجهزة اللازمة لممارسة جميع أعمالها بشكل سليم وملائم ودون انقطاع وفقاً للمواصفات التي تحددها البورصة، فقد قامت البورصة بإصدار هذا الدليل المتضمن المتطلبات الإدارية والفنية بهدف تحديد الحد الأدنى من المتطلبات والمواصفات الفنية الأساسية الواجب توفرها لدى شركات الوساطة لكي تكون قادرة على العمل في شركة بورصة عمان، علماً بأن للبورصة الحق في تعديل أو تغيير هذه المتطلبات أو اعتماد متطلبات إضافية جديدة كلما دعت الحاجة إلى ذلك.

الرؤية

- توفير الأمان لمتعاملي الأوراق المالية بغض النظر عن أماكن تواجدهم لدى التعامل في سوق رأس المال الأردني.
- الوصول إلى سوق مالي متقدم تكنولوجياً قادر على اجتذاب الاستثمارات الاقليمية والدولية.
- رفع مستوى البنية التقنية والفنية لدى شركات الوساطة العاملة بحيث تتماشى مع أفضل الممارسات العالمية بهذا المجال.
- توفير المرونة لشركات الوساطة لاختيار البنية التقنية التي تناسبها والمتوافقة مع المتطلبات الفنية للبورصة.

آلية التطبيق

ستقوم البورصة باعتماد آلية التطبيق التدريجي لتطبيق بعض المتطلبات الفنية خلال فترة زمنية تصل إلى سنتين، وبعض المتطلبات اختيارية، حيث سيتم تطبيق هذه المتطلبات على النحو التالي:

- متطلبات فنية سيتم تطبيقها خلال فترة سنة ونصف وفقاً لأولوية تطبيقها.
- متطلبات فنية سيتم تطبيقها خلال سنتين ونصف وفقاً لأولوية تطبيقها.
- متطلبات فنية استراتيجية اختيارية سيتم تطبيقها وفقاً لرغبة العضو وبما تتطلبها التغييرات المستقبلية.

الجهات المستهدفة بالوثيقة

- شركات الوساطة الأعضاء في بورصة عمان.
- شركات الوساطة الراغبة في الانضمام لعضوية بورصة عمان

المتطلبات الإدارية

يجب على الوسيط أن يحقق الشروط التالية بصورة مستمرة :

1. أن يحمل رخصة سارية المفعول من هيئة الأوراق المالية.
2. أن تتوفر لدى إدارته وموظفيه المؤهلات العلمية والمعرفة والخبرة الكافية لممارسة العمل.
3. أن يعين مديراً عاماً متفرغاً ويجوز له ممارسة أعمال الوساطة المالية إذا كان حاصلاً على الاعتماد اللازم من هيئة الأوراق المالية شريطة عدم الإخلال بالشرط الوارد في البند الخامس.
4. أن يعيّن مديراً مالياً متفرغاً ويجوز له القيام بأعمال المحاسبة في حال عدم تعيين محاسب متفرغ.
5. أن يعمل لديه وسيطان معتمدان متفرغان على الأقل ويشترط في الوسيط المعتمد اجتياز الاختبار المقرر من قبل البورصة.
6. أن يتوفر لديه مقرّ لممارسة أعماله يكون مستوفياً للشروط التي تحددها البورصة.
7. على العضو تنظيم أعماله بشكل مسؤول وأن يوفر الموارد البشرية والفنية والمالية الكافية لتنفيذ أعماله بما يتفق مع التشريعات الصادرة عن البورصة .
8. أن يقوم العضو بوضع إجراءات عمل خطية ملائمة لممارسة أعماله والتي تضمن توفير بيئة رقابية داخلية ملائمة على أن تتضمن هذه الإجراءات ما يلي:
   - هيكل تنظيمي للشركة.
   - مهام تفصيلية لكل مكون من مكونات الهيكل التنظيمي.
   - المفوضين بالتوقيع نيابة عن الشركة.
   - مراعاة فصل المهام بين الأشخاص المرتبطين بها.
9. في حال تكليف أي شخص مرتبط بالوسيط بأي مهام أخرى بالإضافة لوظيفته ,يتوجب على الشركة توثيق ذلك شريطة أن لا يؤدي ذلك التكليف إلى تداخل بالصلاحيات أو تعارض للمصالح.
10. وضع ضوابط تضمن السرية ما بين الوسيط و شركات أنظمة المعلومات وتوقيع اتفاقيات خطية بهذا الخصوص.
11. تسمية أحد موظفيه ضابطا للارتباط مع البورصة، وله أن يسمي ضابط الامتثال ضابطاً للارتباط مع البورصة.

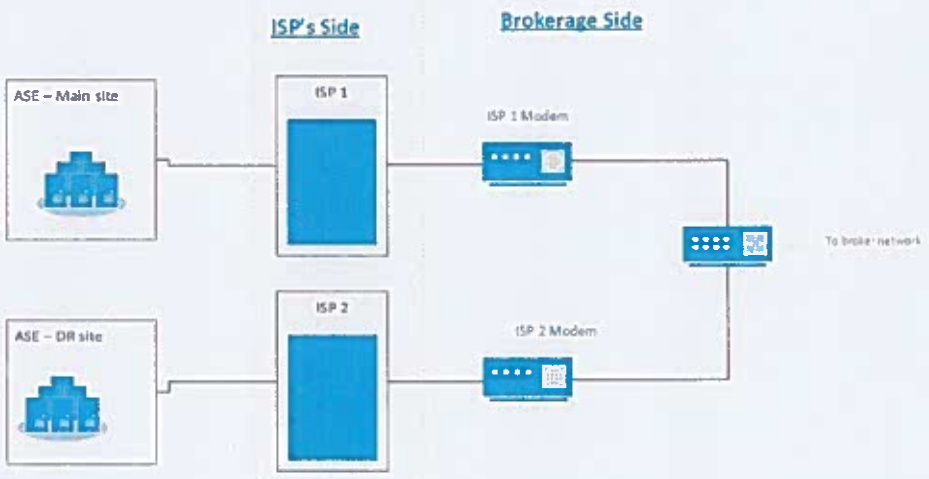
1. البنية التحتية للشبكة الداخلية

يعتبر بناء وتركيب وتهيئة وصيانة الشبكة الداخلية (Local Area Network -LAN) من مسؤوليات شركة الوساطة العضو تحت إشراف البورصة، بحيث يجب على شركات الوساطة الأعضاء الالتزام بالبنود التالية:

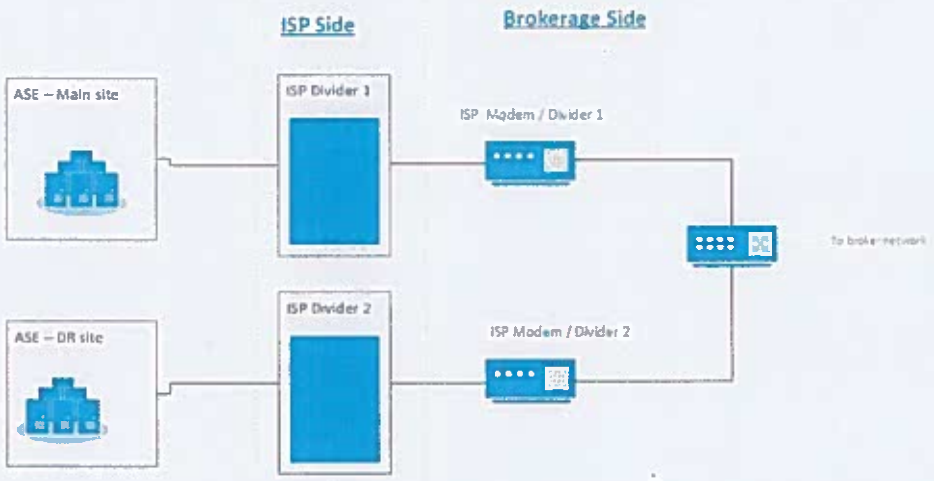
1.1 تأمين بناء وتركيب الشبكة الداخلية ليتم ربطها مع شبكة بورصة عمان، بحيث تشمل وكحد أدنى المواصفات التالية:

1.1.1 تأمين خطين مستأجرين (Leased lines layer 2 P2P) بسرعة (2Mbps) كحد أدنى، بحيث يتم تشغيل الخطين بوضعية نشط/استعداد (Active/Standby)، كما ويجدر بهذه الخطوط أن تكون مشفرة (IPSec tunnel).

1.1.2 توفير خطوط اتصال مؤجرة (Leased-Lines) من مزودين مختلفين (وهو الخيار الأفضل) حسب الرسم التوضيحي (1)، وفي حال رغبتها بالحصول على الخطوط من نفس المزود يجب عليها الالتزام باستخدام خطوط تعمل من مقاسم اتصال مختلفة تابعة لنفس المزود بحيث تضمن اختلاف مسارات الاتصال حسب الرسم التوضيحي (2).



رسم توضيحي (1): خطوط مؤجرة (Leased-Lines) من مزودين مختلفين



رسم توضيحي (2): خطوط مؤجرة (Leased-Lines) من نفس المزود لكن من مقسمين مختلفين

1.1.3 التأكد من أن مزود الخطوط المؤجرة متصل مع مقر البنية التحتية الرئيسي لبورصة عمان، ومقر البنية التحتية البديل للبورصة، مع ضرورة توفير كتاب التعهد رقم (1) حسب الأطر المعتمدة.

1.1.4 تأمين جهاز/أجهزة موجهة خاص/خاصة للشبكة الداخلية الموصولة مع بورصة عمان، بحيث تشتمل وكحد أدنى المواصفات التالية:

- 3 مداخل على الأقل من نوع (Ethernet).
- أن يدعم بروتوكول (SLA) لضمان تشغيل الخطين بوضعية (Active/Standby).
- أن يدعم تقنية (Multicast).
- أن يدعم خاصية تشفير خط الإتصال (IPSec tunnel,IKEV1 and IKEV2).
- يفضل فترة الضمان من الشركة الأم لمدة عام على الأقل على المعدات والبرمجيات.

1.2 يستثنى من المتطلبات المذكورة في البنود (3.1.1، 3.1.2، 3.1.3 و 3.1.4) الاعضاء المتواجدون في مجمع بنك الإسكان، والذين يقومون بالربط على الموزع الرئيسي التابع لبورصة عمان والموجود في ذات الموقع، بحيث يلتزم هؤلاء الأعضاء بتوفير موزع/موزعين (Switch) اثنين لضمان استمرارية الربط مع نقطتي الاتصال اللتين ستوفرهما البورصة لهم.

1.3 تركيب لوحة وصلات (Patch-Panel) منفصلة للشبكة المرتبطة مع البورصة بحيث تكون مرقمة بصورة سليمة وواضحة، لسهولة الوصول إليها.

1.4 تأمين جهاز موزع (Switch) خاص للشبكة الداخلية الموصولة مع بورصة عمان، بحيث يشتمل وكحد أدنى على المواصفات التالية:

✓ ports: minimum 16 (10/100/1000 Mbps)

- ✓ VLAN (Number Supported): minimum 128
- ✓ Support Multicast
- ✓ Managed Switch

1.5 الالتزام بتزويد البورصة باسم مستخدم وكلمة المرور الخاصة بجهاز الموجه (Router)، وجهاز الموزع (Switch) للتأكد من سلامة البيئة والتدقيق على الأجهزة بأي وقت تراه البورصة مناسباً.

2. البنية التحتية لأمن الشبكة

على شركات الوساطة الأعضاء تأمين وتركيب جدار ناري (Firewall)، وذلك لضمان أمان الشركة من الناحية التقنية بما يتوافق مع متطلبات البورصة وحاجة الشركة.

كما ويعتبر بناء وتركيب وتهيئة وصيانة الجدار الناري (Firewall) مسؤولية شركة الوساطة العضو تحت إشراف البورصة، حيث يجب أن يدعم الجدار الناري (Firewall) وبحد أدنى البنود التالية:

2.1 عزل الشبكات المختلفة الموجودة في شركة الوساطة والسماح بتناقل المعلومات بين الشبكات عبر مجموعة من القواعد (Policy Rules).

2.2 دعم الشبكات الخاصة (DMZ) بما يتوافق مع متطلبات وحاجة شركة الوساطة، بحيث يحتوي على الأقل على 6 شبكات خاصة (DMZ).

2.3 أن يدعم (Dual Wan port).

2.4 دعم تقنية البث المتعدد (Multicast).

2.5 يفضل فترة الضمان من الشركة الأم لمدة عام على الأقل على المعدات والبرمجيات.

2.6 يفضل ان يدعم خصائص (Advance filtering, IPS, Anti-Malware).

2.7 تلتزم شركة الوساطة بتزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة والتدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

3. متطلبات أجهزة الحاسوب (PC's) لتشغيل برامج التداول

تقوم بورصة عمان بتحديد الحد الأدنى من خصائص أجهزة الحاسوب لتشغيل برامج التداول التي تعمل عند شركة الوساطة العضو، بحيث تضمن هذه الخصائص أن تكون الأجهزة جاهزة دائما لتشغيل الأنظمة وبرامج التداول في الوضع المثالي بشكل عام وبحسب المرفق رقم (7)، بحيث تضمن القدرة على العمل بشكل مستمر ودون انقطاع.

حيث سيتم ربط هذه الاجهزة على الشبكة الداخلية (LAN) التابعة للبورصة. علماً بأن هذه المواصفات قد تتغير وفقاً لاحتياجات البورصة ومتطلباتها.

4. متطلبات غرفة الأجهزة الخادمة (Server Room)

يجب على شركات الوساطة الأعضاء تأمين غرفة أجهزة خادمة (Server Room) بما يتوافق مع متطلبات البورصة، على النحو التالي:

4.1 تأمين مكان فعلي محمي (Physical Isolation)، بحيث يقتصر الوصول إليه فقط للمسؤولين والأشخاص المخولين، أو الزائرين الخارجيين الخاضعين للإشراف بشكل كامل من قبل المسؤولين المصرح لهم بالدخول.

4.2 توفير جهاز تكييف يعمل على تبريد الغرفة، وأن يكون قادراً على العمل بشكل متواصل، بحيث يحتوي على (Low Ambient kit).

4.3 توفير (Cabinets) ليتم توزيع أجهزة الشبكة (Router, Switch Firewall ..., etc.) والأجهزة الخادمة بشكل منظم من أجل تسهيل عمليات الحركة والصيانة والتحديث والوصول السريع لجميع الأجهزة الخادمة وأجهزة الشبكة.

4.4 حماية جميع الأجهزة والمعدات المشاركة في البنية التحتية بواسطة جهاز حفظ الطاقة (UPS) طوال فترة التداول (3 ساعات على الأقل) في حال حدوث انقطاع التيار كهربائي، علماً بأنه يفضل وجود مولد تيار كهربائي (Generator) يخدم شركة الوساطة في حالة الانقطاع المستمر للكهرباء لمدة أطول من الوقت الذي يوفره جهاز حفظ الطاقة (UPS) لضمان استمرارية عمل الأجهزة بصورة سليمة ودون انقطاع.

4.5 توفير لوحة كهرباء خاصة لتوزيع الكهرباء على الأجهزة المشاركة في البنية التحتية (UPS DB).

5. متطلبات البنية التحتية لتشغيل نظام إدارة الأوامر (OMS)

5.1 تشغيل نظام إدارة الأوامر (OMS) في موقع شركة الوساطة العضو

يلتزم العضو بتجهيز البنية التحتية في موقعه (physical hosting) لاستقبال استضافة تشغيل نظام إدارة الأوامر (OMS) على النحو التالي:

5.1.1 تأمين أجهزة خادمة (Servers) سواء كانت تعمل بشكل منفصل (Physical) أو تعمل باستخدام البيئة الافتراضية (Virtualization).

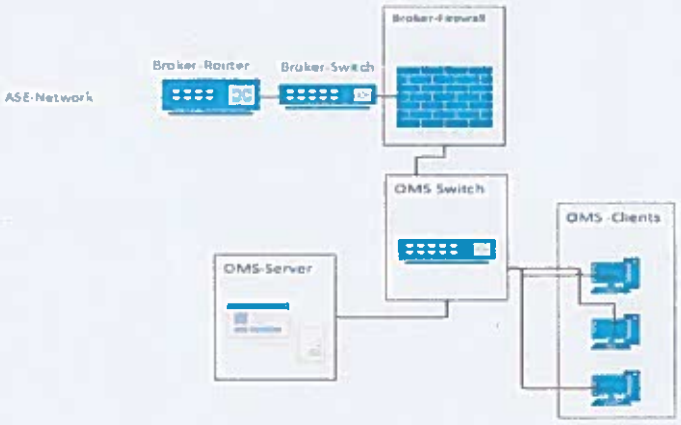
5.1.2 فصل الشبكة الداخلية (DMZ) الخاصة بجهاز الخادم وأجهزة الحاسوب (PC's) الخاصة بنظام إدارة الأوامر (OMS) باستخدام الجدار الناري (Firewall)، حيث يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول إلى الشبكة الداخلية الخاصة بنظام إدارة الأوامر (OMS).

5.1.3 ربط الشبكة الداخلية (DMZ) لنظام إدارة الأوامر (OMS) على شبكة البورصة وفقاً للمتطلبات الفنية التي تحددها البورصة.

5.1.4 الإلتزام بالوثائق الفنية المرفقة بالملاحق التالية:

- ملحق (1)
- ملحق (2)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

5.1.5 الإلتزام باستخدام الشبكة الداخلية (DMZ) لنظام إدارة الأوامر (OMS) لربط جهاز الخادم وأجهزة الحاسوب المشغلة لنظام إدارة الأوامر، حسب الرسم التوضيحي رقم (3).



رسم توضيحي (3): ربط الجهاز الخادم وأجهزة الحاسوب المشغلة لنظام إدارة الأوامر (OMS) على نفس الشبكة الداخلية (DMZ) التابعة للبورصة.

5.2 تشغيل نظام إدارة الأوامر (OMS) خارج شركة الوساطة

5.2.1 شركات الوساطة الأعضاء التابعة لبنك أو فرع بنك مرخص للعمل في الأردن

إذا رغبت شركة الوساطة بالاستفادة من البنية التحتية التابعة للبنك من غرف الأجهزة الخادمة، والأجهزة الخادمة ذاتها الرئيسية بالإضافة إلى أجهزة الشبكات، وذلك لغايات تشغيل نظام إدارة الأوامر (OMS)، فيجب على العضو الإلتزام بما يلي:

5.2.1.1 تقديم التعهد رقم (2).

5.2.1.2 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة البنك.

5.2.1.3 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة و التدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

5.2.1.4 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول إلى الشبكة الداخلية الخاصة بنظام إدارة الأوامر (OMS).

5.2.1.5 تأمين خط مؤجر (Leased-Line) بين شركة الوساطة العضو ومكان استضافة نظام إدارة الأوامر (OMS) مع ضرورة أن يكون هذا الخط مشفراً (IPSec tunnel) وفعالاً (Up and Running).

5.2.1.6 عزل جميع أجهزة الشبكة والأجهزة الخادمة التابعة للعضو عن أجهزة الشبكة والأجهزة الخادمة التابعة للبنك.

5.2.1.7 الإلتزام بتشغيل شاشات التداول الخاصة نظام إدارة الأوامر (OMS) من داخل مكتب العضو.

5.2.1.8 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة عند البنك.

5.2.1.9 الإلتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

5.2.1.10 الإلتزام بتزويد البورصة بتقارير تخص أي مشاكل تحدث.

5.2.2 شركات الوساطة الأردنية التابعة لبنك أو لشركات وساطة إقليمية أو دولية

إذا رغبت شركة الوساطة بالاستفادة من البنية التحتية التابعة لبنك أو لشركات وساطة إقليمية أو دولية من غرف الأجهزة الخادمة، والأجهزة الخادمة ذاتها الرئيسية بالإضافة إلى أجهزة الشبكات التابعة لها لغايات تفعيل خدمة إدارة الأوامر (OMS)، فيجب على العضو الإلتزام بما يلي:

5.2.2.1 تقديم التعهد رقم (3).

5.2.2.2 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة الشركة الأم أو أي شركة تابعة لها.

5.2.2.3 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة و التدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

5.2.2.4 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول الى الشبكة الداخلية الخاصة بنظام إدارة الأوامر (OMS).

5.2.2.5 تأمين خط مؤجر (Leased-Line) بين شركة الوساطة العضو ومكان استضافة نظام إدارة الأوامر (OMS) مع ضرورة أن يكون هذا الخط مشفراً (IPSec tunnel) وفعالاً (Up and Running).

5.2.2.6 عزل جميع أجهزة الشبكة والأجهزة الخادمة التابعة للعضو عن أجهزة الشبكة والأجهزة الخادمة التابعة الشركة الأم أو أي شركة تابعة لها.

5.2.2.7 الإلتزام بتشغيل شاشات التداول الخاصة نظام إدارة الأوامر (OMS) من داخل مكتب العضو.

5.2.2.8 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة عند البنك أو الشركة الأم أو أي شركة تابعة لها، على أن تتحمل شركة الوساطة العضو كافة تكاليف السفر لموظفين اثنين للقيام بعملية الكشف كلما دعت الحاجة.

5.2.2.9 الإلتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

5.2.2.10 الإلتزام بتزويد البورصة بتقارير تخص أي مشاكل تحدث.

5.2.3 شركات الوساطة المستخدمة لتقنية الحوسبة السحابية (Cloud Computing)

إذا رغبت الشركة باستخدام الحوسبة السحابية التي تتضمن استئجار أجهزة خادمة والبنية التحتية حسب الحاجة لدى شركة مختصة توفر هذه الخدمة، بحيث يتم تنزيل الأنظمة المشغلة لنظام إدارة الأوامر (OMS) على هذه الأجهزة، فعلى العضو الإلتزام بما يلي:

5.2.3.1 أن تكون الحوسبة السحابية المستخدمة محلية (Local Cloud).

5.2.3.2 تقديم شهادة تضمن استخدام حوسبة سحابية مطابقة للمعايير العالمية في هذا المجال، مثل:

- ✓ الحفاظ على أمن وسرية المعلومات
- ✓ الفصل في تقديم الخدمة واستخدام خاصية (Virtual Private Cloud)
- ✓ القدرة على توفير الموثوقية والثبات (Reliability and Availability)
- ✓ توفير خطوط اتصالات أمنة وتوفير بدائل لها
- ✓ PCI DSS Certificate
- ✓ Cloud Security Alliance (CSA)
- ✓ ISO/IEC 27000 Standards

5.2.3.3 تأمين خط مؤجر (Leased-Line) بين شركة الوساطة ومكان استضافة نظام إدارة الأوامر (OMS) مع ضرورة أن يكون هذا الخط مشفراً (IPSec tunnel).

5.2.3.4 الإلتزام باستخدام الشبكة الداخلية (DMZ) لنظام ادارة الاوامر (OMS) لربط جهاز الخادم وأجهزة الحاسوب المشغلة نظام إدارة الأوامر.

5.2.3.5 الإلتزام بتشغيل شاشات التداول الخاصة بنظام إدارة الأوامر (OMS) من داخل مكتب العضو.

5.2.3.6 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة الشركة المقدمة لخدمة الحوسبة السحابية المحلية.

5.2.3.7 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة والتدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

5.2.3.8 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول إلى الشبكة الداخلية الخاصة بنظام إدارة الأوامر (OMS).

5.2.3.9 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة العضو عند الحوسبة السحابية المحلية.

5.2.3.10 يجب على شركة الوساطة الالتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

5.2.3.11 الإلتزام بتزويد البورصة بتقارير تخص أي مشاكل تحدث.

6. متطلبات البنية التحتية لتشغيل خدمة التداول عبر الإنترنت

6.1 استضافة خدمة التداول عبر الإنترنت في موقع شركة الوساطة

يجب على شركة الوساطة العضو تجهيز البنية التحتية في موقعها لاستقبال استضافة خدمة التداول عبر الانترنت (physical hosting)، على النحو التالي:

6.1.1 تأمين أجهزة خادمة (Servers) سواء كانت تعمل بشكل منفصل (Physical) أو تعمل باستخدام البيئة الافتراضية (Virtualization).

6.1.2 فصل الشبكة الداخلية الخاصة بجهاز الخادم (DMZ) المشغل لخدمة التداول عبر الإنترنت باستخدام الجدار الناري (Firewall)، حيث يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول إلى الشبكة الداخلية الخاصة لخدمة التداول عبر الإنترنت.

6.1.3 توفير شهادة (SSL) لاستخدامها على جهاز الخادم الخاص بالاستضافة.

6.1.4 توفير جهاز جدار ناري لخدمات الإنترنت (WAF).

6.1.5 الإلتزام بالمتطلبات الفنية التي تحددها البورصة فيما يتعلق بتصميم الشبكة (Network Design).

6.1.6 الالتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (3)
- ملحق (4)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

6.2 استضافة خدمة التداول عبر الإنترنت خارج موقع شركة الوساطة العضو.

6.2.1 شركات الوساطة التابعة لبنك أو فرع بنك مرخص للعمل في الأردن.

إذا رغبت شركة الوساطة بالاستفادة من البنية التحتية التابعة للبنك من غرف الأجهزة الخادمة، والأجهزة الخادمة ذاتها الرئيسية بالإضافة إلى أجهزة الشبكات، وذلك لغايات تشغيل خدمة التداول عبر الإنترنت، فعلى العضو الإلتزام بما يلي:

6.2.1.1 تقديم تعهد رقم (2)

6.2.1.2 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة البنك.

6.2.1.3 توفير شهادة (SSL) لاستخدامها على جهاز الخادم الخاص بالاستضافة.

6.2.1.4 توفير جهاز جدار ناري لخدمات الإنترنت (WAF).

6.2.1.5 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة و التدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

6.2.1.6 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول الى الشبكة الداخلية الخاصة بنظام خدمة التداول عبر الانترنت.

6.2.1.7 عزل جميع أجهزة الشبكة والأجهزة الخادمة التابعة للعضو عن أجهزة الشبكة والأجهزة الخادمة التابعة للبنك.

6.2.1.8 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة عند البنك.

6.2.1.9 الإلتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (3)
- ملحق (4)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

6.2.2 شركات الوساطة الأردنية العضو التابعة لبنك أو لشركات وساطة إقليمية أو دولية.

إذا رغبت شركة الوساطة المحلية بالاستفادة من البنية التحتية من غرف الأجهزة الخادمة، والأجهزة الخادمة ذاتها الرئيسية بالإضافة إلى أجهزة الشبكات للشركة الأم أو أية شركة تابعة لها لغايات تفعيل خدمة التداول عبر الإنترنت، فيجب على العضو الإلتزام بما يلي:

6.2.2.1 تقديم تعهد رقم (3).

6.2.2.1 توفير شهادة (SSL) لاستخدامها على جهاز الخادم الخاص بالاستضافة.

6.2.2.2 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة الشركة الأم أو أي شركة تابعة لها.

6.2.2.3 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة و التدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

6.2.2.4 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول الى الشبكة الداخلية الخاصة بنظام خدمة التداول عبر الإنترنت.

6.2.2.5 عزل جميع أجهزة الشبكة والأجهزة الخادمة التابعة للعضو عن أجهزة الشبكة والأجهزة الخادمة التابعة الشركة الأم أو أي شركة تابعة لها.

6.2.2.6 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة عند البنك أو الشركة الأم أو أي شركة تابعة لها، على أن تتحمل شركة الوساطة العضو كافة تكاليف السفر لموظفين اثنين للقيام بعملية الكشف كلما دعت الحاجة.

6.2.2.7 توفير جهاز جدار ناري لخدمات الإنترنت (WAF).

6.2.2.8 الإلتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (3)
- ملحق (4)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)

- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

6.2.3 شركات الوساطة المستخدمة لتقنية الحوسبة السحابية (Cloud Computing)،

إذا رغبت شركة الوساطة باستخدام تقنية الحوسبة السحابية التي تتضمن استئجار أجهزة خادمة حسب الحاجة لدى شركة مختصة توفر هذه الخدمة، بحيث يتم تنزيل الأنظمة المشغلة لخدمة التداول عبر الإنترنت على هذه الأجهزة، واستخدامها من خلال الإنترنت بدلا من تجهيز بنية تحتية كاملة في مقر شركة الوساطة، فيجب على العضو الإلتزام بما يلي :

6.2.3.1 أن تكون الحوسبة السحابية المستخدمة محلية (Local Cloud).

6.2.3.2 توفير شهادة (SSL) لاستخدامها على جهاز الخادم الخاص بالاستضافة.

6.2.3.3 توفير جهاز جدار ناري (Firewall) يفصل شبكة العضو عن شبكة الشركة المقدمة لخدمة الحوسبة السحابية المحلية.

6.2.3.4 تزويد البورصة باسم المستخدم وكلمة المرور للجدار الناري (Firewall) للتأكد من سلامة البيئة والتدقيق على الجهاز بأي وقت تراه البورصة مناسباً.

6.2.3.5 يقوم العضو ببناء مجموعة من القواعد (Rules) تسمح لموظفي البورصة للوصول إلى الشبكة الداخلية الخاصة بنظام خدمة التداول عبر الأنترنت.

6.2.3.6 الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة العضو عند الحوسبة السحابية المحلية.

6.2.3.7 توفير جهاز جدار ناري لخدمات الإنترنت (WAF).

6.2.3.8 تقديم شهادة تضمن استخدام حوسبة سحابية مطابقة للمعايير العالمية في هذا المجال، مثل:

- ✓ الحفاظ على أمن وسرية المعلومات
- ✓ الفصل في تقديم الخدمة واستخدام خاصية (Virtual Private Cloud)
- ✓ القدرة على توفير الموثوقية والثبات (Reliability and Availability)
- ✓ توفير خطوط اتصالات أمنة وتوفير بدائل لها
- ✓ PCI DSS Certificate
- ✓ Cloud Security Alliance (CSA)
- ✓ ISO/IEC 27000 Standards
- ✓ الكشف على الموقع المزود بخدمة (Cloud)

6.2.3.9 الالتزام بالوثائق الفنية التالية:

- ملحق (1)
- ملحق (2)
- ملحق (3)
- ملحق (4)
- ملحق (5)
- ملحق (6)
- ملحق (7)
- ملحق (8)
- ملحق (9)
- ملحق (10)
- ملحق (11)
- ملحق (12)

7. متطلبات البنية التحتية للموقع البديل (Disaster Recovery)

على شركات الوساطة الأعضاء تأمين موقع بديل (Disaster Recovery) للتعافي من الكوارث والأزمات حسب المواصفات التالية:

7.1 تأمين خط مؤجر (Leased-Line) بين الموقع البديل لشركة الوساطة والبورصة بالإضافة إلى جهاز موجه (Router) أو جهاز حماية (Firewall) وفقاً لمتطلبات البورصة في البنية التحتية للشبكة الداخلية.

7.2 تأمين الحد الأدنى من أجهزة الحاسوب ومختلف الأنظمة بما يضمن عمل شركة الوساطة العضو بشكل ملائم.

7.3 يلتزم العضو بنقل كافة أنواع المعلومات اللازمة لعمل مختلف أنظمة العضو من الموقع الرئيسي لشركة الوساطة العضو إلى الموقع البديل بشكل يومي.

7.4 لا يعمل الموقع البديل لشركة الوساطة العضو إلا في حالة إبلاغ البورصة بحدوث مشكلة في الموقع الرئيسي والحصول على موافقتها.

7.5 يقوم العضو بمخاطبة البورصة لتحديد المشكلة في الموقع الرئيسي والزمن اللازم لإصلاح هذه المشكلة.

7.6 يجوز لشركة الوساطة التابعة لبنك أو فرع بنك مرخص للعمل في الأردن الإستفادة من البنية التحتية الخاصة بالبنك، مع الإلتزام بالفصل الكامل أو الإفتراضي بين بيئة الموقع البديل لشركة الوساطة وبيئة البنك، على أن تقوم شركة الوساطة بتزويد البورصة بإقرار من البنك يفيد بموافقته على استخدام شركة الوساطة للموقع البديل في الحالات الطارئة فقط.

8. تعليمات عامة

- الإلتزام بالسماح لموظفي البورصة المعنيين بالدخول إلى أجهزة ومعدات البنية التحتية الخاصة بشركة الوساطة العضو في أي وقت تراه البورصة مناسباً إما عن بعد (Remotely) من خلال الدخول إلى الواجهات الخاصة بهذه الأجهزة باستخدام (اسم مستخدم / كلمة مرور) مخصصة للبورصة لهذه الغاية، أو عن طريق الزيارات الميدانية لمواقع استضافة هذه المعدات والأجهزة بغض النظر عن موقع تواجدها (Physically).
- تقديم تعهد رقم (4)
- الإلتزام باستخدام الموجه (Router) في الغرض المخصص له فقط للربط بالبورصة ولا يستخدم للربط مع أي جهات أخرى أو للربط مع الإنترنت.
- الإلتزام بحماية أجهزة الحاسوب المشغلة لأنظمة التداول المختلفة من أية مخاطر واختراقات.
- الإلتزام بعدم اتصال أجهزة الحاسوب المشغلة لأنظمة التداول المختلفة بالإنترنت.
- الإلتزام بالسماح لموظفي البورصة بالدخول إلى جميع أجهزة الشبكة والأجهزة الخادمة التابعة لشركة الوساطة عند البنك أو الشركة الأم أو أي شركة التابعة لها، على أن تتحمل شركة الوساطة العضو كافة تكاليف السفر لموظفين اثنين للقيام بعملية الكشف كلما دعت الحاجة.

9. قائمة المصطلحات (Glossary)

- الضوابط المعلوماتية المتعلقة ببورصة عمان (ASE IT Controls)
- مواصفات الفنية لبوابة تبادل المعلومات (Fix Gateway Specifications)
- معلومات بوابة تبادل المعلومات (Fix Gateway information)
- مواصفات الفنية للبرامج المزودة لمعلومات السوق (MDF Specifications)
- نشط/استعداد (Active/Standby)
- خطوط اتصالات مؤجرة (Leased lines layer 2 P2P)
- خط اتصال مشفر وامن (IPSec tunnel).
- لوحة وصلات (Patch-Panel)
- مدخل شبكة (Ethernet)
- بروتوكول يستخدم في إعادة التوجيه التلقائي لخط سير المعلومات (IP-SLA)
- بروتوكول يستخدم في توزيع المعلومات من مصدر واحد الى جميع العناصر التي تستمع لهذا المصدر (Multicast)
- خاصية تشفير خط الإتصال (IPSec tunnel).
- جهاز موزع (Switch)
- جهاز الموجه (Router)
- جدار ناري (Firewall)
- قواعد تسيير المعلومات (Policy Rules)
- الشبكات الخاصة (DMZ)

- الشبكة الداخلية (LAN)
- نظام تشغيل (Supported Windows Operating System)
- نظام إدارة الأوامر (OMS)
- الحوسبة السحابية (Cloud Computing)
- مكان فعلي محمي (Physical Isolation)
- الحوسبة السحابية المحلية (Local Cloud)
- الحوسبة السحابية الوهمية (Virtual Private Cloud)
- موقع بديل (Disaster Recovery)

10. ملحقات ووثائق مرتبطة

10.1 ملحق (1) نموذج طلب العضوية

10.2 ملحق (2) المتطلبات الفنية لتشغيل واستخدام أنظمة إدارة الأوامر (OMS)

10.3 ملحق (3) الضوابط المعلوماتية المتعلقة ببورصة عمان (ASE IT Controls)

10.4 ملحق (4) خطة الطوارئ لشركة الوساطة العضو في حال حدوث خلل في خدمة التداول عبر الإنترنت

10.5 ملحق (5) المواصفات الفنية لبوابة تبادل المعلومات (OPTIQ COMMERCIAL OEG CLIENT SPECIFICATIONS – FIX INTERFACE)

10.6 ملحق (6) المواصفات الفنية لبوابة تبادل المعلومات (OPTIQ COMMERCIAL OEG CLIENT SPECIFICATIONS – SBE INTERFACE)

10.7 ملحق (7) المواصفات الفنية للبرامج المزودة لمعلومات السوق (OPTIQ COMMERCIAL MDG CLIENT SPECIFICATIONS)

10.8 ملحق (8) المواصفات الفنية للاتصال مع نظام بث المعلومات (TECHNICAL MANUAL FOR RUNNING AND USING MDG UDP TO TCP CONVERTER)

10.9 ملحق (9) المواصفات الفنية لملفات الصادرة من نظام التداول (OPTIQ COMMERCIAL FILES SPECIFICATIONS)

10.10 ملحق (10) المواصفات الفنية لحركة المعلومات في نظام التداول (Optiq Commercial - Kinematics Specifications)

10.11 ملحق (11) المواصفات الفنية للاوامر الكلية (OPTIQ COMMERCIAL - DROP COPY SERVICE)

10.8 ملحق (8) مواصفات أجهزة الحاسوب اللازمة لتشغيل برامج التداول

على جميع الأعضاء الالتزام بتوفير أجهزة حاسوب تمكن وبحد أدنى تنزيل نظام تشغيل ويندوز حديث، حيث تمثل البنود التالية الحد الأدنى من المواصفات الواجب توافرها في هذه الأجهزة:

Processor Specifications	
Processor Speed	Minimum 2.30 GHz
Memory	
RAM Capacity	Minimum 3GB
Storage	
Storage Capacity	Minimum 512 GB
Storage Type	HDD OR SSD
Display Specifications	
Display Size	Minimum 15.6"
Connectivity	
Networking	Integrated 10/100/1000 BASE-T Ethernet LAN
Operation System	
Operating System	Minimum Win 10

11. التعهدات

1. تعهد من شركات مزودي خطوط نقل البيانات (Leased-Lines).
2. تعهد صادر عن البنك بالحفاظ على أمن وسرية المعلومات وضمان استمرارية تقديم الخدمة.
3. تعهد صادر عن الشركة الأم أو أي شركة تابعة لها بالحفاظ على أمن وسرية المعلومات وضمان استمرارية تقديم الخدمة.
4. تعهد رسمي بتطبيق كافة البنود المرفقة في هذه الوثيقة.

جدول أولويات المتطلبات الفنية الأساسية الواجب توفرها في شركات الوساطة

رقم البند	البند	الأولوية				
1.1.4	تأمين جهاز/أجهزة موجهة خاص/خاصة للشبكة الداخلية الموصولة مع بورصة عمان بالمواصفات التالية:					
*	- 3 مداخل على الأقل من نوع (Ethernet).	1				
*	- أن يدعم بروتوكول (SLA) لضمان تشغيل الخطين بوضعية (Active/Standby).	1				
*	- أن يدعم تقنية (Multicast).	1				
*	- أن يدعم خاصية تشفير خط الإتصال (IPSec tunnel,IKEV1 and IKEV2).	1				
*	يفضل فترة الضمان من الشركة الأم لمدة عام على الأقل على المعدات والبرمجيات.	1				
1.3	تركيب لوحة وصلات (Patch-Panel) منفصلة للشبكة المرتبطة مع البورصة بحيث تكون مرقمة بصورة سليمة وواضحة، لسهولة الوصول اليها.	1				
1.5	الالتزام بتزويد البورصة باسم مستخدم وكلمة المرور الخاصة بجهاز الموجه (Router)، وجهاز الموزع (Switch) للتأكد من سلامة البيئة والتدقيق على الأجهزة بأي وقت تراه البورصة مناسباً	1				
2	على شركات الوساطة الأعضاء تأمين وتركيب جدار ناري (Firewall)، حسب المواصفات التالية: - دعم الشبكات الخاصة (DMZ) بما يتوافق مع متطلبات وحاجة شركة الوساطة، بحيث يحتوي على الأقل على 6 شبكات خاصة (DMZ). - أن يدعم (Dual Wan port). - دعم تقنية البث المتعدد (Multicast). - يفضل فترة الضمان من الشركة الأم لمدة عام على الأقل على المعدات والبرمجيات. - يفضل ان يدعم خصائص (Advance filtering, IPS, Anti-Malware).	1				
5.1	تشغيل نظام إدارة الأوامر (OMS) في موقع شركة الوساطة العضو	1				
1.1.1	تأمين خطين مستأجرين (Leased lines layer 2 P2P) بسرعة (2Mbps) كحد أدنى، بحيث يتم تشغيل الخطين بوضعية نشط/استعداد (Active/Standby)، كما ويجدر بهذه الخطوط أن تكون مشفرة (IPSec tunnel).	2				
1.1.2	توفير خطوط اتصال مؤجرة (Leased-Lines) من مزودين مختلفين (وهو الخيار الأفضل)، وفي حال رغبتها بالحصول على الخطوط من نفس المزود يجب عليها الالتزام باستخدام خطوط تعمل من مقاسم اتصال مختلفة تابعة لنفس المزود بحيث تضمن اختلاف مسارات الاتصال	2				

جدول أولويات المتطلبات الفنية الأساسية الواجب توفرها في شركات الوساطة

رقم البند	البند	الأولوية
1.4	تأمين جهاز موزع (Switch) خاص للشبكة الداخلية الموصولة مع بورصة عمان (10/100/1000 Mbps) ports: minimum 16 VLAN (Number Supported): minimum 128 Support Multicast Managed Switch	2
3	متطلبات أجهزة الحاسوب (PC's) لتشغيل برامج التداول	2
4	متطلبات غرفة الأجهزة الخادمة (Server Room)	2
5.2.1	تشغيل نظام إدارة الأوامر (OMS) خارج شركة الوساطة 1- شركات الوساطة الاعضاء التابعة لبنك أو فرع بنك مرخص للعمل في الأردن	3
5.2.2	تشغيل نظام إدارة الأوامر (OMS) خارج شركة الوساطة 2- شركات الوساطة الأردنية التابعة لبنك أو لشركات وساطة إقليمية أو دولية	3
5.2.3	تشغيل نظام إدارة الأوامر (OMS) خارج شركة الوساطة 3-شركات الوساطة المستخدمة لتقنية الحوسبة السحابية (Cloud Computing)	3
6.2.1	استضافة خدمة التداول عبر الإنترنت خارج موقع شركة الوساطة العضو 1- شركات الوساطة التابعة لبنك أو فرع بنك مرخص للعمل في الأردن	3
6.2.2	استضافة خدمة التداول عبر الإنترنت خارج موقع شركة الوساطة العضو 2- شركات الوساطة الأردنية العضو التابعة لبنك أو لشركات وساطة إقليمية أو دولية	3
6.2.3	استضافة خدمة التداول عبر الإنترنت خارج موقع شركة الوساطة العضو 3- شركات الوساطة المستخدمة لتقنية الحوسبة السحابية ((Cloud Computing	3
7	متطلبات البنية التحتية للموقع البديل (Disaster Recovery)	3
6.1	استضافة خدمة التداول عبر الإنترنت في موقع شركة الوساطة	3

*** يطبق جدول الأولويات على البنود المطبقة عند شركات الوساطة العاملة حالياً.

رقم الأولوية	الفترة
1	سنة ونصف
2	سنتين ونصف
3	اختياري



طلب عضوية

دائرة الإدراج

طلب عضوية

بيانات عامة:-		
1-	الاسم الكامل للشركة باللغة العربية:	
2-	الاسم الكامل للشركة باللغة الإنجليزية:	
3-	الاسم المختصر للشركة باللغة العربية:	
4-	الاسم المختصر للشركة باللغة الإنجليزية:	
5-	تاريخ تسجيل الشركة لدى وزارة الصناعة والتجارة:	
6-	تاريخ الموافقة على الترخيص من قبل هيئة الأوراق المالية:	
7-	الصفة القانونية للشركة:	
8-	رأس المال المصرح به/دينار:	
9-	رأس المال المكتتب به والمدفوع/دينار:	
10-	صندوق البريد والرمز البريدي:	
11-	البريد الإلكتروني:	
12-	عدد الفروع / المكاتب :	
13-	المدير العام / التنفيذي أو القائم بأعماله:	
14-	رقم هاتف المدير العام / التنفيذي أو القائم بأعماله:	
15-	البريد الإلكتروني للمدير العام / التنفيذي أو القائم بأعماله:	
16-	المدير المالي:	
17-	مدير الوساطة أو القائم بأعماله:	
18-	رقم هاتف مدير الوساطة أو القائم بأعماله:	
19-	البريد الإلكتروني لمدير الوساطة أو القائم	

	بأعماله :	
-20	ضابط الامتثال:	
-21	رقم هاتف ضابط الامتثال:	
-22	البريد الإلكتروني لضابط الامتثال:	
-23	ضابط الارتباط:	
-24	رقم هاتف ضابط الارتباط:	
-25	البريد الإلكتروني لضابط الارتباط:	

التراخيص الممنوحة من قبل هيئة الأوراق المالية:

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

أسماء المفوضين بالتوقيع عن الشركة ونماذج تواقيعهم:

	الاســـم	الوظيفة	نموذج التوقيع
-1			
-2			
-3			
-4			
-5			
-6			
-7			

-8			
-9			
-10			

أسماء الشركاء وحصصهم ونسبة مساهماتهم في رأس مال الشركة أو أسماء المساهمين ب 5% أو أكثر:

	الاســـم	الحصة	نسبة الملكية
-1			
-2			
-3			
-4			
-5			
-6			
-7			

أسماء أعضاء مجلس الإدارة أو أعضاء هيئة المديرين وأسماء أشخاص الإدارة التنفيذية العليا ونسبة مساهمة كل منهم حسب واقع الحال:

	الاســـم	المنصب	نسبة الملكية
-1			
-2			
-3			
-4			
-5			
-6			

-7			
-8			
-9			
-10			

أسماء الوسطاء الماليين المعتمدين من قبل هيئة الأوراق المالية العاملين في الشركة (وسيطان على الأقل):

	الاســـم	الفرع	تاريخ منح الاعتماد
-1			
-2			
-3			
-4			
-5			
-6			
-7			
-8			
-9			
-10			
-11			
-12			
-13			
-14			
-15			
-16			
-17			

أسماء الموظفين:

	الاســـم	الوظيفة
-1		
-2		
-3		
-4		
-5		
-6		
-7		
-8		
-9		
-10		
-11		
-12		
-13		
-14		
-15		
-16		
-17		
-18		
-19		

معلومات المركز الرئيسي والفروع:-

المركز الرئيسي:

العنوان:			
مدير المكتب:		عدد الوسطاء:	
رقم الهاتف:		عدد شاشات التداول:	
رقم الفاكس:		عدد شاشات الرقابة:	

فرع 1:

العنوان:			
مدير الفرع:		عدد الوسطاء:	
رقم الهاتف:		عدد شاشات التداول:	
رقم الفاكس:		عدد شاشات الرقابة:	

فرع 2:

العنوان:			
مدير الفرع:		عدد الوسطاء:	
رقم الهاتف:		عدد شاشات التداول:	
رقم الفاكس:		عدد شاشات الرقابة:	

فرع 3:

العنوان:			
مدير الفرع:		عدد الوسطاء:	
رقم الهاتف:		عدد شاشات التداول:	
رقم الفاكس:		عدد شاشات الرقابة:	

المرفقات المطلوبة:

1. شهادة تسجيل الشركة وحق الشروع في العمل .
2. عقد تأسيس الشركة ونظامها الأساسي .
3. نسخة من الترخيص الممنوح للشركة من قبل الهيئة لممارسة العمل كوسيط .
4. المصدرون الذين تملك الشركة أو أي من أعضاء مجلس إدارتها أو أي من أعضاء هيئة مديريها أو مديرها أو معتمديها (5%) أو أكثر من الأوراق المالية الصادرة عنهم.
5. اسم وعنوان مدقق حسابات الشركة.
6. آخر تقرير مالي سنوي مدقق من قبل مدقق حسابات الشركة إن وجد.
7. اجراءات العمل الخطية المتعلقة بكافة أعمال الوسيط.

إقرار وتعهد:-

- تقر الشركة على مسؤوليتها الكاملة وتحت طائلة المسؤولية بأن جميع المعلومات والبيانات ضمن هذا الطلب والمرفقة معه صحيحة وأنه للبورصة الحق في اتخاذ كافة الإجراءات اللازمة وفق التشريعات المعمول بها في حال تبين خلاف ذلك.
- تقر الشركة بموافقتها على قيام البورصة بتزويد المعلومات الخاصة بالشركة لأي جهة رسمية مختصة.
- تتعهد الشركة بالالتزام بأحكام قانون الأوراق المالية والأنظمة والتعليمات والقرارات الصادرة بمقتضاه.
- تتعهد الشركة بإعلام البورصة بأي تغيير يطرأ على المعلومات الواردة فور حدوثها.

اسم المفوض بالتوقيع:

المنصب:

التوقيع وختم الشركة:

التاريخ:

ملاحظات:

* يراعى عند تقديم الطلب أن تحقق الشركة الشروط الواردة في المادة (4) من نظام العضوية.
* يرفق كتاب من الشركة لطلب العضوية في البورصة.
* يتم تسليم النموذج لدائرة الإدراج في بورصة عمان يرفق مع النموذج أسماء كافة الدوائر والأقسام في الشركة وموظفيها.
* يتكون هذا الطلب من (9) صفحة .

ملحق (2)

المتطلبات الفنية لتشغيل
واستخدام أنظمة إدارة الأوامر

نسخة الإصدار	التاريخ
2.0	7-06-2021
عدد الصفحات	بورصة عمان
7	

مقدمة

تتضمن هذه الوثيقة المتطلبات الفنية التي يجب توفرها في أنظمة إدارة الأوامر لاعتمادها من قبل بورصة عمان والموافقة على تشغيلها واستخدامها لدى شركات الوساطة.

تستهدف الوثيقة

شركات الوساطة الأعضاء في بورصة عمان والشركات المزودة لأنظمة إدارة الأوامر.

التعديلات

النسخة	وصف التعديل
2.0	تعديل المتطلبات الفنية المتعلقة ببوابة تبادل المعلومات (FIX) لتتوافق مع نظام التداول الجديد (OPTIC)

وثائق مرتبطة

يرجى قراءة هذه الوثيقة مع الوثائق التالية:

1- أسس تقديم المعلومات الفورية لأعضاء بورصة عمان.
2- المتطلبات الوظيفية لأنظمة إدارة الأوامر.
3- التعاميم الصادرة عن بورصة عمان لتنظيم خدمة أنظمة إدارة الأوامر.

المحتويات

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1. المتطلبات الفنية المتعلقة بنظام إدارة الأوامر (Order Management System)

1- عدم إمكانية الدخول إلى نظام إدارة الأوامر إلا بموجب معلومات دخول تتضمن اسم المستخدم وكلمة المرور، وألا يُسمح باستخدام المعلومات نفسها للدخول إلى النظام من أكثر من جهاز بنفس الوقت.

2- توفير سجل تاريخي (Historical Log) لحركات مستخدمي نظام إدارة الأوامر يتضمن المعلومات التالية على الأقل:

- اسم المستخدم
- نوع المستخدم (مشرف، مُتداوِل، مراقب، عميل....)
- صلاحيات المستخدم
- تاريخ ووقت الدخول
- تاريخ ووقت الخروج
- حركات المستخدم
- عنوان الاتصال (IP Address) للأجهزة المرتبطة بخادم إدارة نظام المعلومات (OMS).

3- توفير تقارير حول المعلومات المذكورة أعلاه.

4- توفير اسم مستخدم وكلمة مرور لصالح بورصة عمان على نظام إدارة الأوامر (OMS) لتمكين البورصة من إجراء عمليات التدقيق على الخدمة، وبما يمكنها الوصول إلى المعلومات المذكورة أعلاه.

5- توفير اسم مستخدم وكلمة مرور لصالح بورصة عمان على الخادم الخاص (Server) بنظام إدارة الأوامر (OMS)، وبما يمكنها الوصول إلى المعلومات المذكورة أعلاه عن بعد (Remotely) وفي أي وقت.

6- الالتزام بتعبئة الحقول (Tag 528,538,525) في البرتوكول (FIX) بالقيم المبينة أدناه، وذلك للتمييز بين مصدر أوامر الشراء والبيع المدخلة وعلى النحو التالي:

Client ID

Presence Condition: Conditional

Case 3: Used to specify the Position Account Owner. If the Client ID is not provided in the entering order it means the trading member is the Position Account Owner;

- *NestedPartyID (524)* = field in which the **ID of the Client ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 3 (Client ID)

In other words, where before you expected tag '109' to contain the **ID of the Client**, you will now need to look for a NestedParty component where:

- Tag '538' = 3
- Tag '525' = C
- Tag '524' = **ID of Client**

Order Origin	Tag 524- No. of Digits	Tag 524 Value
Broker OMS Station	3	OMS station serial number; 001, 002, ...etc.
Online Trading (Web or Desktop app)	3	999
Client/ Online Trading (Mobile App)	3	990

2. المتطلبات الفنية المتعلقة بالاتصال ببوابة تبادل المعلومات (OEG-FIX)

1- توفر البورصة خادم رئيسي وخادم احتياطي للاتصال ببوابة تبادل المعلومات (OEG-FIX).

2- يتصل الوسيط ببوابة تبادل المعلومات (OEG-FIX) من خلال الاتصال بالخادم الرئيسي، وذلك لإدخال الأوامر باستخدام برتوكول (FIX5.0).

3- يُحول نظام إدارة الأوامر (OMS) الاتصال تلقائياً من الخادم الرئيسي إلى الخادم الاحتياطي في حالة فشل أو انقطاع الاتصال بالخادم الرئيسي.

4- يضمن نظام إدارة الأوامر (OMS) لدى الوسيط عند الاتصال بالخادم الاحتياطي معالجة معلومات التداول اعتباراً من آخر رسالة مستلمة من خلال الاتصال القديم وبما يمنع أية أخطاء في معلومات التداول المعروضة أو المرسلة.

3. المتطلبات الفنية المتعلقة بتزامن التوقيت بين نظام إدارة الأوامر (Order Management OMS System) و نظام التداول الالكتروني

1- توفر البورصة خادم تزامن (NTP server) لغايات تزامن التوقيت بين نظام إدارة الأوامر (OMS) ونظام التداول الالكتروني.
2- يتصل نظام إدارة الأوامر (OMS) لدى الوسيط بخادم التزامن (NTP server) لتحديت الوقت والتأكد من تزامنه مع نظام التداول الإلكتروني.
3- يضمن نظام إدارة الأوامر (OMS) إدخال الأوامر بالوقت الصحيح والمتزامن مع نظام التداول لدى البورصة .

4. المتطلبات الفنية المتعلقة بنظام بث المعلومات الفورية للتداول (Live Data Feed)

1- اتصال نظام إدارة الأوامر بخادمين رئيسيين لبث المعلومات (Real Time MDG Data Feed Servers) وخادمين رئيسيين لبث المعلومات (Snapshot MDG Data Feed Servers)، وذلك للحصول على معلومات التداول الحية والمباشرة بشكل متزامن (Active-Active) من خلال الخادمين، سواءً حصل الوسيط على المعلومات من خلال البورصة أو من خلال شركة توزيع بيانات معتمدة من قبل البورصة.

5. المتطلبات الفنية المتعلقة بنسخة نظام إدارة الأوامر (Order Management OMS System)

1. يلتزم مطورو أنظمة إدارة الأوامر بتطبيق نظام إصدار لنسخ البرامج التي يتم تطويرها.
2. يلتزم مطورو الأنظمة بتزويد البورصة برقم الإصدار لنظام إدارة الاوامر (OMS) للنسخة المراد اختبارها أو المطبقة حالياً لدى شركات الوساطة.

3. يلتزم مطورو الأنظمة بعدم تعديل أنظمة أدارة المعلومات لدى شركات الوساطة بعد إصدار شهادة اعتماد البرنامج أو الانتهاء من اختباره ، الا بعد موافقة البورصة على التعديلات واختبارها.
4. يقوم مطورو الأنظمة بتزويد البورصة بكود لملفات تشغيل النظام (Hash Code MD5) بهدف مقارنة نسخة النظام المطبقة عند الوسيط بالبرنامج الذي تم اختباره والموافقة على تطبيقه.

ملحق (3)

Amman Stock Exchange
Internet Trading - IT Controls

Control	Control Existence	Management Approval	Periodic Review	Comp.?	Comments
Information Security Policy The company should develop an information security policy that should cover the following:					
• Data management and classification					
• Physical and environment security					
• Internet and intranet security					
• Email security					
• Communication and operations management					
• Logical access controls					
• Acquisition, development and maintenance of information systems					
• Periodic review of information security policy					
Confidentiality Requirements All employees shall sign a confidentiality agreement with their respective companies					
• Confidentiality agreement					
• Annual review of the agreements by the company's management					
• More strict provisions in the agreement for employees serving in critical positions					
System Vendors Vendors access to companies' information system shall be provided based on a formal contract					
• Signing system vendors agreements					
• Agreements shall contain confidentiality and non-disclosure clauses					
• Term of service					

Physical and Environmental Security Physical access to information processing areas and their supporting infrastructure should be controlled					
• Secure Data Center (servers and communication equipment)					
• Limited access					
• Authorized access					
• Access logged					
• Firefighting equipment					
• UPS and generators if possible					
• Maintenance agreements for Data Center equipments					
• Labeling all equipment and cables					
Operational Procedures and Responsibilities Companies should develop an operational procedures manual that documents all its critical processes and all changes to information systems environment shall be documented					
• Operational procedures manual includes: ✓ Applications ✓ Hardware specifications ✓ Operating systems ✓ Database configuration ✓ Network configuration					
• Document, review, authorize, and test changes in operational manual					

Password Management (for customers and employees) All information systems shall require identification and authentication through passwords.					
• Passwords authorization, creation, communication procedures					
• All systems must be password protected					
• Minimum passwords length six characters					
• Passwords should be alphanumeric					
• Stored passwords in Databases should be encrypted					
• Default passwords should be changed					
• Unused accounts should be removed					
• User accounts lock after three failure attempts to login					
• Users' credentials reset procedure after lock					
• Session inactivity handling procedure					
Monitoring Significant event details in information systems shall be logged and reviewed					
• Logging significant events for: ✓ Application ✓ Database ✓ OS ✓ Hardware					
• Review logs periodically					

Information Backup and Media Handling All applications, databases, user configuration, and hardware configuration shall be back upped in accordance with backup and restoration procedures. Media shall be controlled and physically protected					
• Backup should include databases, applications, operating systems, hardware configuration: ✓ Backup schedules and procedures ✓ Backup restore procedures ✓ OS mirroring					
• Labeling backup media					
• Backup media should be stored in safe and secure environment					
• Backup copies with documented restoration procedure should be stored in remote locations					
Network Access Control and Configuration Management The following policies shall be complied with during configuration of the companies' firewalls					
• Internal network must be segregated from the ASE network using firewalls and ACLs. Back office must be located in the DMZ					
• Firewall should be placed between DMZ and internal networks					
• All protocols ports and services allowed should be documented					
• Disable unnecessary and insecure services and protocols					
• Review firewall logs periodically					
• Installation of the latest security patches					

World Wide Web Companies WWW resources shall be secured					
• Secure online trading application servers under firewalls' DMZ					
• Applications and Databases vulnerabilities assessment (by the ASE)					
Protection against Viruses					
• Installing Antivirus applications that is constantly updated with the latest virus definitions released					
Securing Customer Transactions Companies should implement adequate cryptographic techniques to secure transactions transit					
• Strong encryption protocols for transmissions of transactions					
Contingency Plans The company should develop a contingency plan pertaining to the Internet trading process					
• Contingency Plan for Internet trading service					

ملحق (4)

خطة طوارئ لشركة الوساطة
في حال حدوث خلل في خدمة التداول عبر الإنترنت

تتضمن هذه الخطة الإجراءات التي تقوم بها شركة الوساطة في حال حدوث خلل في تقديم خدمة التداول عبر الإنترنت، وذلك لضمان جودة الخدمة المقدمة من قبل الشركة:-

1- في حال تعطل أي مما يلي:

أ- خدمة الإنترنت، سواء كان الانقطاع في الاتصال بين العميل وشبكة الإنترنت أو كان انقطاع في الاتصال بين شركة الوساطة وشبكة الإنترنت، أو حدوث بطء شديد في خدمة الإنترنت مما يحول دون القدرة على إدخال الأوامر من قبل العميل ومتابعتها ومتابعة أسعار الأسهم.

ب- نظام (Web Server) الخاص بشركة الوساطة.

يقوم العميل بالاتصال بشركة الوساطة عن طريق الهاتف أو الفاكس أو البريد الإلكتروني لتعديل أو حذف أوامره المدخلة أو إدخال أوامر جديدة إلى نظام التداول، حيث يقوم الوسيط بمتابعة أوامر العميل المدخلة وتعديلها أو حذفها أو إدخال أمر جديدة من خلال نظام (OMS).

2- في حال تعطل نظام (OMS) والذي يحول دون قدرة العملاء من متابعة أوامرهم المدخلة أو إدخال أوامر جديدة عبر الإنترنت، كما و يحول دون قدرة الوسيط من متابعة أوامر العملاء المدخلة أو إدخال أوامر جديدة من خلال نظام (OMS).

يقوم العميل بالاتصال بشركة الوساطة عن طريق الهاتف أو الفاكس أو البريد الإلكتروني لتعديل أو حذف أوامره المدخلة أو إدخال أوامر جديدة إلى نظام التداول، حيث يقوم الوسيط بمتابعة أوامر العميل المدخلة وتعديلها أو حذفها أو إدخال أوامر جديدة من خلال شاشات نظام التداول الإلكتروني (Trading Station) الموفرة من قبل البورصة بعد التحقق من الرصيد النقدي والرصيد من الأوراق المالية للعميل.

3- في حال تعطل خط الـ (Leased Line) الرئيسي الرابط بين شركة الوساطة وبورصة عمان يتم التحويل بشكل مباشر إلى الخط البديل (Back up Leased Line).

4- في حال عدم تمكن شركة الوساطة من استلام بث المعلومات(Market Data Feed) من بورصة عمان لأي سبب من الأسباب، توقف الشركة خدمة التداول عبر الإنترنت الخاصة بعملائها، كما توقف الشركة تعديل أو إدخال الأوامر من خلال نظام (OMS) وذلك لتجنب إدخال الأوامر بأسعار غير صحيحة. كما يقوم العميل بالاتصال بشركة الوساطة عن طريق الهاتف أو الفاكس أو البريد الإلكتروني لتعديل أو حذف أوامره المدخلة أو إدخال أوامر جديدة إلى نظام التداول، حيث يقوم الوسيط بمتابعة أوامر العميل المدخلة وتعديلها أو حذفها أو إدخال أوامر جديدة من خلال شاشات نظام التداول الإلكتروني (Trading Station) الموفرة من قبل البورصة بعد التحقق من الرصيد النقدي والرصيد من الأوراق المالية للعميل.

- التأكيد على ضرورة إضافة رقم هاتف الخط الساخن، وعنوان الموقع الإلكتروني للشركة.

ملحق (5)

Document title

OPTIQ COMMERCIAL OEG CLIENT SPECIFICATIONS – FIX 5.0 INTERFACE

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PREFACE

Purpose

This document sets out the client messages specifications for Optiq OEG using the FIX 5.0 format. More specifically, it describes the contents of administrative and application messages and provides detailed field descriptions.

Associated Documents

The following list of the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- Optiq Commercial OEG Client Specifications – SBE Interface
- Optiq Commercial Kinematics Specifications
- Optiq Commercial Error List
- Optiq Commercial MDG Client Specifications
- Optiq Commercial Files Specifications
- Persistence Engine Detailled Configurations

What's New?

Version	Change Description
1.2.12	**The following sections have been updated:** - OrderCancelReplaceRequest (G): Clearing Account now applicable to the OrderCancelReplaceRequest (G) - ClearingAccount: Applicable Conditions updated

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1.. SOLUTION OVERVIEW

1.1 INTRODUCTION

Optiq Order Entry Gateway (OEG) provides high-speed and real-time connection to the Exchange.

The system has the following high-level features:

- **Predictability**
- **Ultra-low latency**
- **Cash message harmonization**
- **High availability**
- **Reliable network solution**
- **High level of scalability**

This document provides detailed information about the features of the system to support the development of client applications.

1.2 GLOSSARY

This section provides some high level definitions of commonly used terms of this document. Please note that some of these terms are described in more details in the dedicated sections within this document.

- **Optiq:** is a multi-market full trading chain technology platform.
- **Order Entry Gateway (OEG):** is the software that manages the access for exchanges' clients, and acts as the private interface between the clients and the Optiq matching engine.
- **Market Data Gateway (MDG):** is the software that provides high-speed, real-time market data (public messages) for the Exchange markets.
- **Matching Engine:** is the software that manages the trading services for the Exchange markets.
- **Optiq Segment:** defines a universe of instruments habitually sharing common trading properties. An OPTIQ Segment can contain one or several asset classes. An OPTIQ Segment access is setup through a Logical Access.
- **Partition:** is a technical subdivision of an Optiq Segment. An Optiq Segment may be comprised of at least one or several partitions, physically independent from one another, but connected to each other within the context of the OPTIQ Segment. Instruments may move from one partition to another within an Optiq segment.
- **Logical Access:** is an OEG (Order Entry Gateway) entry point, setup for clients to connect to a single OPTIQ Segment, containing the technical configuration for the client's connectivity. Multiple logical accesses can share the same SFTI line.
- **OE Session:** the individual physical connection, to a single Partition. A single Logical access may have as many OE sessions as there are partitions in the Optiq segment.
- **Simple Binary Encoding (SBE):** is the open source binary protocol used as the solution for market data and order entry messaging in Optiq. SBE was designed within the FIX Protocol Limited organization, with a focus on low-bandwidth utilization and the goal of producing a binary encoding solution for low-latency financial trading.

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- **Symbol Index:** is a unique system-wide identifier (in private and public messages) assigned to a trading instrument in Optiq. Note that an instrument here represents either a single tradeable instrument, an index or a strategy. It represents the combination of the following instrument characteristics: ISIN, MIC, Currency and when required the MIC of the Market of Reference,. SymbolIndex will not change over the lifetime of the instrument, but can take a different value for the same instrument, depending on the environment (Prod or Test).
- **Message:** is a discrete unit of communication, provided in pre-defined format, which depends on the chosen protocol and the target functionality it relates to, containing information exchanged between the Exchange and its clients, to enable trading on its systems.
  - **Administration message** is an electronic instruction from client or response from the OEG used to exchange technical, non-trade related information, most notably used to setup and maintain connectivity between a client and an OEG.
  - **Application message** is an electronic instrument from a client or a response from the OEG, used to exchange order and trade related information, including requests and events that impact orders and trades, but do not directly represent them.
  - **Order:** An order is an electronic instruction from a firm to buy or sell an instrument via Optiq. Firms can send many types of buy, sell and cross orders that are matched upon arrival or placed in the order book to await a match.
  - **Trade:** A trade is an electronic agreement between the client(s) that submitted the order(s) to exchange for a certain quantity of one or more instruments, for one of the various forms of reimbursements (payment, exchange of goods, services, etc.).
- **Standing Data:** provides referential data characteristics of all trading instruments available on the Exchange. The data is provided via files and messages.
  - **Standing data files** contain referential data characteristics of the trading instruments and strategies that may be required, or provided as value-added information. These files are provided on a daily basis and can be obtained from a separate HTTPS service.
  - **Standing data messages** contain the basic information of each instrument and strategy, and are disseminated via MDG at the start of each trading session and intra-day on creation of Derivative instruments.
  - Clients should refer to the **MDG documentation** for the full details about these services.
- **Self-Trade Prevention (STP):** Service provided by the Exchange on its trading platform, to allow trading clients to avoid unintentional trading with themselves.
- **Firm:** A firm is an investment firm or financial institution that deals, advises, and/or acts on behalf of its clients and possibly itself on the Exchange.
- **A Firm Access:** An entity allowing the Firm to access the Trading Platform:
  - **Regular Access**: when a firm contracts its own and exclusive order entry access means directly with Exchange, the Firm Trading Solution type is Regular Access (or sometimes Direct Access).

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2.. ORDER ENTRY MAIN PRINCIPLES

2.1 NEW INSTRUMENT SEGREGATION - OPTIQ SEGMENT

High reliability, significantly increased throughput and latency performance with minimal standard deviation, improved flexibility in delivery of new functionalities and products, shorter time to market as well as the improved resiliency will be ensured within Optiq in part by introduction of the new instrument segmentation through Optiq Segments.

2.1.1 Optiq Segments

An Optiq Segment defines a universe of instruments sharing common trading and financial properties, it allows Exchange to segregate instruments among hermetic universes to facilitate clients' organisation toward Exchange financial markets.

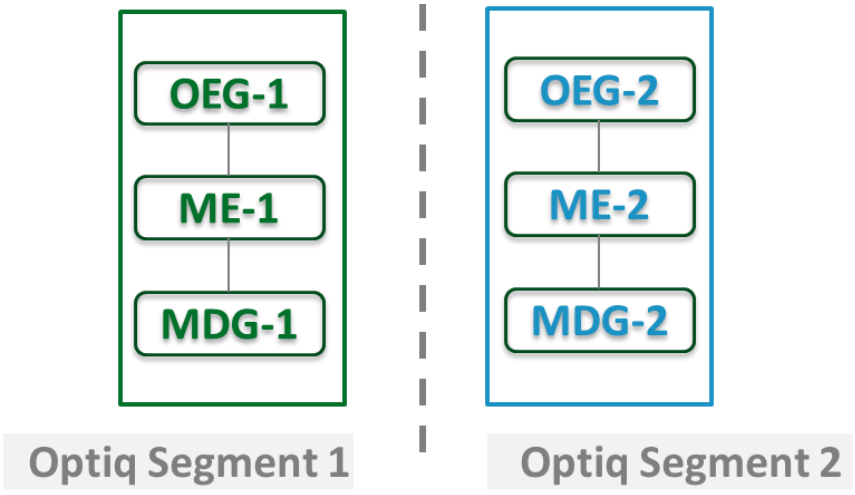
For the implementation of Optiq Segments the instrument universe is rationalized and reorganized to fit the new structure.

A segment can contain one or several asset classes. Information of the Optiq Segment to which an instrument belongs to / hosted on is communicated to clients within the Standing Data files and messages.

Clients must be aware of the different existing Optiq segments and the instruments they host in order to identify which segment(s) they would connect to.

- Segmentation provides:
  - Improvement in resiliency - failure of a single Optiq segment should have limited direct technical impact on other Optiq segments;
  - Increased flexibility – possibility of independent software and operational lifecycle.

Illustration of two different segments:



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2.1.2 Partitions

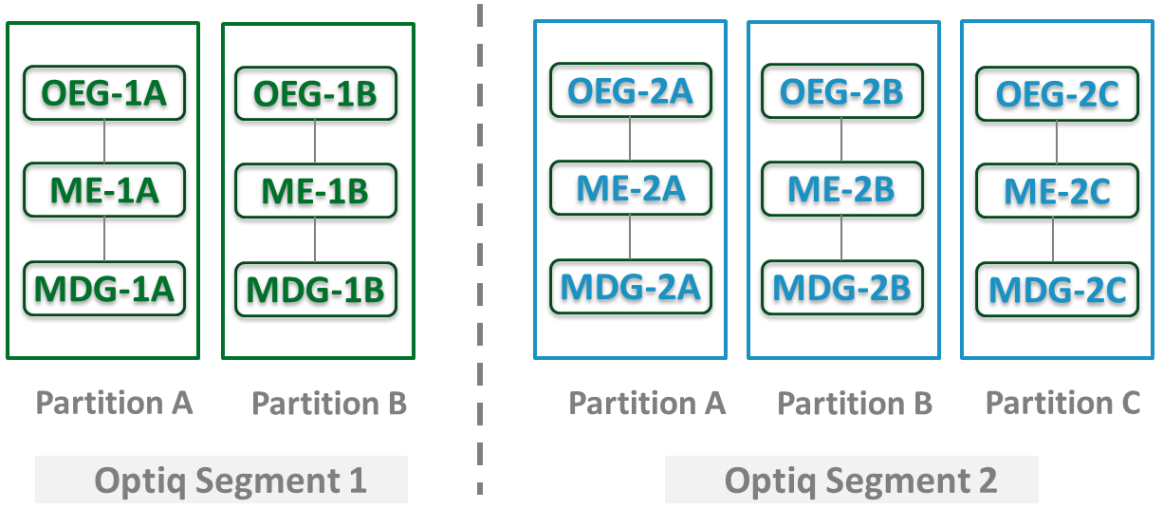
An Optiq Segment may be comprised of one or more physical partitions.

A partition is composed of an Order Entry Gateway (OEG), a Matching Engine (ME) and a Market Data Gateway (MDG).

Instruments have the flexibility to be moved from one partition to another within an Optiq segment.

- Partitioning provides the following benefits:
  - Improved resiliency - failures on one partition impact only a fraction of the market / clients;
  - Improved scalability: simple and seamless scalability model based on horizontal scalability principles;
  - Ensured stable latency and high performance.

Illustration of segments divided into partitions:



2.1.3 Logical Access and OE Sessions

Access to an Optiq Segment requires a dedicated Logical Access:

- A Logical Access is a point of entry configuration for connectivity to a specific Optiq Segment and allows the client to technically reach all the instruments belonging to the particular segment for which an access is setup.
  - A Logical Access is dedicated to an Optiq Segment, i.e. a single Logical Access cannot connect to two different Optiq Segments;
  - Clients may have several Logical Accesses per Optiq Segment;
  - It allows the client to connect to all partitions belonging to the segment either directly or indirectly;
  - The physical connection is managed at the OE Session level and there is at least one per Logical Access.
- An OE session corresponds to the actual physical connection of the client to a partition:
  - OE Sessions are automatically created by the Exchange upon creation of a Logical Access;
  - OE Session is the login identifier for each physical connection represented by the combination of the *LogicalAccessID* and the *OEPartitionID*. These two fields represent an ID which is unique across the whole system and across the various Optiq Segments;

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- One OE Session always belongs to one Logical Access, but a Logical Access can have multiple OE Sessions. There can be as many OE Sessions as there are partitions in the Segment;
- An OE session inherits the majority of characteristics setup for the Logical Access;
- By default OE Sessions hold the ownership of the orders entered through it.

2.1.4 Full mesh OEG-ME Connection

If a segment has multiple partitions, for the best possible response times, clients should initiate an OE session for each available partition and send messages through it only for the instruments hosted on this partition. However, a client may use a single OE Session to access all the instruments of an Optiq Segment, no matter how many partitions compose the segment. This is made possible by the full mesh OEG-ME connectivity provided by Optiq as represented in the diagram below. Such cross-partition access will incur additional response times.

By default, the responses to the private response messages sent through a different partition will return to the OE session holding the ownership of the order (from which it was sent). However the corresponding MDG messages will be issued by the partition on which the instrument is hosted.

As it relates to the OEG and private messaging, Order ownership is the technical belonging of the order to the physical connection that submitted the order, or to the physical connection that took ownership of the order. Outbound messages are sent to the OE Session that owns the corresponding order. Functionally the orders belong to the Firm (designated by its Firm ID), and for the scope of change of ownership; modification can only be done by the requestor with the same Firm ID, and between physical connections or Logical Accesses that are set with the same Firm ID.

Illustration of segments, partitions and connectivity:

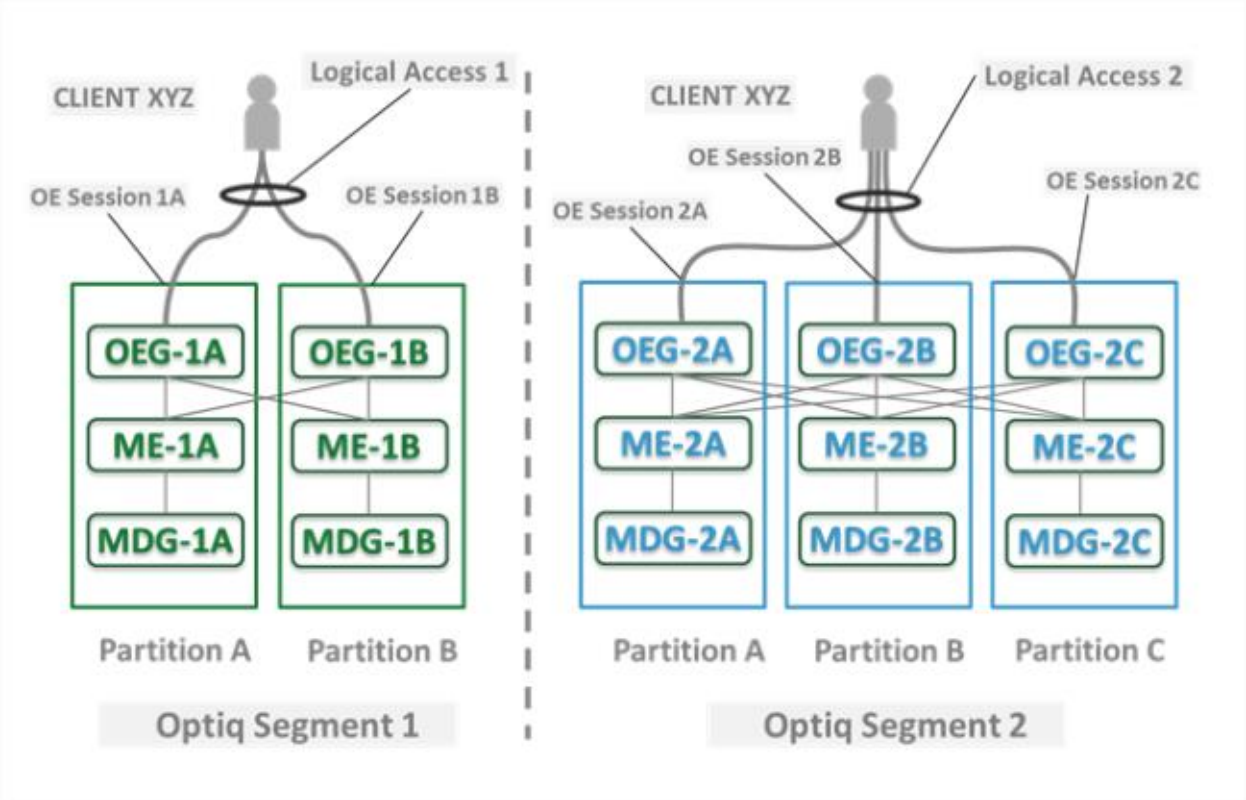

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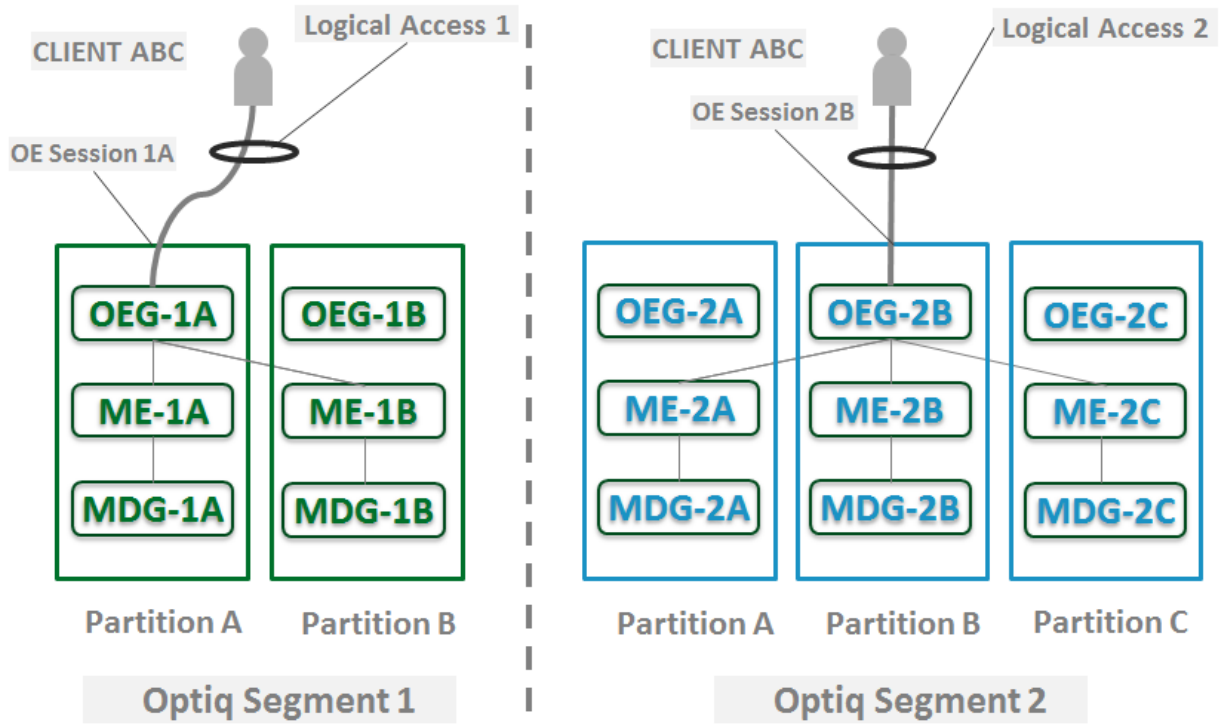
Illustration of the full mesh connectivity:



2.1.5 Determine the "shorter path"

In order to benefit from the best response times the clients should send messages directly to the partition on which the instrument is located. To identify on which partition each instrument is located, clients must use, and update on a daily basis, their referential data by downloading the Standing Data files or using the **Standing Data** (1007) market data messages, where details of the *Partition ID* assigned to each instrument are provided.

Note: *The link between Local Symbol and Symbol Index will only be available in the Standing Data file.*

2.1.6 Setting Up Connectivity

The Exchange provides connectivity information within a dedicated document, the Connectivity Detail specifications, covering all required technical details. Ranges of IPs / Ports and Multi-cast channels are identified for each Optiq segment for Order Entry and Market Data gateways.

To take full advantage of the scalability of Optiq, and ensure continuity of service, clients are strongly encouraged to setup connectivity to the full range specified per segment for OEG and MDG. Individual partitions will be assigned a sub-set of values identified within the specified ranges.

In addition the relevant details for OEG and MDG connectivity per instrument will be communicated in the referential standing data files provided on a daily basis. For the details of the format in which this data is provided please refer to the Standing Data File specifications.

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2.1.7 Overnight instrument migration between partitions

In order to improve latencies and predictability, an overnight load balancing mechanism is introduced by the new Optiq system. This new technical mechanism implies that every day all instruments belonging to an Optiq Segment may potentially be relocated across the partitions belonging to this Optiq Segment.

Please note that this migration between partitions will not cause instruments to migrate from one Optiq Segment to another Optiq Segment.

Every instrument can migrate overnight from one partition to another. It means that connectivity information associated to an instrument can change every day, which is why it is crucial for clients to daily update their referential data by downloading the standing data files provided on the Exchange server.

Please refer to the *Optiq Commercial MDG Client Specifications* document for further details on standing data files.

Note: While migration of instruments between Optiq Segments is not expected to be a regularly occurring event, it may arise, and will be done with prior notification to clients.

2.1.8 Added / Removed Partition

The partitioning of the Optiq Segments, and full-mesh connectivity, allows the Exchange to add or remove a partition without impacting the clients' connectivity. Clients will still be able to access all the instruments belonging to an Optiq Segment by connecting to an already existing partition, as adding/removing a partition will not impact the other partitions, or the OE sessions.

In all cases the clients will always be notified before such changes are performed.

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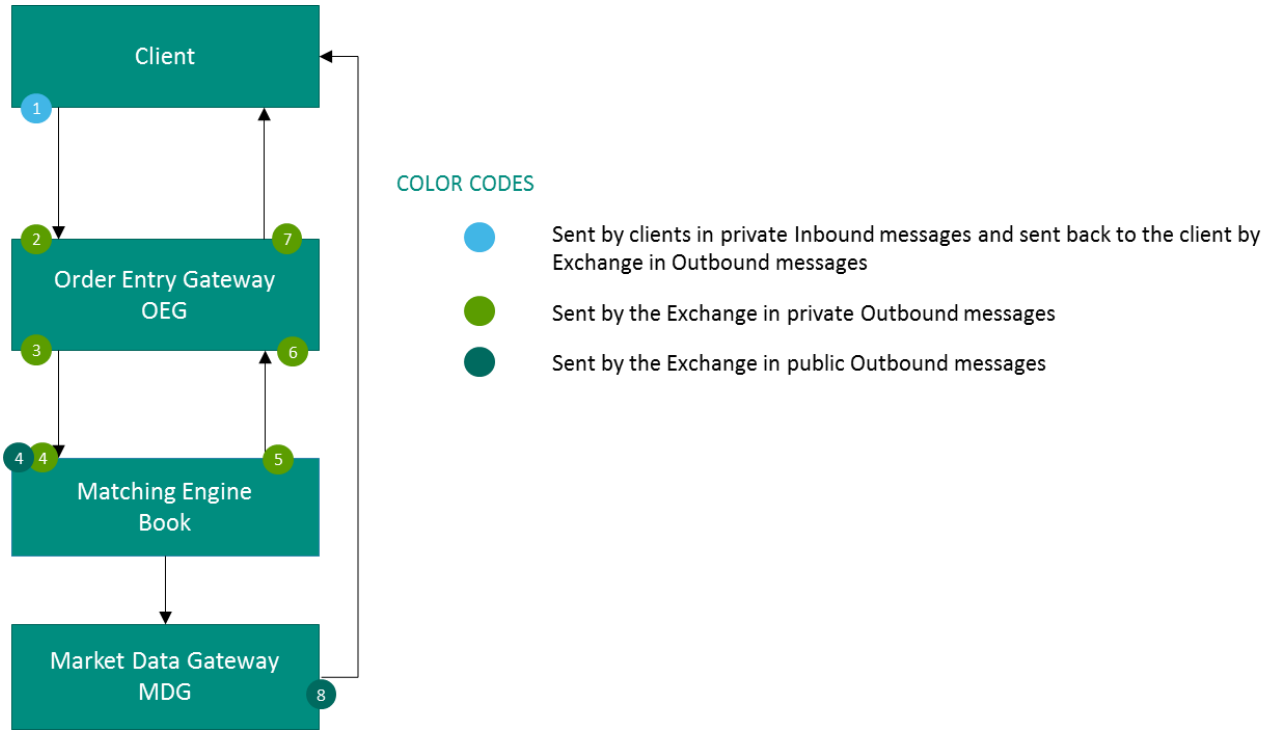
2.2 TECHNICAL FEATURES

2.2.1 Latency Monitoring and Timestamps

Outbound messages provide several internal timestamps to allow the clients to monitor the processing time of the system at different levels.

- The following diagram represents the different timestamps provided in the outbound messages:



#	Field name	Description of data provided
1	*TransactTime*	is assigned by the Client in his inbound message.
2	*OEGINFromMember*	is assigned by the OEG after decoding the inbound message.
3	*OEGOUTToME*	is assigned by the OEG when sending the inbound message to the matching engine.
4	*BookINTime*	is assigned by the ME when receiving the inbound message from the OEG.
5	*BookOUTTime*	is assigned by the ME when sending the outbound message to the OEG.
6	*OEGINFromME*	is assigned by the OEG when receiving the outbound message from the ME.
7	*SendingTime*	is assigned by the OEG when sending the outbound message to the client. Corresponds to the OEG Out To Member timestamp in SBE.
8	*PacketTime*	is assigned by the MDG when sending the message to the market.

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2.2.2 Drop Copy

Drop Copy is a service, providing near real-time copies of trade reports & order messages, usually used for risk management and for compliance needs.

Clients require a dedicated connection to receive Drop Copy messages, which can be setup with configuration that fits their needs.

The service will be available in FIX protocol only. Further details will be provided in a dedicated document.

2.3 CLIENT ORDER ID MANAGEMENT

2.3.1 Client Order ID Overview

Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.

In FIX protocol the Client Order ID is provided in the field ***ClOrdID (11).*** Clients may provide any value that respects the *ClOrdID* format and the ranges as defined below. The field format is a string of 20 characters accepting only numerical values ('0'…'9').

The Exchange recommends setting an unique ID per order, Firm *(SenderCompID (49))* and Symbol Index *(SecurityID (48)).*

For order entry, the *ClOrdID* value is not checked by the Exchange, it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request.

For modification and cancellation using the *OrigClOrdID* as unique identifier[1], the value is checked by the Exchange for possible duplicates, i.e. different live orders originally submitted with the same *ClOrdID*. In case of duplication, the inbound request is rejected with the associated error code.

2.3.2 Client Order ID for Order Management

Clients can submit modification and cancellation requests by using the *OrigClOrdID* as unique identifier, i.e. the value of the *ClOrdID* as submitted previously with the original order.

This allows clients to use the *ClOrdID* as unique identifier to modify or cancel their orders per Symbol Index (*SecurityID*) and Firm (*SenderCompID*), in addition to the *OrderID*. It does not restrict clients to use the *OrderID* to manage their orders.

Please note that *ClOrdID* provided for the modification requests will not be updated in the live order itself; order will keep its original *ClOrdID.*

To properly perform the inbound request, the system checks that the value exists on the corresponding Symbol Index (*SecurityID*) among live orders belonging to the requesting Firm (*SenderCompID*). If no order is found the request is rejected, or if more than one order is found the request is also rejected. In this case clients must use the *OrderID* to reach their orders.

As the uniqueness of the *ClOrdID* is not checked by the Exchange for order entry but only in case of modification and cancellation requests, clients who want to use the *OrigClOrdID* as unique identifier for these

[1] If both *OrigClOrdID* and *Order ID* are provided in a modification or cancellation request, the *OrigClOrdID* is totally ignored and the request is performed on *OrderID* only.

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requests must ensure on their own the unicity of the *ClOrdID* per Symbol Index (*SecurityID*) and Firm (*SenderCompID*) for orders they submit.

As requests using the *OrigClOrdID* require additional checks to be performed by the system, clients may observe a slight increase of the response time for these requests. Hence to ensure the best possible response times clients are encouraged to use *OrderID* as the reference for their orders.

2.3.3 Client Order ID Ranges

Depending on the nature of the client access, the *ClOrdID* must respect some constraints as described below.

Moreover it is recommended that clients implement their own configurable prefix in order to allow firms to integrate several application instances easily and ensure *ClOrdID* uniqueness across all the firm orders.

2.3.3.1 For Regular "In House" Accesses

For Regular In-House accesses (i.e. non via ISV):

- clients must use the positive number range only;
- numerically it means that clients are restricted to values from 0 to 2^63 -1.

2.3.3.2 For Regular Accesses via ISV

For Regular access via ISV:

- clients must use the negative number range only;
- clients must insert at the beginning of the field the unique ISV ID, which will be provided by the Exchange.
  - the ISV ID is composed of three digits
- numerically it means that clients are restricted to a range from –XXX0000000000000000 to –XXX9999999999999999, where XXX is their ISV ID.

The correct use of the ISV ID and range is checked by the exchange during the conformance test, however afterwards the OEG will not perform any checks of the correct assignment of the ID or range in the inbound application message.

2.4 ORDER ID

The *OrderID (37)* used in the messages for trading purposes is a numerical order identifier assigned by the matching engine, unique per instrument over the entire lifetime of the order, which means that this value remains unchanged, even upon submission of the modifications of the order using **OrderCancelReplaceRequest** (G) message.

For reconciliation purposes with Exchange clearing & settlement partners clients may obtain the Order Number and the Order Entry Date from the *OrderID* field, which is composed of two parts required for this, as depicted below:

- the least-significant 5 characters include the relative calendar days number since 1-jan-1970 at 0:00 UTC (EPOCH); (Please note, currently the clearing partners may use the date corresponding to this value in ASCII format)

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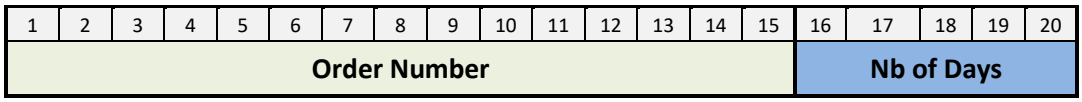
The remaining most-significant 15 characters will include the Order Number.



In case a FIX message is rejected for Technical reasons, it isn't processed by the matching engine. In this case Order ID is neither allocated by the matching engine, nor provided in the rejection message.

Technical rejection cases can be identified by the type of the Error code, as provided in the field "Technical / Functional" within the Error code table in the *Optiq Commercial Error List document.*

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3.. ORDER ENTRY GATEWAY SPECIFICS

3.1 SESSION MANAGEMENT

3.1.1 Logon Overview

Clients initiate a TCP/IP session to the Order Entry Gateway, and then initiate a logon by sending the **Logon** (A) message. Session Logon is always initiated by the client. The **Logon** (A) message must be the first message sent by the client otherwise the OEG will drop the connection, and needs to be sent individually to each partition to which physical connection will be established. Please refer to the description of use for the individual messages and Kinematics document to see the various cases and the associated expected exchange of messages.

After the logon is successful application messages may be exchanged between the client and server. A client has *n* seconds after they connect to send a logon request, otherwise the server drops the connection.

The parameter n has a specific value for each Optiq Segment that is specified in the Configuration Detail specifications document to be provided by the Exchange to the Members.

3.1.2 Heartbeats and TestRequests

The OEG uses the **Heartbeat** (0) and **TestRequest** (1) messages to ensure the connection between the client and the Exchange is up and functioning properly. During periods of inactivity the mechanism used by the OEG functions as described below.

OEG sends a:

- **Heartbeat** (0) message after the given delay of inactivity on its side, i.e. the OEG sends a **Heartbeat** message after it hasn't sent out any messages within *n* second(s). In case no other messages, the clients will receive at least one **Heartbeat** (0) message every *n* second(s) when they are logged on. This ensures the client that OEG is up and functions properly.
- **TestRequest** (1) message after the given delay of inactivity on the client side, i.e. when the client has not sent any message within the last *n* second(s).
  - The client has another, equivalent time delay to answer the **TestRequest** (1) message by sending back to the OEG a **Heartbeat** (0) message.
  - Otherwise if the client does not issue the responding **Heartbeat** (0) message within the given delay, the OEG closes the connection. (Note that this disconnection triggers the Cancel on Disconnect mechanism for any messages in scope).

The **TestRequest** (1) message can also be sent by the client to the OEG at any moment and the OEG will answer with a **Heartbeat** (0) message.

The parameter n has a specific value for each Optiq Segment that is specified in the Configuration Detail specifications document to be provided by the Exchange to the Members.

3.1.3 Logout

Normal termination of the message exchange session will be completed via the exchange of **Logout** (5) messages.

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3.1.4 Message Sequence Usage

Optiq FIX messages are identified by a unique sequence number. Sequence numbers are initialized at the start of each FIX session starting at 1 (one) and increment throughout the session. Monitoring sequence numbers will enable parties to identify and react to missed messages and to gracefully synchronize applications when reconnecting during a FIX session.

Each session will establish an independent incoming and outgoing sequence series; participants will maintain a sequence series to assign to outgoing messages and a separate series to monitor for sequence gaps on incoming messages.

3.2 CANCEL ON DISCONNECT MECHANISM

Cancel on Disconnect is a mechanism which triggers an automatic cancellation of all non-persisted orders upon disconnection of the client whether voluntary or due to an issue.

In typical day-to-day operations the Cancel On Disconnect applies at the OE Session level, which means that it is triggered per OE Session (physical connection) and it does not affect other OE Sessions that belong to the same Logical Access.

By default the Cancel On Disconnect is enabled for all clients and for all their Logical Accesses / OE Sessions. It means that every single order is checked for Cancel On Disconnect.

The Cancel On Disconnect mechanism is triggered when the connection between a client and the OEG is dropped. If the client application is disconnected from the OEG, then all live quotes and non-persisted orders submitted during current day's trading sessions, and belonging to the corresponding OE Session are cancelled for their remaining quantity, regardless of order type and validity type.

When the mechanism kicks in, a **ExecutionReport** (8) are sent to the OE Session for which the mechanism has been triggered for each order and instrument where orders were killed. If the client has not yet reconnected the messages will be queued until he returns.

Clients can indicate on each order if they want it to be persistent, i.e. not included in the scope of the Cancel On Disconnect mechanism. If the *CancelOnDisconnectionIndicator* (21018) field is set to 1 (one) which stands for "Order not in the scope of Cancel On Disconnect" for an order, this order will not be cancelled even if the Cancel On Disconnect kicks in for the OE Session it belongs to.

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4.. FORMATTING

The general format of a OEG message is a standard header, followed by the message body fields and terminated with a standard trailer.

This section describes:

- The Conventions used for field format definition.
- The standard header and trailer of the private (or directed) messages used to communicate with the Order Entry Gateway (OEG) application, which provides access to members to Optiq.

4.1 FIELD FORMAT

A FIX message is composed of a collection of **"<Field tag>=<Field value>"** format. Every FIX field has an associated data type that limits the possible values for the characters used to fill this field.

According to FIX 5.0, all tags must have a value specified.

Table below provides the mapping for the types specified in the "Type" column of message tables and the FIX types described in the official FIX 5.0 specifications document.

Format	Length	FIX 5.0 Type
Char	1	Char
String	N > 1	String
Currency	3	Currency
Boolean	1	Boolean
Int	N	Int
Price	N	Price
Qty	N	Qty
Amt	N	Amt
Percentage	N	Percentage
Length	N	Length
Float	N	Float
LocalMktDate	8	LocalMktDate
SeqNum	N	SeqNum
MultipleCharValue	N	MultipleCharValue
NumInGroup	N	NumInGroup
MonthYear	N	MonthYear
UTCTimestamp	27	UTCTimestamp (Format: YYYYMMDD-HH:MM:SS.sssssssss)

Alphanumerical fields: authorized characters are the following ones:

'0'..'9' 'a'..'z' 'A'..'Z' '"' '#' '$' '&' '(' ')' '+' '-' '.' ',' '/' ':' '<' '=' '>' '@' '*' '+' '^' '_' '`' '~' ',' '-' ' '

Numerical fields: although binary data exist in FIX protocol (notion of raw data used by fields with FIX type "data"), such data are not used in the FIX messages for OEG. Numerical fields are expressed in ASCII characters '0'..'9' and decimal separator '.'.

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String fields: authorized formats are alphanumeric free format strings, which can include any character or punctuation, except the delimiter. All String fields are case sensitive (e.g. EXCHANGE != exchange).

- Note: certain fields are provided in string format (FIX 5.0 compliance) but the authorized characters are restricted to numerical values ('0'..'9') (e.g., fields using **FIRM ID**)

Length: the value provided in the "Len" column of the table above indicates the field length:

- When a value is provided (e.g. '1' for Char type, or '27' for UTCTimestamp type), it indicates that the field value must have the exact length indicated.
- When N is used (e.g. String or Price types), it indicates that the related FIX type has no defined length according to FIX specifications. However, a value is usually provided in the message structures, indicating the maximum length of the field value according to OEG (the value may actually be shorter).

Please refer to the official FIX 5.0 specifications document (chapter "FIX PROTOCOL SYNTAX", section "Data Types") for further details.

- In all the message structures provided of this document (the tables representing the messages only):
  - Where a list of specific allowed values is provided, if the client provides data that is outside of the specified range, the message will be rejected
  - In the fields description the following pictograms represent:
    - [C] - the value is for Cash only;
    - [D] - the value is for Derivatives only;
    - [i] - special conditions apply to the displayed value. These conditions are detailed in the description of the corresponding field in the "Conditions" row.

Price: float field representing a price without decimal places. The real Price value must be calculated as described in the section Price, Quantity, Ratio and Amounts Formats

Qty: float field representing a quantity without decimal places. The real quantity value must be calculated as described in the section Price, Quantity, Ratio and Amounts Formats

Amt: float field representing an amout (typivally Price times Qty) without decimal places. The real amount value must be calculated as described in the section Price, Quantity, Ratio and Amounts Formats

MultipleCharValue: string field allowing sending multiple values at the same time. This field contains one or more space delimited single character values (e.g. |18=0 1 0|) with each possibly indicating different values and/or flags. Each filled in value is normally set to zero (0) or one (1) and should be used as indication of whether the position in the field should be processed or not. Each value provided should be read based the meaning provided for possible values in the description of the each field.

For example, the field *TradeQualifier (21080)* of type MultipleCharValue has 5 possible values which can be simultaneously sent on a 13 characters length string, as follows:

1	2	3	4	5	6	7	8	9
0		**1**		**0**		**1**		**0**

In this example, the values filled correspond to the positions in the field, and indicate possible values that should be interpreted as follows:

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Value position	Position represents	Value Meaning in Example
1	0 = Uncrossing Trade	0 (No) - the trade didn't occur during Uncrossing Phase
3	1 = First Trade Price	1 (Yes) – Opening trade
5	2 = Passive Order	0 (No) – Not a passive order
7	3 = Aggressive Order	1 (Yes) – An Aggressive order
9	4 = Trade Creation by Market Operations	0 (No) – Trade NOT created by Market operations

4.2 STRUCTURE REPRESENTATION

Some messages may contain a subset of consecutive fields (a repeating group) that can be repeated a variable number of times.

Generally the number of times a repeating group is repeated is specified by the numerical field (the counter) preceding that group.

In this document, repeating groups (including their counter) are highlighted with heavy, dark green edges and light grey background, like in the example below:

				…			
	Counter			Repeating Group Counter			
				Repeating Group	Min and max values affect the minimum and maximum message length		

Nested repeating components

In some cases it is necessary to have components (groups of fields) repeated within another repeating group, within a single FIX message. Such "sub"-groups are called nested repeating components. Nested repeating components are especially important in representation of the Parties component, identifying the multiple different cases of the entities participating in the order.

In this document, to easily differentiate from the repeating group within which they are used, nested repeating components are designated within the message definition via:

- Highlighting of the fields within the components with dark gray background, and
- Wider left green outline
- In the tag column, tag number preceded by the symbol "**->**" for all fields that comprise the nested repeating component

If a nested repeating component is used, they are always specified inside another repeating group (identifiable with a green outline and light grey background), and the outer repeating group is always specified.

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				...			
	Counter			Repeating Group Counter			
				Repeating Group	Min and max values affect the minimum and maximum message length		
->	Nested Counter			Nested Repeating Group Counter			
->				Nested Repeating Group	Min and max values affect the minimum and maximum message length		
->							

4.3 FIX OPTIONAL FIELDS

Optional and conditional fields can be set to null value as defined by the FIX standard. Optional and conditional fields are handled as defined by the FIX standard.

If a field is identified to be set to "null value" (e.g. in the associated messages for SBE Interface) - the field isn't provided in FIX.

For more details please refere to section "Conditional Values in Outbound Messages" within this document.

4.4 NOT APPLICABLE / FUTURE USE

In preparation for various functionalities expected to be implemented in the future on Optiq a number of messages and fields were added and flagged “For Future Use”.

Details of functionalities flagged in the specifications as for ‘Future Use’ or ‘Not Applicable [N/A]’ are provided for information purposes only, and may change significantly until such time as the finalised specifications for the relevant service are communicated to clients.

The associated messages and effective use of fields will not be technically supported. Use of these fields in inbound messages will lead the message to be rejected by the system.

This behaviour applies to:

- **Fields** flagged as ‘For Future Use’, ‘Pending Regulatory Approval’ or ‘Not Applicable [N/A]’;
- **Values** flagged with ‘[D]’;

Note: Fields and Values for future use or not applicable, in the messages structures, are represented in *italic, grey and with [N/A] preceding the field description*.

Field	Message	Behaviour
PegOffsetValue (211)	NewOrderSingle (D) OrderCancelReplaceRequest (G)	This tag should not be sent. If provided, OEG will issue an ExecutionReport (8) with

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Field	Message	Behaviour
		ErrorCode set to *2212 Feature forbidden for this market - Peg Offset*
PegPriceType (1094)	NewOrderSingle (D) OrderCancelRequest (F) OrderCancelReplaceRequest (G)	This tag should not be sent. If provided, OEG will issue an ExecutionReport (8) with **ErrorCode set to** *2519 Feature forbidden for this market – PegPricetype (2519)*
SelfMatchPreventionID (2362)	NewOrderSingle (D) OrderCancelReplaceRequest (G)	This tag should not be sent. If provided, OEG will issue an ExecutionReport (8) with **ErrorCode set to** *2520 Feature forbidden for this market - SelfMatchPreventionID (2362)*
ExpireTime (126)	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)	This tag should not be sent. If provided, OEG will issue an ExecutionReport (8) with **ErrorCode set to** *2111 Order Validity forbidden for the current OptiqSegment/EMM/MarketModel combination*
OrderCategory (21041)	OrderCancelRequest (F) OrderMassCancelRequest (q) OrderMassCancelReport (r) OrderMassStatusRequest (AF) OwnershipRequest (U18) OwnershipRequestAck (U29)	This tag should not be sent. If provided, OEG will issue an OrderCancelReject (9) with **ErrorCode set to** *2224 Feature forbidden for this market - OrderCategory (21041)*

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4.5 DATE AND TIME CONVENTIONS

Date and Time provided in this document refer to the following names, and are provided in the following format:

- Date and Timestamps are expressed in UTC (Universal Time, Coordinated) and are synchronised using Precision Time Protocol (PTP). Their format is defined in number of nanoseconds since 01/01/1970 UTC, and is populated using a string of 27 characters, as follows :

YYYYMMDD-HH:MM:SS.sssssssss

where:

  - "YYYY" is the year.
  - "MM" is the month.
  - "DD" is the day.
  - "HH" are the hour.
  - "MM" is the minute.
  - "SS" is the second.
  - "sssssssss" is the fraction of a second (nanoseconds).

- *Note:* Expiry Date for Good Till Date (GTD) orders follow their own rules, please refer to the field description for further details.

4.6 PRICE, QUANTITY, RATIO AND AMOUNT FORMATS

If a price is needed in the messages, it is expressed in currency or in percentages (generally for bonds).

The volume of the order is a number of Securities or an amount expressed in currency.

All prices are processed using two values:

- the price value (Signed/Unsigned Integer);
- the scale code (*Price/Index Level Decimals*).

Clients have to link each instrument to the associated "*Price/Index Level Decimals*" from the Standing Data message or file.

The prices must be calculated according to the following formula:

$$\text{Price} = \frac{Integer}{10^{\text{"Price/Index Level Decimals"}}}$$

For example, a price of 27.56 is sent in messages in the Price field as an Integer of 275600, if the "*Price / Index Level Decimals*" from the Standing Data is equal to 4.

- The same mechanism is used for:
  - All quantities with "*Quantity Decimals*"
  - All ratios and percentages with "*Ratio / Multiplier Decimals*"
  - All amounts with "*Amount Decimals*"

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4.7 INSTRUMENT IDENTIFICATION AND EMM

4.7.1 Symbol Index

An instrument is identified by its Symbol Index. In FIX protocol this value is provided in field **SecurityID** (48).

The standard security identifier (for example ISIN), mnemonic, tick size, instrument name and other instrument characteristics are carried only in the following Market Data messages: **Standing Data** message (1007) and in the Standing Data files available on the Web and SFTI HTTPS server. As such, the client applications must link the Symbol Index (SecurityID) which is used in all messages, with other instrument characteristics present in the **Standing Data** (1007) message or file.

The Symbol Index (SecurityID [tag:48]) is assigned by the Exchange and will not change for the lifetime of the instrument.

In some extraordinary cases an instrument can move from one Optiq segment to another keeping its Symbol Index. Clients will always be notified in advance before such changes.

Any Corporate Action leading to a change of ISIN will lead to change of Symbol Index. These Corporate Actions are generally part of the mandatory reorganisation events; the most frequent ones being stock split, reverse stock split, change of name / denomination. However the ISIN change is not systematic and will be in any case communicated upfront through by the Exchange.

For further details on the Standing Data messages and files please refer to the *Optiq Commercial MDG Client Specifications.*

4.7.2 Order Priority

The *OrderPriority (21004)* is provided in private **ExecutionReport** (8) messages for orders shown to the Market. It is used to allow clients to reconcile with the Market Data feed as the *OrderPriority* is also provided in the **Long Order Update** (1015) message.

For Stop orders *OrderPriority (21004)* will be provided in the private **ExecutionReport** (8) acknoledgement message. This order priority indicates the rank of the stop order on its arrival. If multiple stop orders exist with the same price conditions, they would be triggered in the order of the priority assigned to the stop order upon entry.

When Stop orders are triggered, a new **ExecutionReport** (8) acknoledgement message is issued, with the field *OrdStatus (39)* set to "S = Stop Triggered Ack", they will be assigned a new order priority that indicates their priority vs. the rest of the book.

For further details please refer to the description of the **ExecutionReport** (8) message and to the Kinematics document in Section *1.2.5.1 Private and Public feed reconciliation*.

4.7.3 EMM

The Exchange Market Mechanism represents the platform to which the order sent by the client must be routed. It must be specified by clients each time a Symbol Index [provided in *SecurityID (48)*] is specified as it is used to route the order to the right platform. In FIX protocol this value is provided in the custom field *EMM (20020).*

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4.8 MESSAGE HEADER & TRAILER

4.8.1 Message Header

Client ◀▶OEG
Message Usage:

The header identifies the type, length, destination, sequence number, time and point of origin of each OEG FIX 5.0 message.

Origin and destination information of each message is held by the fields SenderCompID (49) and TargetCompID (56).

There are two fields that help with the resending of messages:

- PossDupFlag (43) - is set to Y when a message is being resend because it was prompted by the system or as result of a ResendRequest.
- PossResend (97) - is set to Y when a message, already sent, is being reissued with a new sequence number (e.g. resending an order).

The receiving application should process these messages as follows:

- PossDupFlag (43) - If a message with this sequence number has been previously received, ignore message, if not, process normally.
- PossResend (97) - Forward the message to the application and determine if was previously received (i.e. verify order ID and parameters).

Note: This field can only be set by the OEG (if set by the client application, a **Reject** (3) message is sent back by the Optiq ME).

Tag	Field	Short Description	Format	Len	Values	Presence	Page
8	BeginString	Beginning of message identifier.	String	9	FIXT.1.1 (Always unencrypted, must be first field in message)	Mandatory	101
9	BodyLength	Message length including header, body and trailer.	Length	6	Integer	Mandatory	101
35	MsgType	Message type.	String	3	(See field description)	Mandatory	119
34	MsgSeqNum	The MsgSeqNum is mandatory for all inbound messages.	SeqNum	10	From 1 to 9 999 999 998.	Mandatory	118
49	SenderCompID	Identifier of the member firm that sends the message.	String	8	Inbound: Firm ID Outbound: Exchange ID	Mandatory	135
56	TargetCompID	Message receptor ID.	String	8	Inbound: Exchange ID Outbound: Firm ID	Mandatory	139
115	OnBehalfOfCompID	ID of the issuing firm when the message is send through a third party.	String	8	Inbound: Firm ID Outbound: Not used	Conditional	124

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
128	DeliverToCompID	ID of the receiving firm when the message is sent through a third party.	String	8	Inbound: Not used Outbound: Firm ID	Conditional	108
43	PossDupFlag	Identifies if a message is being retransmitted or not.	Boolean	1	N = Original transmission (default) Y = Possible duplicate	Optional	130
97	PossResend	Indicates if the message contains information that was already sent under a different sequence number.	Boolean	1	N = Original transmission Y = Possible resend	Optional	130
52	SendingTime	Time (in ns) of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	136
122	OrigSendingTime	Original time (in ns) of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	128
369	LastMsgSeqNumProcessed ~~LastMsgSeqNumProcessed~~	Indicates to the Client which was the Message Sequence Number of the last message processed by the Exchange	SeqNum	10	From 1 to 9 999 999 998.	Conditional	115

4.8.2 Message Trailer

Client ◀▶OEG

Message Usage:

The trailer is used to segregate messages and contains the three digit character representation of the checksum value.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
10	CheckSum	Simple checksum.	String	3	Numerical	Mandatory	103

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4.9 REJECTION AND DISCONNECTION WHEN HANDLING MISSING MANDATORY TAGS OR INCORRECT VALUES IN TAGS

Upon the reception of an inbound message, the Exchange (through OEG) rejects the message if it is poorly formatted, e.g, missing a mandatory field, in the provided fields data is outside of the range of the possible values. In addition to this general rule the table below identifies specific cases when fields or values provided result either rejection of connection, or disconnection of the client disconnection from the OEG. The various cases are grouped by the field / tag.

Field (tag)	Value	Behaviour
MsgType (35)	Missing	If this field is missing in the first message following the physical connection of the client, no matter the type of message sent, OEG closes the connection.
BeginString (8)	Missing	If the inbound message is missing the field *BeginString* (8) or if this field has an unauthorized value, then the OEG will close the connection and will not issue any message back to the client
	Incorrect Value	
BodyLength (9)	Missing	If this field is missing in the first message following the physical connection of the client, no matter the type of message sent, OEG closes the connection.
	Incorrect Value	If the inbound message has a wrong *BodyLength* (9) the message will be ignored by the OEG
CheckSum (10)	Wrong	If the inbound message has a wrong *CheckSum* (10) the message will be ignored by the OEG
MsgSeqNum (34)	Missing	If this field is missing in the first **Logon** (A) message, OEG sends back a Logout (5) with *SessionStatus* (1409) = **104** (Invalid logon Value)
		If the message is not a Logon (A) and this field is missing, OEG closes the connection
SenderCompID (49)	Missing	If the field is missing in any message, OEG closes the connection and if relevant disconnects the client
	Incorrect Value	If the first message is a Logon (A), OEG sends back a **Reject** (3) with fields set as *TargetCompID* (56) = **INCORRECT VALUE** and *SessionRejectReason (373)* = **9** (CompID problem), and the connection is not established.
		If the first message is not a Logon (A), OEG disconnects the client
TargetCompID (56)	Missing	If the field is missing in any message, OEG disconnects the client
	Incorrect Value	If the **Logon** (A) message sent by the client has the *TargetCompID* (56) that exceeds the length of the field, OEG disconnects the client
		If the **Logon** (A) message has a value in *TargetCompID* (56) that doesn't correspond to the one set for the Logical Access, OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **9** (CompID problem)
PossResend (97)	=Y	If there is no session established and client send a message to the Exchange with *PossResend* (97)=Y, the tag is ignored and the message is processed
		If the connection is already established and a messages is sent with PossResend (97)=Y or if the PossResend (97)=Y is set in the **Logon** (A) message OEG sends a **Reject** (3) message with *SessionRejectReason* (373) = **5** (Value is incorrect (out of range) for this tag)
SendingTime (52)	Missing	If the field is missing in the first message that is a **Logon** (A), OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **1** (Required Tag Missing)

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Field (tag)	Value	Behaviour
		If the field is missing in the first message that is not a Logon (A), OEG closes the connection
	Out of Range	If the field is provided with a value that is out of range in the first message that is a **Logon** (A), OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **5** (Value is incorrect (out of range) for this tag)
		If the field is provided with a value that is out of range in the first message is not a Logon (A), OEG closes the connection
	Incorrect Value	If the field is provided with an incorrect value in the first message that is a **Logon** (A), OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **6** (Incorrect data format for value)
		If the field is provided with an incorrect value in the first message that is not a Logon (A), OEG closes the connection
HeartBtInt (108)	Incorrect Value	If the client sends a **Logon** (A) message with *HeartBtInt* (108) having an incorrect value, OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **5** (Value is Incorrect (out of range) for this tag)
EncryptMethod (98)	≠ 0	If the client sends a **Logon** (A) message with *EncryptMethod* (98) with a value different from **0** (zero), OEG sends back: • a **Reject** (3) message with *SessionRejectReason* (373) = **7** (Decryption problem), followed by • a **Logout** (5) message with *SessionStatus* (1409) = **104** (Invalid logon Value)
OEPartitionID (21019) LogicalAccess (21021)	Unknown combination	If the client sends a **Logon** (A) message with an unknown combination of values in fields *OEPartitionID* (21019) and *LogicalAccess* (21021), OEG sends back a **Logout** (5) message with *SessionStatus* (1409) = **5** (Invalid Username or Password)
NextExpectedMsgSeqNum (789)	> 1	If the client sends the first **Logon** (A) message of the day with *NextExpectedMsgSeqNum* (789) higher than 1, OEG sends back a **Logout** (5) message with *SessionStatus* (1409) = **10 (**Received NextExpectedMsgSeqNum(789) is too high)
	< 1	If the client sends the first **Logon** (A) message of the day with *NextExpectedMsgSeqNum* (789*)* equal to **0** (zero), OEG sends back a **Reject** (3) with *SessionRejectReason* (373) = **5** (Value is incorrect (out of range) for this tag)
DefaultApplVerID (1137)	≠ 9	If the client sends a **Logon** (A) message with *DefaultApplVerID* (1137) with a value different than **9** (nine), OEG sends back a **Reject** (3) message with *SessionRejectReason* (373) = **18** (Invalid/Unsupported Application Version)

4.10 SEQUENCE NUMBER GAP MANAGEMENT & REJECTION

Among other methods, OEG uses sequence numbers of messages to keep track of orderly exchange of messages between the Exchange and the client.

A gap between the message numbers may indicate the possibility of missed messages and usually implies the need for re-synchronization of messages or message sequence numbers between the Exchange and the client. As such occurrence of gaps must be detected and managed by use of Gap fill. The gap detection can be performed either by the Exchange, through OEG, or by the client.

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Re-synchronization is done to ensure orderly state of information in each party's systems and the same mechanisms are used by the Exchange in day-to-day run, as well as in cases of recovery after disruptive incidents.

In FIX protocol in cases where a gap is identified the re-synchronization of missed messages between the Exchange and the client may be managed by use of the **Logon** (A) and **ResendRequest** (2) and **SequenceReset** (4) messages.

This section describes various cases and associated behaviour when gap of sequence numbers is detected by the Exchange, as well as the cases when the messages and attempts at re-synchronization are rejected.

The Gap Fill behaviour is managed according to FIX Protocol and takes into account that a gap can be detected in the following cases:

- Upon a Logon Request
- During the trading session while the Client and the Exchange are sending and receiving messages from each other
- Upon a Logout Request

4.10.1 Gap Detection & Management

4.10.1.1 Upon a Logon Request

In order to establish a connection with the Exchange the client sends a **Logon** (A) message to the trading or drop copy gateway. The **Logon** (A) message has a field *NextExpectedMsgSeqNum* (789) that must be used to indicate to the Exchange the sequence number of the last message that was received by the client incremented by one (+1) when re-connecting during the session, and must be set to 1 in the first Logon of the Day. Additionally, as in all message it also contains the field *MsgSeqNum* (34) to indicate the message sequence number. In case a gap is detected through the values provided in the **Logon** (A) message, the gap is filled without sending of the **ResendRequest** (2) messages.

The table below presents the cases where a gap will be detected on Logon, without causing Exchange to ignore or reject the message, as well as the expected behaviour:

MsgSeqNum (34)	NextExpectedSeqNum (789)	Behaviour
Value received is **higher** than the expected one	Value received is the expected one	OEG will acknowledge the **Logon** (A) message and wait for the client to: • resend all the messages that are identified as missed by the gap **OR** • send a *SequenceReset* (4) message indicating the next correct sequence number to be processed by the Exchange
Value received is the expected one	Value received is **lower** than the expected one	OEG will acknowledge the **Logon** (A) message and resend all the outbound messages that the client missed, which are assumed to be starting from the message with sequence number provided in the field *NextExpectedMsgSeqNum* (789) and up to the last known message

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MsgSeqNum (34)	NextExpectedSeqNum (789)	Behaviour
Value received is **higher** than the expected one	Value received is **lower** than the expected one	In this case both the Exchange and client will detect a gap / missed messages. To manage the gap of both sides OEG will acknowledge the **Logon** (A) and: • expect that the client will resend the missing inbound messages, while • resending to the client the message that outbound messages identified as missed

4.10.1.2 During the Trading Session

During a trading session, it is possible that either the client or the Exchange miss incoming and/or outgoing messages. In order to detect such missed messages, the field *MsgSeqNum* (34) must be checked and, if the value provided in this field is higher than the expected then a gap is detected.

The following subsections present how to fill a gap that is detected in following particular cases:

- from an Administration message that is not a Logon (A), Logout (5), ResendRequest (2) or a SequenceReset (4)
- from an Application message

4.10.1.2.1 Gap in Administration Messages

In case where the gap is identified from an Administration message that is not a **Logon** (A), **Logout** (5), **ResendRequest** (2) or a **SequenceReset** (4) the message that resulted in occurrence of the gap is ignored by the Exchange. To manage the gap generated by this case client must take one of the following actions:

- resend all the messages requested by the Exchange via the ResendRequest (2) message (replacing the HeartBeat (0) by a SequenceReset (4) with GapFillFlag (123) set to Y) and issue a new HeartBeat (0) once the gap is filled OR
- send a new SequenceReset (4) message with GapFillFlag (123) set to Y and NewSeqNo (36) set to the sequence number of the next message that will be sent to the Exchange.

Note

When the Gap is detected through a **Logon** (A) or a **Logout** (5) message, OEG will not ignore the message originating the gap. OEG will process the **Logon** (A) or the **Logout** (5) but won't increment his own "*NextExpectedSeqNum*".

4.10.1.2.2 Gap in Application Messages

In case where the gap is identified from an Application message, the message that resulted in occurrence of the gap is ignored by the Exchange. To manage the gap generated by this case client must take one of the following actions:

- resend all the messages requested by the Exchange via the ResendRequest (2) message OR
- send a **SequenceReset** (4) message with fields *GapFillFlag* (123) set to **Y** and *NewSeqNo* (36) set to the sequence number of the next message that will be sent to the Exchange.

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4.10.1.3 Upon a Logout Request

A **Logout** (5) message can be sent either by the Exchange or by the client. If the Exchange detects a gap in the **Logout** (5) message sent by the client, the message is processed as follows:

- OEG processes the **Logout** (5) message sent by the client
- OEG issues a **ResendRequest** (2) requesting the range of messages that were missed and then waits for them to be either
  - resent by the client, or
  - to be replaced by a **SequenceReset** (4) with *GapFillFlag* (123) set to **Y** and *NewSeqNo* (36) set to the sequence number of the next message that will be sent to the Exchange

Client's connection is not disconnected until either the gap in messages is addressed by the actions identified above, or the time of inactivity has passed and client hasn't responded to a **TestRequest** (1) message.

Note

- When the Gap is detected through a **Logon** (A) or a **Logout** (5) message, OEG will not ignore the message originating the gap. OEG will process the **Logon** (A) or the **Logout** (5) but won't increment his own "*NextExpectedSeqNum*".

4.10.1.4 Gap Fill Processing – Rejection Cases

During the gap fill processing, all the functional and technical checks will be performed normally on all the messages in order to insure their integrity. The table below identifies all the rejection cases linked to the processing of the gap fill:

Description of Case Causing Rejection	Associated OEG Behaviour
ResendRequest (2) sent by the client has the *BeginSeqNo* (7) set to **zero '0'**	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **5** (Value is incorrect (out of range) for this tag)
ResendRequest (2) sent by the client has the *BeginSeqNo* (7) **higher** than the *MsgSeqNum* (34) of the last message sent by OEG	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **20** (Requested MsgSeqNum is higher than last known MsgSeqNum)
ResendRequest (2) sent by the client has the *EndSeqNo* (16) **lower** than the *BeginSeqNo* (7)	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **21** (EndSeqNo is lower than BeginSeqNo)
ResendRequest (2) sent by the client has the *EndSeqNo* (16) **higher** than the *MsgSeqNum* (34) of the last message sent by OEG	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **20** (Requested MsgSeqNum is higher than last known MsgSeqNum)
The message resent by the client does not have the *PossDupFlag* (43)	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **1** (Required tag Missing)
The message resent by the client does not have the *OrigSendingTime* (122)	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **1** (Required tag Missing)
The message resent by the client has the *OrigSendingTime* (122) **higher** than the *SendingTime* (52)	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **5** (Value is incorrect (out of range) for this tag)
The message resent by the client has a *MsgSeqNum* (34) **lower** than the expected one	OEG issues a **Logout** (5) with *SessionStatus* (1409) = **9** (Received MsgSeqNum(34) is too low)
The message resent by the client has a *MsgSeqNum* (34) **higher** than the expected one	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **22** (MsgSeqNum too high)
The client issues a *SequenceReset* (4) with *GapFillFlag* (123) set to **N**	OEG issues a **Logout** (5) with *SessionStatus* (1409) = **105** (SequenceReset - Reset Mode not allowed)

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Description of Case Causing Rejection	Associated OEG Behaviour
The client issues a *SequenceReset* (4) with *NewSeqNo* (36) **lower** than the *MsgSeqNum* (34)	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **19** (NewSeqNo too low)
The client issues an **HeartBeat** (0), **TestRequest** (1), **ResendRequest** (2), **Logout** (5) or **Logon** (A) with *PossDupFlag* (43) set to **Y** while OEG is waiting for a gap to be filled	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **23** (Invalid MsgType while waiting for Gap fill)
The client sends a message with *PossDupFlag* (43) set to **Y** when OEG is not in Gap Fill Mode	OEG issues a **Reject** (3) with *SessionRejectReason* (373) = **24** (PossDupFlag set to **Y** when OEG is not in Gap Fill Mode)

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4.11 DIRECT RESPONSES TO APPLICATION MESSAGES

This section lists outbound messages that are sent as direct response to the individual received inbound messages received from the clients, in various cases.

This section provides only the responding message and does not represent complete behaviour for various functionalities in which they may be used. For details on the exchange of messages expected for individual functionalities clients should review the kinematics documents.

The table below provides responses for the following cases:

- **Acknowledgement**: which represents successful receipt and processing into the system of the technical and functional structure and content of an inbound message. In specific functional cases (e.g. breach of trading collars) an acknowledgment may be followed by a rejection that must be correctly handled by the client's system.
- **Functional or Technical Rejection**:
  - Functional Rejection: which represents an error that is raised when the inbound message may have correct technical structure and content, but doesn't meet the functional rules defined for the system / market / functionality. All such rejections a replied with an error code, [field *ErrorCode* (9955)] that is identified as 'Functional' in the error list document.
  - Technical rejection: which represents an error that is raised when the inbound message may not have correct technical structure or content. All such rejections a replied with an error code, [field *ErrorCode* (9955)] that is identified as 'Technical' in the error list document.
- **Session Level Rejection**: messages that are poorly formatted, can't be correctly interpreted or do not meet rules identified for management of FIX connection, sequence and gap fill mechanisms mentioned in a dedicated section of this document.

  Reason for such rejection is identified through the combination of tags: *SessionRejectReason* (373), *RefTagID* (371), *RefMsgType* (372) and *RefSeqNum* (45).

Inbound Application Message	Responding Outbound Message		
	Acknowledgement	Functional or Technical Rejection	Session Level Rejection
NewOrderSingle (D)	ExecutionReport (8)	ExecutionReport (8)	Reject (3)
OrderCancelRequest (F)	ExecutionReport (8)	OrderCancelReject (9)	Reject (3)
OrderCancelReplaceRequest (G)	ExecutionReport (8)	■ Collar Breach: ExecutionReport (8) ■ In All other cases: OrderCancelReject (9)	Reject (3)
OwnershipRequest (U18)	OwnershipRequestAck (U29)	RequestAckMessage (Uy)	Reject (3)
OrderMassStatusRequest (AF)	ExecutionReport (8)	RequestAckMessage (Uy)	Reject (3)
OrderMassCancelRequest (q)	OrderMassCancelReport (r)	OrderCancelReject (9)	Reject (3)

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5.. MESSAGES

5.1 IMPORTANT NOTES

5.1.1 Scope of Messages and Functionalities

While attempts are made to provide as comprehensive an overview of functionalities as possible please note that:

- Some of the functionalities and messages in the document are applicable only when enabled for the specific scope of instruments;
- The functionalities follow the rules set out in the Exchange rules.

The following table describe each Optiq Segment tag. Each tag will be then used for each message to specify on which Optiq Segment this message applies on.

Optiq Segment	Tag
Equities	EQ
Funds	FUND
Fixed Income	FRM
Warrants and Certificates	SP
Drop Copy	DC

5.1.2 Conditional Values in Outbound Messages

Please note that for the outbound messages (Client◀OEG) the “presence” of the fields in the block of the message is often set to “Conditional”, which means that those fields might not be sent when not required. As a single outbound message may cover several trading cases, it contains fields needed in all of these cases, which may be populated or not.

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5.2 ADMINISTRATION MESSAGES

All administrative messages are available on the following Optiq Segments:

EQ FUND FRM SP DC

5.2.1 Logon (A)

Client ◀▶OEG

Message Usage:

The **Logon** (A) message is used by the members to establish a connection with the Exchange and identify the last response message they have processed. It must be the first message sent by the client otherwise the OEG will drop the connection.

When **Logon** (A) message is used as inbound message, it must contain the following fields:

- *LogicalAccessID (21021):* it must be populated by the client according to the Logical Access used.
- *OEPartitionID (21019)*: it must be populated according to the partition the client connects to.
- *NextExpectedMsgSeqNum (789)*: it is the sequence number plus one (+1) of the last message received by the client from the Exchange on a specific OE Session.
- *SoftwareProvider (21050)*: it is an optional field that should be populated for client using software provider services.
- *QueueingIndicator (21020)*: defines whether the orders are rejected or queued in case of throttling.
- *HeartBtInt (108)*: always set to the value defined by the exchange.
- *DefaultApplVerID (1137)*: always set to 9 (FIX50SP2).
- *EncryptMethod (98)*: always set to 0 (No encryption).

If the logon is successful the OEG sends back a **Logon** (A) message providing the sequence number of the last message received from the client. Otherwise the OEG sends back a **Logout** (5) message providing the reason of the rejection *(SessionStatus (1409))* and closes the connection.

Additionally, OEG will send a **Reject** (3) message if the **Logon** (A) is poorly formatted.

Usage of the NextExpectedMsgSeqNum:

At the first logon of the trading day the member must set the field *NextExpectedMsgSeqNum (789)* to 1, as no message can be received before a successful logon.

In case of an unintentional disconnection the client must use the field *NextExpectedMsgSeqNum* to indicate to the Exchange the sequence number of the last message he has received. If some messages have been lost during the disconnection, the OEG will resend them to the client. In this case, the gap will be filled automatically, prior to receiving any messages with sequences above the gap and without the generation of a **ResendRequest** (2) message to the client.

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
108	HeartBtInt	Heartbeat interval (in seconds).	Int	3	Numerical	Mandatory	114
98	EncryptMethod	Method of encryption for the new FIX session	Int	1	Always set to 0 (No encryption)	Mandatory	109
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-2	Mandatory	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-2	Mandatory	116
789	NextExpectedMsgSeqNum	Indicates the sequence number plus one (+1) of the last message received by the Client from the Exchange on the OE Session.	SeqNum	10	Integer.	Mandatory	121
21020	QueueingIndicator	Indicates whether the client requests its orders to be queued or rejected in case of throttling. (0: False - Reject ; 1: True - Queue).	Int	1	0 = False 1 = True	Mandatory	132
1137	DefaultApplVerID	Specifies the service pack release being applied, by default, to the message at the session level	String	1	9 = FIX50SP2	Mandatory	108
21050	SoftwareProvider	Free text field entered by the client in the Logon (A) message, identifying the provider of the software used for exchange of messages for trading purposes.	String	8	Free text field	Optional	138
	Message Trailer					**Mandatory**	

5.2.2 ResendRequest (2)

Client ◀▶OEG

Message Usage:

The **ResendRequest** (2) message can be issued either by the Client or the OEG and is used in the following situations:

- When a gap is detected on the sequence number;
- If the receiving application loses a message;
- As function of the initialization process;

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If the Client application receives a **ResendRequest** (2), with a sequence gap, it is critical that the Client application resends the appropriate messages before issuing its own ResendRequest.

The resending request can be done in three different ways:

- Request a single message: BeginSeqNo = EndSeqNo;
- Request a range of messages: BeginSeqNo = First message of the range and EndSeqNo = last message of the range;
- Request all messages sent after a particular message: BeginSeqNo = First message of the range and EndSeqNo = '0' (Zero meaning 'the infinity');

In all the messages that are sent as the result of a **ResendRequest** (2):

- the *PossDupFlag (43)* field, in the Header, must be set to 'Y';

- the *OrigSendingTime (122)* must be filled with the correct value or, if not possible, must be set to the same value as the *SendingTime (52).*

All the messages sent by the Client after the gap is detected will be ignored by OEG, including the one that origins the gap detection – except if it is the **Logon** (A). The message that origins the gap detection will be part of the Resend Request range. While a **ResendRequest** (2) is pending, OEG will process only messages with *PossDupFlag (43)* set to 'Y'. Sending new messages will only be allowed after the gap is filled.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
7	BeginSeqNo	Message sequence number for first message.	SeqNum	10	From 1 to 2^32-2	Mandatory	100
16	EndSeqNo	Message sequence number for last message	SeqNum	10	From 0 to 2^32-2	Mandatory	110
	Message Trailer					**Mandatory**	

5.2.3 Reject (3)

Client ◀OEG

Message Usage:

The OEG will use this message to reject :

- poorly formatted inbound messages. In this case, the message provides the reason of the rejection *(SessionRejectReason [373]);*
- unknown **MsgType** (35). In this case, the message provides the error code : *SessionRejectReason* [373] = ***11*** *(Invalid message type)* .

Members should keep a record of which messages the OEG rejects and never resend them.

For rejection of messages over the throttling limit, OEG will send a **Reject** (3) message, with field *SessionRejectReason* (373) used to indicate the type of throttling limit breached.

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
45	RefSeqNum	Reference sequence number of the rejected message.	SeqNum	10	Positive Integer. From 1 to 9 999 999 998.	Mandatory	133
371	RefTagID	The tag number of the FIX field being referenced.	Int	6	Integer	Conditional	133
372	RefMsgType	The MsgType (35) of the FIX message being referenced.	String	3	Value received in the rejected inbound message, if any	Conditional	133
373	SessionRejectReason	Session reject reason code.	Int	2	(See field description)	Mandatory	136
	Message Trailer					**Mandatory**	

5.2.4 SequenceReset (4)

Client ◀▶OEG

Message Usage:

The **SequenceReset** (4) message may be sent by the Client or the OEG as an answer to a **ResendRequest** (2) message.

The **SequenceReset** (4) - **Gap Fill Mode** can be used if the sending application chooses not to send an internal message to the Exchange, the **SequenceReset** (4) marks the place of that message. Note that, if the message that needs to be resent is an administrative one they will always be replaced by **SequenceReset** (4). In this case, the **SequenceReset** (4) will have to be sent with the *GapFillFlag (123)* set to 'Y'.

The value in the *NewSeqNo (36)* will always represent the MsgSeqNum of the next message that will be sent by the Client or the OEG. OEG will consider that the gap is filled if *NewSeqNo (36)* is set to a value greater than or equal to the ResendRequest's *EndSeqNo (16).*

While a ResendRequest (2) is pending, if the Client:

- sends a **SequenceReset – Gap Fill Mode** message with MsgSeqNum higher than the expected sequence number, the trading engine issues a **Reject** (3) with field SessionRejectReason(373) set to 22 = MsgSeqNum(34) too high;
- send us a message with NewSeqNo lower or equal to the MsgSeqNum and MsgSeqNum equals to the expected sequence number, the trading engine rejects the message with a **Reject** (3) and *SessionRejectReason (373)* set to '19' (NewSeqNo(36) too low);

Example: If the Exchange issues a **ResendRequest** (2) with BeginSeqNo = 10 and EndSeqNo = 15 and the messages from 11-14 are administrative messages (others than the **Reject** (3)). The client should proceed as below:

- Resend 10 with *PossDupFlag* set to 'Y';

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- **SequenceReset** (4) with *GapFillFlag (123)* set to 'Y' to replace 11, 12, 13, 14 and with the *NewSeqNo (36)* set to 15;
- Resend 15 with *PossDupFlag* set to 'Y';

The Trading Engine will never allow the use of the **SequenceReset** (4) - **Reset Mode**. If the Client send us this message he will receive a **Logout** (5) from OEG, with field SessionStatus (1409) set to 105 = SequenceReset - Reset Mode not allowed .

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
36	NewSeqNo	New sequence number.	SeqNum	10	From 1 to 2^32-2	Mandatory	119
123	GapFillFlag	Purpose of sequence reset.	Boolean	1	Y = Gap fill message N = Sequence reset	Optional	113
	Message Trailer					**Mandatory**	

5.2.5 Logout (5)

Client ◀▶OEG

Message Usage:

The **Logout** (5) message with *SessionStatus = **100** (Regular Logout By Client)* is sent by the client in order to close the connection with the Exchange. The exchange responds with a **Logout** (5) message with *SessionStatus = **4** (Session logout complete)*

In regular cases, at the end of day the Exchange sends a **Logout** (5) message with *SessionStatus* = ***101** (End Of Day)* to the clients before dropping the connection.

The party initiating the logout must be the party that breaks the TCP connection.

Please note that in both cases (message initiated by the client or by the Exchange) it will trigger the Cancel On Disconnect mechanism if it is enabled.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
1409	SessionStatus	Provides the code associated to the reason for the logout.	Int	3	(See field description)	Mandatory	137
	Message Trailer					**Mandatory**	

5.2.6 Heartbeat (0)

Client ◀▶OEG

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Message Usage:

The **Heartbeat** (0) message is used during periods of inactivity, either by the Exchange or the client, to notify each other that the inactivity is not due to a technical issue.

The message is sent:

- after *n* second(s) of inactivity to notify the opposite side that the connection functions properly.
- in response to a **TestRequest** (1) sent by either party. In this case it must contain the *TestReqID (112)* transmitted in the **TestRequest** (1) message.

The parameter *n* has a specific value defined for each Optiq Segment.

After a **TestRequest** (1) is sent, the opposite side has n seconds to answer with an **HeartBeat** (0) having the same *TestReqID* as the one in the initial **TestRequest** (1). During the n seconds delay period:

- all application messages will be processed normally;
- any **Heartbeat** (0) message having a *TestReqID* different than the one in the **TestRequest** (1) initial message will be rejected;
- any **Heartbeat** (0) message without the *TestReqID* field will be accepted but ignored;
- any **Heartbeat** (0) message wrongly formatted will be rejected;

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
112	TestReqID	Test request ID to be returned in Heartbeat.	String	24	Numerical	Conditional	140
	Message Trailer					**Mandatory**	

5.2.7 TestRequest (1)

Client ◀OEG

Message Usage:

The **TestRequest** (1) message can be sent either by the client or the Exchange. It is used during periods of inactivity (when no messages have been exchanged) to check whether the other party is still connected.

The message is sent after *n* second(s) of inactivity on the opposite side. Then:

- The opposite application has *n* second(s) delay to respond to the **TestRequest** (1) message by sending a **Heartbeat** (0) message containing the *TestReqID (112).*
- Otherwise if the opposite application does not issue the responding **Heartbeat** (0) within the given delay, the message sender should close the connection. (Note that, on the Exchange side, this triggers the Cancel on Disconnect mechanism if it is enabled).

The TestRequest (1) message can also be sent by the client to the OEG at any moment and the OEG will answer with a **Heartbeat** (0) message.

The parameter *n* has a specific value defined for each Optiq Segment.

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
112	TestReqID	Test request ID to be returned in Heartbeat.	String	24	Numerical	Mandatory	140
	Message Trailer					**Mandatory**	

5.3 APPLICATION MESSAGES

5.3.1 Central Order Book (COB)

5.3.1.1 NewOrderSingle (D)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **NewOrderSingle** (D) message is used by the clients to create a new order.

Please note that for orders different than Limit Orders, Iceberg Orders and Stop Limit Orders (Market, Stop and MTL) the *Price* must not be provided.

The following fields are used for clearing purposes: *ClearingInstruction*, *AccountCode*, *CustOrderCapacity*, *NestedPartyID*, *NestedPartyIDSource, NestedPartyRole*.

Components Usage within the Message:

This message contains **two components and one nested component:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **NestedParties** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*
- The third component **SideCrossOrdModGrp** is composed of the fields: *NoSides, Side, ClearingInstruction, Text, ClearingAccount, AccountCode, LPRole, TechnicalOrdType, PostingAction, CustOrderCapacity* and of *nested repeating group;*

Use of the groups and values within them:

- Entering Trader should be provided via the ***Parties*** repeating group
- Client ID and Investor ID should be provided via the ***NestedParties*** repeating group
- The third repeating group ***SideCrossOrdModGrp*** is used to identify the order side

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Trading & Clearing related data fields:

Examples of individual cases and some exceptions for the use of these groups are provided below. For the full list of possible values for each field clients should review the individual field descriptions.

Entering Trader

Presence Condition: Conditional [2]

Case 2: Used to specify the Entering Trader.

- *PartyID (448) =* field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452) =* 36 (Entering Trader)

Client ID

Presence Condition: Conditional

Case 3: Used to specify the Position Account Owner. If the Client ID is not provided in the entering order it means the trading member is the Position Account Owner;

- *NestedPartyID (524) =* field in which the **ID of the Client ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 3 (Client ID)

Investor ID

Presence Condition: Conditional

Case 4: Used to specify the Investor ID. If Self Trade Prevention is activated at Investor level or both (Account and Investor level) the Investor ID must be provided.

- *NestedPartyID (524) =* field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 5 (Investor ID)

Clearing Firm ID

Presence Condition: Optional

Case 7: Used to specify the Clearing Firm ID

- *NestedPartyID (524) =* field in which the **ID of the Clearing Firm ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 4 (Clearing Firm)

– The component ***SideCrossOrdModGrp*** is a mandatory repeating group that must be repeated **once for Buy and Sell orders and twice for Cross orders**.

[2] For more details please check the List of Available Functionalities – listed in the Associated Documents

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	142
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109
44	Price	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63+1 to 2^63-1	Conditional	131
38	OrderQty	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-2	Mandatory	126
40	OrdType	Type of Order.	Char	1	(See field description)	Mandatory	127
59	TimeInForce	Specifies the maximum validity of an order.	Char	1	(See field description)	Mandatory	140
29	LastCapacity	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	Mandatory	114
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader	Conditional	129
21016	DisclosedQtyRandIndicator	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	Int	1	0 = No 1 = Yes	Conditional	108
21018	CancelOnDisconnectionIndicator	Indicates whether the order is not in scope of the Cancel On Disconnect mechanism (order is persisted) or if order should be handled as defined by default. (0: Default Configuration ; 1: Order not in the scope of Cancel On Disconnect - Order is to be persisted)	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	Mandatory	102
1094	*PegPriceType*	***[N/A]** Defines the type of the peg order.*	*Int*	*1*	*2 = Mid-price peg (midprice of inside quote) (For Future Use, Pending Regulatory Approval) [C]* *4 = Market peg (For Future Use, Pending Regulatory Approval) [C]* *5 = Primary peg (primary market - buy at bid or sell at offer) [C]*	*Conditional*	*130*
211	*PegOffsetValue*	***[N/A]** Tick offset for a pegged order. (For Future Use)*	*Int*	*3*	*From -128 to 127*	*Conditional*	*129*
2362	*SelfMatchPreventionID*	***[N/A]** For Future Use.*	*String*	*5*	*From 0 to 2^16-1*	*Optional*	*135*
99	StopPx	Stop Trigger Price is mandatory for stop orders.	Price	20	From -2^63 to 2^63-1	Conditional	138
1138	DisplayQty	Maximum number of quantity units to be shown to market participants (Iceberg Order).	Qty	20	From 0 to 2^64-1	Conditional	109

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
110	MinQty	Minimum quantity to be executed upon order entry (else the order is rejected).	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	Optional	118
126	*ExpireTime*	***[N/A]** Field used as time of order expiration for GTT orders (Format: YYYYMMDD-HH:MM:SS.sssssssss).*	*UTCTimestamp*	*27*	*Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)*	*Conditional*	*113*
432	ExpireDate	Field used as date of order expiration (last day the order can trade) for GTD orders(Format: YYYYMMDD).	LocalMktDate	8	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31	Conditional	112
20175	TriggeredStopTimeInForce	Specifies the maximum validity of an triggered stop order.	Char	1	(See field description)	Conditional	144
552	NoSides	Number of sides.	NumInGroup	1	From 1 to 2	Mandatory	123
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Mandatory	137
577	ClearingInstruction	Clearing Instruction.	Int	4	(See field description)	Optional	103
58	Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	String	18	Alphanumeric	Optional	140
20053	ClearingAccount	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	String	16	Alphanumeric	Optional	103
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Mandatory	67
20021	LPRole	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	Int	1	1 = Liquidity Provider or Market Maker	Conditional	67

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
9941	TechnicalOrdType	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.	Char	1	(See field description)	Optional	139
7443	PostingAction	Posting action code (Open/Close) for the order. This field is part of the clearing aggregate.	MultipleCharValue	17	(See field description)	Optional	131
582	CustOrderCapacity	Type of customer trading	Int	1	1 = For own account 2 = For clearing members house account 3 = For account of another member present 4 = For any other customer account	Conditional	107
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, from 1 to 3	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	3 = Client ID 4 = Clearing Firm 5 = Investor ID	Conditional	120
	Message Trailer					**Mandatory**	

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5.3.1.2 ExecutionReport (8)

Client ◀OEG

Available for: EQ FUND FRM SP DC

Message Usage:

The **ExecutionReport (8)** message is sent by the trading engine amongst the following situations:

- Response to **NewOrderSingle (D)** request when the request is accepted and the order created as well as when it is rejected;
- Response to **OrderCancelReplaceRequest (G)** message in case of acceptation (an **OrderCancel Reject (9)** is returned instead in case of rejection); it indicates that the order modification/confirmation is done and holds information associated with the new order;
- Response to **OrderCancelRequest (F)** message in case of acceptation (an **OrderCancelReject (9)** is returned instead in case of rejection); it indicates that the order cancellation is done;
- Response to **OrderMassCancelRequest (q)** message in case of acceptation (an **OrderCancelReject (9)** is returned instead in case of rejection for each rejected cancellation); In this case, one **ExecutionReport** (8) message is sent for each cancelled order. In case of a mass cancellation following a OEG disconnection, the field ***ClOrdID*** is not filled in each Execution Report: the reference of the cancelled order is hold by the field ***OrigClOrdID***;
- Response to **OrderMassStatusRequest (AF)** message.

ExecutionReport (8) Message Signature Tags

The following table identifies the reason for which the **ExecutionReport** (8) message was sent, with a description of the various cases and provides the values of tags *ExecType* (150) and *OrdStatus* (39) used in each case

Cases when ExecutionReport (8) is sent	Details of the Case	ExecType (Tag 150)	OrdStatus (Tag 39)
New Order Submission & Creation			
New Order	*Message 8 sent:* in response to a **NewOrderSingle** (D) message, that is successfully received and accepted	0	0
Rejection of New Order	*Message 8 sent:* in response to a **NewOrderSingle** (D) message, that is received and rejected	8	8
Iceberg Order Conversion	*Message 8 sent:* in response to a **NewOrderSingle** (D) message when the Iceberg order is transformed into a Limit order when it is below the minimum allowed size	h	0
FUTURE USE Order Creation	***FUTURE USE*** *Message 8 sent:* to report an order creation by the Market Operations	i	0
Order Modification			
Modification of an Order	*Message 8 sent:* in response to an **OrderCancelReplaceRequest** (G), for an order that hasn't participated in trading the message indicates that request is successfully received and accepted, and the Order is modified	5	5
Order Enters after Collar Breach Confirmation	*Message 8 sent:* when an Order enters the book following collar breach confirmation	d	5
Order Enters after Ownership Breach Confirmation	*Message 8 sent:* when an Order enters the book following ownership breach confirmation	o	5

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Cases when ExecutionReport (8) is sent	Details of the Case	ExecType (Tag 150)	OrdStatus (Tag 39)
Order Enters after ShortSelling Breach Confirmation	*Message 8 sent:* when an Order enters the book following shortselling breach confirmation	p	5
Individual Order Cancellation			
Individual Order Cancelled by User	*Message 8 sent:* to report cancellation of an Order in response to an **OrderCancelRequest** (F), when the cancel request is received from a client, that was successfully received and accepted	4	4
Individual Order cancelled due to Kill Switch	*Message 8 sent:* to report cancellation of an Order when the cancel request is a consequence of a Kill switch command sent from the Market Operations	V	4
Individual Order cancelled by Market Operations	*Message 8 sent:* to report cancellation of an Order due to manual intervention from Market Operations	U	4
FUTURE USE Individual Order cancelled by Risk Manager	***FUTURE USE*** *Message 8 sent:* to report cancellation of an Order when the cancel request is a request sent from a risk manager	P	4
Individual Order Cancelled due to Static Collars	*Message 8 sent:* to report cancellation of an Order that's cancelled due to the Order Price lies outside of the Static Collars	t	4
Individual Order Cancelled due to breach of Ownership Limit	*Message 8 sent:* to report cancellation of an Order that's cancelled during the Post Session due to the Order Quantity being outside of the maximum quantity allowed for the Investor Type and/or Investor Category of the investor that has submitted the order	x	4
Individual Order Cancelled due to breach of Credit Limit	*Message 8 sent:* to report cancellation of an Order that's cancelled during the Post Session due to the Order Amount being outside of the maximum amount allowed for the Broker that has submitted the order	y	4
Individual Order Cancelled upon CSD request	*Message 8 sent:* to report cancellation of an Order that's cancelled either during the Post Session either intraday due to an update of the Investor Status to Suspended and the purge of all active orders for him	z	4
Individual Order Cancelled due to breach of ShortSelling Limit	*Message 8 sent:* to report cancellation of an Order that's cancelled during the Post Session due to the Order Quantity being outside of the ShortSelling limit of the Clearing Account of the submitted order	B	4
Mass Cancellation of Orders			
Mass Cancellation of Orders by User	*Message 8 sent:* in response to an **OrderMassCancelRequest** (q) received and accepted, to report the cancellation of an order requested by the client	4	4
Mass Cancellation of Orders by Market Operations	*Message 8 sent:* when the mass cancel request is initiated by the Market Operations	U	4
Order Elimination & Automatic Cancellation			
Elimination on Reaching Time or Trading Phase of Expiration	*Message 8 sent:* when Order expired upon reaching its time or phase of elimination (VFU/VFC order eliminated at the end of the uncrossing, GTD order eliminated at its expiration time/date, etc.)	3	3
Elimination of IOC order's remaining quantity	*Message 8 sent:* when IOC order is partially filled, and then the remaining unfilled quaintly is cancelled on entry	X	4
Elimination due to Corporate Event	*Message 8 sent:* when Order is eliminated by a Corporate Event	O	4
Expiration at the end of the Trading Session	*Message 8 sent:* when Order is eliminated at the end of the trading session due to expiration of its time of validity	C	C
Cancellation by STP	*Message 8 sent:* when a resting Order eliminated by the Self-Trade Prevention (STP)	a	4

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Cases when ExecutionReport (8) is sent	Details of the Case	ExecType (Tag 150)	OrdStatus (Tag 39)
Cancellation due to COD mechanism	*Message 8 sent:* when Order is cancelled due to triggering of the Cancel On Disconnect (COD) mechanism	b	4
Order Fill / Trade Execution			
Partial Fill	*Message 8 sent:* to report partial execution of an Order, which results in a trade	F	1
Fill	*Message 8 sent:* to report full execution of an Order, which results in a trade	F	2
Trade Cancellation			
Trade Cancellation	*Message 8 sent:* when the trade is cancelled. All cases of Trade Cancellation are identified in the same way. In all such cases the trade leading to the execution of the order is cancelled and the order remains in the state it was after the trade.	H	H
System Triggered Events			
Stop order	*Message 8 sent:* As a notification of triggering of a Stop-Market / Stop-Limit order	L	S
Re-filled Iceberg order	*Message 8 sent:* As a notification of a refill of an Iceberg order	e	0
MTL order transformation	*Message 8 sent:* As a notification of a resting Market to Limit (MTL) order being transformed into a Limit order during uncrossing	L	T
VFU / VFC order	*Message 8 sent:* As a notification of a Valid for Uncrossing or Valid For Closing order reaching the Uncrossing phase where it is triggered	L	Q
Order Status & Ownership Request			
Order Status	*Message 8 sent:* in response to an **OrderMassStatusRequest** (AF) message	m	R
Ownership Request	*Message 8 sent:* in response to an **OwnershipRequest** (U18) message	k	I
Order Cancelled due to Static Collars			
Order Cancelled due to Static Collars	*Message 8 sent:* As a notification of an order being cancelled due to Static Collars recalculation	t	4
Order Cancelled due to breach of Ownership Limit			
Order Cancelled due to breach of Ownership Limit	*Message 8 sent:* As a notification of an order being cancelled due to breach of Ownership Limit	x	4
Order Cancelled due to breach of Credit Limit			
Order Cancelled due to breach of Credit Limit	*Message 8 sent:* As a notification of an order being cancelled due to breach of Credit Limit	y	4
Order Cancelled upon CSD request			
Order Cancelled upon CSD request	*Message 8 sent:* As a notification of an order being cancelled due to the Purge indicator provided by the CSD	z	4

Private & Public feed reconciliation:

The **ExecutionReport** (8) message allows clients to reconcile their orders with the Market Data feed by using the field *OrderPriority (21004)*.

This mechanism is clearly explained in the Kinematics in Section *1.2.5.1 Private and Public feed reconciliation*.

This allows clients to identify their orders in public feed as the *OrderPriority* is also provided in the public **LongOrder Update** (1015) message. The *OrderPriority* is thus used as an order identifier.

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Please note that the field *OrderPriority (21004)* is provided for newly received Stop orders, and all orders shown to the market. List below identifies the cases in which it is provided:

- In the **ExecutionReport** (8) message as a response to a **NewOrderSingle** (D) or to an **OrderCancelReplaceRequest** (G) with *ConfirmFlag (9930)* set to '1 = Confirmed';
- In the **ExecutionReport** (8) message as a response to a new order entry;
- In the **ExecutionReport** (8) message as a notification of a triggered Stop-market/Stop-limit order;
- In the **ExecutionReport** (8) message as a notification of a triggered Valid For Uncrossing (VFU) or Valid For Closing (VFC) order;
- In the **ExecutionReport** (8) message for a refilled Iceberg Order.

For orders that are still hidden for the market (ex. an un-triggered Stop order) the *OrderPriority* will not be provided.

Unsolicited Reports:

The **ExecutionReport** (8) message may be used to relay order execution reports:

- **Order Partial Fill execution report**: the **ExecutionReport** (8) message is used to relay the notification of an order's partial fill.
- **Order Fill execution report**: the **ExecutionReport** (8) message is used to relay the notification of an order's full fill.

The **ExecutionReport** (8) message may be used to relay Market Operations reports:

- **Market Operations order creation report**: the **ExecutionReport** (8) message is used to relay the notification of an order creation by Market Operations.
- **Market Operations trade cancellation reports**: two **ExecutionReport** (8) messages are used to relay the notification of a trade cancellation by Market Operations (one message per order involved).
- **Order Expiration report**: the **ExecutionReport** (8) message is used to relay the notification of an order's expiration.
- **Order Collar rejection report**: the **ExecutionReport** (8) message is used to relay the notification of an order's rejection for collars.

Note

The situation where an order is rejected for collar implies that it must at least have been created or modified, possibly partially filled; the rejection for collars always follows immediately these "before-rejection" events. Hence, when the expression "order collar rejection report" is used, it includes the Execution Reports of the latter events.

Please note that conditional fields are provided only if they are present in the corresponding inbound message.

Components Usage within the Message:

This message contains **two components and one nested component:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **Nested***Parties* is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*

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- The third component ***SideCrossOrdModGrp*** is composed of the fields: *NoSides, Side, ClearingInstruction, Text, ClearingAccount, AccountCode, LPRole, TechnicalOrdType, PostingAction, CustOrderCapacity* and of *nested repeating group;*

Use of the groups and values within them:

- Entering Trader should be provided via the ***Parties*** repeating group
- Client ID and Investor ID should be provided via the ***NestedParties*** repeating group
- The third repeating group ***SideCrossOrdModGrp*** is used to identify the order side

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Trading & Clearing related data fields:

Examples of individual cases and some exceptions for the use of these groups are provided below. For the full list of possible values for each field clients should review the individual field descriptions.

Entering Trader

Presence Condition: Conditional (provided when received in the inbound request)

Case 2: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Client ID

Presence Condition: Conditional (provided when received in the inbound request)

Case 3: Used to specify the Position Account Owner. If the Client ID is not provided in the entering order it means the trading member is the Position Account Owner.

- *NestedPartyID (524)* = field in which the **ID of the Client ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 3 (Client ID)

Investor ID

Presence Condition: Conditional (Provided when received in the inbound request.)

Case 4: Used to specify the Investor ID. If Self Trade Prevention is activated at Investor level or both (Account and Investor level) the Investor ID must be provided.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = *5 (Investor ID)*

Clearing Firm ID

Presence Condition: Optional (provided when received in the inbound request)

Case 7: Used to specify the Clearing Firm ID.

- *NestedPartyID (524)* = field in which the **ID of the Clearing Firm ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 4 (Clearing Firm)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	142
21005	ClientMessageSendingTime	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	105
5979	OEGINFromMember	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
7764	OEGOUTToME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	124
21002	BookINTime	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	101
21003	BookOUTTime	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	102

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
7765	OEGINFromME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63 to 2^63-1	Conditional	105
41	OrigClOrdID	Client order ID of the original order.	String	20	From -2^63 to 2^63-1	Conditional	127
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Conditional	109
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-2	Mandatory	125
39	OrdStatus	Order status.	Char	1	(See field description)	Mandatory	126
21004	OrderPriority	Rank giving the priority of the order. The order with the lowest value of OrderPriority has the highest priority.	Int	20	From 0 to 2^64-1	Conditional	126
44	Price	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63 to 2^63-1	Conditional	131
38	OrderQty	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-1	Conditional	126
31	LastPx	The Last Traded Price indicates the price of last fill on an instrument (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63 to 2^63-1	Conditional	114

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
32	LastQty	The LastQty indicates the quantity of the last fill on an instrument (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-1	Conditional	115
151	LeavesQty	Indicates the remaining quantity of an order, i.e. the quantity open for further execution (to be calculated with Quantity Decimals).	Qty	20	From -1 to 2^64-2	Mandatory	116
17	ExecID	The ExecID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation.	String	10	From 0 to 2^32-2	Mandatory	110
150	ExecType	Describes the specific ExecutionReport while OrdStatus (39) will always identify the current order status (e.g. Partially Filled).	Char	1	(See field description)	Mandatory	111
99	StopPx	Stop Trigger Price is mandatory for stop orders.	Price	20	From -2^63+1 to 2^63-1	Conditional	138
1138	DisplayQty	Maximum number of quantity units to be shown to market participants (Iceberg Order).	Qty	20	From 0 to 2^64-1	Conditional	109
20175	TriggeredStopTimeInForce	Specifies the maximum validity of an triggered stop order.	Char	1	(See field description)	Conditional	144
584	MassStatusReqID	Client ID for the Order Mass Status Request.	String	20	From -2^63+1 to 2^63-1	Conditional	117
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader	Conditional	129
110	MinQty	Minimum quantity to be executed upon order entry (else the order is rejected).	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	Conditional	118
29	LastCapacity	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	Conditional	114

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21013	AckPhase	Indicates the trading phase during which the Matching Engine has processed the event that has triggered this ExecutionReport (8) message.	Char	1	(See field description)	Conditional	100
21014	AckQualifiers	Field used to provide additional information on the corresponding order. A single field can contain up to 8 values, space delimited, provided in different positions.	MultipleChar Value	3	(See field description)	Conditional	100
21010	TradeType	Type of trade.	Int	2	(See field description)	Conditional	142
21023	ExecPhase	Indicates the trading phase during which the trade has occurred.	Char	1	(See field description)	Conditional	111
21080	TradeQualifier	Trade Qualifier. This field can contain up to 7 values, space delimited, provided in different positions.	MultipleChar Value	13	(See field description)	Conditional	141
375	ContraBroker	ID of the Counterpart Firm in specific cases.	String	20	From 0 to 2^64-1	Conditional	106
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-1	Conditional	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-1	Conditional	116
19	ExecRefID	The ExecRefID is an unique identifier of a trade per instrument. This field is provided in case of trade cancellation.	String	10	Sequential number. From 1 to 2^32-1	Conditional	111
432	ExpireDate	Field used as date of order expiration (last day the order can trade) for GTD orders(Format: YYYYMMDD).	LocalMktDate	8	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31	Conditional	112
14	CumQty	Cumulated quantity (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-2	Mandatory	107
40	OrdType	Type of Order.	Char	1	(See field description)	Conditional	127
59	TimeInForce	Specifies the maximum validity of an order.	Char	1	(See field description)	Conditional	140
552	NoSides	Number of sides.	NumInGroup	1	From 1 to 2	Conditional	123
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Conditional	137
577	ClearingInstruction	Clearing Instruction.	Int	4	(See field description)	Conditional	103
58	Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	String	18	Alphanumeric	Conditional	140

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
20053	ClearingAccount	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	String	16	Alphanumeric	Conditional	103
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Conditional	67
20021	LPRole	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	Int	1	1 = Liquidity Provider or Market Maker	Conditional	67
9941	TechnicalOrdType	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.	Char	1	(See field description)	Conditional	139
7443	PostingAction	Posting action code (Open/Close) for the order. This field is part of the clearing aggregate.	MultipleCharValue	17	(See field description)	Optional	131
582	CustOrderCapacity	Type of customer trading	Int	1	1 = For own account 2 = For clearing members house account 3 = For account of another member present 4 = For any other customer account	Conditional	107
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, from 1 to 3	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	3= Client ID 4 = Clearing Firm 5= Investor ID	Conditional	120

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
126	*ExpireTime*	***[N/A]** Field used as time of order expiration for GTT orders (Format: YYYYMMDD-HH:MM:SS.sssssssss).*	*UTCTimestamp*	*27*	*Valid values:* *YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)*	*Conditional*	*113*
2362	*SelfMatchPreventionID*	***[N/A]** For Future Use.*	*String*	*5*	*From 0 to 2^16-1*	*Conditional*	*135*
21016	DisclosedQtyRandIndicator	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	Int	1	0 = No 1 = Yes	Conditional	108
21018	CancelOnDisconnectionIndicator	Indicates whether the order is not in scope of the Cancel On Disconnect mechanism (order is persisted) or if order should be handled as defined by default. (0: Default Configuration ; 1: Order not in the scope of Cancel On Disconnect - Order is to be persisted)	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	Conditional	102
1094	*PegPriceType*	***[N/A]** Defines the type of the peg order.*	*Int*	*1*	*2 = Mid-price peg (midprice of inside quote) (For Future Use, Pending Regulatory Approval) [C]* *4 = Market peg (For Future Use, Pending Regulatory Approval) [C]* *5 = Primary peg (primary market - buy at bid or sell at offer) [C]*	*Conditional*	*130*
211	*PegOffsetValue*	***[N/A]** Tick offset for a pegged order. (For Future Use)*	*Int*	*3*	*From -128 to 127*	*Conditional*	*129*
9955	ErrorCode	Error code in case of rejection.	Int	5	From 0 to 2^16-1	Conditional	110
9962	CollarRejType	Hit collar type (high or low) in case of order rejection due to collar breach.	Char	1	1 = Low dynamic collar 2 = High dynamic collar	Conditional	106
21001	BreachedCollarPrice	Breached collar price in case of collar rejection (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63+1 to 2^63-1	Conditional	102
	Message Trailer					**Mandatory**	

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5.3.1.3 OrderCancelRequest (F)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OrderCancelRequest** (F) message is used to request the cancellation of the entire remaining quantity of **an active order in the order book**, note that only the originating Firm is authorized to cancel its own orders.

An order cancellation only applies to the remaining quantity of an order in the book. If the order to be cancelled was partially filled, the cancellation has no effect on the previous trades (or any previously executed quantity).

An active order can be cancelled by specifying the *ClOrdID* of the original order:

- If the **OrderCancelRequest** (F) message contains both *OrderID* and *OrigClOrdID*, the matching engine uses the *OrderID* to cancel the order. If the *OrderID* specified in the message is not found in the active orders list, the order modification is rejected. If the *OrderID* specified in the message is found the matching engine does not check that the *OrigClOrdID* of the order found ("cancelled" order) matches with the *OrigClOrdID* contained in the **OrderCancelRequest** (F) message.

In the case where the values of the *Side* and/or *OrdType* provided in the **OrderCancelRequest** (F) message do not match with the *Side* and *OrdType* of the targeted order it will lead to the rejection of the request with the error code 2101 "Unknown Order ID". (For triggered Stop orders, the value in field *OrdType* must be equal to Limit, for Stop-limit, or Market for Stop-market order, corresponding to the type of stop order originally submitted.)

Important Notes

By default, live orders submitted intraday are automatically cancelled on a network disconnection (OE Session or OEG disconnection).

Clients can indicate on each order if they want it to be persistent, i.e. not included in the scope of the Cancel On Disconnect mechanism. If the tag *DisabledCancelOnDisconnect* (21018) is set to "1" for an order, this order will not be cancelled even if the Cancel On Disconnect kicks in for the OE Session it belongs to.

When the Cancel On Disconnect mechanism is triggered, the cancellation involves only orders entered on the current day. All still active orders, entered the previous days, remain in the order book.

Components Usage within the Message:

This message contains **two components:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **NestedParties** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*

Use of the groups and values within them:

- Entering Trader should be provided via the ***Parties*** repeating group
- Investor ID should be provided via the ***NestedParties*** repeating group

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Trading & Clearing related data fields:

Examples of individual cases and some exceptions for the use of these groups are provided below. For the full list of possible values for each field clients should review the individual field descriptions.

Entering Trader

Presence Condition: Conditional[3]

Case 2: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Investor ID

Presence Condition: Conditional

Case 4: Used to specify the Investor ID. If Self Trade Prevention is activated at Investor level or both (Account and Investor level) the Investor ID must be provided.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 5 (Investor ID)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109

[3] For more details please check the List of Available Functionalities – listed in the Associated Documents

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-2	Conditional	125
41	OrigClOrdID	Client order ID of the original order.	String	20	From -2^63 to 2^63-1	Conditional	127
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Mandatory	137
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader	Conditional	129
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	5= Investor ID	Conditional	120
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	142
40	OrdType	Type of Order.	Char	1	(See field description)	Mandatory	127
1094	*PegPriceType*	***[N/A]** Defines the type of the peg order.*	*Int*	*1*	*2 = Mid-price peg (midprice of inside quote) (For Future Use) [C]* *4 = Market peg (For Future Use) [C]* *5 = Primary peg (primary market - buy at bid or sell at offer) [C]*	*Conditional*	*130*

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21041	*OrderCategory*	***[N/A]** Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

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5.3.1.4 OrderCancelReplaceRequest (G)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OrderCancelReplaceRequest** (G) message is used in three situations:

- Modify **active orders in the order book**; note that only the originating Firm (regardless of the Logical Access) is authorized to modify its orders.
- Confirming a new order that can be executed upon entry, but whose matching price hits a collar (in that case, the remaining quantity of that order is rejected). In this case the *ConfirmFlag (9930)* has to be set to 1;
- Confirming a new order that's breaching Ownership or Short Selling Limits. The order is rejected upon Order Entry (for the Total Order Qty) with a specific ErrorCode (9955) depending on which of the limits is being breached and depending on the configuration at Trading Group/Instrument level - In this case the *ConfirmFlag (9930)* has to be set to 1;

An active order can be modified by specifying the *OrderID* of the original order or the *OrigClOrdID*:

- If the **OrderCancelReplaceRequest** (G) message contains both *OrderID* and *OrigClOrdID*, the matching engine uses the *OrderID* to cancel the order. If the *OrderID* specified in the message is not found in the active orders list, the order modification is rejected. If the *OrderID* specified in the message is found the matching engine does not check that the *ClOrdID* of the order found ("modified" order) matches with the *OrigClOrdID* contained in the **OrderCancelReplaceRequest** (G) message.

Please note that the field *ClOrdID* is an identifier of the **OrderCancelReplaceRequest** (G) request.

Regarding the values provided through the repeating groups included in this message:

- **Parties:** The values provided through this group will override the information previously provided;
- **NestedParties:**
  - In case it is used to provide the Clearing Firm ID or the Client ID, the values will override the information previsouly sent;
  - In case it is used to provide the Investor ID, the value won't override the information previsouly sent. Meaning, it will not lead to any modification on the values previously submitted and associated to the live order being modified;

While fields *Side* and *OrdType* are part of the message structure, modification of these values is not allowed, and the values provided must match the values originally set on submission of the order. In the case where the values in the **OrderCancelReplaceRequest** (G) message do not match with the *Side* and *OrdType* of the targeted order it will lead to the rejection of the request with the error code 2101 'Unknown Order'. (For triggered Stop orders, the value in field *OrdType* must be equal to Limit, for Stop-limit, or Market for Stop-market order, corresponding to the type of stop order originally submitted.)

Find below a description of the components present within this message, please note that all combinations are only required for order modification (ConfirmFlag (9930) set to 0 or not provided).

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Components Usage within the Message:

This message contains **two components:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **Nested*Parties*** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*

Use of the groups and values within them:

- Entering Trader should be provided via the ***Parties*** repeating group
- Client ID, Clearing Firm ID and Investor ID should be provided via the ***NestedParties*** repeating group

Trading & Clearing related data fields:

Examples of individual cases and some exceptions for the use of these groups are provided below. For the full list of possible values for each field clients should review the individual field descriptions.

Entering Trader

Presence Condition: Conditional[4]

Case 2: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Client ID

Presence Condition: Conditional

Case 3: Used to specify the Position Account Owner. If the Client ID is not provided in the entering order it means the trading member is the Position Account Owner;

- *NestedPartyID (524)* = field in which the **ID of the Client ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 3 (Client ID)

Investor ID

Presence Condition: Conditional

Case 4: Used to specify the Investor ID. If Self Trade Prevention is activated at Investor level or both (Account and Investor level) the Investor ID must be provided.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)

[4] For more details please check the List of Available Functionalities – listed in the Associated Documents

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- *NestedPartyRole (538)* = 5 (Investor ID)

Clearing Firm ID

Presence Condition: Optional

Case 7: Used to specify the Clearing Firm ID

- *NestedPartyID (524)* = field in which the **ID of the Clearing Firm I**D is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 4 (Clearing Firm)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	142
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-1	Conditional	125
41	OrigClOrdID	Client order ID of the original order.	String	20	From -2^63 to 2^63-1	Conditional	127
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader	Conditional	129
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, from 1 to 3	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	3= Client ID 4 = Clearing Firm 5= Investor ID	Conditional	120
44	Price	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63 to 2^63-1	Conditional	131
38	OrderQty	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-2	Mandatory	126
40	OrdType	Type of Order.	Char	1	(See field description)	Mandatory	127
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Mandatory	137
59	TimeInForce	Specifies the maximum validity of an order.	Char	1	(See field description)	Mandatory	140
20021	LPRole	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	Int	1	1 = Liquidity Provider or Market Maker	Optional	149
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Optional	127
21016	DisclosedQtyRandIndicator	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	Int	1	0 = No 1 = Yes	Optional	108

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21018	CancelOnDisconnectionIndicator	Indicates whether the order is not in scope of the Cancel On Disconnect mechanism (order is persisted) or if order should be handled as defined by default. (0: Default Configuration ; 1: Order not in the scope of Cancel On Disconnect - Order is to be persisted)	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	Mandatory	102
1094	*PegPriceType*	***[N/A]** Defines the type of the peg order.*	*Int*	*1*	*2 = Mid-price peg (midprice of inside quote) (For Future Use, Pending Regulatory Approval) [C]* *4 = Market peg (For Future Use, Pending Regulatory Approval) [C]* *5 = Primary peg (primary market - buy at bid or sell at offer) [C]*	*Conditional*	*130*
211	*PegOffsetValue*	***[N/A]** Tick offset for a pegged order. (For Future Use)*	*Int*	*3*	*From -127 to 127*	*Conditional*	*129*
2362	*SelfMatchPreventionID*	***[N/A]** For Future Use.*	*String*	*5*	*From 0 to 2^16-2*	*Optional*	*135*
58	Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	String	18	Alphanumeric	Optional	140
99	StopPx	Stop Trigger Price is mandatory for stop orders.	Price	20	From -2^63 to 2^63-1	Conditional	138
1138	*DisplayQty*	***[N/A]** Maximum number of quantity units to be shown to market participants (Iceberg Order).*	*Qty*	*20*	*From 0 to 2^64-1*	*Conditional*	*109*
126	*ExpireTime*	***[N/A]** Field used as time of order expiration for GTT orders (Format: YYYYMMDD-HH:MM:SS.sssssssss).*	*UTCTimestamp*	*27*	*Valid values:* *YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)*	*Conditional*	*113*
432	ExpireDate	Field used as date of order expiration (last day the order can trade) for GTD orders(Format: YYYYMMDD).	LocalMktDate	8	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31	Conditional	112

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
20175	TriggeredStopTimeInForce	Specifies the maximum validity of an triggered stop order.	Char	1	(See field description)	Conditional	144
20053	ClearingAccount	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	String	16	Alphanumeric	Optional	103
9941	TechnicalOrdType	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.	Char	1	(See field description)	Optional	139
7443	PostingAction	Posting action code (Open/Close) for the order. This field is part of the clearing aggregate.	MultipleCharValue	17	(See field description)	Optional	131
577	ClearingInstruction	Clearing Instruction.	Int	4	(See field description)	Optional	103
9930	ConfirmFlag	Indicates if the order entry or modification is confirmed by the broker issuing the order or not.	Char	1	0 = Not confirmed (default) 1 = Confirmed	Optional	106
	Message Trailer					**Mandatory**	

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5.3.1.5 OrderCancelReject (9)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OrderCancelReject** (9) message is used to notify the request issuer that the following messages were not processed by the matching engine:

- **OrderCancelRequest (F)**
- **OrderCancelReplaceRequest (G)**
- **OrderMassCancelRequest (q)**

Please refer to the Error Code List document for an exhaustive list of those cases.

The *ClOrdID* provided in the Reject message identifies the request which is rejected; it does not refer to an order of the order book. Only the *OrigClOrdID* field will refer to the targeted order. Hence in case of a rejection of an **OrderCancelRequest** (F) message, the *ClOrdID* field will refer to the *ClOrdID* provided in the rejected **OrderCancelRequest** (F) request, not to the targeted order.

If a client sends an Invalid value in a field, then in place of this value the **OrderCancelReject** (9) messages will not provide any value.

If a client sends an unknown ID (such as *SecurityID*, *OrderId*, *OrigClOrdID*…) which, however, can be decoded by the system, this value is provided back to the client in the **OrderCancelRequest** (F), exactly as entered.

The reason of the rejection is provided by the *ErrorCode*, and a text for explanations of the error is provided in the Error Code List.

Rejection Behaviour:

In Optiq orders are identified by multiple characteristics as follows: *OrderID* (37) / *OrigClOrdID* (41), *Side* (54), *OrdType* (40) and *SenderCompID* (49). If any of the characteristics are not met, the order is considered "Unknown".

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
21005	ClientMessageSendingTime	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	105

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
5979	OEGINFromMember	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
7764	OEGOUTToME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	124
21002	BookINTime	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	101
21003	BookOUTTime	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	102
7765	OEGINFromME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63 to 2^63-1	Conditional	105

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-1	Conditional	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Conditional	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Conditional	109
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-1	Conditional	125
9955	ErrorCode	Error code in case of rejection.	Int	5	From 0 to 2^16-1	Conditional	110
434	CxlRejResponseTo	Origin of cancellation rejection	Char	1	(See field description)	Mandatory	107
9962	CollarRejType	Hit collar type (high or low) in case of order rejection due to collar breach.	Char	1	1 = Low dynamic collar 2 = High dynamic collar	Conditional	106
21001	BreachedCollarPrice	Breached collar price in case of collar rejection (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63+1 to 2^63-1	Conditional	102
39	OrdStatus	Order status.	Char	1	(See field description)	Mandatory	126
	Message Trailer					**Mandatory**	

5.3.1.6 RequestAckMessage (Uy)

Available for: EQ FUND FRM SP

Client ◀OEG
Message Usage:

The **RequestAckMessage** (Uy) message is also used to notify the request issuer that the following messages were not processed by the matching engine:

- **OwnershipRequest** (U18)
- **OrderMassStatusRequest** (AF)

The fields *RequestID (21060)* and *RefMsgType (372)* identify the request message and its type.

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The field *ErrorCode (9955)* will provide the reason in case of request rejection. If the request is accepted, this field won't be filled.

Please refer to the Error Code List document for an exhaustive list of those cases.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
21005	ClientMessageSendingTime	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	105
5979	OEGINFromMember	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
7764	OEGOUTToME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	124
21002	BookINTime	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	101
21003	BookOUTTime	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	102

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
7765	OEGINFromME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
21060	RequestID	Unique message identifier as assigned by the Client when submitting the message request.	String	20	From -2^63 to 2^63-1	Conditional	173
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-1	Conditional	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Conditional	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Conditional	109
372	RefMsgType	The MsgType (35) of the FIX message being referenced.	String	3	Value received in the rejected inbound message, if any	Conditional	133
9955	ErrorCode	Error code in case of rejection.	Int	5	From 0 to 2^16-1	Conditional	110
	Message Trailer					**Mandatory**	

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5.3.1.7 OwnershipRequest (U18)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OwnershipRequest** (U18) message is used by the clients to change the ownership of an active order from an OE Session to another OE Session belonging to the same Firm. Ownership migration is used to define the OE Session that will receive all outbound messages associated to the targeted order. Please note that modifying an order (**OrderCancelReplaceRequest** (G)) also leads to an ownership migration.

The scope of the ownership can be a single order by specifying the *OrderID* and *SecurityID* of the targeted order. It could also be all orders of the specified *SecurityID* belonging to the targeted Logical Access (*LogicalAccessID*).

The **OwnershipRequest** (U18) is acknowledged by the **OwnershipRequestAck** (U29), and by **ExecutionReport** (8) message(s) which provides the details of the affected order(s).

When an error is detected in any field of the message, the trading engine responds with the **RequestAckMessage** (Uy) message and the associated error code.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-1	Conditional	125
41	OrigClOrdID	Client order ID of the original order.	String	20	From -2^63 to 2^63-1	Conditional	127
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-2	Optional	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-1	Conditional	116
21041	*OrderCategory*	***[N/A]** Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

5.3.1.8 OwnershipRequestAck (U29)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OwnershipRequestAck** (U29) message is sent twice by the matching engine to confirm that the **OwnershipRequest** (U18) has been taken into account. The first **OwnershipRequestAck** (U29) message has *TotalAffectedOrders* (533) set to -1, and repeats all the fields as they were submitted in the **OwnershipRequest** (U18).
Subsequently the member will receive an **ExecutionReport** (8) message per order affected by the command.
When the ownership request is totally processed the member will receive a last **OwnershipRequestAck** (U29) message to notify the member of the *TotalAffectedOrders*.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63 to 2^63-1	Mandatory	105
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-1	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-1	Conditional	125

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-1	Conditional	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-1	Conditional	116
533	TotalAffectedOrders	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.	Int	10	From -2^31+1 to 2^31-1	Mandatory	141
21041	*OrderCategory*	***[N/A]** Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

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5.3.1.9 UserNotification (CB)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **UserNotification** (CB) message is used to notify clients if they have been suspended or if their suspension status has been lifted, and the scope (or granularity) on which this action has been applied.

The field *UserStatus (926)* in this message indicates the nature of action as well as the scope taken on the access and/or orders.

The text in the field *UserStatus (926)* associated to each value provides the scope of each one of the following possible actions and granularities.

Actions:

Action	Description
Suspended	access to the trading system has been suspended
Suspension Cleared	access to the trading system has been restored after a Suspension
Killed	access to the trading system has been suspended and all unexecuted orders submitted have been cancelled
Kill Cleared	access to the trading system has been restored after a Kill functionality was initiated. Orders cancelled upon initiation of Kill functionality will NOT be restored

Scope:

Scope	Description
Firm	member, including all of the physical connections and orders associated to the Firm ID will be in scope
Trader	trader, including all of the orders associated to the Trader ID will be in scope

Components Usage within the Message:

This message contains one component:

– The component ***Parties*** is composed of the fields: *NoPartyIDs*, *PartyID*, *PartyIDSource* and *PartyRole* and is used to identify the Entering firm and Entering Trader;

Entering Firm

Presence Condition: Conditional

Case 1: Used to specify the Firm being suspended.

- *PartyID (448)* = field in which the **ID of the Entering Firm** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 7 (Entering Firm)

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Entering Trader

Presence Condition: Conditional

Case 2: Used to specify the Entering Trader being suspended.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
926	UserStatus	Status of the user.	Int	3	(See field description)	Mandatory	145
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	Always set to 1	Mandatory	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Mandatory	128
447	PartyIDSource	Source of PartyID value.	Char	1	C= Generally accepted market participant identifier	Mandatory	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	7 = Entering Firm 36 = Entering Trader	Mandatory	129
	Message Trailer					**Mandatory**	

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5.3.1.10 OrderMassStatusRequest (AF)

Client ▶OEG

Available for: EQ FUND FRM SP OPT FUT CMDT

Message Usage:

The **OrderMassStatusRequest** (AF) message is used by the clients to request the status of the target order (*OrderID* or *OrigClOrdID*):

- If there is a corresponding live order in the Order Book, the system will acknowledge the request with an **ExecutionReport** (8) message (*ExecType* = 'm') ;
- If there is no corresponding order in the Order Book, the system will reject the request with a **OrderCancelReject** (9) message (*ErrorCode* = '2101' - 'Unknown Order').

Please note that the field *MassStatusReqID (584)* is an identifier of the **OrderMassStatusRequest** (AF) message.

When an error is detected in any field of the message, the trading engine responds with the **RequestAckMessage** (Uy) message and the associated error code.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
37	OrderID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	String	20	From 0 to 2^64-1	Conditional	125
41	OrigClOrdID	Client order ID of the original order.	String	20	From -2^63 to 2^63-1	Conditional	127
584	MassStatusReqID	Client ID for the Order Mass Status Request.	String	20	From -2^63+1 to 2^63-1	Mandatory	117
585	MassStatusReqType	Mass status request type.	Int	3	101 = Status of a single order	Mandatory	118
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109
21041	*OrderCategory*	***[N/A]** Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

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5.3.1.11 OrderMassCancelRequest (q)

Client ▶OEG

Available for: EQ FRM SP OPT FUT CMDT

Message Usage :

The **OrderMassCancelRequest** (q) message is used to request the cancellation of the entire remaining quantity of **all active orders** matching the specified criteria(s), note that only the originating Firm is authorized to cancel its own orders.

An order cancellation only applies to the remaining quantity of an order in the book. If the order to be cancelled was partially filled, the cancellation has no effect on the previous trades (or any previously executed quantity).

If the value 1 is specified in the *MassCancelRequestType (530)* the *SecurityID (48)* field must be specified. If the value A is specified in the *MassCancelRequestType (530)* the *ClassID (9945)* field must be specified. (Note that if both *SecurityID* and *ClassID* are populated, the granularity of the **OrderMassCancelRequest** will be set depending on the value of the field *MassCancelRequestType).*

Optional additional criteria can be specified: *EMM*, *Side*, *AccountCode*, *LogicalAccessID*, and *OEPartitionID*. Those filters are used to restrict the scope of the Mass Cancel request. (Please note that *OEPartitionID* is not taken into account if *LogicalAccessID* is not populated).

When an error is detected in any field of the message, the trading engine responds with the **OrderCancelReject** (9) message and the associated error code.

Components Usage within the Message:

This message contains **two components:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **NestedParties** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*

Use of the groups and values within them:

- Entering Trader should be provided via the ***Parties*** repeating group
- Investor ID should be provided via the ***NestedParties*** repeating group

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Trading & Clearing related data fields:

Examples of individual cases and some exceptions for the use of these groups are provided below. For the full list of possible values for each field clients should review the individual field descriptions.

Entering Trader

Presence Condition: Conditional[5]

Case 2: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Investor ID

Presence Condition: Conditional

Case 4: Used to specify the Investor ID. If Self Trade Prevention is activated at Investor level or both (Account and Investor level) the Investor ID must be provided.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 5 (Investor ID)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	142
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
530	MassCancelRequest Type	Scope of orders already in COB to be cancelled only for them having the selected maturity.	Char	1	1 = Cancel orders for a security A = Cancel orders for a security group	Mandatory	117
9945	ClassID	Instrument Trading Group / Class Identifier.	String	2	Alphanumeric	Conditional	103

[5] For more details please check the List of Available Functionalities – listed in the Associated Documents

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-1	Conditional	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Conditional	135
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader	Conditional	129
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, always set to 1	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C= Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	5= Investor ID	Conditional	120
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Optional	109
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Optional	137
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-1	Optional	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-1	Optional	116
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Optional	67

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21041	*OrderCategory*	***[N/A]** Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

5.3.1.12 OrderMassCancelReport (r)

Client ◀OEG

Available for: EQ FRM SP

Message Usage:

The **OrderMassCancelReport** (r) message is sent twice by the matching engine to confirm that the **OrderMassCancelRequest** (q) has been taken into account. The first **OrderMassCancelReport** (r) message has *TotalAffectedOrders* (533) set to -1, and repeats all the fields as they were submitted in the **OrderMassCancelReport** (r) request.

The client will receive a single **ExecutionReport** (8) message per successfully cancelled order (if any). Please note that **ExecutionReport** (8) messages are sent to the OE Session that owns the cancelled order.

When the mass cancel request is completely processed the client will receive a last **OrderMassCancelReport** (r) message to notify them of the *TotalAffectedOrders (533)*. The number provided by *TotalAffectedOrders* field could be different than the number of killed order notifications received by the issuer of the Mass Cancel request if some killed orders belonged to other OE Sessions. (Please refer to the Kinematics for further details)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
21005	ClientMessageSendingTime	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	105
5979	OEGINFromMember	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
7764	OEGOUTToME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	124
21002	BookINTime	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	101
21003	BookOUTTime	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	102
7765	OEGINFromME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	123
11	ClOrdID	An identifier of an Order assigned by the Client when submitting an order to the Exchange.	String	20	From -2^63+1 to 2^63-1	Mandatory	105
533	TotalAffectedOrders	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.	Int	10	From -2^31+1 to 2^31-1	Mandatory	141
9945	ClassID	Instrument Trading Group / Class Identifier.	String	2	Alphanumeric	Conditional	103

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-1	Conditional	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Conditional	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Conditional	109
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Conditional	137
21019	OEPartitionID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Int	5	From 0 to 2^16-1	Conditional	124
21021	LogicalAccessID	Identifier of the Logical Access.	Int	10	From 0 to 2^32-1	Conditional	116
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Conditional	67
1369	MassActionReportID	Exchange allocated order mass cancel report ID.	String	20	Value provided by the Trading Engine	Mandatory	117
530	MassCancelRequestType	Scope of orders already in COB to be cancelled only for them having the selected maturity.	Char	1	1 = Cancel orders for a security A = Cancel orders for a security group	Mandatory	117
531	MassCancelResponse	Specifies the action taken by counterparty order handling system as a result of the OrderMassCancelRequest (AF).	Char	1	1 = Cancel orders for a security A = Cancel orders for a security group	Mandatory	117
21041	*OrderCategory*	***[N/A]*** *Field used as instruction for cancel order handling.*	*Char*	*1*	*1 = Lit Order*	*Conditional*	*125*
	Message Trailer					**Mandatory**	

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5.3.2 Cash On Exchange Off Book

5.3.2.1 TradeCaptureReport (AE)

Client ▶OEG

Available for: EQ FRM SP

Message Usage:

The **TradeCaptureReport** (AE) message is used for:

- sending of Block Trade Declarations (i.e. declaration entry):

TradeCaptureReport (AE)	
Field/Tag	**Value**
TradeReportTransType (487)	0 = New
TradeReportType (856)	Not provided

- requesting cancellation of a previously submitted declaration whose status is "Pending New":

TradeCaptureReport (AE)	
Field/Tag	**Value**
TradeReportTransType (487)	1 = Cancel
TradeReportType (856)	1 = Alleged

- to refuse a declaration submitted by the counterparty:

TradeCaptureReport (AE)	
Field/Tag	**Value**
TradeReportTransType (487)	0 = New
TradeReportType (856)	3 = Decline

Components Usage within the Message:

This message contains **two components and one nested component:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **NestedParties** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*
- The third component **SideCrossOrdModGrp** is composed of the fields: *NoSides, Side, Text, ClearingAccount, AccountCode, LastCapacity;*
- The component ***SideCrossOrdModGrp*** is a mandatory repeating group that must be repeated **once for Single Sided Declarations and twice for Dual Sided Declarations**.

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Use of the groups and values within them:

- Entering Trader and Entering Counterparty should be provided via the ***Parties*** repeating group
- Investor ID, Investor ID Cross and Clearing Firm ID should be provided via the ***NestedParties*** repeating group
- The third repeating group ***SideCrossOrdModGrp*** is used to identify the declaration side

Entering Trader

Presence Condition: Conditional[6].

Case 1: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Entering Counterparty

Presence Condition: Conditional.

Case 2: Used to specify the Entering Counterparty. Mandatory for Single Sided Declarations (i.e, declarations with Side set Buy or Sell).

- *PartyID (448) = field in which the* **ID of the Entering Counterparty** *is provided*
- *PartyIDSource (447) = C (Generally accepted market participant identifier)*
- *PartyRole (452) = 17 (Contra Firm)*

Investor ID

Presence Condition: Conditional

Case 3: Used to specify the Investor ID.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 5 (Investor ID)

Investor ID Cross

Presence Condition: Conditional

Case 3: Used to specify the Investor ID of the Sell side on a Dual sided declaration.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 39 (Contra Investor ID)

[6] For more details please check the List of Available Functionalities – listed in the Associated Documents

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Clearing Firm ID

Presence Condition: Optional

Case 4: Used to specify the Clearing Firm ID

- *NestedPartyID (524)* = field in which the **ID of the Clearing Firm ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 4 (Clearing Firm)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
571	TradeReportID	Unique identifier of trade capture report.	String	20	From -2^63+1 to 2^63-1	Conditional	143
1003	TradeID	The unique ID assigned by the matching engine to the trade entity, once it is received or matched.	String	20	From 0 to 2^64-2	Conditional	142
487	TradeReportTransType	Trade Report Transaction Type.	Int	1	0 = New 1 = Cancel	Mandatory	143
856	TradeReportType	Trade Report Type.	Int	1	1 = Alleged 3 = Decline	Conditional	143
828	TrdType	Type of Operation.	Int	4	(See field description)	Conditional	144
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	String	2	(See field description)	Mandatory	109
552	NoSides	Number of sides.	NumInGroup	1	If provided, from 1 to 2	Conditional	123
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Conditional	137
20053	ClearingAccount	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	String	16	Alphanumeric	Conditional	103

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Conditional	67
29	LastCapacity	MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	Conditional	114
58	Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	String	18	Alphanumeric	Optional	140
20155	PrincipalCode	Identifies the beneficiary of the transaction when trading on behalf of another establishment.	String	20	Alphanumeric	Optional	132
53	Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-2	Conditional	132
44	Price	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63+1 to 2^63-1	Conditional	131
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, from 1 to 2	Conditional	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	129
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader 17 = Contra Firm	Conditional	129
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, from 1 to 3	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	120

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	4 = Clearing Firm 5 = Investor ID 39 = Contra Investor ID	Conditional	120
10055	SettlPeriod	Indicates the settlement delay in trading days, from 0 to 30 days.	Int	2	From 0 to 30	Conditional	137
9970	SettlementFlag	Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled)	Char	1	0 = False 1 = True	Conditional	137
9971	GuaranteeFlag	Indicates if the trade is guaranteed or not (for clearing purposes).	Char	1	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed	Conditional	113
1839	TradePriceCondition	Contribution to price formation or the price discovery process.	Int	3	15 = Non-price forming trade (NPFT) 101 = Plain Vanilla Trade 102 = Trade Not Contributing to Price Discovery Process	Optional	142
	Message Trailer					**Mandatory**	

5.3.2.2 TradeCaptureReportAck (AR)

Client ◀ OEG

Available for: EQ FRM SP

Message Usage:

The **TradeCaptureReportAck** (AR) message is sent in response to the **TradeCaptureReport** (AE) message. It is also sent as an unsolicited message to provide the status of a previously submitted declaration to counterparties and to notify the members upon a Market Operations action (declaration creation / cancellation / acceptation).

The message is sent as:

- Declaration notification to the counterparty;
- Declaration refusal notice;
- Matching Notice;
- Expiration Notice;
- Trade Cancellation Notice by Market Operations;
- Rejection;

Please note that the following fields are provided only in case the notice is issued for a Fill (*TrdRptStatus* = '19') and only to the concerned member if the corresponding necessary values were

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submitted in the original declaration: *TransactTime*, *NestedParties* (*Clearing Firm ID)*, *AccountCode*, *Account*, *Text*).

Components Usage within the Message:

This message contains **two components and one nested component:**

- The first component **Parties** is composed of the fields: NoPartyIDs, PartyID, PartyIDSource and PartyRole;
- The nested component **NestedParties** is composed of the fields: *NestedPartyIDs*, *NestedPartyID*, *NestedPartyIDSource* and *NestedPartyRole;*
- The third component **SideCrossOrdModGrp** is composed of the fields: *NoSides, Side, Text, ClearingAccount, AccountCode, LastCapacity;*
- The component ***SideCrossOrdModGrp*** is a mandatory repeating group that must be repeated **once for Single Sided Declarations and twice for Dual Sided Declarations**.

Use of the groups and values within them:

- Entering Trader and Entering Counterparty should be provided via the ***Parties*** repeating group
- Investor ID, Investor ID Cross and Clearing Firm ID should be provided via the ***NestedParties*** repeating group
- The third repeating group ***SideCrossOrdModGrp*** is used to identify the declaration side

Entering Trader

Presence Condition: Conditional (provided when received in the inbound request)

Case 1: Used to specify the Entering Trader.

- *PartyID (448)* = field in which the **ID of the Entering Trader** is provided
- *PartyIDSource (447)* = C (Generally accepted market participant identifier)
- *PartyRole (452)* = 36 (Entering Trader)

Entering Counterparty

Presence Condition: Conditional (provided when received in the inbound request)

Case 2: Used to specify the Entering Counterparty. Mandatory for Single Sided Declarations (i.e, declarations with Side set Buy or Sell).

- *PartyID (448) = field in which the ID is provided*
- *PartyIDSource (447) = C (Generally accepted market participant identifier)*
- *PartyRole (452) = 17 (Contra Firm)*

Investor ID

Presence Condition: Conditional (provided when received in the inbound request)

Case 3: Used to specify the Investor ID.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)

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- *NestedPartyRole (538)* = 5 (Investor ID)

Investor ID Cross

Presence Condition: Conditional (provided when received in the inbound request)

Case 3: Used to specify the Investor ID of the Sell side on a Dual sided declaration.

- *NestedPartyID (524)* = field in which the **ID of the Investor ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 39 (Contra Investor ID)

Clearing Firm ID

Presence Condition: Optional (provided when received in the inbound request)

Case 4: Used to specify the Clearing Firm ID

- *NestedPartyID (524)* = field in which the **ID of the Clearing Firm ID** is provided
- *NestedPartyIDSource (525)* = C (Generally accepted market participant identifier)
- *NestedPartyRole (538)* = 4 (Clearing Firm)

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
21005	ClientMessageSendingTime	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	105
5979	OEGINFromMember	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
7764	OEGOUTToME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	124

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
21002	BookINTime	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	101
21003	BookOUTTime	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	102
7765	OEGINFromME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	123
571	TradeReportID	Unique identifier of trade capture report.	String	20	From -2^63+1 to 2^63-1	Conditional	143
1003	TradeID	The unique ID assigned by the matching engine to the trade entity, once it is received or matched.	String	20	From 0 to 2^64-2	Conditional	142
939	TrdRptStatus	Trade Report Type.	Int	2	(See field description)	Conditional	144
828	TrdType	Type of Operation.	Int	4	(See field description)	Conditional	144
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	String	2	(See field description)	Conditional	109

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
60	TransactTime	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Conditional	142
552	NoSides	Number of sides.	NumInGroup	1	If provided, always set to 1	Conditional	123
54	Side	Indicates the side of the order.	Char	1	1 = Buy 2 = Sell	Conditional	137
20053	ClearingAccount	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	String	16	Alphanumeric	Conditional	103
6399	AccountCode	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Int	1	(See field description)	Conditional	67
29	LastCapacity	MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	Conditional	114
58	Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	String	18	Alphanumeric	Optional	140
20155	PrincipalCode	Identifies the beneficiary of the transaction when trading on behalf of another establishment.	String	20	Alphanumeric	Optional	132
53	Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Qty	20	From 0 to 2^64-2	Conditional	132
44	Price	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	Price	20	From -2^63+1 to 2^63-1	Conditional	131
453	NoPartyIDs	Number of PartyID entries.	NumInGroup	1	If provided, from 1 to 2	Conditional	121
448	PartyID	Party identifier/code. See PartyIDSource (447) and PartyRole (452).	String	16	Alphanumeric	Conditional	128
447	PartyIDSource	Source of PartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	129

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Tag	Field	Short Description	Format	Len	Values	Presence	Page
452	PartyRole	Identifies the type or role of the PartyID (448) specified.	Int	3	36 = Entering Trader 17 = Contra Firm	Conditional	129
539	NoNestedPartyIDs	Number of NestedPartyID entries.	NumInGroup	1	If provided, from 1 to 3	Conditional	121
524	NestedPartyID	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).	String	16	Alphanumeric	Conditional	119
525	NestedPartyIDSource	Source of NestedPartyID value.	Char	1	C = Generally accepted market participant identifier	Conditional	120
538	NestedPartyRole	Identifies the type or role of the NestedPartyID (524) specified.	Int	3	4 = Clearing Firm 5 = Investor ID 39 = Contra Investor ID	Conditional	120
10055	SettlPeriod	Indicates the settlement delay in trading days, from 0 to 30 days.	Int	2	From 0 to 30	Conditional	137
9970	SettlementFlag	Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled)	Char	1	0 = False 1 = True	Conditional	137
9971	GuaranteeFlag	Indicates if the trade is guaranteed or not (for clearing purposes).	Char	1	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed	Conditional	113
1839	TradePriceCondition	Contribution to price formation or the price discovery process.	Int	3	15 = Non-price forming trade (NPFT) 101 = Plain Vanilla Trade 102 = Trade Not Contributing to Price Discovery Process	Conditional	142
9955	ErrorCode	Error code in case of rejection.	Int	5	From 0 to 2^16-2	Conditional	110
372	RefMsgType	The MsgType (35) of the FIX message being referenced.	String	3	Value received in the rejected inbound message, if any	Conditional	133
	Message Trailer					**Mandatory**	

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5.3.3 Recovery Messages

5.3.3.1 InstrumentSynchronizationList (U50)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **InstrumentSynchronizationList** (U50) message is sent in order to associate each instrument with a *ResynchronizationID (20030).* This ID is used only in case of failover of the matching engine.

Please refer to message **SynchronizationTime** (U51) for further details.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
20030	ResynchronizationID	Each Instrument is assigned to a Recovery ID that is used in case of failover.	Int	5	From 0 to 2^16-2	Mandatory	177
146	NoRelatedSym	Number of SecurityID entries.	NumInGroup	3	From 1 to 254	Mandatory	160
48	SecurityID	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	String	10	From 0 to 2^32-2	Mandatory	134
22	SecurityIDSource	Gives the type of SecurityID.	String	1	8 = Symbol Index	Mandatory	135
20020	EMM	Defines the Exchange Market Mechanism applied on each platform.	Int	2	(See field description)	Mandatory	109
	Message Trailer					**Mandatory**	

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5.3.3.2 SynchronizationTime (U51)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **SynchronizationTime** (U51) message is sent after a disruptive incident affecting the trading chain to help the clients assess whether the messages received immediately before the disruptive incident are in valid and stored state or if they must be discarded.

This message provides a timestamp (*LastBookInTime (20031)*) of the last known valid and stored message, and is sent by the system for the associated resynchronization ID (*ResynchronizationID (20030)*).

Upon the reception of the message, clients must check the list of all the instruments associated to the field *ResynchronizationID (20030)* and analyze all received messages related to these instruments. Messages having *BookInTime (21002)* or *TransactTime (60)* higher than the associated *LastBookInTime (20031)* must be discarded.

For example, upon the reception of a **SynchronizationTime** (U51) message, if a client previously received an **ExecutionReport** (8) message as a notification of a Fill with the *BookInTime (21002)* higher than the *LastBookInTime (20031)*, then this **ExecutionReport** (8) notification must be ignored and the order fill must be reversed in the client system; the trade is considered as if it has never happened (i.e. the quantity has not been traded, and the order may still be present in the order book for further execution).

Similarly, if a client previously received an **ExecutionReport** (8) as a Kill notification with the *TransactTime (60)* higher than the *LastBookInTime (20031)*, then the Kill notification must be ignored (meaning that the order may still present in the order book for further execution).

All the messages received after a **SynchronizationTime** (U51) message must be processed normally.

Tag	Field	Short Description	Format	Len	Values	Presence	Page
	Message Header					**Mandatory**	
20030	ResynchronizationID	Each Instrument is assigned to a Recovery ID that is used in case of failover.	Int	5	From 0 to 2^16-2	Mandatory	177
20031	LastBookInTime	Last Matching Engine In Time (in ns) processed on the associated ResynchronizationID. (Format: YYYYMMDD-HH:MM:SS.sssssssss).	UTCTimestamp	27	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)	Mandatory	149
	Message Trailer					**Mandatory**	

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6. FIELD DESCRIPTION

A

AccountCode

Field Name	AccountCode
Tag	6399
Description	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. For Cross orders it specifies the account type for which the buy side of a cross order is entered. - Non-LP clients are not allowed to use the type '6' (Liquidity Provider).
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment
Conditions	It is mandatory for every NewOrderSingle (D). In OrderCancelReplaceRequest (G) message, if provided the field is ignored. The value 2 is only available for BSE and BVMT. The values from 6 up to 13 are only available for BVMT.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) OrderMassCancelReport (r) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

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AckPhase

Field Name	AckPhase
Tag	21013
Description	Indicates the trading phase during which the Matching Engine has processed the event that has triggered this ExecutionReport (8) message.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase [C] 4 = Closed Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended
Conditions	It is provided only as response to NewOrderSingle (D) and OrderCancelReplaceRequest (G) message.
Used In	ExecutionReport (8)

AckQualifiers

Field Name	AckQualifiers
Tag	21014
Description	Field used to provide additional information on the corresponding order. A single field can contain up to 8 values, space delimited, provided in different positions. - Queue Indicator: indicates whether the corresponding inbound message was queued because of throttling or not. (0: No ; 1: Yes).
Used For	Cash and Derivatives
Format	MultipleCharValue
Length	3
Possible Values	1 = Queue Indicator
Conditions	Provided only as a response to a NewOrderSingle (D) and to OrderCancelReplaceRequest (G).
Used In	ExecutionReport (8)

B

BeginSeqNo

Field Name	BeginSeqNo
Tag	7
Description	Message sequence number for first message.
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Possible Values	From 1 to 2^32-2
Used In	ResendRequest (2)

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BeginString

Field Name	BeginString
Tag	8
Description	Beginning of message identifier. Identifies the beginning of message and the protocol version. Must be the first field in message. Always unencrypted.
Used For	Cash and Derivatives
Format	String
Length	9
Possible Values	FIXT.1.1 (Always unencrypted, must be first field in message)
Conditions	Inbound messages: Mandatory. Outbound messages: Always Provided.
Used In	Message Header

BodyLength

Field Name	BodyLength
Tag	9
Description	Message length including header, body and trailer. Message length, in bytes, forward to checksum field. Must be second field in message. Always unencrypted.
Used For	Cash and Derivatives
Format	Length
Length	6
Possible Values	Integer
Conditions	Inbound messages: Mandatory. Outbound messages: Always Provided.
Used In	Message Header

BookINTime

Field Name	BookINTime
Tag	21002
Description	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Conditions	In ExecutionReport (8) message: - it corresponds to the order creation/modification time or to the cancellation time, according to the fields ExecType (150) and OrdStatus (39). - in case of an acknowledgement message, it corresponds to the time at which the event generating the ExecutionReport (8) entered the matching engine. - in case of a kill message it corresponds to the time at which the corresponding order has been killed - in case of trade cancellation, it corresponds to the trade cancellation time.

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Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) OrderMassCancelReport (r)

BookOUTTime

Field Name	BookOUTTime
Tag	21003
Description	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) OrderMassCancelReport (r)

BreachedCollarPrice

Field Name	BreachedCollarPrice
Tag	21001
Description	Breached collar price in case of collar rejection (to be calculated with Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	Provided only in case of a rejection due to a collar breach.
Used In	ExecutionReport (8) OrderCancelReject (9)

C

CancelOnDisconnectionIndicator

Field Name	CancelOnDisconnectionIndicator
Tag	21018
Description	Indicates whether the order is not in scope of the Cancel On Disconnect mechanism (order is persisted) or if order should be handled as defined by default. (0: Default Configuration ; 1: Order not in the scope of Cancel On Disconnect - Order is to be persisted)
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect

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Conditions	If the OrderCancelReplaceRequest (G) is used to confirm a new order that can be executed upon entry, but whose matching price hits a collar, this field can't be populated.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

CheckSum

Field Name	CheckSum
Tag	10
Description	Simple checksum. Always 3 bytes, always unencrypted, always last field in message.
Used For	Cash and Derivatives
Format	String
Length	3
Possible Values	Numerical
Conditions	Inbound messages: Mandatory. Outbound messages: Always Provided.
Used In	Message Trailer

ClassID

Field Name	ClassID
Tag	9945
Description	Instrument Trading Group / Class Identifier.
Used For	Cash
Format	String
Length	2
Possible Values	Alphanumeric
Conditions	In OrderMassCancelRequest (q): mutually exclusive with SecurityID. In OrderMassCancelRequestReport (r), provided with the value held by the OrderMassCancelRequest (q), if any; else, not provided.
Used In	OrderMassCancelRequest (q) OrderMassCancelReport (r)

ClearingAccount

Field Name	ClearingAccount
Tag	20053
Description	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	String
Length	16
Possible Values	Alphanumeric
Conditions	For Order submission and Order Modification: • required when Self Trade Preventation is configured at Clearing Account level and/or • required when Clearing Account functionality is activated;

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	For Order submission, Order modification and Declaration submission: • required when CCM functionality is activated; **Note**: For the Order modification, it must be populated with the same value as the one provided in the original order submission. In ExecutionReport (8) message, this field is provided only in the Drop Copy feed – Drop Copy conditions below: • required when Self Trade Preventation is configured at Clearing Account level • required when CCM functionality is activated; • required when Clearing Account functionality is activated; In TradeCaptureReportAck (AR) message, this field is provided only in the Drop Copy feed – Drop Copy conditions below: • required when CCM functionality is activated; • required when Clearing Account functionality is activated;
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

ClearingInstruction

Field Name	ClearingInstruction
Tag	577
Description	Clearing Instruction. Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred: - Process normally - Manual mode (pre-posting and/or pre-giveup) - Automatic posting mode (trade posting to the position account number specified) - Automatic give-up mode (trade give-up to the give-up destination number specified) [C] - Automatic and account authorization [D] - Manual and account authorization [D] - Give-up to single firm [D]
Used For	Cash and Derivatives
Format	Int
Length	4
Possible Values	0 = Process normally (formerly Systematic posting) [C] 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode [C] *4008 = Automatic and account authorization [D]* *4009 = Manual and account authorization [D]* *4010 = Give-up to single firm [D]*
Conditions	In ExecutionReport (8) message, this field is provided only for Drop Copy. Conditions for Drop Copy will be provided at a later date. In Drop Copy provided in Ack and Fill messages, if provided on order entry by the client.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

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ClientMessageSendingTime

Field Name	ClientMessageSendingTime
Tag	21005
Description	Indicates the time of inbound message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Conditions	This field is provided only if the ExecutionReport (8) is a response to a requested inbound message.
Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) OrderMassCancelReport (r)

ClOrdID

Field Name	ClOrdID
Tag	11
Description	An identifier of an Order assigned by the Client when submitting an order to the Exchange. Clients must provide a ClOrdID in every inbound application message, otherwise the message will be immediately rejected by the OEG. Clients may provide any value that respects the ClOrdID format, which is a string of 20 characters, and the ranges as defined according to their access. The Exchange recommends setting an unique ID per order, Firm and SecurityID. For order entry, the ClOrdID value is not checked by the Exchange (besides the format), it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request. For modification and cancellation using the OrigClOrdID as unique identifier, the value is checked by the Exchange for possible duplicates, i.e. different orders submitted with the same ClOrdID. In case of duplication, the inbound request is rejected with the according error code.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	When used in inbound application messages, this field is always mandatory. In outbound application messages, this field is provided for solicited messages and not provided for unsolicited messages. In outbound ExecutionReport (8) messages if MassStatusReqID (584) is filled ClOrdID (11) is not provided. If message is sent due to breach of collars, as in that case there is an order acknowledgement ExecutionReport (8) before (the exchange "OrderID" is provided), the ClOrdID is not sent for the rejection message
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderCancelReject (9) OwnershipRequest (U18) OwnershipRequestAck (U29)

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	OrderMassCancelRequest (q) OrderMassCancelReport (r)

CollarRejType

Field Name	CollarRejType
Tag	9962
Description	Hit collar type (high or low) in case of order rejection due to collar breach.
Used For	Cash
Format	Char
Length	1
Possible Values	1 = Low dynamic collar 2 = High dynamic collar
Conditions	Provided only in case of a rejection due to a collar breach.
Used In	ExecutionReport (8) OrderCancelReject (9)

ConfirmFlag

Field Name	ConfirmFlag
Tag	9930
Description	Indicates if the order entry or modification is confirmed by the broker issuing the order or not. If the order is not confirmed by the issuing broker, additional checks on price and quantity are performed by the Trading Engine. On the other hand, a confirmed order is not subject to this additional checks. Field also used in cancel/replace request to confirm a collar pass-through in case of rejection due to collar breach.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0 = Not confirmed (default) 1 = Confirmed
Used In	OrderCancelReplaceRequest (G)

ContraBroker

Field Name	ContraBroker
Tag	375
Description	ID of the Counterpart Firm in specific cases. The counterpart identifier is provided in the ExecutionReport (8) message in case the notified trade is the result of : - the Internal Matching Service (IMS), - the Internal Clearing Service (ICS), - a transaction performed on the Primary Market Model and not broadcast to the Clearing House, - a transaction performed on the Public Auctions Market (VPU), - a transaction performed on a non-clearable instrument.
Used For	Cash
Format	String
Length	20
Possible Values	From 0 to 2^64-2

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Used In	ExecutionReport (8)

CumQty

Field Name	CumQty
Tag	14
Description	Cumulated quantity (to be calculated with Quantity Decimals). Total number of shares filled. If an order is partially filled for a quantity q1, then partially filled for a quantity q2, in the first execution report, CumQty = q1 and in the second execution report, CumQty = q1 + q2.
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	From -1 to 2^64-2
Conditions	CumQty (14) is set to "-1" in case of Kill, Reject and Trade cancellation (i.e. If the OrdStatus(39) equal to '4' (Canceled), '3' (Done For Day), 'C' (Expired), '8' (Rejected) or H (Cancel Trade))
Used In	ExecutionReport (8)

CustOrderCapacity

Field Name	CustOrderCapacity
Tag	582
Description	Type of customer trading
Used For	Derivatives
Format	Int
Length	1
Possible Values	1 = For own account 2 = For clearing members house account 3 = For account of another member present 4 = For any other customer account
Used In	NewOrderSingle (D) ExecutionReport (8)

CxlRejResponseTo

Field Name	CxlRejResponseTo
Tag	434
Description	Origin of cancellation rejection
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = OrderCancelRequest (F) 2 = OrderCancelReplaceRequest (G) 4 = OrderMassCancelRequest (q)
Used In	OrderCancelReject (9)

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D

DefaultApplVerID

Field Name	DefaultApplVerID
Tag	1137
Description	Specifies the service pack release being applied, by default, to the message at the session level
Used For	Cash and Derivatives
Format	String
Length	1
Possible Values	9 = FIX50SP2
Used In	Logon (A)

DeliverToCompID

Field Name	DeliverToCompID
Tag	128
Description	ID of the receiving firm when the message is sent through a third party. This field holds the same information as the one held by OnBehalfOfCompID in inbound messages.
Used For	Cash and Derivatives
Format	String
Length	8
Possible Values	Inbound: Not used Outbound: Firm ID
Conditions	In case a firm's Logical access is configured with Additional allowed member code(s) [ACL] on top of the mandatory Member Code [Owner] that owns / requests the connection: If these member codes (between Owner and ACL) are not the same, in a selected list of Outbound application messages (provided below) the field DeliverToCompID (128) is populated with the value specified in the field OnBehalfOfCompID (115). Otherwise, the field is not provided in Outbound messages. List of selected outbound messages: ExecutionReport (8), OrderCancelReject (9), OrderMassCancelReport (r), RequestAckMessage (Uy), OwnershipRequestAck (U29)
Used In	Message Header

DisclosedQtyRandIndicator

Field Name	DisclosedQtyRandIndicator
Tag	21016
Description	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	0 = No 1 = Yes
Conditions	Mandatory if OrdType = X (Iceberg).
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

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DisplayQty

Field Name	DisplayQty
Tag	1138
Description	Maximum number of quantity units to be shown to market participants (Iceberg Order). DisplayQty is to be calculated with Quantity Decimals.
Used For	Cash
Format	Qty
Length	20
Possible Values	From 1 to 2^64-1
Conditions	The DisplayQty is provided only if OrdType = X (Iceberg) and ExecType is '0' (New) or 'e' (Refilled Iceberg Ack). DisplayQty should be multiple of the instrument's lot size, otherwise the order will be rejected.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

E

EMM

Field Name	EMM
Tag	20020
Description	Defines the Exchange Market Mechanism applied on each platform.
Used For	Cash and Derivatives
Format	Int
Length	2
Possible Values	1 = Cash and Derivative Central Order Book (COB) 5 = Cash On Exchange Off book [C] *10 = Buy In* *11 = Odd Lot* 99 = Not Applicable (For indices and iNAV) [C]
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderCancelReject (9) RequestAckMessage (Uy) OwnershipRequest (U18) OrderMassStatusRequest (AF) OrderMassCancelRequest (q) OrderMassCancelReport (r) InstrumentSynchronisationList (U50) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

EncryptMethod

Field Name	EncryptMethod

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Tag	98
Description	Method of encryption for the new FIX session
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	Always set to 0 (No encryption)
Used In	Logon (A)

EndSeqNo

Field Name	EndSeqNo
Tag	16
Description	Message sequence number for last message
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Possible Values	From 0 to 2^32-2
Used In	ResendRequest (2)

ErrorCode

Field Name	ErrorCode
Tag	9955
Description	Error code in case of rejection. Provides the return error code when a request is rejected for a functional or a technical reason.
Used For	Cash and Derivatives
Format	Int
Length	5
Possible Values	From 0 to 2^16-1
Conditions	In ExecutionReport (8) message this field is provided when OrdStatus = '8' (Rejected).
Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) TradeCaptureReportAck (AR)

ExecID

Field Name	ExecID
Tag	17
Description	The ExecID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation. For example, let x be the reference identifier of a given trade, x is reported in the two ExecutionReport (8) messages generated for the both sides of the trade. x will also be used as reference for this trade in the Drop Copy feed. And if this trade is cancelled, x is again reported in the ExecutionReport (8) messages sent for the 2 sides of the trade.
Used For	Cash and Derivatives
Format	String
Length	10

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Possible Values	From 0 to 2^32-1
Conditions	In Order Information reports and Market Operations Trade Cancellation reports, this field is provided with the reference ID of the current execution, during the current day and for the concerned instrument. This field is populated with 'NA' for all Ack type messages (New order, Refilled and Transformation of Iceberg order, Modification of an order, Triggering of MTL, Stop, VFU / VFC, Order Status and Ownership request), Kill and Reject.
Used In	ExecutionReport (8)

ExecPhase

Field Name	ExecPhase
Tag	21023
Description	Indicates the trading phase during which the trade has occurred.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Continuous Trading Phase 2 = Uncrossing Phase 3 = Trading At Last Phase
Conditions	Provided only in case of Fill or Partial Fill.
Used In	ExecutionReport (8)

ExecRefID

Field Name	ExecRefID
Tag	19
Description	The ExecRefID is an unique identifier of a trade per instrument. This field is provided in case of trade cancellation.
Used For	Cash and Derivatives
Format	String
Length	10
Possible Values	Sequential number. From 1 to 2^32-2
Conditions	Provided only in case of Trade Cancellation. When provided filled with the ExecID (17) of the Trade being cancelled.
Used In	ExecutionReport (8)

ExecType

Field Name	ExecType
Tag	150
Description	Describes the specific ExecutionReport while OrdStatus (39) will always identify the current order status (e.g. Partially Filled).
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0 = New 3 = Done for Day 4 = Cancelled 5 = Replaced 8 = Rejected

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	a = Cancelled by STP b = Order Cancelled due to Cancel On Disconnect Mechanism d = Collar Confirmation Ack [C] e = Refilled Iceberg Ack [C] h = Iceberg Transformed to Limit due to Minimum size [C] i = Order Creation By Market Operations k = OwnershipRequest Ack [C] m = OrderMassStatusRequest Ack [C] C = Expired F = Trade G = Trade Creation by Market Operation H = Cancel Trade I = Order Status L = Triggered or Activated by System O = Eliminated by corporate event *P = Cancelled by Member Risk Manager (For Future Use)* U = Order Cancelled by Market Operations V = Cancelled due to a Kill command W = Cancelled MTL in an empty Order Book [C] X = Remaining quantity killed (IOC) Z = Too many collar breach attempts t = Order Cancelled due to Static Collars x = Order Cancelled due to breach of Ownership Limit y = Order Cancelled due to breach of Credit Limit z = Order Cancelled upon CSD request B = Order Cancelled due to breach of Short Selling Limit o = Ownership Confirmation Ack p = ShortSelling Confirmation Ack
Used In	ExecutionReport (8)

ExpireDate

Field Name	ExpireDate
Tag	432
Description	Field used as date of order expiration (last day the order can trade) for GTD orders(Format: YYYYMMDD).
Used For	Cash and Derivatives
Format	LocalMktDate
Length	8
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31
Conditions	*ExpireDate* is mandatory in the Inbound NewOrderSingle (D) messages for GTD orders. This field is not provided in the Outbound messages in trading OEG. This field is populated in order related messages in Drop Copy. In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

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ExpireTime

Field Name	*ExpireTime*
Tag	*126*
Description	*Field used as time of order expiration for GTT orders (Format: YYYYMMDD-HH:MM:SS.sssssssss).*
Used For	*Cash*
Format	*UTCTimestamp*
Length	*27*
Possible Values	*Valid values:* *YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)*
Conditions	*ExpireTime is mandatory in the Inbound NewOrderSingle (D) messages for GTT orders. Valid timestamps must have the current trade date and a time specified at a second level. The last 9 characters (nanoseconds) are ignored for this field.* *This field is not provided in the Outbound messages in trading OEG.* *This field is populated in order related messages in Drop Copy.* *In OrderCancelReplaceRequest (G) message:* *- (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration* *- (ii) when sent to modify an order, value will be modified to the one provided*
Used In	*NewOrderSingle (D)* *ExecutionReport (8)* *OrderCancelReplaceRequest (G)*

G

GapFillFlag

Field Name	GapFillFlag
Tag	123
Description	Purpose of sequence reset.
Used For	Cash and Derivatives
Format	Boolean
Length	1
Possible Values	Y = Gap fill message N = Sequence reset
Used In	SequenceReset (4)

GuaranteeFlag

Field Name	GuaranteeFlag
Tag	9971
Description	Indicates if the trade is guaranteed or not (for clearing purposes).
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Cleared but not Guaranteed

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	2 = Cleared and Guaranteed
Conditions	In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

H

HeartBtInt

Field Name	HeartBtInt
Tag	108
Description	Heartbeat interval (in seconds).
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	Numerical
Used In	Logon (A)

L

LastBookInTime

Field Name	LastBookInTime
Tag	20031
Description	Last Matching Engine In Time (in ns) processed on the associated ResynchronizationID. (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	SynchronisationTime (U51)

LastCapacity

Field Name	LastCapacity
Tag	29
Description	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)

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Conditions	In inbound messages this field can be provided with any of the allowed values, they are not used.
Used In	NewOrderSingle (D) ExecutionReport (8) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

LastPx

Field Name	LastPx
Tag	31
Description	The Last Traded Price indicates the price of last fill on an instrument (to be calculated with Price/Index Level Decimals).
Used For	Cash and Derivatives
Format	Price
Length	20
Possible Values	From -2^63+1 to 2^63-1
Conditions	Provided only in case of a Fill, Partial Fill and Trade Cancellation. For a trade cancellation the LastPx refers to price of the cancelled trade.
Used In	ExecutionReport (8)

LastMsgSeqNumProcessed

Field Name	LastMsgSeqNumProcessed
Tag	369
Description	Indicates to the Client which was the Message Sequence Number of the last message processed by the Exchange
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Conditions	Provided to clients in outbound messages
Possible Values	From 1 to 2^32-1
Used In	Message Header

LastQty

Field Name	LastQty
Tag	32
Description	The LastQty indicates the quantity of the last fill on an instrument (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	From 0 to 2^64-1
Conditions	Provided only in case of a Fill, Partial Fill and Trade Cancellation. For a trade cancellation the LastQty refers to quantity of the cancelled trade.
Used In	ExecutionReport (8)

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LeavesQty

Field Name	LeavesQty
Tag	151
Description	Indicates the remaining quantity of an order, i.e. the quantity open for further execution (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	From -1 to 2^64-2
Conditions	LeavesQty (151) is set to '0' when the order is no longer active (i.e. OrdStatus (39) is = '4' (Canceled), '3' (Done For Day), 'C' (Expired) or '8' (Rejected)). LeavesQty (151) is set to '-1' in case of Trade Cancellation (i.e. OrdStatus(39) is equal to 'H' (Cancel Trade)).
Used In	ExecutionReport (8)

LogicalAccessID

Field Name	LogicalAccessID
Tag	21021
Description	Identifier of the Logical Access.
Used For	Cash and Derivatives
Format	Int
Length	10
Possible Values	From 0 to 2^32-1
Conditions	It is required in Logon (A) message. It is required in the OwnershipRequest (U18) message when the OrderID is not provided. In the ExecutionReport (8) message, when combined to the OEPartitionID, it provides the OE Session that owns the order. In the OrderMassCancelRequest (q) message it can be used as filter to cancel orders belonging to this Logical Access.
Used In	Logon (A) ExecutionReport (8) OwnershipRequest (U18) OwnershipRequestAck (U29) OrderMassCancelRequest (q) OrderMassCancelReport (r)

LPRole

Field Name	LPRole
Tag	20021
Description	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to 'Liquidity Provider'.
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	1 = Liquidity Provider or Market Maker
Conditions	Liquidity Provider Role is mandatory when AccountCode is equal to 'Liquidity Provider'.

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	In OrderCancelReplaceRequest (G) message, if provided the value is ignored.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

M

MassActionReportID

Field Name	MassActionReportID
Tag	1369
Description	Exchange allocated order mass cancel report ID.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	Value provided by the Trading Engine
Used In	OrderMassCancelReport (r)

MassCancelRequestType

Field Name	MassCancelRequestType
Tag	530
Description	Scope of orders already in COB to be cancelled only for them having the selected maturity.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Cancel orders for a security A = Cancel orders for a security group
Used In	OrderMassCancelRequest (q) OrderMassCancelReport (r)

MassCancelResponse

Field Name	MassCancelResponse
Tag	531
Description	Specifies the action taken by counterparty order handling system as a result of the OrderMassCancelRequest (AF).
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Cancel orders for a security A = Cancel orders for a security group
Used In	OrderMassCancelReport (r)

MassStatusReqID

Field Name	MassStatusReqID
Tag	584

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Description	Client ID for the Order Mass Status Request.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From -2^63+1 to 2^63-1
Conditions	Mandatory in inbound OrderMassStatusRequest (AF) message. Provided in outbound ExecutionReport (8) if sent as a response to a OrderMassStatusRequest (AF) message. In outbound ExecutionReport (8) messages if MassStatusReqID (584) is filled ClOrdID (11) is not provided.
Used In	ExecutionReport (8) OrderMassStatusRequest (AF)

MassStatusReqType

Field Name	MassStatusReqType
Tag	585
Description	Mass status request type.
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	101 = Status of a single order
Used In	OrderMassStatusRequest (AF)

MinQty

Field Name	MinQty
Tag	110
Description	Minimum quantity to be executed upon order entry (else the order is rejected). MinQty is to be calculated with Quantity Decimals.
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	Value '0' by default and depending to a minimum value for the given instrument and/or market type
Conditions	Optional when entered in NewOrderSingle (D). Provided as is (if previously entered by client) in ExecutionReport (8).
Used In	NewOrderSingle (D) ExecutionReport (8)

MsgSeqNum

Field Name	MsgSeqNum
Tag	34
Description	The MsgSeqNum is mandatory for all inbound messages.
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Possible Values	From 1 to 2^32-1
Used In	Message Header

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MsgType

Field Name	MsgType
Tag	35
Description	Message type.
Used For	Cash and Derivatives
Format	String
Length	3
Possible Values	0 = Heartbeat 1 = TestRequest 2 = ResendRequest 3 = Reject 4 = SequenceReset 5 = Logout 8 = ExecutionReport 9 = OrderCancelReject A = Logon D = NewOrderSingle F = OrderCancelRequest G = OrderCancelReplaceRequest q = OrderMassCancelRequest r = OrderMassCancelReport AF = OrderMassStatusRequest CB = UserNotification U18 = OwnershipRequest U29 = OwnershipRequestAck Uy = RequestAckMessage U50 = InstrumentSynchronizationList U51 = SynchronizationTime
Used In	Message Header

N

NestedPartyID

Field Name	NestedPartyID
Tag	524
Description	Party identifier/code. See NestedPartyIDSource (525) and NestedPartyRole (538).
Used For	Cash and Derivatives
Format	String
Length	16
Possible Values	Alphanumeric
Conditions	Mandatory if NoNestedPartyIDs >= 1.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) TradeCaptureReport (AE)

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	TradeCaptureReportAck (AR)

NestedPartyIDSource

Field Name	NestedPartyIDSource
Tag	525
Description	Source of NestedPartyID value.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	C= Generally accepted market participant identifier
Conditions	Mandatory if NoNestedPartyIDs >= 1
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

NestedPartyRole

Field Name	NestedPartyRole
Tag	538
Description	Identifies the type or role of the NestedPartyID (524) specified.
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	3= Client ID 4 = Clearing Firm 5= Investor ID 39 = Contra Investor ID
Conditions	Mandatory if NoNestedPartyIDs >= 1
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

NewSeqNo

Field Name	NewSeqNo
Tag	36
Description	New sequence number.
Used For	Cash and Derivatives
Format	SeqNum
Length	10

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Possible Values	From 1 to 2^32-2
Used In	SequenceReset (4)

NextExpectedMsgSeqNum

Field Name	NextExpectedMsgSeqNum
Tag	789
Description	Indicates the sequence number plus one (+1) of the last message received by the Client from the Exchange on the OE Session.
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Possible Values	From 1 to 2^32-1
Used In	Logon (A)

NoNestedPartyIDs

Field Name	NoNestedPartyIDs
Tag	539
Description	Number of NestedPartyID entries.
Used For	Cash and Derivatives
Format	NumInGroup
Length	1
Possible Values	If provided, from 1 to 2
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

NoPartyIDs

Field Name	NoPartyIDs
Tag	453
Description	Number of PartyID entries.
Used For	Cash and Derivatives
Format	NumInGroup
Length	1
Possible Values	From 1 to 4
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) UserNotification (CB) OrderMassCancelReport (r) TradeCaptureReport (AE)

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	TradeCaptureReportAck (AR)

NoRelatedSym

Field Name	NoRelatedSym
Tag	146
Description	Number of related symbols (instruments).
Used For	Cash and Derivatives
Format	NumInGroup
Length	1
Possible Values	Always set to 1
Used In	InstrumentSynchronisationList (U50)

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NoSides

Field Name	NoSides
Tag	552
Description	Number of sides.
Used For	Cash and Derivatives
Format	NumInGroup
Length	1
Possible Values	From 1 to 2
Used In	NewOrderSingle (D) ExecutionReport (8) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

O

OEGINFromME

Field Name	OEGINFromME
Tag	7765
Description	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) OrderMassCancelReport (r) TradeCaptureReportAck (AR)

OEGINFromMember

Field Name	OEGINFromMember
Tag	5979
Description	Order Entry Gateway IN time from member (in nanoseconds), measured when inbound message enters the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	ExecutionReport (8) OrderCancelReject (9)

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	RequestAckMessage (Uy) OrderMassCancelReport (r) TradeCaptureReportAck (AR)

OEGOUTToME

Field Name	OEGOUTToME
Tag	7764
Description	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	ExecutionReport (8) OrderCancelReject (9) RequestAckMessage (Uy) OrderMassCancelReport (r) TradeCaptureReportAck (AR)

OEPartitionID

Field Name	OEPartitionID
Tag	21019
Description	Identifies uniquely an OE Optiq partition by which the engine is reached.
Used For	Cash and Derivatives
Format	Int
Length	5
Possible Values	From 0 to 2^16-1
Conditions	In Logon (A) message it must be set according to the partition to which the messages are sent. In the OwnershipRequest (U18) message it is optional. If populated it is used to restrict the request of ownership to the orders belonging to the specified LogicalAccessID and entered through this partition. In the OrderMassCancelRequest (q) message it is optional, but if populated the LogicalAccessID field is mandatory. If populated it is used as a filter to cancel PotentialMatchingPriceorders entered through this partition (it can be combined with other criteria). In the ExecutionReport (8) message it indicates to which OE Session the orders belong to (in response to OrderMassStatusRequest (AF) and OwnershipRequest (U18)) .
Used In	Logon (A) ExecutionReport (8) OwnershipRequest (U18) OwnershipRequestAck (U29) OrderMassCancelRequest (q) OrderMassCancelReport (r)

OnBehalfOfCompID

Field Name	OnBehalfOfCompID
Tag	115
Description	ID of the issuing firm when the message is send through a third party.

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Used For	Cash and Derivatives
Format	String
Length	8
Possible Values	Inbound: Firm ID Outbound: Not used
Conditions	In case a firm's Logical access is configured with Additional allowed member code(s) [ACL] on top of the mandatory Member Code [Owner] that owns / requests the connection: If these member codes (between Owner and ACL) are not the same, the field OnBehalfOfCompID (115) is mandatory in Inbound messages. Otherwise the field is not mandatory.
Used In	Message Header

OrderCategory

Field Name	*OrderCategory*
Tag	*21041*
Description	*Field used as instruction for cancel order handling.*
Used For	*Cash and Derivatives*
Format	*Char*
Length	*1*
Possible Values	*1 = Lit Order*
Used In	*OrderCancelRequest (F)* *OrderMassCancelRequest (q)* *OrderMassCancelReport (r)* *OwnershipRequest (U18)* *OwnershipRequestAck (U29)* *OrderMassStatusRequest (AF)*

OrderID

Field Name	OrderID
Tag	37
Description	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From 0 to 2^64-2
Conditions	In case a message is rejected for Technical reasons, it isn't processed by the trading engine and the Order ID is not provided in the rejection message. Technical rejection cases can be identified by the type of the Error code, as provided in the field "Technical / Functional" within the Error code table in the Optiq Commercial Error List document.
Used In	ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderCancelReject (9) OwnershipRequest (U18) OwnershipRequestAck (U29) OrderMassStatusRequest (AF)

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OrderPriority

Field Name	OrderPriority
Tag	21004
Description	Rank giving the priority of the order. The order with the lowest value of OrderPriority has the highest priority. OrderPriority is unique per SecurityID and EMM, therefore, it is also used as the unique order identifier in the market data feed. Order Priority should then allow clients to reconcile their orders between private order entry and market data feed. Also assigned for newly entered Stop orders. When Stop orders are triggered they will be assigned a new OrderPriority. Used in conjunction with Previous Priority, for market data only.
Used For	Cash
Format	Int
Length	20
Possible Values	From 0 to 2^64-1
Used In	ExecutionReport (8)

OrderQty

Field Name	OrderQty
Tag	38
Description	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	From 0 to 2^64-1
Conditions	In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

OrdStatus

Field Name	OrdStatus
Tag	39
Description	Order status.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0 = New 1 = Partially filled 2 = Filled 3 = Done for Day 4 = Cancelled 5 = Replaced

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	8 = Rejected C = Expired H = Cancel Trade I = Order Status Q = VFU/VFC Triggered Ack [C] R = OrderMassStatusRequest Ack [C] S = Stop Triggered Ack [C] T = MTL Second Ack [C] Z = Message Rejected
Used In	ExecutionReport (8) OrderCancelReject (9)

OrdType

Field Name	OrdType
Tag	40
Description	Type of Order. Please note that the values Stop-market/Stop-market-on-Quote, Stop limit/Stop-limit-on-quote, Iceberg and Mid-Point Peg are used only for the Order Entry, they will never be populated in the Market Data feed.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit X = Iceberg
Conditions	For OrderCancelReplaceRequest (G) and OrderCancelRequest (F) messages if the OrdType is different than the Order Type of the targeted order, the request will be rejected with the reason "Unknown Order". In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided For ExecutionReport (8) OrdType is only filled if the content is an acknolwdgment type of message. OrdType will be present in case of response to: - NewOrderSingle (D) successful order creation (ExecType: 0 | OrdStatus: 0) - Iceberg order transformed into Limit order (ExecType: h | OrdStatus: 0) - Triggered Stop order (ExecType: L | OrdStatus: S) - Market to Limit order transformation (ExecType: L | OrdStatus: T)
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G)

OrigClOrdID

Field Name	OrigClOrdID
Tag	41
Description	Client order ID of the original order.
Used For	Cash and Derivatives

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Format	String
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	It is provided in the ExecutionReport (8) message only as response of a modification or cancellation done on OrigClOrdID.
Used In	ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OwnershipRequest (U18) OrderMassStatusRequest (AF)

OrigSendingTime

Field Name	OrigSendingTime
Tag	122
Description	Time (in ns) of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Conditions	Required for applicative messages resent as a result of a ResendRequest (2) or automatic resynchronization at Logon. Field is not populated in outbound SequenceReset-GapFill message and is not expected in inbound SequenceReset-GapFill message.
Used In	Message Header

P

PartyID

Field Name	PartyID
Tag	448
Description	Party identifier/code. See PartyIDSource (447) and PartyRole (452).
Used For	Cash and Derivatives
Format	String
Length	16
Possible Values	Alphanumeric
Conditions	Mandatory if NoPartyIDs >= 1.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) UserNotification (CB) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

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PartyIDSource

Field Name	PartyIDSource
Tag	447
Description	Source of PartyID value.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	C= Generally accepted market participant identifier
Conditions	Mandatory if NoPartyIDs >= 1
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) UserNotification (CB) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

PartyRole

Field Name	PartyRole
Tag	452
Description	Identifies the type or role of the PartyID (448) specified.
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	7 = Entering Firm 36 = Entering Trader
Conditions	Mandatory if NoPartyIDs >= 1.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) UserNotification (CB) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

PegOffsetValue

Field Name	*PegOffsetValue*
Tag	*211*
Description	*Tick offset for a pegged order. (For Future Use)* *Used to indicate the signed tick added to the peg reference for a pegged order.*
Used For	*Cash*
Format	*Int*
Length	*3*
Possible Values	*From -128 to 127*

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Conditions	*Mandatory for Primary and Market Peg Orders.* *If the OrderCancelReplaceRequest (G) is used to confirm a new order that can be executed upon entry, but whose matching price hits a collar, this field can't be populated.*
Used In	*NewOrderSingle (D)* *ExecutionReport (8)* *OrderCancelReplaceRequest (G)*

PegPriceType

Field Name	*PegPriceType*
Tag	*1094*
Description	*Defines the type of the peg order.*
Used For	*Cash*
Format	*Int*
Length	*1*
Possible Values	*2 = Mid-price peg (midprice of inside quote) (For Future Use, Pending Regulatory Approval) [C]* *4 = Market peg (For Future Use, Pending Regulatory Approval) [C]* *5 = Primary peg (primary market - buy at bid or sell at offer) [C]*
Conditions	*Mandatory if OrdType = P (Peg).* *In OrderCancelReplaceRequest (G) message:* *- (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration* *- (ii) when sent to modify an order, value will be modified to the one provided*
Used In	*NewOrderSingle (D)* *ExecutionReport (8)* *OrderCancelRequest (F)* *OrderCancelReplaceRequest (G)*

PossDupFlag

Field Name	PossDupFlag
Tag	43
Description	Identifies if a message is being retransmitted or not.
Used For	Cash and Derivatives
Format	Boolean
Length	1
Possible Values	N = Original transmission (default) Y = Possible duplicate
Conditions	Field provided in all cases when the message is being resent
Used In	Message Header

PossResend

Field Name	PossResend
Tag	97
Description	Indicates if the message contains information that was already sent under a different sequence number.
Used For	Cash and Derivatives
Format	Boolean
Length	1

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Possible Values	N = Original transmission Y = Possible resend
Used In	Message Header

PostingAction

Field Name	PostingAction
Tag	7443
Description	Posting action code (Open/Close) for the order. This field is part of the clearing aggregate. This field can contain up to 9 values, space delimited, provided in different positions. The first character will be used to indicate whether this field is being actively used or not (1 = Actively Used; 0 = Field Not Used). For each Leg, 0 means Open and 1 means Close. Leg 2 to Leg 9 are not applicable for cash instruments.
Used For	Derivatives
Format	MultipleCharValue
Length	17
Possible Values	1 = Leg 1 2 = Leg 2 [D] 3 = Leg 3 [D] 4 = Leg 4 [D] 5 = Leg 5 [D] 6 = Leg 6 [D] 7 = Leg 7 [D] 8 = Leg 8 [D] 9 = Leg 9 [D]
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

Price

Field Name	Price
Tag	44
Description	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals). It is mandatory for priced orders (Limit, Stop-limit) and must not be sent when the price is irrelevant (Market, Stop-market, Peg, MTL).
Used For	Cash and Derivatives
Format	Price
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	In NewOrderSingle (D) and OrderCancelReplaceRequest (G) requests: Mandatory if: OrdType = 2 (Limit), OrdType = 4 (Stop Limit) or OrdType = X (Iceberg). In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

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	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

PrincipalCode

Field Name	PrincipalCode
Tag	20155
Description	Identifies the beneficiary of the transaction when trading on behalf of another establishment.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	Alphanumeric
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

Q

Quantity

Field Name	Quantity
Tag	53
Description	Number of traded or ordered units (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Qty
Length	20
Possible Values	From 0 to 2^64-2
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

QueueingIndicator

Field Name	QueueingIndicator
Tag	21020
Description	Indicates whether the client requests its orders to be queued or rejected in case of throttling. (0: False - Reject ; 1: True - Queue).
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	0 = False 1 = True
Used In	Logon (A)

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R

RequestID

Field Name	RequestID
Tag	21060
Description	Unique message identifier as assigned by the Client when submitting the message request.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	In case the RequestAckMessage (Uy) message is an acknowledgement or rejection sent in response to a OwnershipRequest (U18), this field is filled with the *ClOrdID (11).* In case the RequestAckMessage (Uy) message is an acknowledgement or rejection sent in response to an OrderMassStatusRequest (AF) message, this field is filled with the *MassStatusReqID (584).*
Used In	RequestAckMessage (Uy)

RefMsgType

Field Name	RefMsgType
Tag	372
Description	The MsgType (35) of the FIX message being referenced.
Used For	Cash and Derivatives
Format	String
Length	3
Possible Values	Value received in the rejected inbound message, if any
Conditions	This field is provided only if the message type is referenced in the rejection.
Used In	Reject (3) RequestAckMessage (Uy) TradeCaptureReportAck (AR)

RefSeqNum

Field Name	RefSeqNum
Tag	45
Description	Reference sequence number of the rejected message.
Used For	Cash and Derivatives
Format	SeqNum
Length	10
Possible Values	From 1 to 2^32-1
Used In	Reject (3)

RefTagID

Field Name	RefTagID
Tag	371
Description	The tag number of the FIX field being referenced.

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Used For	Cash and Derivatives
Format	Int
Length	6
Possible Values	From 1 to 999 999
Conditions	This field is provided only if the tag number is referenced in the rejection.
Used In	Reject (3)

ResynchronizationID

Field Name	ResynchronizationID
Tag	20030
Description	Each Instrument is assigned to a Recovery ID that is used in case of failover.
Used For	Cash and Derivatives
Format	Int
Length	5
Possible Values	From 0 to 2^16-2

S

SecurityID

Field Name	SecurityID
Tag	48
Description	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.
Used For	Cash and Derivatives
Format	String
Length	10
Possible Values	From 0 to 2^32-1
Conditions	In case of rejection of LiquidityProviderCommand (UZ), OwnershipRequest (U18), OrderMassStatusRequest (AF) messages – field may not be provided in case of technical rejection, or if the data wasn't provided by the client in the Inbound message.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderCancelReject (9) RequestAckMessage (Uy) OwnershipRequest (U18) OwnershipRequestAck (U29) OrderMassStatusRequest (AF) OrderMassCancelRequest (q) OrderMassCancelReport (r) InstrumentSynchronisationList (U50) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

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SecurityIDSource

Field Name	SecurityIDSource
Tag	22
Description	Gives the type of SecurityID.
Used For	Cash and Derivatives
Format	String
Length	1
Possible Values	8 = Symbol Index
Conditions	In case of rejection of LiquidityProviderCommand (UZ), OwnershipRequest (U18), OrderMassStatusRequest (AF) messages - field may not be provided in case of technical rejection, or if the data wasn't provided by the client in the Inbound message.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderCancelReject (9) RequestAckMessage (Uy) OwnershipRequest (U18) OwnershipRequestAck (U29) OrderMassStatusRequest (AF) OrderMassCancelRequest (q) OrderMassCancelReport (r) InstrumentSynchronisationList (U50) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

SelfMatchPreventionID

Field Name	*SelfMatchPreventionID*
Tag	*2362*
Description	*For Future Use.*
Used For	*Cash and Derivatives*
Format	*String*
Length	*5*
Possible Values	*From 0 to 2^16-1*
Conditions	*In ExecutionReport (8) message, this field is provided only for Drop Copy. Conditions for Drop Copy will be provided at a later date.*
Used In	*NewOrderSingle (D)* *ExecutionReport (8)* *OrderCancelReplaceRequest (G)*

SenderCompID

Field Name	SenderCompID
Tag	49
Description	Identifier of the member firm that sends the message. It is provided by the Exchange upon the registration of the Firm by the Membership department..
Used For	Cash and Derivatives
Format	String

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Length	8
Possible Values	Inbound: Firm ID Outbound: Exchange ID
Conditions	In inbound messages it is the ID of the firm that sent the message. In outbound messages it is the ID of the Exchange.
Used In	Message Header

SendingTime

Field Name	SendingTime
Tag	52
Description	Time (in ns) of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Used In	Message Header

SessionRejectReason

Field Name	SessionRejectReason
Tag	373
Description	Session reject reason code. Code to identify the reason for a session-level rejection message.
Used For	Cash and Derivatives
Format	Int
Length	2
Possible Values	0 = Invalid Tag Number 1 = Required Tag Missing 2 = Tag not defined for this message type 3 = Undefined tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 7 = Decryption problem 8 = Signature problem 9 = CompID problem 11 = Invalid MsgType 13 = Tag appears more than once 14 = Tag specified out of required order 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating group 18 = Invalid/Unsupported Application Version 19 = NewSeqNo too low 20 = Requested MsgSeqNum is higher than last known MsgSeqNum 21 = EndSeqNo is lower than BeginSeqNo 22 = MsgSeqNum too high 23 = Invalid MsgType while waiting for Gap fill 24 = PossDupFlag set to 'Y' while OEG is not in Gap Fill Mode 25 = Throttling queue full

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	26 = Throttling Rate exceeded 27 = System busy 99 = Other
Used In	Reject (3)

SessionStatus

Field Name	SessionStatus
Tag	1409
Description	Provides the code associated to the reason for the logout.
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	4 = Session logout complete 5 = Invalid username or password 9 = Received MsgSeqNum(34) is too low 10 = Received NextExpectedMsgSeqNum(789) is too high 100 = Regular Logout By Client 101 = End Of Day 102 = System unavailable 103 = Client session already logged on 104 = Invalid Logon Value 105 = SequenceReset - Reset Mode not allowed 106 = Excessive Number of Messages 107 = Excessive Amount of Data in Bytes 108 = Excessive Number of Messages & Amount of Data in Bytes
Used In	Logout (5)

SettlementFlag

Field Name	SettlementFlag
Tag	9970
Description	Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled)
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0 = False 1 = True
Conditions	In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

SettlPeriod

Field Name	SettlPeriod
Tag	10055
Description	Indicates the settlement delay in trading days, from 0 to 30 days.
Used For	Cash and Derivatives

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Format	Int
Length	2
Possible Values	From 0 to 30
Conditions	In inbound TradeCaptureReport (AE) messages field is mandatory if it is submitted with TradeReportTransType (487) set to 0 = New
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

Side

Field Name	Side
Tag	54
Description	Indicates the side of the order.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	1 = Buy 2 = Sell
Conditions	In ExecutionReport (8) messages this field is provided in case of Order acknowledgement or Fill. For OrderCancelReplace (G) and OrderCancelRequest (F) messages if the Side is different than the Side of the targeted order, the request will be rejected with the reason "Unknown Order". In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) OrderMassCancelReport (r) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

SoftwareProvider

Field Name	SoftwareProvider
Tag	21050
Description	Free text field entered by the client in the Logon (A) message, identifying the provider of the software used for exchange of messages for trading purposes.
Used For	Cash and Derivatives
Format	String
Length	8
Possible Values	Free text field
Used In	Logon (A)

StopPx

Field Name	StopPx
Tag	99

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Description	Stop Trigger Price is mandatory for stop orders.
Used For	Cash
Format	Price
Length	20
Possible Values	From -2^63 to 2^63-1
Conditions	This field is mandatory for incoming Stop order messages. In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided It is not provided in the ExecutionReport (8) in outgoing messages.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

T

TargetCompID

Field Name	TargetCompID
Tag	56
Description	Message receptor ID.
Used For	Cash and Derivatives
Format	String
Length	8
Possible Values	Inbound: Exchange ID Outbound: Firm ID
Conditions	In inbound messages it is the ID of the Exchange. In outbound messages it is the ID of the firm to which the message is sent.
Used In	Message Header

TechnicalOrdType

Field Name	TechnicalOrdType
Tag	9941
Description	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.
Used For	Cash
Format	Char
Length	1
Possible Values	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining
Conditions	In ExecutionReport (8) message, this field is provided only for Drop Copy. Conditions for Drop Copy will be provided at a later date.
Used In	NewOrderSingle (D) ExecutionReport (8)

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	OrderCancelReplaceRequest (G)

TestReqID

Field Name	TestReqID
Tag	112
Description	Test request ID to be returned in Heartbeat.
Used For	Cash and Derivatives
Format	String
Length	24
Possible Values	Numerical
Conditions	Required when the HeartBeat message is the result of a TestRequest Message.
Used In	Heartbeat (0) TestRequest (1)

Text

Field Name	Text
Tag	58
Description	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	String
Length	18
Possible Values	Alphanumeric
Conditions	In ExecutionReport (8) message, this field is provided only for Drop Copy. Conditions for Drop Copy will be provided at a later date.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G) TradeCaptureReport (AE) TradeCaptureReportAck (AR)

TimeInForce

Field Name	TimeInForce
Tag	59
Description	Specifies the maximum validity of an order. For Stop orders it provides the maximum validity when not triggered.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) [C] 6 = Good till Date (GTD) 7 = At the Close [C] *A = Good for Time (GTT) [C]* B = Good for auction (GFA) [C]

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	C = Good Till Month (GTM)
Conditions	In ExecutionReport (8) message, this field is provided only for Drop Copy. Absence of this field is NOT interpreted as a DAY order. In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

TotalAffectedOrders

Field Name	TotalAffectedOrders
Tag	533
Description	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.
Used For	Cash and Derivatives
Format	Int
Length	10
Possible Values	From -2^31 to 2^31-1
Used In	OwnershipRequestAck (U29) OrderMassCancelReport (r)

TradeQualifier

Field Name	TradeQualifier
Tag	21080
Description	Trade Qualifier. This field can contain up to 7 values, space delimited, provided in different positions. - Uncrossing Trade: indicates whether the trade occurred during an Uncrossing, or not. (0: No ; 1: Yes) - Opening Trade: indicates whether the trade is the first trade of the day, or not. (0: No ; 1: Yes) Please note that during an Uncrossing phase there can be multiple Opening Trades. - Passive Order: indicates whether the corresponding order was passive, or not. (0: No ; 1: Yes) - Aggressive Order: indicates whether the corresponding order was aggressive, or not. (0: No ; 1: Yes) - Trade Creation by Market Operations: indicates whether the trade results from a creation by Market Operations, or not. (0: No ; 1: Yes) *- NAV Trade expressed in bps: indicates whether the trade results from a NAV trade expressed in basis point on the ETF MTF platform. (0: No ; 1: Yes)* *- NAV Trade expressed in price currency: indicates whether the trade is a NAV trade expressed in price currency. This trade is always an update from a previous NAV trade expressed in basis point on the ETF MTF platform. (0: No ; 1: Yes)* *- Deferred Publication: indicates whether the trade publication is deferred or immediate. (0: Immediate Publication ; 1: Deferred Publication)* For the Market Data feed: - The values Passive Order and Aggressive Order always qualify the Buy order.
Used For	Cash and Derivatives
Format	MultipleCharValue
Length	13
Possible Values	0 = Uncrossing Trade 1 = First Trade Price 2 = Passive Order 3 = Aggressive Order

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	4 = Trade Creation by Market Operations *5 = NAV Trade expressed in bps [C]* *6 = NAV Trade expressed in price currency [C]* *7 = Deferred Publication*
Conditions	Provided only in case of Fill or Partial Fill.
Used In	ExecutionReport (8)

TradeType

Field Name	TradeType
Tag	21010
Description	Type of trade.
Used For	Cash and Derivatives
Format	Int
Length	2
Possible Values	1 = Conventional Trade (Cash and Derivatives) 5 = Guaranteed Cross Trade (Cash and Derivatives) 24= Trade Cancellation (Cash and Derivatives) 39 = Guaranteed Cross – Negotiated deal NLIQ (Liquid) 40 = Guaranteed Cross – Negotiated deal OILQ (illiquid)
Used In	ExecutionReport (8)

TradeID

Field Name	TradeID
Tag	1003
Description	The unique ID assigned by the matching engine to the trade entity, once it is received or matched.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From 0 to 2^64-2
Conditions	In TradeCaptureReportAck (AR) message, in case of a declaration acknowledgment or notice it provides the identifier of the declaration. In TradeCaptureReportAck (AR) message, in case of a declaration cancel and refusal it provides the identifier of the declaration refused/to be cancelled. In inbound TradeCaptureReport (AE) message, provided by the client requesting cancellation of a previously matched declaration.
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

TradePriceCondition

Field Name	TradePriceCondition
Tag	1839
Description	Contribution to price formation or the price discovery process.
Used For	Cash and Derivatives
Format	Int
Length	3

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Possible Values	15 = Non-price forming trade (NPFT) 101 = Plain Vanilla Trade 102 = Trade Not Contributing to Price Discovery Process
Conditions	In outbound **TradeCaptureReportAck** (AR) message provided only if previously set in the corresponding inbound **TradeCaptureReport** (AE) message
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

TradeReportID

Field Name	TradeReportID
Tag	571
Description	Unique identifier of trade capture report.
Used For	Cash and Derivatives
Format	String
Length	20
Possible Values	From -2^63+1 to 2^63-1
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

TradeReportTransType

Field Name	TradeReportTransType
Tag	487
Description	Trade Report Transaction Type.
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	0 = New 1 = Cancel
Used In	TradeCaptureReport (AE)

TradeReportType

Field Name	TradeReportType
Tag	856
Description	Trade Report Type.
Used For	Cash and Derivatives
Format	Int
Length	1
Possible Values	1 = Alleged 3 = Decline
Used In	TradeCaptureReport (AE)

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TransactTime

Field Name	TransactTime
Tag	60
Description	Indicates the time of message transmission (Format: YYYYMMDD-HH:MM:SS.sssssssss).
Used For	Cash and Derivatives
Format	UTCTimestamp
Length	27
Possible Values	Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59, sssssssss = 000000000-999999999 (nanoseconds)
Conditions	In ExecutionReport (8) it is provided only in case of Fill or Partial Fill.
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelRequest (F) OrderCancelReplaceRequest (G) OrderMassCancelRequest (q) TradeCaptureReportAck (AR)

TrdRptStatus

Field Name	TrdRptStatus
Tag	939
Description	Trade Report Type.
Used For	Cash and Derivatives
Format	Int
Length	2
Possible Values	1 = Rejected 2 = Cancelled 4 = Pending New 5 = Pending Cancel 10 = Verified 14 = Expiration of a pending declaration 15 = Elimination of a pending declaration 19 = Filled 20 = Declaration Created by MO 21 = Cancelled upon CSD request
Used In	TradeCaptureReportAck (AR)

TrdType

Field Name	TrdType
Tag	828
Description	Type of Operation.
Used For	Cash and Derivatives
Format	Int
Length	4
Possible Values	1001 = Declaration of a trade outside the book

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Conditions	Mandatory for every submission of a new TradeCaptureReport (AE) declaration message where TradeReportTransType is 0 = 'New'.
Used In	TradeCaptureReport (AE) TradeCaptureReportAck (AR)

TriggeredStopTimeInForce

Field Name	TriggeredStopTimeInForce
Tag	20175
Description	Specifies the maximum validity of an triggered stop order. If both Time In Force and Triggered Stop Time In Force are Good till Date they will both refer to the same Order Expiration Date (or Order Expiration Time) provided in the order. If Order Expiration Date is modified it will be for both untriggered stop and triggered stop, or only for the triggered stop if the order was previously triggered.
Used For	Cash and Derivatives
Format	Char
Length	1
Possible Values	0= Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)
Conditions	In Inbound messages this field is mandatory for stop orders. In OrderCancelReplaceRequest (G) message: - (i) when sent to confirm a breached collar of an order, values in this field must be provided, but won't be taken into consideration - (ii) when sent to modify an order, value will be modified to the one provided In outbound messages, this field is provided only in Drop Copy
Used In	NewOrderSingle (D) ExecutionReport (8) OrderCancelReplaceRequest (G)

U

UserStatus

Field Name	UserStatus
Tag	926
Description	Status of the user.
Used For	Cash and Derivatives
Format	Int
Length	3
Possible Values	101 = Trader – Algo Suspended 102 = Trader – Algo Suspension Cleared 103 = Trader – Algo Killed 104 = Trader – Algo Kill Cleared 105 = Firm Suspended 106 = Firm Suspension Cleared
Used In	UserNotification (CB)

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7. EXAMPLES

Example 1: For Gap In Administration Messages that is not a Logon (A), Logout (5), ResendRequest (2) or a SequenceReset (4)

Example below indicates handling of the gap in this case, with the gap detected in the *MsgSeqNum* (34) field of the **HeartBeat** (0) message sent by the client.

#	Received From Client		Sent by Exchange
1	At the start of session client sends the first Logon (A) message		
	Logon (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **1**	>	
		<	**Logon** (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **2**
2	Following a successful logon the exchange of application messages proceeds during the session		
	NewOrderSingle (D) order #1 *MsgSeqNum* (34) = **2** *Side* (54) = 1 (Buy)	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **2** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #2 *MsgSeqNum* (34) = **3** *Side* (54) = 1 (Buy)	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **3** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
3	Following a period of inactivity Exchange sends a TestRequest (1) message to check the status of the connection		
		<	**TestRequest** (1) *MsgSeqNum* (34) = **4**
4	In the meantime client is sending messages for new orders, that do not appear to be reaching the exchange		
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy)	>	
	NewOrderSingle (D) order #4 *MsgSeqNum* (34) = **5** *Side* (54) = 1 (Buy)	>	
	NewOrderSingle (D) order #5 *MsgSeqNum* (34) = **6** *Side* (54) = 1 (Buy)	>	
5	Either due to inactivity or as a delayed answer to the TestRequest (1) message in step 3 client's system sends a HeartBeat (0) message		
	HeartBeat (0) *MsgSeqNum* (34) = **7**	>	
6	Exchange detects a gap in the HeartBeat (0) message from client, and issues a ResendRequest (2) to fill the gap.		
		<	**ResendRequest** (2) *MsgSeqNum* (34) = **5** *BeginSeqNo* (7) = **4** *EndSeqNo* (16) = **7**
7	Client resends order messages that were missed, starting with the indicated sequence number of 4 to fill the gap, with Exchange acknowledging them		
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **6** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #4 *MsgSeqNum* (34) = **5** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate)	>	

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#	Received From Client		Sent by Exchange
	OrgSendingTime (122) = set to time of original sending		
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **7** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #5 *MsgSeqNum* (34) = **6** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **8** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
8	After resending missed order messages client sends a SequenceReset (4) message, to replace the HeartBeat (0) message, before resending a HeartBeat (0) message that is assigned the new sequence number identified		
	SequenceReset (4) *MsgSeqNum* (34) = **7** *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to current time *NewSeqNo* (36) = **8**	>	
	HeartBeat (0) *MsgSeqNum* (34) = **8**	>	
		...	

Example 2: Gap in Application Messages

Example below indicates handling of the gap in this a case, with the gap is detected in the field *MsgSeqNum* (34) of the **NewOrderSingle** (D) message sent by the client.

#	Received From Client		Sent by Exchange
1	At the start of session client sends the first Logon (A) message		
	Logon (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **1**	>	
		<	**Logon** (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **2**
2	Following a successful logon the exchange of application messages proceeds during the session		
	NewOrderSingle (D) order #1 *MsgSeqNum* (34) = **2** *Side* (54) = 1 (Buy)	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **2** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #2 *MsgSeqNum* (34) = **3** *Side* (54) = 1 (Buy)	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **3** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
3	Client sends three (3) messages for new orders that do not appear to be reaching the exchange		
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy)	>	
	NewOrderSingle (D) order #4 *MsgSeqNum* (34) = **5** *Side* (54) = 1 (Buy)	>	
	NewOrderSingle (D) order #5 *MsgSeqNum* (34) = **6** *Side* (54) = 1 (Buy)	>	
4	Client sends one more order message that reaches the exchange, that indicates the gap of the previously missed messages		
	NewOrderSingle (D) order #6 *MsgSeqNum* (34) = **7** *Side* (54) = 1 (Buy)	>	
6	Exchange detects a gap in sequence numbers in the NewOrderSingle (D) message sent by the client, which reaches the exchange, and issues a ResendRequest (2) to fill the gap. The message for order #6 is ignored by the exchange		

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#	Received From Client		Sent by Exchange
		<	**ResendRequest** (2) *MsgSeqNum* (34) = **4** *BeginSeqNo* (7) = **4** *EndSeqNo* (16) = **7**
7	Client resends the four (4) order messages that were missed, starting with the indicated sequence number of 4 to fill the gap, with Exchange acknowledging them		
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **5** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #4 *MsgSeqNum* (34) = **5** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **6** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #5 *MsgSeqNum* (34) = **6** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **7** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #6 *MsgSeqNum* (34) = **7** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **8** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
		...	

Example 3: Gap in Logout Request

#	Received From Client		Sent by Exchange
1	At the start of session client sends the first Logon (A) message		
	Logon (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **1**	>	
		<	**Logon** (A) *MsgSeqNum* (34) = **1** *NextExpectedMsgSeqNum* (789) = **2**
2	Following a successful logon the exchange of application messages proceeds during the session		
	NewOrderSingle (D) order #1 *MsgSeqNum* (34) = **2** *Side* (54) = 1 (Buy)	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **2** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
3	Client sends two (2) messages for new orders that do not appear to be reaching the exchange		
	NewOrderSingle (D) order #2 *MsgSeqNum* (34) = **3** *Side* (54) = 1 (Buy)	>	
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy)	>	
4	Client chooses to close connection, and send a Logout (5) message		
	Logout (5) *MsgSeqNum* (34) = **5**	>	
5	Exchange detects a gap in sequence numbers in the Logout (5) message and issues a ResendRequest (2) to fill the gap. The Logout message is ignored by the exchange		

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#	Received From Client		Sent by Exchange
		<	**ResendRequest** (2) *MsgSeqNum* (34) = **3** *BeginSeqNo* (7) = **3** *EndSeqNo* (16) = **5**
6	Client resends the two orders with Exchange acknowledging the orders		
	NewOrderSingle (D) order #2 *MsgSeqNum* (34) = **3** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **4** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
	NewOrderSingle (D) order #3 *MsgSeqNum* (34) = **4** *Side* (54) = 1 (Buy) *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to time of original sending	>	
		<	**ExecutionReport** (8) *MsgSeqNum* (34) = **5** *OrdStatus* (39) = 0 (New) / *ExecType* (150) = 0 (New)
7	Then clients sends the last message of SequenceReset (4) to replace the sequence id of the previously sent Logout message and is logged out by the Exchange		
	SequenceReset (4) *MsgSeqNum* (34) = **5** *PossDupFlag* (43) = Y (Possible duplicate) *OrgSendingTime* (122) = set to current time *NewSeqNo* (36) = **6**	>	
		<	**Logout** (5) *MsgSeqNum* (34) = **6**

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APPENDIX A: DOCUMENT HISTORY

Document Name	OPTIQ COMMERCIAL OEG CLIENT SPECIFICATIONS – FIX 5.0 INTERFACE
Project Name	
Location	
Version Number	1.2.12

Document History

Revision No./ Version No.	Date	Change Description
1.0.0	16/03/2018	First Release
1.1.0	28/03/2018	First Release Reviewed
1.1.1	04/05/2018	**Conditions have been updated for the following fields:** *OrigSendingTime* (122) ; *LastMsgSeqNumProcessed* (369) ; *LastCapacity* (29) ; *DisplayQty* (1138) ; *SecurityID* (48) ; *SecurityIDSource* (22) ; *OrderID* (37) ; *OnBehalfOfCompID* (115) ; *DeliverToCompID* (128). **Presence Rule has been updated for the following fields:** - In **RequestAckMessage (Uy),** *BookINTime* (21002), *SecurityID* (48), *SecurityIDSource* (22), *EMM* (20020) are Conditional; - In **NewOrderSingle (D), OrderCancelRequest (F), OrderCancelReplaceRequest (G) and OrderMassCancelRequest (q),** NoNestedPartyIDs (539), NestedPartyID (524), NestedPartyIDSource (525), NestedPartyRole (538) presence is set to Conditional; **Values have been updated for the following fields:** - *SessionRejectReason* (373): addition of values values identified for rejection in case of throttling : **25** = Throttling queue full; **26** = Throttling Rate exceeded; **27** = System busy. - *DisplayQty* (1138) : Value starts from 1. - *NestedPartyRole (538): 4 = Clearing Firm was added;* - *NoNestedPartyIDs (539): Possible values updated;* **The following sections have been updated:** - "4.7.1 Message Header": Clarification regarding OnBehalfOfCompID (115) and DeliverToCompID (128) fields. - "5.2.4 SequenceReset (4)" : Removal of this case : While a ResendRequest (2) is pending, if the Client sends a **SequenceReset – Gap Fill Mode** message with MsgSeqNum lower than the expected sequence number and PossDupFlag (43) set to 'Y', the trading engine ignores the message; - Messages Description: Updated Repeating Groups explanation concerning Entering Firm and Clearing Firm cases, for all messages; - "5.3.4 OrderCancelReplaceRequest (G)": Clarification added regarding the values provided through the repeating groups; - "5.3.7 OrderCancelReject (9)" addition of Rejection Behaviour paragraph **The following section has been added:** - "4.11 Direct Responses to Application Messages"
1.2.0	13/09/2018	**Values have been updated for the following fields:**

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Revision No./ Version No.	Date	Change Description
		- NestedPartyRole (538): 39 = Contra Investor ID was added; - ExecType (150): t = Order Cancelled due to Static Collars - *TriggeredStopTimeInForce (20175):* C = Good Till Month (GTM) was added; - *UserStatus (926) :* 101 = Trader-Algo Suspended, 102 = Trader-Algo Suspension Cleared, 103 = Trader-Algo Killed, 104 = Trader-Algo Kill Cleared were added; **The following Messages have been added:** - 5.3.2.1 TradeCaptureReport (AE) - 5.3.2.2 TradeCaptureReportAck (AR) **The following sections have been updated:** - 4.4. Not Applicable / Future Use - 5.3 Application Messages - ExecutionReport (8) table update to contain Order Cancelled due to Static Collars - All messages descriptions were updated : Entering Firm combination was removed from all except UserNotification (CB); - UserNotification (CB) message description updated concerning the Scope and Actions available; **The following field was removed:** - STPAggressorindicator (21015) **The following field was added:** - LastCapacity (29);
1.2.1	19 Oct 2018	**The following Sections have been updated:** - OrderMassCancelRequest (q) : Repeating groups combinations reviewed; - OrderCancelRequest (F): Repeating groups combinations reviewed;
1.2.2	28 Nov 2018	**The following fields have been updated:** - Account (1) was replaced by ClearingAccount (20053) in order to accommodate the 16 chars of required length; - Increase size of PartyID (448) and NestedPartyID (524) up to 16 **for messages under Cash On Exchange Off Book section only;** - PartyID (448) and NestedPartyID (524) size is 11 for messages under Central Order Book section – size to be incremented in the coming releases;
1.2.3	20 Dec 2018	**The following field has been updated:** - OrderCancelRequest (F): CancelExecutionInstruction (21041) renamed into OrderCategory (21041); **The following field was added:** - OrderMassCancelRequest (q), OrderMassCancelReport (r), OrderMassStatusRequest (AF), OwnershipRequest (U18), OwnershipRequestAck (U29): OrderCategory (21041) was added; **The following Section was updated:** - "4.4 Not Applicable/Future Use:" CancelExecutionInstruction (21041) was renamed OrderCategory (2101) and list of messages where it's present was updated as well as the ErrorCode;
1.2.4	25 Feb 2019	**The following field has been updated:** - ExecType (150): values added due to CCM functionality; - AccountCode (6399): values reviewed accordingly with client's needs – please refere to the conditions of the field;

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Revision No./ Version No.	Date	Change Description
1.2.5	26 Mar 2019	**The following field has been updated:** - ExecType (150): value added due to CCM functionality: o B = Order Cancelled due to breach of Short Selling Limit; **The following description has been updated:** - **OrderCancelReplaceRequest (G):** description updated to accommodate the confirmation of Orders due to breach of Short Selling and Ownership Limit – future use;
1.2.6	24 Apr 2019	**The following fields have been updated:** - ExecType (150): value added due to CCM functionality: o o = Ownership Confirmation Ack o p = ShortSelling Confirmation Ack - TrdRptStatus (939): value added due to CCM functionality: o 21 = Cancelled upon CSD request; **The following description has been updated:** - **ExecutionReport (8):** table updated to accommodate all cases when ExecutionReport is sent to notify the members;
1.2.7	28 Jun 2019	Review sections numbering
1.2.8	16 Sep 2019	**The following Message has been updated:** - OrderCancelReplaceRequest(G): o Clearing Account is no longer modifiable. Field has been greyed out to be consistent with document rules. o DisplayQty is not modifiable. Field has been greyed out to be consistent with document rules.
1.2.9	14 Nov 2019	**The following Message has been updated:** - SequenceReset(4): o GapFillFlag tag updated to the correct value '123'
1.2.10	26 Nov 2019	**The following references have been removed:** - RiskFamily (20165), Text (58), SecurityID (48) fields have been updated to remove references to UserNotification (CB)
1.2.11	05 Mar 2020	**The following Field Description has been updated:** - Order Type: Additional detail added regarding OrdType (tag 40) presence in Execution Report (8)
1.2.12	16 Sept 2020	**The following sections have been updated:** - OrderCancelReplaceRequest (G): Clearing Account now applicable to the OrderCancelReplaceRequest (G) - ClearingAccount: Applicable Conditions updated

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ملحق (6)

Document title

OPTIQ COMMERCIAL OEG CLIENT SPECIFICATIONS – SBE INTERFACE

Document type or subject

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PREFACE

Purpose

This document sets out the client messages specifications for Optiq® OEG using the SBE format. More specifically, it describes the contents of administrative and application messages and provides detailed field descriptions.

Associated Documents

The following list identifies the associated documents, which either should be read in conjunction with this document, or which provide other relevant information for the user:

- Optiq Commercial OEG Client Specifications – FIX 5.0 Interface
- Optiq Commercial Optiq Kinematics Specifications
- Optiq Commercial Error List
- Optiq Commercial MDG Client Specifications
- Optiq Commercial File Specifications
- Persistence Engine Detailed Configurations

What's New?

Version	Change Description
1.2.10	**The following sections has been updated:** - 5.4.1.5 Cancel Replace (06) o Correction of "CancelRequest (12)" to "Cancel Replace (06)" in the condition in which the matching engine uses the Order ID to cancel the order. o Include the Clearing Account field in the message structure - **Clearing account** o Correction to indicate the applicability of the field to Order modification

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1. SOLUTION OVERVIEW

1.1 INTRODUCTION

The Optiq Order Entry Gateway (OEG) provides high-speed and real-time connection to the Exchange.

The system has the following high-level features:

- **Predictability**
- **Ultra-low latency**
- **Cash & Derivatives message harmonization**
- **High availability**
- **Reliable network solution**
- **High level of scalability**

This document provides detailed information about the features of the system to support the development of client applications.

1.2 GLOSSARY

This section provides some high level definitions of commonly used terms in this document. Please note that some of these terms are described in more details in the dedicated sections within this document.

- **Optiq:** is a multi-market full trading chain technology platform.
- **Order Entry Gateway (OEG):** is the software that manages the access for exchanges' clients, and acts as the private interface between the clients and the Optiq matching engine.
- **Market Data Gateway (MDG):** is the software that provides high-speed, real-time market data (public messages) for the Exchange markets.
- **Matching Engine:** is the software that manages the trading services for the Exchange.
- **Optiq Segment:** defines a universe of instruments habitually sharing common trading properties. An OPTIQ Segment can contain one or several asset classes. An OPTIQ Segment access is setup through a Logical Access.
- **Partition:** is a technical subdivision of an Optiq Segment. An Optiq Segment may be comprised of at least one or several partitions, physically independent one from one another, but connected to each other within the context of the Optiq Segment. Instruments may move from one partition to another within an OPTIQ segment.
- **Logical Access:** is an OEG (Order Entry Gateway) entry point, setup for clients to connect to a single OPTIQ Segment, containing the technical configuration for the client's connectivity. Multiple logical accesses can share the same SFTI line.
- **OE Session:** the individual physical connection, to a single Partition. A single Logical access may have as many OE sessions as there are partitions in the Optiq segment.
- **Simple Binary Encoding (SBE):** is the open source binary protocol used as the solution for market data and order entry messaging in Optiq. SBE was designed within the FIX Protocol Limited organization, with a focus on low-bandwidth utilization and the goal of producing a binary encoding solution for low-latency financial trading.

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- **Symbol Index:** is a unique system-wide identifier (in private and public messages) assigned to a trading instrument in Optiq. Note that an instrument here represents either a single tradeable instrument, an index or a strategy. It represents the combination of the following instrument characteristics: ISIN, MIC, Currency and when required the MIC of the Market of Reference,. SymbolIndex will not change over the lifetime of the instrument, but can take a different value for the same instrument, depending on the environment (Prod or Test).
- **Message:** is a discrete unit of communication, provided in pre-defined format, which depends on the chosen protocol and the target functionality it relates to, containing information exchanged between the Exchange and its clients, to enable trading on its systems.
  - **Administration message** is an electronic instruction from client or response from the OEG used to exchange technical, non-trade related information, most notably used to setup and maintain connectivity between a client and an OEG.
  - **Application message** is an electronic instrument from a client or a response from the OEG, used to exchange order and trade related information, including requests and events that impact orders and trades, but do not directly represent them.
  - **Order:** An order is an electronic instruction from a firm to buy or sell an instrument via Optiq. Firms can send many types of buy, sell and cross orders that are matched upon arrival or placed in the order book to await a match.
  - **Trade:** A trade is an electronic agreement between the client(s) that submitted the order(s) to exchange for a certain quantity of one or more instruments, for one of the various forms of reimbursements (payment, exchange of goods, services, etc.).
- **Standing Data:** provides referential data characteristics of all trading instruments available on Exchange. The data is provided via files and messages.
  - **Standing data files** contain referential data characteristics of the trading instruments and strategies that may be required, or provided as value-added information. These files are provided on a daily basis and can be obtained from a separate HTTPS service.
  - **Standing data messages** contain the basic information of each instrument and strategy, and are disseminated via MDG at the start of each trading session and intra-day on creation of Derivative instruments.
  - Clients should refer to the **MDG documentation** for the full details about these services.
- **Self-Trade Prevention (STP):** Service provided by the Exchange on its trading platform, to allow trading clients to avoid unintentional trading with themselves.
- **Firm:** A firm is an investment firm or financial institution that deals, advises, and/or acts on behalf of its clients and possibly itself on the Exchange.
- **A Firm Access**: An entity allowing the Firm to access the Trading Platform:
  - **Regular Access**: when a firm contracts its own and exclusive order entry access means directly with Exchange, the Firm Trading Solution type is Regular Access (or sometimes Direct Access).

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2. ORDER ENTRY MAIN PRINCIPLES

2.1 NEW INSTRUMENT SEGREGATION - OPTIQ SEGMENT

High reliability, significantly increased throughput and latency performance with minimal standard deviation, improved flexibility in delivery of new functionalities and products, shorter time to market as well as the improved resiliency will be ensured within Optiq in part by introduction of the new instrument segmentation through Optiq Segments.

2.1.1 Optiq Segments

An Optiq Segment defines a universe of instruments sharing common trading and financial properties, it allows the segregation of instruments among hermetic universes to facilitate clients' organisation toward Exchange financial markets.

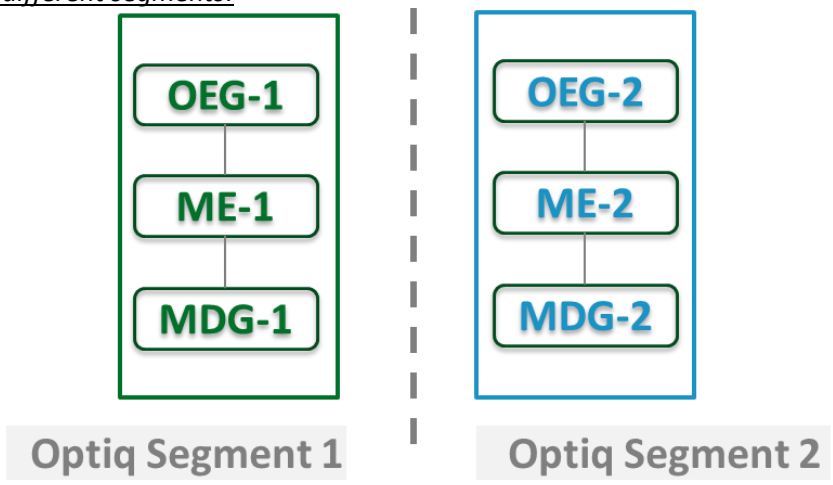
For the implementation of Optiq Segments the instrument universe is rationalized and reorganized to fit the new structure.

A segment can contain one or several asset classes. Information of the Optiq Segment to which an instrument belongs to / hosted on is communicated to clients within the Standing Data files and messages.

Clients must be aware of the different existing Optiq segments and the instruments they host in order to identify which segment(s) they would connect to.

- Segmentation provides:
  - Improvement in resiliency - failure of a single Optiq segment should have limited direct technical impact on other Optiq segments;
  - Increased flexibility – possibility of independent software and operational lifecycle.

Illustration of two different segments:



2.1.2 Partitions

An Optiq Segment may be comprised of one or more physical partitions.

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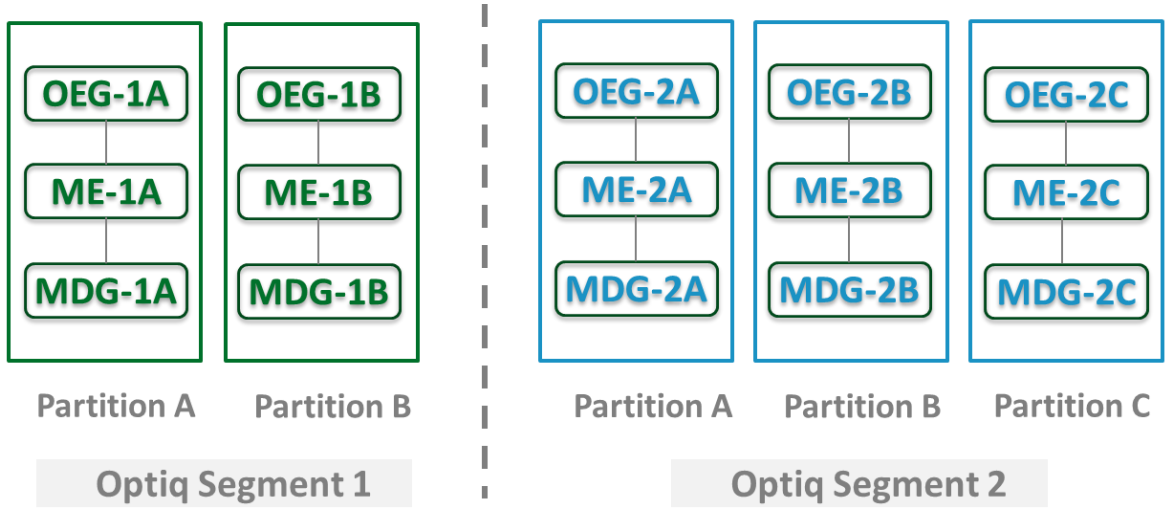
A partition is composed of an Order Entry Gateway (OEG), a Matching Engine (ME) and a Market Data Gateway (MDG).

Instruments have the flexibility to be moved from one partition to another within an Optiq segment.

- Partitioning provides the following benefits:
  - Improved resiliency - failures on one partition impact only a fraction of the market / clients;
  - Improved scalability: simple and seamless scalability model based on horizontal scalability principles;
  - Ensured stable latency and high performance.

Illustration of segments divided into partitions:



2.1.3 Logical Access and OE Sessions

Access to an Optiq Segment requires a dedicated Logical Access:

- A Logical Access is a point of entry configuration for connectivity to a specific Optiq Segment and allows the client to technically reach all the instruments belonging to the particular segment for which an access is setup.
  - A Logical Access is dedicated to an Optiq Segment, i.e. a single Logical Access cannot connect to two different Optiq Segments;
  - Clients may have several Logical Accesses per Optiq Segment;
  - It allows the client to connect to all partitions belonging to the segment either directly or indirectly;
  - The physical connection is managed at the OE Session level and there is at least one per Logical Access.
- An OE session corresponds to the actual physical connection of the client to a partition:
  - OE Sessions are automatically created by the Exchange upon creation of a Logical Access;
  - OE Session is the login identifier for each physical connection represented by the combination of the *Logical Access ID* and the *OE Partition ID*. These two fields represent an ID which is unique across the whole system and across the various Optiq Segments;
  - One OE Session always belongs to one Logical Access, but a Logical Access can have multiple OE Sessions. There can be as many OE Sessions as there are partitions in the Segment;
  - An OE session inherits the majority of characteristics setup for the Logical Access;
  - By default OE Sessions hold the ownership of the orders entered through it.

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2.1.4 Full mesh OEG-ME Connection

If a segment has multiple partitions, for the best possible response times, clients should initiate an OE session for each available partition and send messages through it only for the instruments hosted on this partition. However, a client may use a single OE Session to access all the instruments of an Optiq Segment, no matter how many partitions compose the segment. This is made possible by the full mesh OEG-ME connectivity provided by Optiq as represented in the diagram below. Such cross-partition access will incur additional response times.

By default, the responses to the private response messages sent through a different partition will return to the OE session holding the ownership of the order (from which it was sent). However the corresponding MDG messages will be issued by the partition on which the instrument is hosted.

As it relates to the OEG and private messaging, Order ownership is the technical belonging of the order to the physical connection that submitted the order, or to the physical connection that took ownership of the order. Outbound messages are sent to the OE Session that owns the corresponding order. Functionally the orders belong to the Firm (designated by its Firm ID), and for the scope of change of ownership; modification can only be done by the requestor with the same Firm ID, and between physical connections or Logical Accesses that are set with the same Firm ID.

Illustration of segments, partitions and connectivity:

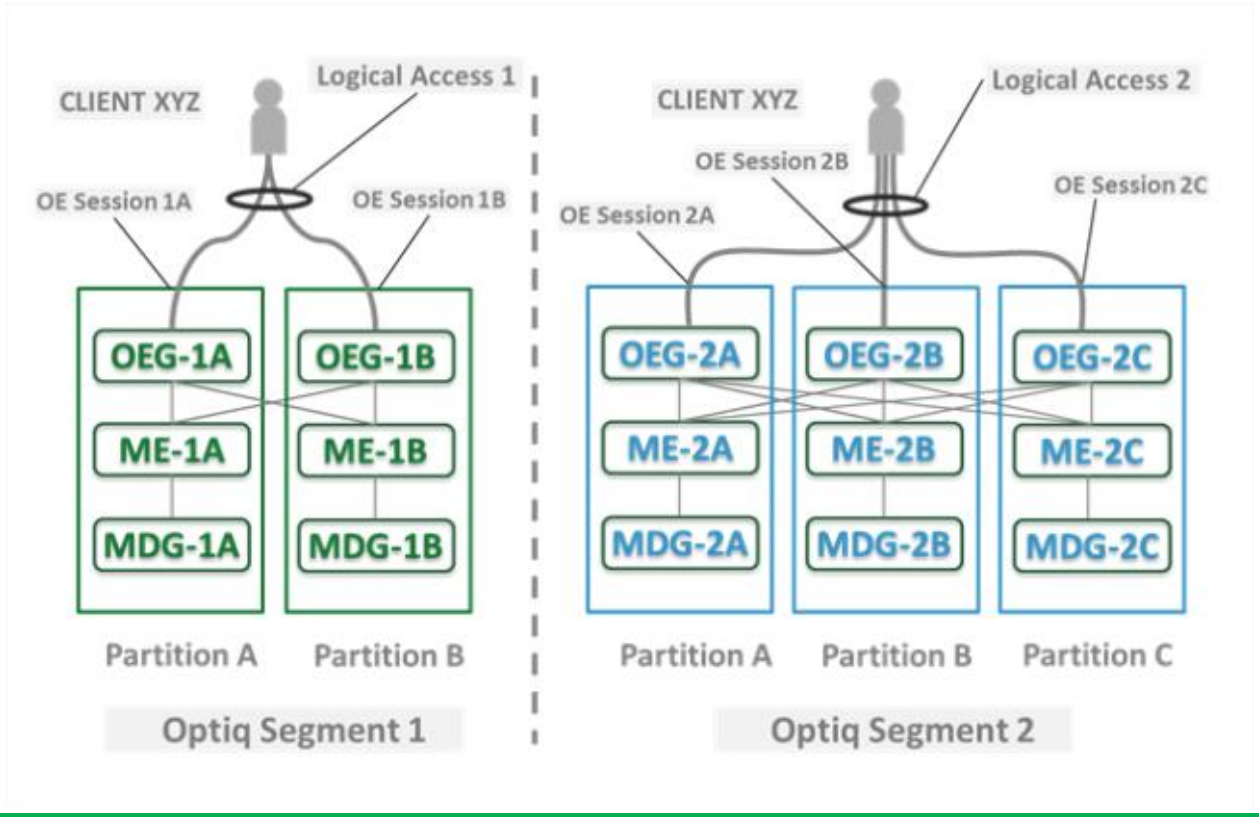

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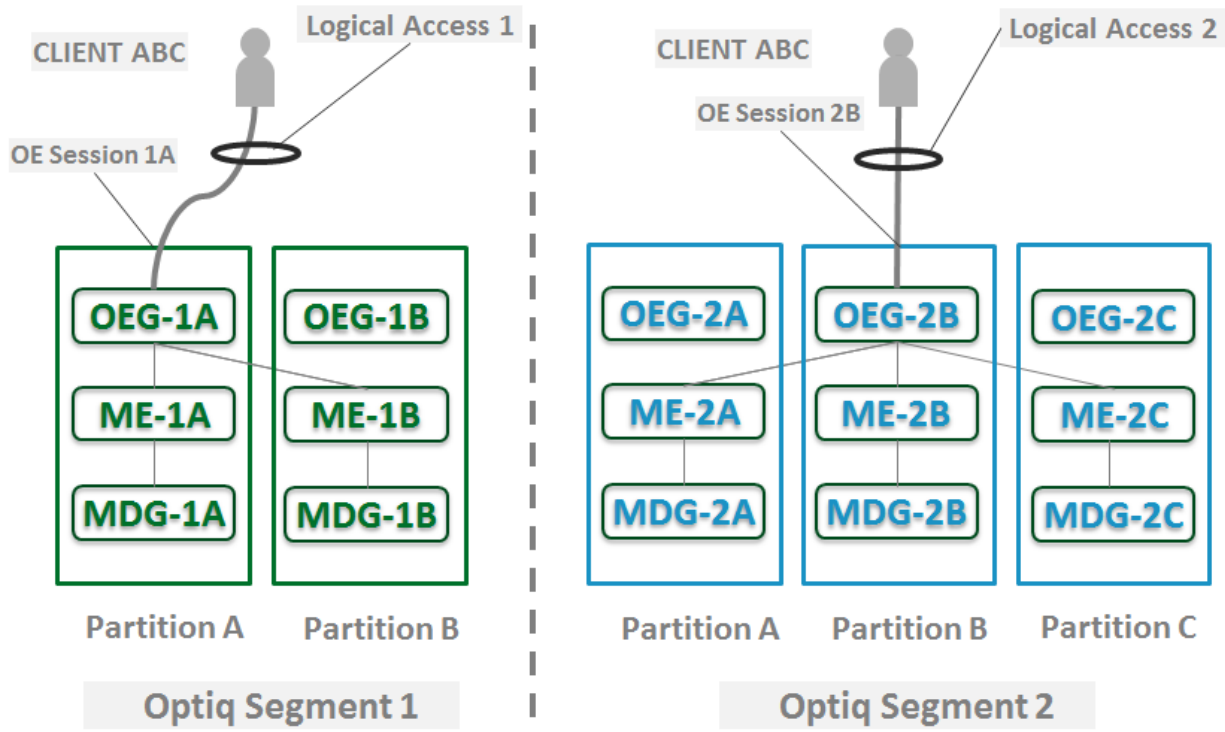
Illustration of the full mesh connectivity:



2.1.5 Determine the "shorter path"

In order to benefit from the best response times the clients should send messages directly to the partition on which the instrument is located. To identify on which partition each instrument is located, clients must use, and update on a daily basis, their referential data by downloading the Standing Data files or using the **StandingData** (1007) market data messages, where details of the *Partition ID* assigned to each instrument are provided.

Note: *The link between Local Symbol and Symbol Index will only be available in the Standing Data file.*

2.1.6 Setting Up Connectivity

The Exchange provides connectivity information within a dedicated document, the Connectivity Detail specifications, covering all required technical details. Ranges of IPs / Ports and Multi-cast channels are identified for each Optiq segment for Order Entry and Market Data gateways.

To take full advantage of the scalability of Optiq, and ensure continuity of service, clients are strongly encouraged to setup connectivity to the full range specified per segment for OEG and MDG. Individual partitions will be assigned a sub-set of values identified within the specified ranges.

In addition the relevant details for OEG and MDG connectivity per instrument will be communicated in the referential standing data files provided on a daily basis. For the details of the format in which this data is provided please refer to the Standing Data File specifications.

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2.1.7 Overnight instrument migration between partitions

In order to improve latencies and predictability, an overnight load balancing mechanism is introduced by the new Optiq system. This new technical mechanism implies that every day all instruments belonging to an Optiq Segment may potentially be relocated across the partitions belonging to this Optiq Segment.

Please note that this migration between partitions will not cause instruments to migrate from one Optiq Segment to another Optiq Segment.

Every instrument can migrate overnight from one partition to another. It means that connectivity information associated to an instrument can change every day, which is why it is crucial for clients to daily update their referential data by downloading the standing data files provided on the Exchange server.

Please refer to the *Optiq Commercial MDG Client Specifications* document for further details on standing data files.

Note: While migration of instruments between Optiq Segments is not expected to be a regularly occurring event, it may arise, and will be done with prior notification to clients.

2.1.8 Added / Removed Partition

The partitioning of the Optiq Segments, and full-mesh connectivity, allows Exchange to add or remove a partition without impacting the clients' connectivity. Clients will still be able to access all the instruments belonging to an Optiq Segment by connecting to an already existing partition, as adding/removing a partition will not impact the other partitions, or the OE sessions.

In all cases the clients will always be notified before such changes are performed.

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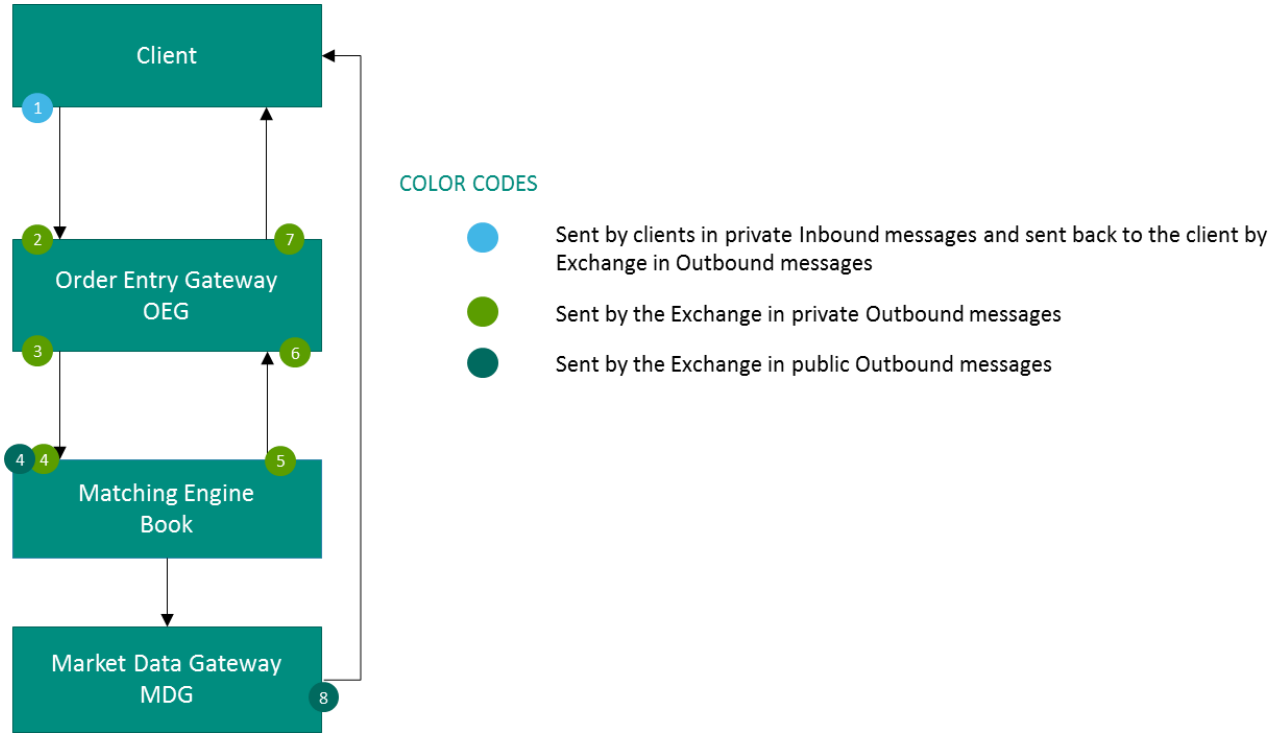
2.2 TECHNICAL FEATURES

2.2.1 Latency Monitoring and Timestamps

Outbound messages provide several internal timestamps to allow the clients to monitor the processing time of the system at different levels.

- The following diagram represents the different timestamps provided in the outbound messages:



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#	Field name	Description of data provided
1	*Message Sending Time*	is assigned by the Client in his inbound message
2	*OEG IN From Member*	is assigned by the OEG after decoding the inbound message
3	*OEG Out to ME*	is assigned by the OEG when sending the inbound message to the matching engine
4	*Book IN Time*	is assigned by the ME when receiving the inbound message from the OEG
5	*Book OUT Time*	is assigned by the ME when sending the outbound message to the OEG
6	*OEG IN From ME*	is assigned by the OEG when receiving the outbound message from the ME
7	*OEG OUT To Member*	is assigned by the OEG when sending the outbound message to the client
8	*Packet Time*	is assigned by the MDG when sending the message to the market

2.2.2 Drop Copy

Drop Copy is a service, providing near real-time copies of trade reports & order messages, usually used for risk management and for compliance needs.

Clients require a dedicated connection to receive Drop Copy messages, which can be setup with configuration that fits their needs.

The service will be available in FIX protocol only; further details will be provided in a dedicated document.

2.3 CLIENT ORDER ID MANAGEMENT

2.3.1 Client Order ID Overview

Clients must provide a *Client Order ID* in every inbound application message, otherwise the message will be immediately rejected by the OEG.

Clients may provide any value that respects the *Client Order ID* format, which is an 8-byte signed integer, and the ranges as defined below. The Exchange recommends setting an unique ID per order, Firm and Symbol Index.

For order entry, the *Client Order ID* value is not checked by the Exchange, it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request.

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For modification and cancellation using the *Original Client Order ID* as unique identifier[1], the value is checked by the Exchange for possible duplicates. If among live orders and/or orders executed during current trading session, at least two orders were originally submitted with the same *Client Order ID*, they are considered to be duplicates. In case of duplication, the inbound request is rejected with the associated error code.

2.3.2 Client Order ID Usages for Order Management

Clients can submit modification and cancellation requests by using the *Original Client Order ID* as unique identifier, i.e. the value of the *Client Order ID* as submitted previously with the original order.

This allows clients to use the *Client Order ID* as unique identifier to modify or cancel their orders per Symbol Index and Firm, in addition of the *Order ID*. It does not restrict clients to use the Order ID to manage their orders.

Please note that *Client Order ID* provided for the modification requests will not be updated in the live order itself; order will keep its original *Client Order ID*.

To properly perform the inbound request, the system checks that the value exists on the corresponding Symbol Index among live orders belonging to the requesting Firm. If no order is found the request is rejected, or if more than one order is found the request is also rejected. In this case clients must use the *Order ID* to reach their orders.

As the uniqueness of the *Client Order ID* is not checked by the Exchange for order entry but only in case of modification and cancellation requests, clients who want to use the *Original Client Order ID* as unique identifier for these requests must ensure on their own the unicity of the Client Order ID per Symbol Index and Firm for orders they submit.

As requests using the *Original Client Order ID* require additional checks to be performed by the system, clients may observe a slight increase of the response time for these requests. Hence to ensure the best possible response times clients are encouraged to use *Order ID* as the reference for their orders.

2.3.3 Client Order ID Ranges

Depending on the nature of the client access, the *Client Order ID* must respect some constraints as described below.

Moreover it is recommended that clients implement their own configurable prefix in order to allow firms to integrate several application instances easily and ensure *Client Order ID* uniqueness across all the firm orders.

2.3.3.1 For Regular “In House” Accesses

The guideline for the range to use for the Regular In-House accesses (i.e. non via ISV):

- clients should use the positive number range only;
- numerically it means that clients are restricted to values from 0 to 2^63 -1.

There is no other constraint than positive values for the non-Service Bureau accesses.

[1] If both *Original Client Order ID* and *Order ID* are provided in a modification or cancellation request, the *Original Client Order ID* is totally ignored and the request is performed on *Order ID* only.

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The correct use of the client order id range is checked by the exchange during the conformance test, however afterwards the OEG will not perform any checks of the correct assignment of the range in the inbound application message.

2.3.3.2 For Regular Accesses via ISV

The guideline for the range to use for the Regular access via ISV:

- clients should use the negative number range only;
- clients should insert at the beginning of the field the unique ISV ID, which will be provided by the Exchange.
  - the ISV ID is composed of three digits
- numerically it means that clients are restricted to a range from –XXX0000000000000000 to –XXX9999999999999999, where XXX is their ISV ID.

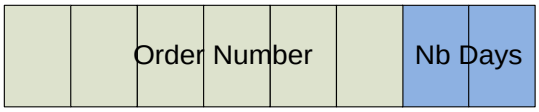
The correct use of the ISV ID and range is checked by the exchange during the conformance test, however afterwards the OEG will not perform any checks of the correct assignment of the ID or range in the inbound application message.

2.4 ORDER ID

The *Order ID* used in the messages for trading purposes is a numerical order identifier assigned by the matching engine, unique per instrument over the entire lifetime of the order, which means that this value remains unchanged, even upon submission of the modifications of the order using **CancelReplace** (06) message.

For reconciliation purposes with Exchange clearing & settlement partners clients may obtain the Order Number and the Order Entry Date from the *Order ID* field, which is composed of two parts required for this, as depicted below:

- the least-significant 2-bytes include the relative calendar days number since 1-jan-1970 at 0:00 UTC (EPOCH); (Please note, currently the clearing partners may use the date corresponding to this value in ASCII format)
- The remaining most-significant 6-bytes will include the Order Number.



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3. ORDER ENTRY GATEWAY SPECIFICS

3.1 SESSION MANAGEMENT

3.1.1 Logon Overview

Clients initiate a TCP/IP session to the Order Entry Gateway, and then initiate a logon by sending the **Logon** (100) message. Session Logon is always initiated by the client. The **Logon (100)** message must be the first message sent by the client otherwise the OEG will drop the connection, and needs to be sent individually to each partition to which physical connection will be established. Please refer to the description of use for the individual messages and Kinematics document to see the various cases and the associated expected exchange of messages.

After the logon is successful application messages may be exchanged between the client and server. A client has *n* seconds after they connect to send a logon request, otherwise the server drops the connection.

The value of the time delay n is provided for each Optiq Segment in the Connectivity Configuration Specifications to be provided by the Exchange to Members.

3.1.2 Heartbeats and TestRequests

The OEG uses the **Heartbeat** and **TestRequest** messages to ensure the connection between the client and the Exchange is up and functioning properly. During periods of inactivity the mechanism used by the OEG functions as described below.

OEG sends a:

- **Heartbeat** (106) message after the given delay of inactivity on its side, i.e. the OEG sends a **Heartbeat** message after it hasn't sent out any messages within *n* second(s). In case no other application messages, the clients will receive at least one **Heartbeat** (106) message every *n* second(s) when they are logged on. This ensures the client that OEG is up and functions properly.
- **TestRequest** (107) message after the given delay of inactivity on the client side, i.e. when the client has not sent any message in the last *n* second(s).
  - The client has another, equivalent time delay to answer the **TestRequest** (107) message by sending back to the OEG either a **Heartbeat** (106) message, or any other application message.
  - Otherwise if the client does not issue any message within the given delay, the OEG closes the connection. (Note that this disconnection triggers the Cancel on Disconnect mechanism for any messages in scope,)

The **TestRequest** (107) message can also be sent by the client to the OEG at any moment and the OEG will answer with a **Heartbeat** (106) message.

The value of the time delay n is provided for each Optiq Segment in the Connectivity Configuration Specifications to be provided by the Exchange to Members.

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3.1.3 Logout

Logout (103) message is used to improve session management processes. This message identifies to the exchange if the client has disconnected on purpose or because of technical issue.

3.1.4 Message Sequence Usage

Optiq uses sequence numbers to ensure no loss of messages. Clients assign sequence numbers to the messages they send to the exchange and the Optiq tracks these numbers for the incoming (sent by client) messages. Similarly, Optiq assigns its own sequence numbers to the outgoing messages (sent by Optiq) that it sends to the client.

The first sequence values provided in the initial Logon messages of the day are set to zero (0) [or 1 for FIX]. When clients log on after a disconnection, the Logon message allows the client and Optiq to exchange the sequence numbers of the last messages that they processed from each other. Each side can then start sending the next message that has not been processed by the other side, or otherwise follow the business continuity and recovery processes.

Please note that message sequence numbers are assigned only to application messages and not to administration messages.

3.2 CANCEL ON DISCONNECT MECHANISM

Cancel on Disconnect is a mechanism which triggers an automatic cancellation of all non-persisted orders upon disconnection of the client whether voluntary or due to an issue.

In typical day-to-day operations the Cancel On Disconnect applies at the OE Session level, which means that it is triggered per OE Session (physical connection) and it does not affect other OE Sessions that belong to the same Logical Access.

By default the Cancel On Disconnect is enabled for all clients and for all their Logical Accesses / OE Sessions. It means that every single order is checked for Cancel On Disconnect.

The Cancel On Disconnect mechanism is triggered when the connection between a client and the OEG is dropped. If the client application is disconnected from the OEG, then all live quotes and non-persisted orders submitted during current day's trading sessions, and belonging to the corresponding OE Session are cancelled for their remaining quantity, regardless of order type and validity type.

When the mechanism kicks in, a **Kill** (05) are sent to the OE Session for which the mechanism has been triggered for each order and instrument where orders were killed. If the client has not yet reconnected the messages will be queued until he returns.

Clients can indicate on each order if they want it to be persistent, i.e. not included in the scope of the Cancel On Disconnect mechanism. If the *Disabled Cancel On Disconnect Indicator* (see field *Execution Instruction*) is set to "True" for an order, this order will not be cancelled even if the Cancel On Disconnect kicks in for the OE Session it belongs to.

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4. FORMATTING

4.1 SBE MESSAGE STRUCTURE

Private inbound and outbound messages are composed of the following parts displayed from left to right in the table below:

SBE Structure													
Frame	SBE Header	Block	Repeating Section 1					...	Repeating Section N				
			Repeating Section Header	Rep. Sec. 1.a	Rep. Sec. 1.b	...	Rep. Sec. 1.n	...	Repeating Section Header	Rep. Sec. N.a	Rep. Sec. N.a	...	Rep. Sec. N.a
2 bytes	8 bytes	n bytes	2 bytes	x_1 bytes	x_1 bytes	...	x_1 bytes	...	2 bytes	x_N bytes	x_N bytes	...	x_N bytes

Each message is enriched with a "Frame" field followed by the SBE header. The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.

Please note that even if the Frame must be present on the wire for every message, for readability purpose it is not represented in the message structures of this document.

4.1.1 SBE Header

The SBE Header is composed of the following fields:

Field	Description	Length	Values
Block Length	Length of the block. The Block is the message without the repeating section headers and the repeating sections. This is especially useful of new versions of messages in case Exchange adds fields at the end of the block. Clients will remain able to process the block fields and know where the repeating sections starts.	2 bytes	From 0 to 2^16-1
Template ID	Identifier of the message template. This is the **message type** of the messages (e.g. NewOrder (01), Ack (03)…).	2 bytes	From 0 to 2^16-1
Schema ID	Identifier of the message schema that contains the template.	2 bytes	From 0 to 2^16-1
Schema version	Version of the message schema in which the message is defined. Used to add messages and/or modify some others.	2 bytes	From 0 to 2^16-1

A Schema is the file describing a group of messages (Private inbound and outbound, Market Data, etc.) used by the Exchange. The group of messages is identified by the *Schema ID*. The schema contains the templates that represent the structure of messages supported by the Exchange, each message being identified by its *Template ID* (message type). A given schema may have several *Schema Version* values, which specify the message structure used by the sender.

Hence the file *OEG_SBE_Input_Schema* contains all the Templates for the private inbound and outbound messages. The Schema Version defines the version of this *OEG_SBE_Input_Schema* and the structure to be used by the sender.

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Please note that the SBE Header must be present on the wire for every message, but for readability purpose it is not represented in the message structures of this document.

4.1.2 SBE Repeating Section Header

The SBE Repeating Section Header is composed of the following fields:

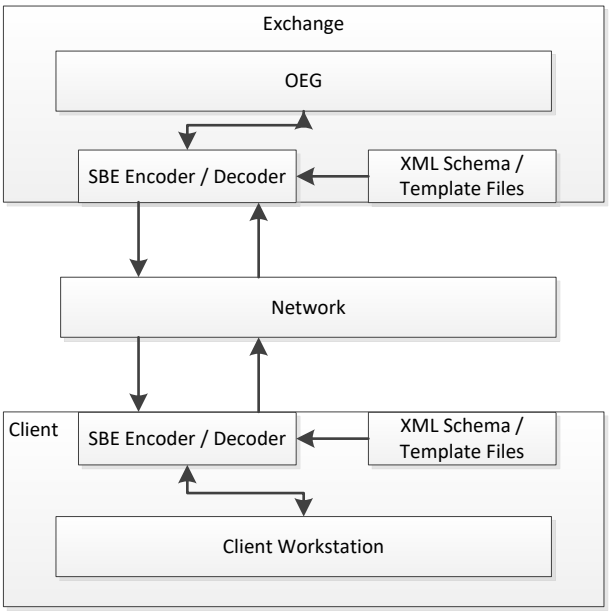
Field	Description	Length	Values
Block Length	Defines the length in bytes of a repeating section (without the length of the header).	1 bytes	From 0 to 255
Num In Group	Defines how many times the repeating section is repeated. It is set to "0" if there is no occurrence of this repeating section.	1 bytes	From 0 to 255

This header must be present at the beginning of each repeating section group.

Please note that the SBE Repeating Section Header must be present on the wire at the beginning of each repeating section block, but for readability purpose it is not represented in the message structures of this document.

4.1.3 SBE Usage

Exchange provides SBE Template XML files that contain all message types supported by the system. Client systems can decode and encode SBE message using the schema and the template files as below:



SBE offers the possibility to have backward and forward compatibility. It means that clients are not required to be on the last version of Schema Version (message structure version) to be able to read the message. This is only possible if changes between versions occurred at the end of:

- The block
- The repeating section.

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Using message length, SBE is able to know the difference between the block length or the repeating section length managed by a given client and the received message. As such, fields that do not match a client's version of the messages will be skipped.

However, it is crucial to note that the list of available values in any given field can be updated and the length can be changed. In this case, the update must be taken into account.

Hence if a field required by the regulator becomes mandatory in a message, each client using this message will need to update its Schema for the latest version, otherwise this message will be rejected by the Order Entry Gateway. A change of length of any field will also lead client to update their Schema if they want to use a message containing this field.

4.1.4 SBE Optional Fields and Null Value

Optional and conditional fields can be provided as null value, as defined by the SBE standard and further indicated in the SBE XML templates.

Please note that the Null Value means that the field is not applicable, not provided or not used. This is different from the value of zero (0), which may have its own meaning depending on the field.

For unused Bitmap fields all the bits must be set to '0'.

4.2 TECHNICAL FORMAT FIELDS

The format of the fields contained in the messages will follow these rules:

- All integers are numeric (signed/ unsigned specified in each field format description) using two's complement method.
- Binary data are in Intel byte order (Little-Endian).
- All "Alphanumerical ID" and "Text" fields are alphanumeric based on UTF-8, left aligned and null padded.
- SBE allows optional fields with a null value. The applicable NULL value is defined by SBE interface.
- Only field values will appear in the published messages (no name or 'tag' will appear in the messages).
- The field names that appear in this document are for reference purposes only.
- All the fields are contiguous.
- All field sizes are fixed and constant.
- Even if it is not always mandatory to be able to process last message version (Schema Version), it is mandatory for clients to check for each update if it contains important or regulation updates.

Format fields	Description
Alphanumerical ID	String type identifying an element.
Amount	Signed numerical field representing an amount.

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Format fields	Description
Bitmap	Array of bits, each bit specifying whether an optional value is present (set to "1") or not (set to "0") (in Little-Endian). e.g. For the field Execution Instruction a Bitmap field allows indicating in different positions of the field, for the same order message, in position zero (0) with the bit set to one (1) STP type of Resting, as well as in position four (4) with the bit set to one (1) as well, indicate that this order should be persisted and should be excluded from the scope of CoD
Boolean	Indicator having two possible values, either 'true - 1' or 'false - 0'. This value is set on the first bit of the byte (in Little-Endian).
Date	Date of an event (in number of days since 01/01/1970 UTC - 01/01/1970 is the day "0").
Enumerated	Information having a delimited set of possible values.
Numerical	Generic numerical field.
Numerical ID	Numerical field identifying an element.
Price	Numerical field representing a price (either signed or not signed). See the description in Price, Quantity, Ratio and Amounts Formats
Quantity	Unsigned numerical field representing a quantity of elements (for example a number of shares).
Sequence	See the description in Sequence Numbers
Text	Text in UTF-8, left aligned and completed with null padding.
Epoch Time in Nanoseconds	Time in number of nanosecond since 01/01/1970 UTC.

4.3 NOT APPLICABLE / FUTURE USE

In preparation for various functionalities expected to be implemented in the future on Optiq a number of messages and fields were added and flagged "For Future Use".

Details of functionalities flagged in the specifications as for 'Future Use' or 'Not Applicable [N/A]' are provided for information purposes only, and may change significantly until such time as the finalised specifications for the relevant service are communicated to clients.

The associated messages and effective use of fields will not be technically supported. Use of these fields in inbound messages will lead the message to be rejected by the system.

This behaviour applies to:

- **Fields** flagged as 'For Future Use', 'Pending Regulatory Approval' or 'Not Applicable [N/A]';
- **Values** flagged with '[D]';

Note: Fields and Values for future use or not applicable, in the messages structures, are represented in *italic, grey and with [N/A] preceding the field description*.

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Per each field that is either flagged as for *'Future Use'* either *in italic, grey and with [N/A]* preceding the field description there is a table below identifying how those fields should be handled. The flagged fields must be provided with the value identified in the line ***Value to Provide,*** if not, the system will behave as following:

	ExecutionWithinFirmShortCode
Value to Provide	**0**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3702 Value provided for ExecutionWithinFirmShortCode is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12), Mass Cancel (13), Open Order Request (15), Ownership Request (18), Collar Breach Confirmation (20) and Declaration Entry (40)

	MiFID Indicators
Value to Provide	**0**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3703 Value provided for MiFID Indicators is not the Default one*
Messages	New Order (01) , Cancel Replace (06) and Declaration Entry (40)

	InvestmentDecisionWithinFirmShortCode
Value to Provide	This field is part of the MiFID Short Codes repeating section (that should not be provided), meaning, repeating section header must be set to zero
Behaviour	If provided, the field will be ignored by the System, independently of the value
Messages	New Order (01) and Declaration Entry (40)

		ClientIdentificationShortCode
Value to Provide	**New Order (01)**	This field is part of the MiFID Short Codes repeating section (that should not be provided), meaning, repeating section header must be set to zero
	Others	Null Value
Behaviour	**New Order (01)**	If provided, the field will be ignored by the System, independently of the value
	Others	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3704 Value provided for ClientIdentificationShortCode is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12), Mass Cancel (13), Open Order Request (15), Ownership Request (18), Collar Breach Confirmation (20) and Declaration Entry (40)	

	ClientIdentificationShortCodeCross
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3741 Value provided for ClientIdentificationShortCodeCross is not the Default one*
Messages	Declaration Entry (40)

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	NonExecutingBrokerShortCode
Value to Provide	This field is part of the MiFID Short Codes repeating section (that should not be provided), meaning, repeating section header must be set to zero
Behaviour	If provided, the field will be ignored by the System, independently of the value
Messages	New Order (01)

	Undisclosed Iceberg Type
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3705 Value provided for Undisclosed Iceberg Type is not the Default one*
Messages	New Order (01) and Cancel Replace (06)

	Trading Session Validity
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3706 Value provided for Trading Session Validity is not the Default one*
Messages	New Order (01) and Cancel Replace (06)

	QuoteReqID
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3707 Value provided for QuoteReqID is not the Default one*
Messages	New Order (01)

	Peg Offset
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3708 Value provided for PegOffset is not the Default one*
Messages	New Order (01) and Cancel Replace (06)

	Undisclosed Price

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Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3709 Value provided for Undisclosed Price is not the Default one*
Messages	New Order (01) and Cancel Replace (06)

	Dark Execution Instruction
Value to Provide	**0**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3711 Value provided for DarkExecutionInstruction is not the Default one*
Messages	New Order (01), Cancel Replace (06) and Cancel Request (12)

	Order Expiration Time
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *2111 Order Validity forbidden for the current OptiqSegment/EMM/MarketModel combination*
Messages	New Order (01) and Cancel Replace (06)

	Maturity
Value to Provide	**Null Character (Binary zero)**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3714 Value provided for Maturity is not the Default one*
Messages	Mass Cancel (13) and Mass Cancel Ack (14)

	Option Type
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** **set to** *3713 Value provided for Option Type is not the Default one*
Messages	Mass Cancel (13) and Mass Cancel Ack (14)

	Contract ID
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3712 Value provided for Contract ID is not the Default one*
Messages	Mass Cancel (13) and Mass Cancel Ack (14)

	Market Phase Flag

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Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3721 Value provided for Market Phase Flag is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12) and Mass Cancel (13)

	Margin Trading Flag
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3722 Value provided for Margin trading Flag is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12) and Mass Cancel (13)

	Access Flag
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3723 Value provided for Access Flag is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12) and Mass Cancel (13)

	Desk ID
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3724 Value provided for Desk ID is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12) and Mass Cancel (13)

	Sender Location ID
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3725 Value provided for Sender Location ID is not the Default one*
Messages	New Order (01), Cancel Replace (06), Cancel Request (12) and Mass Cancel (13)

	Order Category
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3720 Value provided for Order Category is not the Default one*
Messages	Cancel Request (12), Mass Cancel (13), Mass Cancel Ack (14) Open Order Request (15), Ownership Request (18), OwnershipRequestAck (17)

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	Mic Of Secondary Listing
Value to Provide	**Null Character (Binary zero)**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3734 Value provided for Mic Of Secondary Listing is not the Default one*
Messages	Declaration Entry (40), Declaration Entry Ack (41), Declaration Notice (42) and Declaration Entry Reject (46)

	Centralisation Date
Value to Provide	**Null Character (Binary zero)**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3735 Value provided for Centralisation Date is not the Default one*
Messages	Declaration Entry (40) and Declaration Notice (42)

	Gross Trade Amount
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3736 Value provided for Gross Trade Amount is not the Default one*
Messages	Declaration Entry (40) and Declaration Notice (42)

	Start Time VWAP
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3739 Value provided for Start Time VWAP is not the Default one*
Messages	Declaration Entry (40) and Declaration Notice (42)

	End Time VWAP
Value to Provide	**Null Value**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3740 Value provided for End Time VWAP is not the Default one*
Messages	Declaration Entry (40) and Declaration Notice (42)

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	Account Number
Value to Provide	**Null Character (Binary zero)**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3751 Value provided for Account Number is not the Default one*
Messages	New Order (01), Cancel Replace (06), Declaration Entry (40) and Declaration Notice (42)

	Account Number Cross
Value to Provide	**Null Character (Binary zero)**
Behaviour	If provided with a different value, the message will be rejected with ***ErrorCode*** set to *3752 Value provided for Account Number Cross is not the Default one*
Messages	Declaration Entry (40) and Declaration Notice (42)

4.4 DATE AND TIME CONVENTIONS

Date and Time provided in this document refer to the following names, and are provided in the following format:

- Timestamps are expressed in UTC (Universal Time, Coordinated) and are synchronised using Precision Time Protocol (PTP). Their format is defined in number of nanoseconds since 01/01/1970 UTC, and is populated as 8-byte unsigned integers.
- Dates are defined in number of days since 01/01/1970 UTC (01/01/1970 is the day "0") and are populated as 2-byte unsigned integers.
- *Note:* Expiry Date for Good Till Date (GTD) orders follow their own rules, please refer to the field description for further details.

4.5 SEQUENCE NUMBERS

The Order Entry Gateway manages two sequence numbers:

- Message Sequence Number: this sequence number is incremented one by one by the OEG and per OE Session (physical connection). It is provided in every application outbound message.
- Client Message Sequence Number: this sequence number must be managed by the client's workstation and is mandatory for each application inbound message. It is recommended to increment this number one by one per OE Session (physical connection), starting from 1. Please note that this sequence is not checked by the OEG but will be useful for some specific recovery cases.

4.6 PRICE, QUANTITY, RATIO AND AMOUNT FORMATS

If a price is needed in the messages, it is expressed in currency or in percentages (generally for bonds).

The volume of the order is a number of Securities or an amount expressed in currency.

All prices are processed using two values:

- the price value (Signed/Unsigned Integer);

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- the scale code (*Price/Index Level Decimals*).

Clients have to link each instrument to the associated "*Price/Index Level Decimals*" from the Standing Data message or file.

The prices must be calculated according to the following formula:

$$\text{Price} = \frac{Integer}{10^{\text{"Price/Index Level Decimals"}}}$$

For example, a price of 27.56 is sent in messages in the Price field as an Integer of 275600, if the "*Price / Index Level Decimals*" from the Standing Data is equal to 4.

- The same mechanism is used for:
  - All quantities with "*Quantity Decimals*"
  - All ratios and percentages with "*Ratio / Multiplier Decimals*"
  - All amounts with "*Amount Decimals*"

4.7 INSTRUMENT IDENTIFIERS AND EMM

4.7.1 Symbol Index

An instrument is identified by its Symbol Index.

The standard security identifier (for example ISIN), mnemonic, tick size, instrument name and other instrument characteristics are carried only in the following Market Data messages: **StandingData** message (1007) and in the Standing Data files available on the HTTPS server. As such, the client applications must link the Symbol Index which is used in all messages, with other instrument characteristics present in the **StandingData** (1007) message or file.

The Symbol Index is assigned by Exchange and will not change over the lifetime of the instrument.

In some extraordinary cases an instrument can move from one Optiq segment to another keeping its Symbol Index. Clients will always be notified in advance before such changes.

Any Corporate Action leading to a change of ISIN will lead to change of SymbolIndex. These Corporate Actions are generally part of the mandatory reorganisation events; the most frequent ones being stock split, reverse stock split, change of name / denomination. However the ISIN change is not systematic and will be in any case communicated upfront by the Exchange.

For further details on the Standing Data messages and files please refer to the *Optiq Commercial MDG Client Specifications.*

4.7.2 Order Priority

The *Order Priority* is provided in private **Ack** (03) messages for every order. It is used to allow clients to reconcile with the Market Data feed as the *Order Priority* is also provided in the **LongOrderUpdate** (1015) message.

For Stop orders *Order Priority* will be provided in the private **Ack** (03) message. This order priority indicates the rank of the stop order on its arrival. If multiple stop orders exist with the same price conditions, they would be triggered in the order of the priority assigned to the stop order upon entry.

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When Stop orders are triggered, a new **Ack** (03) message is issued, with the field *Ack Type* set to "Stop Triggered Ack", they will be assigned a new order priority that indicates their priority vs. the rest of the order book.

For further details please refer to the description of the **Ack** (03) message and to the Kinematics document in Section *1.2.5.1 Private and Public feed reconciliation*.

4.7.3 EMM

The *Exchange Market Mechanism* represents the platform to which the order sent by the client must be routed. It must be specified by clients each time a *Symbol Index* is specified as it is used to route the order to the right platform.

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5. MESSAGES

5.1 IMPORTANT NOTES

5.1.1 Scope of Messages and Functionalities

While attempts are made to provide as comprehensive an overview of functionalities as possible please note that:

- Some of the functionalities and messages in the document are applicable only when enabled for the specific scope of instruments;
- The functionalities follow the rules set out in the Exchange rules.

The following table describe each Optiq Segment tag. Each tag will be then used for each message to specify on which Optiq Segment this message applies on.

Optiq Segment	Tag
Equities	EQ
Funds	FUND
Fixed Income	FRM
Warrants and Certificates	SP

5.1.2 Conditional Values in Outbound Messages

Please note that for the outbound messages (Client◀OEG) the “presence” of the fields in the block of the message is often set to “Conditional”, which means that those fields might be populated with Null Value, when not required. As a single outbound message may cover several trading cases, it contains fields needed in all of these cases, which may be populated or not.

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5.2 MESSAGES FORMATTING

5.2.1 Introduction to Message Representation

To help reading the message structure in this document the following introductory explanation is provided.

- In all the structures of messages of this document (the tables representing the messages only):
  - All the lengths identified are in bytes.
  - Short descriptions of individual fields within the structures might not be exhaustive, please refer to Section 6 Field Description where further details are provided for each individual field.
  - Where a list of specific allowed values is provided, if client provides data that is outside of this range of values, the message will be rejected
  - In the fields description the following pictograms represent:
    - [C] means that the value is for Cash only;
    - [i] means that special conditions apply to the displayed value. These conditions are detailed in the "conditions" in the description of the corresponding field.
  - The display of message sections is formatted as described below:
    - **Block section**: The block is for all the non-repeated fields. They must be present on the wire for each message, even if they are optional or conditional. The length of the section is defined in each individual message template (in bytes).

Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	96
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	104
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	111
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	96
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	125
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	100

    - **Green Repeating section**: All the fields that are repeated. All these fields are in bold and green table borders, it might be **0 to *n* occurrence(s)** for this repeating section. (the maximum value of *n* is defined in the *Template*)

Bid Quantity	Quote bid quantity, (To be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-1	Optional	93
Bid Price	Quote bid price, (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63 to 2^63-1	Optional	93
Offer Quantity	Quote offer quantity, (To be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-1	Optional	116
Offer Price	Quote offer price, (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63 to 2^63-1	Optional	116
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	125
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	100

    - **Light Blue Repeating section**: All these fields are in bold and light blue table borders, it might be **0 to 2 occurrence(s)** for this repeating section. This is mainly used to manage optional fields.

Free Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	Text	18	(See field description)	Optional	105

    - **Blue Repeating section**: All these fields are in bold and blue table borders, it might be **0 to 1 occurrence** for this repeating section. This is mainly used to manage optional fields.

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Collar Rejection Type	Hit collar type (high or low) in case of order rejection due to collar breach.	Enumerated	1	1 = Low dynamic collar 2 = High dynamic collar	Conditional	98
Breached Collar Price	Breached collar price in case of collar rejection.	Price	8	From -2^63 to 2^63-1	Conditional	94

- SBE message structures are organized as below:

SBE Section	Description	Length
Block	The block is for all the non-repeated fields. They must be present on the wire for each message, even if they are optional.	As defined by the individual message template (in bytes)
Repeating section 1	All the fields that are repeated. All these fields are in bold and are outlined by green table borders; there may be 0 to *n* occurrences of this repeating section. (the maximum value of *n* is defined in the *Template*)	As defined by the template (in bytes)
Repeating section 2	All these fields are in bold and are outlined by light blue table borders; there may be 0 to 2 occurrences of this repeating section. This it is mainly used to manage optional fields.	As defined by the template (in bytes)
Repeating section 3	All these fields are in bold and are outlined by blue table borders; there may be 0 to 1 occurrence of this repeating section. This it is mainly used to manage optional fields.	As defined by the template (in bytes)
Repeating Section 4	All these fields are in bold and are outlined by blue table borders; there may be 0 to 1 occurrence of this repeating section. This it is mainly used to manage optional fields.	As defined by the template (in bytes)
Repeating section 5	All the fields that are repeated. All these fields are in bold and are outlined by green table borders; there may be 0 to *n* occurrences of this repeating section. (the maximum value of *n* is defined in the *Template*)	As defined by the template (in bytes)

- In this explanatory example, the Frame, SBE Header and SBE Repeating Section Header are represented in the structure. There are in a grey background and will not be provided in the rest of this document.
- Please note not all messages use repeating sections. In those cases repeating sections are not identified in the structure of the message.

- For example: the following combination of blocks could be present in a message structure:

SBE Section	Description	Length
Frame	The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.	2 bytes
SBE Header	SBE header is composed of 4 fields, as previously defined.	8 bytes
Block	The block is for all the non-repeated fields. They must be present on the wire for each message, even if they are optional.	As defined by the template (in bytes)
Repeating section 1 header	This is how many times the repeating section is repeated and the length of the repeating section. It will not been displayed in any below message. *Num In Group* is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)

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SBE Section	Description	Length
Repeating section 1.a	First occurrence of the repeating section 1.	As defined by the template (in bytes)
Repeating section 1.n	Occurrence N of the repeating section 1.	As defined by the template (in bytes)
Repeating section 2 header	This is how many times the repeating section is repeated and the length of the repeating section. It will not been displayed in any below message. *Num In Group* is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 2.a	All these fields are in bold and blue table borders, it might be 0 to 1 occurrence for this repeating section. This it is used to manage optional fields.	As defined by the template (in bytes)
Repeating section 3 header	This is how many times the repeating section is repeated and the length of the repeating section. It will not been displayed in any below message. *Num In Group* is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 3.a	All these fields are in bold and grey table borders, it might be 0 to 1 occurrence for this repeating section.	As defined by the template (in bytes)

5.2.2 Example: NewOrder (01) message

- Below is an example representing the sections using the **NewOrder** (01) message (Frame and headers provided):

SBE Section	Description	Length
Frame	The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.	2 bytes
SBE Header	SBE header is composed of 4 fields, as previously defined.	8 bytes
Block	Includes all the mandatory fields for the NewOrder (01) message.	As defined by the template (in bytes)
Repeating section header 1	This is how many times the repeating section 1 is repeated and the length of a repeating section 1. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 1	This repeating section **contains only the *FreeText*** and can be populated 0, 1 or 2 times (2 times for Cross Orders only).	As defined by the template (in bytes)
Repeating section header 2	This is how many times the repeating section 2 is repeated and the length of a repeating section 2. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 2	This repeating section **contains MiFID II short codes** and can be populated 0, 1 or 2 times (2 times for Cross Orders only).	As defined by the template (in bytes)
Repeating section header 3	This is how many times the repeating section 3 is repeated and the length of a repeating section 3. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 3	This repeating section **contains additional order characteristics** and can be populated 0 or 1 time.	As defined by the template (in bytes)

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SBE Section	Description	Length
Repeating section header 4	This is how many times the repeating section 4 is repeated and the length of a repeating section 4. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section 4	This repeating section **contains the clearing data** and can be populated 0, 1 or 2 times (2 times for Cross Orders only).	As defined by the template (in bytes)
Repeating section header 5	This is how many times the repeating section 5 is repeated and the length of a repeating section 5. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating Section 5	This repeating section **contains additional order characteristics** and can be populated 0 or 1 time.	As defined by the template (in bytes)
Repeating section header 6	This is how many times the repeating section 6 is repeated and the length of a repeating section 6. It will not been displayed in any below message. It is at 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating Section 6	This repeating section contains additional order characteristics and can be populated 0, 1 or 2 times.	As defined by the template (in bytes)

It means that a message that contains at least one repeating section has a variable length, depending of the number of times each repeating section is populated.

- As an example below is a representation of the fields that may be sent in the structure of NewOrder (01) message, that represent some of the sections listed above.
  - The following sections are populated in this example: the Frame, SBE Header, Block, **Repeating Section 2** populated once, **Repeating Section 3** populated once.
  - The following sections are not populated in this example: **Repeating Section 1, Repeating Section 4**.

Please note that the values provided in this example are purely indicative and do not represent any specific trading case. Moreover the values are here provided in a "human readable format" when in reality they will be sent on the wire in a binary format.

Field	Short Description	Values	Presence
Frame	The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.	148	Mandatory
Block Length	Length of the block. The Block is the message without the repeating sections.	64	Mandatory
Template ID	Identifier of the message template. This is the message type of the message	01	Mandatory
Schema ID	Identifier of the message schema that contains the template.	2	Mandatory
Schema version	Version of the message schema in which the message is defined.	1	Mandatory
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	5	Mandatory
Firm ID	Firm ID.	00010258	Mandatory

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Field	Short Description	Values	Presence
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	26th October 2016 @ 12:16:46-015-255-248	Mandatory
Client Order ID	Client order ID.	1	Mandatory
Symbol Index	Exchange identification code of the instrument.	46489	Mandatory
EMM	Defines the Exchange Market Mechanism applied on each platform.	1 COB	Mandatory
Order Side	Indicates the side of the order.	2 Sell	Mandatory
Order Type	Type of Order.	2 Limit	Mandatory
Time In Force	Specifies the maximum validity of an order.	0 Day	Mandatory
Order Price	Instrument price per quantity unit.	150000000	Conditional
Order Quantity	Total order quantity, per quantity unit.	200000000	Mandatory
ExecutionWithinFirmShortCode	*MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Null Value*	*Optional*
Trading Capacity	*MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.*	*Null Value*	*Optional*
Account Type	Indicates the account type for which the order is entered.	4 RO	Mandatory
LP Role	Liquidity Provider Role identifies the type of the Liquidity Provider.	Null Value	Conditional
Execution Instruction	Field used as instruction for order handling.	00000000	Mandatory
Dark Execution Instruction	*Field used as instruction for dark order handling.*	*00000000*	*Optional*
MiFID Indicators	*Field used as instruction for order handling.*	*00000000*	*Optional*
STP ID	*For Future Use.*	*Null Value*	*Optional*
Block Length for repeating section 1	Defines the length in bytes of the repeating section 1.	18	Mandatory
Num In Group for repeating section 1	Defines how many times the repeating section 1 is repeated.	0	Mandatory
Block Length for repeating section 2	Defines the length in bytes of the repeating section 2.	16	Mandatory
Num In Group for repeating section 2	Defines how many times the repeating section 2 is repeated.	1	Mandatory
InvestmentDecisionWFirmShortCode	*MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision.*	*Null Value*	*Optional*
NonExecutingBrokerShortCode	*MiFID II short code, Non-executing broker, identifier of the non-executing broker.*	*Null Value*	*Optional*

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Field	Short Description	Values	Presence
ClientIdentificationShortCode	*MiFID II short code, Client identification code. Short Code used to identify the entity executing the transaction. In case there is DEA, the code of the DEA user shall be used.*	*Null Value*	*Optional*
Block Length for repeating section 3	Defines the length in bytes of the repeating section 3.	50	Mandatory
Num In Group for repeating section 3	Defines how many times the repeating section 3 is repeated.	1	Mandatory
Stop Trigger Price	Stop Trigger Price is mandatory for stop orders.	Null Value	Conditional
Undisclosed Price	*Optional price a client can give to the hidden part of an Iceberg order.*	*Null Value*	*Conditional*
Disclosed Quantity	Maximum number of quantity units to be shown to market participants (Iceberg Order). (To be calculated with Quantity Level Decimals)	Null Value	Conditional
Minimum Order Quantity	Minimum quantity to be executed upon order entry (else the order is rejected), (To be calculated with Quantity Level Decimals).	50000000	Optional
QuoteReqID	*Numerical RFQ identifier assigned by the matching engine, unique per instrument and EMM.*	*Null Value*	*Optional*
Order Expiration Time	*Field used as time of order expiration for GTT orders.*	*Null Value*	*Conditional*
Order Expiration Date	Field used as date of order expiration for GTD orders.	Null Value	Conditional
Peg Offset	*Tick offset for a pegged order.*	*Null Value*	*Conditional*
Trading Session Validity	*Trading Session Validity.*	*Null Value*	*Optional*
Undisclosed Iceberg Type	*Order handling related to the undisclosed part of an Iceberg order eligible to a matching in the Dark pool of liquidity.*	*Null Value*	*Optional*
Triggered Stop Time In Force	Specifies the maximum validity of an triggered stop order.	Null Value	Conditional
Block Length for repeating section 4	Defines the length in bytes of the repeating section 4.	34	Mandatory
Num In Group for repeating section 4	Defines how many times the repeating section 4 is repeated.	0	Mandatory
Block Length for repeating section 5	Defines the length in bytes of the repeating section 5.	56	Mandatory
Num In Group for repeating section 5	Defines how many times the repeating section 5 is repeated.	0	Mandatory

- Below is another example of the fields that may be sent in the structure of NewOrder (01) message, but this time the repeating section containing the clearing data is repeated twice:
  - The following sections are populated in this example: the Frame, SBE Header, Block, **Repeating Section 4** populated twice.
  - The following sections are not populated in this example: **Repeating Section 1**, **Repeating Section 2** and **Repeating Section 3**.

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Please note that the values provided in this example are purely indicative and do not represent any specific trading case. Moreover the values are here provided in a "human readable format" when in reality they will be sent on the wire in a binary format.

Field	Short Description	Values	Presence
Frame	The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields.	150	Mandatory
Block Length	Length of the block. The Block is the message without the repeating sections.	64	Mandatory
Template ID	Identifier of the message template. This is the message type of the message	01	Mandatory
Schema ID	Identifier of the message schema that contains the template.	2	Mandatory
Schema version	Version of the message schema in which the message is defined.	1	Mandatory
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	7	Mandatory
Firm ID	Firm ID.	00010258	Mandatory
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	26th October 2016 @ 14:07:22-785-123-591	Mandatory
Client Order ID	Client order ID.	2	Mandatory
Symbol Index	Exchange identification code of the instrument.	77997	Mandatory
EMM	Defines the Exchange Market Mechanism applied on each platform.	1 COB	Mandatory
Order Side	Indicates the side of the order.	3 Cross	Mandatory
Order Type	Type of Order.	2 Limit	Mandatory
Time In Force	Specifies the maximum validity of an order.	0 Day	Mandatory
Order Price	Instrument price per quantity unit.	273000000	Conditional
Order Quantity	Total order quantity, per quantity unit.	1000000000	Mandatory
ExecutionWithinFirmShortCode	*MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*2132156*	*Optional*
Trading Capacity	*MiFID II field that indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.*	*1*	*Optional*
Account Type	Indicates the account type for which the order is entered.	1 Client	Mandatory
LP Role	Liquidity Provider Role identifies the type of the Liquidity Provider.	Null Value	Conditional
Execution Instruction	Field used as instruction for order handling.	00000000	Mandatory

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Field	Short Description	Values	Presence
Dark Execution Instruction	*Field used as instruction for dark order handling.*	*00000000*	*Optional*
MiFID Indicators	*Field used as instruction for order handling.*	*00000000*	*Optional*
STP ID	*For Future Use.*	*Null Value*	*Optional*
Block Length for repeating section 1	Defines the length in bytes of the repeating section 1.	18	Mandatory
Num In Group for repeating section 1	Defines how many times the repeating section 1 is repeated.	0	Mandatory
Block Length for repeating section 2	Defines the length in bytes of the repeating section 2.	16	Mandatory
Num In Group for repeating section 2	Defines how many times the repeating section 2 is repeated.	0	Mandatory
Block Length for repeating section 3	Defines the length in bytes of the repeating section 3.	50	Mandatory
Num In Group for repeating section 3	Defines how many times the repeating section 3 is repeated.	0	Mandatory
Block Length for repeating section 4	Defines the length in bytes of the repeating section 4.	34	Mandatory
Num In Group for repeating section 4	Defines how many times the repeating section 4 is repeated.	2	Mandatory
Clearing Firm ID	Clearing firm ID.	Null Value	Optional
Client ID	Field used to identify the client (investor).	Null Value	Optional
Account Number	Account Number	JFG147G22G14	Optional
Technical Origin	Indicates the nature of the order issuer	Null Value	Optional
Open Close	Open Close Indicator, Posting action.	Null Value	Optional
Clearing Instruction	Clearing Instruction.	Null Value	Optional
Account Type Cross	Indicates the account type for which the sell side of a cross order is entered.	Null Value	Optional
Clearing Firm ID	Clearing firm ID.	Null Value	Optional
Client ID	Field used to identify the client (investor).	Null Value	Optional
Account Number	Account Number	DHCVIE14987G	Optional
Technical Origin	Indicates the nature of the order issuer	Null Value	Optional
Open Close	Open Close Indicator, Posting action.	Null Value	Optional
Clearing Instruction	Clearing Instruction.	8 Manual Mode	Optional
Account Type Cross	Indicates the account type for which the sell side of a cross order is entered.	1 Client	Optional
Market Phase Flag	Indicates the market phase to which the orders are eligible to.	1 Continuous Trading Only	Conditional
Margin Trading Flag	Indicates if the order is a Margin Trade order or not.	1 = True	Conditional
Trader ID	Field used to identify the trader entering the order.	JP00000000000022	Conditional
Sender Location ID	Field used to identify the specific message originator.	Null Value	Conditional
Desk ID	Field used to identify the Trading Desk.	Null Value	Optional

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Field	Short Description	Values	Presence
Block Length for repeating section 6	Defines the length in bytes of the repeating section 4.	16	Mandatory
Num In Group for repeating section 6	Defines the length in bytes of the repeating section 6.	0	Mandatory

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5.3 ADMINISTRATION MESSAGES

All administrative messages are available on the following Optiq Segments:

EQ FUND FRM SP

5.3.1 Logon (100)

Client ▶OEG
Message Usage:

The **Logon** (100) message is used by the clients to establish a connection with the Exchange and identify the last response message they have processed. It must be the first message sent by the client otherwise the OEG will drop the connection.

The **Logon** (100) message contains the following fields:

- *Logical Access ID*: it must be populated by the client according to the Logical Access used.
- *OE Partition ID*: it must be populated according to the partition the client connects to.
- *Last Message Sequence Number*: it is the sequence number of the last message received by the client from the Exchange on a specific OE Session.
- *Software Provider*: it is an optional field that should be populated for client using software provider services.
- *Queueing Indicator*: defines whether the orders are rejected or queued in case of throttling.

If the logon is successful the OEG sends back a **LogonAck** (101) message providing the exchange identifier (*Exchange ID*) and the 'Last Client Message Sequence Number' as "0". Otherwise the OEG sends back a **LogonReject** (102) message providing the reason of the rejection (*Logon Reject Code*) and closes the connection.

Usage of the Last Message Sequence Number:

At the first logon of the trading day the client must set the field *Last Message Sequence Number* to "0", as no message can be received before a successful logon.

In case of an unintentional disconnection the client must use the field *Last Message Sequence Number* to indicate to the Exchange the sequence number of the last message he has received. If some messages have been lost during the disconnection the OEG will resend them to the client.

The clients must not skip sequence numbers; can however pass the Null Value as *Last Message Sequence Number* to notify the server not to validate the next sequence number. The server will accept the next sequence from the client and then send what it thinks is the next outbound sequence.

If the *Last Message Sequence Number* provided in the Logon message exceeds the sequence number of the last message sent by the Exchange, the OEG will reject the logon (**LogonReject** (102)) and will drop the connection. The **LogonReject** (102) will provide the '*Last Message Sequence Number*' the Exchange is expecting. This behaviour allows the members to establish the proper sequence number in case of connection issues.

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Field	Short Description	Format	Len	Values	Presence	Page
Logical Access ID	Identifier of the Logical Access.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
OE Partition ID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Numerical ID	2	From 0 to 2^16-2	Mandatory	122
Last Message Sequence Number	Indicates the sequence number of the last message received by the Client from the Exchange on the OE Session.	Sequence	4	From 0 to 2^32-2	Conditional	115
Software Provider	Free text field entered by the client in the Logon (100) message, identifying the provider of the software used for exchange of messages for trading purposes.	Text	8	(See field description)	Optional	133
Queueing Indicator	Indicates whether the client requests its orders to be queued or rejected in case of throttling. (0: False - Reject ; 1: True - Queue).	Boolean	1	0 = False 1 = True	Mandatory	131

5.3.2 Logon Ack (101)

Client ◀OEG
Message Usage:

The **LogonAck** (101) message is sent by the OEG as a response to a successful logon of a client. The message provides the Exchange identifier (*Exchange ID*) along with the sequence number of the last client message processed by the system.

The sequence number may be used to identify gap in the messages sent or received. If the client realizes that some messages have been dropped, he can decide whether to resend or not to the messages that have not been processed by the Exchange.

Please note that rejected messages are considered as processed messages.

Field	Short Description	Format	Len	Values	Presence	Page
Exchange ID	Identifies the Exchange.	Text	8	(See field description)	Mandatory	108
Last Client Message Sequence Number	***[N/A]*** Indicates the sequence number of the last message received by the Exchange from the Client on the OE Session.	Sequence	4	From 0 to 2^32-2	Mandatory	115

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5.3.3 Logon Reject (102)

Client ◀OEG
Message Usage:

The **LogonReject** (102) message is sent by the OEG as a response to an unsuccessful logon of a client. The message provides the Exchange identifier (*Exchange ID*) along with the reason of the rejection (*Logon Reject Code*).

The *Last Client Message Sequence Number* indicates the sequence number of the last client message processed by the system and *Last Message Sequence Number* indicates the the sequence number of the last message sent by the Exchange.

A logon rejection will automatically lead OEG to drop the connection.

If the logon fails because the OEG does not recognize the **Logon** (100) message at all (because of a structural error, when a message is improperly formed according to these specifications, for example), then no connection is established and OEG does NOT send a **LogonReject** (102) message. In this circumstance, the client does not receive any response at all to the **Logon** (100) message.

Field	Short Description	Format	Len	Values	Presence	Page
Exchange ID	Identifies the Exchange.	Text	8	(See field description)	Mandatory	108
Logon Reject Code	Provides the logon rejection reason.	Enumerated	1	(See field description)	Mandatory	118
Last Client Message Sequence Number	***[N/A]*** Indicates the sequence number of the last message received by the Exchange from the Client on the OE Session.	Sequence	4	From 0 to 2^32-2	Mandatory	115
Last Message Sequence Number	Indicates the sequence number of the last message received by the Client from the Exchange on the OE Session.	Sequence	4	From 0 to 2^32-2	Mandatory	115

5.3.4 Logout (103)

Client ◀▶OEG
Message Usage:

The **Logout (103)** message with *Log Out Reason Code* = 0 is sent by the client in order to close the connection with the Exchange.

In regular cases, at the end of day the Exchange sends a **Logout (103)** message with *Log Out Reason Code* = 1 to the clients before dropping the connection.

Please note that in both cases it will trigger the Cancel On Disconnect mechanism if it is enabled.

Field	Short Description	Format	Len	Values	Presence	Page
Log Out Reason Code	Log Out Reason Code. Value 0 is from client, value 1 is from Exchange.	Enumerated	1	0 = Regular Logout By Client 1 = End Of Day	Mandatory	117

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5.3.5 Heartbeat (106)

Client ◀▶OEG
Message Usage:

The **Heartbeat** (106) message is used during periods of inactivity, (i.e. when there is no exchange of application messages), either by the OEG or the clients to notify each other that this inactivity is not due to a technical issue.

The message is only composed of an SBE Header. Please refer to Section 4.1.1 SBE Header.

It is sent by:

- The OEG after *n* second(s) of inactivity to notify the client that the connection functions properly, or as a response to a client's **TestRequest** (107).
- The client as a response to a **TestRequest** (107) message to notify the OEG that his system functions properly. (Please note that any application message is also a proper response to the **TestRequest** (107) message.)

The parameter *n* has a specific value defined for each Optiq Segment.

5.3.6 TestRequest (107)

Client ◀▶OEG
Message Usage:

The **TestRequest** (107) message is used by the OEG to check if the network and the client's system function properly.

The message is only composed of an SBE Header. Please refer to Section 4.1.1 Header.

It is sent by the OEG after *n* second(s) of inactivity on the client side. Then:

- The client has *n* second(s) delay to answer the **TestRequest** (107) message by sending a **Heartbeat** (106) message, or any other application message.
- Otherwise if the client does not issue any message within the given delay, the OEG closes the connection. (Note that it triggers the Cancel on Disconnect mechanism if it is enabled)

It can also be sent by the clients to the OEG at any moment and the OEG will answer with a **Heartbeat** (106) message.

The parameter *n* has a specific value defined for each Optiq Segment

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5.3.7 Technical Reject (108)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **TechnicalReject** (108) message is sent by the order entry gateway to notify the request issuer that their requests are not processed. It is used to reject application and unknown messages sent by the client.

The **TechnicalReject** (108) message is sent by the order entry gateway for the following reasons:

- Throttling
- Unknown message

The *Rejected Client Message Sequence Number* provided in the **TechnicalReject** (108) message identifies the request which is rejected: it is the *Client Message Sequence Number* of the corresponding inbound message sent by the client.

Note: in case of a rejection of an unknown message the *Rejected Client Message Sequence Number* may not be provided.

The reason of the rejection is provided by the Error Code, and a text message explaining the error is provided in the Error Code List.

Field	Short Description	Format	Len	Values	Presence	Page
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	124
Rejected Client Message Sequence Number	Indicates the Client Message Sequence Number of the rejected message.	Sequence	4	From 0 to 2^32-2	Conditional	132
Rejected Message	***[N/A]*** *Provides the ID (Template ID) of the rejected message.*	*Numerical ID*	*1*	*From 0 to 2^8-2*	*Conditional*	*132*
Error Code	Error code in case of rejection.	Numerical ID	2	From 0 to 2^16-2	Mandatory	107
Rejected Message ID	Provides the ID (Template ID) of the rejected message.	Numerical ID	2	From 0 to 2^16-1	Conditional	132

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5.4 APPLICATION MESSAGES

5.4.1 Central Order Book (COB)

5.4.1.1 New Order (01)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **NewOrder** (01) message is used by the clients to create a new order.

All the fields in the block of the message must be populated for each **NewOrder** (01) otherwise the message will be immediately rejected by the Order Entry Gateway (OEG).

Optional fields clients do not want to populate must still be present in the block and set to the null value by the client application. For example, for Market, Stop-Market and Market To Limit orders, the *Order Price* is useless but the field must be present and set to the null value.

Repeating Section Usage:

The message contains **four optional repeating sections:**

- **FreeText repeating section:** the first repeating section contains only the field *FreeText*. It can be populated once for Buy and Sell orders and twice for Cross orders, respectively for the buy side and the sell side. Please note that the *FreeText* is part of the Clearing Data repeating section, which aggregates the clearing-related data (clearing aggregate) but it is set in a dedicated repeating section for performance purpose. Possible number of repeating groups: 0, 1.
- ***MiFID Shortcodes repeating section:*** *the second repeating section contains the MiFID shortcodes and can be populated once for Buy and Sell orders. It can be repeated twice for Cross orders, respectively for the buy side and the sell side. Possible number of repeating groups: 0, 1, 2.*

  Note: The header of this repeating section must be set to zero. Please check 4.3 Not Applicable / Future Use
- **Additional Order Characteristics repeating section:** the third repeating section can be populated only once and contains optional order characteristics along with conditionally required fields. For the specific conditions on the conditionally required fields please refer to section *Order Characteristics*. Possible number of repeating groups: 0, 1.
- **Clearing Data repeating section:** the fourth repeating section contains the clearing fields. Possible number of repeating groups: 0, 1, 2.
  - For standard Buy and Sell orders the first occurrence is optional and contains all the clearing data of the order. Please note that in that case, the field *Account Type Cross* is always ignored by the system as the Account Type value of the standard order is specified in the block of the message.
  - For Cross orders, two occurrences are mandatory; the first one for the buy side and the second one for the sell side. Please note that in that case the Account Type value of the buy side is specified in the *Account Type* field in the block of the message and the Account Type value of the sell side is specified in the *Account Type Cross* field of the second occurrence (the sell side occurrence).
  - As a consequence, the *Account Type Cross* field of the first occurrence is never used and is thus ignored by the OEG.

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- **Additional Order Characteristics repeating section:** the fifth repeating section can be populated only once and contains optional order characteristics along with conditionally required fields. Possible number of repeating groups: 1.
- **Self-Trade Prevention repeating section:** the sixth repeating section contains information linked to the Self trade Prevention functionality and Clearing Data. Possible number of repeating groups: 0, 1, 2 (for Cross Orders only).

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell 3 = Cross [i]	Mandatory	128
Order Type	Type of Order.	Enumerated	1	(See field description)	Mandatory	128
Time In Force	Specifies the maximum validity of an order.	Enumerated	1	(See field description)	Mandatory	136
Order Price	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Conditional	127
Order Quantity	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)	Quantity	8	From 0 to 2^64-2	Mandatory	127
ExecutionWithinFirmShortCode	***[N/A]*** *MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Optional*	*109*
Trading Capacity	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Enumerated	1	(See field description)	Optional	138

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Field	Short Description	Format	Len	Values	Presence	Page
Account Type	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Enumerated	1	(See field description)	Mandatory	96
LP Role	Liquidity Provider Role identifies the type of the Liquidity Provider when Account Type is equal to "Liquidity Provider".	Enumerated	1	1 = Liquidity Provider or Market Maker	Conditional	118
Execution Instruction	Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Mandatory	109
Dark Execution Instruction	***[N/A]*** *Field used as instruction for dark order handling (For Future Use, Pending Regulatory Approval). Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Optional*	*105*
MiFID Indicators	***[N/A]*** *Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Optional*	*120*
STP ID	***[N/A]*** *For Future Use.*	*Numerical ID*	*2*	*From 0 to 2^16-1*	*Optional*	*134*
Free Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	Text	18	(See field description)	Optional	111
InvestmentDecision WFirmShortCode	***[N/A]*** *MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Optional*	*113*
NonExecutingBroker ShortCode	***[N/A]*** *MiFID II short code, Non-executing broker, identifier of the non-executing broker.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Optional*	*122*
ClientIdentificationS hortCode	***[N/A]*** *MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Optional*	*103*
Stop Trigger Price	Stop Trigger Price is mandatory for stop orders.	Price	8	From -2^63 to 2^63-1	Conditional	134

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Field	Short Description	Format	Len	Values	Presence	Page
Undisclosed Price	***[N/A]** Optional price for the hidden part of an Iceberg order. (For Future Use, Pending Regulatory Approval)*	*Price*	*8*	*From -2^63 to 2^63-1*	*Optional*	*141*
Disclosed Quantity	Maximum number of quantity units to be shown to market participants (Iceberg Order). (To be calculated with Quantity Decimals)	Quantity	8	From 0 to 2^64-1	Conditional	105
Minimum Order Quantity	Minimum quantity to be executed upon order entry (else the order is rejected), (To be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-1	Optional	121
QuoteReqID	***[N/A]** Numerical RFQ identifier assigned by the matching engine, unique per instrument and EMM. (For Future Use)*	*Numerical ID*	*8*	*From 0 to 2^64-1*	*Conditional*	*131*
Order Expiration Time	***[N/A]** Field used as time of order expiration for GTT orders.*	*Numerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*126*
Order Expiration Date	Field used as date of order expiration for GTD orders.	Numerical ID	2	From 0 to 2^16-1	Conditional	125
Peg Offset	***[N/A]** Tick offset for a pegged order. (For Future Use)*	*Numerical ID*	*1*	*From -128 to 127*	*Conditional*	*129*
Trading Session Validity	***[N/A]** Trading Session Validity. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*1 = Session 1* *2 = Session 2* *3 = Session 3*	*Conditional*	*139*
Undisclosed Iceberg Type	***[N/A]** Order handling related to the undisclosed part of an Iceberg order eligible to a matching in the Dark pool of liquidity. (For Future Use, Pending Regulatory Approval)*	*Enumerated*	*1*	*1 = Limit* *2 = Peg Mid-Point* *3 = Peg Primary* *4 = Peg Market*	*Optional*	*140*
Triggered Stop Time In Force	Specifies the maximum validity of an triggered stop order.	Enumerated	1	(See field description)	Conditional	139
Clearing Firm ID	Clearing firm ID.	Alphanumeric al ID	8	(See field description)	Optional	99
Client ID	Field used to identify the client (investor).	Alphanumeric al ID	8	(See field description)	Optional	101
Account Number	***[N/A]** Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.*	*Alphanumeric al ID*	*12*	*(See field description)*	*Optional*	*95*
Technical Origin	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.	Enumerated	1	(See field description)	Optional	135

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Field	Short Description	Format	Len	Values	Presence	Page
Open Close	Open Close Indicator, Posting action. This field is part of the clearing aggregate.	Bitmap	2	(See field description)	Optional	124
Clearing Instruction	Clearing Instruction.	Enumerated	2	(See field description)	Optional	101
Account Type Cross	Indicates the account type for which the sell side of a cross order is entered.	Enumerated	1	(See field description)	Optional	96
Market Phase Flag	***[N/A]** Indicates the market phase to which the orders are eligible to.*	*Enumerated*	*1*	*1 = Continuous trading only (default)* *2 = Trading At Last (TAL) trading only* *3 = Both*	*Conditional*	*118*
Margin Trading Flag	***[N/A]** Indicates if the order is a Margin Trade order or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Access Flag	***[N/A]** Indicates if it is a DMA Access or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Trader ID	Field used to identify the trader entering the order.	Alphanumerical ID	16	(See field description)	Conditional	136
Sender Location ID	***[N/A]** Field used to identify the specific message originator.*	*Alphanumerical ID*	*11*	*(See field description)*	*Conditional*	*133*
Desk ID	***[N/A]** Field used to identify the Trading Desk.*	*Alphanumerical ID*	*11*	*(See field description)*	*Optional*	*105*
Investor ID	Field used to identify the investor.	Alphanumerical ID	16	(See field description)	Optional	113
Clearing Account	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	Alphanumerical ID	16	(See field description)	Optional	95

5.4.1.2 Ack (03)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The acknowledgment message is sent by the matching engine to confirm that the corresponding request has been taken into account by the matching engine. Moreover it usually allows the client to reconcile the *Client Order ID* he has given to its request with the *Order ID* assigned by the matching engine.

Note: *Original Client Order ID* is only provided in the **Ack** (03) as response to a **CancelReplace** (06) message if originally used in the corresponding request.

The acknowledgment message is sent by the matching engine in the following situations:

- Responses to **NewOrder** (01) requests in case of acceptation;
- Responses to **CancelReplace** (06) requests in case of acceptation;
- Responses to **CollarBreachConfirmation** (20) requests in case of acceptation;
- Responses to **PriceInput** (28) requests in case of acceptation;

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- Responses to **NewOrder** (01) or **CancelReplace** (06) for an Iceberg Transformed to Limit due to Minimum size;
- Notifications of triggered Stop-Market/Stop-Limit orders;
- Notifications of triggered Valid For Uncrossing and Valid For Closing Uncrossing orders;
- Notifications of refilled Iceberg orders;
- Notifications of MTL orders transformed into Limit at the end of an Uncrossing trading phase;
- Notifications of order creations by Market Operations.

As a response to a NewOrder (01) request, *Ack Type*=New Order Ack.
It confirms the creation of the new order and specifies the *Order ID*, *Order Side*, *Order Price* (if any), *Order Quantity* for which the system has processed the order.

As a response to a CancelReplace (06) request, *Ack Type*=Replace Ack.
It confirms the modification of the order identified by the *Order ID* and specifies the *Order Side*, *Order Price (if any)*, *Order Quantity* for which the system has processed the modified order. The *Original Client Order ID* will also be provided if it was provided in the original corresponding request. Note that the *Order Quantity* is the total order quantity originally submitted or newly modified by the client and not the leaves quantity.

As a response to a CollarBreachConfirmation (20) request:

- Ack Type = Collar Confirmation Ack: It confirms that the price of the order lies now within the updated collars and that the new order has been created. It also specifies the *Order ID, Order Side*, *Order Price* (if any), *Order Quantity* for which the system has processed the order;
- Ack Type = Ownership Confirmation Ack: It confirms that the new order has been created even if the order quantity didn't lie within the Ownership limits upon submission. It also specifies the *Order ID, Order Side*, *Order Price* (if any), *Order Quantity* for which the system has processed the order;
- Ack Type = ShortSellig Confirmation Ack: It confirms that the new order has been created even if the order quantity didn't lie within the ShortSelling limits upon submission. It also specifies the *Order ID, Order Side*, *Order Price* (if any), *Order Quantity* for which the system has processed the order;

As a response to a NewOrder (01) or CancelReplace (06) request for an Iceberg Transformed to Limit due to Minimum size, *Ack Type*= Iceberg Transformed to Limit due to Minimum size.
It confirms the creation of the new order or the modification of the order but it notifies the client that his iceberg order has been transformed into a limit order because any Iceberg order that is entered into the book below the minimum iceberg amount (as defined by MiFID II), or has its total amount updated to be below this amount, is automatically converted to a Limit order.

As a notification of a triggered Stop-Market/Stop-Limit order, *Ack Type*=Stop Triggered Ack.
It is an unsolicited message which notifies the client that its stop order previously submitted (identified by the *Order ID*) has been triggered and it specifies the *Order Side*, *Order Price* (if any), *Order Quantity* and *Order Priority* for which the system has processed the order.

As a notification of a triggered Valid For Uncrossing and Valid For Closing Uncrossing orders, *Ack Type*= VFU/VFC Triggered Ack.
It is an unsolicited message which notifies the client that its VFU/VFC order previously submitted (identified by the *Order ID*) has been triggered and it specifies the *Order Side*, *Order Price* (if any), *Order Quantity* and *Order Priority* for which the system has processed the order.

As a notification of a refilled Iceberg order, *Ack Type*=Refilled Iceberg Ack.
It is an unsolicited message which notifies the client that its Iceberg order has been refilled and it specifies the *Order Side*, *Order Price*, *Order Quantity* and *Order Priority* for which the system has processed the refilled

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order. Note that the *Order Quantity* is the total order quantity originally submitted by the client and not the quantity shown to the market nor the leaves quantity.

As a notification of a resting MTL order transformed into Limit order during uncrossing, *Ack Type*=MTL Second Ack.
It is an unsolicited message which notifies the client that its MTL has been transformed into a Limit order. It specifies the *Order Side*, *Order Price*, *Order Quantity* for which the system has processed the order. The *Order Price* is the price of the transformed Limit order and the *Order Quantity* is the total order quantity submitted by the client and not the leaves quantity.
It occurs if at the end of an Uncrossing trading phase:

- the instrument switches to a Continuous trading phase, all MTL orders (partially or not executed) always become Limit orders at the Uncrossing price for their remaining quantity;
- the instrument switches to a Call trading phase, all MTL orders partially executed become Limit orders at the Uncrossing price for their remaining quantity.

As a notification of an order created on behalf of a client by Market Operations, *Ack Type*= Order Creation By Market Operations.
It is an unsolicited message which notifies the client that Market Operations has created an order on his behalf. It specifies the *Order ID*, *Order Side*, *Order Price*, *Order Quantity* for which the system has processed the order.

Private & Public feed reconciliation:

The **Ack** (03) message allows the clients to reconcile their orders with the Market Data feed by using the field *Order Priority*.

This mechanism is clearly explained in the Kinematics document in Section *1.2.5.1 Private and Public feed reconciliation*.

This allows the clients to identify their orders in public feed as the *Order Priority* is also provided in the public **LongOrderUpdate** (1015) message. The *Order Priority* is thus used as an order identifier.

Please note that the field Order Priority is provided for all orders on the market. List below identifies the cases in which it is provided:

- In the **Ack** (03) message as a response to a **NewOrder** (01) (*including Stop-market/Stop-limit orders*) or a **CollarBreachConfirmation** (20);
- In the **Ack** (03) message for a triggered Stop-market/Stop-limit;
- In the **Ack** (03) message for a triggered Stop-market/Stop-limit and VFU/VFC orders;
- In the **Ack** (03) message for a refilled Iceberg Order.

Modifications of non-triggered stop orders should not result in modification of their priority.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	111

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Field	Short Description	Format	Len	Values	Presence	Page
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	102
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Conditional	128
Ack Type	Indicates the type of the Ack message	Enumerated	1	(See field description)	Mandatory	98

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Field	Short Description	Format	Len	Values	Presence	Page
Ack Phase	Indicates the trading phase during which the Matching Engine has processed the event that has triggered this Ack (03) message.	Enumerated	1	(See field description)	Conditional	97
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Order Priority	Rank giving the priority of the order. The order with the lowest value of Order Priority has the highest priority.	Numerical ID	8	From 0 to 2^64-1	Conditional	127
Order Price	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63 to 2^63-1	Conditional	127
Order Quantity	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)	Quantity	8	From 0 to 2^64-1	Conditional	127
Ack Qualifiers	Field used to provide additional information on the corresponding order. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Mandatory	97

5.4.1.3 Fill (04)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **Fill** (04) message is an unsolicited message sent by the matching engine and is used to relay order execution reports. It notifies the issuers of orders that their orders have been partially or completely filled.

The message specifies the price (*Last Traded Price*), the quantity (*Last Traded Quantity*), the execution type (*Trade Type*) and the time (*Trade Time*) of the execution along with the *Execution ID* assigned by the matching engine. It also provides the remaining quantity of the order (*Leaves Quantity*).

For purposes of Trading Venue Transaction Identification Code (TVTIC), clients are required to concatenate the values of fields *Symbol Index*, *EMM* and *Execution ID*, provided in the **Fill** (04) message in order to obtain the unique Execution ID by instrument per MIC and day for reporting purposes.

Repeating Section Usage:

The message may contain **two repeating sections:**

- **Additional Execution Data repeating section:** the first repeating section can be populated only once and contains only one field used by the cash matching engine: *Counterpart Firm ID*. Possible number of repeating groups: 0, 1.

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– ***Strategy Execution Data repeating section:*** *the second repeating section is only used by the derivatives matching engine. Can be populated (to be defined in phase 3).*

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Trade Time	Time of the trade.	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	138
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Mandatory	128
Trade Type	Type of trade.	Enumerated	1	(See field description)	Mandatory	138
Trade Qualifier	Trade Qualifier. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Mandatory	137
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-2	Mandatory	126
Last Traded Price	The Last Traded Price indicates the price of last fill on an instrument (to be calculated with the Price/Index Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	115

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Field	Short Description	Format	Len	Values	Presence	Page
Last Traded Quantity	The Last Traded Quantity indicates the quantity of last fill on an instrument (to be calculated with the Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Mandatory	116
Leaves Quantity	Indicates the remaining quantity of an order, i.e. the quantity open for further execution.	Quantity	8	From 0 to 2^64-2	Mandatory	116
Execution ID	The Execution ID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation.	Numerical ID	4	From 0 to 2^32-2	Mandatory	108
Execution Phase	Indicates the trading phase during which the trade has occurred.	Enumerated	1	(See field description)	Mandatory	109
Counterpart Firm ID	ID of the Counterpart Firm in specific cases.	Alphanumeric al ID	8	(See field description)	Conditional	104
Underlying Last Traded Price	***[N/A]*** *For Basis and Against Actual trades only: underlying cash leg price.*	*Price*	*8*	*From -2^63 to 2^63-1*	*Conditional*	*140*
Package ID	***[N/A]*** *ID used to link several Large in Scale (LiS) Package trades together.*	*Alphanumeric al ID*	*12*	*(See field description)*	*Conditional*	*129*
Underlying Instrument ID	***[N/A]*** *The commodity key for the other component leg of an asset allocation or ISIN code for the underlying cash leg that is part of a Basis or Against Actuals trade.*	*Numerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*140*
Leg Last Traded Price	***[N/A]*** *Leg Last Traded Price*	*Price*	*8*	*From -2^63 to 2^63-1*	*Conditional*	*116*
Leg Last Traded Quantity	***[N/A]*** *Leg Last Traded Quantity*	*Quantity*	*8*	*From 0 to 2^64-1*	*Conditional*	*117*
Leg Instrument ID	***[N/A]*** *Numerical leg instrument identifier (SymbolIndex) valid for the life of the instrument.*	*Numerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*116*
Leg Side	***[N/A]*** *Indicates the side of the trade leg.*	*Enumerated*	*1*	*1 = Buy* *2 = Sell*	*Conditional*	*117*

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5.4.1.4 Kill (05)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **Kill** (05) message is a message sent by the matching engine to notify the order issuer that his or her order is no longer active.

The **Kill** (05) message is sent by the matching engine in the following situations:

- Responses to **CancelRequest** (12) requests in case of acceptation;
- Responses to **MassCancel** (13) requests for each order successfully cancelled;
- Notifications of the cancellation of the remaining quantity of IOC orders;
- Notification of orders cancelled by STP;
- Notifications of expired orders;
- Notifications of killed orders due to the Cancel On Disconnect mechanism;
- Notifications of killed orders due to a Kill command;
- Notifications of orders eliminated due to Corporate Events;
- Notifications of orders cancelled by Market Operations;
- Notifications of orders cancelled due to Static Collars recalculation;
- Notifications of orders cancelled due to breach of Ownership Limit;
- Notifications of orders cancelled due to breach of Credit Limit;
- Notifications of MTL orders cancelled at the end of an Uncrossing trading phase when switching to a Continuous trading phase if the order book on the opposite side is empty;

In the block of the message the field *Client Order ID* identifies the request originally sent by the client that triggered the **Kill** (05) message, thus it is filled only if the **Kill** (05) message was solicited (e.g. as a response to a **CancelRequest** (06) message). It represents the data provided by the client and does not identify the id used by the system to kill the order, for these purposes the system uses the Order ID.

The killed order is identified by its *Order ID* and a *Kill Reason* is always provided for each killed order.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119

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Field	Short Description	Format	Len	Values	Presence	Page
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	102
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-2	Mandatory	126
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Kill Reason	Order Kill Reason	Enumerated	2	(See field description)	Mandatory	113

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5.4.1.5 Cancel Replace (06)

Client ▶OEG

Available for: 

Message Usage:

The **CancelReplace** (06) message is used to modify **active orders in the order book**, note that only the originating Firm (regardless of the Logical Access) is authorized to modify its orders.

An active order can be modified by specifying the *Order ID* of the original order or the *Original Client Order ID*:

- If the **CancelReplace** (06) message contains both *Order ID* and *Original Client Order ID*, the matching engine uses the *Order ID* to cancel the order. If the *Order ID* specified in the message is not found in the active orders list, the order modification is rejected. If the Order ID specified in the message is found the matching engine does not check that the Client Order ID of the order found ("modified" order) matches with the *Original Client Order ID* contained in the **CancelRequest** (12) message.

Further to the previous remark on the *Order ID*, all the **fields in the block of the message must be populated** for each **CancelReplace** (06) otherwise the message will be immediately rejected by the Order Entry Gateway (OEG).

Please note that the field *Client Order ID* is an identifier of the **CancelReplace** (06) request.

Repeating Section Usage:

The message contains **three optional repeating sections**:

- **FreeText repeating section:** the first repeating section contains only the field *FreeText*. It can be populated only once and will override the previously submitted value if populated, if not populated the previously submitted value will be deleted. Possible number of repeating groups: 0, 1.
- **Additional Order Characteristics repeating section:** the third repeating can be populated only once and contains optional order characteristics. If some optional fields are populated those values will override the previously submitted values, otherwise if not populated the previously submitted value will be deleted. Possible number of repeating groups: 0, 1.
- **Clearing Data repeating section:** the forth repeating section contains the clearing fields. If some values are populated they will override the previously submitted values, otherwise if not populated the previously submitted value will be deleted. Possible number of repeating groups: 0, 1.
- **Additional Order Characteristics repeating section:** the fifth repeating section can be populated only once and contains optional order characteristics along with conditionally required fields. If some optional fields are populated those values will override the previously submitted values, otherwise if not populated the previously submitted value will be deleted. Possible number of repeating groups: 1.
- **Self-Trade Prevention repeating section:** the sixth repeating section contains information linked to the Self trade Prevention functionality and Clearing Data. If a value is provided it will concern the Cancel Replace itself and it won't override the value previously provided. Possible number of repeating groups: 0, 1.

Handling of fields not available for modification:

- *Account Type* and *LP Role* fields present in this message will always be ignored by the system, which means that clients are not able to modify *Account Type/ LP Role* of their live orders. If modification is required clients must cancel their existing order and submit a new one with a **NewOrder** (01) message.

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- *Order Side* and *Order Type* fields present in this message are not available for modification but the values provided must match the values originally set on submission of the order. In the case where the values in the **CancelReplace** (06) message do not match with the *Order Side* and *Order Type* of the targeted order it will lead to the rejection of the request with the error code 2101 "Unknown Order". (For triggered Stop orders, the value in field *Order Type* must be equal to Limit (2), for Stop-limit, or Market (1) for Stop-market order, corresponding to the type of stop order originally submitted.)

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Order Price	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63 to 2^63-1	Conditional	127
Order Quantity	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)	Quantity	8	From 0 to 2^64-2	Mandatory	127
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Mandatory	128
Order Type	Type of Order.	Enumerated	1	(See field description)	Mandatory	128
Time In Force	Specifies the maximum validity of an order.	Enumerated	1	(See field description)	Mandatory	136

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Field	Short Description	Format	Len	Values	Presence	Page
Account Type	***[N/A]** Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*96*
LP Role	***[N/A]** Liquidity Provider Role identifies the type of the Liquidity Provider when Account Type is equal to "Liquidity Provider".*	*Enumerated*	*1*	*1 = Liquidity Provider or Market Maker*	*Optional*	*118*
Execution Instruction	Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Mandatory	109
Dark Execution Instruction	***[N/A]** Field used as instruction for dark order handling (For Future Use, Pending Regulatory Approval). Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Mandatory*	*105*
MiFID Indicators	***[N/A]** Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Mandatory*	*120*
STP ID	***[N/A]** For Future Use.*	*Numerical ID*	*2*	*From 0 to 2^16-1*	*Optional*	*134*
Free Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	Text	18	(See field description)	Optional	111
Stop Trigger Price	Stop Trigger Price is mandatory for stop orders.	Price	8	From -2^63 to 2^63-1	Conditional	134
Peg Offset	***[N/A]** Tick offset for a pegged order. (For Future Use)*	*Numerical ID*	*1*	*From -128 to 127*	*Conditional*	*129*
Undisclosed Price	***[N/A]** Optional price for the hidden part of an Iceberg order. (For Future Use, Pending Regulatory Approval)*	*Price*	*8*	*From -2^63 to 2^63-1*	*Optional*	*141*
Disclosed Quantity	***[N/A]** Maximum number of quantity units to be shown to market participants (Iceberg Order). (To be calculated with Quantity Decimals)*	*Quantity*	*8*	*From 0 to 2^64-1*	*Conditional*	*105*
Order Expiration Time	***[N/A]** Field used as time of order expiration for GTT orders.*	*Numerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*126*

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Field	Short Description	Format	Len	Values	Presence	Page
Order Expiration Date	Field used as date of order expiration for GTD orders.	Numerical ID	2	From 0 to 2^16-1	Conditional	125
Trading Session Validity	***[N/A]** Trading Session Validity. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*1 = Session 1* *2 = Session 2* *3 = Session 3*	*Conditional*	*139*
Triggered Stop Time In Force	Specifies the maximum validity of an triggered stop order.	Enumerated	1	(See field description)	Conditional	139
Undisclosed Iceberg Type	***[N/A]** Order handling related to the undisclosed part of an Iceberg order eligible to a matching in the Dark pool of liquidity. (For Future Use, Pending Regulatory Approval)*	*Enumerated*	*1*	*1 = Limit* *2 = Peg Mid-Point* *3 = Peg Primary* *4 = Peg Market*	*Optional*	*140*
Clearing Firm ID	Clearing firm ID.	Alphanumeric al ID	8	(See field description)	Optional	99
Client ID	Field used to identify the client (investor).	Alphanumeric al ID	8	(See field description)	Optional	101
Account Number	***[N/A]** Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.*	*Alphanumeric al ID*	*12*	*(See field description)*	*Optional*	*95*
Technical Origin	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.	Enumerated	1	(See field description)	Optional	135
Open Close	Open Close Indicator, Posting action. This field is part of the clearing aggregate.	Bitmap	2	(See field description)	Optional	124
Clearing Instruction	Clearing Instruction.	Enumerated	2	(See field description)	Optional	101
Market Phase Flag	***[N/A]** Indicates the market phase to which the orders are eligible to.*	*Enumerated*	*1*	*1 = Continuous trading only (default)* *2 = Trading At Last (TAL) trading only* *3 = Both*	*Conditional*	*118*
Margin Trading Flag	***[N/A]** Indicates if the order is a Margin Trade order or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Access Flag	***[N/A]** Indicates if it is a DMA Access or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Trader ID	Field used to identify the trader entering the order.	Alphanumeric al ID	16	(See field description)	Conditional	136
Sender Location ID	***[N/A]** Field used to identify the specific message originator.*	*Alphanumeric al ID*	*11*	*(See field description)*	*Conditional*	*133*
Desk ID	***[N/A]** Field used to identify the Trading Desk.*	*Alphanumeric al ID*	*11*	*(See field description)*	*Optional*	*105*
Investor ID	Field used to identify the investor.	Alphanumeric al ID	16	(See field description)	Optional	113

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Field	Short Description	Format	Len	Values	Presence	Page
Clearing Account	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	Alphanumeric al ID	16	(See field description)	Optional	100

5.4.1.6 Reject (07)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **Reject** (07) message is a message sent by the matching engine to notify the request issuer that his or her request is not processed by the matching engine. It is a possible response to every application message sent by the client.

The **Reject** (07) message is sent by the matching engine in the following situations:

- **For technical reasons**: symbol is unknown, message is wrongly formatted, unknown value, client not authorized to send messages, etc.
- **For functional reasons**: type of order forbidden for this trading phase, type of order not authorized for the client, quantity to modify no longer available, last traded price better than the stop trigger price, collars breached, etc.

Please refer to the Error Code List document for an exhaustive list of those cases.

The *Client Order ID* provided in the Reject message identifies the request which is rejected; it does not refer to an order of the order book. Hence in case of a rejection of a **CancelReplace** (06) message, the *Client Order ID* field will refer to the *Client Order ID* provided in the rejected **CancelReplace** (06) request, not to the targeted order.

In case of a functional rejection of a **NewOrder** (01) the matching engine will assign an *Order ID* to the rejected order.

If a client sends an Invalid value in an enumerated field, then in place of this value the Reject messages will contain a Null value (note: the *Firm ID* behaves as an enumerated field).

If a client sends an unknown ID (such as *Symbol Index*, *Order Id*, *Original Client Order ID*…) which, however, can be decoded by the system, this value is provided as entered back to the client in the **Reject** (07) message sent back.

The reason of the rejection is provided by the Error Code, and a text message explaining the error is provided in the Error Code List.

All application messages are rejected by the **Reject** (07) message, unless for very specific cases (please refer to **Quotes (08)**, **TechnicalReject** (108) message).

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Rejection Behaviour:

In Optiq orders are identified by multiple characteristics as follows: Order ID / Original Client Order ID, Order Side, Order Type and Firm ID. If any of the characteristics are not met, the order is considered "Unknown".

In case an attempt is made to modify or cancel an order that results in a rejection, whether this order is considered to be "Known" or "Unknown", in such rejection message the same Order ID is echoed back, as the one provided by the client in the inbound message, in all cases.

In cases where the inbound message receives a rejection with functional or technical error code client should review the error code to identify what needs to be fixed in the submitted message.

In some cases an "Unknown" order will not receive an error code identifying the issue, but rather code 2101 (Unknown order). In this case client should review the fields identified as mandatory order characteristics before resubmitting the request.

Repeating Section Usage:

In this message the repeating section is populated only once and only in the case of a rejection due to a breached collar. It provides the details related to the breached collar (high or low) and its price. Possible number of repeating groups: 0, 1.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Conditional	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123

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Field	Short Description	Format	Len	Values	Presence	Page
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	102
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-1	Conditional	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Conditional	107
Rejected Message	***[N/A]*** *Provides the ID (Template ID) of the rejected message.*	*Numerical ID*	*1*	*From 0 to 2^8-1*	*Conditional*	*132*
Error Code	Error code in case of rejection.	Numerical ID	2	From 0 to 2^16-2	Mandatory	107
Rejected Message ID	Provides the ID (Template ID) of the rejected message.	Numerical ID	2	From 0 to 2^16-1	Conditional	132
Collar Rejection Type	Hit collar type (high or low) in case of order rejection due to collar breach.	Enumerated	1	1 = Low dynamic collar 2 = High dynamic collar	Conditional	103
Breached Collar Price	Breached collar price in case of collar rejection.	Price	8	From -2^63 to 2^63-1	Conditional	99

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5.4.1.7 Cancel Request (12)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **CancelRequest** (12) message is used to request the cancellation of the entire remaining quantity of **an active order in the order book**, note that only the originating Firm is authorized to cancel its own orders.

An order cancellation only applies to the remaining quantity of an order in the book. If the order to be cancelled was partially filled, the cancellation has no effect on the previous trades (or any previously executed quantity).

An active order can be cancelled by specifying the *Client Order ID* of the original order:

- If the **CancelRequest** (12) message contains both *Order ID* and *Original Client Order ID*, the matching engine uses the *Order ID* to cancel the order. If the *Order ID* specified in the message is not found in the active orders list, the order modification is rejected. If the *Order ID* specified in the message is found the matching engine does not check that the Client Order ID of the order found ("cancelled" order) matches with the *Original Client Order ID* contained in the **CancelRequest** (12) message.

In the case where the values of the *Order Side* and/or *Order Type* provided in the **CancelRequest** (12) message do not match with the *Order Side* and *Order Type* of the targeted order it will lead to the rejection of the request with the error code 2101 "Unknown Order". (For triggered Stop orders, the value in field *Order Type* must be equal to Limit (2), for Stop-limit, or Market (1) for Stop-market order, corresponding to the type of stop order originally submitted.)

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102

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Field	Short Description	Format	Len	Values	Presence	Page
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell 3 = Cross [i]	Mandatory	128
Order Type	Type of Order.	Enumerated	1	(See field description)	Mandatory	128
Order Category	***[N/A]** Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*
Market Phase Flag	***[N/A]** Indicates the market phase to which the orders are eligible to.*	*Enumerated*	*1*	*1 = Continuous trading only (default)* *2 = Trading At Last (TAL) trading only* *3 = Both*	*Conditional*	*118*
Margin Trading Flag	***[N/A]** Indicates if the order is a Margin Trade order or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Trader ID	Field used to identify the trader entering the order.	Alphanumerical ID	16	(See field description)	Conditional	136
Sender Location ID	***[N/A]** Field used to identify the specific message originator.*	*Alphanumerical ID*	*11*	*(See field description)*	*Conditional*	*133*
Desk ID	***[N/A]** Field used to identify the Trading Desk.*	*Alphanumerical ID*	*11*	*(See field description)*	*Optional*	*105*
Investor ID	Field used to identify the investor.	Alphanumerical ID	16	(See field description)	Optional	113

5.4.1.8 Mass Cancel (13)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **MassCancel** (13) message is used to request the cancellation of the entire remaining quantity of **all active orders** matching the specified criteria(s), note that only the originating Firm is authorized to cancel its own orders.

An order cancellation only applies to the remaining quantity of an order in the book. If the order to be cancelled was partially filled, the cancellation has no effect on the previous trades (or any previously executed quantity).

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Either the *Instrument Group Code* field or the *Symbol Index* field must be populated to determine the scope of the mass cancel; otherwise the Mass Cancel will be rejected. (Note that if both are populated, *Instrument Group Code* is ignored, and the *Symbol Index* will be used as the reference.)

Optional additional criteria can be specified: *EMM*, *Order Side*, *Logical Access ID*, and *OE Partition ID*. Those filters are used to restrict the scope of the Mass Cancel request. (Please note that *OE Partition ID* is not taken into account if *Logical Access ID* is not populated).

The repeating sections identified below can also be used to restrict the scope of the cancellation:

- **Additional Order Characteristics repeating section:** the fifth repeating section can be populated only once and contains optional order characteristics along with conditionally required fields. Possible number of repeating groups: 1.
- **Self-Trade Prevention repeating section:** the sixth repeating section contains information linked to the Self trade Prevention functionality. Possible number of repeating groups: 0, 1.

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-1	Conditional	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Optional	107
Instrument Group Code	Instrument Trading Group / Class Identifier.	Alphanumerical ID	2	(See field description)	Conditional	112
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Optional	128
Logical Access ID	Identifier of the Logical Access.	Numerical ID	4	From 0 to 2^32-1	Optional	117
OE Partition ID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Numerical ID	2	From 0 to 2^16-1	Optional	122

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Field	Short Description	Format	Len	Values	Presence	Page
Contract ID	***[N/A]** Identifier of a derivatives contract (Symbol Index).*	*Alphanumeric al ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*104*
Maturity	***[N/A]** Scope of active orders to be cancelled according the selected maturity, expressed in YYYYMMDD format.*	*Alphanumeric al ID*	*8*	*(See field description)*	*Optional*	*118*
Account Type	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Enumerated	1	(See field description)	Optional	96
Option Type	***[N/A]** Type of the option.*	*Enumerated*	*1*	*1 = Call* *2 = Put*	*Optional*	*125*
Order Category	***[N/A]** Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*
Market Phase Flag	***[N/A]** Indicates the market phase to which the orders are eligible to.*	*Enumerated*	*1*	*1 = Continuous trading only (default)* *2 = Trading At Last (TAL) trading only* *3 = Both*	*Conditional*	*118*
Margin Trading Flag	***[N/A]** Indicates if the order is a Margin Trade order or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Access Flag	***[N/A]** Indicates if it is a DMA Access or not.*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*118*
Trader ID	Field used to identify the trader entering the order.	Alphanumeric al ID	16	(See field description)	Conditional	136
Sender Location ID	***[N/A]** Field used to identify the specific message originator.*	*Alphanumeric al ID*	*11*	*(See field description)*	*Conditional*	*133*
Desk ID	***[N/A]** Field used to identify the Trading Desk.*	*Alphanumeric al ID*	*11*	*(See field description)*	*Optional*	*105*
Investor ID	Field used to identify the investor.	Alphanumeric al ID	16	(See field description)	Optional	113

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5.4.1.9 Mass Cancel Ack (14)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **MassCancelAck** (14) message is sent twice by the matching engine to confirm that the **MassCancel** request has been taken into account. The first **MassCancelAck** (14) message has *Total Affected Orders* set to -1, and repeats all the fields as they were submitted in the **MassCancel** (13) request.

The client will receive a **Kill** (05) message per successfully cancelled order (if any). Please note that **Kill** (05) messages are sent to the OE Session that owns the cancelled order.

When the mass cancel request is completely processed the client will receive a last **MassCancelAck** (14) message to notify them of the *Total Affected Orders*. The number provided by *Total Affected Orders* field could be different than the number of killed order notifications received by the issuer of the Mass Cancel request if some killed orders belonged to other OE Sessions. (Please refer to the Kinematics for further details)

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	98

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Field	Short Description	Format	Len	Values	Presence	Page
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	124
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Total Affected Orders	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.	Numerical ID	4	From -2^31+1 to 2^31-1	Mandatory	136
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-1	Conditional	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Conditional	107
Instrument Group Code	Instrument Trading Group / Class Identifier.	Alphanumerical ID	2	(See field description)	Conditional	112
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Conditional	128
Logical Access ID	Identifier of the Logical Access.	Numerical ID	4	From 0 to 2^32-1	Conditional	117
OE Partition ID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Numerical ID	2	From 0 to 2^16-1	Conditional	122
Contract ID	***[N/A]*** *Identifier of a derivatives contract (Symbol Index).*	*Alphanumerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*104*
Maturity	***[N/A]*** *Scope of active orders to be cancelled according the selected maturity, expressed in YYYYMMDD format.*	*Alphanumerical ID*	*8*	*(See field description)*	*Conditional*	*118*
Account Type	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Enumerated	1	(See field description)	Conditional	96
Option Type	***[N/A]*** *Type of the option.*	*Enumerated*	*1*	*1 = Call* *2 = Put*	*Conditional*	*125*
Order Category	***[N/A]*** *Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*

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5.4.1.10 Open Order Request (15)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OpenOrderRequest** (15) message is used by the clients to request the status of the target order (*Order ID* or *Original Client Order ID*):

- If there is a corresponding live order in the Order Book, the system will acknowledge the request with an **Ack** (03) message (*Ack Type* = 17) ;
- If there is no corresponding order in the Order Book, the system will reject the request with a **Reject** (07) message (*Error Code* = 2101 'Unknown Order').

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirm ShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationS hortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order Category	*[N/A] Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*

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5.4.1.11 Ownership Request Ack (17)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **OwnershipRequestAck** (17) message is sent twice by the matching engine to confirm that the **OwnershipRequest** (18) has been taken into account. The first **OwnershipRequestAck** (17) message has *Total Affected Orders* set to -1, and repeats all the fields as they were submitted in the **OwnershipRequest** (18).

Subsequently the client will receive an **Ack** (03) message per order affected by the command.

When the Ownership request is totally processed the client will receive a last **OwnershipRequestAck** (17) message to notify the client of the *Total Affected Orders*.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
Logical Access ID	Identifier of the Logical Access.	Numerical ID	4	From 0 to 2^32-1	Conditional	117
OE Partition ID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Numerical ID	2	From 0 to 2^16-1	Conditional	122
Total Affected Orders	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.	Numerical ID	4	From -2^31+1 to 2^31-1	Mandatory	136
Order Category	*[N/A] Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*

5.4.1.12 Ownership Request (18)

Client ▶OEG

Available for: EQ FUND FRM SP

Message Usage:

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The **OwnershipRequest** (18) message is used by the clients to change the ownership of an active order from one OE Session to another OE Session belonging to the same Firm. Ownership migration is used to define the OE Session that will receive all outbound messages associated to the targeted order.

Please note that modifying an order (**CancelReplace** (06)) by a different OE session also leads to an ownership migration.

The scope of the ownership can be a single order by specifying the *Order ID* and *Symbol Index* of the targeted order. It could also be all orders of the specified *Symbol Index* belonging to the targeted Logical Access (*Logical Access ID*).

The **OwnershipRequest** (18) is acknowledged by the **OwnershipRequestAck** (17), and by **Ack** (03) message(s) which provides the affected order(s).

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Logical Access ID	Identifier of the Logical Access.	Numerical ID	4	From 0 to 2^32-1	Conditional	117
OE Partition ID	Identifies uniquely an OE Optiq partition by which the engine is reached.	Numerical ID	2	From 0 to 2^16-1	Optional	122
Order Category	*[N/A] Field used as instruction for cancel order handling.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*105*

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5.4.1.13 Trade Bust Notification (19)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

This message is sent to both counterparts of a trade if Market Operations busts a trade.

Please note that *Last Traded Price* and *Last Traded Quantity* refer to Price and Quantity of the cancelled trade.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	111
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107

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Field	Short Description	Format	Len	Values	Presence	Page
Execution ID	The Execution ID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation.	Numerical ID	4	From 0 to 2^32-2	Mandatory	108
Last Traded Price	The Last Traded Price indicates the price of last fill on an instrument (to be calculated with the Price/Index Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	115
Last Traded Quantity	The Last Traded Quantity indicates the quantity of last fill on an instrument (to be calculated with the Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Mandatory	116

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5.4.1.14 Collar Breach Confirmation (20)

Client ▶OEG

Available for: EQ

Message Usage:

The **CollarBreachConfirmation** (20) message is used by a client who:

- wants to confirm the submission of the order previously rejected for dynamic collar breach:
    - If an order sent causes a matching price that breaches the dynamic thresholds the order gets automatically rejected and the client who has sent the order receives a **Reject** (07) message with an *Order ID* for the rejected order;
    - For instruments with appropriate collar logic, in case an order submission rejected due to collar breach, clients have the possibility to confirm the submission of this order by submitting a **CollarBreachConfirmation** (20) within *n* seconds after the rejection. The confirmation will lead to the collar recalculation, and then the order is checked against the updated collars and is either accepted or rejected again due to collar breach;
    - Please note that there is a maximum number of confirmations allowed possible per order. It is set per Trading Group (Class). Please refer to the Trading Manual for further information.
    - To confirm the rejected order the client must send a **CollarBreachConfirmation** (20) message and specify the *Order ID* of the concerned order (this *Order ID* was previously provided in the corresponding **Reject** (07) message);
    - Note that an order can be rejected for a breach of a collar even if it has partially matched; in this case the confirmation is applied to the remaining unmatched quantity of the order;

- wants to confirm the submission of the order previously rejected for Ownership and/or Short Selling breach:
    - If an order sent causes the breach of Ownership or Short Selling limits the order gets automatically rejected and the client receives a **Reject** (07) message with an *Order ID* for the rejected order;
    - For instruments with appropriate configuration, in case an order submission is rejected due to breach of Ownership or Short Selling, clients have the possibility to confirm the submission of this order by submitting a **CollarBreachConfirmation** (20) within *n* seconds after the rejection. The confirmation will lead to the order acceptation and trigger negative positions;
    - To confirm the rejected order the client must send a **CollarBreachConfirmation** (20) message and specify the *Order ID* of the concerned order (this *Order ID* was previously provided in the corresponding **Reject** (07) message);

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111

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Field	Short Description	Format	Len	Values	Presence	Page
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	119
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Client Order ID	An identifier of a message assigned by the Client when submitting an order to the Exchange.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Order ID	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.	Numerical ID	8	From 0 to 2^64-1	Conditional	126
Original Client Order ID	Client order ID of the original order.	Numerical ID	8	From -2^63 to 2^63-1	Conditional	128

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5.4.1.15 User Notification (39)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **UserNotification** (39) message is used to notify clients if they have been suspended or if their suspension status has been lifted, and the scope (or granularity) on which this action has been applied.

After notification of suspension is sent, and until this suspension is cleared, any following messages are rejected using Reject (07) message.

The field *User Status* in this message indicates the nature of action as well as the scope taken on the access and/or orders.

The text in the field *User Status* associated to each value provides the scope of each one of the following possible actions and granularities.

Actions:

Action	Description
Suspended	access to the trading system has been suspended
Suspension Cleared	access to the trading system has been restored after a Suspension
Killed	access to the trading system has been suspended and all unexecuted orders submitted have been cancelled
Kill Cleared	access to the trading system has been restored after a Kill functionality was initiated. Orders cancelled upon initiation of Kill functionality will NOT be restored

Scope:

Scope	Description
Firm	member, including all of the physical connections and orders associated to the Firm ID will be in scope
Trader	Trader, including all of the orders associated to the Trader ID will be in scope

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumeric al ID	8	(See field description)	Mandatory	111
ExecutionWithinFirm ShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*109*

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Field	Short Description	Format	Len	Values	Presence	Page
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*103*
Family ID	***[N/A]** Identifier of the family.*	*Alphanumerical ID*	*8*	*(See field description)*	*Conditional*	*110*
Symbol Index	***[N/A]** Exchange identification code of the instrument.*	*Numerical ID*	*4*	*From 0 to 2^32-1*	*Conditional*	*135*
User Status	Status of the user.	Enumerated	1	(See field description)	Mandatory	141
Trader ID	Field used to identify the trader entering the order.	Alphanumerical ID	16	(See field description)	Conditional	136

5.4.2 Cash On Exchange Off Book

5.4.2.1 Declaration Entry (40)

Client ▶OEG

Available for: EQ FRM SP

Message Usage:

The **Declaration Entry** (40) message is used for the sending of a Block Trade Declaration.

For Cross orders two instances of fields listed below are provided, to identify the information for each side of the cross order. The description of each field identifies whether the field is to be used for identification of the buy or sell side, but as a general rule fields containing "Cross" in the name, are used for provision of the information for the sell side: *Clearing Account*, Clearing *Account Cross*, *Account Type*, *Account Type Cross*, *Free Text*, *Free Text Cross, Investor ID, Investor ID Cross*.

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Timestamp	8	From 0 to 2^64-2	Mandatory	119
Client Order ID	Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102

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Field	Short Description	Format	Len	Values	Presence	Page
Operation Type	Type of Operation.	Enumerated	1	(See field description)	Mandatory	125
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Entering Counterparty	Identifies the counterpart of the transaction.	Alphanumerical ID	8	(See field description)	Optional	107
Side	Indicates the Executing Side.	Enumerated	1	1 = Buy 2 = Sell 3 = Cross	Mandatory	133
Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Conditional	131
Price	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Conditional	130
ExecutionWithinFirmShortCode	***[N/A]** MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Mandatory*	*109*
ClientIdentificationShortCode	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Conditional*	*103*
MIC of Secondary Listing	***[N/A]** Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383.*	*Alphanumerical ID*	*4*	*(See field description)*	*Conditional*	*120*
Centralisation Date	***[N/A]** Centralisation Date.*	*Alphanumerical ID*	*10*	*(See field description)*	*Optional*	*99*
Clearing Firm ID	Clearing firm ID.	Alphanumerical ID	8	(See field description)	Optional	99
Account Type	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Enumerated	1	(See field description)	Mandatory	96
Account Type Cross	Indicates the account type for which the sell side of a cross order is entered.	Enumerated	1	(See field description)	Conditional	96
Trading Capacity	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Enumerated	1	(See field description)	Mandatory	138
Trading Capacity Cross	Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity.	Enumerated	1	(See field description)	Conditional	139

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Field	Short Description	Format	Len	Values	Presence	Page
Settlement Period	Indicates the settlement delay in trading days, from 0 to 30 days.	Numerical	1	From 0 to 30	Mandatory	133
Settlement Flag	Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled")	Boolean	1	0 = False 1 = True	Mandatory	133
Guarantee Flag	Indicates if the trade is guaranteed or not (for clearing purposes).	Enumerated	1	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed	Mandatory	112
MiFID Indicators	***[N/A]*** Field used as instruction for order handling. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Mandatory	120
Transaction Price Type	Contribution to price formation or the price discovery process.	Enumerated	1	(See field description)	Optional	139
Principal Code	Identifies the beneficiary of the transaction when trading on behalf of another establishment.	Alphanumerical ID	8	(See field description)	Optional	130
Principal Code Cross	Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order.	Alphanumerical ID	8	(See field description)	Optional	130
Start Time Vwap	***[N/A]*** *Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*	*Intraday Time in Seconds*	*4*	*From 0 to 2^32-2*	*Conditional*	*134*
End Time Vwap	***[N/A]*** *End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*	*Intraday Time in Seconds*	*4*	*From 0 to 2^32-2*	*Conditional*	*108*
Gross Trade Amount	***[N/A]*** *Total amount of a Declaration.*	*Amount*	*8*	*From -2^63+1 to 2^63-1*	*Conditional*	*112*
Account Number	***[N/A]*** *Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.*	*Alphanumerical ID*	*12*	*(See field description)*	*Optional*	*95*
Account Number Cross	***[N/A]*** *Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate.*	*Alphanumerical ID*	*12*	*(See field description)*	*Optional*	*95*

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Field	Short Description	Format	Len	Values	Presence	Page
Free Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	Text	18	(See field description)	Optional	111
Free Text Cross	Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate.	Text	18	(See field description)	Optional	111
InvestmentDecisionWFirmShortCode	***[N/A]** MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision.*	*Numerical ID*	*4*	*From -2^31 to 2^31-1*	*Conditional*	*113*
ClientIdentificationShortCodeCross	***[N/A]** MiFID II short code, Client identification code.*	*Numerical ID*	*4*	*From -2^31+1 to 2^31-1*	*Conditional*	*103*
Trader ID	Field used to identify the trader entering the Declaration.	Alphanumerical ID	16	(See field description)	Conditional	136
Investor ID	Field used to identify the investor.	Alphanumerical ID	16	(See field description)	Conditional	113
Investor ID Cross	Field used to identify the investor for the Sell side.	Alphanumerical ID	16	(See field description)	Conditional	113
Clearing Account	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	Alphanumerical ID	16	(See field description)	Optional	95
Clearing Account Cross	Clearing Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate.	Alphanumerical ID	16	(See field description)	Optional	95

5.4.2.2 Declaration Entry Ack (41)

Client ◀OEG

Available for: EQ FRM SP

Message Usage:

The **DeclarationEntryAck** (41) message is sent in response to the **DeclarationEntry** (40) message. This message informs clients of the acknowledgement of positive status of their submission.

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Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Declaration ID	Numerical declaration identifier assigned by the Exchange.	Numerical ID	8	From 0 to 2^64-2	Conditional	106
Client Order ID	Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Conditional	107
MIC of Secondary Listing	***[N/A]** Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383.*	*Alphanumerical ID*	*4*	*(See field description)*	*Conditional*	*120*
Operation Type	Type of Operation.	Enumerated	1	(See field description)	Mandatory	125
Pre Matching Type	***[N/A]** Pre-matching delay indicator for a TCS Declaration.*	*Enumerated*	*1*	*(See field description)*	*Conditional*	*129*
Waiver Indicator	***[N/A]** Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Conditional*	*141*
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123

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Field	Short Description	Format	Len	Values	Presence	Page
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124

5.4.2.3 Declaration Notice (42)

Client ◀OEG

Available for: EQ FRM SP

Message Usage:

The **DeclarationNotice** (42) message is sent to provide the status of a previously submitted declaration to counterparties. This message is also used to notify the members upon a Market Operations action (declaration creation / cancellation /acceptation).

The message is sent as:

- Declaration notification to the counterparty;
- Declaration refusal notice;
- Matching Notice;
- Expiration Notice;
- Trade Cancellation Notice by Market Operations.

Please note that the following fields are provided only in case the notice is issued for a Fill (*Declaration Status* = '7') and only to the concerned member if the corresponding necessary values were submitted in the original declaration: *Trade Time*, *Clearing Firm ID*, *Account Type*, *Account Type Cross, Trading Capacity*,

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Trading Capacity Cross, *Principal Code*, *Principal Code Cross*, Clearing *Account* , Clearing *Account Cross*, *Free Text*, *Free Text Cross*, *Waiver Indicator,Trader ID, Investor ID, Investor ID Cross*.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Client Order ID	Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.	Numerical ID	8	From -2^63+1 to 2^63-1	Conditional	102
Declaration ID	Numerical declaration identifier assigned by the Exchange.	Numerical ID	8	From 0 to 2^64-2	Mandatory	106
Declaration Status	Provides status of the Declaration.	Enumerated	1	(See field description)	Mandatory	106
Operation Type	Type of Operation.	Enumerated	1	(See field description)	Mandatory	125
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Entering Counterparty	Identifies the counterpart of the transaction.	Alphanumerical ID	8	(See field description)	Conditional	107
Side	Indicates the Executing Side.	Enumerated	1	1 = Buy 2 = Sell 3 = Cross	Conditional	133
Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Conditional	131
Price	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Conditional	130
Pre Matching Type	***[N/A]** Pre-matching delay indicator for a TCS Declaration.*	*Enumerated*	*1*	*(See field description)*	*Conditional*	*129*
Trade Time	Time of the trade.	Timestamp	8	From 0 to 2^64-2	Conditional	138
MIC of Secondary Listing	***[N/A]** Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383.*	*Alphanumerical ID*	*4*	*(See field description)*	*Conditional*	*120*
Centralisation Date	***[N/A]** Centralisation Date.*	*Alphanumerical ID*	*10*	*(See field description)*	*Optional*	*99*
Clearing Firm ID	Clearing firm ID.	Alphanumerical ID	8	(See field description)	Conditional	99

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Field	Short Description	Format	Len	Values	Presence	Page
Account Type	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account.	Enumerated	1	(See field description)	Conditional	96
Account Type Cross	Indicates the account type for which the sell side of a cross order is entered.	Enumerated	1	(See field description)	Conditional	96
Trading Capacity	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	Enumerated	1	(See field description)	Conditional	138
Trading Capacity Cross	Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity.	Enumerated	1	(See field description)	Conditional	139
Settlement Flag	Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled")	Boolean	1	0 = False 1 = True	Conditional	133
Settlement Period	Indicates the settlement delay in trading days, from 0 to 30 days.	Numerical	1	From 0 to 30	Conditional	133
Guarantee Flag	Indicates if the trade is guaranteed or not (for clearing purposes).	Enumerated	1	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed	Conditional	112
Transaction Price Type	Contribution to price formation or the price discovery process.	Enumerated	1	1 = Plain Vanilla Trade 2 = Non Price Forming Trade (NPFT) 3 = Trade Not Contributing to Price Discovery Process	Conditional	139
Principal Code	Identifies the beneficiary of the transaction when trading on behalf of another establishment.	Alphanumerical ID	8	(See field description)	Conditional	130
Principal Code Cross	Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order.	Alphanumerical ID	8	(See field description)	Conditional	130
Start Time Vwap	***[N/A]** Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*	*Intraday Time in Seconds*	*4*	*From 0 to 2^32-2*	*Conditional*	*134*

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Field	Short Description	Format	Len	Values	Presence	Page
End Time Vwap	***[N/A]** End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*	*Intraday Time in Seconds*	*4*	*From 0 to 2^32-2*	*Conditional*	*108*
Gross Trade Amount	***[N/A]** Total amount of a Declaration.*	*Amount*	*8*	*From -2^63+1 to 2^63-1*	*Conditional*	*112*
Account Number	***[N/A]** Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.*	*Alphanumerical ID*	*12*	*(See field description)*	*Conditional*	*95*
Account Number Cross	***[N/A]** Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate.*	*Alphanumerical ID*	*12*	*(See field description)*	*Conditional*	*95*
Free Text	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.	Text	18	(See field description)	Conditional	111
Free Text Cross	Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate.	Text	18	(See field description)	Conditional	111
Waiver Indicator	***[N/A]** Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*	*Bitmap*	*1*	*(See field description)*	*Conditional*	*141*
Previous Day Indicator	***[N/A]** Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1")*	*Boolean*	*1*	*0 = False* *1 = True*	*Conditional*	*130*
Miscellaneous Fee Amount	***[N/A]** Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order.*	*Amount*	*8*	*From -2^63+1 to 2^63-1*	*Conditional*	*121*
CCP ID	***[N/A]** ID Of the clearing house in case of a CCP clearing transaction.*	*Enumerated*	*1*	*(see field description)*	*Conditional*	
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119

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Field	Short Description	Format	Len	Values	Presence	Page
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
Trader ID	Field used to identify the trader entering the Declaration.	Alphanumerical ID	16	(See field description)	Conditional	136
Investor ID	Field used to identify the investor.	Alphanumerical ID	16	(See field description)	Conditional	113
Investor ID Cross	Field used to identify the investor for the Sell side.	Alphanumerical ID	16	(See field description)	Conditional	113
Clearing Account	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.	Alphanumerical ID	16	(See field description)	Optional	95
Clearing Account Cross	Clearing Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate.	Alphanumerical ID	16	(See field description)	Optional	95

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5.4.2.4 Declaration Cancel and Refusal (43)

Client ▶OEG

Available for: EQ FRM SP

Message Usage:

The **DeclarationCancelandRefusal** (43) message is used to request cancellation of a previously entered declaration, or to refuse a declaration upon declaration notification submitted by the counterparty.

Field	Short Description	Format	Len	Values	Presence	Page
Client Message Sequence Number	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.	Sequence	4	From 0 to 2^32-2	Mandatory	102
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Timestamp	8	From 0 to 2^64-2	Mandatory	119
Client Order ID	Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107
Declaration ID	Numerical declaration identifier assigned by the Exchange.	Numerical ID	8	From 0 to 2^64-2	Mandatory	106
Action Type	Provides the request to be performed on an existing declaration, which is identified by its Declaration ID.	Enumerated	1	1 = Declaration Cancellation Request 2 = Declaration Refusal	Mandatory	97

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5.4.2.5 Declaration Entry Reject (46)2

Client ◀OEG

Available for: EQ FRM SP

Message Usage:

The **DeclarationEntryReject** (46) message is sent in response to the **DeclarationEntry** (40). This message informs clients if the status of their submission is negative. If message was rejected due to inconsistency of data / presence of multiple fields or conditions checked, the field *Error Code* will indicate only the first instance of inconsistency encountered in the inbound message.

Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
Firm ID	Identifier of the member firm that sends the message.	Alphanumerical ID	8	(See field description)	Mandatory	111
Client Order ID	Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG.	Numerical ID	8	From -2^63+1 to 2^63-1	Mandatory	102
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Conditional	107
MIC of Secondary Listing	***[N/A]** Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383.*	*Alphanumerical ID*	*4*	*(See field description)*	*Conditional*	*120*
Operation Type	Type of Operation.	Enumerated	1	(See field description)	Mandatory	125
Error Code	Error code in case of rejection.	Numerical ID	2	From 0 to 2^16-2	Mandatory	107
Rejected Message	Provides the ID (Template ID) of the rejected message.	Numerical ID	1	From 0 to 2^8-2	Mandatory	132
Message Sending Time	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	119

[2] In some very specific cases, such as when a declaration is submitted for na instrument that is not configured for EMM = 5, the message is rejected with Reject (07) and the appropriated error code.

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Field	Short Description	Format	Len	Values	Presence	Page
OEG IN From Member	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123
OEG OUT To ME	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	123
Book IN Time	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	98
Book OUT Time	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Conditional	99
OEG IN From ME	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	123
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-1	Conditional	124

5.4.3 Recovery Messages

5.4.3.1 Instrument Synchronization List (50)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **InstrumentSynchronizationList** (50) message is sent in order to associate each instrument with a *ResynchronizationID.* This ID is used only in case of failover of the matching engine.

Please refer to message **SynchronizationTime** (51) for further details.

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Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	124
Resynchronization ID	Each instrument is assigned to a Resynchronization ID, which is use in case of failover.	Numerical ID	2	From 0 to 2^16-2	Mandatory	132
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	135
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	107

5.4.3.2 Synchronization Time (51)

Client ◀OEG

Available for: EQ FUND FRM SP

Message Usage:

The **SynchronizationTime** (51) message is sent after a disruptive incident affecting the trading chain to help the clients assess whether the messages received immediately before the disruptive incident are valid and stored state or if they must be discarded.

This message provides a timestamp (*Last Book In Time*) of the last known valid and stored message, and is sent by the system for the associated resynchronization ID (*Resynchronization ID*).

Upon the reception of the message, clients must check the list of all instruments associated to the field *Resynchronization ID* and analyze all messages received before the **Synchronization Time** (51) message, related to these instruments. Messages having *Book In Time* or *Trade Time* higher than the associated *Last Book In Time* must be discarded.

For example, upon the reception of a **Synchronization Time** (51) message, if a client previously received a **Fill** (04) message with the *Trade Time* higher than the *Last Book In Time*, then this **Fill** (04) message must be ignored and the order fill must be reversed in client system; the trade is considered as if it has never happened (i.e. the quantity has not been traded, and the order may still be present in the order book for further execution).

Similarly, if a client previously received a **Kill** (05) message with a *Book In Time* higher than the *Last Book In Time,* then the Kill notification must be ignored (meaning that the order may still present in the order book for further execution).

All the messages received after the **SynchronizationTime** (51) messages must be processed normally.

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Field	Short Description	Format	Len	Values	Presence	Page
Message Sequence Number	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)	Sequence	4	From 0 to 2^32-2	Mandatory	120
OEG OUT To Member	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	124
Resynchronization ID	Each instrument is assigned to a Resynchronization ID, that is use in case of failover.	Numerical ID	2	From 0 to 2^16-2	Mandatory	132
Last Book IN Time	Last Matching Engine IN time (in ns) processed on the associated Resynchronization ID.	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	115

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6. FIELD DESCRIPTION

A

Access Flag

Field Name	Access Flag
Description	Indicates if it is a DMA Access or not.
Used For	Cash and Derivatives
Format	Boolean
Length	1
Possible Values	0 = False 1 = True
Used In	New Order (01) Cancel Replace (06) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14)

Account Number

Field Name	Account Number
Description	Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	12
Possible Values	(See field description)
Conditions	For Order submission, required when Self Trade Preventation is configuread at Account Number level or both (Account Number and Investor) level
Used In	New Order (01) Cancel Replace (06) Declaration Entry (40) Declaration Notice (42)

Account Number Cross

Field Name	Account Number Cross
Description	Account Number Cross. Client account number identifying the investor's account for the sell side of a cross order. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	12
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

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Account Type

Field Name	Account Type
Description	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. For Cross orders it specifies the account type for which the buy side of a cross order is entered. - Non-LP clients are not allowed to use the type '6' (Liquidity Provider).
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment
Conditions	It is mandatory for every NewOrder (01) message. In CancelReplace (06) message, if provided the value is ignored. The value 2 is only available for BSE and BVMT. The values from 6 up to 13 are only available for BVMT.
Used In	New Order (01) Cancel Replace (06) Mass Cancel (13) Mass Cancel Ack (14) Declaration Entry (40) Declaration Notice (42)

Account Type Cross

Field Name	Account Type Cross
Description	Indicates the account type for which the sell side of a cross order is entered. Only for Cross orders.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment
Conditions	For NewOrder (01) message it is mandatory for Cross orders and it qualifies the Sell side. It must be populated in the second occurrence of this repeating section. The value 2 is only available for BSE and BVMT. The values from 6 up to 13 are only available for BVMT.
Used In	New Order (01)

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	Declaration Entry (40) Declaration Notice (42)

Action Type

Field Name	Action Type
Description	Provides the request to be performed on an existing declaration, which is identified by its Declaration ID.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Declaration Cancellation Request 2 = Declaration Refusal
Used In	Declaration Cancel and Refusal (43)

Ack Phase

Field Name	Ack Phase
Description	Indicates the trading phase during which the Matching Engine has processed the event that has triggered this Ack (03) message.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase [C] 4 = Closed Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended
Used In	Ack (03)

Ack Qualifiers

Field Name	Ack Qualifiers
Description	Field used to provide additional information on the corresponding order. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. *- Dark Indicator: Indicates whether the corresponding order was entered as a dark order or not. (0: LIT ; 1: Dark). For Iceberg Order it indicates whether its undisclosed part is eligible to the Dark pool of liquidity or not.* - Queue Indicator: indicates whether the corresponding inbound message was queued because of throttling or not. (0: No ; 1: Yes)
Used For	Cash and Derivatives
Format	Bitmap
Length	1
Possible Values	*0 = Dark Indicator* 1 = Queue Indicator
Used In	Ack (03)

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Ack Type

Field Name	Ack Type
Description	Indicates the type of the Ack message
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = New Order Ack 1 = Replace Ack 2 = Order Creation By Market Operations 3 = Stop Triggered Ack [C] 4 = Collar Confirmation Ack [C] 5 = Refilled Iceberg Ack [C] 6 = MTL Second Ack [C] 14 = Iceberg Transformed to Limit due to Minimum size [C] 15 = Ownership Request Ack [C] 16 = VFU/VFC Triggered Ack [C] 17 = Open Order Request Ack [C] 19 = Ownership Confirmation Ack 20 = ShortSelling Confirmation Ack
Used In	Ack (03)

B

Book IN Time

Field Name	Book IN Time
Description	Matching Engine IN time (in ns), time at which the corresponding inbound message entered the Matching Engine. (Time in number of nanoseconds since 01/01/1970 UTC)
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Conditions	In the Ack (03) message it corresponds to the time at which the event generating the Ack (03) entered the matching engine. In the Kill (05) message it corresponds to the time at which the corresponding order has been killed. In the Reject (07) it is provided only in case of a functional rejection, not in case of a technical rejection. In the Trade Bust Notification (19) it corresponds to the trade cancellation time.
Used In	Ack (03) Kill (05) Reject (07) Mass Cancel Ack (14) Trade Bust Notification (19) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

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Book OUT Time

Field Name	Book OUT Time
Description	Matching Engine OUT time (in ns), when message leaves the Matching Engine (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Fill (04) Kill (05) Reject (07) Mass Cancel Ack (14) Trade Bust Notification (19) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

Breached Collar Price

Field Name	Breached Collar Price
Description	Breached collar price in case of collar rejection.
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63 to 2^63-1
Used In	Reject (07)

C

Centralisation Date

Field Name	*Centralisation Date*
Description	*Cut-off for the trading cycle / session on the Euronext Funds Service: Paris is not identified by the fund agent; as such there is no technical cut-off of a trading session set for such funds.* *Centralisation date may be used by the client to inform the fund agent for which session the declaration should be eligible for, and may be used as a criteria by the fund agent to accept, or not, a declaration.* *When used, the declaration should be automatically accepted for the following order collection cycle / session if:* *- centralisation date is not specified by the client AND the session has passed its cut-off, OR* *- centralisation date is specified, and fund agent elects not to acknowledge the declaration during the session identified in the broker's message AND doesn't reject the declaration.* *Should be provided in binary equivalent of YYYY-MM-DD, where YYYY = 0000-9999, MM = 01-12, DD = 01-31* *Should be provided for Euronext Funds Service: Paris instruments only.*
Used For	*Cash and Derivatives*
Format	*Alphanumerical ID*

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Length	*10*
Possible Values	*(See field description)*
Used In	*Declaration Entry (40)* *Declaration Notice (42)*

CCP ID

Field Name	*CCP ID*
Description	*Clearing House Code*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = LCH SA* *6 = EuroCCP*
Used In	*Declaration Notice (42)*

Clearing Account

Field Name	Clearing Account
Description	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	16
Possible Values	(See field description)
Conditions	For Order submission and Order Modification: • required when Self Trade Preventation is configured at Clearing Account level and/or • required when Clearing Account functionality is activated; For Order submission, Order modification and Declaration submission: • required when CCM functionality is activated; **Note:** For the Cancel Replace (06), it must be populated with the same value as the one provided in the original order submission.
Used In	New Order (01) Cancel Replace (06) Declaration Entry (40) Declaration Notice (42)

Clearing Account Cross

Field Name	Clearing Account Cross
Description	Clearing Account Number Cross. Client account number identifying the investor's account for the sell side of a cross declaration (dual sided declaration). This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	16
Possible Values	(See field description)
Conditions	For Declaration submission: • required when CCM functionality is activated;
Used In	Declaration Entry (40)

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	Declaration Notice (42)

Clearing Firm ID

Field Name	Clearing Firm ID
Description	Clearing firm ID. Identifier of the give-up firm when a give-up is executed (a give-up is a trade executed by a firm for the client of another firm, the latter being referred to as the give-up firm).
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	New Order (01) Cancel Replace (06) Declaration Entry (40) Declaration Notice (42)

Clearing Instruction

Field Name	Clearing Instruction
Description	Clearing Instruction. Indicates the pre-posting and give-up action to be taken by the clearing system when a trade has occurred. ■ Process normally ■ Manual mode (pre-posting and/or pre-giveup) ■ Automatic posting mode (trade posting to the position account number specified) ■ Automatic give-up mode (trade give-up to the give-up destination number specified) [C] ■ Automatic and account authorization [D] ■ Manual and account authorization [D] ■ Give-up to single firm [D]
Used For	Cash and Derivatives
Format	Enumerated
Length	2
Possible Values	0 = Process normally [C] 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode [C] *4008 = Automatic and account authorization [D]* *4009 = Manual and account authorization [D]* *4010 = Give-up to single firm [D]*
Used In	New Order (01) Cancel Replace (06)

Client ID

Field Name	Client ID
Description	Field used to identify the client (investor).
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8

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Possible Values	(See field description)
Used In	New Order (01) Cancel Replace (06)

Client Message Sequence Number

Field Name	Client Message Sequence Number
Description	The Client Message Sequence Number is mandatory for all inbound messages, but the consistency of the sequence is not checked by the Exchange.
Used For	Cash and Derivatives
Format	Sequence
Length	4
Possible Values	From 0 to 2^32-1
Used In	New Order (01) Cancel Replace (06) Cancel Request (12) Mass Cancel (13) Open Order Request (15) Ownership Request (18) Collar Breach Confirmation (20) Declaration Entry (40) Declaration Cancel and Refusal (43)

Client Order ID

Field Name	Client Order ID
Description	An identifier of a message assigned by the Client when submitting an order to the Exchange. Clients must provide a Client Order ID in every inbound application message, otherwise the message will be immediately rejected by the OEG. Clients may provide any value that respects the Client Order ID format, which is an 8-byte signed integer, and the ranges as defined according to their access. The Exchange recommends setting an unique ID per order, Firm and Symbol Index. For order entry, the Client Order ID value is not checked by the Exchange, it is simply returned in the corresponding outbound message to allow clients to reconcile the response message with their original inbound request. For modification and cancellation using the Original Client Order ID as unique identifier, the value is checked by the Exchange for possible duplicates, i.e. different orders submitted with the same Client Order ID. In case of duplication, the inbound request is rejected with the according error code.
Used For	Cash and Derivatives
Format	Numerical ID
Length	8
Possible Values	From -2^63 to 2^63-1
Conditions	In inbound application messages, this field is always mandatory. In outbound application messages, this field is provided for solicited messages and not provided (null value) for unsolicited messages. For the Fill (04) message, it is always set to the null value. For Reject (7) message: - If message is sent due to breach of collars, as in that case there is an Ack (3) message before, the Client Order ID is set to null in the Reject (7); - In all other cases the Client Order ID is populated in the Reject (7);
Used In	New Order (01)

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	Ack (03) Fill (04) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14) Open Order Request (15) Ownership Request Ack (17) Ownership Request (18) Collar Breach Confirmation (20) Declaration Entry (40) Declaration Entry Ack (41) Declaration Notice (42) Declaration Cancel and Refusal (43) Declaration Entry Reject (46)

Client Identification Short Code

Field Name	*Client Identification Short Code*
Description	*MIFID II short code, Client identification code.* *ESMA description of the field:* *Code used to identify the client of the member or participant of the trading venue. In case of DEA, the code of the DEA user should be provided.* *Where the client is a legal entity, the LEI code of the client shall be used.* *Where the client is not a legal entity, the {NATIONAL_ID} shall be used.* *In the case of aggregated orders, the flag AGGR shall be used.* *In case of pending allocations, the flag PNAL shall be used.* *This field shall be left blank only if the member or participant of the trading venue has no client.*
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From -2^31 to 2^31-1*
Conditions	*This field is required for DEA User in every inbound message, or when Account Type = Client or RO.* *Provided in the User Notification (39) message, if User Status concerns a DEA to identify it.* *To indicate value of AGGR "1" shall be used.* *To indicate value of PNAL "2" shall be used.*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)* *Open Order Request (15)* *Ownership Request (18)* *Collar Breach Confirmation (20)* *User Notification (39)* *Declaration Entry (40)*

ClientIdentificationShortCodeCross

Field Name	*ClientIdentificationShortCodeCross*

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Description	*MiFID II short code, Client identification code.* *ESMA description of the field:* *Code used to identify the client of the member or participant of the trading venue. In case of DEA, the code of the DEA user should be provided.* *Where the client is a legal entity, the LEI code of the client shall be used.* *Where the client is not a legal entity, the {NATIONAL_ID} shall be used.* *In the case of aggregated orders, the flag AGGR shall be used.* *In case of pending allocations, the flag PNAL shall be used.*
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From -2^31+1 to 2^31-1*
Conditions	*This field is required for DEA User in every inbound message.* *To indicate value of AGGR "1" shall be used.* *To indicate value of PNAL "2" shall be used.* *For the inbound Declaration Entry (40) message it is to be provided when Side is equal to Cross and if the cross order is being submitted to cover orders of two different clients.*
Used In	*Declaration Entry (40)*

Collar Rejection Type

Field Name	Collar Rejection Type
Description	Hit collar type (high or low) in case of order rejection due to collar breach.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Low dynamic collar 2 = High dynamic collar
Used In	Reject (07)

Contract ID

Field Name	*Contract ID*
Description	*Identifier of a derivatives contract (Symbol Index).*
Used For	*Derivatives*
Format	*Alphanumerical ID*
Length	*4*
Possible Values	*From 0 to 2^32-1*
Used In	*Mass Cancel (13)* *Mass Cancel Ack (14)*

Counterpart Firm ID

Field Name	Counterpart Firm ID
Description	ID of the Counterpart Firm in specific cases. The counterpart identifier is provided in the Fill (04) message in case the notified trade is the result of : ■ the Internal Matching Service (IMS), ■ the Internal Clearing Service (ICS) (For Future Use),

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	■ a transaction performed on the Primary Market Model and not broadcast to the Clearing House (For Future Use), ■ a transaction performed on a non-clearable instrument.
Used For	Cash
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	Fill (04)

D

Dark Execution Instruction

Field Name	*Dark Execution Instruction*
Description	*Field used as instruction for dark order handling (For Future Use, Pending Regulatory Approval). Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.* *- Dark Indicator: indicates whether the client requests its order to benefit from a Large In Scale Pre-Transparency waiver to match the order in the Dark. (0: No ; 1: Yes)* *- Sweep Order Indicator: indicates whether the client requests a sweep to his order between both LIT and the hidden pool of liquidity (Dark). (0: No ; 1: Yes)* *- Minimum Quantity Type: indicates whether the Minimum Quantity for a dark order is MES or MAQ. (0: MAQ ; 1: MES)*
Used For	*Cash*
Format	*Bitmap*
Length	*1*
Possible Values	*0 = Dark Indicator* *1 = Deferred Trade Indicator* - ***Deprecated*** *2 = Displayed Order Interaction* - ***Deprecated*** *3 = Sweep Order Indicator* *4 = Minimum Quantity Type*
Used In	*New Order (01)* *Cancel Replace (06)*

Desk ID

Field Name	*Desk ID*
Description	*Field used to identify the Trading Desk.*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*11*
Possible Values	*(See field description)*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)*

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Declaration ID

Field Name	Declaration ID
Description	Numerical declaration identifier assigned by the Exchange.
Used For	Cash and Derivatives
Format	Numerical ID
Length	8
Possible Values	From 0 to 2^64-2
Conditions	In the Declaration Entry Ack (42) message it provides the identifier of the declaration. In the Declaration Notice (41) message it provides the identifier of the declaration. In Declaration Cancel Refusal (43) it provides the ID of the declaration refused/to be cancelled.
Used In	Declaration Entry Ack (41) Declaration Notice (42) Declaration Cancel and Refusal (43)

Declaration Status

Field Name	Declaration Status
Description	Provides status of the Declaration.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = New Waiting for Counterparty Confirmation 2 = Confirmed by Counterparty 3 = Refused by Counterparty 5 = Cancelled 7 = Filled 9 = Expiration of a pending declaration 10 = Elimination of a pending declaration 14 = Declaration Created by MO 16 = Cancelled upon CSD request
Used In	Declaration Notice (42)

Disclosed Quantity

Field Name	Disclosed Quantity
Description	Maximum number of quantity units to be shown to market participants (Iceberg Order). (To be calculated with Quantity Decimals)
Used For	Cash
Format	Quantity
Length	8
Possible Values	From 1 to 2^64-1
Conditions	The Disclosed Quantity is mandatory for Iceberg orders. Disclosed quantity should be multiple of the instrument's lot size; otherwise the order will be rejected.
Used In	New Order (01) Cancel Replace (06)

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E

EMM

Field Name	EMM
Description	Defines the Exchange Market Mechanism applied on each platform.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Cash and Derivative Central Order Book (COB) 5 = Cash On Exchange Off book [C] *10 = Buy In* *11 = Odd Lot* 99 = Not Applicable (For indices and iNAV) [C]
Conditions	In the Reject (07) message, it is populated only if provided as a valid value in the corresponding Inbound request AND the corresponding Inbound request was technically correctly formatted; otherwise it is provided at the Null value.
Used In	New Order (01) Ack (03) Fill (04) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14) Open Order Request (15) Ownership Request (18) Trade Bust Notification (19) Collar Breach Confirmation (20) Instrument Synchronization List (50) Declaration Entry (40) Declaration Entry Ack (41) Declaration Notice (42) Declaration Entry Reject (46)

Entering Counterparty

Field Name	Entering Counterparty
Description	Identifies the counterpart of the transaction. Clients may provide a Member ID or an Euronext Member ID.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

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End Time Vwap

Field Name	*End Time Vwap*
Description	*End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*
Used For	*Cash*
Format	*Intraday Time in Seconds*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Conditions	*For Declaration Entry (40) message, it is mandatory for declarations when Operation Type = '5' ; and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session.*
Used In	*Declaration Entry (40)* *Declaration Notice (42)*

Error Code

Field Name	Error Code
Description	Error code in case of rejection. Provides the return error code when a request is rejected for a functional or a technical reason.
Used For	Cash and Derivatives
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-1
Used In	Reject (07) Technical Reject (108)

Exchange ID

Field Name	Exchange ID
Description	Identifies the Exchange.
Used For	Cash and Derivatives
Format	Text
Length	8
Possible Values	(See field description)
Used In	Logon Ack (101) Logon Reject (102)

Execution ID

Field Name	Execution ID
Description	The Execution ID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation. For example, let x be the reference identifier of a given trade, x is reported in the two Fill (04) messages generated for the both sides of the trade. x will also be used as reference for this trade in the Drop Copy feed. And if this trade is cancelled, x is again reported in the Trade Bust Notification (19) messages sent for the two sides of the trade.
Used For	Cash and Derivatives
Format	Numerical ID

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Length	4
Possible Values	From 0 to 2^32-1
Used In	Fill (04) Trade Bust Notification (19)

Execution Instruction

Field Name	Execution Instruction
Description	Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. - STP resting order: indicates whether the STP rule is "cancel resting order" or not. (0: STP Resting Order deactivated ; 1: Cancel Resting Order) - STP incoming order: indicates whether the STP rule is "cancel incoming order" or not. (0: STP Incoming Order deactivated ; 1: Cancel Incoming Order) - Disclosed Quantity Randomization: indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order. (0: No ; 1: Yes) - Disabled Cancel On Disconnect Indicator: indicates whether the client sets his order to be persisted (is not in scope of the Cancel On Disconnect mechanism) or not. (0: Cancel on Disconnect enabled ; 1: Cancel on Disconnect disabled)
Used For	Cash and Derivatives
Format	Bitmap
Length	1
Possible Values	0 = STP resting order [C] 1 = STP incoming order [C] 2 = Disclosed Quantity Randomization [C] 3 = Disabled Cancel On Disconnect Indicator
Used In	New Order (01) Cancel Replace (06)

Execution Phase

Field Name	Execution Phase
Description	Indicates the trading phase during which the trade has occurred.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Continuous Trading Phase 2 = Uncrossing Phase 3 = Trading At Last Phase
Used In	Fill (04)

ExecutionWithinFirmShortCode

Field Name	*ExecutionWithinFirmShortCode*
Description	*MiFID II short code, Execution within firm, identifier of the trader or algorithm responsible for the execution making.* *ESMA description of the field:*

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	Code used to identify the person (trader) or algorithm within the member or participant of the trading venue who is responsible for the execution of the transaction resulting from the order. *Where a natural person is responsible for the execution of the transaction, the person shall be identified by {NATIONAL_ID}* *Where an algorithm is responsible for the execution of the transaction, this field shall be populated in accordance with Article 9 of [RTS 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014]* *Where more than one person or a combination of persons and algorithms are involved in the execution of the transaction, the member or participant or client of the trading venue shall determine the trader or algorithm primarily responsible as specified in Article 9(4) of [RTS on trading obligations under Article 26 of Regulation (EU) No 600/2014] and populate this field with the identity of that trader or algorithm.*
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From -2^31 to 2^31-1*
Conditions	*This field is mandatory for every application inbound messages.* *Provided in the User Notification (39) message, if User Status concerns a Trader or an Algo to identify it.* *Guideline for algorithm associated values: When an order message is flagged with the ExecutionAlgoIndicator (position 2) in the MiFID Indicators field set to value "0: No algorithm" involved then all positive values (from 0 to 2^31-1) would represent a human trader.* *If the indicator is set to "1: Algorithm involved" clients are requested to populate this field with the ranges of values identified below. No technical checks would be performed to validate correctness of the ranges used* *- In–house algorithms with positive range of values between 0 to 2^31-1* *- ISV algorithms : negative range of values between -2^31+1 to -1*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)* *Open Order Request (15)* *Ownership Request (18)* *Collar Breach Confirmation (20)* *User Notification (39)* *Declaration Entry (40)*

F

Family ID

Field Name	*Family ID*
Description	*Identifier of the family.*
Used For	*Cash and Derivatives*
Format	*Alphanumerical ID*
Length	*8*
Possible Values	*(See field description)*
Conditions	*If provided in the User Notification (39) message, it specifies the scope of the action specified in User Status.*
Used In	*User Notification (39)*

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Firm ID

Field Name	Firm ID
Description	Identifier of the member firm that sends the message. It is provided by the Exchange upon the registration of the Firm by the Membership department.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Conditions	In inbound messages it is the ID of the firm that sent the message. In outbound messages it is the ID of the firm to which the message is sent.
Used In	New Order (01) Ack (03) Fill (04) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14) Open Order Request (15) Ownership Request Ack (17) Ownership Request (18) Trade Bust Notification (19) Collar Breach Confirmation (20) User Notification (39) Declaration Entry (40) Declaration Entry Ack (41) Declaration Notice (42) Declaration Cancel and Refusal (43) Declaration Entry Reject (46)

Free Text

Field Name	Free Text
Description	Free Text is manually entered by the trader issuing the order. This field is part of the clearing aggregate.
Used For	Cash and Derivatives
Format	Text
Length	18
Possible Values	(See field description)
Used In	New Order (01) Cancel Replace (06) Declaration Entry (40) Declaration Notice (42)

Free Text Cross

Field Name	Free Text Cross
Description	Free Text Cross is manually entered by the trader issuing the order in case of a cross order and concerns the sell side. This field is part of the clearing aggregate.

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Used For	Cash and Derivatives
Format	Text
Length	18
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

G

Gross Trade Amount

Field Name	*Gross Trade Amount*
Description	*Total amount of a Declaration.* *Indicates the global amount of a declaration when it is expressed as an amount.*
Used For	*TCS*
Format	*Amount*
Length	*8*
Possible Values	*From -2^63+1 to 2^63-1*
Conditions	*For inbound Declaration Entry (40) message (TCS), it is applicable only when Operation Type = '6' for a trade/declaration on Dutch Funds if expressed as an amount. If expressed as a quantity, this field should not be provided.* *In outbound Declaration Notice (42) messages (from TCS) field Gross Trade Amount is provided only for message with the Operation Type = '6' AND Declaration Status set to 7 = Filled, 13 = Pre-Matched OR 5 = Cancelled.*
Used In	*Declaration Entry (40)* *Declaration Notice (42)*

Guarantee Flag

Field Name	Guarantee Flag
Description	Indicates if the trade is guaranteed or not (for clearing purposes).
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed
Used In	Declaration Entry (40) Declaration Notice (42)

I

Instrument Group Code

Field Name	Instrument Group Code
Description	Instrument Trading Group / Class Identifier.
Used For	Cash

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Format	Alphanumerical ID
Length	2
Possible Values	(See field description)
Used In	Mass Cancel (13) Mass Cancel Ack (14)

Investor ID

Field Name	Investor ID
Description	Field used to identify the investor.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	16
Possible Values	(See field description)
Conditions	For Order submission, required when Self Trade Preventation is configuread at Investor level
Used In	New Order (01) Cancel Replace (06) Cancel Request (12) Mass Cancel (13) Declaration Entry (40) Declaration Notice (42)

Investor ID Cross

Field Name	Investor ID Cross
Description	Field used to identify the investor associated to the sell side of a declaration.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	16
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

K

InvestmentDecisionWFirmShortCode

Field Name	*InvestmentDecisionWFirmShortCode*
Description	*MiFID II short code, Investment decision within firm, identifier of the trader or algorithm responsible for the investment decision.* *ESMA description of the field:* *Code used to identify the person or the algorithm within the member or participant of the trading venue who is responsible for the investment decision.* *Where a natural person(s) within the member or participant of the trading venue is responsible for the investment decision the person who is responsible or has primary responsibility for the investment decision shall be identified with the {NATIONAL_ID}*

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	Where an algorithm is responsible for the investment decision the field shall be populated in accordance with Article 8 of [RTS 22 on transaction reporting under Article 26 of Regulation (EU) No 600/2014.]
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From -2^31 to 2^31-1*
Conditions	*This field is mandatory when Account Type = Liquidity Provider, Related Party, House or Structured Product Market Maker; and only when DEA Indicator = 0. Also mandatory in in case in the field MIFID Indicators position 1 (InvestmentAlgoIndicator) is set to "1: Algorithm involved"; and only when DEA Indicator = 0.* *Guideline for algorithm associated values: When an order message is flagged with the associated InvestmentAlgoIndicator (position 1) in the MiFID Indicators field set to value "0: No algorithm" involved then all positive values (from 0 to 2^31-1) would represent a human trader.* *If the indicator is set to "1: Algorithm involved" clients are requested to populate this field with the ranges of values identified below. No technical checks would be performed to validate correctness of the ranges used.* *- In –house algorithms with positive range of values between 0 to 2^31-1* *- ISV algorithms : negative range of values between -2^31+1 to -1*
Used In	*New Order (01)* *Declaration Entry (40)*

Kill Reason

Field Name	Kill Reason
Description	Order Kill Reason
Used For	Cash and Derivatives
Format	Enumerated
Length	2
Possible Values	1 = Order Cancelled by Client 2 = Order Expired 3 = Order Cancelled by Market Operations 4 = Order Eliminated due to Corporate Event 5 = Done for day 6 = Cancelled MTL in an empty Order Book [C] 7 = Cancelled by STP 8 = Remaining quantity killed (IOC) 11 = Order Cancelled due to Cancel On Disconnect Mechanism 17 = Order Cancelled due to a Kill command 18 = Order Cancelled due to Static Collars 31 = Order Cancelled due to breach of Ownership Limit 32 = Order Cancelled due to breach of Credit Limit 33 = Order Cancelled upon CSD request 34 = Order Cancelled due to breach of Short Selling Limit 35 = Order Cancelled due to Instrument not being Eligible for Margin
Used In	Kill (05)

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L

Last Book IN Time

Field Name	Last Book IN Time
Description	Last Matching Engine IN time (in ns) processed on the associated Resynchronization ID.
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Synchronization Time (51)

Last Client Message Sequence Number

Field Name	Last Client Message Sequence Number
Description	Indicates the sequence number of the last message received by the Exchange from the Client on the OE Session.
Used For	Cash and Derivatives
Format	Sequence
Length	4
Possible Values	From 0 to 2^32-1
Used In	Logon Ack (101) Logon Reject (102)

Last Message Sequence Number

Field Name	Last Message Sequence Number
Description	Indicates the sequence number of the last message received by the Client from the Exchange on the OE Session.
Used For	Cash and Derivatives
Format	Sequence
Length	4
Possible Values	From 0 to 2^32-1
Used In	Logon (100) Logon Reject (102)

Last Traded Price

Field Name	Last Traded Price
Description	The Last Traded Price indicates the price of last fill on an instrument (to be calculated with the Price/Index Decimals).
Used For	Cash and Derivatives
Format	Price
Length	8
Possible Values	From -2^63 to 2^63-1

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Conditions	In the Trade Bust Notification (19) message the Last Traded Price refers to Price of the cancelled trade.
Used In	Fill (04) Trade Bust Notification (19)

Last Traded Quantity

Field Name	Last Traded Quantity
Description	The Last Traded Quantity indicates the quantity of last fill on an instrument (to be calculated with the Quantity Decimals).
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-1
Conditions	In the Trade Bust Notification (19) message the Last Traded Quantity refers to Quantity of the cancelled trade.
Used In	Fill (04) Trade Bust Notification (19)

Leaves Quantity

Field Name	Leaves Quantity
Description	Indicates the remaining quantity of an order, i.e. the quantity open for further execution.
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-1
Used In	Fill (04)

Leg Instrument ID

Field Name	*Leg Instrument ID*
Description	*Numerical leg instrument identifier (SymbolIndex) valid for the life of the instrument.*
Used For	*Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From 0 to 2^32-1*
Used In	*Fill (04)*

Leg Last Traded Price

Field Name	*Leg Last Traded Price*
Description	*Leg Last Traded Price*
Used For	*Derivatives*
Format	*Price*
Length	*8*

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Possible Values	*From -2^63 to 2^63-1*
Used In	*Fill (04)*

Leg Last Traded Quantity

Field Name	*Leg Last Traded Quantity*
Description	*Leg Last Traded Quantity*
Used For	*Derivatives*
Format	*Quantity*
Length	*8*
Possible Values	*From 0 to 2^64-1*
Used In	*Fill (04)*

Leg Side

Field Name	*Leg Side*
Description	*Indicates the side of the trade leg.*
Used For	*Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Buy* *2 = Sell*
Used In	*Fill (04)*

Log Out Reason Code

Field Name	Log Out Reason Code
Description	Log Out Reason Code. Value 0 is from client, value 1 is from Exchange.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Regular Logout By Client 1 = End Of Day 2 = Too many unknown messages 3 = Excessive Number of Messages 4 = Excessive Amount of Data in Bytes 5 = Excessive Number of Messages & Amount of Data in Bytes
Used In	Logout (103)

Logical Access ID

Field Name	Logical Access ID
Description	Identifier of the Logical Access.
Used For	Cash and Derivatives
Format	Numerical ID

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Length	4
Possible Values	From 0 to 2^32-1
Conditions	It is required in both Logon (100) and Logout (103) messages. It is required in the OwnershipRequest (18) message when the Order ID is not provided. In the Mass Cancel (13) message it can be used as filter to cancel orders belonging to this Logical Access.
Used In	Logon (100) Mass Cancel (13) Mass Cancel Ack (14) Ownership Request Ack (17) Ownership Request (18)

Logon Reject Code

Field Name	Logon Reject Code
Description	Provides the logon rejection reason.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Unknown Connection Identifier 2 = System unavailable 3 = Invalid sequence number 4 = Client session already logged on 5 = Client session disabled 6 = Invalid Queueing Indicator 7 = Invalid Logon format
Used In	Logon Reject (102)

LP Role

Field Name	LP Role
Description	Liquidity Provider Role identifies the type of the Liquidity Provider when Account Type is equal to "Liquidity Provider".
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Liquidity Provider or Market Maker
Conditions	Liquidity Provider Role is mandatory when Account Type is equal to "Liquidity Provider". In CancelReplace (06) message, if provided the value is ignored.
Used In	New Order (01) Cancel Replace (06)

M

Margin Trading Flag

Field Name	*Margin Trading Flag*

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Description	*Indicates if the order is a Margin Trade order or not.*
Used For	*Cash and Derivatives*
Format	*Boolean*
Length	*1*
Possible Values	*0 = False* *1 = True*
Conditions	*Always provided*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)*

Market Phase Flag

Field Name	*Market Phase Flag*
Description	*Indicates the market phase to which the orders are eligible to.*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Continuous trading only (default)* *2 = Trading At Last (TAL) trading only* *3 = Both*
Conditions	*Always provided*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)*

Maturity

Field Name	*Maturity*
Description	*Scope of active orders to be cancelled according the selected maturity, expressed in YYYYMMDD format.* *For monthly DD must be set to 00. To identify weeklies and dailies DD must be set to the last trading day.*
Used For	*Derivatives*
Format	*Alphanumerical ID*
Length	*8*
Possible Values	*(See field description)*
Used In	*Mass Cancel (13)* *Mass Cancel Ack (14)*

Message Sending Time

Field Name	Message Sending Time
Description	Indicates the time of message transmission, the consistency of the time provided is not checked by the Exchange. (Time in number of nanoseconds since 01/01/1970 UTC)
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8

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Possible Values	From 0 to 2^64-1
Used In	New Order (01) Ack (03) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14) Open Order Request (15) Ownership Request (18) Collar Breach Confirmation (20) Declaration Entry (40) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

Message Sequence Number

Field Name	Message Sequence Number
Description	Indicates the Message Sequence Number per OE Session. (for messages sent by the Exchange)
Used For	Cash and Derivatives
Format	Sequence
Length	4
Possible Values	From 0 to 2^32-1
Used In	Ack (03) Fill (04) Kill (05) Reject (07) Mass Cancel Ack (14) Ownership Request Ack (17) Trade Bust Notification (19) User Notification (39) Instrument Synchronization List (50) Synchronization Time (51) Declaration Entry Ack (41) Declaration Notice (42) Declaration Entry Reject (46)

MIC of Secondary Listing

Field Name	*MIC of Secondary Listing*
Description	*Identifies the secondary listing place to which an instrument belongs by its MIC (Market Identification Code.), segment MIC according to ISO 10383.*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*4*
Possible Values	*(See field description)*
Conditions	*In inbound DeclarationEntry (40) messages for declaration on the secondary listing place (Operation Type = '7'), the field Symbol Index and MIC of Secondary Listing must be provided.*

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	In associated outbound messages, provided only to acknowledge receipt of the original declaration.
Used In	*Declaration Entry (40)* *Declaration Entry Ack (41)* *Declaration Notice (42)* *Declaration Entry Reject (46)*

MiFID Indicators

Field Name	*MiFID Indicators*
Description	*Field used as instruction for order handling. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.* *- DEA Indicator: indicates whether the order was submitted via a Direct Electronic Access (DEA) connection or not. It must be set to 1 for DEA access. (0: No ; 1: Yes) If set to 1, then field ClientIdentificationShortCode must be populated.* *- InvestmentAlgoIndicator: indicates whether the investment decision was submitted by a trading algorithm or not. (0: No algorithm involved ; 1: Algorithm involved) This value must be set to 1 for cases where Algorithm has made the Investment decision. If set to 1, then field InvestmentDecisionWFirmShortCode must be filled.* *- ExecutionAlgoIndicator: indicates whether the order execution was submitted by a trading algorithm or not. (0: No algorithm involved ; 1: Algorithm involved)* *- CommodityDerivativeIndicator: indicates for a commodity derivative or a warrant with a commodity underlying, if the trade reduces the risk. (0: Order not associated with reduction of risk for Commodity Derivatives or Warrants with Commodity underlyings ; 1: Risk Reduction flag for orders associated with Commodity Derivatives or Warrants with Commodity underlyings)* *- Deferral Indicator: Indicates whether the order is candidate for a deferred publication of the resulting trade(s) or not. (0: Not Candidate ; 1: Candidate)*
Used For	*Cash and Derivatives*
Format	*Bitmap*
Length	*1*
Possible Values	*0 = DEA Indicator* *1 = InvestmentAlgoIndicator* *2 = ExecutionAlgoIndicator* *3 = CommodityDerivativeIndicator* *4 = Deferral Indicator*
Used In	*New Order (01)* *Cancel Replace (06)* *Declaration Entry (40)*

Minimum Order Quantity

Field Name	Minimum Order Quantity
Description	Minimum quantity to be executed upon order entry (else the order is rejected), (To be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-1
Used In	New Order (01)

Miscellaneous Fee Amount

Field Name	*Miscellaneous Fee Amount*

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Description	*Miscellaneous Fee Value. Total order fees related to the funds share creation or redemption applied by the Asset Manager per order.*
Used For	*Cash and Derivatives*
Format	*Amount*
Length	*8*
Possible Values	*From -2^63+1 to 2^63-1*
Used In	*Declaration Notice (42)*

N

NonExecutingBrokerShortCode

Field Name	*NonExecutingBrokerShortCode*
Description	*MiFID II short code, Non-executing broker, identifier of the non-executing broker.* *ESMA description of the field:* *In accordance with Article 2(d).* *This field shall be left blank when not relevant.*
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From -2^31 to 2^31-1*
Used In	*New Order (01)*

O

OE Partition ID

Field Name	OE Partition ID
Description	Identifies uniquely an OE Optiq partition by which the engine is reached.
Used For	Cash and Derivatives
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-1
Conditions	In Logon (100) message it must be set according to the partition to which the messages are sent. In the Ownership Request (18) message it is optional, if populated it used to restrict the request of ownership to the orders belonging to the specified Logical Access ID and entered through this partition. In the Mass Cancel (13) message it is optional but cannot be populated if Logical Access ID is not populated ; if populated it used as filter to cancel orders entered through this partition (it can be combined with other criteria).
Used In	Logon (100) Mass Cancel (13) Mass Cancel Ack (14) Ownership Request Ack (17) Ownership Request (18)

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OEG IN From ME

Field Name	OEG IN From ME
Description	Gateway IN time from ME (in ns), measured when outbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Fill (04) Kill (05) Reject (07) Mass Cancel Ack (14) Trade Bust Notification (19) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

OEG IN From Member

Field Name	OEG IN From Member
Description	Order Entry Gateway IN time from member (in ns), measured when inbound message enters the gateway (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Kill (05) Reject (07) Mass Cancel Ack (14) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

OEG OUT To ME

Field Name	OEG OUT To ME
Description	Gateway OUT time to ME (in ns), measured when inbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Kill (05) Reject (07)

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	Mass Cancel Ack (14) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

OEG OUT To Member

Field Name	OEG OUT To Member
Description	Order Entry Gateway OUT time to member (in ns), measured when outbound message leaves the gateway (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Fill (04) Kill (05) Reject (07) Mass Cancel Ack (14) Trade Bust Notification (19) Instrument Synchronization List (50) Synchronization Time (51) Technical Reject (108) Declaration Entry Ack (41) Declaration Entry Reject (46) Declaration Notice (42)

Open Close

Field Name	Open Close
Description	Open Close Indicator, Posting action. This field is part of the clearing aggregate. The first bit will be used to indicate whether this field is being actively used or not (1 = Actively Used ; 0 = Field Not Used). For each Leg 0 means Open and 1 means Close. Leg 2 to Leg 9 are not applicable for cash instruments.
Used For	Cash and Derivatives
Format	Bitmap
Length	2
Possible Values	0 = Field Actively Used 1 = Leg 1 *2 = Leg 2 [D]* *3 = Leg 3 [D]* *4 = Leg 4 [D]* *5 = Leg 5 [D]* *6 = Leg 6 [D]* *7 = Leg 7 [D]* *8 = Leg 8 [D]* *9 = Leg 9 [D]*
Used In	New Order (01) Cancel Replace (06)

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Operation Type

Field Name	Operation Type
Description	Type of Operation.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Declaration of a trade outside the book
Used In	Declaration Entry (40) Declaration Entry Ack (41) Declaration Notice (42) Declaration Entry Reject (46)

Option Type

Field Name	*Option Type*
Description	*Type of the option.*
Used For	*Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Call* *2 = Put*
Used In	*Mass Cancel (13)* *Mass Cancel Ack (14)*

Order Category

Field Name	*Order Category*
Description	*Field used as instruction for cancel order handling.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Lit order* *2 = Lis order* *3 = Quote Request* *4 = RFQ LP Answer*
Used In	*Cancel Request (12)* *Ownership Request Ack (17)* *Ownership Request (18)* *Open Order Request (15)* *Mass Cancel Ack (14)* *Mass Cancel (13)*

Order Expiration Date

Field Name	Order Expiration Date
Description	Field used as date of order expiration for GTD orders.

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	- Format : MMDD - Minimum Value : 0101 (Jan 1st) - Maximum Value : 1231 (Dec 31st)
Used For	Cash and Derivatives
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-1
Conditions	Order Expiration Date is mandatory for GTD orders.
Used In	New Order (01) Cancel Replace (06)

Order Expiration Time

Field Name	*Order Expiration Time*
Description	*Field used as time of order expiration for GTT orders.* *- Format : HHMMSS* *- Minimum Value : 0 (00:00:00)* *- Maximum Value : 235959 (23:59:59)*
Used For	*Cash*
Format	*Numerical ID*
Length	*4*
Possible Values	*From 0 to 2^32-1*
Conditions	*Order Expiration Time is mandatory for GTT orders.*
Used In	*New Order (01)* *Cancel Replace (06)*

Order ID

Field Name	Order ID
Description	Numerical order identifier assigned by the matching engine, unique per instrument and EMM.
Used For	Cash and Derivatives
Format	Numerical ID
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03) Fill (04) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Open Order Request (15) Ownership Request Ack (17) Ownership Request (18) Collar Breach Confirmation (20)

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Order Price

Field Name	Order Price
Description	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals). For the Market Data feed: -Set to Null Value for priceless orders. For the Order Entry - It is mandatory for priced orders (Limit, Stop-limit) and must be set to Null Value where the price is irrelevant (Market, Stop-market, Peg, MTL).
Used For	Cash and Derivatives
Format	Price
Length	8
Possible Values	From -2^63 to 2^63-1
Used In	New Order (01) Ack (03) Cancel Replace (06)

Order Priority

Field Name	Order Priority
Description	Rank giving the priority of the order. The order with the lowest value of Order Priority has the highest priority. Order Priority is unique per Symbol Index and EMM, therefore, it is also used as the unique order identifier in the market data feed. Order Priority should then allow clients to reconcile their orders between private order entry and market data feed. Also assigned for newly entered Stop orders. When Stop orders are triggered they will be assigned a new priority. Used in conjunction with Previous Priority, for market data only.
Used For	Cash
Format	Numerical ID
Length	8
Possible Values	From 0 to 2^64-1
Used In	Ack (03)

Order Quantity

Field Name	Order Quantity
Description	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-1
Used In	New Order (01) Ack (03) Cancel Replace (06)

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Order Side

Field Name	Order Side
Description	Indicates the side of the order. Please note that the value Cross is used only for the Order Entry, it will never be populated in the Market Data feed.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Buy 2 = Sell 3 = Cross [i]
Conditions	The value Cross is only used in the NewOrder (01) message. For Cancel Replace (06) and Cancel Request (10) messages if the Order Side different than the Order Side of the targeted order, the request will be rejected with the reason "Unknown Order".
Used In	New Order (01) Ack (03) Fill (04) Cancel Replace (06) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14)

Order Type

Field Name	Order Type
Description	Type of Order. Please note that the values Stop-market/Stop-market-on-Quote, Stop limit/Stop-limit-on-quote, Iceberg and Mid-Point Peg are used only for the Order Entry, they will never be populated in the Market Data feed.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Market 2 = Limit 3 = Stop-market or Stop-market-on-quote 4 = Stop-limit or Stop-limit-on-quote 6 = Market to limit 10 = Iceberg
Conditions	For Cancel Replace (06) and Cancel Request (10) messages if the Order Type is different than the Order Type of the targeted order, the request will be rejected with the reason "Unknown Order".
Used In	New Order (01) Cancel Replace (06) Cancel Request (12)

Original Client Order ID

Field Name	Original Client Order ID
Description	Client order ID of the original order.
Used For	Cash and Derivatives

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Format	Numerical ID
Length	8
Possible Values	From -2^63 to 2^63-1
Conditions	It is provided in the Ack (03) message only as response of a modification done on Original Client Order ID.
Used In	Ack (03) Kill (05) Cancel Replace (06) Cancel Request (12) Open Order Request (15) Ownership Request (18) Collar Breach Confirmation (20)

P

Package ID

Field Name	*Package ID*
Description	*ID used to link several Large in Scale (LiS) Package trades together.*
Used For	*Derivatives*
Format	*Alphanumerical ID*
Length	*12*
Possible Values	*(See field description)*
Used In	*Fill (04)*

Peg Offset

Field Name	*Peg Offset*
Description	*Tick offset for a pegged order. (For Future Use)* *Used to indicate the signed tick added to the peg reference for a pegged order.*
Used For	*Cash*
Format	*Numerical ID*
Length	*1*
Possible Values	*From -128 to 127*
Used In	*New Order (01)* *Cancel Replace (06)*

Pre Matching Type

Field Name	*Pre Matching Type*
Description	*Pre-matching delay indicator for a TCS Declaration.*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Not pre-matched* *2 = Pre-matched for the next fixing* *3 = Pre-matched for the second next fixing*

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	4 = Pre-matched for the third next fixing *5 = Pre-matched for the fourth next fixing* *6 = Pre-matched for the fifth next fixing*
Used In	*Declaration Entry Ack (41)* *Declaration Notice (42)*

Previous Day Indicator

Field Name	*Previous Day Indicator*
Description	*Flag indicator whether declaration matched at D or D-1. (0: [indicated as False] means "matched at D" ; 1: [indicated as True] means "matched at D-1")*
Used For	*Cash and Derivatives*
Format	*Boolean*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*Declaration Notice (42)*

Price

Field Name	Price
Description	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).
Used For	Cash and Derivatives
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Declaration Entry (40) Declaration Notice (42)

Principal Code

Field Name	Principal Code
Description	Identifies the beneficiary of the transaction when trading on behalf of another establishment.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

Principal Code Cross

Field Name	Principal Code Cross
Description	Identifies the beneficiary of the transaction when trading on behalf of another establishment, for the sell side of a cross order.
Used For	Cash and Derivatives

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Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	Declaration Entry (40) Declaration Notice (42)

Q

Quantity

Field Name	Quantity
Description	Number of traded or ordered units (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Declaration Entry (40) Declaration Notice (42)

Queueing Indicator

Field Name	Queueing Indicator
Description	Indicates whether the client requests its orders to be queued or rejected in case of throttling. (0: False - Reject ; 1: True - Queue).
Used For	Cash and Derivatives
Format	Boolean
Length	1
Possible Values	0 = False 1 = True
Used In	Logon (100)

QuoteReqID

Field Name	*QuoteReqID*
Description	*Numerical RFQ identifier assigned by the matching engine, unique per instrument and EMM. (For Future Use)*
Used For	*Cash*
Format	*Numerical ID*
Length	*8*
Possible Values	*From 0 to 2^64-1*
Conditions	*Mandatory if 'RFQ Answer' or 'RFQ Confirmation' (field Execution Instruction) = Yes*
Used In	*New Order (01)*

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R

Rejected Message

Field Name	*Rejected Message*
Description	*Provides the ID (Template ID) of the rejected message.* *E.g. 01 for NewOrder, 06 for CancelReplace...*
Used For	*Cash and Derivatives*
Format	*Numerical ID*
Length	*1*
Possible Values	*From 0 to 2^8-1*
Used In	*Reject (07)* *Technical Reject (108)*

Rejected Message ID

Field Name	Rejected Message
Description	Provides the ID (Template ID) of the rejected message. E.g. 01 for NewOrder, 06 for CancelReplace...
Used For	Cash and Derivatives
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-1
Used In	Reject (07) Technical Reject (108) Declaration Entry Reject (46)

Rejected Client Message Sequence Number

Field Name	Rejected Client Message Sequence Number
Description	Indicates the Client Message Sequence Number of the rejected message.
Used For	Cash and Derivatives
Format	Sequence
Length	4
Possible Values	From 0 to 2^32-1
Used In	Technical Reject (108)

Resynchronization ID

Field Name	Resynchronization ID
Description	Each instrument is assigned to a Resynchronization ID, which is used in case of failover.
Used For	Cash and Derivatives
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-2
Used In	Instrument Synchronization List (50) Synchronization Time (51)

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S

Sender Location ID

Field Name	*Sender Location ID*
Description	*Field used to identify the specific message originator.*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*11*
Possible Values	*(See field description)*
Used In	*New Order (01)* *Cancel Replace (06)* *Cancel Request (12)* *Mass Cancel (13)* *Mass Cancel Ack (14)*

Settlement Flag

Field Name	Settlement Flag
Description	Indicates whether the declaration must be settled or not. (0: [indicated as False] means "Not Settled" ; 1: [indicated as True] means "Settled")
Used For	Cash and Derivatives
Format	Boolean
Length	1
Possible Values	0 = False 1 = True
Used In	Declaration Entry (40) Declaration Notice (42)

Settlement Period

Field Name	Settlement Period
Description	Indicates the settlement delay in trading days, from 0 to 30 days.
Used For	Cash and Derivatives
Format	Numerical
Length	1
Possible Values	From 0 to 30
Used In	Declaration Entry (40) Declaration Notice (42)

Side

Field Name	Side
Description	Indicates the Executing Side.
Used For	Cash and Derivatives

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Format	Enumerated
Length	1
Possible Values	1 = Buy 2 = Sell 3 = Cross
Used In	Declaration Entry (40) Declaration Notice (42)

Software Provider

Field Name	Software Provider
Description	Free text field entered by the client in the Logon (100) message, identifying the provider of the software used for exchange of messages for trading purposes.
Used For	Cash and Derivatives
Format	Text
Length	8
Possible Values	(See field description)
Used In	Logon (100)

Start Time Vwap

Field Name	*Start Time Vwap*
Description	*Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).*
Used For	*Cash*
Format	*Intraday Time in Seconds*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Conditions	*For Declaration Entry (40) message, it is used for declarations when Operation Type = '5' ; and if not provided it is assumed that the VWAP calculation period lasts until the end of the trading session.*
Used In	*Declaration Entry (40)* *Declaration Notice (42)*

Stop Trigger Price

Field Name	Stop Trigger Price
Description	Stop Trigger Price is mandatory for stop orders.
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63 to 2^63-1
Used In	New Order (01) Cancel Replace (06)

STP ID

Field Name	*STP ID*

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Description	*For Future Use.*
Used For	*Cash*
Format	*Numerical ID*
Length	*2*
Possible Values	*From 0 to 2^16-1*
Used In	*New Order (01)* *Cancel Replace (06)*

Symbol Index

Field Name	Symbol Index
Description	Exchange identification code of the instrument. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence of the Symbol Index and with the instrument characteristics is provided in the standing data messages and associated files.
Used For	Cash and Derivatives
Format	Numerical ID
Length	4
Possible Values	From 0 to 2^32-1
Conditions	If provided in the User Notification (39) message, it specifies the scope of the action specified in User Status. In the Reject (07) message, it is populated only if provided as a valid value in the corresponding Inbound request AND the corresponding Inbound request was technically correctly formatted; otherwise it is provided at the Null value.
Used In	New Order (01) Ack (03) Fill (04) Kill (05) Cancel Replace (06) Reject (07) Cancel Request (12) Mass Cancel (13) Mass Cancel Ack (14) Open Order Request (15) Ownership Request Ack (17) Ownership Request (18) Trade Bust Notification (19) Collar Breach Confirmation (20) User Notification (39) Instrument Synchronization List (50) Declaration Entry (40)

T

Technical Origin

Field Name	Technical Origin
Description	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system. This field is part of the clearing aggregate.
Used For	Cash

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Format	Enumerated
Length	1
Possible Values	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining
Used In	New Order (01) Cancel Replace (06)

Time In Force

Field Name	Time In Force
Description	Specifies the maximum validity of an order. For Stop orders it provides the maximum validity when not triggered.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Day 1 = Good Till Cancel 2 = Valid for Uncrossing [C] 3 = Immediate or Cancel 4 = Fill or Kill [C] *5 = Good till Time [C]* 6 = Good till Date 7 = Valid for Closing Uncrossing [C] 10 = Good Till Month
Used In	New Order (01) Cancel Replace (06)

Total Affected Orders

Field Name	Total Affected Orders
Description	Number of orders affected following a global request. It is set to -1 to indicate that the request is processed.
Used For	Cash and Derivatives
Format	Numerical ID
Length	4
Possible Values	From -2^31 to 2^31-1
Used In	Mass Cancel Ack (14) Ownership Request Ack (17)

Trader ID

Field Name	Trader ID
Description	Field used to identify the trader entering the order.
Used For	Cash and Derivatives
Format	Alphanumerical ID

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Length	16
Possible Values	(See field Description)
Conditions	- Required in the inbound messages depending on the List of Available Functionalities – Listed on the Associated Documents; - Provided in UserNotification (CB) only if UserStatus is 1 = Trader – Algo Suspended, 2 = Trader – Algo Suspension Cleared, 3 = Trader – Algo Killed, 4 = Trader – Algo Killed Cleared;
Used In	New Order (01) Cancel Replace (06) Cancel Request (12) Mass Cancel (13) User Notification (39) Declaration Entry (40) Declaration Notice (42)

Trade Qualifier

Field Name	Trade Qualifier
Description	Trade Qualifier. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. - bit in position 0 - Uncrossing Trade: indicates whether the trade occurred during an Uncrossing, or not. (0: No ; 1: Yes) - bit in position 1 - First Trade Price: indicates whether the price of the trade is the first trade price of the day, or not. (0: No ; 1: Yes) Please note that there can be multiple Trades with the “First Trade Price” flag set to Yes. - bit in position 2 - Passive Order: indicates whether the corresponding order was passive, or not. (0: No ; 1: Yes) - bit in position 3 - Aggressive Order: indicates whether the corresponding order was aggressive, or not. (0: No ; 1: Yes) - bit in position 4 - Trade Creation by Market Operations: indicates whether the trade results from a creation by Market Operations, or not. (0: No ; 1: Yes) - For future use *- bit in position 5 - NAV Trade expressed in bps: indicates whether the trade results from a NAV trade expressed in basis point on the ETF Access platform. (0: No ; 1: Yes)* *- bit in position 6 - NAV Trade expressed in price currency: indicates whether the trade is a NAV trade expressed in price currency. This trade is always an update from a previous NAV trade expressed in basis point on the ETF Access platform. (0: No ; 1: Yes)* *- bit in position 7 - Deferred Publication: indicates whether the trade publication is deferred or immediate. (0: Immediate Publication ; 1: Deferred Publication)* *If all bits are set to 0, then it means that no Trade Qualifier applies.* For the Market Data feed: - The values Passive Order and Aggressive Order always qualify the Buy order. Format: Numerical value expressed in base 2, prefixed with '0b'.
Used For	Cash and Derivatives
Format	Bitmap
Length	1
Possible Values	0 = Uncrossing Trade 1 = First Trade Price 2 = Passive Order 3 = Aggressive Order 4 = Trade Creation by Market Operations *5 = NAV Trade expressed in bps [C]* *6 = NAV Trade expressed in price currency [C]* *7 = Deferred Publication*

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Used In	Fill (04)

Trade Time

Field Name	Trade Time
Description	Time of the trade. Equals to the Matching Engine IN time (in ns), when the aggressor enters the matching engine.
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-1
Conditions	Provided only in outbound Declaration Notice (42) messages when Declaration Status is set to 7 = Filled.
Used In	Fill (04) Declaration Notice (42)

Trade Type

Field Name	Trade Type
Description	Type of trade.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Conventional Trade (Cash and Derivatives) 5 = Guaranteed Cross Trade (Cash and Derivatives) 24 = Trade Cancellation (Cash and Derivatives) 39 = Guaranteed Cross – Negotiated deal NLIQ (Liquid) 40 = Guaranteed Cross – Negotiated deal OILQ (illiquid)
Conditions	**In OEG, for the Fill (04) message, only the following values are used: '1', '5', '39' and '40'** ; for consistency purposes other values are also listed here, however they are only used in market data.
Used In	Fill (04)

Trading Capacity

Field Name	Trading Capacity
Description	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Dealing on own account (DEAL) 2 = Matched principal (MTCH) 3 = Any other capacity (AOTC)
Used In	New Order (01) Declaration Entry (40) Declaration Notice (42)

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Trading Capacity Cross

Field Name	Trading Capacity Cross
Description	Indicates for the sell side of a cross order whether the order submission results from trading as matched principal, on own account or as any other capacity.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Dealing on own account (DEAL) 2 = Matched principal (MTCH) 3 = Any other capacity (AOTC)
Conditions	For DeclarationEntry (40) message, it is mandatory for Cross order and indicates the trading capacity of the sell side.
Used In	Declaration Entry (40) Declaration Notice (42)

Trading Session Validity

Field Name	*Trading Session Validity*
Description	*Trading Session Validity. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.*
Used For	*Derivatives*
Format	*Bitmap*
Length	*1*
Possible Values	*1 = Session 1* *2 = Session 2* *3 = Session 3*
Used In	*New Order (01)* *Cancel Replace (06)*

Transaction Price Type

Field Name	Transaction Price Type
Description	Contribution to price formation or the price discovery process.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Plain Vanilla Trade 2 = Non Price Forming Trade (NPFT) 3 = Trade Not Contributing to Price Discovery Process
Conditions	For Declaration Notice (42) message, it is provided only if previously set in the corresponding inbound Declaration Entry (40).
Used In	Declaration Entry (40) Declaration Notice (42)

Triggered Stop Time In Force

Field Name	Triggered Stop Time In Force

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Description	Specifies the maximum validity of an triggered stop order. If both Time In Force and Triggered Stop Time In Force are Good till Date they will both refer to the same Order Expiration Date (or Order Expiration Time) provided in the order. If Order Expiration Date is modified it will be for both untriggered stop and triggered stop, or only for the triggered stop if the order was previously triggered.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Day 1 = Good Till Cancel 6 = Good till Date 10 = Good Till Month (GTM)
Conditions	It is mandatory for stop orders.
Used In	New Order (01) Cancel Replace (06)

U

Underlying Instrument ID

Field Name	*Underlying Instrument ID*
Description	*The commodity key for the other component leg of an asset allocation or ISIN code for the underlying cash leg that is part of a Basis or Against Actuals trade.*
Used For	*Derivatives*
Format	*Numerical ID*
Length	*4*
Possible Values	*From 0 to 2^32-1*
Used In	*Fill (04)*

Underlying Last Traded Price

Field Name	*Underlying Last Traded Price*
Description	*For Basis and Against Actual trades only: underlying cash leg price.*
Used For	*Derivatives*
Format	*Price*
Length	*8*
Possible Values	*From -2^63 to 2^63-1*
Used In	*Fill (04)*

Undisclosed Iceberg Type

Field Name	*Undisclosed Iceberg Type*
Description	*Order handling related to the undisclosed part of an Iceberg order eligible to a matching in the Dark pool of liquidity. (For Future Use, Pending Regulatory Approval)*
Used For	*Cash*
Format	*Enumerated*

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Length	1
Possible Values	1 = Limit 2 = Peg Mid-Point 3 = Peg Primary 4 = Peg Market
Used In	New Order (01) Cancel Replace (06)

Undisclosed Price

Field Name	Undisclosed Price
Description	Optional price for the hidden part of an Iceberg order. (For Future Use, Pending Regulatory Approval)
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63 to 2^63-1
Used In	New Order (01) Cancel Replace (06)

User Status

Field Name	User Status
Description	Status of the user.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Trader – Algo Suspended 2 = Trader – Algo Suspension Cleared 3 = Trader – Algo Killed 4 = Trader – Algo Killed Cleared 5 = Firm Suspended 6 = Firm Suspension Cleared
Used In	User Notification (39)

W

Waiver Indicator

Field Name	Waiver Indicator
Description	Waiver Indicator. Values indicated (in list of possible values) indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. ESMA description of the field: Indication as to whether the transaction was executed under a pre-trade waiver in accordance with Articles 4 and 9 of Regulation (EU) 600/2014. For all instruments: 'LRGS' = Large in scale For equity instruments: 'RFPT' = Reference price transaction 'NLIQ' = Negotiated transactions in liquid financial instruments 'OILQ' = Negotiated transactions in illiquid financial instruments 'PRIC' = Negotiated transactions subject to conditions other than the current market price of that equity financial instrument. For non-equity instruments: 'SIZE' = Above specific size transaction 'ILQD' = Illiquid instrument transaction This field shall only be populated for the market side of a transaction executed under a waiver on a trading venue.

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Used For	*Cash and Derivatives*
Format	*Bitmap*
Length	*1*
Possible Values	*0 = LRGS (for future use)* *1 = RFPT* *2 = NLIQ* *3 = OILQ* *4 = PRIC* *5 = SIZE* *6 = ILQD* *7 = OMF (for future use)*
Conditions	*In outbound Declaration Notice (42) messages (from TCS) field Waiver Indicator is filled with one of the possible values if Declaration Status is set to 7 = Filled AND the transaction meets the conditions required for a waiver.*
Used In	*Declaration Entry Ack (41)* *Declaration Notice (42)*

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APPENDIX A: DOCUMENT HISTORY

Document Name	Optiq Commercial OEG Client Specifications – SBE Interface
Project Name	
Location	
Version Number	1.2.10

Document History

Revision No./ Version No.	Date	Change Description
1.0.0	16/03/2018	First Release
1.1.0	28/03/2018	First Release - Reviewed
1.1.1	04/05/2018	Second Release
1.2.0	13/09/2018	**The following Messages have been added:** - Declaration Entry (40); - Declaration Entry Ack (41); - Declaration Notice (42); - Declaration Cancel And Refusal (43); - Declaration Entry Reject (46); **The following Sections have been updated:** - 4.3 Not Applicable / Future Use; - User Notification (39) description was updated; - Kill (05) description was updated; **Values have been updated for the following fields:** - User Status; - Triggered Stop Time In Force: 10 = Good Till Month was added; - Kill Reason: 18 = Order Cancelled due to Static Collars **Conditions have been updated for the following fields:** - Trader ID; - Investor ID; Account Number;
1.2.1	19/10/2018	**Conditions have been updated for the following fields:** - Transaction Price Type; **The following Messages have been updated:** Cancel Replace (06): Investor ID repeating section set to dark blue;
1.2.2	07/12/2018	**Conditions have been updated for the following fields:** - Investor ID; **The following Field has been added:** - New Order (01) and Cancel Replace (06): Clearing Account was added; - Declaration Entry (40) and Declaration Notice (42): Clearing Account and Clearing Account Cross were added; **The following Field was flagged as not applicable:**

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Revision No./ Version No.	Date	Change Description
		- New Order (01), Cancel Replace (06): Account Number was flagged as not Applicable due to size limitation. The same information should now be provided through Clearing Account; - Declaration Entry (40) and Declaration Notice (42: Account Number and Account Number Cros were flagged as not Applicable due to size limitation. The same information should now be provided through Clearing Account and Clearing Account Cross; **The following Field section has been updated:** - 4.3 Not Applicable/Future Use: o The default value to be provided for both Account Number and Account Number Cross was added; o The default value identified to be provided in Dark Execution Instruction field was incorrect (Null Value) this field should be provided with zero (0);
1.2.3	19/12/2018	**The following Messages have been updated:** - Cancel Request (12): Cancel Execution Instruction was renamed into Order Category; - Ownership Request (18), Ownership Request Ack (17), Open Order Request (15), Mass Cancel (13) and mass Cancel Ack (14): Order Category was added and flagged as Not Applicable; **The following section has been updated:** - 4.3 Not Applicable/Future Use: Cancel Execution Instruction was renamed into Order Category;
1.2.4	25/02/2019	**The following field has been updated:** - Account Type and Account Type Cross: authorized values adjusted considering each clients needs – further details provided in the fiel conditions; Kill Reason: values added due to CCM functionality (31, 32, 33);
1.2.5	29/03/2019	**The following field has been updated:** - Kill Reason: value added due to CCM functionality (34, 35); - Clearing Account and Clearing Account Cross: conditions reviewed; **The following description has been reviewed:** **Collar Breach Confirmation (20):** description adjusted to accommodate the confirmation of orders breaching Ownership or Short Selling Limit – Future Use – available on Release 1.5;
1.2.6	24/04/2019	**The following field has been updated:** - Ack Type: values added due to CCM functionality (19, 20); - Declaration Status: values added due to CCM functionality (16); **The following description has been reviewed:** **Collar Breach Confirmation (20):** description adjusted to accommodate the2 new Ack Types concerning Ownership and ShortSelling Confirmation;
1.2.7	16/09/2019	**The following Message has been updated:** - Cancel Replace (06): o Clearing Account is no longer modifiable. Field has been greyed out to be consistent with document rules. o DisplayQty is not modifiable. Field has been greyed out to be consistent with document rules.

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Revision No./ Version No.	Date	Change Description
1.2.8	08/10/2019	**The following message has been updated:** - Logon (100): o The presence of "Last Client Message Sequence Number" in Logon(100) and "Last Message Sequence Number" in Logon Reject (102) has been clarified
1.2.9	04/03/2020	**The following messages have been updated:** - Logon Ack (101), Logon Reject (102): o "Last Client Message Sequence Number" has been flagged as Not Applicable to avoid confusion. The field value is always filled with zero ("0").
1.2.10	16/09/2020	**The following sections has been updated:** - 5.4.1.5 Cancel Replace (06) o Correction of "CancelRequest (12)" to "Cancel Replace (06)" in the condition in which the matching engine uses the Order ID to cancel the order. o Include the Clearing Account field in the message structure - **Clearing account** o Correction to indicate the applicability of the field to Order modification

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ملحق (7)

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OPTIQ COMMERCIAL MDG CLIENT SPECIFICATIONS

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PREFACE

PURPOSE

The purpose of this document is to describe all the specifications of Optiq Commercial Market Data Gateway.

TARGET AUDIENCE

This document must be read by Exchange developing a Market Data Feed Handler.

SCOPE

The scope of this document is listed below (✓ In scope, ✘ Out of scope):

Products	
Equities	✓
Indices	✓

ASSOCIATED DOCUMENTS

Please read the following documents along with these specifications:

- Optiq Commercial Kinematics Specifications
- Optiq Commercial File Specifications

WHAT'S NEW?

Version	Change Description
1.2.15	**The following Section has been updated:** - 3.3 Snapshots: Correction of the example of a late connection to the exchange

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1. OPTIQ COMMERCIAL MARKET DATA GATEWAY SOLUTION

1.1 INTRODUCTION

The Optiq Commercial Market Data Gateway (MDG) provides high-speed, real-time market data for markets.

The data feed has the following high-level features:

- **Multicast technology**
- **Ultra-low latency**
- **Cash & Derivatives message harmonization**
- **Optimized feed for each type of connectivity**
- **High availability**
- **Reliable network solution**
- **High level of scalability**

This document provides detailed information about the features of the feed to support the development of client applications.

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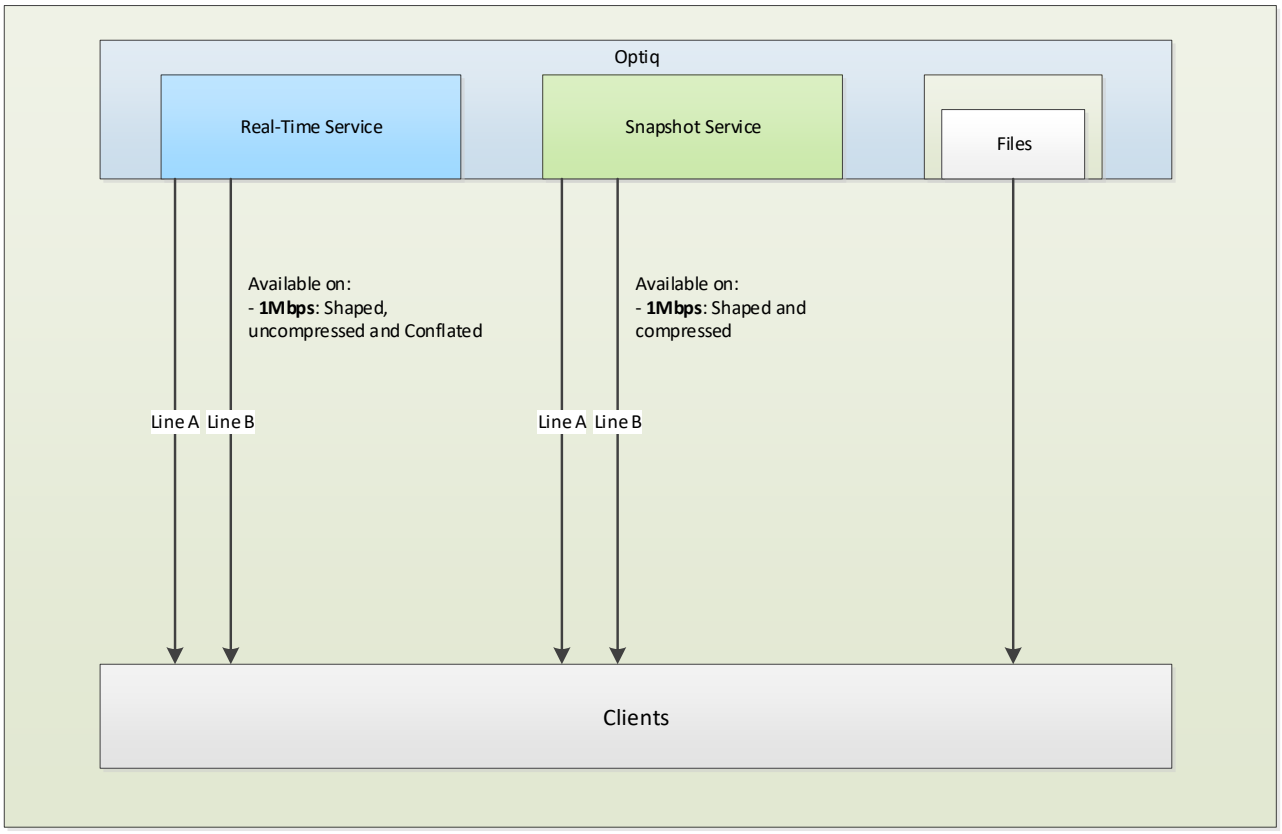
2. MARKET DATA CHANNELS

2.1 ACCESS TO MARKET DATA

The following diagram presents the Optiq Commercial MDG services:



Clients access Market Data as follows:

- **Real-Time service** Clients connect to multicast UDP/IP channels to receive Market Data messages in real-time
- **Snapshot service** Clients connect to multicast UDP/IP channels to receive unsolicited Snapshots sent periodically on dedicated multicast channels to recover from packet loss or for intraday starts.

Market Data are available in the following modes:

- **Unshaped** All messages are sent as fast as possible (service only available on 10 Gbps lines)
- **Shaped** Allow optimized emission of Market Data with low latency, optimized bandwidth use and packet loss prevention (service available on the 1 Mbps, 100 Mbps and 1 Gbps lines)
- **Compressed** Messages are compressed in order to reduce the use of bandwidth (available on 1 Mbps and 100 Mbps lines)
- **Uncompressed** Messages are sent in the original size, no compression is applied

Other methods could be available in the future upon performance analysis study.

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Two recovery mechanisms are available:

- **Line arbitration** Identical packets are sent on two lines (line A and line B). Clients are strongly invited to use this first recovery mechanism in case of message loss
- **Snapshot service** If messages are lost on both lines or if a client connects intra-day

2.2 MESSAGING PROTOCOL AND PUBLISHING MODEL

Real-time and Snapshot Market Data are message-based over the UDP/IP protocol with SBE (Simple Binary Encoding).

This binary encoding is optimized for low latency encoding and decoding while keeping bandwidth utilization reasonably small, and is used across all asset classes.

The process of subscribing to a multicast group ID is also known as "joining" a multicast group. Upon session termination, the member's host system should issue an "unjoin" message. This will terminate delivery of data to that local host network. If a client application terminates without issuing an "unjoin" message, the network will eventually issue a "timeout" for the multicast group subscription that will automatically terminate delivery of the multicast packets to the local host network.

The "join" and "unjoin" processes are standard functions. No specific instructions are provided here, as they are specific to the user's operating system and programming language.

2.3 TYPE OF MARKET DATA CHANNELS

2.3.1 Market Data Channels

The Exchange offers real-time and snapshot Market Data through different channels that clients can subscribe to. Each channel is linked to a unique IP multicast group address and a unique port.

Channels are split according to the following criteria:

- **Asset Class**
- **Real-time or Snapshot** Real-time and snapshot messages are sent through different channels
- **Types of data:**
  - Full Order Book Market Update (FBMU) channel provides full order book depth and BBO using the Market Update message.

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- Full Order Book Order Update (FBOU) channel provides full order book depth using the Order Update message and BBO with Market Update.
- Best Bid and Offer (BBBO) channel will only provide the best limits when they are updated.
- Reference Data and Full Trade Information channel (REFT) provides all instrument characteristics, scheduled phases, market administration messages and trade messages.
- Reference Data and Index Package channel (REFI) provides all instrument characteristics, scheduled phases, market administration messages and Index messages.

- **Shaping** Channels are either unshaped, shaped to 1 Gbps, 100 Mbps or 1 Mbps.
- **Scalability** For performance reasons, a channel can be split into several channels. It is also possible for an instrument to move from one channel to another, although intraday changes will not occur.

2.3.2 Client Connectivity

The subscription to a set of channels depends on the type of client connectivity. For example, if a client has a 1 Mbps line, then he cannot subscribe to the unshaped channels which are only offered on 10 Gbps lines nor subscribe to the shaped BBO channels, which are only available on 1 Gbps lines. 1 Gbps clients cannot subscribe to the unshaped data, which is only available on 10 Gbps lines. Conversely, a client with a 10 Gbps line can subscribe to all available channels like the Full Order Book channels (either unshaped (10 Gbps) or shaped (1 Gbps)) as well as to the compressed, conflated and shaped channels (100 Mbps and 1 Mbps).

2.3.3 Market Data Messages per Channel

Optiq MDG will provide the Full Order Book (FOB) in two different ways based on instrument type:

- **Market by Order** The Long Order Update (1015) message will be disseminated for each new order, modification or cancellation, and is available for Cash Equities.
- **Market by Limit** Aggregated price limits are published using the Market Update (1001) message, and are available for Equity and Index.

The following table provides an overview of all Optiq MDG messages. The aim is to provide a better understanding of the message types per channel table.

Message Name	Message type	Description
Start Of Day	1101	First message of the day sent by the Market Data Gateway
End Of Day	1102	Last message of the day sent by the Market Data Gateway
Health Status	1103	Heartbeat message sent at regular intervals throughout the day
Technical Notification	1106	Informs on the start or end retransmission
Timetable	1006	Scheduled Trading Mode and Phase Types for each instrument
Market Status Change	1005	Indicates the change in the state of an instrument (either scheduled or manually processed)
Standing Data	1007	Provides characteristics for all instruments on Cash
Market Update	1001	Provides information generated by market events, including limit updates and trades

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Message Name	Message type	Description
Long Order Update	1015	Indicates new orders, modifications, cancellations or retransmissions
Price Update	1003	Provides all updated reference prices
Full Trade Information	1004	Contains trade information, including all MiFID II regulatory fields
Real Time Index	1008	Provides all Index-related statistics
Statistics	1009	Provides statistics on prices and volumes on an instrument
Index Summary	1011	Provides index level summaries in closing phases
Start Of Snapshot	2101	Identifies the beginning of a snapshot sequence
End Of Snapshot	2102	Identifies the end of a snapshot sequence

The following table explains which message types are available for each real-time channel:

2.3.3.1 Real Time Channels for Cash

This is composed of: Equities, Funds and Fixed Income.

	1 Mbps Shaped and Uncompressed			
	Pre-trade			Post-Trade
	Full Order Book Order Update	Best Bid and Offer	Full Order Book Market Update	Reference Data[1] and Full Trade Information
Start Of Day (1101)	X	X	X	X
End Of Day (1102)	X	X	X	X
Health Status (1103)	X	X	X	X
Technical Notification (1106)	X	X	X	X
Timetable (1006)				X
Market Status Change (1005)	X	X	X	
Standing Data (1007)				X
Market Update (1001)	X	X	X	
Long Order Update (1015)	X			
Price Update (1003)	X[5]	X[5]	X[5]	X[6]
Full Trade Information (1004)				X
Statistics (1009)				X

[1] Reference Data represents: all instruments characteristics, scheduled phases and market administration messages.

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[2] This message will not provide: New Bid (3)/New Offer (4), Updated Bid (5) /Updated Offer (6), New Bid With Liquidity Provider (58)/New Offer With Liquidity Provider (59), Updated Bid With Liquidity Provider(60)/ Updated Offer With Liquidity Provider (61), New Bid RLP (Retail Liquidity Provider) (16)/ New Offer RLP (Retail Liquidity Provider) (17) and Updated Bid RLP Retail Liquidity Provider) (18)/ Updated Offer RLP (Retail Liquidity Provider) (19).

[5] This message will only provide: Indicative Matching Price (14)

[6] This message will **not** provide: Indicative Matching Price (14)

2.3.3.2 Real Time Channels for Indices

	1 Mbps Shaped and Uncompressed
	Indices
	Reference Data and Index Package
Start Of Day (1101)	X
End Of Day (1102)	X
Health Status (1103)	X
Start Of Snapshot (2101)	
End Of Snapshot (2102)	
Technical Notification (1106)	
Timetable (1006)	
Market Status Change (1005)	
Standing Data (1007)	X
Market Update (1001)	
Long Order Update (1015)	
Price Update (1003)	
Full Trade Information (1004)	
Statistics (1009)	X
Real Time Index (1008)	X
Index Summary (1011)	X

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2.3.3.3 Snapshot Channels for Cash

This is composed of: Equities.

	Shaped and Compressed			
	1 Mbps			
	Full Order Book Order Update	Best Bid and Offer	Full Order Book Market Update	Reference Data[1] and Full Trade Information
Start Of Day (1101)	X	X	X	X
End Of Day (1102)	X	X	X	X
Health Status (1103)	X	X	X	X
Start Of Snapshot (2101)	X	X	X	X
End Of Snapshot (2102)	X	X	X	X
Technical Notification (1106)				
Timetable (1006)				
Market Status Change (1005)	X	X	X	
Standing Data (1007)				
Market Update (1001)	X[2]	X	X	
Long Order Update (1015)	X			
Price Update (1003)	X[5]	X[5]	X[5]	X[6]
Full Trade Information (1004)				X
Statistics (1009)				X

[1] Reference Data represents: all instruments characteristics, scheduled phases and market administration messages.
[5] This message will only provide: Indicative Matching Price (14)
[6] This message will **not** provide: Indicative Matching Price (14)

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2.3.3.4 Snapshot Channels for Indices

	1 Mbps Shaped and Compressed
	Indices
	Reference Data and Index Package
Start Of Day (1101)	X
End Of Day (1102)	X
Health Status (1103)	X
Start Of Snapshot (2101)	X
End Of Snapshot (2102)	X
Technical Notification (1106)	
Timetable (1006)	
Market Status Change (1005)	
Standing Data (1007)	
Market Update (1001)	
Long Order Update (1015)	
Price Update (1003)	
Full Trade Information (1004)	
Statistics (1009)	X
Real Time Index (1008)	X
Index Summary (1011)	X

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3. MARKET DATA GATEWAY FEATURES

3.1 START AND END OF DAY

"Start Of Day" (1101) messages are sent on each channel once the Market Data Gateway starts. These messages will be sent periodically until another MDG message is sent on any channel of an aggregator (please refer to The Market Data Sequence Number paragraph for aggregator description). After the Start of Day messages, the "Health Status" messages (1103) will be sent periodically.

This mechanism guarantees that "Start Of Day" (1101) messages are the first messages sent by MDG.

At end of day, MDG will stop sending messages (including "Health Status" (1103)) and will periodically send "End Of Day" (1102) messages during a specified period before shutting down.

3.2 BOOK RETRANSMISSION

Retransmission is the process used by the Market Data Gateway to retransmit data in real-time to ensure trades and full book consistency. This is used each day to retransmit order books at the start of the day but can also be used intraday to recover from an Exchange failure.

3.2.1 Clear the Book

Before any market retransmission, Optiq MDG will send a clear book request.

- For the first clear book, at the beginning of the day, customers are expected to clear any stored information for any Market Data Update Type received the previous day.
- For any intraday clear book request, customers are expected to clear only the Market Data Update Types related to the specific order book, listed below, and keep all other Market Data Update Type unchanged.

  1 - Best Bid (Cash and Derivatives)
  2 - Best Offer (Cash and Derivatives)
  3 - New Bid (Cash and Derivatives)
  4 - New Offer (Cash and Derivatives)
  5 - Updated Bid (Cash and Derivatives)
  6 - Updated Offer (Cash and Derivatives)
  14 - High Dynamic Collar (Cash Only)
  15 - Low Dynamic Collar (Cash Only)
  63 - Low Static Collar (Cash Only)
  64 - High Static Collar (Cash Only)

- For market by orders, clients will receive an Long Order Update (1015) with Market Data Action Type set to "3 - Deletion of all orders for the given instrument", quantity set to '0' (zero) and all other fields set to null according to the SBE protocol.

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3.2.2 Book Retransmission

Book retransmission consists of resubmitting the depth of the book on real-time channels. This book retransmission occurs:

- Every morning at the start of the day.
- Intraday to recover in case of MDG message loss.

Morning Book Retransmission

The broadcasting sequence is the following:

For each instrument:

1. Clear Book on Long Order Update (1015)
   - Market Data Action Type: 3 - Deletion of all orders for the given instrument
   - Rebroadcast Indicator: 0
2. Clear Book on Market Update (1001)
   - Market Data Update Type: 254 – Clear Book
   - Rebroadcast Indicator: 0
3. Price Update (1003)
   - Market Data Price Type: 12 = Adjusted Closing Price
   - Rebroadcast Indicator: 0
4. Full depth book in Long Order Update (1015)
   - Market Data Action Type: 5 - Retransmission of all orders for the given instrument
   - Rebroadcast Indicator: 1
5. BBO in Market Update (1001)
   - Market Data Update Type: 1 - Best Bid and 2 - Best Offer
   - Rebroadcast Indicator: 1
6. Full depth book in Market Update (1001)
   - Market Data Update Type: 3 - New Bid and 4 - New Offer
   - Rebroadcast Indicator: 1
7. Collars in Market Update (1001)
   - Market Data Update Type: 14 - High Dynamic Collar and 15 - Low Dynamic Collar
   - Market Data Update Type: 63 - Low Static Collar and 64 - High Static Collar
   - Rebroadcast Indicator: 1
8. Technical Notification (1106)
   - Technical Notification Type: 3 – Instrument Book Retransmission End
   - Rebroadcast Indicator: 1

Intraday Book Retransmission

In case of HA, a Market Update (1001) or Long Order Update (1015) message will be sent for each instrument, respectively filled with Market Data Update Type = “254 - Clear Book” or Market Data Action Type = “3 - Deletion of all orders for the given instrument”. Then the full book depth will be resent with “Rebroadcast Indicator” set to “1”.

For Market Update messages (1001): limits will be aggregated and the Market Data Update Type field will be “5 - Updated Bid” or “6 - Updated Offer” (or “Updated Bid/Offer RLP” etc.).

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For Long Order Update messages (1015): each order will be resent with Market Data Action Type = “5 - Retransmission of all orders for the given instrument”.

3.3 SNAPSHOTS

Snapshot is a service providing an image of the market data at a giving time of the day to allow clients to recover from packet loss or for intraday starts. Customers can ‘hop on’ (connect) and ‘hop off’ the Snapshot multicast channels as needed.

Each real time channel has a matching snapshot channel. Real time channels giving the same information through different bandwidth speed share the same snapshot channel. An image contains all instruments broadcasted on this channel.

An image sent in the snapshot is linked to real time with the Last Market Data Sequence Number from the real time channel.

This broadcasted image of all channels of an aggregator (see section on Market Data Sequence Number) is a snapshot sequence and cannot be sent more than 1 every 2 seconds. The order of each channel images in a snapshot sequence is fixed for a day but can change from 1 day to another.

They will use the same messages as real time messages with Rebroadcast indicator set to “1”.

Here are the snapshot sequences for Cash and Indices.

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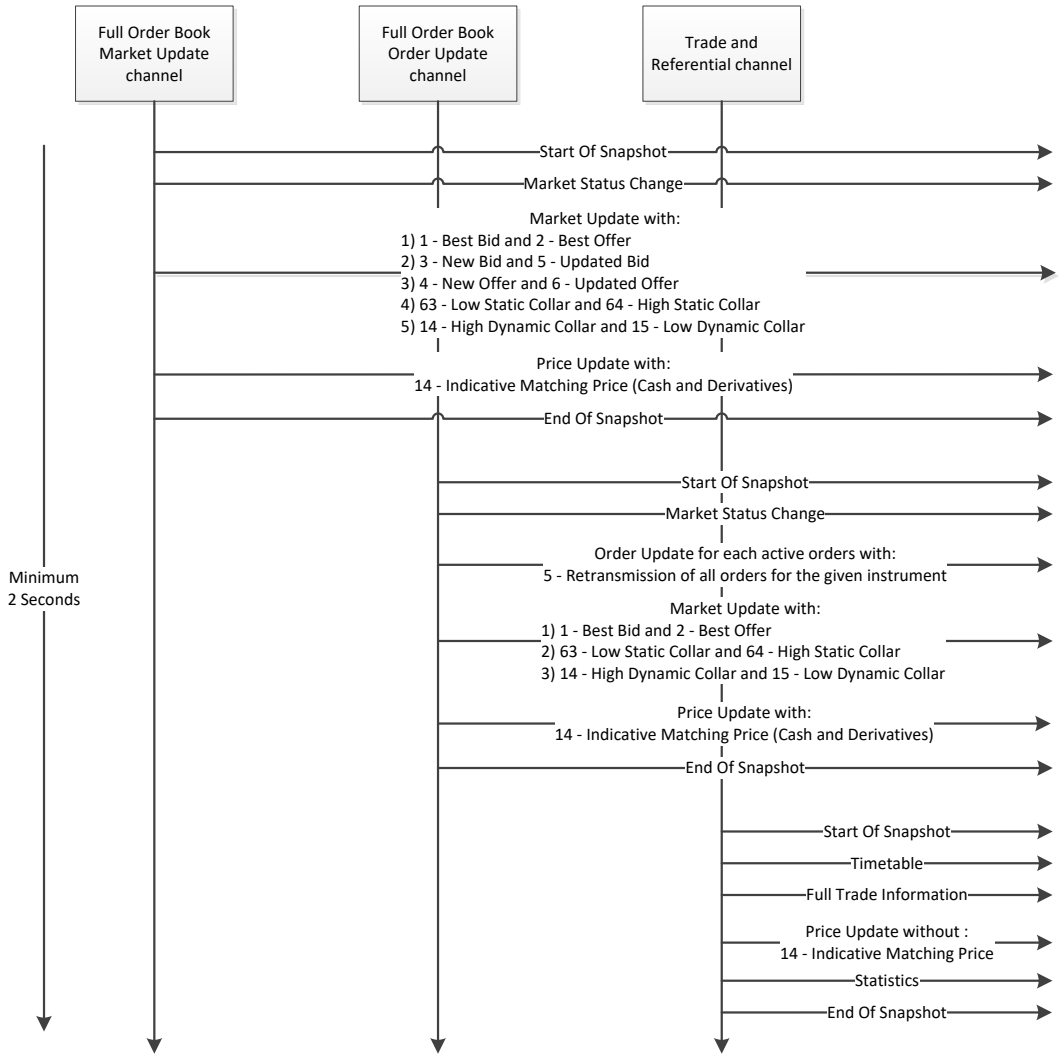
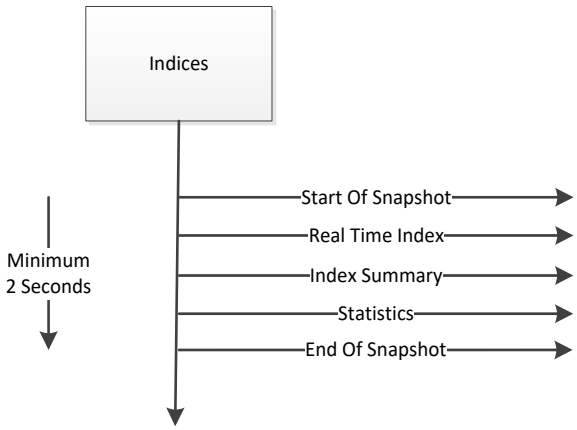
- Snapshot sequence for Cash:



- Snapshot sequence for Indices:



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Both “Start Of Snapshot” and “End Of Snapshot” messages contain the last “Market Data Sequence Number” of the last real-time message taken into account by the snapshot (see Sequence Numbers and Snapshot Sequence behaviour for explanations on the “Market Data Sequence Number”). This last MDSN has been sent on each channel speed.

In the 2 following situations:

- Late connection to the exchange
- Loss of packets on both lines A and B

Members have to process as follow:

- Clear all the market data sent on this channel.
- Listen to the real time channel and start queuing all messages.
- Identify the lowest MDSN from real time feed.
- Wait for a Start Of Snapshot with a “Last Market Data Sequence Number” that is higher or equal to the MDSN identified just before on real time. Otherwise the Snapshot might not contain all the missing messages.
- Listen to the entire snapshot image until the End Of Snapshot.
- Discard all the real time messages with a MDSN lower or equal than the Last Market Data Sequence Number of the Start or End Of Snapshot message.
- Integrate all the remaining real time messages into the snapshot image.
- Keep listening real time as normal.

If in the snapshot a packet is missing, then try to get this packet from the second line. If it has not been retrieve with the second line then use the next snapshot for this channel.

It is important to note that since the Market Data Sequence Number of snapshot channels does not necessarily increment by 1, the sequence number in the start or end snapshot messages might belong to another channel, and was in fact not actually lost. In order to correctly identify which packets are indeed lost, please refer to section Gap Detection and Line Arbitration.

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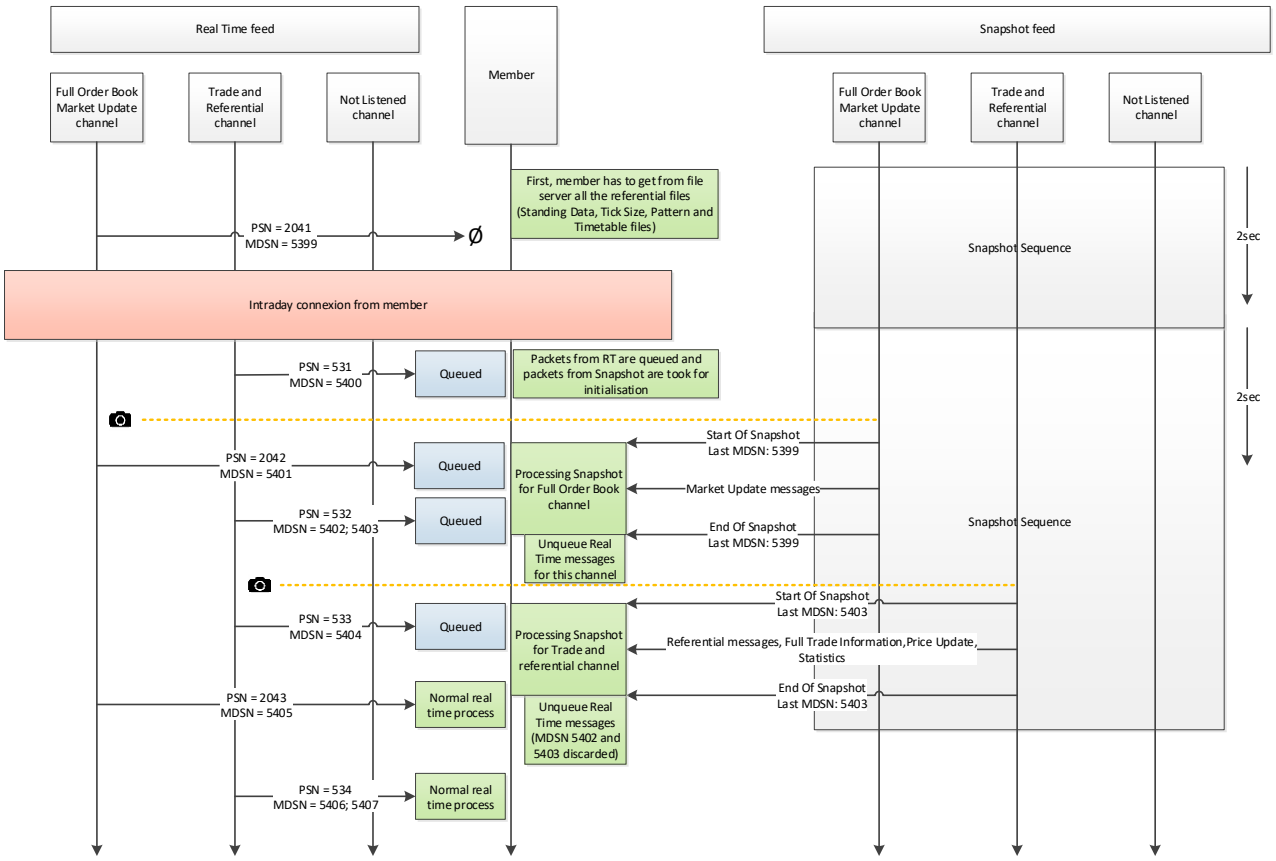
- Example of a late connection to the exchange:



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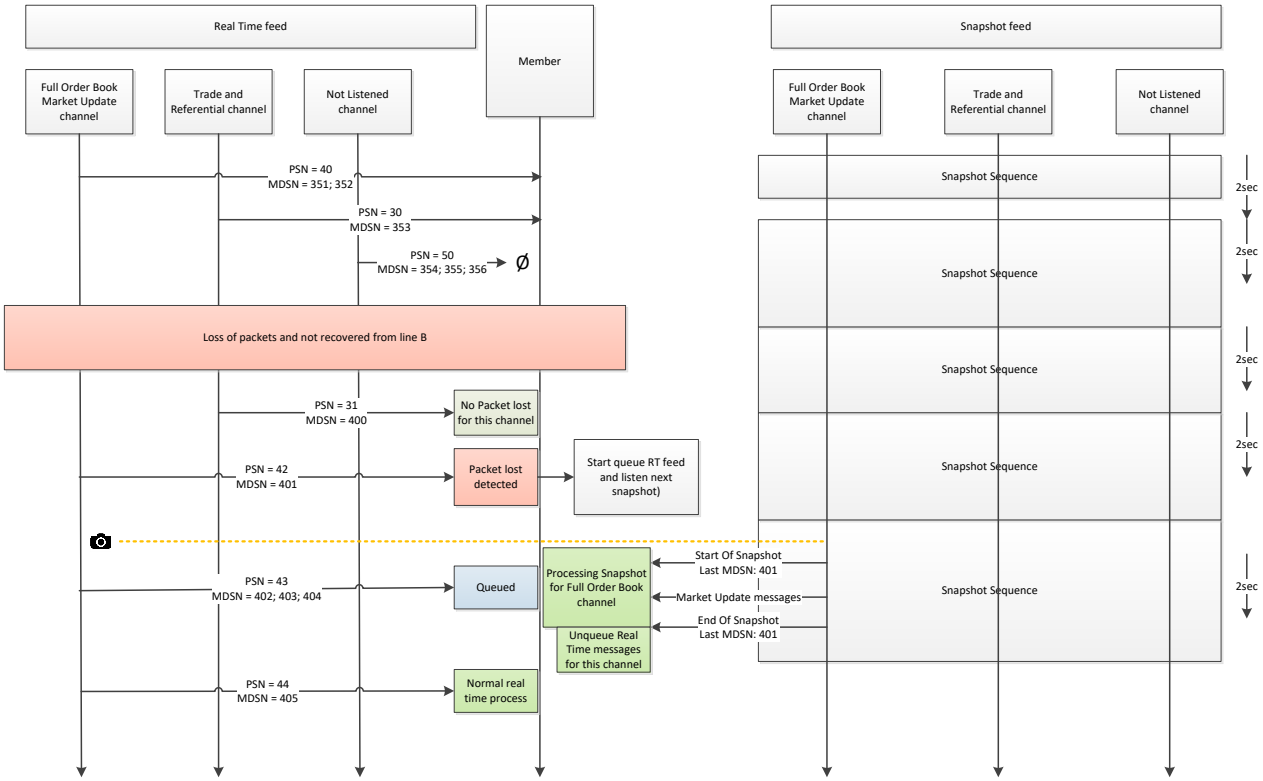
- Example of a packet loss:



- How to use information type

MDG offers another mechanism in the snapshot to resynchronize only for a subset of the information whatever the Symbol Index.

These information are functionally gathered into information type:

- For Market Update, the information types are BBO, Implied Limits, Full Depth, Collars (Please refer to the table below in this section to have all the Market Data Update Type for each Information Type)
- For the other messages, every message type is in a single information type (ex: all the Long Order Update messages are in the information type “Order Update”)

For example, if members are only interested into the information type BBO and they have lost a packet in the real-time and they have to use the snapshot to recover, they can detect if the lost packet was containing BBO information.

To do so, members have to look at the Market Data Sequence Number (MDSN) of snapshotted messages. If for one information type, the MDSN in a snapshot message is lower or equals to the MDSN of a message received in real time (for this information type), it means that no messages have been lost for this information type.

The following table provides the exact mapping between Market Data Update Types and Information Types.

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Market Data Update Type	Information Type
1 - Best Bid (Cash and Derivatives)	BBO
2 - Best Offer (Cash and Derivatives)	
3 - New Bid (Cash and Derivatives)	Full Depth
4 - New Offer (Cash and Derivatives)	
5 - Updated Bid (Cash and Derivatives)	
6 - Updated Offer (Cash and Derivatives)	
14 - High Dynamic Collar (Cash Only)	Collars
15 - Low Dynamic Collar (Cash Only)	
63 - Low Static Collar (Cash Only)	
64 - High Static Collar (Cash Only)	

Members that connect late just have to take the full snapshot and synchronize with real-time.

Example 1:

If members have the following from the real time:
MDSN for BBO = 98
MDSN for Full Depth = 80
MDSN for Collars = 45

And if in snapshot the Last Market Data Sequence Number is 100 with:
MDSN for BBO = 100 (meaning all the Market Data Update Type with a value that matches BBO Information Type have a MDSN equal to 100)
MDSN for Full Depth = 80
MDSN for Collars = 45

It means that members need to recover all the BBO Information Type but not Full Depth and Collars.

Example 2:

If the last Market Status Message (1005) message sent had MDSN 80, then all Market Status Message (1005) messages in snapshot have MDSN 80

Example 3:

If the last Best Bid sent has MDSN 1000 in the real-time channel, then all Market Update message for Best Bid and Best Ask updates (types 1 and 2) will have MDSN 1000 in the snapshot too.

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3.4 CONFLATION

Performance analysis studies will be conducted in order to assess the need and the type of bandwidth optimization.

3.5 COMPRESSION

Optiq MDG will use LZ4 compression in block mode with no headers. It will be available for real-time market data used on low bandwidth connections (1 Mbps) and for all snapshots. Only the body of the Market Data packets will be compressed, excluding the packet header. It should be noted that a compressed market data packet can contain several different messages, which are all compressed into a single packet.

On compressed channels, it is possible to have compressed and uncompressed packets. The compression flag in the packet header defines if the packet is compressed or not.

The maximum extracted packet size cannot be greater than 8192 bytes.

Please see Appendix A: Disclaimers for LZ4 disclaimers.

3.6 SHAPING

- **Optiq MDG Traffic Shaping**

Optiq MDG Traffic shaping is used for 1 Mbps connections on real-time and snapshot market data. Traffic shaping by Optiq MDG is used to:

- Optimize the use of available bandwidth on 1 Mbps connections
- Prevent packet loss: Optiq MDG will keep track of what is being sent out per millisecond and will use this information to guarantee packets will be sent respecting the available bandwidth
- Guarantee performance available on 1 Mbps connections
- Minimize latency

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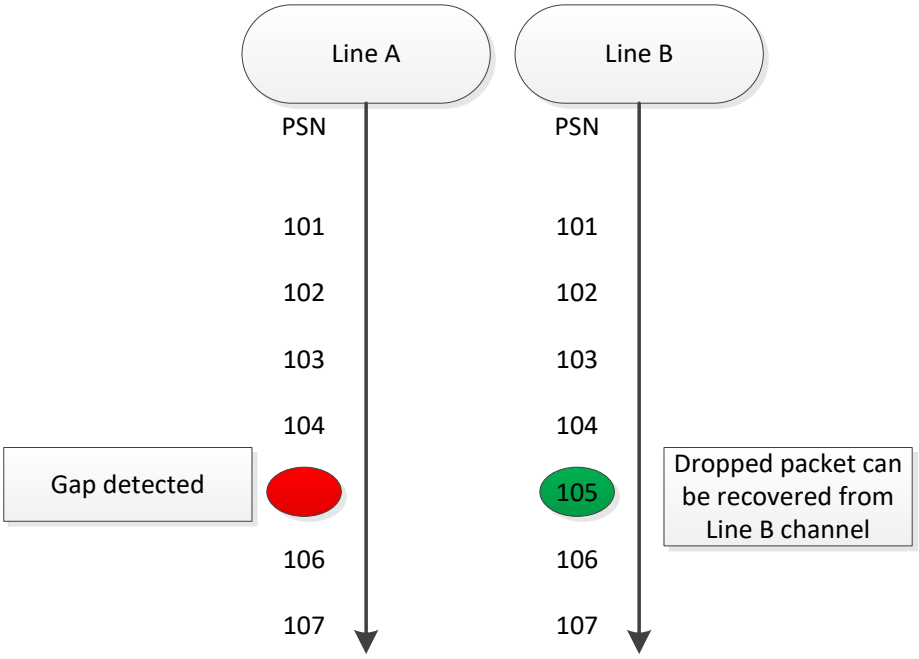
3.7 GAP DETECTION AND LINE ARBITRATION

The Packet Sequence Number (please see Market Data Packet Header) should be used to detect gaps in the transmission of packets.



Using this method, a lost packet can be recovered from the second line. In case of packet loss on both lines, then the snapshot mechanism should be used.

UDP packets can potentially arrive unordered and potentially sent twice. As such, systems should be able to reorder the packets and detect duplicate packets.

3.8 SYSTEM FAILURES

- High Availability

The High Availability (HA) functionality of Optiq MDG is set up to ensure that there is no loss of service during an outage on the primary publisher, such as a hardware failure. Failover to a secondary publisher can be identified by the change of sequence in the Packet headers (the Packet Sequence Number restarts to “1” and bits between 1 and 3 in the “Packet Flags” field increase by “1”. Keep in mind that these 3 bits can overflow and it will result with a “0” again). The HA failover is designed to be as transparent as possible, and multicast groups and ports will not change. However, there are specific details that must be considered.

When a market data source restarts and is not able to keep its sequential behaviour, the Market Data Gateway initiates a new start sequence for this source. The Market Data Gateway then sends an order book retransmission sequence, and a list of corrected trades asynchronously inside the real-time channel used for trades. These messages are flagged as a retransmission (rebroadcast Indicator set to “1”).

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As the system is asynchronous, some trades might be lost in case of a matching engine failure. Therefore, the trade retransmission should be used to update the status of each trade that is resent, to complete trades not already taken into account, and even in certain cases, to indicate that some trades should be removed.

Please refer to Book and Trades Retransmission to have all details on how books and trades are retransmitted.

In case of a MDG restart:

- Clients have to use the “Packet Flags” field (bits 1 to 3) to maintain a unique Packet Sequence Number for the trading day.
- On real-time channels the Market Data Sequence Number (MDSN) is reset to 0 and first functional message that MDG receives gets MDSN 0 and higher.
- Messages that will be sent in snapshots, while there is no message to be resent in real time, will have a MDSN set to "0" (so several messages inside a snapshot can share the same MDSN).
- Clients need to take into account that the Last Market Data Sequence Number (LMDSN) in first Start and End Of Snapshot messages are set to ‘0’ and not set to ‘null’ as at start-up of MDG.

- Disaster Recovery Site

In order to mitigate any serious outage in the primary data centre, a secondary data centre is online in standby mode.

Clients should ensure that all configurations surrounding the secondary data centre are included, as described in the Optiq Commercial Market Data Gateway Production or External User Acceptance Environment document.

- Client System Failure

Real-time and snapshot market data will be available on two different multicast groups, and will allow clients the possibility to set up more than one receiving system processing the same data. In case of client system failure, the backup client system should continue to process the real-time and snapshot data sent on the second multicast group.

3.9 TRADE RETRANSMISSION

Trade retransmission will only be used in case of internal MDG message loss and will be sent on the real-time channels. The retransmission will always start with the “Technical Notification” message (1106) with “Technical Notification Type”: “Trade Retransmission Start” (10) and contains the “Retransmission Start Time” and the “Retransmission End Time” fields. These times define a time window: all trades previously received with an “Event time” included in this time window must be considered invalid. A new “Full Trade Information” message (1004) with the “Rebroadcast Indicator” field set to “1” will be sent. The trade retransmission ends with the “Technical Notification” message (1106) and “Technical Notification Type”: “Trade Retransmission End” (11).

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Note: if for a time window that contains trade(s) on real-time feed but no “Full Trade Information” (1004) are rebroadcasted in between the “Technical Notification” (1106) messages, then members have to remove the trade(s) received in real-time.

3.10 HEALTH STATUS MECHANISM

The Health Status messages will be broadcasted on all channels repeatedly during the day, from the time the Standing Data messages are broadcasted until the End of Day messages are sent. The Market Data Sequence Number for this message will be the last Market Data Sequence Number of the message sent by the aggregator of this channel (please be advised that this message can have been sent on another channel managed by this aggregator).

Please for aggregators and detailed description, refer to: the Market Data Sequence Number.

For Snapshot, please refer to: Technical messages in Snapshot channels.

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4. MESSAGING PROTOCOL

4.1 OVERVIEW

MDG messages will be sent within a Market Data Packet that will be broadcast using multicast UDP/IP standards. A Market Data Packet will be composed of N complete messages. A single message will never spread across multiple packets.

The maximum length of a packet is 1400 bytes and does not include UDP/IP protocol fields.

Each message is enriched with a "Frame" field followed by a SBE header. The "Frame" field contains the length of the message including the length of the "Frame" and "SBE header" fields. The following diagram shows the structure of a packet:

<table>
<tr><td colspan="11">IP</td></tr>
<tr><td rowspan="3">Header IP</td><td colspan="10">UDP</td></tr>
<tr><td rowspan="2">Header UDP</td><td colspan="10">Packet</td></tr>
<tr><td rowspan="2">Market Data Packet Header</td><td colspan="8">1st SBE Message</td><td>Next SBE Message(s)</td></tr>
<tr><td rowspan="2">Frame</td><td rowspan="2">SBE Header</td><td rowspan="2">Block</td><td colspan="5">Repeating Section 1</td><td>…</td></tr>
<tr><td>Repeating Section Header</td><td>Rep. Sec. 1.a</td><td>Rep. Sec. 1.b</td><td>…</td><td>Rep. Sec. 1.n</td><td>…</td></tr>
<tr><td>n bytes</td><td>8 bytes</td><td>16 bytes</td><td>2 bytes</td><td>8 bytes</td><td>n bytes</td><td>2 bytes</td><td>x_1 bytes</td><td>x_1 bytes</td><td>…</td><td>x_1 bytes</td><td>…</td></tr>
</table>

Client applications should check that the length of the Market Data Packet (indicated in the UDP datagram) matches $16\ bytes\ (Packet\ Header\ size) + \sum message\ size\ (indicated\ in\ the\ Frame\ field)$. If not, then the packet should be considered corrupted.

A message can contain n repeating sections for a trading event but clients should not base algorithms on repeating sections since these repeating sections can also be in n messages.

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4.2 MARKET DATA PACKET HEADER

The packet header is described below:

Field	Description	Length	Values
Packet Time	Time when the packet is pushed to the clients (Time in number of nanoseconds since 01/01/1970 UTC).	8 bytes	From 0 to 2^64-1
Packet Sequence Number (PSN)	Each channel has its own PSN sequence. Starting from 1 at every MDG start and increasing by step of 1. In case of overflow (over 4.2 billon) Packet Flags will increase for bits 4-6. With this mechanism the PSN has 35 bits available.	4 bytes	From 0 to 2^32-1
Packet Flags	Used to flag information: - Bit 0: Compression - 0 = body of the packet is not compressed (the body is the packet without the packet header) - 1 = body of the packet is compressed - Bit 1 to 3: will be set to 0 every morning and incremented for each restart of MDG in the same day (wrapping to 0 if the field overflows) - Bit 4 to 6: used if the Packet Sequence Number (PSN) goes over (2^32)-1. They are PSN high weight bits - Bit 7: is set to 1 when in the packet there is a Start Of Snapshot (2101) message, 0 otherwise - Bit 8: is set to 1 when in the packet there is a End Of Snapshot (2102) message, 0 otherwise - Bit 9: is set to 1 when in the packet there is a Health Status (1103) message, Start Of Day (1101) message or End Of Day (1102) message, 0 otherwise - Bit 10 to 15: for future use.	2 bytes	From 0 to 2^16-1
Channel ID	Identifies the channel.	2 bytes	From 0 to 2^16-1

Client applications should check that the length of the Market Data Packet Body matches the sum of message sizes (indicated in the Frame field). If not, then the packet has to be considered corrupted.

The Market Data Packet Body size is also the:

- UDP datagram payload size minus 16 bytes for Packet Header size
- Uncompressed body size if the packet was compressed

Note: The Packet Header will not be compressed in compressed messages.

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4.3 SBE MESSAGE STRUCTURE

A Market Data message is composed of the following parts:

SBE Message Structure								
Frame	SBE Header	Block	Repeating Section 1					...
			Repeating Section Header	Rep. Sec. 1.a	Rep. Sec. 1.b	...	Rep. Sec. 1.n	...
2 bytes	8 bytes	n bytes	2 bytes	x_1 bytes	x_1 bytes	...	x_1 bytes	...

The maximum length of a message is 1384 bytes (maximum packet length (1400 bytes) minus the packet header length (16 bytes)).

The SBE Header is defined as follows:

Field	Description	Length	Values
Block Length	Length of the block. The Block is the message without the repeating sections. This is useful for new message versions in case the exchange adds fields at the end of the block. Clients will be able to process the block fields and identify where the repeating sections starts.	2 bytes	From 0 to 2^16-2
Template ID	Identifier of the message template. This is the **message type** of the Market Data messages.	2 bytes	From 0 to 2^16-2
Schema ID	Identifier of the message schema that contains the template. Used to differentiate exchange Specifications.	2 bytes	From 0 to 2^16-2
Schema version	Version of the message schema in which the message is defined. Used to add messages and/or modify some others.	2 bytes	From 0 to 2^16-2

The Repeating Section Header is defined as follows:

Field	Description	Length	Values
Repeating section header	Defines how many times the repeating section is repeated and the length in bytes of a repeating section. It is set to “0” if there is no repeating section.	2 bytes (the first byte for the length and the second byte for the count)	From 0 to 254 for both

A Schema ID is composed of Template IDs (or message types) and each Template ID has its own Schema version (message version).

Please note that the SBE Header and Repeated Section Header must be present on the wire for each message (SBE Repeated Section Header only for messages that have a repeated section), but for readability purpose it is not represented in the message structures in this document.

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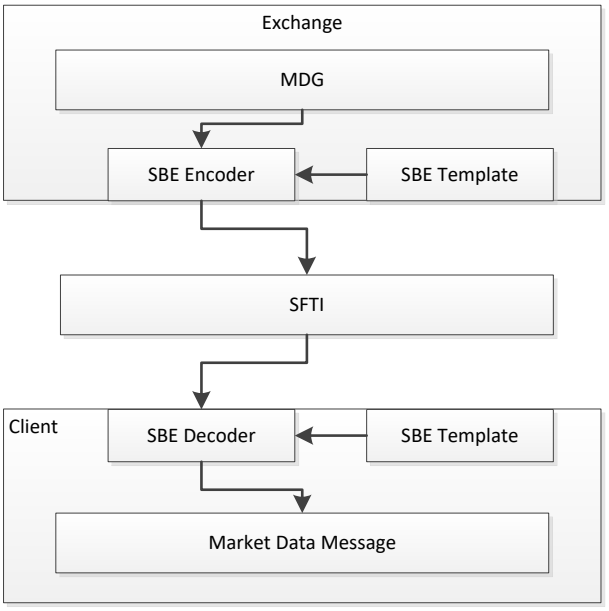
The Exchange provides SBE Template XML files that contain all message types supported by MDG. Client systems can decode SBE messages from MDG using the schema and template files as below:



4.4 SBE BACKWARD AND FORWARD COMPATIBILITY

The aim of backward and forward SBE compatibility is to allow members to choose to update to the latest SBE version or remain in previous versions.

To do so, the main element is the SBE version provided in SBE Template file. This SBE version is in the attribute: “version”. In addition, each changes on message, field or possible value (for enumerated or bitmap) in the SBE Template file, are flagged with attributes:

- sinceVersion for additions
- deprecated for removals

Each above attributes will be set with the value of the SBE version when the change occurred. So their value cannot be greater than the SBE version.

It is crucial for members to check for each new SBE Template if the compatibility is insured and until which version in order to update if necessary.

These compatibilities are not insured for:

- New field added wherever except the end of the block or the repeated section
- Existing field length changed
- Field, message or possible value name changed

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- For enumerated field, if the value is changed (example: in field “EMM”, value Not Applicable changes from 254 to 99)

The following describes the mechanism for each compatibility:

- New field compatibility

Consider SBE version is set to 5.

If in a message a field has been added at the end of the block and before the repeated section with “sinceVersion = 5” then members that are not interesting by this new field can ignore it.

To ignore it, members are using the SBE Version 4 (or lower) that has not this new field. Therefore, the block length in the SBE header does not include the field added in version 5. Then SBE Decoder when processing the new message will process all fields inside the block length in SBE version 4 and ignore the new fields in version 5 to continue processing the message with the repeated section header.

Same logic is used for field added at the end of the repeated section. The length of the repeated section is in the Repeated Section Header and it is not the same size between version 4 and 5.

- New possible value compatibility

If a new possible value is added in SBE version 5, it will be flagged with “sinceVersion = 5”. Members that are not interested by this new possible value will potentially receive this new value but will have to define a specific behaviour. They can for example ignore it.

- New message compatibility

In case a new message is created and until the member wants to use it by updating the SBE version, this message will be ignored.

- Removals

The field or message or possible value will still be sent with a coherent value in order to ensure the compatibility, and will be flagged with the attribute “deprecated”.

NOTE: In case the SBE compatibility is broken, client will be made aware in timely manner.

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5. MESSAGE OVERVIEW

5.1 TECHNICAL FORMAT FIELDS

The field formats contained in the messages will adhere to these rules:

- Binary data are in Intel byte order (Little-Endian).
- All integers are unsigned numeric or signed binary using two's complement method.
- All message fields will be sent for every message. Only their value will be broadcasted (field names in this document are only for reference purpose).
- All field sizes are fixed and constant.
- Segmentation of messages across packets will not be supported, so a message will never straddle a packet boundary.
- Even if it is not always mandatory to be able to process last message version (Schema Version), it is mandatory to check each update for important or regulation updates.

If a mandatory field is received with a null value, then the member has to process this as an error.

NULL VALUES

- SBE allows optional fields with a null value. The applicable NULL value is defined in the SBE Template file. In message and field specifications, only the not null values are indicated in the "Values" column.
- All text fields (Text and Alphanumerical Id that have more than 1 character) have a specific null value that is not defined in SBE Template. This null value is binary 0 (/0) for each character.
- All "Alphanumerical ID" and "Text" fields are alphanumeric based on UTF-8, left aligned and null padded (\0).

Format fields	Description	Null value
Alphanumerical ID	String type identifying an element, left aligned and completed with null padding (\0).	Each character is a UTF-8 null code point (\0)
Amount	Signed or unsigned numerical field representing the price multiplied by the quantity. See the description in Price, Quantity, Ratio And Amount Formats.	Null value defined in SBE Template
Bitmap	Array of bits, each bit specifying whether an optional value is present (set to "1") or not (set to "0") (in Little-Endian). E.g. For the Trade Qualifier bitmap field if its bit in position zero (0) is set to one (1) then it defines the trade as an Uncrossing Trade. In the same time bit in position one (1) can also be set to one (1) which will in this case indicates that this is also a First Traded Price.	No null value
Boolean	This field acts as an enumerated field with the possible values 0 (false), 1 (true) or null value.	Null value defined in SBE Template
Date	Date of an event (in number of days since 01/01/1970 UTC - 01/01/1970 is the day "0").	Null value defined in SBE Template

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Format fields	Description	Null value
Decimal Places	Number of decimals associated to a numerical field. See the description in Price, Quantity, Ratio And Amount Formats.	Null value defined in SBE Template
Enumerated	Information having a delimited set of possible values.	Null value defined in SBE Template Note: The null value here depends on the technical type which can be unsigned integer or character.
Epoch Time in Nanoseconds	UTC Timestamp indicating the number of nanoseconds since epoch (January the 1st 1970).	Null value defined in SBE Template
Integer Time in hhmmss	UTC Timestamp using an integer to define the time as hhmmss.	Null value defined in SBE Template
Intraday Time in Seconds	UTC Timestamp indicating the number of seconds since the beginning of the day.	Null value defined in SBE Template
Numerical	Generic numerical field on unsigned integer.	Null value defined in SBE Template
Numerical ID	Numerical field identifying an element.	Null value defined in SBE Template
Price	Signed numerical field representing a price. See the description in Price, Quantity, Ratio And Amount Formats.	Null value defined in SBE Template
Quantity	Unsigned numerical field representing a quantity of elements (for example a number of shares). See the description in Price, Quantity, Ratio And Amount Formats.	Null value defined in SBE Template
Sequence	See the description in §5.4 - Sequence Numbers.	Null value defined in SBE Template
Signed Numerical	Generic numerical field on signed integer.	Null value defined in SBE Template
Text	Text in UTF-8, left aligned and completed with null padding (\0).	Each character is a UTF-8 null code point (\0)

5.2 NOT APPLICABLE / FUTURE USE

In preparation for various functionalities expected to be implemented in the future on Optiq a number of messages and fields were added and flagged “For Future Use”.

Details of functionalities flagged in the specifications as for ‘Future Use’ or ‘Not Applicable [N/A]’ are provided for information purposes only, and may change significantly until such time as the finalised specifications for the relevant service are communicated to clients.

The associated messages and effective use of fields will not be technically supported. Use of these fields in inbound messages will lead the message to be rejected by the system.

This behaviour applies to:

- **Fields** flagged as ‘For Future Use’, ‘Pending Regulatory Approval’ ot ‘Not Applicable [N/A]’;
- **Values** flagged with ‘[D]’;

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Note: Fields and Values for future use or not applicable, in the messages structures, are represented in *italic, grey and with [N/A] preceding the field description*

5.3 DATE AND TIME CONVENTIONS

Times and Timestamps are expressed in UTC (Universal Time, Coordinated) and are synchronised using Precision Time Protocol (PTP). They are defined in number of nanoseconds since 01/01/1970 UTC based on Unix Epoch or number of seconds since the beginning of the day.

Phase Time and Scheduled Event Time for cash are expressed in an unsigned integer 32 to define a time in hhmmss UTC. Thus this time is in the range 0 to 235 959. Each time 60 (seconds) is reached, it increments the hundreds by 1 and seconds are reset to 0. The same apply every 60 minutes (or for each increments of a second when we have 59 minutes and 59 seconds), it increments the 10 thousands by 1 and reset all the inferior figures to 0.

Example: if we have 25959 (2h 59m 59s), the next second will be 30000 (3h 0m 0s).

Dates are defined in number of days since 01/01/1970 UTC (01/01/1970 is the day “0”).

Dates and Times formatted for ESMA reporting (MiFID II) are defined with a 27 bytes character string following ISO 8601:

YYYY-MM-DDThh:mm:ss.ddddddZ.

Where:

- “YYYY” is the year.
- “MM” is the month.
- “DD” is the day.
- “T” is a constant letter used as a separator between “YYYY-MM-DD” and “hh:mm:ss.ddddddZ”.
- “hh” is the hour.
- “mm” is the minute.
- “ss.dddddd” is the second and its fraction of a second.
- “Z” is a constant letter standing for UTC time.

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5.4 SEQUENCE NUMBERS

The feed contains two sequence numbers:

5.4.1 The Packet Sequence Number (PSN)

The Packet Sequence Number (PSN) is part of the packet header and should be used for UDP gap detection and packet ordering. Each channel has its own PSN sequence.

5.4.2 The Market Data Sequence Number

Aggregators are MDG internal components that are dealing with a set of channels. The Market Data Sequence Numbers are managed at the aggregator level. Each one of them has its own sequence, starting from 0 and incrementing by step of 1 along the day. Since clients may listen to only a subset of the channels managed by one aggregator, they won't see all the Market Data Sequence Numbers in the messages they get from the channels they listen to. Therefore on one channel the Market Data Sequence Numbers will increment all along the day but not necessarily by step of 1.

The behaviour of the Market Data Sequence Numbers for the following messages is different. Please refer to their message definition for further explanations:

- "Start Of Day" (1101)
- "End Of Day" (1102)
- "Health Status" (1103)

Reminder: For gap detection: please use the Packet Sequence Number (PSN).

5.5 PRICE, QUANTITY, RATIO AND AMOUNT FORMATS

All prices must be processed with two values: the price value in an integer and its scale code. Each instrument must be linked to the associated Price / Index Level Decimals from the Standing Data message or file.

Prices must be calculated according to the following formula:

$$\text{Price} = \frac{Integer}{10^{\,Price/Index\ Level\ Decimals}}$$

For example, a price of 27.56 can be represented by an Integer of 275600 and a Price / Index Level Decimals of 4.

Only 2 prices are not using the generic field above: "Issue Price" and "Strike Price". Since these fields have decimals computed instrument per instrument, they have a dedicated decimal location field that are respectively: "Issue Price Decimals" and "Strike Price Decimals".

Note 1: The same mechanism is used for:

- All quantities with Quantity Decimals
- All ratios and percentages with Ratio / Multiplier Decimals

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- All amounts with Amount Decimals

Note 2: Prices, quantities and amounts for MiFID 2 do not follow this Price / Index Level Decimals behaviour. The complete format is described in the Field Description.

5.6 INSTRUMENT TICKS

- For Cash instruments:

A Tick Size Index Identifier, within the Standing Data message (1007) and Cash Tick Size Referential File, will link the instrument to a tick table (only in file). This tick table gives a security the "Tick Size Index ID" to apply the base range of the entered price.

The same logic applies on EDSP (Exchange Delivery Settlement Price) with the Instrument EDSP Tick Size and on the Settlement Prices (at maturity) with Instrument Settlement Tick Size.

5.7 INSTRUMENT IDENTIFIERS

An instrument is identified by its Symbol Index.

5.7.1 Symbol Index

The Symbol Index is assigned by the exchange and will not change over the lifetime of the instrument, nor used again after instrument expiration.

Any Corporate Action leading to a change of ISIN will lead to change of Symbol Index. These Corporate Actions are generally part of the mandatory reorganisation events; the most frequent ones being stock split, reverse stock split, change of name / denomination. However the ISIN change is not systematic and will be in any case communicated upfront through the Euronext Corporate Action notices.

The following rules apply to the Symbol Index:

Symbol Index value	Used for
From 1 to 99,999	Indices
From 1,110,000 to 9,999,999	Cash

The standard security identifier (for example ISIN), mnemonic, tick size, instrument name and other instrument characteristics are carried only in the Standing Data message (1007) and in the Standing Data files on servers. As such, the client applications must link the Symbol Index which is sent in all messages, with other instrument characteristics present in the Standing Data messages or files.

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6. HOW TO …

6.1 … PROCESS CANCELLATIONS

6.1.1 Trade Cancellation

The trade will be cancelled with all the details of the trade in:

- Market Update (1001) message with Market Data Update Type “50 – Trade Cancellation”. It will not be possible from this message to make the link with the original trade.
- Full Trade Information (1004) with Trade Type “24 – Trade Cancellation”. All other fields will be set with original trade details.

6.1.2 Order Cancellation with Long Order Update message

For an order deletion an Long Order Update (1015) message is sent with a Market Data Action type set to “2 - Deletion of order identified by Previous Priority” with the Previous Priority set to identify the order to remove from the book. Price and Order Priority will be set to the null value and quantity set to ‘0’. Order side and order type will be populated according to the deleted order.

6.1.3 Limit Cancellation with Market Update message

In the Market Update message, if there is no more volume for a given price, the limit will be updated with an “Updated Bid” or “Updated Ask” with the quantity set to ‘0’.

If the BBO has no more volume, then it will be updated with a “Best Bid” or “Best Offer” with quantity set to ‘0’. If the book side is empty, the BBO will be sent with Price set to null according to the SBE protocol and quantity ‘0’. It will be followed by a limit update with the price of the limit to update and quantity set to ‘0’.

6.2 … DETERMINE THE MESSAGE TYPE

Each message has a type that uniquely defines its structure and its content, and is represented by a numeric identifier. For example the message “Market Update” has the type “1001”. In the SBE message header the “Template ID” field contains this type (see SBE Message Structure).

6.3 … DETERMINE THE NUMBER OF REPEATING SECTIONS IN A MESSAGE

The number of repeating sections is defined in the second byte of the “Repeating Section Header” (see SBE Message Structure).

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6.4 … DETERMINE THE LENGTH OF A PACKET

The length of the packet is set in the UDP header. It includes the UDP header length.

6.5 … DETERMINE THE LENGTH OF A MESSAGE

The length of a message (including the length of the “Frame” and “SBE header” fields) is in the field “Frame” (see 4.1 - Overview).

6.6 … MANAGE A NEW VERSION OF A MESSAGE IF THE CLIENT HAS NOT IMPLEMENTED THE NEW FIELDS

Please refer to the explanations in the paragraph SBE Backward and Forward Compatibility.

6.7 … LOOK FOR A TRADE

This is possible by checking in Full Trade Information message (1004) the MiFID Execution ID field. It is the association of Symbol Index, EMM and Execution ID completed with null on the right to complete until the 52 bytes of the field are filled.

Example:

- Trade occurs on the Central Order Book (COB – EMM: 1), for Symbol Index 1110007 and ExecutionID assigned to it is 257;
    - Note: Symbol Index is up to 10 Chars, EMM is up to 3 Chars and Execution ID is up to 10 chars. In the Mifid ExecutionID, each one of this informations is padded with Zeros on the right side, up to the max number of chars for each one of them;
- MIFID Execution ID is 000**1110007**001**0000000257**

6.8 … LOOK FOR AN ORDER

For a given Symbol Index and EMM, the order can be found using its Order Priority that uniquely identifies an order. This value is given in the “Ack” message sent by Order Entry Gateway (OEG).

Since updated orders might have a loss of priority, members have to use Previous Priority field to find the order in the book. Previous Priority, when set, has to be matched with Order Priority in the existing orders.

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6.9 … RESYNCHRONIZE WITH SNAPSHOT AFTER PACKET LOSS

Please refer to the explanations on the Snapshot: Snapshots.

6.10 … MANAGE BBO

Best Bid and Offer (BBO) updates are sent with a price and a quantity to indicate the best limit on bid or offer side. When the Best Bid or Best Offer changes, a new Best Bid or Best Offer update is sent out and replaces the previous sent Best Bid or Best Offer. If a side of the book becomes empty, then a Best Bid or Best Offer is sent with quantity set to 0 and price set to null to clear the Best Bid or Best offer.

6.11 … MANAGE IMPLIED PRICES

Implied (out) prices are sent out in case the Implied bid or Implied offer price is the same or better price than the Best Bid or Best Offer. When the Implied Bid or Implied Offer price changes, a new Implied Bid or Implied Offer update is sent out and replaces the previous sent Implied Bid or Implied Offer. When the Implied Bid or Implied Offer is no longer valid, an Implied Bid or Implied Offer update is sent out with quantity set to 0 and price set to null to clear the Implied Bid or Implied offer.

6.12 … BUILD THE BOOK

Optiq Market Data provides market by limits (with Market Update messages (1001)) or by orders (with Long Order Update (1015) depending on the instrument type.

- For markets built using aggregated limits (Market Update (1001)), clients have to order the limits by prices (only one price by line):
  - On a new bid or ask, clients must add the new limit
  - On an updated bid or ask, clients must update the current limit with the new limit. This update can be on the limit: type, quantity or number of order.
  - On a limit deletion, clients will receive an update with quantity set to ‘0’ and the price matching the limit to delete.
- For markets built using Long Order Update (1015), clients have to arrange each order by its Order Priority (The order with the lowest value of Order Priority has the highest priority):
  - On a New Order, clients must add the new order identified by its Order Priority
  - On an order modification with loss of priority, clients must remove the order identified by the Previous Priority and add a new order identified by its Order Priority.
  - On an order modification without loss of priority, clients must update the order identified by its Order Priority.
  - On an order cancelation, clients must remove the order identified by its Previous Priority.

Clients should not process both the BBO and limits to construct the book. If Best Bid and Offer updates are sent as a part of the same message, then they should be processed as one update to the BBO and not individually. Otherwise, the order book might appear crossed.

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6.13 … DETERMINE A CLOSING PRICE

The Closing Price is determined once an instrument's Timetable reaches the phase "Closed". As per configuration done in MATRIX, for all Trading Groups, the Closing Prices can be of three types:

- LTP (Last Traded Price)
- VWAP (Volume Weighted Average Price)
- VWAP based on a number of Trades (default 5)

An additional Closing Price exists pending on the activation of a feature: The value of a breached Static Collar[1]. If no trade took place during the day, the 'Last Adjusted Closing Price' will be used as the Closing Price. The 'Last Adjusted Closing Price' is sent every morning in the reference data. It is the previous day's Closing Price, adjusted for Corporate Events (if applicable).

6.14 DETERMINE ROUND LOT WITH QUANTITY NOTATION

To determine the Round Lot is has to consider field Quantity Notation as follow:

- If Quantity Notation is equal to 'UNT' then Round Lot equals Lot Size.
- If Quantity Notation is equal to 'FMT' then Round Lot equals Par value
- If Quantity Notation is equal to '-' then Round Lot equals 1.

It is important for Lot Size and Par Value to apply the decimal field associated.

[1] Please refer to "Optiq Commercial - Additional Feature Specifications" for details

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7. MESSAGES

The message specification format is as follow:

Field	Description	Length
Block	The block is all the non-repeated fields.	Variable (in bytes)
Repeating section header	This is how many times the repeating section is repeated and the length of a repeating section. It will not been displayed in any below message. It is set to 0 if there is no repeating section.	2 bytes (1byte for the length 1byte for the count)
Repeating section	All the fields that are repeated. All these fields are in bold and green table borders	Variable (in bytes)

All field lengths are in bytes.

Field definition might not be exhaustive, please go to the Field Description section. Further details will be provided.

7.1 TECHNICAL MESSAGES

7.1.1 Start Of Day (1101)

These messages will be sent periodically until another MDG message is sent on any channel of an aggregator. After the Start of Day messages, the “Health Status” messages (1103) will be sent periodically.

This mechanism guarantees that “Start Of Day” (1101) messages are the really first messages sent by MDG.

Message Sending Rules:

“Start Of Day” (1101) messages are sent every 2 seconds on each channel once the Market Data Gateway starts.

Note:

- Start Of Day Market Data Sequence Number will always be set to "0".

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Session Trading Day	Date of the current trading session (in number of days since the 1st of January 1970).	Date	2	From 0 to 2^16-2	Mandatory	114

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7.1.2 End Of Day (1102)

"End Of Day" (1102) messages are sent at end of day to inform that MDG will shut down 15 minutes after the first "End Of Day" (1102) message is sent. During these 15 minutes, MDG will stop sending messages (including "Health Status" (1103)).

Message Sending Rules:

At the end of day, based on the production timetable, MDG will send "End Of Day" (1102) messages every 2 seconds during 15 minutes.

Note:

- The Market Data Sequence Number of all the "End Of Day" (1102) messages is the Market Data Sequence Number of the last message sent by the aggregator for this set of channels (be aware that this last message can have been sent on another channel managed by this aggregator).

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Session Trading Day	Date of the current trading session (in number of days since the 1st of January 1970).	Date	2	From 0 to 2^16-2	Mandatory	114

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7.1.3 Health Status (1103)

The Health Status messages are broadcasted on all channels repeatedly all along the day as soon as the Standing Data messages are broadcasted and until End of Day messages are broadcasted. The Market Data Sequence Number for this message will be the last Market Data Sequence Number of the message sent by the aggregator of this channel (be aware that this message can be sent on another channel managed by this aggregator).

The Event time indicates the time of the generation of the Health Status message.

This message is alone in the packet.

Message Sending Rules:

- Health Status are sent every 2 seconds even if there are market data messages sent on a channel.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81

7.1.4 Technical Notification (1106)

Technical Notification message is used to notify the beginning of Start and End Retransmissions.

Message Sending Rules:

- At the end of each book retransmission on a single instrument (they start with a clear book request in Long Order Update or Market Update message). Field "Symbol Index" will have the value of the instrument book sent. "Retransmission Start Time" will be set to null.
- At the beginning and end of a trade retransmission, providing the time window to clear previous trades and to be replaced by the resubmitted trades. Field "Symbol Index" will be set to null.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Optional	91

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Field	Short Description	Format	Len	Values	Presence	Page
Technical Notification Type	Indicates the technical notification sent.	Enumerated	1	1 = Instrument Book Retransmission End 10 = Trade Retransmission Start 11 = Trade Retransmission End	Mandatory	118
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
Retransmission Start Time	Indicates when the retransmission starts. For trade retransmission, all the trades previously received by the clients that have an “Event time” strictly lower than this field are valid (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	113
Retransmission End Time	Indicates when the retransmission ends. For trade retransmission, all the trades previously received by the clients that have an “Event time” strictly higher than this field are valid (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	113
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Optional	117

7.2 REFERENTIAL MESSAGES

7.2.1 Standing Data (1007)

The Standing Data message provides instrument characteristics for Cash and Index products, valid for the current trading day.

Message Sending Rules:

- Every morning following the Session Start messages.

Notes:

- Standing Data messages are also available in XML file.

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- The repeating section links the “Exchange Market Mechanism” (EMM) with its “Pattern ID”.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Optiq Segment	An Optiq segment is a universe of instruments sharing common trading properties.	Enumerated	1	(See field description)	Mandatory	104
Partition ID	Identifies uniquely an Optiq partition across all the Exchange partitions.	Numerical ID	2	From 0 to 2^16-2	Mandatory	106
Full Instrument Name	Full Instrument Name.	Text	102	(See field description)	Optional	82
Instrument Name	Instrument Name	Text	18	(See field description)	Mandatory	86
Instrument Trading Code	Alternate ID (Ticker Symbol).	Alphanumerical ID	15	(See field description)	Mandatory	86
Instrument Group Code	Instrument Group / Class Identifier.	Alphanumerical ID	2	(See field description)	Mandatory	86
ISIN Code	Instrument ISIN following ISO 6166.	Alphanumerical ID	12	(See field description)	Mandatory	87
Price / Index Level Decimals	Indicates the number of decimals for each Price / Index Level related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Mandatory	109
Quantity Decimals	Indicates the number of decimals for each Quantity related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	111
Amount Decimals	Indicates the number of decimals for each Amount related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	76
Ratio / Multiplier Decimals	Indicates the number of decimals for each Ratio / Multiplier related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Mandatory	112
CFI	Classification code of a financial instrument defined by the ISO-10962:2015 standard.	Text	6	(See field description)	Mandatory	77
Instrument Event Date	Date of the last instrument characteristic modification(s) except for some exceptions.	Date	2	From 0 to 2^16-2	Mandatory	85

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Field	Short Description	Format	Len	Values	Presence	Page
Strike Price	***[N/A]** The strike price of an option/warrant is the specified price at which the underlying can be bought (in the case of a call/right to buy) or sold (in case of a put/right to sell) by the holder (buyer) of the option/warrant contract, at the moment he exercises his right against a writer (seller) of the option/warrant.*	*Price*	*8*	*From -2^63+1 to 2^63-1*	*Optional*	*117*
Dark Eligibility	***[N/A]** Indicates the Eligibility to dark. 0 is not eligible, 1 is eligible.*	*Boolean*	*1*	*0 = False* *1 = True*	*Optional*	*79*
Dark LIS Threshold	***[N/A]** Defines the minimum amount of an order to benefit from the LIS (Large In Scale) pre-transparency waiver.*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*79*
Dark Minimum Quantity	***[N/A]** Defines the minimum quantity required for an order to be filled in the Dark liquidity. 0 indicates that no minimum amount is required.*	*Quantity*	*4*	*From 0 to 2^32-2*	*Optional*	*79*
Date Of Last Trade	Date of the Last Price for the Instrument (in number of days since the 1st of January 1970).	Date	2	From 0 to 2^16-2	Optional	80
Depositary List	Identifies the possible main depository organizations (maximum four) for shares or fixed income.	Text	20	(See field description)	Optional	80
Main Depositary	Identifies the default (or main) depository organization of the instrument (between the possible 4 depositaries registered) used by priority for the settlement (for example: multi-listed instruments which have several depositories).	Alphanumerical ID	5	(See field description)	Optional	90
First Settlement Date	Represents the first possible settlement date for a given instrument.	Date	2	From 0 to 2^16-2	Optional	76
Guarantee Indicator	Indicates if the trade is guaranteed or not (for clearing purpose)	Enumerated	1	0 = This instrument is not guaranteed 1 = This instrument is guaranteed 2 = This instrument is not clearable *8 = This instrument is part of Cleared Borrowing and Lending Service (CBLM) and is guaranteed (Future Use)*	Optional	82

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Field	Short Description	Format	Len	Values	Presence	Page
ICB	Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.	Alphanumerical ID	16	(See field description)	Optional	83
Issuing Country	Issuing country.	Alphanumerical ID	3	(See field description)	Optional	87
Last Adjusted Closing Price	Last traded price of the previous trading day after application of the adjustment coefficient (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	88
Lot Size	***[N/A]** For cash instruments with Quantity Notation = "UNT": The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size.* *The field has been deprecated in sbe version 112.*	*Quantity*	*8*	*From 0 to 2^64-2*	*Optional*	*89*
Maturity Date	***[N/A]** Maturity Date of the instrument (text formatted as YYYYMMDD).*	*Text*	*8*	*(See field description)*	*Optional*	*92*
Maximum Decimals In Quantity	***[N/A]** Maximum Decimals In Quantity was introduced for Euronext Fund Services Paris and indicates the maximum of relevant decimal number for trading.*	*Numerical*	*1*	*From 0 to 2^8-2*	*Optional*	*93*
MIC	Identifies the market to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383.	Alphanumerical ID	4	(See field description)	Mandatory	93
MIC List	***[N/A]** Identifies the Euronext markets on which an instrument is listed by its MIC (Market Identification Code).*	*Alphanumerical ID*	*20*	*(See field description)*	*Optional*	*93*
Country Of Exchange	Country of exchange is the Country associated to the MIC following ISO 3166 Alpha-3.	Alphanumerical ID	3	(See field description)	Optional	77
Mnemonic	Mnemonic code of the instrument. This field is not populated for every instrument.	Alphanumerical ID	5	(See field description)	Optional	102
Underlying MIC	Identifies the market to which an instrument' underlying belongs by its MIC (Market Identification Code), according to ISO 10383. Refer to MIC field to have all the authorized values.	Alphanumerical ID	4	(See field description)	Optional	124

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Field	Short Description	Format	Len	Values	Presence	Page
Underlying ISIN Code	Underlying ISIN.	Alphanumerical ID	12	(See field description)	Optional	124
Trading Currency	Code of the currency (ISO 4217-3A).	Alphanumerical ID	3	(See field description)	Optional	121
Currency Coefficient	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals).	Numerical ID	4	From 0 to 2^32-2	Optional	78
Trading Currency Indicator	Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply.	Enumerated	1	0 = Change rate not applied to the traded price 1 = Change rate applied to the traded price	Optional	121
Strike Currency Indicator	***[N/A]*** *Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply.*	*Enumerated*	*1*	*0 = Change rate not applied to the strike price* *1 = Change rate applied to the strike price*	*Optional*	*117*
Number Instrument Circulating	For stocks: this is the total number of shares issued by the company. For Fix Income: this is the number of Fix Income still to be repaid.	Quantity	8	From 0 to 2^64-2	Optional	103
Par Value	***[N/A]*** *Par Value (also called Nominal value) for Instrument. For Fixed Income it represents the par amount to be repaid at maturity (not including interest revenue) (to be calculated with the Amount Decimals).*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*106*
Quantity Notation	Indication of the type of measurement (e.g. number of units, nominal, monetary value, etc.) in which the transaction is expressed.	Text	3	(See field description)	Optional	111
Instrument Unit Expression	***[N/A]*** *Unit in which the instrument is quoted.* *The field has been deprecated in sbe version 112.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*86*
Settlement Delay	Gives the number of trading days that represents the period between the trade date and the settlement date (delivery and payment) for an instrument to be cleared and settled.	Alphanumerical ID	2	(See field description)	Optional	114
Strike Currency	***[N/A]*** *Code of the strike currency (ISO 4217-3A).*	*Alphanumerical ID*	*3*	*(See field description)*	*Optional*	*116*

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Field	Short Description	Format	Len	Values	Presence	Page
Tax Code	***[N/A]** Tax deduction code to which the instrument belongs.*	*Enumerated*	*1*	*0 = Not eligible to PEA* *3 = Eligible to PEA* *9 = Not Applicable*	*Optional*	*118*
Type Of Corporate Event	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. The data item is automatically calculated by the adjustment application but in case of problem or error, the data item value could be modified manually, particularly for purging the order book in case of absence of corporate event. This data has to be treated in consideration of the date of the event included into the header of the message.	Alphanumerical ID	2	(See field description)	Optional	123
Type Of Market Admission	Indicates the type of market to which an instrument has been listed.	Enumerated	1	(See field description)	Optional	124
Repo Indicator	***[N/A]** Indicates whether the instrument listed underlies any loan contracts, meaning it has been admitted to the Deferred Settlement system and/or to the lending market.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*112*
Issue Price	Issuing price of the instrument (to be calculated with Issue Price Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	87
Nominal Currency	Code of the nominal currency (ISO 4217-3A).	Alphanumerical ID	3	(See field description)	Optional	102
Issue Price Decimals	Indicates the number of decimals for Issue Price related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	87
Strike Price Decimals	***[N/A]** Indicates the number of decimals for Strike Price related to this Symbol Index*	*Decimal Places*	*1*	*From 0 to 2^8-2*	*Optional*	*117*
Liquid Instrument Indicator	***[N/A]** Indicates whether the instrument is liquid or not, as defined per MiFID II. (0 = Illiquid ; 1 = Liquid)*	*Boolean*	*1*	*0 = False* *1 = True*	*Optional*	*88*
Market Of Reference MIC	***[N/A]** Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*	*Alphanumerical ID*	*4*	*(See field description)*	*Optional*	*92*
ICB Code	***[N/A]** Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification. (For Future Use).*	*Alphanumerical ID*	*8*	*(See field description)*	*Optional*	*83*

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Field	Short Description	Format	Len	Values	Presence	Page
Threshold LIS Post Trade 60mn	Defines the amount of an order to benefit from the LIS Trade Deferred publication to 60 min (to be calculated with the Amount Decimals).	Amount	8	From 0 to 2^64-2	Optional	119
Threshold LIS Post Trade 120mn	Defines the amount of an order to benefit from the LIS Trade Deferred publication to 120 min (to be calculated with the Amount Decimals).	Amount	8	From 0 to 2^64-2	Optional	119
Threshold LIS Post Trade EOD	Defines the amount of an order to benefit from the LIS Trade Deferred publication to EOD (to be calculated with the Amount Decimals).	Amount	8	From 0 to 2^64-2	Optional	119
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Pattern ID	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.	Numerical ID	2	From 0 to 2^16-2	Optional	107
Tick Size Index ID	ID of the tick size table available in the Tick Table file.	Numerical ID	2	From 0 to 2^16-2	Optional	118
Market Model	Market Model identifier.	Enumerated	1	(See field description)	Optional	92
Lot Size	For cash instruments with Quantity Notation = “UNT”: The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size.	Quantity	8	From 0 to 2^64-2	Optional	89
Instrument Unit Expression	Unit in which the instrument is quoted.	Enumerated	1	(See field description)	Optional	86

7.2.2 Timetable (1006)

The timetable message is available on cash markets and indicates the instrument trading patterns (state change sequence) for the current trading day.

Instrument books are linked to their trading patterns in the Standing Data Message (1007).

Message Sending Rules:

- Automatically for each Trading Pattern, after the Session Start and Referential messages
- On an exceptional basis, it may be sent during the trading day in case scheduled hours have changed due to manual intervention by Market Operations or if there are multiple openings during the day. If

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it indicates a Pattern ID, then the change applies on all instruments linked to this Pattern ID, otherwise it only applies on the Symbol Index and EMM.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Optional	80
Pattern ID	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.	Numerical ID	2	From 0 to 2^16-2	Optional	107
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Optional	117
Phase Time	Time of Phase start (Time in an integer on 4 bytes expressed as hhmmss).	Integer Time in hhmmss	8	From 0 to 2^64-2	Mandatory	108
Phase Id	Indicates the phase of the instrument.	Enumerated	1	(See field description)	Mandatory	108
Phase Qualifier	Indicates the Phase Qualifier (no multiple phase possible at the same time even if this field is a bitmap).	Bitmap	2	(See field description)	Optional	108
Trading Period	Provides the current trading period.	Enumerated	1	1 = Opening (Cash and Derivatives) 2 = Standard (Cash and Derivatives) 3 = Closing (Cash and Derivatives)	Mandatory	122
Order Entry Qualifier	Field indicating the state of the Order Entry for the current market state.	Enumerated	1	(See field description)	Optional	104
Session	Current market session.	Enumerated	1	(See field description)	Mandatory	114

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7.3 APPLICATION MESSAGES

7.3.1 Market Update (1001)

The Market Update Message provides the following data to the market:

- Best limits (BBO)
- Full depth limits
- Clear Book
- Short trade
- Collars
- VWAP

Message Sending Rules:

- For the book retransmission every morning or in case of HA.
- For new or updated price and/or volume in the book (including BBO).
- As a short trade message indicating its trade type, traded price, traded quantity and VWAP value.
- For new Collars when the update is caused by a new trade which impacts collar.

Market Data Update Types

The following table defines for each Market Data Update Type on which instruments it applies.

		Equities	
Market Data Update Type		**Full Order Book (MU)**	**Full Order Book (OU)**
BBO	1 - Best Bid	X	X
	2 - Best Offer		
Full Depth	3 - New Bid	X	
	4 - New Offer		
	5 - Updated Bid		
	6 - Updated Offer		
Clear Book	254 - Clear Book	X	X
Trade Type	24 - Conventional Trade	X	X
	30 - Guaranteed Cross Trade		
	50 - Trade Cancellation		
Collars	14 - High Dynamic Collar	X	X
	15 - Low Dynamic Collar		
	63 - Low Static Collar		
	64 - High Static Collar		
VWAP	85 – Volume Weited Average Price	X	X

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Limits (BBO and Full Depth):

The "Market Data Update Type" field indicates the type of price/volume update as follows:

- The Best Bid/Offer are the best explicit buy or sell limit price and aggregated volume at the best limit price. When best orders are Market Orders or Market To Limit orders, the Best Bid/Offer is sent out with a price set to null and a quantity equal to the aggregated volume of Market Order (MO) and Market To Limit (MTL).
- A Market Order is sent in Market Data with a price set to null value and the quantity is the one from the client order.
- When there is no more Limit on a book side, last BBO is sent with quantity set to '0' and Price set to null value.

Clear Book:

- A Clear Book requests clients to clear the entire book for a given Symbol Index. Quantity will be '0' and Price set to null value.

Collars:

Collars are sent as follow:

- For dynamic collars:
  - On each book retransmission (including morning and HA book retransmission)
  - On each dynamic collar price changes
  - On action from Market Operation
- For static collars:
  - On each book retransmission (including morning and HA book retransmission)
  - On Market Operation request
  - For some instruments, on the first trade of the day

VWAP:

- The VWAP value is provided in the Market Update (1001) message every time it is calculated.
  - On each Trade
  - On each Trade Cancelation[2]
  - If the VWAP Threshold feature is active, and the Threshold is not yet met, the VWAP value will be provided as an SBE null value

Short trades:

Trades will also be notified using the Market Update message.

[2] If all trades that have occurred in the active session are cancelled, the VWAP value will be provided as null (Price = SBE null).

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Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Market Data Update Type	Type of market data update.	Enumerated	1	(See field description)	Mandatory	91
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Number Of Orders	Number of orders at the current price limit.	Numerical	2	From 0 to 2^16-2	Optional	103
Price	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	109
Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Optional	111

7.3.2 Long Order Update (1015)

On Cash markets, the Order Update Message provides the market with the information needed to build the order book.

Multiple changes can be disseminated within a single Long Order Update (1015) message.

This message takes into account all order types, with the exception of Stop Loss and Stop Limit orders. Stop orders are not broadcasted to market participants until they are triggered.

Message Sending Rules:

- In the morning, before market opening, when the trading engine is initialized, to retransmit orders remaining in the book from previous days (taking into account expired orders and order book purges). This is known as the 'order book retransmission' or 'market sheet retransmission'.
- During the day, on each new order, modify order or deletion order from a member firm.
- During the day, in case of order book retransmission. This is a failsafe in case of order book resynchronization.

Market Data Action Types

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The Market Data Action Types apply for all cash instrument on central order book.

Order Modifications

For modification of orders, the field Market Data Action Type will flag if there is a loss of priority or not. The order will lose its priority for:

- a price change
- an amendment with an increase of its displayed quantity

To be noted:

- Symbol Index, EMM and Order Priority identify the rank of the order in the order book.
- Order Priority identifies the priority of the order in the order book (the order book is identified with Symbol Index and EMM).
- In case of a Deletion (Market Data Action Type '2' or '3'), the quantity will be set to '0' and the price set to default value.
- Orders for cash must be arranged according to:
  - Order type: Priority should be given first to Market order and Market to limit followed by Limits and Peg orders
  - Order price
  - Order priority
- For Market Orders the price will be set to null value and the quantity is the one from the client order.

Client applications should do the following in order to build the market sheet:

- Determine the Market Data Action Type (add, modify, delete)
- Determine the priority of an order based on Order Type, Order Price, and the Order Priority. The priority of orders of the same type and price depends on their order priority. The order with the lowest value of Order Priority has the highest priority. Bid orders with higher prices have higher priority; ask orders with lower price have higher priority.
- Determine the price and size of an order.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80

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Field	Short Description	Format	Len	Values	Presence	Page
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Market Data Action Type	Identifies if the order is a New Order, a Deletion, a Modification or a Retransmission.	Enumerated	1	(See field description)	Mandatory	90
Order Priority	Rank giving the priority of the order. The order with the lowest value of Order Priority has the highest priority.	Numerical ID	8	From 0 to 2^64-2	Optional	105
Previous Priority	Previous Priority is populated only when there is a "Modification of existing order With Loss Of Priority" or order deletions. Then clients have to remove from their market sheet the order identified with the field "Previous Priority" and add a new order with the field "Order Priority" newly provided.	Numerical ID	8	From 0 to 2^64-2	Optional	109
Order Type	Type of Order.	Enumerated	1	(See field description)	Optional	106
Order Price	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	104
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Optional	105
Order Quantity	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)	Quantity	8	From 0 to 2^64-2	Optional	105
Peg Offset	*[N/A] (Future Use) Tick offset for a pegged order.*	*Numerical ID*	*1*	*From -127 to 127*	*Optional*	*107*
Firm ID	Identifier of the member firm that has entered the Order.	Alphanumerical ID	8	(See field description)	Conditional	123
Account Type	Indicates the account type for which the order is entered.	Enumerated	1	(See field description)	Conditional	113

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7.3.3 Price Update (1003)

The Price Update message provides reference prices.

Message Sending Rules:

Price Update message are sent each time a reference price is updated.

Market Data Price Types

Reference prices are available for the following instruments:

	Cash Equities
12 - Adjusted Closing Price (Cash Only)	X
13 - Subscription Price (Cash Only)	
14 - Indicative Matching Price (Cash and Derivatives)	X
23 - Valuation Price (Cash Only)	X
26 - Uncrossing Price (Cash and Derivatives)	X
27 - Last Traded Price (Cash and Derivatives)	X
28 - Alternative Indicative Price (AIP) (Cash Only)	X

It is sent either for past settlements (in the morning) and intraday settlements (during the trading day).

Indicative Matching Price:

A Price Update message with Market Data Price Type: 14 (Indicative Matching Price) indicates the instrument theoretical opening conditions which consist of:

- The Indicative Matching Price (IMP): price at which the instrument would trade if it opened at the moment the price is calculated
- The Indicative Matching Volume (IMV): quantity that would trade at the IMP if the instrument opened at the moment the price is calculated
- The indicative imbalance volume: remaining unmatched quantity at the IMP
- The indicative imbalance volume side: side of the indicative imbalance volume
- An Indicative Matching Price is sent if at least one of the instrument's theoretical opening conditions changes: (indicative matching price or indicative matching volume or imbalance volume or imbalance volume side varies).
- If the Indicative Matching Price remains undetermined, but the reason for this undetermined changes, then an Indicative Matching Price is sent with null values (in field Price).

Last Traded Price:

- The Last Traded Price is included in the Price Update (1003) when the same is modified by a Market Operations user.

Quantity field will be set to null for the following Market Data Price Type:

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- 13 - Subscription Price
- 23 - Valuation Price
- 27 - Last Traded Price
- 28 - Alternative Indicative Price (AIP)

For Cash markets, all reference prices are published through a Price Update message:

- Closing Price
- Uncrossing Price
- Valuation Price

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Market Data Price Type	Type of price update.	Enumerated	1	(See field description)	Mandatory	91
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Price	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	109
Quantity	Number of traded or ordered units (to be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Optional	111
Imbalance Quantity	Imbalance volume quantity if Uncrossing occurs at this moment. This volume includes hidden quantity (to be calculated with Quantity Decimals).	Quantity	8	From 0 to 2^64-2	Optional	84
Imbalance Quantity Side	Side of the imbalance volume if the Uncrossing occurs at this moment.	Enumerated	1	0 = No imbalance 1 = Buy 2 = Sell	Optional	84

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7.3.4 Full Trade Information (1004)

The Full Trade Information Message feeds the Market with a trade summary (A short trade message is provided in the Market Update message (1001) for all markets).

Message Sending Rules:

- For each trade notification.
- For each trade retransmission.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Optional	117
Trading Date Time	Date and time when the transaction was executed.	Text	27	(See field description)	Mandatory	121
Publication Date Time	Date and time when the transaction was published by a trading venue or Approved Publication Arrangement (APA).	Text	27	(See field description)	Optional	110
Trade Type	Type of trade.	Enumerated	1	(See field description)	Mandatory	120
MiFID Instrument ID Type	Code type used to identify the financial instrument.	Text	4	(See field description)	Optional	95
MiFID Instrument ID	Code used to identify the financial instrument. This code has to be processed with the MiFID Instrument ID Type.	Alphanumerical ID	12	(See field description)	Optional	95
MiFID Execution ID	MiFID Transaction Identification Code is composed of the Symbol Index (on 10 characters), the EMM (on 3 characters) and the Execution ID (on 10 characters). It is a unique Execution ID by instrument per day on the different available EMM.	Alphanumerical ID	52	(See field description)	Mandatory	94

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Field	Short Description	Format	Len	Values	Presence	Page
MiFID Price	Traded price of the transaction excluding, where applicable, commission and accrued interest.	Text	20	(See field description)	Optional	96
MiFID Quantity	Number of units of the financial instrument. The nominal or monetary value of the financial instrument.	Text	20	(See field description)	Mandatory	97
MiFID Price Notation	Indication as to whether the price is expressed in monetary value, in percentage or in yield.	Text	4	(See field description)	Optional	96
MiFID Currency	Currency in which the price is expressed (applicable if the price is expressed as monetary value) following ISO 4217 standard.	Alphanumerical ID	3	(See field description)	Optional	94
MiFID Qty in Measurement Unit Notation	***[N/A]** Indication of measurement units in which the quantity in measurement unit is expressed.*	*Text*	*25*	*(See field description)*	*Optional*	*96*
MiFID Quantity Measurement Unit	***[N/A]** The equivalent amount of commodity or emission allowance traded expressed in measurement unit*	*Text*	*20*	*(See field description)*	*Optional*	*97*
MiFID Notional Amount	***[N/A]** Nominal amount or notional amount.*	*Text*	*20*	*(See field description)*	*Optional*	*95*
Notional Currency	Currency in which the notional is denominated following ISO 4217 standard.	Alphanumerical ID	3	(See field description)	Optional	102
MiFID Clearing Flag	Code to identify whether the transaction will be cleared.	Text	5	(See field description)	Optional	94
MMT Market Mechanism	Defines the fundamental functional market mechanism that has facilitated the trade following MMT level 1.	Enumerated	1	(See field description)	Optional	99
MMT Trading Mode	Differentiates transactions by defining the trading mode under which the trade was executed following MMT level 2.	Enumerated	1	(See field description)	Optional	101
MMT Transaction Category	***[N/A]** Defines the transaction category following MMT level 3.1.*	*Text*	*4*	*(See field description)*	*Optional*	*101*
MMT Negotiation Indicator	***[N/A]** Defines the negotiation indicator or pre-trade transparency waiver following MMT level 3.2.*	*Text*	*4*	*(See field description)*	*Optional*	*99*
MMT Agency Cross Trade Indicator	***[N/A]** Defines the agency cross trade indicator following MMT level 3.3.*	*Text*	*4*	*(See field description)*	*Optional*	*97*
MMT Modification Indicator	Defines the modification indicator following MMT level 3.4.	Text	4	(See field description)	Optional	99

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Field	Short Description	Format	Len	Values	Presence	Page
MMT Benchmark Indicator	***[N/A]** Defines the benchmark indicator or the reference price indicator following MMT level 3.5.*	*Text*	*4*	*(See field description)*	*Optional*	*98*
MMT Special Dividend Indicator	***[N/A]** Defines the special dividend indicator following MMT level 3.6.*	*Text*	*4*	*(See field description)*	*Optional*	*101*
MMT Off Book Automated Indicator	***[N/A]** Defines the off book automated indicator following MMT level 3.7.*	*Enumerated*	*1*	*M = Off Book Non-Automated* *Q = Off Book Automated* *- = (Hyphen) Unspecified or does not apply*	*Optional*	*100*
MMT Contribution to Price	***[N/A]** Defines the contribution to price or the price discovery process following MMT level 3.8.*	*Text*	*4*	*(See field description)*	*Optional*	*98*
MMT Algorithmic Indicator	***[N/A]** Defines the algorithmic indicator following MMT level 3.9.*	*Text*	*4*	*(See field description)*	*Optional*	*98*
MMT Publication Mode	***[N/A]** Defines the publication mode or post-trade deferral reason following MMT level 4.1.*	*Text*	*4*	*(See field description)*	*Optional*	*100*
MMT Post Trade Deferral	***[N/A]** Defines the post trade deferral or enrichment type following MMT level 4.2.*	*Text*	*4*	*(See field description)*	*Optional*	*100*
MMT Duplicative Indicator	***[N/A]** Defines the duplicative indicator following MMT level 5.*	*Text*	*4*	*(See field description)*	*Optional*	*98*
Trade Qualifier	Trade Qualifier. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Optional	119
Transaction Type	***[N/A]** Transaction type or publication type.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*122*
Effective Date Indicator	Indicates if the trade is introduced on the trading session day or earlier.	Enumerated	1	0 = If the seller declaration is received on the current trading session day 1 = If seller declaration is received before the current trading session day	Optional	80

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Field	Short Description	Format	Len	Values	Presence	Page
Block Trade Code	Indicates if trade relates to a block or a negotiated deal following MiFID rules.	Enumerated	1	B = Block Trade N = Regular trade or Negotiated deal - = (Hyphen) Undefined	Optional	76
Trade Reference	Reference of the trade reported to the Exchange.	Alphanumerical ID	30	(See field description)	Optional	120
Original Report Timestamp	Timestamp of trade reporting to the Exchange (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	106
Transparency Indicator	Used to define the transparency of the trade.	Enumerated	1	0 = Lit/Regular Trade	Optional	123
Currency Coefficient	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals).	Numerical ID	4	From 0 to 2^32-2	Optional	78
Price Multiplier	Number of units of the financial instrument that are contained in a trading lot. Price multiplier coefficient for instrument unit price.	Numerical	4	From 0 to 2^32-2	Optional	110
Price Multiplier Decimals	Number of decimals for the field Price Multiplier.	Numerical	1	From 0 to 2^8-2	Optional	110
Venue	Identification of the venue where the transaction was executed using the ISO 10383 segment MIC for transactions executed on a trading venue.	Alphanumerical ID	11	(See field description)	Mandatory	125
Start Time Vwap	Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).	Intraday Time in Seconds	4	From 0 to 2^32-2	Optional	115
End Time Vwap	End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).	Intraday Time in Seconds	4	From 0 to 2^32-2	Optional	81
MiFID Emission Allowance Type	***[N/A]** This field is only applicable for emission allowances.*	*Text*	*4*	*(See field description)*	*Optional*	*94*
Market Of Reference MIC	***[N/A]** Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*	*Alphanumerical ID*	*4*	*(See field description)*	*Optional*	*92*
Firm ID	Identifier of the member firm that has entered the Order.	Alphanumerical ID	8	(See field description)	Conditional	123

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Field	Short Description	Format	Len	Values	Presence	Page
Account Type	Indicates the account type for which the order is entered.	Enumerated	1	(See field description)	Conditional	113
Order Side	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell	Conditional	105

7.3.5 Market Status Change (1005)

Market Status Change message informs the market of the following changes on the instrument:

- Book State
- Status Reason
- Phase Qualifier
- Trading Period
- Order Entry Qualifier
- Session
- Plan a Scheduled Event

Message Sending Rules:

The Market Status Change message is sent for:

- Each Time above parameter change. It can be:
  - A change on the predefined pattern
  - An unscheduled status change

Status changes following the predefined pattern

A Market Status Change (1005) message is sent to notify each phase change as defined in the Timetable (1006) message.

On an exceptional basis, scheduled hours in pattern can change. A new Timetable message is sent and Market Status Change message will follow this new pattern.

Following is an example of content that are sent in Market Status Change message through the day.

Unscheduled status changes

For book state, the difference between suspension, reservation and halted are:

- Suspension is a manual suspension on instrument level
- Halted is a manual suspension for all the Instrument Group Code
- Reservation is an automatic suspension for an instrument

In addition Market Status Change can be sent from Market Operation team. In these cases, the following tables are providing the complete list of possible values for each case.

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– Cancel Previous Scheduled Event

Field	Possible values
Market Data Change Type	Scheduled Event Notification (1)
Event Time	Time when the change is effective
Book State	Value at the moment the message is generated
Status Reason	Action by Market Operations (Cash and Derivatives) (15)
Phase Qualifier	Value at the moment the message is generated
Trading Period	Value at the moment the message is generated
Trading Side	Value at the moment the message is generated
Price Limits	Value at the moment the message is generated
Quote Spread Multiplier	Value at the moment the message is generated
Order Entry Qualifier	Value at the moment the message is generated
Session	Value at the moment the message is generated
Scheduled Event	Cancel Previously Scheduled Event(Cash and Derivatives) (0)
Scheduled Event Time	Scheduled time of the event that is cancelled

– Suspension:

Field	Possible values
Market Data Change Type	Status Change(s) (0)
Event Time	Time when the change is effective
Book State	Suspended (8)
Status Reason	Action by Market Operations (Cash and Derivatives) (15) New Listing (20)
Phase Qualifier	Same as the one of the instrument when suspended
Trading Period	Same as the one of the instrument when suspended
Trading Side	Same as the one of the instrument when suspended
Price Limits	Same as the one of the instrument when suspended but can also be changed by Market Operation
Quote Spread Multiplier	Same as the one of the instrument when suspended but can also be changed by Market Operation
Order Entry Qualifier	Any
Session	Same as the one of the instrument when suspended
Scheduled Event	Null
Scheduled Event Time	Null

– Reservation:

Field	Possible values
Market Data Change Type	Status Change(s) (0)
Event Time	Time when the change is effective
Book State	9 - Reserved
Status Reason	4 = Collars Breach (Cash Only)
Phase Qualifier	000001 - No Qualifier
Trading Period	Any
Trading Side	Any
Price Limits	Null
Quote Spread Multiplier	Null
Order Entry Qualifier	Any
Session	Same as the one defined in the timetable at the reserved
Scheduled Event	Null or Reopening (1) when Status Reason is Collars Breach (4)
Scheduled Event Time	Null or set when Status Reason is Collars Breach (4)

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– Reopening:

Field	Possible values
Market Data Change Type	Status Change(s) (0)
Event Time	Time when the change is effective
Book State	Same Book State as the one defined in timetable for this instrument when reopened. Except for Continuous phase which reopens with Uncrossing (4) or Continuous Uncrossing (7) Can also be: - Reserved (9) for immediate reservation or PAKO (Payment After Knock-Out) - Call (3) for PAKO (Payment After Knock-Out)
Status Reason	Collars Breach (Cash Only) (4) Action by Market Operations (Cash and Derivatives) (15)
Phase Qualifier	Same Phase Qualifier as the one defined in timetable for this instrument when reopened (except for TaL where the uncrossing is not flagged as TaL)
Trading Period	Same as the one defined in the timetable at the reopening
Trading Side	Same as the one defined in the timetable at the reopening
Price Limits	Same as the one of the instrument when reopened but can also be changed by Market Operation
Quote Spread Multiplier	Same as the one of the instrument when reopened but can also be changed by Market Operation
Order Entry Qualifier	Any
Session	Same as the one defined in the timetable at the reopening
Scheduled Event	Null
Scheduled Event Time	Null

– Halt:

Field	Possible values
Market Data Change Type	Status Change(s) (0)
Event Time	Time when the change is effective
Book State	Halted (6)
Status Reason	15 = Action by Market Operations (Cash and Derivatives)
Phase Qualifier	no qualifier
Trading Period	standard
Trading Side	Any
Price Limits	Null
Quote Spread Multiplier	Null
Order Entry Qualifier	Any
Session	1
Scheduled Event	Null
Scheduled Event Time	Null

– Resume Halted Trading Group

♦ Immediate:

Field	Possible values
Market Data Change Type	Status Change(s) (0)
Event Time	Time when the change is effective
Book State	Same Book State as the one in timetable for this instrument when reopened. Except for Continuous phase which reopens with Uncrossing (4) or Continuous Uncrossing (7)
Status Reason	Action by Market Operations (Cash and Derivatives) (15)
Phase Qualifier	Same Phase Qualifier as the one defined in timetable for this instrument when reopened (except for TaL where the uncrossing is not flagged as TaL)
Trading Period	Same as the one defined in the timetable at the reopening
Trading Side	Same as the one defined in the timetable at the reopening
Price Limits	Null

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Quote Spread Multiplier	Null
Order Entry Qualifier	Any
Session	Same as the one defined in the timetable at the reopening
Scheduled Event	Null
Scheduled Event Time	Null

Note: A resume halt can lead to Book State: “Suspended (8)”.

- Scheduled:

Field	Possible values
Market Data Change Type	Scheduled Event Notification (1)
Event Time	Time when the change is effective
Book State	Halted (6)
Status Reason	Action by Market Operations (Cash and Derivatives) (15)
Phase Qualifier	Same Phase Qualifier as the one defined in timetable for this instrument when reopened (except for TaL where the uncrossing is not flagged as TaL)
Trading Period	Same as the one defined in the timetable at the reopening
Trading Side	Same as the one defined in the timetable at the reopening
Price Limits	Null
Quote Spread Multiplier	Null
Order Entry Qualifier	Any
Session	Same as the one defined in the timetable at the reopening
Scheduled Event	Resumption of trading (3)
Scheduled Event Time	Time when the change will be effective

At the time of the effective change, an immediate resume halted is sent to clients.

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Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Market Data Change Type	Type of scheduled change.	Enumerated	1	0 = Status Change(s) 1 = Scheduled Event Notification 2 = Status Change(s) and Scheduled Event Notification	Mandatory	90
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Event Time	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Book State	Book State.	Enumerated	1	(See field description)	Optional	77
Status Reason	Provides the reason for Book State changes.	Enumerated	1	(See field description)	Optional	116
Phase Qualifier	Indicates the Phase Qualifier (no multiple phase possible at the same time even if this field is a bitmap).	Bitmap	2	(See field description)	Mandatory	108
Trading Period	Provides the current trading period.	Enumerated	1	1 = Opening (Cash and Derivatives) 2 = Standard (Cash and Derivatives) 3 = Closing (Cash and Derivatives)	Optional	122
Trading Side	***[N/A]*** *Indicates the Trading Side.*	*Enumerated*	*1*	*1 = Bid Only (Cash Only)* *2 = Offer Only (Cash Only)* *3 = PAKO (Cash Only)* *4 = Both Sides (Cash Only)*	*Optional*	*122*

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Field	Short Description	Format	Len	Values	Presence	Page
Price Limits	***[N/A]** Indicates the Price Limits mode.*	*Enumerated*	*1*	*1 = Price Limits Enabled - Normal (Derivatives Only)* *2 = Price Limits Enabled - Wide (Derivatives Only)* *3 = Price Limits Enabled - Widest (Derivatives Only)* *4 = Price Limits Disabled (Derivatives Only)*	*Optional*	*109*
Quote Spread Multiplier	***[N/A]** Indicates the Quote Spread Multiplier.*	*Enumerated*	*1*	*1 = Quote Spread Multiplier 1 (Derivatives Only)* *2 = Quote Spread Multiplier 2 (Derivatives Only)* *3 = Quote Spread Multiplier 3 (Derivatives Only)*	*Optional*	*111*
Order Entry Qualifier	Field indicating the state of the Order Entry for the current market state.	Enumerated	1	(See field description)	Optional	104
Session	Current market session.	Enumerated	1	(See field description)	Mandatory	114
Scheduled Event	Type of Scheduled Event.	Enumerated	1	(See field description)	Optional	113
Scheduled Event Time	Scheduled Time for the event to happen (On cash: time in an integer on 8 bytes expressed as hhmmss UTC;	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	114

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7.3.6 Statistics (1009)

This message provides statistics on:

- High and Low
- Percent Variation Previous Close
- Last Traded Price
- Variation Last Price
- Open Price
- Trade Count
- Cumulative quantities

Stats Update Type:

The following table lists the statistics available per instrument:

Statistics	On-exchange on-book		On-exchange off-book
	Cash Equities		On-exchange off-book
	Valuation	All Other	
5 - Daily High (Cash and Derivatives)	x	x	
6 - Daily Low (Cash and Derivatives)	x	x	
14 - Variation Last Price (Cash Only)	x	x	
15 - Open Price (Cash and Derivatives)	x	x	
16 - Trade Count (Cash and Derivatives)		x	
17 - Last Traded Price (Cash and Derivatives)	x	x	
18 - Percent Variation Previous Close (Cash and Derivatives)	x	x	
19 – Off Book Cumulative Quantity (Cash and Derivatives)			x
21 - On Book Auction Cumulative Quantity (Cash Only)		x	
22 - On Book Continuous Cumulative Quantity (Cash Only)		x	
23 - On and Off Book Cumulative Quantity (Cash and Derivatives)		x	x

Message Sending Rules:

Statistics message is sent each time a statistic is modified.

High and Low

- **Daily High:** Highest traded price for the current trading day.
- **Daily Low:** Lowest traded price for the current trading day.

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Cumulative quantities

On Cash: MDG will deliver 4 cumulative quantity fields that will allow clients to compute all possible statistics based on this. These fields are:

- ■ **Off Book Cumulative Quantity:** Cumulated volume traded outside the central order book and on regulated market since the start of the current trading session.
- **On Book Auction Cumulative Quantity:** Cumulated volume of regulated market trades done in Auction phase since the start of the current trading session.
- **On Book Continuous Cumulative Quantity:** Cumulated volume of regulated market trades done in Continuous phase since the start of the current trading session.
- **On and Off Book Cumulative Quantity:** Cumulated volume of trades on regulated market (in or outside the central order book) since the start of the current trading session. This is the sum of Off Book Cumulative Quantity, On Book Auction Cumulative Quantity and On Book Continuous Cumulative Quantity.

Other Statistics

- **Percentage Variation Previous Close:** Percentage of variation for price (or index) versus Last Adjusted Closing Price (LACP).
- **Variation Last Price:** Percentage variation of price with last reference price.
- **Last Traded Price:** The Last Traded Price indicates the price of last fill on an instrument.
- **Open Price:** Opening Price of the instrument.
- **Trade Count:** The number of trades done intra-day on the instrument. For cash it is only for on-book trades.

Decimals for Statistics

For Statistics, the decimal field to apply on the “Stats Update Value” field will depend on the “Stats Update Type” field as follow:

- **For prices and index levels, use the “Price/Index Decimals” field for:**
  - High and Low (Stats Update Types: 5 to 10)
  - Open Price (Stats Update Type: 15)
  - Last Traded Price (Stats Update Type: 17)
- **For quantities, use the “Quantity Decimals” field for:**
  - Cumulatives Quantities (Stats Update Types: 21 to 23)
- **For Ratio, use the « Ratio / Multiplier Decimals” field for:**
  - Variation Last Price (Stats Update Type: 14)
  - Percentage Variation Previous Close (Stats Update Type: 18)

Trade cancellation in statistics

In case of a trade cancellation the statistics message will broadcast all the statistics updates. If the cancellation cancelled the only trade and there is no Valuation Price then the statistics will be set to null except for the Trade Count and the cumulative quantities.

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Statistics after HA (for cash only)

The first statistics messages after a MDG HA will carry the most accurate and up to date statistics since some trades may not have been persisted (Clients can detect the a MDG restart with the “Packet Flags” when counter on bits between position 1 and 3 changes).

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Stats Update Type	Indicates the type of published statistics update.	Enumerated	1	(See field description)	Mandatory	115
Stats Update Value	Indicates the value of the published statistics update.	Signed Numerical	8	From -2^63+1 to 2^63-1	Optional	116

7.3.7 Real Time Index (1008)

A Real-Time Index message handles the real-time characteristics of an index: the level of the index, type of index level (opening index level, real-time, indicative level). This message is sent for:

- Stock Indices
- Strategy Indices
- Volatility Indices

Message Sending Rules:

Sending of these messages for a given index is conditioned by a flag configured at the index level. These conditions and the nature of these messages that are sent for each index are dependent on two factors:

- The publication mode of the index; there are three publication modes:
  - Continuous: Calculated index levels are published periodically, at a frequency that can be configured for each index. Currently an index that is published continuously can either be published every 15 seconds or every 30 seconds.
  - Discontinuous: A single Closing level (level 5) before the provisional closing phase, occurring at a time (a 'fixed time') that can be configured for each index
  - At closing only: No broadcast before the provisional closing phase
- The current calculation phase of the index

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Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Event Time	(Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Index Level	The value of the last level for the index that is the subject of this message (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	84
Percentage of Capitalization	Percentage of capitalization for the active instruments in the index (to be calculated with the Ratio / Multiplier Decimals).	Numerical	8	From 0 to 2^64-2	Optional	107
Percentage Var from Prev Close	Percentage of variation for last price (or index) versus previous closing price (or closing reference price) (to be calculated with the Ratio / Multiplier Decimals).	Signed Numerical	8	From -2^63+1 to 2^63-1	Mandatory	107
Number Of Traded Instruments in Index	Number of traded instruments in the index.	Quantity	2	From 0 to 2^16-2	Optional	103
Index Level Type	Type of Index Level.	Enumerated	1	(See field description)	Mandatory	85
Index Price Code	Type of Price as positioned in Session High/Low or to indicate the trend or at the contrary the reference value from which the price may change.	Enumerated	1	(See field description)	Mandatory	85

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7.3.8 Index Summary (1011)

The Index Summary message is sent twice at the end of the day in order to disseminate the final statistics related to an index, which aggregates daily data.

Message Sending Rules:

- Every trading day, for each index type 'stock index', two types of index summary messages are sent:
  - The first summary is sent when the index enters the provisional closing phase.
  - The second summary is sent when the index enters the final closing phase.

Field	Short Description	Format	Len	Values	Presence	Page
Market Data Sequence Number	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence.	Sequence	8	From 0 to 2^64-2	Mandatory	91
Rebroadcast Indicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	112
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	80
Event Time	(Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	81
Symbol Index	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	117
Opening Level	Official Opening Index Level. This level corresponds to the Index Level Type 1 of the Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	103
Opening Time	Time of Official Opening level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	104
Confirmed Reference Level	Confirmed Reference level. This level corresponds to the index Level Type 6 of the message Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	78
Confirmed Reference Time	Time of (Confirmed) Reference level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	78

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Field	Short Description	Format	Len	Values	Presence	Page
Closing Reference Level	Reference closing index level. This level corresponds to the Index Level Type 5 of the message Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	77
Closing Reference Time	Time of provisional closing reference index level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	**78**
Percentage Var from Prev Close	Percentage of variation for last price (or index) versus previous closing price (or closing reference price) (to be calculated with the Ratio / Multiplier Decimals).	Signed Numerical	8	From -2^63+1 to 2^63-1	Mandatory	107
High Level	Highest index level (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	83
High Time	Time of provisional highest index level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	83
Low Level	Lowest index level (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Mandatory	89
Low Time	Time of provisional lowest index level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	89
Liquidation Level	Index Level of reference at expiration settlement (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	88
Liquidation Time	Time of provisional expiration settlement index level (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Optional	89

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7.4 SNAPSHOT MESSAGES

The Snapshot mechanism uses the same messages as the real-time feed.

When used for the snapshot, the messages have the field “Rebroadcast Indicator” set to “1”.

Message	Purpose	Sending rules
Start Of Snapshot (2101)	Defines the start of a snapshot sequence on all channels	This is the first message of a snapshot sequence. It contains the last Market Data Sequence Number from real-time that is contained in this snapshot sequence.
End Of Snapshot (2102)	Defines the end of a snapshot sequence on all channels	This is the last message of a snapshot sequence. It contains the last Market Data Sequence Number from real-time that is contained in this snapshot sequence.
Market Status Change (1005)	Notifies of a market status change along with its reason	Only the Last Market Status Change per Symbol Index and EMM will be sent.
Market Update (1001) for BBO (with Market Data Update Type set to “1” or “2” only)	Provides the Best Bid and the Best Offer for each instrument	Only the last Best Bid and the last Best Offer will be resent.
Market Update (1001)	Allows clients to rebuilt the book with full depth	Only for market by limits.
Long Order Update (1015)		Only for market by orders.
Price Update (1003)	Provides all last updated reference prices	Only last Price Update, for each Market Data Price Type, will be sent.
Full Trade Information (1004)	Provides Trade reporting for last trades	Only last 50 intraday trades and if they are not older than 15 minutes, for the whole instrument set on a given channel will be resent.
Statistics (1009)	Provides full statistics per instruments	Only last statistics will be sent. Clients might receive, in snapshot, statistics for an instrument in more than one packet.
Index Summary (1011)	Provides end of day index summary	Only the last message will be resent.
Real Time Index (1008)	Provides real-time index data	Only the last message will be resent.

Any message that is not in the above table will not be disseminated using the Snapshot mechanism.

7.4.1 Technical messages in Snapshot channels

Start of Day, Health Status and End of Day are also sent on the snapshot channels. They are not part of the Snapshot Sequence and should be processed separately by the clients. Customers need to take into account that they can also be sent between a Start of Snapshot and an End of snapshot messages.

In the Health Status, still on the snapshot channels, the Market Data Sequence Number is the MDSN of the last message sent by the aggregator of this channel. Please note that this Market Data Sequence Number may be different from the Last Market Data Sequence Number in the Start / End of Snapshot messages that matches the last real time message taken into account to build the snapshot.

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7.4.2 Snapshot Sequence behaviour

The snapshot sequences start as soon as MDG is ready to broadcast messages (and not after the first real-time message is sent on the real-time channels) and stops only when MDG stops. So Start of Day, Health Status and End of Day messages will be sent along with the snapshots at the beginning of the day, during the day and at the end of the day respectively. At the beginning of the day the snapshots will contain only Start of Snapshot and End of Snapshot messages with no snapshotted messages in between and the Market Data Sequence Number in Start of Snapshot and End of Snapshot will be set to null.

The minimum period between two snapshot sequences for a given channel is set to 2 seconds all along the day.

The snapshot sequence provides messages for all instruments of the channel at the same time, as opposed to instrument by instrument.

7.4.3 Start Of Snapshot (2101)

Provides the Market Data Sequence Number of the last real-time message processed for this snapshot.

Last Market Data Sequence Number is set to null at the beginning of the day until another message than Start Of Day (1101) is broadcasted.

Message Sending Rules:

Start Of Snapshot message is always the first message of a snapshot sequence, and indicates the beginning of a snapshot sequence.

Field	Short Description	Format	Len	Values	Presence	Page
Last Market Data Sequence Number	Indicates the Market Data Message Sequence Number of the last real-time message processed for this snapshot.	Sequence	8	From 0 to 2^64-2	Optional	88
Snapshot Time	Indicates the time when snapshot generation has respectively started/ended in the Start Of Snapshot/End Of Snapshot message (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	115

7.4.4 End Of Snapshot (2102)

The End Of Snapshot message indicates the end of a snapshot sequence.

It provides the Market Data Sequence Number of the last real time message processed for this snapshot. It also indicates that processing queued messages from the real-time feed with a higher Market Data Sequence member is now possible.

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Message Sending Rules:

End Of Snapshot message is always the last message of a snapshot sequence.

Field	Short Description	Format	Len	Values	Presence	Page
Last Market Data Sequence Number	Indicates the Market Data Message Sequence Number of the last real-time message processed for this snapshot.	Sequence	8	From 0 to 2^64-2	Optional	88
Snapshot Time	Indicates the time when snapshot generation has respectively started/ended in the Start Of Snapshot/End Of Snapshot message (Time in number of nanoseconds since 01/01/1970 UTC).	Epoch Time in Nanoseconds	8	From 0 to 2^64-2	Mandatory	115

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8. FIELD DESCRIPTION

A

Account Type

Field Name	Account Type
Description	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. - Non-LP clients are not allowed to use the type '6' (Liquidity Provider).
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment
Conditions	Provided only for Non-Anonymous markets. The value 2 is only for BSE and BVMT. The values from 6 up to 13 are only BVMT.
Used In	Long Order Update (1015) Full Trade Information (1004)

Amount Decimals

Field Name	Amount Decimals
Description	Indicates the number of decimals for each Amount related to this Symbol Index
Used For	Cash and Derivatives
Format	Decimal Places
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

B

Block Trade Code

Field Name	Block Trade Code
Description	Indicates if trade relates to a block or a negotiated deal following MiFID rules.
Used For	Cash

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Format	Enumerated
Length	1
Possible Values	B = Block Trade N = Regular trade or Negotiated deal - = (Hyphen) Undefined
Used In	Full Trade Information (1004)

Book State

Field Name	Book State
Description	Book State.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Inaccessible 2 = Closed 3 = Call 4 = Uncrossing 5 = Continuous 6 = Halted 8 = Suspended 9 = Reserved
Used In	Market Status Change (1005)

C

CFI

Field Name	CFI
Description	Classification code of a financial instrument defined by the ISO-10962:2015 standard.
Used For	Cash and Derivatives
Format	Text
Length	6
Possible Values	(See field description)
Used In	Standing Data (1007)

Closing Reference Level

Field Name	Closing Reference Level
Description	Reference closing index level. This level corresponds to the Index Level Type 5 of the message Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1

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Used In	Index Summary (1011)

Closing Reference Time

Field Name	Closing Reference Time
Description	Time of provisional closing reference index level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

Confirmed Reference Level

Field Name	Confirmed Reference Level
Description	Confirmed Reference level. This level corresponds to the index Level Type 6 of the message Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Index Summary (1011)

Confirmed Reference Time

Field Name	Confirmed Reference Time
Description	Time of (Confirmed) Reference level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

Country Of Exchange

Field Name	Country Of Exchange
Description	Country of exchange is the Country associated to the MIC following ISO 3166 Alpha-3.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Standing Data (1007)

Currency Coefficient

Field Name	Currency Coefficient
Description	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals).

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	For example a UK-listed instrument with its trading currency GBP having a price expressed in Pence, the Currency Coefficient will be 0.01 expressed with Currency Coefficient set to 1 and Ratio / Multiplier Decimals set to 2. The Currency Coefficient may be used for the Instrument Trading Price (the Referential field Trading Currency Indicator is then set to 1).
Used For	Cash
Format	Numerical ID
Length	4
Possible Values	From 0 to 2^32-2
Used In	Standing Data (1007) Full Trade Information (1004)

D

Dark Eligibility

Field Name	*Dark Eligibility*
Description	*Indicates the Eligibility to dark. 0 is not eligible, 1 is eligible.*
Used For	*Cash*
Format	*Boolean*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*Standing Data (1007)*

Dark LIS Threshold

Field Name	*Dark LIS Threshold*
Description	*Defines the minimum amount of an order to benefit from the LIS (Large In Scale) pre-transparency waiver.*
Used For	*Cash*
Format	*Amount*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*Standing Data (1007)*

Dark Minimum Quantity

Field Name	*Dark Minimum Quantity*
Description	*Defines the minimum quantity required for an order to be filled in the Dark liquidity. 0 indicates that no minimum amount is required.*
Used For	*Cash*
Format	*Quantity*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Used In	*Standing Data (1007)*

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Date Of Last Trade

Field Name	Date Of Last Trade
Description	Date of the Last Price for the Instrument (in number of days since the 1st of January 1970).
Used For	Cash
Format	Date
Length	2
Possible Values	From 0 to 2^16-2
Used In	Standing Data (1007)

Depositary List

Field Name	Depositary List
Description	Identifies the possible main depository organizations (maximum four) for shares or fixed income. Use the clearing house to determine the relevant system for settling trades. Valid values are: - '00000' – No depository organization - 'Nulls' – Not significant - *Values to be added*
Used For	Cash
Format	Text
Length	20
Possible Values	(See field description)
Used In	Standing Data (1007)

E

Effective Date Indicator

Field Name	Effective Date Indicator
Description	Indicates if the trade is introduced on the trading session day or earlier.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = If the seller declaration is received on the current trading session day 1 = If seller declaration is received before the current trading session day
Used In	Full Trade Information (1004)

EMM

Field Name	EMM
Description	Defines the Exchange Market Mechanism applied on each platform.
Used For	Cash and Derivatives

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Format	Enumerated
Length	1
Possible Values	1 = Cash and Derivative Central Order Book (COB) 5 = Cash On Exchange Off book [C] *10 = Buy In* *11 = Odd Lot* 99 = Not Applicable (For indices and iNAV) [C]
Used In	Standing Data (1007) Timetable (1006) Market Update (1001) Long Order Update (1015) Price Update (1003) Full Trade Information (1004) Market Status Change (1005) Real Time Index (1008) Index Summary (1011)

End Time Vwap

Field Name	End Time Vwap
Description	End time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).
Used For	Cash
Format	Intraday Time in Seconds
Length	4
Possible Values	From 0 to 2^32-2
Used In	Full Trade Information (1004)

Event Time

Field Name	Event Time
Description	Time when an event has been processed (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Health Status (1103) Market Update (1001) Long Order Update (1015) Price Update (1003) Full Trade Information (1004) Market Status Change (1005) Real Time Index (1008) Index Summary (1011)

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F

First Settlement Date

Field Name	First Settlement Date
Description	Represents the first possible settlement date for a given instrument. This information is always populated when instruments are admitted to listing / trading under an As If and When Issued / Delivered scheme (or "Promesses"). When this date is not provided, it means that the first possible settlement date is the same as the first trading date (in number of days since the 1st of January 1970).
Used For	Cash
Format	Date
Length	2
Possible Values	From 0 to 2^16-2
Used In	Standing Data (1007)

Firm ID

Field Name	Firm ID
Description	Identifier of the member firm that has entered the Order.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Conditions	Provided only for non anonymous market.
Used In	Long Order Update (1015) Full Trade Information (1004)

Full Instrument Name

Field Name	Full Instrument Name
Description	Full Instrument Name.
Used For	Cash
Format	Text
Length	102
Possible Values	(See field description)
Used In	Standing Data (1007)

G

Guarantee Indicator

Field Name	Guarantee Indicator
Description	Indicates if the trade is guaranteed or not (for clearing purpose)
Used For	Cash

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Format	Enumerated
Length	1
Possible Values	0 = This instrument is not guaranteed 1 = This instrument is guaranteed 2 = This instrument is not clearable 8 = This instrument is part of Cleared Borrowing and Lending Service (CBLM) and is guaranteed
Used In	Standing Data (1007)

H

High Level

Field Name	High Level
Description	Highest index level (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Index Summary (1011)

High Time

Field Name	High Time
Description	Time of provisional highest index level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

I

ICB

Field Name	*ICB*
Description	*Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*16*
Possible Values	*(See field description)*
Used In	*Standing Data (1007)*

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ICB Code

Field Name	ICB Code
Description	Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.
Used For	Cash
Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Used In	Standing Data (1007)

Imbalance Quantity

Field Name	Imbalance Quantity
Description	Imbalance volume quantity if Uncrossing occurs at this moment. This volume includes hidden quantity (to be calculated with Quantity Decimals).
Used For	Cash
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Price Update (1003)

Imbalance Quantity Side

Field Name	Imbalance Quantity Side
Description	Side of the imbalance volume if the Uncrossing occurs at this moment.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	0 = No imbalance 1 = Buy 2 = Sell
Used In	Price Update (1003)

Index Level

Field Name	Index Level
Description	The value of the last level for the index that is the subject of this message (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Real Time Index (1008)

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Index Level Type

Field Name	Index Level Type
Description	Type of Index Level.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	0 = Indicative Index 1 = Official Opening Index 2 = Real-Time Index 3 = Automatic Indicative Index 4 = (Preliminary) Reference Index 5 = Closing Reference Index 6 = (Confirmed) Reference Index 7 = Options Liquidation Index
Used In	Real Time Index (1008)

Index Price Code

Field Name	Index Price Code
Description	Type of Price as positioned in Session High/Low or to indicate the trend or at the contrary the reference value from which the price may change.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	0 = Only Index 1 = Index and Session High 2 = Index and Session Low 3 = Index and Session High and Low (typically first price) 4 = Only Session High 5 = Only Session Low 6 = Previous Day Close
Used In	Real Time Index (1008)

Instrument Event Date

Field Name	Instrument Event Date
Description	Date of the last instrument characteristic modification(s) except for some exceptions. The following exceptions (since they are modified every day) are not updating the Event Date and allow members to know when a change occurs on instrument characteristics: - Previous day's adjusted closing price (LastAdjPrice) - Previous day capital traded (Prev Day Capital Traded) - Number of shares for this instrument traded on previous day (Previous Volume Traded) - Date instrument last traded (DateOfLastTrade) (in number of days since the 1st of January 1970).
Used For	Cash and Derivatives
Format	Date
Length	2
Possible Values	From 0 to 2^16-2

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Used In	Standing Data (1007)

Instrument Group Code

Field Name	Instrument Group Code
Description	Instrument Group / Class Identifier.
Used For	Cash
Format	Alphanumerical ID
Length	2
Possible Values	(See field description)
Used In	Standing Data (1007)

Instrument Name

Field Name	Instrument Name
Description	Instrument Name
Used For	Cash
Format	Text
Length	18
Possible Values	(See field description)
Used In	Standing Data (1007)

Instrument Trading Code

Field Name	Instrument Trading Code
Description	Trading code is a 12-character string, the only instrument identifier that is unique in the feed in addition to the symbol index. Also known as Local Symbol.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	15
Possible Values	(See field description)
Used In	Standing Data (1007)

Instrument Unit Expression

Field Name	Instrument Unit Expression
Description	Unit in which the instrument is quoted.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Units 2 = Percentage of Nominal Excluding Accrued Interest (Clean) 3 = Basis Points 5 = Percentage of Nominal Including Accrued Interest (Dirty) 8 = Kilograms

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	9 = Ounces
Used In	Standing Data (1007)

ISIN Code

Field Name	ISIN Code
Description	Instrument ISIN following ISO 6166. Identifier of a product. Combined with MIC and Currency, identifies an instrument traded on a given market using a given currency.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	12
Possible Values	(See field description)
Used In	Standing Data (1007)

Issue Price

Field Name	Issue Price
Description	Issuing price of the instrument (to be calculated with Issue Price Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Standing Data (1007)

Issue Price Decimals

Field Name	Issue Price Decimals
Description	Indicates the number of decimals for Issue Price related to this Symbol Index
Used For	Cash
Format	Decimal Places
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

Issuing Country

Field Name	Issuing Country
Description	Issuing country. Provides the ISO 3166 (Alpha 3) code for the country of headquarter company that issued the instrument.
Used For	Cash
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Standing Data (1007)

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L

Last Adjusted Closing Price

Field Name	Last Adjusted Closing Price
Description	Last traded price of the previous trading day after application of the adjustment coefficient (to be calculated with the Price/Index Level Decimals). Not provided for European instruments.
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Standing Data (1007)

Last Market Data Sequence Number

Field Name	Last Market Data Sequence Number
Description	Indicates the Market Data Message Sequence Number of the last real-time message processed for this snapshot.
Used For	Cash and Derivatives
Format	Sequence
Length	8
Possible Values	From 0 to 2^64-2
Used In	Start Of Snapshot (2101) End Of Snapshot (2102)

Liquid Instrument Indicator

Field Name	*Liquid Instrument Indicator*
Description	*Indicates whether the instrument is liquid or not, as defined per MiFID II. (0 = Illiquid ; 1 = Liquid)*
Used For	*Derivatives*
Format	*Boolean*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*Standing Data (1007)*

Liquidation Level

Field Name	Liquidation Level
Description	Index Level of reference at expiration settlement (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8

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Possible Values	From -2^63+1 to 2^63-1
Used In	Index Summary (1011)

Liquidation Time

Field Name	Liquidation Time
Description	Time of provisional expiration settlement index level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

Lot Size

Field Name	Lot Size
Description	For cash instruments with Quantity Notation = “UNT”: The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size. For cash instruments with Quantity Notation = “FMT”: The Lot Size has to be considered with the data “Par value”, and the order quantity has to be a multiple of this Par value.
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Standing Data (1007)

Low Level

Field Name	Low Level
Description	Lowest index level (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Index Summary (1011)

Low Time

Field Name	Low Time
Description	Time of provisional lowest index level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

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M

Main Depositary

Field Name	Main Depositary
Description	Identifies the default (or main) depository organization of the instrument (between the possible 4 depositaries registered) used by priority for the settlement (for example: multi-listed instruments which have several depositories). For Cash Markets this data has to be treated in consideration of the data Depositary List used by the clearing house to determine the relevant system for settling trades. Valid values are the same as for "Depositary List". Valid values are: - '00000' – No depository organization - 'Nulls' – Not significant - *Values to be added*
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	5
Possible Values	(See field description)
Used In	Standing Data (1007)

Market Data Action Type

Field Name	Market Data Action Type
Description	Identifies if the order is a New Order, a Deletion, a Modification or a Retransmission.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = New Order 2 = Deletion of order identified by Previous Priority 3 = Deletion of all orders for the given instrument (depending on the side. If side is not provided, it means both) 4 = Modification of existing order Without Loss Of Priority 5 = Retransmission of all orders for the given instrument 6 = Modification of existing order With Loss Of Priority
Used In	Long Order Update (1015)

Market Data Change Type

Field Name	Market Data Change Type
Description	Type of scheduled change.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Status Change(s) 1 = Scheduled Event Notification 2 = Status Change(s) and Scheduled Event Notification
Used In	Market Status Change (1005)

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Market Data Price Type

Field Name	Market Data Price Type
Description	Type of price update.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	12 = Adjusted Closing Price (Cash Only) 13 = Subscription Price (Cash Only) 14 = Indicative Matching Price (Cash and Derivatives) 23 = Valuation Price (Cash Only) 26 = Uncrossing Price (Cash and Derivatives) 27 = Last Traded Price (Cash and Derivatives) 28 = Alternative Indicative Price (AIP) (Cash Only)
Used In	Price Update (1003)

Market Data Sequence Number

Field Name	Market Data Sequence Number
Description	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence. This sequence will always increment but not by 1 during the day, except for “Health Status” messages that will contain the Market Data Sequence Number of the last message (that is not a “Health Status” message) sent on the channel.
Used For	Cash and Derivatives
Format	Sequence
Length	8
Possible Values	From 0 to 2^64-2
Used In	Start Of Day (1101) End Of Day (1102) Health Status (1103) Technical Notification (1106) Standing Data (1007) Timetable (1006) Market Update (1001) Long Order Update (1015) Price Update (1003) Full Trade Information (1004) Market Status Change (1005) Statistics (1009) Real Time Index (1008) Index Summary (1011)

Market Data Update Type

Field Name	Market Data Update Type
Description	Type of market data update.
Used For	Cash and Derivatives

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Format	Enumerated
Length	1
Possible Values	1 = Best Bid (Cash and Derivatives) 2 = Best Offer (Cash and Derivatives) 3 = New Bid (Cash and Derivatives) 4 = New Offer (Cash and Derivatives) 5 = Updated Bid (Cash and Derivatives) 6 = Updated Offer (Cash and Derivatives) 14 = High Dynamic Collar (Cash Only) 15 = Low Dynamic Collar (Cash Only) 24 = Conventional Trade (Cash and Derivatives) 30 = Guaranteed Cross Trade (Cash and Derivatives) 50 = Trade Cancellation (Cash and Derivatives) 51 = Out of Market Trade (Cash and Derivatives) 63 = Low Static Collar (Cash Only) 64 = High Static Collar (Cash Only) 85 = Volume Weighted Average Price (Cash Only) 254 = Clear Book (Cash and Derivatives)
Used In	Market Update (1001)

Market Model

Field Name	Market Model
Description	Market Model identifier.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Order Driven *2 = Quote Driven* 7 = Declaration Driven
Used In	Standing Data (1007)

Market Of Reference MIC

Field Name	*Market Of Reference MIC*
Description	*Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*4*
Possible Values	*(See field description)*
Used In	*Standing Data (1007)* *Full Trade Information (1004)*

Maturity Date

Field Name	*Maturity Date*
Description	*Maturity Date of the instrument (text formatted as YYYYMMDD).*

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	For contracts with one expiry per month the day component may be "00" (text formatted as YYYYMMDD). *For AtomX instruments this field contains the exact expiry date.* *For repo (repurchase agreement) it represents the inclusive date until which a lending/borrowing contract can be traded.*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*8*
Possible Values	*(See field description)*
Used In	*Standing Data (1007)*

Maximum Decimals In Quantity

Field Name	Maximum Decimals In Quantity
Description	Maximum Decimals In Quantity was introduced for Euronext Fund Services Paris and indicates the maximum of relevant decimal number for trading.
Used For	Cash
Format	Numerical
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

MIC

Field Name	MIC
Description	Identifies the market to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	4
Possible Values	(See field description)
Used In	Standing Data (1007)

MIC List

Field Name	*MIC List*
Description	*Identifies the Euronext markets on which an instrument is listed by its MIC (Market Identification Code).* *For an instrument listed on a single Euronext market, the listing MIC code is the same than "Market Identification Code (MIC) of the listed instrument" For an instrument listed on several Euronext Markets:* *- The first MIC is the same than the "Market Identification Code (MIC) of the listed instrument* *- The others MIC indicate the other listing places*
Used For	*Cash and Derivatives*
Format	*Alphanumerical ID*
Length	*20*
Possible Values	*(See field description)*
Used In	*Standing Data (1007)*

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MiFID Clearing Flag

Field Name	MiFID Clearing Flag
Description	Code to identify whether the transaction will be cleared. - 'true': Transaction to be cleared. - 'false': Transaction not to be cleared.
Used For	Derivatives
Format	Text
Length	5
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Currency

Field Name	MiFID Currency
Description	Currency in which the price is expressed (applicable if the price is expressed as monetary value) following ISO 4217 standard.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Emission Allowance Type

Field Name	*MiFID Emission Allowance Type*
Description	*This field is only applicable for emission allowances.* *Possible values:* *- 'EUAE' – European Union Allowances (EUA)* *- 'CERE' - Certified Emission Reductions (CER)* *- 'ERUE' - Emission Reduction Units (ERU)* *- 'EUAA' - European Union Aviation Allowances (EUAA)* *- 'OTHR' – Other (for derivatives only)*
Used For	*Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MiFID Execution ID

Field Name	MiFID Execution ID
Description	MiFID Transaction Identification Code is composed of the Symbol Index (on 10 characters), the EMM (on 3 characters) and the Execution ID (on 10 characters). It is a unique Execution ID by instrument per day on the different available EMM.

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	Example: Trade done with Execution Id: 42 on the Symbol Index: 1384659 on EMM: 1 (COB) will have this MiFID Execution ID: 00013846590010000000042.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	52
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Instrument ID

Field Name	MiFID Instrument ID
Description	Code used to identify the financial instrument. This code has to be processed with the MiFID Instrument ID Type.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	12
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Instrument ID Type

Field Name	MiFID Instrument ID Type
Description	Code type used to identify the financial instrument. Possible values: - 'ISIN' = ISIN code, where ISIN is available. - 'OTHR' = other identifier.
Used For	Cash and Derivatives
Format	Text
Length	4
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Notional Amount

Field Name	*MiFID Notional Amount*
Description	*Nominal amount or notional amount.* *For spread bets, the notional amount shall be the monetary value wagered per point movement in the underlying financial instrument.* *For credit default swaps, it shall be the notional amount for which the protection is acquired or disposed of.* *Possible values:* *- Maximum of 18 digits with a maximum of 5 decimals.* *Note: Decimal separator is '.' (full stop).*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*20*
Possible Values	*(See field description)*

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Used In	*Full Trade Information (1004)*

MiFID Price

Field Name	MiFID Price
Description	Traded price of the transaction excluding, where applicable, commission and accrued interest. Where price is reported in monetary terms, it shall be provided in the major currency unit. Where price is not applicable the field shall not be populated. Possible values: - For price expressed as monetary value: maximum of 18 digits with a maximum of 13 decimals. - For price expressed as percentage or yield: maximum of 11 digits with a maximum of 10 decimals. Note 1: Decimal separator is '.' (full stop). Note 2: Negative numbers are prefixed with '-' (minus). Note 3: Where applicable, values shall be rounded and not truncated.
Used For	Cash and Derivatives
Format	Text
Length	20
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Price Notation

Field Name	MiFID Price Notation
Description	Indication as to whether the price is expressed in monetary value, in percentage or in yield. Possible values: 'MONE' – Monetary value 'PERC' – Percentage 'YIEL' – Yield 'BAPO' – Basis points.
Used For	Cash and Derivatives
Format	Text
Length	4
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Qty in Measurement Unit Notation

Field Name	*MiFID Qty in Measurement Unit Notation*
Description	*Indication of measurement units in which the quantity in measurement unit is expressed.* *Possible values:* *'TOCD' – tons of carbon dioxide equivalent* *Or* *{ALPHANUM-25} otherwise.*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*25*

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Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MiFID Quantity

Field Name	MiFID Quantity
Description	Number of units of the financial instrument. The nominal or monetary value of the financial instrument. Possible values: - For quantity expressed as number of units: maximum of 18 digits with a maximum of 17 decimals. - For quantity expressed as monetary or nominal value: maximum of 18 digits with a maximum of 5 decimals. Note 1: Decimal separator is '.' (full stop).
Used For	Cash and Derivatives
Format	Text
Length	20
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MiFID Quantity Measurement Unit

Field Name	*MiFID Quantity Measurement Unit*
Description	*The equivalent amount of commodity or emission allowance traded expressed in measurement unit* *Possible values:* *- For quantity expressed as number of units: maximum of 18 digits with a maximum of 17 decimals.* *Note: Decimal separator is '.' (full stop).*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*20*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Agency Cross Trade Indicator

Field Name	*MMT Agency Cross Trade Indicator*
Description	*Defines the agency cross trade indicator following MMT level 3.3.* *Possible values:* *- 'ACTX': Agency Cross Trade* *- '-': No Agency Cross Trade*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

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MMT Algorithmic Indicator

Field Name	*MMT Algorithmic Indicator*
Description	*Defines the algorithmic indicator following MMT level 3.9.* *Possible values:* *- 'ALGO': Algorithmic Trade* *- '-': No Algorithmic Trade*
Used For	*Cash*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Benchmark Indicator

Field Name	*MMT Benchmark Indicator*
Description	*Defines the benchmark indicator or the reference price indicator following MMT level 3.5.* *Possible values:* *- 'BENC': Benchmark Trade* *- 'RFPT': Reference Price Trade* *- '-': No Benchmark or Reference Price Trade*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Contribution to Price

Field Name	*MMT Contribution to Price*
Description	*Defines the contribution to price or the price discovery process following MMT level 3.8.* *Possible values:* *- 'P': Plain-Vanilla Trade* *- 'NPFT': Non-Price Forming Trade (formerly known as the Technical Trade)* *- 'TNCP': Trade not Contributing to the Price Discovery Process*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Duplicative Indicator

Field Name	*MMT Duplicative Indicator*
Description	*Defines the duplicative indicator following MMT level 5.* *Possible values:* *- 'DUPL': Duplicative Trade Report (reported to more than one APA)*

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	- '-': Unique Trade Report
Used For	*Cash*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Market Mechanism

Field Name	MMT Market Mechanism
Description	Defines the fundamental functional market mechanism that has facilitated the trade following MMT level 1.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Central Limit Order Book *2 = Quote Driven Market* 5 = Periodic Auction (= Uncrossing)
Used In	Full Trade Information (1004)

MMT Modification Indicator

Field Name	MMT Modification Indicator
Description	Defines the modification indicator following MMT level 3.4. Possible values: - 'CANC': Trade Cancellation *- 'AMND': Trade Amendment* - '-': New Trade
Used For	Cash and Derivatives
Format	Text
Length	4
Possible Values	(See field description)
Used In	Full Trade Information (1004)

MMT Negotiation Indicator

Field Name	*MMT Negotiation Indicator*
Description	*Defines the negotiation indicator or pre-trade transparency waiver following MMT level 3.2.* *Possible values:* *- 'N': Negotiated Trade* *- 'NLIQ': Negotiated Trade in Liquid Financial Instruments* *- 'OILQ': Negotiated Trade in Illiquid Financial Instruments* *- 'PRIC': Negotiated Trade Subject to Conditions Other Than The Current Market Price* *- 'ILQD': Pre-Trade Transparency Waiver for illiquid instrument on an Side* *- 'SIZE': Pre-Trade Transparency Waiver for above standard market size on an SI* *- '-': No Negotiated Trade*
Used For	*Cash*

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Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Off Book Automated Indicator

Field Name	*MMT Off Book Automated Indicator*
Description	*Defines the off book automated indicator following MMT level 3.7.*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Length	*1*
Possible Values	*M = Off Book Non-Automated* *Q = Off Book Automated* *- = (Hyphen) Unspecified or does not apply*
Used In	*Full Trade Information (1004)*

MMT Post Trade Deferral

Field Name	*MMT Post Trade Deferral*
Description	*Defines the post trade deferral or enrichment type following MMT level 4.2.* *Possible values for the original trade:* *- 'LMTF': Limited Details Trade* *- 'DATF': Daily Aggregated Trade* *- 'VOLO': Volume Omission Trade* *- 'FWAF': Four Weeks Aggregation Trade* *- 'IDAF': Indefinite Aggregation Trade* *- 'VOLW': Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form* *Possible values for the subsequent enrichment trade:* *- 'FULF': Full Details of Earlier "Limited Details Trade (LMTF)"* *- 'FULA': Full Details of Earlier "Daily Aggregated Trade (DATF)"* *- 'FULV': Full Details of Earlier "Volume Omission Trade (VOLO)"* *- 'FULJ': Full Details of Earlier "Four Weeks Aggregation Trade (FWAF)"* *- 'COAF': Full Details in Aggregated Form of Earlier "Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form (VOLW)"* *Possible values if neither apply:* *- '-': Not Applicable / No Relevant Deferral or Enrichment Type*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Publication Mode

Field Name	*MMT Publication Mode*
Description	*Defines the publication mode or post-trade deferral reason following MMT level 4.1.* *Possible values:*

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	- '-': Immediate Publication *- '1': Non-Immediate Publication* *- 'LRGS': Non-Immediate Publication: Deferral for "Large in Scale"* *- 'ILQD': Non-Immediate Publication: Deferral for "Illiquid Instrument"* *- 'SIZE': Non-Immediate Publication: Deferral for "Size Specific"*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Special Dividend Indicator

Field Name	*MMT Special Dividend Indicator*
Description	*Defines the special dividend indicator following MMT level 3.6.* *Possible values:* *- 'SDIV': Special Dividend Trade* *- '-': No Special Dividend Trade*
Used For	*Cash*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

MMT Trading Mode

Field Name	MMT Trading Mode
Description	Differentiates transactions by defining the trading mode under which the trade was executed following MMT level 2.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Undefined Auction (= Uncrossing) 2 = Continuous Trading 3 = At Market Close Trading 4 = Out of Main Session Trading I = Scheduled Intraday Auction (= Uncrossing) K = Scheduled Closing Auction (= Uncrossing) O = Scheduled Opening Auction (= Uncrossing) U = Unscheduled Auction (= Uncrossing)
Used In	Full Trade Information (1004)

MMT Transaction Category

Field Name	*MMT Transaction Category*
Description	*Defines the transaction category following MMT level 3.1.* *Possible values:*

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	- 'D': Dark Trade *- 'RPRI': Trade that has Received Price Improvement* *- 'TPAC': Package Trade (excluding Exchange for Physicals)* *- 'XFPH': Exchange for Physicals Trade* *- '-': None apply (a standard trade for the Market Mechanism and Trading Mode)*
Used For	*Cash and Derivatives*
Format	*Text*
Length	*4*
Possible Values	*(See field description)*
Used In	*Full Trade Information (1004)*

Mnemonic

Field Name	Mnemonic
Description	Mnemonic code of the instrument. This field is not populated for every instrument.
Used For	Cash
Format	Alphanumerical ID
Length	5
Possible Values	(See field description)
Used In	Standing Data (1007)

N

Nominal Currency

Field Name	Nominal Currency
Description	Code of the nominal currency (ISO 4217-3A).
Used For	Cash
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Standing Data (1007)

Notional Currency

Field Name	Notional Currency
Description	Currency in which the notional is denominated following ISO 4217 standard.
Used For	Cash
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Full Trade Information (1004)

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Number Instrument Circulating

Field Name	Number Instrument Circulating
Description	**For stocks:** this is the total number of shares issued by the company. **For Fix Income:** this is the number of Fix Income still to be repaid.
Used For	Cash
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Standing Data (1007)

Number Of Orders

Field Name	Number Of Orders
Description	Number of orders at the current price limit.
Used For	Cash and Derivatives
Format	Numerical
Length	2
Possible Values	From 0 to 2^16-2
Used In	Market Update (1001)

Number Of Traded Instruments in Index

Field Name	Number Of Traded Instruments in Index
Description	Number of traded instruments in the index.
Used For	Cash
Format	Quantity
Length	2
Possible Values	From 0 to 2^16-2
Used In	Real Time Index (1008)

O

Opening Level

Field Name	Opening Level
Description	Official Opening Index Level. This level corresponds to the Index Level Type 1 of the Real Time Index (1008) of the corresponding index (to be calculated with the Price/Index Level Decimals).
Used For	Cash
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Index Summary (1011)

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Opening Time

Field Name	Opening Time
Description	Time of Official Opening level (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Index Summary (1011)

Optiq Segment

Field Name	Optiq Segment
Description	An Optiq segment is a universe of instruments sharing common trading properties. Instruments have the flexibility to be moved from one partition to another within an Optiq segment.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Equities 9 = Indices
Used In	Standing Data (1007)

Order Entry Qualifier

Field Name	Order Entry Qualifier
Description	Field indicating the state of the Order Entry for the current market state.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Order Entry/Cancel/Modify Disabled 1 = Order Entry/Cancel/Modify Enabled 3 = Cancel Only 4 = Order Entry Only
Used In	Timetable (1006) Market Status Change (1005)

Order Price

Field Name	Order Price
Description	Instrument price per quantity unit (To be calculated with Price/Index Level Decimals). For the Market Data feed: -Set to Null Value for priceless orders. For the Order Entry -It is mandatory for priced orders (Limit, Stop-limit) and must be set to Null Value where the price is irrelevant (Market, Stop-market, Peg, MTL).
Used For	Cash and Derivatives
Format	Price

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Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Long Order Update (1015)

Order Priority

Field Name	Order Priority
Description	Rank giving the priority of the order. The order with the lowest value of Order Priority has the highest priority. Order Priority is unique per Symbol Index and EMM, therefore, it is also used as the unique order identifier in the market data feed. Order Priority should then allow clients to reconcile their orders between private order entry and market data feed. Used in conjunction with Previous Priority, for market data only.
Used For	Cash
Format	Numerical ID
Length	8
Possible Values	From 0 to 2^64-2
Used In	Long Order Update (1015)

Order Quantity

Field Name	Order Quantity
Description	Total order quantity, per quantity unit.(To be calculated with Quantity Decimals)
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Long Order Update (1015)

Order Side

Field Name	Order Side
Description	Indicates the side of the order. Please note that the value Cross is used only for the Order Entry, it will never be populated in the Market Data feed.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Buy 2 = Sell
Used In	Long Order Update (1015) Full Trade Information (1004)

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Order Type

Field Name	Order Type
Description	Type of Order. Please note that the values Stop-market/Stop-market-on-Quote, Stop limit/Stop-limit-on-quote, Average Price, Iceberg and Mid-Point Peg are used only for the Order Entry, they will never be populated in the Market Data feed.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Market 2 = Limit 3 = Stop-market or Stop-market-on-quote (Cash Only) 4 = Stop-limit or Stop-limit-on-quote (Cash Only) 6 = Market to limit 10 = Iceberg (Cash Only)
Used In	Long Order Update (1015)

Original Report Timestamp

Field Name	Original Report Timestamp
Description	Timestamp of trade reporting to the Exchange (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Full Trade Information (1004)

P

Par Value

Field Name	*Par Value*
Description	*Par Value (also called Nominal value) for Instrument. For Fixed Income it represents the par amount to be repaid at maturity (not including interest revenue) (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Amount*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*Standing Data (1007)*

Partition ID

Field Name	Partition ID
Description	Identifies uniquely an Optiq partition across all the Exchange partitions.
Used For	Cash and Derivatives

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Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-2
Used In	Standing Data (1007)

Pattern ID

Field Name	Pattern ID
Description	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.
Used For	Cash
Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-2
Used In	Standing Data (1007) Timetable (1006)

Peg Offset

Field Name	*Peg Offset*
Description	*(Future Use) Tick offset for a pegged order.* *Used to indicate the signed tick added to the peg reference for a pegged order.*
Used For	*Cash*
Format	*Numerical ID*
Length	*1*
Possible Values	*From -127 to 127*
Used In	Long Order Update (1015)

Percentage of Capitalization

Field Name	Percentage of Capitalization
Description	Percentage of capitalization for the active instruments in the index (to be calculated with the Ratio / Multiplier Decimals).
Used For	Cash
Format	Numerical
Length	8
Possible Values	From 0 to 2^64-2
Used In	Real Time Index (1008)

Percentage Var from Prev Close

Field Name	Percentage Var from Prev Close
Description	Percentage of variation for last price (or index) versus previous closing price (or closing reference price) (to be calculated with the Ratio / Multiplier Decimals).
Used For	Cash and Derivatives

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Format	Signed Numerical
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Real Time Index (1008) Index Summary (1011)

Phase Id

Field Name	Phase Id
Description	Indicates the phase of the instrument.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Inaccessible 2 = Closed 3 = Call 4 = Uncrossing 5 = Continuous
Used In	Timetable (1006)

Phase Qualifier

Field Name	Phase Qualifier
Description	Indicates the Phase Qualifier (no multiple phase possible at the same time even if this field is a bitmap). - bit in position 0 – No Qualifier: indicates that no phase qualifier are applicable (0: No ; 1: Yes) - bit in position 1 – Call BBO Only (Cash Only): indicates a call on BBO only phase (0: No ; 1: Yes) - bit in position 2 – Trading At Last (Cash Only): indicates a trading at last phase (TaL) phase (0: No ; 1: Yes) - bit in position 3 – Random Uncrossing (Cash Only): indicates a random uncrossing phase (0: No ; 1: Yes) *- bit in position 4 – Indicates if it is a suspended phase (0: No ; 1: Yes)* *- bit in position 5 – Indicates if wholesale is allowed (0: No ; 1: Yes)*
Used For	Cash and Derivatives
Format	Bitmap
Length	2
Possible Values	0 = No Qualifier 1 = Call BBO Only (Cash Only) 2 = Trading At Last (Cash Only) 3 = Random Uncrossing (Cash Only) *4 = Suspended (Derivatives Only)* *5 = Wholesale Allowed (Derivatives Only)*
Used In	Timetable (1006) Market Status Change (1005)

Phase Time

Field Name	Phase Time
Description	Time of Phase start (Time in an integer on 4 bytes expressed as hhmmss).
Used For	Cash and Derivatives
Format	Integer Time in hhmmss

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Length	8
Possible Values	From 0 to 2^64-2
Used In	Timetable (1006)

Previous Priority

Field Name	Previous Priority
Description	Previous Priority is populated only when there is a "Modification of existing order With Loss Of Priority" or order deletions. Then clients have to remove from their market sheet the order identified with the field "Previous Priority" and add a new order with the field "Order Priority" newly provided. Used in conjunction with Order Priority.
Used For	Cash
Format	Numerical ID
Length	8
Possible Values	From 0 to 2^64-2
Used In	Long Order Update (1015)

Price

Field Name	Price
Description	Price per unit of quantity (to be calculated with the Price/Index Level Decimals).
Used For	Cash and Derivatives
Format	Price
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Market Update (1001) Price Update (1003)

Price / Index Level Decimals

Field Name	Price / Index Level Decimals
Description	Indicates the number of decimals for each Price / Index Level related to this Symbol Index
Used For	Cash and Derivatives
Format	Decimal Places
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

Price Limits

Field Name	*Price Limits*
Description	*Indicates the Price Limits mode.*
Used For	*Derivatives*
Format	*Enumerated*
Length	*1*

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Possible Values	*1 = Price Limits Enabled - Normal (Derivatives Only)* *2 = Price Limits Enabled - Wide (Derivatives Only)* *3 = Price Limits Enabled - Widest (Derivatives Only)* *4 = Price Limits Disabled (Derivatives Only)*
Used In	*Market Status Change (1005)*

Price Multiplier

Field Name	Price Multiplier
Description	Number of units of the financial instrument that are contained in a trading lot. Price multiplier coefficient for instrument unit price.
Used For	Cash
Format	Numerical
Length	4
Possible Values	From 0 to 2^32-2
Used In	Full Trade Information (1004)

Price Multiplier Decimals

Field Name	Price Multiplier Decimals
Description	Number of decimals for the field Price Multiplier.
Used For	Cash
Format	Numerical
Length	1
Possible Values	From 0 to 2^8-2
Used In	Full Trade Information (1004)

Publication Date Time

Field Name	Publication Date Time
Description	Date and time when the transaction was published by a trading venue. Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddddd Z. Where: - 'YYYY' is the year. - 'MM' is the month. - 'DD' is the day. - 'T' constant 'T' letter used as separator between YYYY-MM-DD and hh:mm:ss.dddddd Z. - 'hh' is the hour. - 'mm' is the minute. - 'ss.dddddd' is the second and its fraction of a second. - 'Z' constant 'Z' letter that stands for UTC time.
Used For	Cash and Derivatives
Format	Text
Length	27
Possible Values	(See field description)
Used In	Full Trade Information (1004)

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Q

Quantity

Field Name	Quantity
Description	Number of traded or ordered units (to be calculated with Quantity Decimals).
Used For	Cash and Derivatives
Format	Quantity
Length	8
Possible Values	From 0 to 2^64-2
Used In	Market Update (1001) Price Update (1003)

Quantity Decimals

Field Name	Quantity Decimals
Description	Indicates the number of decimals for each Quantity related to this Symbol Index
Used For	Cash and Derivatives
Format	Decimal Places
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

Quantity Notation

Field Name	Quantity Notation
Description	Indication of the type of measurement (e.g. number of units, nominal, monetary value, etc.) in which the transaction is expressed. Possible values: "UNT" - Units "FMT" - Facial Amount "-" - Not Applicable
Used For	Cash
Format	Text
Length	3
Possible Values	(See field description)
Used In	Standing Data (1007)

Quote Spread Multiplier

Field Name	*Quote Spread Multiplier*
Description	*Indicates the Quote Spread Multiplier.*
Used For	*Derivatives*
Format	*Enumerated*
Length	*1*

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Possible Values	*1 = Quote Spread Multiplier 1 (Derivatives Only)* *2 = Quote Spread Multiplier 2 (Derivatives Only)* *3 = Quote Spread Multiplier 3 (Derivatives Only)*
Used In	*Market Status Change (1005)*

R

Ratio / Multiplier Decimals

Field Name	Ratio / Multiplier Decimals
Description	Indicates the number of decimals for each Ratio / Multiplier related to this Symbol Index
Used For	Cash and Derivatives
Format	Decimal Places
Length	1
Possible Values	From 0 to 2^8-2
Used In	Standing Data (1007)

Rebroadcast Indicator

Field Name	Rebroadcast Indicator
Description	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.
Used For	Cash and Derivatives
Format	Numerical ID
Length	1
Possible Values	From 0 to 2^8-2
Used In	Technical Notification (1106) Standing Data (1007) Timetable (1006) Market Update (1001) Long Order Update (1015) Price Update (1003) Full Trade Information (1004) Market Status Change (1005) Statistics (1009) Real Time Index (1008) Index Summary (1011)

Repo Indicator

Field Name	*Repo Indicator*
Description	*Indicates whether the instrument listed underlies any loan contracts, meaning it has been admitted to the Deferred Settlement system and/or to the lending market.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*

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Possible Values	*0 = Instrument neither eligible for the SRD, nor eligible for the Loan and Lending Market* *1 = Instrument eligible for the SRD and for the Loan and Lending Market* *2 = Instrument eligible for the SRD long only* *3 = Instrument eligible for the Loan and Lending Market and for the SRD long only* *4 = Easy-to-borrow Instrument eligible for the SRD and the for Loan and Lending Market* *5 = Instrument eligible for the Loan and Lending Market* *8 = Non significant*
Used In	*Standing Data (1007)*

Retransmission End Time

Field Name	Retransmission End Time
Description	Indicates when the retransmission ends. For trade retransmission, all the trades previously received by the clients that have an "Event time" strictly higher than this field are valid (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Technical Notification (1106)

Retransmission Start Time

Field Name	Retransmission Start Time
Description	Indicates when the retransmission starts. For trade retransmission, all the trades previously received by the clients that have an "Event time" strictly lower than this field are valid (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Technical Notification (1106)

S

Scheduled Event

Field Name	Scheduled Event
Description	Type of Scheduled Event. Notifies an event that will occur at the Scheduled Event Time.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Cancel Previously Scheduled Event (Cash and Derivatives) 1 = Reopening (Cash Only) 3 = Resumption of trading (Cash Only)

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Used In	Market Status Change (1005)

Scheduled Event Time

Field Name	Scheduled Event Time
Description	Scheduled Time for the event to happen (On cash: time in an integer on 8 bytes expressed as hhmmss UTC;
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Market Status Change (1005)

Session

Field Name	Session
Description	Current market session.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Session 0 1 = Session 1 2 = Session 2 3 = Session 3 4 = Session 4 5 = Session 5 6 = Session 6 7 = Session 7 8 = Session 8 9 = Session 9
Used In	Timetable (1006) Market Status Change (1005)

Session Trading Day

Field Name	Session Trading Day
Description	Date of the current trading session (in number of days since the 1st of January 1970).
Used For	Cash and Derivatives
Format	Date
Length	2
Possible Values	From 0 to 2^16-2
Used In	Start Of Day (1101) End Of Day (1102)

Settlement Delay

Field Name	Settlement Delay

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Description	Gives the number of trading days that represents the period between the trade date and the settlement date (delivery and payment) for an instrument to be cleared and settled. Permitted Values - From 0 to 30 (Standard values) - X: This value is assigned by default if none provided. - Z: This value is assigned for Lending/Borrowing instruments. This value is especially interpreted to manage the associated management rules (D+3).
Used For	Cash
Format	Alphanumerical ID
Length	2
Possible Values	(See field description)
Used In	Standing Data (1007)

Snapshot Time

Field Name	Snapshot Time
Description	Indicates the time when snapshot generation has respectively started/ended in the Start Of Snapshot/End Of Snapshot message (Time in number of nanoseconds since 01/01/1970 UTC).
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Length	8
Possible Values	From 0 to 2^64-2
Used In	Start Of Snapshot (2101) End Of Snapshot (2102)

Start Time Vwap

Field Name	Start Time Vwap
Description	Start time for the Volume Weight Average price computation period (Number of seconds since the beginning of the day).
Used For	Cash
Format	Intraday Time in Seconds
Length	4
Possible Values	From 0 to 2^32-2
Used In	Full Trade Information (1004)

Stats Update Type

Field Name	Stats Update Type
Description	Indicates the type of published statistics update.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	5 = Daily High (Cash and Derivatives) 6 = Daily Low (Cash and Derivatives) 14 = Variation Last Price (Cash Only) 15 = Open Price (Cash and Derivatives)

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	16 = Trade Count (Cash and Derivatives) 17 = Last Traded Price (Cash and Derivatives) 18 = Percent Variation Previous Close (Cash and Derivatives) 19 = Off Book Cumulative Quantity (Cash) 21 = On Book Auction Cumulative Quantity (Cash) 22 = On Book Continuous Cumulative Quantity (Cash) 23 = On and Off Book Cumulative Quantity (Cash and Derivatives)
Used In	Statistics (1009)

Stats Update Value

Field Name	Stats Update Value
Description	Indicates the value of the published statistics update. This field has to be calculated with a scale code field depending on the "Stats Update Type" as follow: - Price / Index Level Decimals for "Stats Update Type": "5 - Daily High", "6 - Daily Low", "9 - Lifetime High", "10 - Lifetime Low", "15 - Open Price" and "17 - Last Trade Price" - Quantity Decimals for "Stats Update Type": "21 - On Book Auction Cumulative Quantity", "22 - On book Continuous Cumulative Quantity" and "23 - On and Off Book Cumulative Quantity" - Ratio / Multiplier Decimals for "Stats Update Type": "14 - Variation Last Price" and "18 - Percent Variation Previous Close" "16 - Trade Count" has no scale code.
Used For	Cash and Derivatives
Format	Signed Numerical
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	Statistics (1009)

Status Reason

Field Name	Status Reason
Description	Provides the reason for Book State changes.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	0 = Scheduled (Cash and Derivatives) 4 = Collars Breach (Cash Only) 7 = Automatic Reopening (Cash Only) 15 = Action by Market Operations (Cash and Derivatives)
Used In	Market Status Change (1005)

Strike Currency

Field Name	*Strike Currency*
Description	*Code of the strike currency (ISO 4217-3A).*
Used For	*Cash*
Format	*Alphanumerical ID*
Length	*3*
Possible Values	*(See field description)*

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Used In	*Standing Data (1007)*

Strike Currency Indicator

Field Name	*Strike Currency Indicator*
Description	*Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply.* *This is the case for strike instruments in pennies. The currency will be 'GBP', Strike Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*
Possible Values	*0 = Change rate not applied to the strike price* *1 = Change rate applied to the strike price*
Used In	*Standing Data (1007)*

Strike Price

Field Name	*Strike Price*
Description	*The strike price of an option/warrant is the specified price at which the underlying can be bought (in the case of a call/right to buy) or sold (in case of a put/right to sell) by the holder (buyer) of the option/warrant contract, at the moment he exercises his right against a writer (seller) of the option/warrant.* *Only provided for warrants or other derivatives instruments. To be calculated with Strike Price Decimals.*
Used For	*Cash and Derivatives*
Format	*Price*
Length	*8*
Possible Values	*From -2^63+1 to 2^63-1*
Used In	*Standing Data (1007)*

Strike Price Decimals

Field Name	*Strike Price Decimals*
Description	*Indicates the number of decimals for Strike Price related to this Symbol Index*
Used For	*Cash*
Format	*Decimal Places*
Length	*1*
Possible Values	*From 0 to 2^8-2*
Used In	*Standing Data (1007)*

Symbol Index

Field Name	Symbol Index
Description	Exchange identification code of the instrument. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence of the Symbol Index and with the instrument characteristics is provided in the standing data messages and associated files.
Used For	Cash and Derivatives

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Format	Numerical ID
Length	4
Possible Values	From 0 to 2^32-2
Used In	Technical Notification (1106) Standing Data (1007) Timetable (1006) Market Update (1001) Long Order Update (1015) Price Update (1003) Full Trade Information (1004) Market Status Change (1005) Statistics (1009) Real Time Index (1008) Index Summary (1011)

T

Tax Code

Field Name	*Tax Code*
Description	*Tax deduction code to which the instrument belongs.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*
Possible Values	*0 = Not eligible to PEA* *3 = Eligible to PEA* *9 = Not Applicable*
Used In	*Standing Data (1007)*

Technical Notification Type

Field Name	Technical Notification Type
Description	Indicates the technical notification sent.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Instrument Book Retransmission End 10 = Trade Retransmission Start 11 = Trade Retransmission End
Used In	Technical Notification (1106)

Tick Size Index ID

Field Name	Tick Size Index ID
Description	ID of the tick size table available in the Tick Table file.
Used For	Cash

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Format	Numerical ID
Length	2
Possible Values	From 0 to 2^16-2
Used In	Standing Data (1007)

ThresholdLISPostTrade60mn

Field Name	*Threshold LIS Post Trade 60mn*
Description	*Defines the amount of an order to benefit from the LIS Trade Deferred publication to 60 min (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Amount*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*Standing Data (1007)*

ThresholdLISPostTrade120mn

Field Name	*Threshold LIS Post Trade 120mn*
Description	*Defines the amount of an order to benefit from the LIS Trade Deferred publication to 120 min (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Amount*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*Standing Data (1007)*

ThresholdLISPostTradeEOD

Field Name	*Threshold LIS Post Trade EOD*
Description	*Defines the amount of an order to benefit from the LIS Trade Deferred publication to EOD (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Amount*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*Standing Data (1007)*

Trade Qualifier

Field Name	Trade Qualifier
Description	Trade Qualifier. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions. - bit in position 0 - Uncrossing Trade: indicates whether the trade occurred during an Uncrossing, or not. (0: No ; 1: Yes)

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	- bit in position 1 - First Trade Price: indicates whether the price of the trade is the first trade price of the day, or not. (0: No ; 1: Yes) Please note that there can be multiple Trades with the "First Trade Price" flag set to Yes. - bit in position 2 - Passive Order: indicates whether the corresponding order was passive, or not. (0: No ; 1: Yes) - bit in position 3 - Aggressive Order: indicates whether the corresponding order was aggressive, or not. (0: No ; 1: Yes) - bit in position 4 - Trade Creation by Market Operations: indicates whether the trade results from a creation by Market Operations, or not. (0: No ; 1: Yes) - For future use *- bit in position 5 - NAV Trade expressed in bps: indicates whether the trade results from a NAV trade expressed in basis point on the ETF Access platform. (0: No ; 1: Yes)* *- bit in position 6 - NAV Trade expressed in price currency: indicates whether the trade is a NAV trade expressed in price currency. This trade is always an update from a previous NAV trade expressed in basis point on the ETF Access platform. (0: No ; 1: Yes)* *- bit in position 7 - Deferred Publication: indicates whether the trade publication is deferred or immediate. (0: Immediate Publication ; 1: Deferred Publication)* If all bits are set to 0, then it means that no Trade Qualifier applies. For the Market Data feed: - The values Passive Order and Aggressive Order always qualify the Buy order. Format: Numerical value expressed in base 2, prefixed with '0b'.
Used For	Cash and Derivatives
Format	Bitmap
Length	1
Possible Values	0 = Uncrossing Trade 1 = First Trade Price 2 = Passive Order 3 = Aggressive Order 4 = Trade Creation by Market Operations *5 = NAV Trade expressed in bps (Cash Only)* *6 = NAV Trade expressed in price currency (Cash Only)* *7 = Deferred Publication (Cash Only)*
Used In	Full Trade Information (1004)

Trade Reference

Field Name	Trade Reference
Description	Reference of the trade reported to the Exchange.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	30
Possible Values	(See field description)
Used In	Full Trade Information (1004)

Trade Type

Field Name	Trade Type
Description	Type of trade.
Used For	Cash and Derivatives

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Format	Enumerated
Length	1
Possible Values	1 = Conventional Trade (Cash and Derivatives) 5 = Guaranteed Cross Trade (Cash and Derivatives) 24 = Trade Cancellation (Cash and Derivatives) 25 = Out Of Market Trade (Cash)
Used In	Full Trade Information (1004)

Trading Currency

Field Name	Trading Currency
Description	Code of the currency (ISO 4217-3A).
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	3
Possible Values	(See field description)
Used In	Standing Data (1007)

Trading Currency Indicator

Field Name	Trading Currency Indicator
Description	Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply. This is the case for instruments traded in pennies. The currency will be 'GBP', Trading Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	0 = Change rate not applied to the traded price 1 = Change rate applied to the traded price
Used In	Standing Data (1007)

Trading Date Time

Field Name	Trading Date Time
Description	Date and time when the transaction was executed. Date and time in the following format: YYYY-MM-DDThh:mm:ss.dddddd**Z**. Where: - 'YYYY' is the year. - 'MM' is the month. - 'DD' is the day. - 'T' constant 'T' letter used as separator between YYYY-MM-DD and hh:mm:ss.dddddd**Z**. - 'hh' is the hour. - 'mm' is the minute. - 'ss.dddddd' is the second and its fraction of a second. - 'Z' constant 'Z' letter that stands for UTC time.
Used For	Cash and Derivatives

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Format	Text
Length	27
Possible Values	(See field description)
Used In	Full Trade Information (1004)

Trading Period

Field Name	Trading Period
Description	Provides the current trading period.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Opening (Cash and Derivatives) 2 = Standard (Cash and Derivatives) 3 = Closing (Cash and Derivatives)
Used In	Timetable (1006) Market Status Change (1005)

Trading Side

Field Name	*Trading Side*
Description	*Indicates the Trading Side.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Bid Only (Cash Only)* *2 = Offer Only (Cash Only)* *3 = PAKO (Cash Only)* *4 = Both Sides (Cash Only)*
Used In	*Market Status Change (1005)*

Transaction Type

Field Name	*Transaction Type*
Description	*Transaction type or publication type.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*
Possible Values	*1 = Plain Vanilla Trade* *2 = Dark Trade* *3 = Benchmark Trade* *4 = Technical Trade* *5 = Give-up/Give-in Trade* *6 = Ex/Cum dividend Trade* *7 = Trade With Condition* *15 = Summary Report*
Used In	*Full Trade Information (1004)*

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Transparency Indicator

Field Name	Transparency Indicator
Description	Used to define the transparency of the trade.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	0 = Lit/Regular Trade
Used In	Full Trade Information (1004)

Type Of Corporate Event

Field Name	Type Of Corporate Event
Description	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. The data item is automatically calculated by the adjustment application but in case of problem or error, the data item value could be modified manually, particularly for purging the order book in case of absence of corporate event. This data has to be treated in consideration of the date of the event included into the header of the message. Valid values are: 00 – No specific event 01 – Dividend Payment in Cash *02 – Interest payment (Fix Income for which the price is not expressed in% of the nominal, only)* 03 - Interest Payment (%) 04 – Split 05 – Bonus (i.e. attribution) *06 – Subscription* *07 – Share allocation* *08 – Share swap* 09 – Reverse split *10 – Merger* 12 – Capital Reduction *15 – Optional corporate events(dividend option)* *17 – Purge of the order book (purge is initiated manually in the absence of a corporate event, for example, following the modification of the variable tick of the listed instrument)* 18 – Rights 19 – Bonus and Rights 20 – Bonus also entitled for Rights 21 – Rights also entitled for Bonus 23 - Price and Shares Adjustment 24 - Price and Shares Adjustment (No Purge)
Used For	Cash
Format	Alphanumerical ID
Length	2
Possible Values	(See field description)
Used In	Standing Data (1007)

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Type Of Market Admission

Field Name	Type Of Market Admission
Description	Indicates the type of market to which an instrument has been listed.
Used For	Cash
Format	Enumerated
Length	1
Possible Values	A = Instruments traded on the primary market B = Instruments traded on the secondary market C = Instruments traded on the New Market D = Non-regulated market / instruments traded on the free market ('Marche Libre') F = Non listed G = Regulated Market / Non equities H = Regulated Market / Equities / Segment A I = Regulated Market / Equities / Segment B J = Regulated Market / Equities / Segment C K = Regulated Market / All securities / Special Segment L = Regulated Market / Equities / Other instruments 6 = Off Market 7 = Gold, Currencies, and Indices 9 = Foreign
Used In	Standing Data (1007)

U

Underlying ISIN Code

Field Name	Underlying ISIN Code
Description	Underlying ISIN. For Repo: Underlying instrument (instrument used in the loan quotation system) for loan contracts on centralized lending market. For Warrant: Gives the trading code of the underlying listed instrument of a warrant.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	12
Possible Values	(See field description)
Used In	Standing Data (1007)

Underlying MIC

Field Name	Underlying MIC
Description	Identifies the market to which an instrument' underlying belongs by its MIC (Market Identification Code), according to ISO 10383. Refer to MIC field to have all the authorized values.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Length	4

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Possible Values	(See field description)
Used In	Standing Data (1007)

V

Venue

Field Name	Venue
Description	Identification of the venue where the transaction was executed using the ISO 10383 segment MIC for transactions executed on a trading venue. Otherwise the BIC is sent following ISO 9362.
Used For	Derivatives
Format	Alphanumerical ID
Length	11
Possible Values	(See field description)
Used In	Full Trade Information (1004)

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APPENDIX B: DOCUMENT HISTORY

REVIEW LOG

DOCUMENT NAME	Optiq Commercial MDG Client Specifications
PROJECT NAME	
LOCATION	
VERSION NUMBER	1.2.15

DOCUMENT HISTORY

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0.0	16/03/2018	ITS – BA Team	First Release
1.1.0	28/03/2018	ITS – BA Team	First Release - Reviewed

1.2.0	14/09/2018	ITS – BA Team	**The following values have been added:**
			- Market Data Update Type :
			o 50 = Out Of Market Trade;
			o 82 = Volume Weighted Average Price;
			- Stats Update Type :
			o 19 = Off Book Cumulative Quantity (Cash)
			- Trade Type:
			o 25 = Out Of Market Trade;
			- Order Entry Qualifier:
			o 4 = Order Entry Only;
			The following values have been updated:
			- Trade Type: 24 = Trade Cancellation was flagged as applicable;
			The following field have been added:
			- **Statistics (1009)**: EMM;
			The following Messages have been added:
			- Real Time Index (1008);
			- Index Summary (1011);
			The following Messages have been updated:
			- **Standing Data (1007)**: ICB field was deprecated and new **ICBCode** field was added;
			- **Full Trade Information (1004)**:
			o MMT Modification Indicator: flagged as applicable;
			o MIFID Instrument ID: flagged as applicable;
			o Block Trade Code: flagged as applicable;
			- **Statistics (1009)**:
			o Description updated to accommodate On Exchange Off Book Statistics;

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REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
			The following Sections have been updated: - 2.3.3.3 Real Time Channels for Indices; - 2.3.3.6 Snapshot Channels for Indices;
1.2.1	19/10/2018	ITS – BA Team	**The following fields have been updated:** - Type Of Corporate Event: o 02 – Interest Payment flagged as not applicable; o 06 – Subscription was flagged as not applicable; o 07 – Share allocation was flagged as not applicable; o 08 – Share Swap was flagged as not applicable; o 10 – Merger was flagged as not applicable; o 15 – Optional Coporate Events was flagged as not applicable; o 17 – Purge of the Order Book was flagged as not applicable; o 23 – Stock Interest was flagged as not applicable; **The following Messages have been updated:** - **Statistics (1009)**: o Description updated to remove Yearly High and Yearly Low as well as Lifetime High and Lifetime Low; **The following Sections have been updated:** - 2.1 Access to Market Data;
1.2.2	08/12/2018	ITS – BA Team	**The following fields have been updated:** - Account Type conditions were updated: o Market Model: 7 = Declaration Driven was added
1.2.3	19/12/2018	ITS – BA Team	**The following Messages have been updated:** - Standing Data (1007): o Lot Size and Instrument Unit Expression were set to deprecated on the Standing Data Unitary Repeating Section and added in the EMM Pattern repeating section;
1.2.4	27/02/2019	ITS – BA Team	**The following field has been updated:** - Account Type values reviewed accordingly with client's needs;
1.2.5	09/05/2019	ITS – BA Team	**The following Section has been updated:** - 7.4 Snapshot Messages. Removal of mention to Full Trade Information file.
1.2.6	28/06/2019	ITS – BA Team	**The following Section has been updated:** - 6.7 Look For a Trade – How to reconcile trades between market data and order entry gateway;
1.2.7	13/09/2019	ITS – BA Team	**The following Messages have been updated:** - Market Update (1001) – "Requests" and "Best implied limits" removed from initial list as they are not relevant. - Price Update (1003) – Added note that "Last Traded Price" is only sent when updated by Market Operators. - Snapshot and Realtime channels mentions have been updated across the document to reflect their compressed and uncompressed formats, respectively. - Bandwith references across the document have been updated to reflect MDG support to 1 Mbps lines.
1.2.8	09/10/2019	ITS – BA Team	**The following amendments were done:** - OptiqSegment values have been updated.

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REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
			- Type of Corporate Event '23' and '24' (Price and Shares Adjustment) updated as applicable to Optiq. - 'AMND' (Trade Amendment) on MMT Modification Indicator updated as not applicable to Optiq.
1.2.9	26/11/2019	ITS-BA Team	**The following field has been updated:** - Phase Qualifier had two bitmaps added to it
1.2.10	14/02/2019	ITS-BA Team	**The following Messages have been updated:** - Market Update (1001): VWAP value added to list of possible 'Market Data Update Type' values. Descriptions added to the section details. - Standing Data (1007): ICB field deprecation was removed and new **ICBCode** field is considered for future use. Implementation of the field use dependent on external factors. **The following Section has been updated:** - Snapshot Messages and Snapshot Channels for Cash: Timetable (1006) has been removed from the list of messages included in the snapshot. **The following Description has been updated:** Settlement Delay: 'X' was added as a possible value.
1.2.11	26/02/2020	ITS-BA Team	**The following Sections have been updated:** - (How to) Determine a Closing Price: Section updated to include all types of Closing Price Types. - Real Time and Snapshot Channels for Cash: Figure has been corrected, Long Order Update (1015) removed from "Best Bid and Offer" channel.
1.2.12	17/03/2020	ITS-BA Team	**The following Message has been updated:** - Standing Data (1007): 'Instrument Trading Code' length corrected from 12 to 15 (no change in the message structure or size). **The following Section has been updated:** - System Failures: High availability: Additional technical detail related to a MDG restart was added
1.2.13	04/05/2020	ITS-BA Team	**The following Section has been updated:** - Snapshot Channels for Cash: Correction of the Price Update message content - Real Time Channels for Cash: Correction of the Market Update Message content
1.2.14	19/06/2020	ITS-BA Team	**The following Section has been updated:** - Snapshot Channels for Cash: Correction of Standing Data (1007) presence - Snapshot Channels for Indices: Correction of Standing Data (1007) presence - Long Order Update (1015): correction of possible values of the Order Side field - Full Trade Information (1004): correction of possible values of the Order Side field - Order Side field: Correction of the messages in which it's presented
1.2.15	14/08/2020	ITS – NP	**The following Section has been updated:** - 3.3 Snapshots: Correction of the example of a late connection to the exchange

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ملحق (8)



TECHNICAL MANUAL FOR RUNNING AND USING MDG UDP TO TCP CONVERTER

Date	Version #
16-3-2020	3.0

Purpose

The purpose of this document is to provide technical information and requirements needed to be met to receive MDG packets through TCP connection.

Targeted Audience

Vendors and brokerage firms who are working with the Amman Stock Exchange (ASE).

Adjustments

Version	Description of Adjustments
1.0	• First version
2.0	• Add section "UDP2TCP packet sequence"
3.0	• Add section "Snapshot"

Related documents

The following are documents, which either should be read in conjunction with this document or to provide other relevant information for the targeted users:

1- Optiq Commercial MDG Client Specifications.
2- Optiq Commercial Kinematics Specifications.
3- Optiq Commercial File Specifications.

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6. Standing Data Files and SBE Template 7
7. Snapshot 7

1. The Reason for ASE to Convert MDG Packets from UDP to TCP

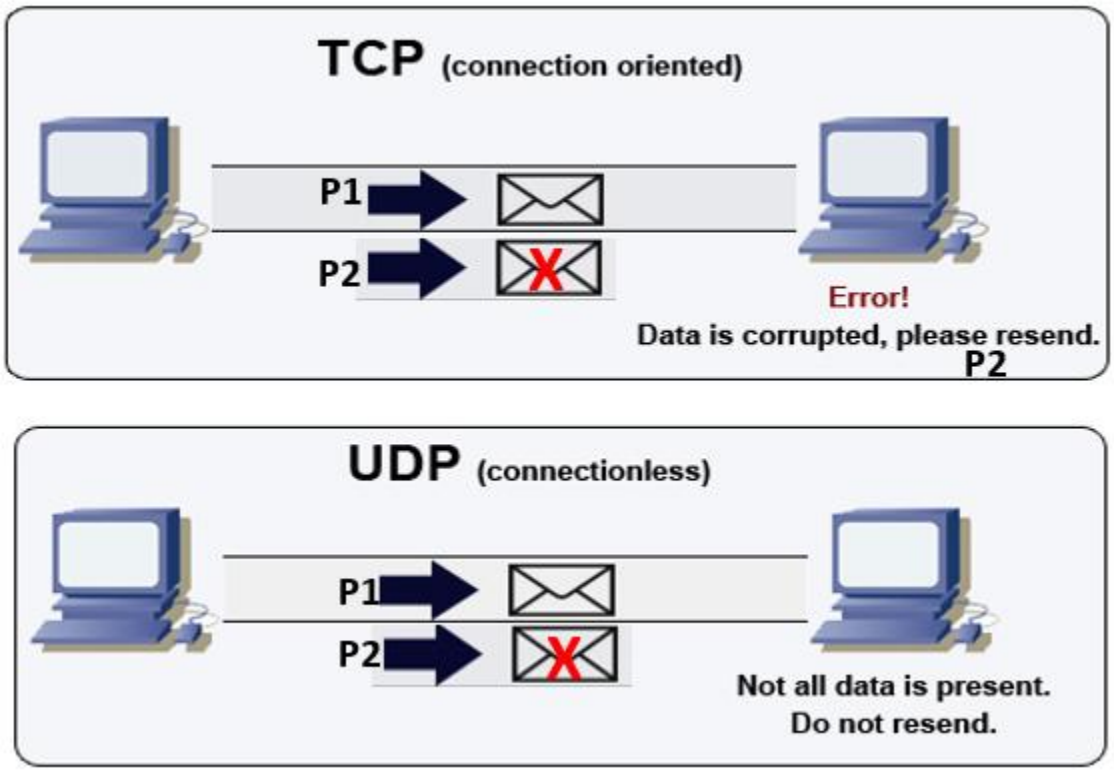

Figure1.TCP vs UDP

Transmission Control Protocol (TCP) is one of the main protocols in TCP/IP networks. TCP enables two hosts to establish a connection and exchange streams of data. TCP guarantees that all packets are delivered in the same order in which they are sent.

User Datagram Protocol (UDP) is a connectionless protocol that runs on the top of IP networks. It does not provide any recovery/retransmission services, instead, it offers a direct way to send and receive datagrams over an IP network.

For the reason that the UDP does not support retransmission or even delivery guarantee, the Amman stock exchange (ASE) has internally developed applications named "**MDG UDP2TCP Converter Real-Time**" and "**MDG UDP2TCP Converter Snapshot**", these programs will receive all of the Optiq MDG UDP packets and resend them as a TCP stream of packets.

Finally, the ASE members, ISVs and data vendor will connect to their dedicated TCP ports to receive MDG Packets from the channels that allowed for each to receive.

In summary, The UDB2TCP converters will provide the following cons:

1. Guarantee that all Optiq MDG packets are delivered in the same order they were sent.
2. Providing full capabilities to restart packet sequence as required by intended parties (brokers, ISVs and data vendor).
3. Full ability to merge different MDG channels packets into one TCP port. for example, it can send packets from FBMU and REFT in the same port. The client will distinguish packet channel ID using (Source Port) in the UDP header.

2. Components of Output Packets in MDG (UDP2TCP) Converters

The UDP2TCP converter will provide the market data packet covered by the UDP header (shown in Figure.2). Each intended parties will receive the TCP stream of UDP MDG packets, each one consist of :

1. UDP header block (8 bytes)
2. Packet block.

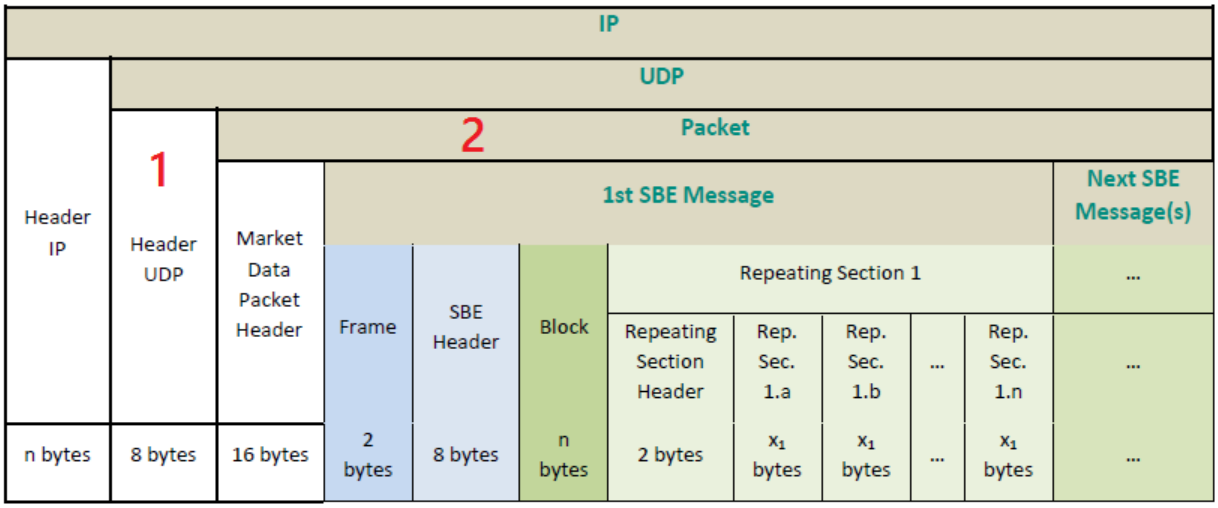

Figure 2. Market Data Packet

The UDP header consists of four fields each of them consists of 2 bytes as shown in Figure 3, Table 1 :

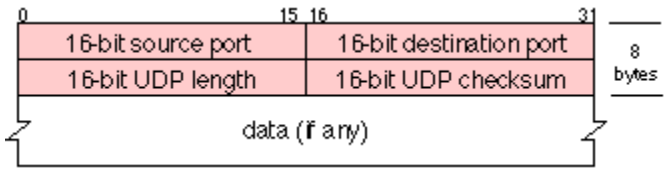

Figure 3. The UDP protocol header consists of 8 bytes

The detailed description for each field in the UDP header is as the following:

1. **Source Port**: The first 2 bytes represent the UDP Multicast channel port, based on this field, the receiver will receive different kinds of data as follow:

   - ✓ **Full Order Book Market Update (FBMU) channel** provides full order book depth and BBO using the Market Update message.
   - ✓ **Full Order Book Order Update (FBOU) channel** provides full order book depth using the Order Update message and BBO with Market Update.
   - ✓ **Best Bid and Offer (BBBO) channel** will only provide the best limits when they are updated.
   - ✓ **Reference Data and Full Trade Information channel (REFT)** provides all instrument characteristics, scheduled phases, market administration messages and trade messages.
   - ✓ **Reference Data and Index Package channel (REFI)** provides all instrument characteristics, scheduled phases, market administration messages, and Index messages.

2. **Destination Port:** The second 2 bytes will have **NULL** values.
3. **UDP length:** The Third 2 bytes represent the number of bytes comprising the combined UDP header information and payload data, in another way the content of this field is the sum of (UDP Header Length + Packet Length).
4. **UDP Checksum:** The Fourth 2 bytes will have **NULL** values.

Table 1. UDP protocol header fields

Field	Length (in Byte)	Descriptions
Source Port	2	MDG UDP Multicast channel port
Destination Port	2	Null value
UDP length	2	Packet length + UDP header length
UDP Checksum	2	Null value

The targeted audience will get the channels source ports values from the following files:

- OptiqMDG_CashStandingDataFile_Indices.xml
- OptiqMDG_Equities.xml

3. UDP2TCP Packet Sequence

ASE members, ISVs and data vendor will connect to their separate dedicated TCP ports to receive MDG packets as follow:

- MDG Real-Time port, provide only Real-Time data messages.
- MDG Snapshot port, provide only Snapshot data messages.

UDP2TCP provides packet sequence for the client application that is connected to TCP converter port as follow:

- For MDG Real-Time port: The client will receive the packet sequence from the beginning (packet sequence =1).
- For MDG Snapshot port: The client will receive the packet sequence from the last received (packet sequence = **Last Packet Received**). This due to a large number of packet received (1 packet every 2 seconds) and this is more practical for speed of recovery for the packet lost.

4. How to Reset Packet Sequence

UDP2TCP converters applications allow automatic re-initialization of packet sequence for the Real-Time and Snapshot ports (packet sequence=1). A client application that is connected to the TCP converter port can trigger re-initialization for packet sequences by doing the following steps:

1. Sending UTF8 encoding byte array containing "**restart_feedshop\r\n**" string.
2. Waiting for response byte array containing "**restart_feedshop_complete\r\n**" string.
3. Close the TCP connection.
4. Waiting 3 seconds then reconnect to the TCP port again.

Those steps simply will kill the TCP port socket and reset the message sequence to zero.

5. Connection Requirements

To prepare TCP ports, clients must provide Amman Stock Exchange with their physical IP address for the device that will connect to the (UDP2TCP) converters ports. Once this IP is provided the ASE will manage to reflect this IP on the next business day.

6. Standing Data Files and SBE Template

The trading instruments referential data that are available in the Amman Stock Exchange will be provided via files called standing data. These files are provided daily and can be accessed using HTTP service. The files names are:

- OptiqMDG_CashStandingDataFile_Indices.xml
- OptiqMDG_Equities.xml
- timetable.xml

To decode SBE messages received from MDG, Amman Stock Exchange provides the SBE template XML file which contains all message types supported by MDG. The file name is:

- mdg_binary_sbe_input.xml

The targeted audience will download the required standing data files and SBE template from a specific web server, the IPs of the webserver will be provided later on.

7. Snapshot

ASE members, ISVs and data vendor must take into consideration the Snapshots usage to ensure data recovery is the following:

- Recover the MDG messages in case of any data loss in a real-time feed.
- Recover the MDG messages in case of receiving out-of-ordered messages in a real-time feed.
- Recover the MDG messages in case the failover occurred in the trading chain.
- Recover the MDG messages in case switch to DR site.

When the client connects/disconnects into Snapshots TCP port will receive the last packet sequence received (packet sequence (PSN) = the Last packet received). Based on that, The useful way to recover is using the latest Snapshot, so each time client connecting will find the last snapshot and can recover the data as described on the "Optiq Commercial MDG Client Specifications" document.

ملحق (9)

Document title

OPTIQ COMMERCIAL FILES SPECIFICATIONS

Document type or subject

Optiq Commercial Files Specifications

Version number
1.2.11

Date
13 Mar 2020

Number of pages
86

Author
Euronext

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PREFACE

PURPOSE

The purpose of this document is to describe all the file specifications on Optiq Commercial.

TARGET AUDIENCE

This document must be read by clients developing tools for retrieving and processing Market Data files.

SCOPE

The scope of this document is listed below (✓ In scope, ✘ Out of scope):

Products	
Equities	✓
Indexes	✓

ASSOCIATED DOCUMENTS

Please read the following documents along with these specifications:

Title	Description
Optiq Commercial MDG Client Specifications	Description of Market Data Gateway and all message structures

WHAT'S NEW?

Version	Change Description
1.2.11	**<u>The following File has been updated:</u>** **CashStandingDataFile (9007):** • 'Instrument Trading Code' is no longer flagged as "Not Applicable". Additionally, the field's length as been corrected from 12 to 15. **<u>The following section has been added:</u>** **3.5 - Full Trade Information File (9030)**

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1. OPTIQ COMMERCIAL MARKET DATA GATEWAY SOLUTION

1.1 INTRODUCTION

This document details the Referential Data Server, to be used in conjunction with the Optiq MDG Client Specifications.

The Servers provide full referential data for the markets, as well as feed configurations. Users of the market data feed should use the files to:

- Configure feed connections every day.
- Support the referential data that is disseminated on the feed.

1.2 ACCESS TO OPTIQ FILES

Availability of the files to exchange with clients to be confirmed by the Exchange.

1.3 FILE NAMING CONVENTION

The files are of different types:

- Cross Optiq Segment Files, i.e. a unique file is generated for all Optiq Segments.
- Files generated by Optiq Segment, once a day.
- Files generated by Optiq Segment, several times a day.

As a result, the file naming convention varies according to the type of file.

Cross Optiq Segment Files generated once a day

These files are unique referential files, valid for all Optiq Segments. It is therefore not required to generate the same file for each Optiq Segment.
Cross Optiq Segment files will have the following naming convention:
<OptiqGateway>_<Environment>_<FileName>_<ALL>_<Date>.xml
Where :

- OptiqGateway is 'OptiqMDG', for MDG files or 'OptiqOEG', for OEG files
- Environment and FileName are the same as defined in folder structure.
- OptiqSegment is always 'ALL'.
- Date is the current trading date with format 'YYYYMMDD'

The files concerned are the following:

- CashTickSizeReferentialFile

Example of the Cash Tick Size Referential File generated in Production on the 1st of June 2017:
OptiqMDG_Production_CashTickSizeReferentialFile_ALL_20170601.xml.

And it will be located in:

OptiqMDG
└ Production
└ CashTickSizeReferentialFile
└ Current

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Files generated by Optiq Segment once a day

Files generated by Optiq Segment once a day will have the following naming convention:
<OptiqGateway>_<Environment>_<FileName>_<OptiqSegment>_<Date>.xml
Where :

- OptiqGateway is 'OptiqMDG', for MDG files or 'OptiqOEG', for OEG files
- Environment, FileName and OptiqSegment are the same as defined in folder structure.
- Date is the current trading date with format 'YYYYMMDD'

The files concerned are the following:

- CashStandingDataFile
- TimetableFile
- CashTickSizeReferentialFile

Example of the Cash Standing Data File generated in Production on 1st of June 2017:
OptiqMDG_Production_CashStandingDataFile_Equities_20170601.xml

1.4 FILE VERSION AVAILABILITY

The OEG and MDG SBE Template files are Backward and Forward compatible and we will keep the supported versions available on the sever. For more information on Backward and forward compatibility of SBE, please refer to the client MDG specifications: Optiq Commercial MDG Client Specifications.

For all other file types, in case of a new version of the file, customers will have to migrate to the new version of the file on the go-live date. We will only provide the latest version of the file for the current trading day.

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2. FILE OVERVIEW

The aim of this section is to describe the fields types used in the reference data files.

2.1 FUNCTIONAL FORMAT FIELDS

Functional Format	Description
Alphanumerical ID	String type identifying an element.
Amount	Signed numerical field representing an amount.
Bitmap	Array of bits, each bit specifying whether an optional value is present (set to “1”) or not (set to “0”) (in Little-Endian).
Boolean	Indicator having two possible values, either 'true - 1' or 'false - 0'. This value is set on the first bit of the byte (in Little-Endian).
Date	Date of an event.
Decimal Places	Number of decimals associated to a numerical field.
Enumerated	Information having a delimited set of possible values.
Epoch Time in Nanoseconds	UTC time in nanoseconds since 1970 January the 1st.
Integer Time in hhmmss	Time in an integer on 2 bytes expressed as hhmmss
Intraday Time in Seconds	UTC time in seconds since the beginning of the day.
Numerical	Generic numerical field.
Numerical ID	Numerical field identifying an element.
Price	Numerical field representing a price (either signed or not signed).
Quantity	Unsigned numerical field representing a quantity of elements (for example a number of shares).
Text	Text in UTF-8.
Timestamp	Time of an event.

2.2 TECHNICAL FORMAT FIELDS

The following technical types are used:

- All integers are numeric (signed/ unsigned specified in each field format description) using two’s complement method.
- Binary data are in Intel byte order (Little-Endian).
- All “Alphanumerical ID” and “Text” fields are alphanumeric based on UTF-8.

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Technical Format	Description
character	Alphanumerical field containing only 1 character
signed integer 64	8 bytes signed numerical field
unsigned integer 8	1 byte unsigned numerical field
unsigned integer 16	2 bytes unsigned numerical field
unsigned integer 32	4 bytes unsigned numerical field
unsigned integer 64	8 bytes unsigned numerical field
XML date	Date displayed in YYYMMDD format
XML timeSec	Text formatted according to ISO 8601: hh:mm:ssZ where Z = UTC
XML timeNano	Text formatted according to ISO 8601: hh:mm:ss:mmmμμμnnnZ where "mmm" indicate the milliseconds "μμμ" indicate the microseconds "nnn" indicate the nanoseconds Z = UTC
XML text50	Alphanumerical field which length is 50 characters
Decimals	Numerical field with "." as a separator

2.3 NOT APPLICABLE / FUTURE USE

In preparation for various functionalities expected to be implemented in the future on Optiq a number of messages and fields were added and flagged "For Future Use".

Details of functionalities flagged in the specifications as for 'Future Use' or 'Not Applicable [N/A]' are provided for information purposes only, and may change significantly until such time as the finalised specifications for the relevant service are communicated to clients.

The associated messages and effective use of fields will not be technically supported. Use of these fields in inbound messages will lead the message to be rejected by the system.

This behaviour applies to:

- **Fields** flagged as 'For Future Use', 'Pending Regulatory Approval' or 'Not Applicable [N/A]';
- **Values** flagged with '[D]';

Note: Fields and Values for future use or not applicable, in the messages structures, are represented in *italic, grey and with [N/A] preceding the field description*.

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2.4 DATE CONVENTION

Dates are defined in number of days since 1970 January the 1st (01/01/1970 is the day "0"). The file structure provides them in human readable format YYYYMMDD where

- "YYYY" is the year
- "MM" is the month
- "DD" is the day

2.5 TIME CONVENTION

In XML files, 2 timestamps, based on ISO 8601 are possible. Time in seconds and time in nanoseconds.

- Times in seconds: hh:mm:ssZ

Where:

- hh is the hours
- mm the minutes
- ss the seconds
- Z stands for UTC time

- Times in nanoseconds: hh:mm:ss:mmmμμμnnnZ

Where:

- hh is the hours
- mm the minutes
- ss the seconds
- mmm the milliseconds
- μμμ the microseconds
- nnn the nanoseconds
- Z stands for UTC time

2.6 FEED CONFIGURATION

The CashStandingDataFile (9007) is provided on a daily basis per Optiq Segment. Every Instrument in the file has a repeating section called MDGSetOfChannels and this repeating section provides the MDGSetOfChannelsID and the MDGSetOfChannelsName. The ID is a unique number for the combination of Asset Class and Country Split.

MDGSetOfChannels					
	MDGSetOfChannelsID	Identifier of an MDG Set Of Channels.	unsigned integer 16	2	From 0 to 65534
	MDGSetOfChannelsName	Name of the MDG Set Of Channels.	string	100	(See field description)
/MDGSetOfChannels					

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Most instruments have only one repeating section, only instruments belonging to the Equities Optiq Segment can have more than one repeating section.

Possible values for MDGSetOfChannelsID will be agreed during the implementation phase of the project.

At end of the Standing Data file, the full feed configuration details for the Optiq Segment are made available. For each SetOfChannels, the ChannelType is provided for Real-Time and Snapshot channels, together with the available ChannelID's and ChannelSpeed.

SetOfChannels				
MDGSetOfChannelsID	Identifier of an MDG Set Of Channels.	unsigned integer 16	2	From 0 to 65534
MDGSetOfChannelsName	Name of the MDG Set Of Channels.	string	100	(See field description)
Channels				
ChannelType	Defines the channel.	string	4	(See field description)
MulticastDataRealTime				
ChannelID	Identifies the channel.	unsigned integer 16	2	From 0 to 65534
ChannelSpeed	Defines the Channel bandwidth.	string	4	100M 100Mbps Channel
MulticastA				
SourceIPRange	Defines the primary and secondary IP range (IP v4).	string	20	(See field description) (See field description)
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	string	20	(See field description)
MulticastGroupIP	Defines the IP number (IP v4).	string	15	(See field description)
PortNumber	Defines the port number.	unsigned integer 16	2	From 0 to 65534
/MulticastA				
MulticastB				
SourceIPRange	Defines the primary and secondary IP range (IP v4).	string	20	(See field description)
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	string	20	(See field description)
MulticastGroupIP	Defines the IP number (IP v4).	string	15	(See field description)

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	PortNumber	Defines the port number.	unsigned integer 16	2	From 0 to 65534
/MulticastB					
/MulticastDataRealTime					
MulticastDataSnapshot					
ChannelID		Identifies the channel.	unsigned integer 16	2	From 0 to 65534
ChannelSpeed		Defines the Channel bandwidth.	string	4	100M 100Mbps Channel
MulticastA					
	SourceIPRange	Defines the primary and secondary IP range (IP v4).	string	20	(See field description)
	DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	string	20	(See field description)
	MulticastGroupIP	Defines the IP number (IP v4).	string	15	(See field description)
	PortNumber	Defines the port number.	unsigned integer 16	2	From 0 to 65534
/MulticastA					
MulticastB					
	SourceIPRange	Defines the primary and secondary IP range (IP v4).	string	20	(See field description) (See field description)
	DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	string	20	(See field description) (See field description)
	MulticastGroupIP	Defines the IP number (IP v4).	string	15	(See field description) (See field description)
	PortNumber	Defines the port number.	unsigned integer 16	2	From 0 to 65534
/MulticastB					
/MulticastDataSnapshot					
/Channels					
/SetOfChannels					

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3. FILE DESCRIPTION

3.1 SBE TEMPLATE FILES

SBE Template files aim to decode SBE messages using an SBE decoder.

- 2 SBE Template files are available : one for OEG and one for MDG. These files are stored in each <OptiqSegment> folder.

All SBE tools and documentation needed to generate (encode and decode) SBE messages will be available on:

https://github.com/real-logic/simple-binary-encoding (refer to SBE Disclaimer in appendix)

This file structure is defined by SBE protocol and contains:

- The list of all technical fields
- SBE Headers structure
- The list of all possible values for each Enumerated fields
- The list of all possible values for each Bitmap fields
- The structure of each message with the expected order of each fields

Clients must check the file every day to determine whether a new Schema Version is available.

Full and detailed message structures are specified in the **Optiq Commercial MDG Client Specifications**.

File Availability:

Available 24/7.

Scope of contents:

One file per Optiq Segment.

next segments and all SBE messages for Market Data.

3.2 CASHSTANDINGDATAFILE (9007)

The Cash Standing Data file provides referential data for cash markets.

The file provides three structures per instrument breakdown.

- The first structure provides the standing data functionally needed for trading purpose.

All operational referential data broadcasted on the feed at start of day via Optiq MDG Standing Data 1007 message are also available in this section.

The only difference between the feed and the file relies in the format on which some data are provided.

As an example, Timestamps on the feed are provided in number of ns since 1970 January the 1st. The file structure provides them in human readable format (YYYYMMDD).

- The second structure is dedicated to MD connectivity. It provides the physical addresses of channels on which data are disseminated for the given instrument, which access depends on client authorization.

- The third structure provides connectivity information for all Cash Order entry gateways of the concerned Optiq Segment and the associated Drop Copy (DC) gateway.

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File Availability:

Should be Available 24/7.

Intraday updates:

This file will be updated overnight.

Field	Short Description	Format	Len	Values	Presence	Page
CashStandingDataFile						
StandingDataUnitary						
SymbolIndex	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Mandatory	75
OptiqSegment	An Optiq segment is a universe of instruments sharing common trading properties.	Enumerated	1	(See field description)	Mandatory	65
PartitionID	Identifies uniquely an Optiq partition across all the Exchange partitions.	Numerical ID	2	From 0 to 2^16-2	Mandatory	66
FullInstrumentName	Full Instrument Name.	Text	102	(See field description)	Optional	42
InstrumentName	Instrument Name	Text	18	(See field description)	Mandatory	45
InstrumentTradingCode	Alternate ID (Ticker Symbol).	Alphanumerical ID	15	(See field description)	Mandatory	45
InstrumentGroupCode	Instrument Group / Class Identifier.	Alphanumerical ID	2	(See field description)	Mandatory	45
ISINCode	Instrument ISIN following ISO 6166.	Alphanumerical ID	12	(See field description)	Mandatory	47
PriceDecimals	Indicates the number of decimals for each Price / Index Level related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Mandatory	69
QuantityDecimals	Indicates the number of decimals for each Quantity related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	70
AmountDecimals	Indicates the number of decimals for each Amount related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	31
RatioDecimals	Indicates the number of decimals for each Ratio / Multiplier related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Mandatory	71
CFI	Classification code of a financial instrument defined by the ISO-10962:2015 standard.	Text	6	(See field description)	Mandatory	35
InstrumentEventDate	Date of the last instrument characteristic modification(s) except for some exceptions.	Date	8	(See field description)	Mandatory	43

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Field	Short Description	Format	Len	Values	Presence	Page
StrikePrice	***[N/A]** The strike price of an option/warrant is the specified price at which the underlying can be bought (in the case of a call/right to buy) or sold (in case of a put/right to sell) by the holder (buyer) of the option/warrant contract, at the moment he exercises his right against a writer (seller) of the option/warrant.*	*Price*	*8*	*From -2^63+1 to 2^63-1*	*Optional*	*74*
DarkEligibility	***[N/A]** Indicates the Eligibility to dark. 0 is not eligible, 1 is eligible.*	*Boolean*	*1*	*0 = False* *1 = True*	*Optional*	*37*
DarkLISThreshold	***[N/A]** Defines the minimum amount of an order to benefit from the LIS (Large In Scale) pre-transparency waiver.*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*37*
DarkMinQuantity	***[N/A]** Defines the minimum quantity required for an order to be filled in the Dark liquidity. 0 indicates that no minimum amount is required.*	*Quantity*	*4*	*From 0 to 2^32-2*	*Optional*	*38*
DateOfLastTrade	Date of the Last Price for the Instrument (Format YYYYMMDD).	Date	8	(See field description)	Optional	38
DepositaryList	Identifies the possible main depository organizations (maximum four) for shares or fixed income.	Text	20	(See field description)	Optional	38
MainDepositary	Identifies the default (or main) depository organization of the instrument (between the possible 4 depositaries registered) used by priority for the settlement (for example: multi-listed instruments which have several depositories).	Alphanumerical ID	5	(See field description)	Optional	49
FirstSettlementDate	Represents the first possible settlement date for a given instrument.	Date	8	(See field description)	Optional	41
GuaranteeIndicator	Indicates if the trade is guaranteed or not (for clearing purpose)	Enumerated	1	0 = This instrument is not guaranteed 1 = This instrument is guaranteed 2 = This instrument is not clearable 8 = This instrument is part of Cleared Borrowing and Lending Service (CBLM) and is guaranteed	Optional	43

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Field	Short Description	Format	Len	Values	Presence	Page
ICB	Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.	Alphanumerical ID	16	(See field description)	Optional	43
IssuingCountry	Issuing country.	Alphanumerical ID	3	(See field description)	Optional	48
LastAdjustedClosingPrice	Last traded price of the previous trading day after application of the adjustment coefficient (to be calculated with the Price/Index Level Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	48
LotSize	***[N/A]*** *For cash instruments with Quantity Notation = "UNT": The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size.*	*Quantity*	*8*	*From 0 to 2^64-2*	*Optional*	*48*
MaturityDate	***[N/A]*** *Maturity Date of the instrument (text formatted as YYYYMMDD).*	*Text*	*8*	*(See field description)*	*Optional*	*51*
MaximumDecimalsInQuantity	***[N/A]*** *Maximum Decimals In Quantity was introduced for Euronext Fund Services Paris and indicates the maximum of relevant decimal number for trading.*	*Numerical*	*1*	*From 0 to 2^8-2*	*Optional*	*51*
MIC	Identifies the market to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383.	Alphanumerical ID	4	(See field description)	Mandatory	52
MICList	***[N/A]*** *Identifies the Euronext markets on which an instrument is listed by its MIC (Market Identification Code).*	*Alphanumerical ID*	*20*	*(See field description)*	*Optional*	*52*
CountryOfExchange	Country of exchange is the Country associated to the MIC following ISO 3166 Alpha-3.	Alphanumerical ID	3	(See field description)	Optional	36
Mnemonic	Mnemonic code of the instrument. This field is not populated for every instrument.	Alphanumerical ID	5	(See field description)	Optional	62
UnderlyingMIC	Identifies the market to which an instrument' underlying belongs by its MIC (Market Identification Code), according to ISO 10383. Refer to MIC field to have all the authorized values.	Alphanumerical ID	4	(See field description)	Optional	82
UnderlyingISINCode	Underlying ISIN.	Alphanumerical ID	12	(See field description)	Optional	81

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Field	Short Description	Format	Len	Values	Presence	Page
TradingCurrency	Code of the currency (ISO 4217-3A).	Alphanumerical ID	3	(See field description)	Optional	77
CurrencyCoefficient	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals).	Numerical ID	4	From 0 to 2^32-2	Optional	36
TradingCurrencyIndicator	Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply. This is the case for instruments traded in pennies. The currency will be 'GBP', Trading Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.	Enumerated	1	0 = Change rate not applied to the traded price 1 = Change rate applied to the traded price	Optional	78
StrikeCurrencyIndicator	***[N/A]*** *Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply.* *This is the case for strike instruments in pennies. The currency will be 'GBP', Strike Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.*	*Enumerated*	*1*	*0 = Change rate not applied to the strike price* *1 = Change rate applied to the strike price*	*Optional*	*74*
NumberInstrumentCirculating	For stocks: this is the total number of shares issued by the company. For Fix Income: this is the number of Fix Income still to be repaid.	Quantity	8	From 0 to 2^64-2	Optional	64
ParValue	***[N/A]*** *Par Value (also called Nominal value) for Instrument. For Fixed Income it represents the par amount to be repaid at maturity (not including interest revenue) (to be calculated with the Amount Decimals).*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*67*
QuantityNotation	Indication of the type of measurement (e.g. number of units, nominal, monetary value, etc.) in which the transaction is expressed.	Text	3	(See field description)	Optional	70
InstUnitExp	Unit in which the instrument is quoted.	Enumerated	1	(See field description)	Optional	46

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Field	Short Description	Format	Len	Values	Presence	Page
SettlementDelay	Gives the number of trading days that represents the period between the trade date and the settlement date (delivery and payment) for an instrument to be cleared and settled.	Alphanumerical ID	2	(See field description)	Optional	72
StrikeCurrency	***[N/A]** Code of the strike currency (ISO 4217-3A).*	*Alphanumerical ID*	*3*	*(See field description)*	*Optional*	*73*
TaxCode	***[N/A]** Tax deduction code to which the instrument belongs.*	*Enumerated*	*1*	*0 = Not eligible to PEA* *3 = Eligible to PEA* *9 = Not Applicable*	*Optional*	*75*
TypeOfCorporateEvent	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. The data item is automatically calculated by the adjustment application but in case of problem or error, the data item value could be modified manually, particularly for purging the order book in case of absence of corporate event. This data has to be treated in consideration of the date of the event included into the header of the message.	Alphanumerical ID	2	(See field description)	Optional	80
TypeOfMarketAdmission	Indicates the type of market to which an instrument has been listed.	Enumerated	1	(See field description)	Optional	81
RepoIndicator	***[N/A]** Indicates whether the instrument listed underlies any loan contracts, meaning it has been admitted to the Deferred Settlement system and/or to the lending market. (Future Use)*	*Enumerated*	*1*	*(See field description)*	*Optional*	*71*
IssuePrice	Issuing price of the instrument (to be calculated with Issue Price Decimals).	Price	8	From -2^63+1 to 2^63-1	Optional	47
NominalCurrency	Code of the nominal currency (ISO 4217-3A).	Alphanumerical ID	3	(See field description)	Optional	63
IssuePriceDecimals	Indicates the number of decimals for Issue Price related to this Symbol Index	Decimal Places	1	From 0 to 2^8-2	Optional	48
StrikePriceDecimals	***[N/A]** Indicates the number of decimals for Strike Price related to this Symbol Index*	*Decimal Places*	*1*	*From 0 to 2^8-2*	*Optional*	*75*
LiquidInstrumentIndicator	***[N/A]** Indicates whether the instrument is liquid or not, as defined per MiFID II. (0 = Illiquid ; 1 = Liquid)*	*Boolean*	*1*	*0 = False* *1 = True*	*Optional*	*48*

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Field	Short Description	Format	Len	Values	Presence	Page
MarketOfReferenceMIC	***[N/A]** Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*	*Alphanumerical ID*	*4*	*(See field description)*	*Optional*	*50*
ICB Code	***[N/A]** Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification. (For Future Use).*	*Alphanumerical ID*	*8*	*(See field description)*	*Optional*	*43*
ThresholdLISPostTrade60mn	***[N/A]** Defines the amount of an order to benefit from the LIS Trade Deferred publication to 60 min (to be calculated with the Amount Decimals).*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*43*
ThresholdLISPostTrade120mn	***[N/A]** Defines the amount of an order to benefit from the LIS Trade Deferred publication to 120 min (to be calculated with the Amount Decimals).*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*43*
ThresholdLISPostTradeEOD	***[N/A]** Defines the amount of an order to benefit from the LIS Trade Deferred publication to EOD (to be calculated with the Amount Decimals).*	*Amount*	*8*	*From 0 to 2^64-2*	*Optional*	*43*
AssetClass	***[N/A]** Defines the Asset Class for a group of products.*	*Enumerated*	*8*	*From 0 to 2^64-2*	*Optional*	*31*
Instrument Category	Identifies the category of the instrument.	Alphanumerical ID	4	(See field description)	Mandatory	44
Instrument Type	***[N/A]** Instrument Type*	*Alphanumerical ID*	*4*	*(See field description)*	*Mandatory*	*46*
Closing Price Type	Indicates the Type of Closing Price in use by the Instrument	Enumerated	1	(See field description)	Mandatory	36
EMMPattern						
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	40
PatternID	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.	Numerical ID	2	From 0 to 2^16-2	Optional	67
TickSizeIndexID	ID of the tick size table available in the Tick Table file.	Numerical ID	2	From 0 to 2^16-2	Optional	76
MarketModel	Market Model identifier.	Enumerated	1	(See field description)	Optional	50

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Field	Short Description	Format	Len	Values	Presence	Page
LotSize	For cash instruments with Quantity Notation = "UNT": The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size.	Quantity	8	From 0 to 2^64-2	Optional	36
InstrumentUnitExpression	Unit in which the instrument is quoted.	Enumerated	1	(See field description)	Optional	36
BpsLowCollar	Indicates the low collar applied on the NAV order book of ETF MTF. It is derived from the redemption fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).	Price	8	From 0 to 2^64-2	Mandatory	36
BpsHighCollar	Indicates the High collar applied on the NAV order book of ETF MTF. It is derived from the creation fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).	Price	8	From 0 to 2^64-2	Mandatory	36
Block Size	Indicates the minimum amount of a declaration for an instrument.	Amount	8	From 0 to 2^64-2	Optional	33
Block Price Control ID	ID of the Block Price Table.	Numerical ID	2	From 0 to 2^16-2	Optional	33
Declaration Duration	Declaration Duration (in minutes)	Numerical	8	From 0 to 2^64-2	Optional	39
Eligible for Margin	Indicates if the instrument is eligible for margin or not.	Boolean	1	(See field description)	Conditional	40
/EMMPattern						
MDGSetOfChannels						
MDGSetOfChannelsID	Identifier of an MDG Set Of Channels.	Enumerated	1	(See field description)	Mandatory	51
MDGSetOfChannelsName	Name of the MDG Set Of Channels.	Text	100	(See field description)	Mandatory	52
/MDGSetOfChannels						
ETFDataFromMarketOfReference						
SixMonthsADVExchangeOfRef	***[N/A]*** *Indicates the 6 months average daily volume (number of shares) traded on the exchange of reference (to be calculated with Quantity Decimals).*	*Decimals*	*32*	*(See field description)*	*Mandatory*	*73*
SixMonthsADV	***[N/A]*** *Indicates the 6 months average daily volume (number of shares) traded on the ETF-MTF platform (to be calculated with Quantity Decimals).*	*Decimals*	*32*	*(See field description)*	*Mandatory*	*73*

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Field	Short Description	Format	Len	Values	Presence	Page
AUM	**[N/A]** Stands for Asset Under Management. Indicates the fund's total market value (to be calculated with the Amount Decimals).	Decimals	32	(See field description)	Mandatory	31
BICMainDepositary	**[N/A]** Identifies the BIC of the default depository organization.	character	11	(See field description)	Mandatory	33
CutOffTime	**[N/A]** Indicates the point reached in the day from which the order will not be processed for the current business day (Time in number of seconds since the beginning of the day).	unsigned integer 32	4	From 0 to 2^32-2	Mandatory	37
DateNextTradableNAV	**[N/A]** Date of the next tradable NAV (in number of days since the 1st of January 1970).	XML date	8	(See field description)	Mandatory	38
PublicationDateNextTradableNAV	**[N/A]** Publication Date of the next tradable NAV (in number of days since the 1st of January 1970).	XML date	8	(See field description)	Mandatory	69
DividendFrequency	**[N/A]** Indicates how often a dividend is paid by an individual instrument.	XML Text33	33	1 = Capitalization 2 = Monthly 3 = Yearly	Mandatory	39
InstrumentDomiciliation	**[N/A]** Domiciliation country.	character	3	(See field description)	Mandatory	44
MICExchangeOfReference	**[N/A]** Indicates the instrument's Exchange of Reference by its MIC (Market Identification Code according to ISO 10383).	character	4	(See field description)	Mandatory	52
NameExchangeOfReference	**[N/A]** Indicates the instrument's Exchange of Reference by its Name.	character	25	(See field description)	Mandatory	63
ExpositionType	**[N/A]** Indicates the ETF replication method.	XML Text33	33	1 = Physical 2 = Synthetic 3 = Sampling	Mandatory	41
FundType	**[N/A]** Defines the instrument type based on Euronext classification.	character	3	(See field description)	Mandatory	42
ICSD	**[N/A]** Indicates if the settlement can be processed through an International CSD (1) or not (0).	unsigned integer 8	1	0 = False 1 = True	Mandatory	43
IndexLeverage	**[N/A]** Indicates the multiplier coefficient of an leveraged fund.	Decimals	32	(See field description)	Mandatory	44
IssuerName	**[N/A]** Indicates the name of the Legal Issuing Entity.	character	80	(See field description)	Mandatory	47
LEI	**[N/A]** Indicates the Legal Entity Identifier (LEI).	character	20	(See field description)	Mandatory	48

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Field	Short Description	Format	Len	Values	Presence	Page
ListingDate	**[N/A]** Indicates the listing date of the fund on the Exchange of Reference. (in number of days since the 1st of January 1970).	XML date	8	(See field description)	Mandatory	49
NAVCurrency	**[N/A]** Code of the NAV currency (ISO 4217-3A).	character	3	(See field description)	Mandatory	63
PreviousNAV	**[N/A]** Indicates the previous official Net Asset Value (to be calculated with the Price/Index Level Decimals).	Decimals	32	(See field description)	Mandatory	67
NAVLowCollar	**[N/A]** Indicates the low collar applied on the NAV order book of ETF MTF. It is derived from the redemption fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).	Decimals	32	(See field description)	Mandatory	63
NAVHighCollar	**[N/A]** Indicates the High collar applied on the NAV order book of ETF MTF. It is derived from the creation fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).	Decimals	32	(See field description)	Mandatory	75
ReutersRICCode	**[N/A]** Indicates the Reuters RIC Code.	character	13	(See field description)	Mandatory	72
TotalExpenseRatio	**[N/A]** Total Expense Ratio (TER): total costs associated with managing and operating a fund.	unsigned integer 32	4	From 0 to 2^32-2	Mandatory	76
BloombergTickerCode	**[N/A]** Indicates the Bloomberg Ticker Code.	character	13	(See field description)	Mandatory	33
NAVPublicationTime	**[N/A]** Indicates the official NAV publication time. (Time in number of seconds since the beginning of the day).	unsigned integer 32	4	From 0 to 2^32-2	Mandatory	64
UMTF	**[N/A]** Indicates the instrument code based on 'Uniform MTF' symbology.	character	6	(See field description)	Mandatory	81
UnderlyingName	**[N/A]** Indicates the full name of the ETF underlying.	character	102	(See field description)	Mandatory	82
UnderlyingReturnType	**[N/A]** Indicates the dividend treatment applied.	XML Text33	33	1 = Net Total Return 2 = Price Return 3 = Total Return	Mandatory	82
UnderlyingSegmentation	**[N/A]** Indicates the underlying asset segmentation.	XML Text33	33	(See field description)	Mandatory	82
/ETFDataFromMarketOfReference						
/StandingDataUnitary						
SetOfChannels						

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Field	Short Description	Format	Len	Values	Presence	Page
MDGSetOfChannelsID	Identifier of an MDG Set Of Channels.	Enumerated	1	(See field description)	Mandatory	51
MDGSetOfChannelsName	Name of the MDG Set Of Channels.	Text	100	(See field description)	Mandatory	52
Channels						
ChannelType	Defines the channel.	Enumerated	4	(See field description)	Mandatory	36
MulticastDataRealTime						
ChannelID	Identifies the channel.	Numerical	2	From 0 to 2^16-2	Mandatory	35
ChannelSpeed	Defines the Channel bandwidth.	Enumerated	4	100M = 100Mbps Channel	Mandatory	35
PartitionID	Identifies uniquely an Optiq partition across all the Exchange partitions.	Numerical ID	2	From 0 to 2^16-2	Mandatory	66
MulticastA						
SourceIPRange	Defines the primary and secondary IP range (IP v4).	Text	20	(See field description)	Mandatory	73
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	Text	20	(See field description)	Mandatory	39
MulticastGroupIP	Defines the IP number (IP v4).	Text	15	(See field description)	Mandatory	63
PortNumber	Defines the port number.	Numerical	2	From 0 to 2^16-2	Mandatory	69
/MulticastA						
MulticastB						
SourceIPRange	Defines the primary and secondary IP range (IP v4).	Text	20	(See field description)	Mandatory	73
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	Text	20	(See field description)	Mandatory	39
MulticastGroupIP	Defines the IP number (IP v4).	Text	15	(See field description)	Mandatory	63
PortNumber	Defines the port number.	Numerical	2	From 0 to 2^16-2	Mandatory	69
/MulticastB						
/MulticastDataRealTime						
MulticastDataSnapshot						
ChannelID	Identifies the channel.	Numerical	2	From 0 to 2^16-2	Mandatory	35
ChannelSpeed	Defines the Channel bandwidth.	Enumerated	4	100M = 100Mbps Channel	Mandatory	35
PartitionID	Identifies uniquely an Optiq partition across all the Exchange partitions.	Numerical ID	2	From 0 to 2^16-2	Mandatory	66
MulticastA						
SourceIPRange	Defines the primary and secondary IP range (IP v4).	Text	20	(See field description)	Mandatory	73

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Field	Short Description	Format	Len	Values	Presence	Page
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	Text	20	(See field description)	Mandatory	39
MulticastGroupIP	Defines the IP number (IP v4).	Text	15	(See field description)	Mandatory	63
PortNumber	Defines the port number.	Numerical	2	From 0 to 2^16-2	Mandatory	69
/MulticastA						
MulticastB						
SourceIPRange	Defines the primary and secondary IP range (IP v4).	Text	20	(See field description)	Mandatory	73
DRSourceIPRange	Defines the Disaster Recovery IP address /25 range number (IP v4).	Text	20	(See field description)	Mandatory	39
MulticastGroupIP	Defines the IP number (IP v4).	Text	15	(See field description)	Mandatory	63
PortNumber	Defines the port number.	Numerical	2	From 0 to 2^16-2	Mandatory	69
/MulticastB						
/MulticastDataSnapshot						
/Channels						
/SetOfChannels						
LogicalAccessConnectivity						
Partition						
PartitionID	Identifies uniquely an Optiq partition across all the Exchange partitions.	Numerical ID	2	From 0 to 2^16-2	Mandatory	66
IPAddressPrimary	IP Address of the Primary and Secondary (backup) access to the gateway. Provided for all environments (IP v4).	Text	15	Valid IP v4 address	Mandatory	47
IPAddressDR	IP Address of the Disaster Recovery access to the gateway. Populated only for the Disaster Recovery environment, in the file generated for the Production environment. Blank for all other environments (IP v4).	Text	15	Valid IP v4 address	Optional	46
PartitionType	Indicates the type of Partition, either Order Entry or Drop Copy. Use of Order Entry and Drop Copy gateways require separate and individual setup of the Logical access to each service.	Enumerated	2	OE = Order Entry DC = Drop Copy	Mandatory	67
/Partition						
/LogicalAccessConnectivity						
/CashStandingDataFile						

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3.3 CASHTICKSIZEREFERENTIALFILE (9020)

General characteristics of the Cash Tick Size file

The Ticksize file contains different tables defining the variable ticksizes used for trading activity. A table is composed of an index (identifying a table instance) with a list of price ranges that have corresponding ticksizes, this is associated to an instrument class level. If an instrument uses specific variable ticksizes, which are different than the Class, the specific table index will figure in the Instrument Standing Data.

Fixed ticksizes are actually also included in the ticksize, they correspond to indexes for which only one entry range [0,MaxValue] is defined. In this case, the tick value itself is sent in the Instrument Standing Data, instead of the table index. If a fix ticksize and a variable ticksize are defined on an instrument, the fix ticksize takes priority over the variable ticksize.

Ticksizes depend of the EMM and certain EMMs do not support ticksizes.

File availability:

This file is available at the start of day and is needed by the Customers for the trading day. Customers must be able to download and process this file on a daily basis.

Scope of contents:

The file scope is the following: a tick size table for Cash markets, contains variable (price range-dependent) ticks and fixed price ticks.

Intraday updates:

No intraday update will be performed on the Tick Size table. Should the need arise, updates will be done in the referential tool and will be applied on the following business day (i.e. D+1). Meaning, the file will only be updated on a daily basis.

Field	Short Description	Format	Len	Values	Presence	Page
CashTickSizeReferentialFile						
CashTickSizes						
TickSizeIndexID	ID of the tick size table available in the Tick Table file.	Numerical ID	2	From 0 to 2^16-2	Mandatory	76
CashTickSize						
MinimumPrice	Minimum Price of the order. Price with decimals on x characters, with '.' as a separator	Price	32	(See field description)	Mandatory	57
TickSize	Tick Size applied between the current Minimum Price and the next Minimum Price. Tick size on x characters, with . as a separator	Price	32	(See field description)	Mandatory	76
/CashTickSize						
/CashTickSizes						
/CashTickSizeReferentialFile						

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3.4 TIMETABLEFILE (9001)

The Timetable file indicates the scheduled trading patterns, on a given day, associated to a Symbol Index linked by the Pattern ID. Please Refer to Optiq MDG Client Specifications for details.

File Availability:

Should Available 24/7.

Scope of contents:

All the Optiq segments for Market Data.

Intraday updates:

This file will be updated overnight.

Field	Short Description	Format	Len	Values	Presence	Page
TimetableFile						
Pattern						
PatternID	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.	Numerical ID	2	From 0 to 2^16-2	Mandatory	67
Phase						
PhaseTime	Time of Phase start (Text formatted following ISO 8601: hh:mm:ssZ where Z is for UTC").	Integer Time in hhmmss	9	(See field description)	Mandatory	68
PhaseId	Indicates the phase of the instrument.The length for this field is maximum possible value length.	Enumerated	50	(See field description)	Mandatory	67
PhaseQualifier	Indicates the Phase Qualifier (no multiple phase possible at the same time even if this field is a bitmap).	Bitmap	2	(See field description)	Optional	68
TradingPeriod	Provides the current trading period.	Enumerated	1	1 = Opening 2 = Standard 3 = Closing	Mandatory	79
OrderEntryQualifier	Field indicating the state of the Order Entry for the current market state.	Enumerated	1	0 = Order Entry/Cancel/Modify Disabled 1 = Order Entry/Cancel/Modify Enabled 3 = Cancel Only 4 = Order Entry Only	Optional	65
Session	Current market session.	Enumerated	1	(See field description)	Mandatory	72
/Phase						

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Field	Short Description	Format	Len	Values	Presence	Page
/Pattern						
/TimetableFile						

3.5 FULLTRADEINFORMATIONFILE (9030)

Full Trade Information file contains information regarding:

- trade notification;
- trade retransmission;

The repeating section called *NonAnonymous* will provide the information concerning the member entering the Buy and Sell order originating the trade.

File availability:

This file will be delivered every 15 minutes (configurable) to allow customers the ability to download trades they have missed, some of these may be via the Market Data feed. This file also allows Customers to download all trades at the end of day after trading hours.

Scope of contents:

One file will be generated per Optiq Segment. Each file delivered will contain the information previously delivered in addition to the new information.

Intraday updates:

Intraday updates will be performed every 15 minutes (configurable).

File naming convention:

"OptiqMDG_ FullTradeInfo_HHMMSS"

Field	Short Description	Format	Len	Values	Presence	Page
FullTradeInformationFile						
MarketDataHeaer						
MDSeqNum	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence	Sequence	8	From 0 to 2^64-2	Mandatory	50
RebroadcastIndicator	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.	Numerical ID	1	From 0 to 2^8-2	Mandatory	71
EMM	Defines the Exchange Market Mechanism applied on each platform.	Enumerated	1	(See field description)	Mandatory	40
/MarketDataHeader						
FullTradeInfo						

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Field	Short Description	Format	Len	Values	Presence	Page
EventTime	Time when an event has been processed (Text formatted following ISO 8601: hh:mm:ss.mmmµµµnnnZ	Epoch Time in Nanoseconds	19	(See field description)	Mandatory	40
SymbolIndex	Exchange identification code of the instrument.	Numerical ID	4	From 0 to 2^32-2	Optional	75
TradingDateTime	Date and time when the transaction was executed.	Text	27	(See field description)	Mandatory	78
PublicationDateTime	***[N/A]** Date and time when the transaction was published by a trading venue or Approved Publication Arrangement (APA).*	*Text*	*27*	*(See field description)*	*Optional*	*69*
TradeType	Type of trade.	Enumerated	1	(See field description)	Mandatory	77
MifidInstrumentIdType	Code type used to identify the financial instrument.	Text	4	(See field description)	Optional	55
MifidInstrumentID	Code used to identify the financial instrument. This code has to be processed with the MiFID Instrument ID Type.	Alphanumerical ID	12	(See field description)	Optional	54
MifidExecutionID	MiFID Transaction Identification Code is composed of the Symbol Index (on 10 characters), the EMM (on 3 characters) and the Execution ID (on 10 characters). It is a unique Execution ID by instrument per day on the different available EMM.	Alphanumerical ID	52	(See field description)	Mandatory	54
MifidPrice	Traded price of the transaction excluding, where applicable, commission and accrued interest.	Text	20	(See field description)	Optional	55
MifidQuantity	Number of units of the financial instrument. The nominal or monetary value of the financial instrument.	Text	20	(See field description)	Mandatory	56
MifidPriceNotation	Indication as to whether the price is expressed in monetary value, in percentage or in yield.	Text	4	(See field description)	Optional	56
MifidCurrency	Currency in which the price is expressed (applicable if the price is expressed as monetary value) following ISO 4217 standard.	Alphanumerical ID	3	(See field description)	Optional	53
MiFIDQtyinMsrmtUnitNotation	***[N/A]** Indication of measurement units in which the quantity in measurement unit is expressed.*	*Text*	*25*	*(See field description)*	*Optional*	*56*

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Field	Short Description	Format	Len	Values	Presence	Page
MifidQuantityMeasurementUnit	***[N/A]** The equivalent amount of commodity or emission allowance traded expressed in measurement unit*	*Text*	*20*	*(See field description)*	*Optional*	*57*
MiFIDNotionalAmount	***[N/A]** Nominal amount or notional amount.*	*Text*	*20*	*(See field description)*	*Optional*	*55*
NotionalCurrency	Currency in which the notional is denominated following ISO 4217 standard.	Alphanumerical ID	3	(See field description)	Optional	64
MiFIDClearingFlag	Code to identify whether the transaction will be cleared.	Text	5	(See field description)	Optional	53
MMTMarketMechanism	Defines the fundamental functional market mechanism that has facilitated the trade following MMT level 1.	Enumerated	1	(See field description)	Optional	59
MMTTradingMode	Differentiates transactions by defining the trading mode under which the trade was executed following MMT level 2.	Enumerated	1	(See field description)	Optional	62
MMTTransactionCategory	***[N/A]** Defines the transaction category following MMT level 3.1.*	*Text*	*4*	*(See field description)*	*Optional*	*62*
MMTNegotiationIndicator	***[N/A]** Defines the negotiation indicator or pre-trade transparency waiver following MMT level 3.2.*	*Text*	*4*	*(See field description)*	*Optional*	*60*
MMTAgencyCrossTradeIndicator	***[N/A]** Defines the agency cross trade indicator following MMT level 3.3.*	*Text*	*4*	*(See field description)*	*Optional*	*57*
MMTModificationIndicator	Defines the modification indicator following MMT level 3.4.	Text	4	(See field description)	Optional	59
MMTBenchmarkIndicator	***[N/A]** Defines the benchmark indicator or the reference price indicator following MMT level 3.5.*	*Text*	*4*	*(See field description)*	*Optional*	*58*
MMTSpecialDividendIndicator	***[N/A]** Defines the special dividend indicator following MMT level 3.6.*	*Text*	*4*	*(See field description)*	*Optional*	*61*
MMTOffBookAutomatedIndicator	***[N/A]** Defines the off book automated indicator following MMT level 3.7.*	*Enumerated*	*1*	*M = Off Book Non-Automated* *Q = Off Book Automated* *- = (Hyphen) Unspecified or does not apply*	*Optional*	*60*
MMTContributiontoPrice	***[N/A]** Defines the contribution to price or the price discovery process following MMT level 3.8.*	*Text*	*4*	*(See field description)*	*Optional*	*58*

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Field	Short Description	Format	Len	Values	Presence	Page
MMTAlgorithmicIndicator	***[N/A]** Defines the algorithmic indicator following MMT level 3.9.*	*Text*	*4*	*(See field description)*	*Optional*	*58*
MMTPublicationMode	***[N/A]** Defines the publication mode or post-trade deferral reason following MMT level 4.1.*	*Text*	*4*	*(See field description)*	*Optional*	*61*
MMTPostTradeDeferral	***[N/A]** Defines the post trade deferral or enrichment type following MMT level 4.2.*	*Text*	*4*	*(See field description)*	*Optional*	*60*
MMTDuplicativeIndicator	***[N/A]** Defines the duplicative indicator following MMT level 5.*	*Text*	*4*	*(See field description)*	*Optional*	*59*
TradeQualifier	Trade Qualifier. Values specified, in the list of possible values, indicate the bit positions that should be used to set zero (0) or one (1) values. A single field contains multiple values provided in different positions.	Bitmap	1	(See field description)	Optional	76
TransactionType	***[N/A]** Transaction type or publication type.*	*Enumerated*	*1*	*(See field description)*	*Optional*	*79*
EffectiveDateIndicator	Indicates if the trade is introduced on the trading session day or earlier.	Enumerated	1	0 = If the seller declaration is received on the current trading session day 1 = If seller declaration is received before the current trading session day	Optional	40
BlockTradeCode	***[N/A]** Indicates if trade relates to a block or a negotiated deal following MiFID rules.*	*Enumerated*	*1*	*B = Block Trade* *N = Regular trade or Negotiated deal* *- = (Hyphen) Undefined*	*Optional*	*33*
TradeReference	***[N/A]** Reference of the trade reported to the Exchange.*	*Alphanumerical ID*	*30*	*(See field description)*	*Optional*	***77***
OriginalReportTimestamp	Timestamp of trade reporting to the Exchange (Text formatted following ISO 8601: hh:mm:ss.mmmμμμnnnZ	Epoch Time in Nanoseconds	19	(See field description)	Optional	66
TransparencyIndicator	Used to define the transparency of the trade.	Enumerated	1	0 = Lit/Regular Trade	Optional	80

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Field	Short Description	Format	Len	Values	Presence	Page
CurrencyCoefficient	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals).	Numerical ID	4	From 0 to 2^32-2	Optional	36
PriceMultiplier	***[N/A]** Number of units of the financial instrument that are contained in a trading lot. Price multiplier coefficient for instrument unit price.*	*Numerical*	*4*	*From 0 to 2^32-2*	*Optional*	*69*
PriceMultiplierDecimals	***[N/A]** Number of decimals for the field Price Multiplier.*	*Numerical*	*1*	*From 0 to 2^8-2*	*Optional*	*69*
Venue	Identification of the venue where the transaction was executed using the ISO 10383 segment MIC for transactions executed on a trading venue.	Alphanumerical ID	11	(See field description)	Mandatory	83
StartTimeVwap	Start time for the Volume Weight Average price computation period (Text formatted following ISO 8601: hh:mm:ssZ where Z stands for UTC).	Intraday Time in Seconds	9	(See field description)	Optional	73
EndTimeVwap	End time for the Volume Weight Average price computation period (Text formatted following ISO 8601: hh:mm:ssZ where Z stands for UTC).	Intraday Time in Seconds	9	(See field description)	Optional	40
MiFIDEmissionAllowanceType	***[N/A]** This field is only applicable for emission allowances.*	*Text*	*4*	*(See field description)*	*Optional*	*53*
MarketOfReferenceMIC	***[N/A]** Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*	*Alphanumerical ID*	*4*	*(See field description)*	*Optional*	*50*
NonAnonymous						
FirmID	Identifier of the member firm that has entered the Order.	Alphanumerical ID	8	(See field description)	Conditional	41
AccountType	Indicates the account type for which the buy order is entered.	Enumerated	1	(See field description)	Conditional	31
OrderSide	Indicates the side of the order.	Enumerated	1	1 = Buy 2 = Sell 3 = Cross [i]	Conditional	66
/NonAnonymous						
/FullTradeInfo						

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Field	Short Description	Format	Len	Values	Presence	Page
/FullTradeInformationFile						

3.6 BLOCKPRICECONTROLFILE (9018)

The Block Price Control file contains different tables defining the set of controls to be applied upon declaration submission. These controls are defined based on the Central order Book Book State and Reference Price Type.

File availability:

This file is available at the start of day and is needed by the Customers for the trading day. Customers must be able to download and process this file on a daily basis.

Scope of contents:

The file scope is the following: a block price control table for the Cash on Exchange Off Book.

Intraday updates:

No intraday update will be performed on the Block Price Control table. Should the need arise, updates will be done in the referential tool and will be applied on the following business day (i.e. D+1). Meaning, the file will only be updated on a daily basis.

Field	Short Description	Format	Len	Values	Presence	Page
BlockPriceControlFile						
BlockPriceControls						
Block Price Control ID	ID of the Block Price Table.	Numerical ID	2	From 0 to 2^16-2	Mandatory	33
SetOfBlockPriceControls						
Book State	Indicates the state of the Central Order Book.	Enumerated	1	(See field description)	Mandatory	33
Minimum Size	Minimum Size Percentage to be applied to the declaration amount.	Price	10	(See field description)	Mandatory	57
Reference Price Type	Indicates the type of Price that will be used for the block price control table.	Enumerated	1	(See field description)	Mandatory	71
Authorized Price Fluctuation	Indicates the APF value.	Price	8	From 0 to 2^64-2	Mandatory	32
AuthorizedPrice Fluctuation Type	Indicates whether the APF is expressed in percentage or value.	Enumerated	1	(See field description)	Mandatory	32
/SetOfBlockPrice Controls						
/BlockPriceControls						
/ BlockPriceControlFile						

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4. FIELD DESCRIPTION

A

Account Type

Field Name	Account Type
Description	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. - Non-LP clients are not allowed to use the type '6' (Liquidity Provider).
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment
Conditions	Provided only for non anonymous market. The value 2 is only available for BSE and BVMT. The values from 6 up to 13 are only available for BVMT.
Used In	FullTradeInformationFile (9030)

AmountDecimals

Field Name	*Amount Decimals*
Description	*Indicates the number of decimals for each Amount related to this Symbol Index*
Used For	*Cash*
Format	*Decimal Places*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*From 0 to 2^8-2*
Used In	*CashStandingDataFile (9007)*

AssetClass

Field Name	*Asset Class*
Description	*Defines the Asset Class for a group of products.*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Tech Format	*character*
Length	*3*
Possible Values	*EQT = Equities*

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	BoB = Best of Book (BoB) *TRP = Trade Reporting and Publication* *SIS = Société Générale Systematic Internalizer (SI)* *ETF = ETFs* *FIX = Fixed Income* *WAC = Warrants and Certificates* *BDL = Luxembourg Stock Exchange* *EQO = Equity Options* *IDO = Index Options* *CCO = Currency Options* *ATO = AtomX (for Flex Contracts)* *EIF = Equity and Index Futures* *CCF = Currency Futures* *COD = Commodity Derivatives* *EXI = Euronext Indices* *INA = Euronext iNAVs* *TPI = Third Party Indices* *APA = Approved Publication Arrangement*
Used In	CashStandingDataFile (9007)

AUM

Field Name	*AUM*
Description	*Stands for Asset Under Management. Indicates the fund's total market value (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

AuthorizedPriceFluctuation

Field Name	Authorized Price Fluctuation
Description	APF Value
Used For	Cash
Format	Price
Length	8
Possible Values	From 0 to 2^64-2
Used In	BlockPriceControlFile (9018)

AuthorizedPriceFluctuationType

Field Name	Authorized Price Fluctuation Type
Description	Indicates whether the APF is expressed in percentage or value
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Percentage 2 = Value

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Used In	BlockPriceControlFile (9018)

B

BookState

Field Name	Book State
Description	Indicates the state of the Central Order Book.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Inacessible 2 = Closed 3 = Call 4 = Uncrossing 5 = Continuous 6 = Halted 8 = Suspended 9 = Reserved 10 = Any
Used In	BlockPriceControlFile (9018)

BICMainDepositary

Field Name	*BIC Main Depositary*
Description	*Identifies the BIC of the default depository organization.*
Used For	*Cash*
Format	*character*
Length	*11*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

BlockPriceControlID

Field Name	Block Price Control ID
Description	ID of the block Price Control table available in the Block Price Control file.
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007) BlockPriceControlFile (9018)

BlockTradeCode

Field Name	Block Trade Code

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Description	Indicates if trade relates to a block or a negotiated deal following MiFID rules.
Used For	Cash
Format	Enumerated
Tech Format	character
Length	1
Possible Values	B = Block Trade N = Regular trade or Negotiated deal - = (Hyphen) Undefined
Used In	FullTradeInformationFile (9030)

BlockSize

Field Name	Block Size
Description	Indicates the minimum amount of a declaration for an instrument.
Used For	Cash
Format	Amount
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

BloombergTickerCode

Field Name	*Bloomberg Ticker Code*
Description	*Indicates the Bloomberg Ticker Code.*
Used For	*Cash*
Format	*character*
Length	*13*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

BPSLowCollar

Field Name	*BPSLowCollar*
Description	*Indicates the low collar applied on the NAV order book of ETF MTF. It is derived from the redemption fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Price*
Length	*8*
Possible Values	*From 0 to 2 ^64-2*
Used In	*CashStandingDataFile (9007)*

BPSHighCollar

Field Name	*BPSHighCollar*

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Description	*Indicates the High collar applied on the NAV order book of ETF MTF. It is derived from the creation fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Price*
Length	*8*
Possible Values	*From 0 to 2 ^64-2*
Used In	*CashStandingDataFile (9007)*

C

CFI

Field Name	CFI
Description	Classification code of a financial instrument defined by the ISO-10962:2015 standard.
Used For	Cash
Format	Text
Tech Format	character
Length	6
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

ChannelID

Field Name	Channel ID
Description	Identifies the channel. First figure defines if it is Real-Time feed (1 Production, 3 UAT or 5 UAT) or Snapshot feed (2 Production, 4 UAT or 6 UAT). Second figure identifies the MDG partition (partition 1 will start with 0 as second figure). Last 3 figures are channel identifier and it is unique and the same across the different platforms we have (UAT/Production).
Used For	Cash
Format	Numerical
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007)

ChannelSpeed

Field Name	Channel Speed
Description	Defines the Channel bandwidth.
Used For	Cash
Format	Enumerated
Tech Format	character

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Length	4
Possible Values	100M = 100Mbps Channel
Used In	CashStandingDataFile (9007)

ChannelType

Field Name	Channel Type
Description	Defines the channel.
Used For	Cash
Format	Enumerated
Tech Format	character
Length	4
Possible Values	FBOU = Full Order Book – Order Update message FBMU = Full Order Book – Market Update message REFI = Indices and referential channel REFT = Trades and referential channel BBBO = Best Bid and Best Offer channel
Used In	CashStandingDataFile (9007)

Closing Price Type

Field Name	Closing Price Type
Description	Indicates the type of Closing Price in use by the instrument
Used For	Cash
Format	Enumerated
Length	1
Possible Values	1 = Last Traded Price 2 = Volume Weighted Average Price 3 = Volume Weighted Average Price (VWAP X Trades)
Used In	CashStandingDataFile (9007)

CountryOfExchange

Field Name	Country Of Exchange
Description	Country of exchange is the Country associated to the MIC following ISO 3166 Alpha-3.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

CurrencyCoefficient

Field Name	Currency Coefficient

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Description	When an actual price is displayed in a different 'price expression' than the official instrument trading currency, the Currency Coefficient represents the ratio 'price expression' divided by 'official currency' (To be calculated with Ratio / Multiplier Decimals). For example a UK-listed instrument with its trading currency GBP having a price expressed in Pence, the Currency Coefficient will be 0.01 expressed with Currency Coefficient set to 1 and Ratio / Multiplier Decimals set to 2. The Currency Coefficient may be used for the Instrument Trading Price (the Referential field Trading Currency Indicator is then set to 1).
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 32
Length	4
Possible Values	From 0 to 2^32-2
Used In	CashStandingDataFile (9007)

CutOffTime

Field Name	*CutOff Time*
Description	*Indicates the point reached in the day from which the order will not be processed for the current business day (Time in number of seconds since the beginning of the day).*
Used For	*Cash*
Format	*unsigned integer 32*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Used In	*CashStandingDataFile (9007)*

D

DarkEligibility

Field Name	*Dark Eligibility*
Description	*Indicates the Eligibility to dark. 0 is not eligible, 1 is eligible.*
Used For	*Cash*
Format	*Boolean*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*CashStandingDataFile (9007)*

DarkLISThreshold

Field Name	*Dark LIS Threshold*
Description	*Defines the minimum amount of an order to benefit from the LIS (Large In Scale) pre-transparency waiver.*
Used For	*Cash*
Format	*Amount*

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Tech Format	*unsigned integer 64*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*CashStandingDataFile (9007)*

DarkMinQuantity

Field Name	*Dark Minimum Quantity*
Description	*Defines the minimum quantity required for an order to be filled in the Dark liquidity. 0 indicates that no minimum amount is required.*
Used For	*Cash*
Format	*Quantity*
Tech Format	*unsigned integer 32*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Used In	*CashStandingDataFile (9007)*

DateNextTradableNAV

Field Name	*Date Next Tradable NAV*
Description	*Date of the next tradable NAV (in number of days since the 1st of January 1970).*
Used For	*Cash*
Format	*XML date*
Length	*8*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

DateOfLastTrade

Field Name	Date Of Last Trade
Description	Date of the Last Price for the Instrument (Format YYYYMMDD).
Used For	Cash
Format	Date
Tech Format	XML date
Length	8
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

DepositaryList

Field Name	Depositary List
Description	Identifies the possible main depository organizations (maximum four) for shares or fixed income. Use the clearing house to determine the relevant system for settling trades. Valid values are: - '00000' – No depository organization - 'Nulls' – Not significant

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	- Values to be added
Used For	Cash
Format	Text
Tech Format	character
Length	20
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

DeclarationDuration

Field Name	Declaration Duration
Description	Declaration Duration (in minutes)
Used For	Cash
Format	Numerical
Tech Format	Unsigned integer 64
Length	8
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

DRSourceIPRange

Field Name	DR Source IP Range
Description	Defines the Disaster Recovery IP address /25 range number (IP v4).
Used For	Cash
Format	Text
Tech Format	character
Length	20
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

DividendFrequency

Field Name	*Dividend Frequency*
Description	*Indicates how often a dividend is paid by an individual instrument.*
Used For	*Cash*
Format	*XML Text33*
Length	*33*
Possible Values	*1 = Capitalization* *2 = Monthly* *3 = Yearly*
Used In	*CashStandingDataFile (9007)*

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E

EffectiveDateIndicator

Field Name	Effective Date Indicator
Description	Indicates if the trade is introduced on the trading session day or earlier.
Used For	Cash and Derivatives
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = If the seller declaration is received on the current trading session day 1 = If seller declaration is received before the current trading session day
Used In	FullTradeInformationFile (9030)

Eligible For Margin

Field Name	Eligible for Margin
Description	Indicates if the instrument is eligible for margin or not.
Used For	Cash
Format	Boolean
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Yes 0 = No
Used In	CashStandingDataFile (9007)

EMM

Field Name	EMM
Description	Defines the Exchange Market Mechanism applied on each platform.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Cash and Derivative Central Order Book (COB) 5 = Cash On Exchange Off book [C] *10 = Buy In* *11 = Odd Lot* 99 = Not Applicable (For indices and iNAV) [C]
Used In	CashStandingDataFile (9007) FullTradeInformationFile (9030)

EndTimeVwap

Field Name	End Time Vwap

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Description	End time for the Volume Weight Average price computation period (Text formatted following ISO 8601: hh:mm:ssZ where Z stands for UTC).
Used For	Cash
Format	Intraday Time in Seconds
Tech Format	XML timeSec
Length	9
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

EventTime

Field Name	Event Time
Description	Time when an event has been processed (Text formatted following ISO 8601: hh:mm:ss.mmmμμμnnnZ where mmm for the milliseconds μμμ for the microseconds nnn for the nanoseconds Z is for UTC").
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Tech Format	XML timeNano
Length	19
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

ExpositionType

Field Name	*Exposition Type*
Description	*Indicates the ETF replication method.*
Used For	*Cash*
Format	*XML Text33*
Length	*33*
Possible Values	*1 = Physical* *2 = Synthetic* *3 = Sampling*
Used In	*CashStandingDataFile (9007)*

F

Firm ID

Field Name	Firm ID
Description	Identifier of the member firm that has entered the Buy Order.
Used For	Cash and Derivatives

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Format	Alphanumerical ID
Length	8
Possible Values	(See field description)
Conditions	Provided only for non anonymous market.
Used In	FullTradeInformationFile (9030)

FirstSettlementDate

Field Name	First Settlement Date
Description	Represents the first possible settlement date for a given instrument. This information is always populated when instruments are admitted to listing / trading under an As If and When Issued / Delivered scheme (or “Promesses”). When this date is not provided, it means that the first possible settlement date is the same as the first trading date.(Format YYYYMMDD).
Used For	Cash
Format	Date
Tech Format	XML date
Length	8
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

FullInstrumentName

Field Name	Full Instrument Name
Description	Full Instrument Name.
Used For	Cash
Format	Text
Tech Format	character
Length	102
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

FundType

Field Name	*Fund Type*
Description	*Defines the instrument type based on Euronext classification.*
Used For	*Cash*
Format	*character*
Length	*3*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

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G

GuaranteeIndicator

Field Name	Guarantee Indicator
Description	Indicates if the trade is guaranteed or not (for clearing purpose)
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = This instrument is not guaranteed 1 = This instrument is guaranteed 2 = This instrument is not clearable *8 = This instrument is part of Cleared Borrowing and Lending Service (CBLM) and is guaranteed*
Used In	CashStandingDataFile (9007)

I

ICB

Field Name	*ICB*
Description	*Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.*
Used For	*Cash*
Format	*Alphanumerical ID*
Tech Format	*character*
Length	*16*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

ICB Code

Field Name	ICB
Description	Identifies for a listed instrument, the economic subsector of the issuing company in the ICB (Industry Classification Benchmark) classification.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	8
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

ICSD

Field Name	*ICSD*

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Description	*Indicates if the settlement can be processed through an International CSD (1) or not (0).*
Used For	*Cash*
Format	*unsigned integer 8*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*CashStandingDataFile (9007)*

IndexLeverage

Field Name	*Index Leverage*
Description	*Indicates the multiplier coefficient of an leveraged fund.*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

InstrumentCategory

Field Name	Instrument Category
Description	Identifies the category of the instrument.
Used For	Cash
Format	Alphanumerical ID
Tech Format	unsigned integer 8
Length	4
Possible Values	1 = Equities 2 = Fixed Income 11 = Indices
Used In	CashStandingDataFile (9007)

InstrumentDomiciliation

Field Name	*Instrument Domiciliation*
Description	*Domiciliation country.* *Provides the ISO 4217 (3A) code for the instrument's domiciliation country.*
Used For	*Cash*
Format	*character*
Length	*3*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

InstrumentEventDate

Field Name	Instrument Event Date
Description	Date of the last instrument characteristic modification(s) except for some exceptions. The following exceptions (since they are modified every day) are not updating the Event Date and allow members to know when a change occurs on instrument characteristics: - Previous day's adjusted closing price (LastAdjPrice)

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	- Previous day capital traded (Prev Day Capital Traded) - Number of shares for this instrument traded on previous day (Previous Volume Traded) - Date instrument last traded (DateOfLastTrade) (Format YYYYMMDD).
Used For	Cash
Format	Date
Tech Format	XML date
Length	8
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

InstrumentGroupCode

Field Name	Instrument Group Code
Description	Instrument Group / Class Identifier.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	2
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

InstrumentName

Field Name	Instrument Name
Description	Instrument Name
Used For	Cash
Format	Text
Tech Format	character
Length	18
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

InstrumentTradingCode

Field Name	Instrument Trading Code
Description	Trading code is a 12-character string, the only instrument identifier that is unique in the feed in addition to the symbol index. Also known as Local Symbol.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	15
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

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InstrumentType

Field Name	*Instrument Type*
Description	*Identifies the type of instrument.*
Used For	*Cash*
Format	*Alphanumerical ID*
Tech Format	*unsigned integer 8*
Length	*4*
Possible Values	*SHRS = Shares* *SBRT = Subscription Right* *DPRP = Depository Receipts* *WNTS = Warrant* *ETFT = Exchange Traded Funds* *OTHR = Other*
Used In	*CashStandingDataFile (9007)*

InstUnitExp

Field Name	Instrument Unit Expression
Description	Unit in which the instrument is quoted.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Units 2 = Percentage of Nominal Excluding Accrued Interest (Clean) 3 = Basis Points 5 = Percentage of Nominal Including Accrued Interest (Dirty) 8 = Kilograms 9 = Ounces
Used In	CashStandingDataFile (9007)

IPAddressDR

Field Name	IP Address DR
Description	IP Address of the Disaster Recovery access to the gateway. Populated only for the Disaster Recovery environment, in the file generated for the Production environment. Blank for all other environments (IP v4).
Used For	Cash
Format	Text
Tech Format	character
Length	15
Possible Values	Valid IP v4 address
Used In	CashStandingDataFile (9007)

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IPAddressPrimary

Field Name	IP Address Primary
Description	IP Address of the Primary and Secondary (backup) access to the gateway. Provided for all environments (IP v4).
Used For	Cash
Format	Text
Tech Format	character
Length	15
Possible Values	Valid IP v4 address
Used In	CashStandingDataFile (9007)

ISINCode

Field Name	ISIN Code
Description	Instrument ISIN following ISO 6166. Identifier of a product. Combined with MIC and Currency, identifies an instrument traded on a given market using a given currency.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	12
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

IssuerName

Field Name	Issuer Name
Description	Indicates the name of the Legal Issuing Entity.
Used For	Cash
Format	Text
Tech Format	character
Length	80
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

IssuePrice

Field Name	Issue Price
Description	Issuing price of the instrument (to be calculated with Issue Price Decimals).
Used For	Cash
Format	Price
Tech Format	signed integer 64
Length	8
Possible Values	From -2^63+1 to 2^63-1

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Used In	CashStandingDataFile (9007)

IssuePriceDecimals

Field Name	Issue Price Decimals
Description	Indicates the number of decimals for Issue Price related to this Symbol Index
Used For	Cash
Format	Decimal Places
Tech Format	unsigned integer 8
Length	1
Possible Values	From 0 to 2^8-2
Used In	CashStandingDataFile (9007)

IssuingCountry

Field Name	Issuing Country
Description	Issuing country. Provides the ISO 3166 (Alpha 3) code for the country of headquarter company that issued the instrument.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

L

LastAdjustedClosingPrice

Field Name	Last Adjusted Closing Price
Description	Last traded price of the previous trading day after application of the adjustment coefficient (to be calculated with the Price/Index Level Decimals). Not provided for European instruments.
Used For	Cash
Format	Price
Tech Format	signed integer 64
Length	8
Possible Values	From -2^63+1 to 2^63-1
Used In	CashStandingDataFile (9007)

LEI

Field Name	*LEI*
Description	*Indicates the Legal Entity Identifier (LEI).*
Used For	*Cash*

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Format	*character*
Length	*20*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

LiquidInstrumentIndicator

Field Name	*Liquid Instrument Indicator*
Description	*Indicates whether the instrument is liquid or not, as defined per MiFID II. (0 = Illiquid ; 1 = Liquid)*
Used For	*N/A*
Format	*Boolean*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*0 = False* *1 = True*
Used In	*CashStandingDataFile (9007)*

ListingDate

Field Name	*Listing Date*
Description	*Indicates the listing date of the fund on the Exchange of Reference. (in number of days since the 1st of January 1970).*
Used For	*Cash*
Format	*XML date*
Length	*8*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

LotSize

Field Name	Lot Size
Description	**For cash instruments with Quantity Notation = "UNT":** The Lot Size is the minimum tradable quantity that is set for each instrument by the Exchange. The quantity has to be a multiple of the Lot Size. **For cash instruments with Quantity Notation = "FMT":** The Lot Size has to be considered with the data "Par value", and the order quantity has to be a multiple of this Par value.
Used For	Cash
Format	Quantity
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

M

MainDepositary

Field Name	Main Depositary

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Description	Identifies the default (or main) depository organization of the instrument (between the possible 4 depositaries registered) used by priority for the settlement (for example: multi-listed instruments which have several depositories). For Cash Markets this data has to be treated in consideration of the data Depositary List used by the clearing house to determine the relevant system for settling trades. Valid values are the same as for "Depositary List". Valid values are: - '00000' – No depository organization - 'Nulls' – Not significant - *Values to be added*
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	5
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

MDSeqNum

Field Name	Market Data Sequence Number
Description	Assigned by MDG for each message. Each channel has its own Market Data Sequence Number sequence. This sequence will always increment but not by 1 during the day, except for "Health Status" messages that will contain the Market Data Sequence Number of the last message (that is not a "Health Status" message) sent on the channel.
Used For	Cash and Derivatives
Format	Sequence
Length	8
Possible Values	From 0 to 2^64-2
Used In	FullTradeInformationFile (9030)

MarketModel

Field Name	Market Model
Description	Market Model identifier.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Order Driven *2 = Quote Driven* 7 = Declaration Driven
Used In	CashStandingDataFile (9007)

MarketOfReferenceMIC

Field Name	*Market Of Reference MIC*
Description	*Indicates the instrument Exchange of Reference by its MIC (Market Identification Code according to ISO 10383) (For Future Use).*

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Used For	*Cash*
Format	*Alphanumerical ID*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

MaturityDate

Field Name	*Maturity Date*
Description	*Maturity Date of the instrument (text formatted as YYYYMMDD).* *For contracts with one expiry per month the day component may be "00" (text formatted as YYYYMMDD).* *For repo (repurchase agreement) it represents the inclusive date until which a lending/borrowing contract can be traded.*
Used For	*Cash*
Format	*Text*
Tech Format	*character*
Length	*8*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

MaximumDecimalsInQuantity

Field Name	*Maximum Decimals In Quantity*
Description	*Maximum Decimals In Quantity was introduced for Euronext Fund Services Paris and indicates the maximum of relevant decimal number for trading.*
Used For	*Cash*
Format	*Numerical*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*From 0 to 2^8-2*
Used In	*CashStandingDataFile (9007)*

MDGSetOfChannelsID

Field Name	MDG Set Of Channels ID
Description	Identifier of an MDG Set Of Channels.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	100 - Equities 101 - Indices
Used In	CashStandingDataFile (9007)

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MDGSetOfChannelsName

Field Name	MDG Set Of Channels Name
Description	Name of the MDG Set Of Channels.
Used For	Cash
Format	Text
Tech Format	character
Length	100
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

MIC

Field Name	MIC
Description	Identifies the market to which an instrument belongs by its MIC (Market Identification Code), segment MIC according to ISO 10383.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

MICExchangeOfReference

Field Name	*MIC Exchange Of Reference*
Description	*Indicates the instrument's Exchange of Reference by its MIC (Market Identification Code according to ISO 10383).*
Used For	*Cash*
Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

MICList

Field Name	*MIC List*
Description	*Identifies the Euronext markets on which an instrument is listed by its MIC (Market Identification Code).* *For an instrument listed on a single Euronext market, the listing MIC code is the same than "Market Identification Code (MIC) of the listed instrument" For an instrument listed on several Euronext Markets:* *- The first MIC is the same than the "Market Identification Code (MIC) of the listed instrument* *- The others MIC indicate the other listing places*
Used For	*Cash*
Format	*Alphanumerical ID*
Tech Format	*character*
Length	*20*
Possible Values	*(See field description)*

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Used In	*CashStandingDataFile (9007)*

MiFIDClearingFlag

Field Name	MiFID Clearing Flag
Description	Code to identify whether the transaction will be cleared. - 'true': Transaction to be cleared. - 'false': Transaction not to be cleared.
Used For	Derivatives
Format	Text
Tech Format	character
Length	5
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MifidCurrency

Field Name	MiFID Currency
Description	Currency in which the price is expressed (applicable if the price is expressed as monetary value) following ISO 4217 standard.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MiFIDEmissionAllowanceType

Field Name	*MiFID Emission Allowance Type*
Description	*This field is only applicable for emission allowances.* *Possible values:* *- 'EUAE' – European Union Allowances (EUA)* *- 'CERE' - Certified Emission Reductions (CER)* *- 'ERUE' - Emission Reduction Units (ERU)* *- 'EUAA' - European Union Aviation Allowances (EUAA)* *- 'OTHR' – Other (for derivatives only)*
Used For	*Derivatives*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

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MiFIDEmissionAllowanceType

Field Name	*MiFID Emission Allowance Type*
Description	*This field is only applicable for emission allowances.* *Possible values:* *- 'EUAE' – European Union Allowances (EUA)* *- 'CERE' - Certified Emission Reductions (CER)* *- 'ERUE' - Emission Reduction Units (ERU)* *- 'EUAA' - European Union Aviation Allowances (EUAA)* *- 'OTHR' – Other (for derivatives only)*
Used For	*Derivatives*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MifidExecutionID

Field Name	MiFID Execution ID
Description	MiFID Transaction Identification Code is composed of the Symbol Index (on 10 characters), the EMM (on 3 characters) and the Execution ID (on 10 characters). It is a unique Execution ID by instrument per day on the different available EMM. Example: Trade done with Execution Id: 42 on the Symbol Index: 1384659 on EMM: 1 (COB) will have this MiFID Execution ID: 00013846590010000000042.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Tech Format	character
Length	52
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MifidInstrumentID

Field Name	MiFID Instrument ID
Description	Code used to identify the financial instrument. This code has to be processed with the MiFID Instrument ID Type.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Tech Format	character
Length	12
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

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MifidInstrumentIdType

Field Name	MiFID Instrument ID Type
Description	Code type used to identify the financial instrument. Possible values: - 'ISIN' = ISIN code, where ISIN is available. - 'OTHR' = other identifier.
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MiFIDNotionalAmount

Field Name	*MiFID Notional Amount*
Description	*Nominal amount or notional amount.* *For spread bets, the notional amount shall be the monetary value wagered per point movement in the underlying financial instrument.* *For credit default swaps, it shall be the notional amount for which the protection is acquired or disposed of.* *Possible values:* *- Maximum of 18 digits with a maximum of 5 decimals.* *Note: Decimal separator is '.' (full stop).*
Used For	*Cash and Derivatives*
Format	*Text*
Tech Format	*character*
Length	*20*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MifidPrice

Field Name	MiFID Price
Description	Traded price of the transaction excluding, where applicable, commission and accrued interest. Where price is reported in monetary terms, it shall be provided in the major currency unit. Where price is not applicable the field shall not be populated. Possible values: - For price expressed as monetary value: maximum of 18 digits with a maximum of 13 decimals. - For price expressed as percentage or yield: maximum of 11 digits with a maximum of 10 decimals. Note 1: Decimal separator is '.' (full stop). Note 2: Negative numbers are prefixed with '-' (minus). Note 3: Where applicable, values shall be rounded and not truncated.
Used For	Cash and Derivatives
Format	Text

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Tech Format	character
Length	20
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MifidPriceNotation

Field Name	MiFID Price Notation
Description	Indication as to whether the price is expressed in monetary value, in percentage or in yield. Possible values: 'MONE' – Monetary value 'PERC' – Percentage 'YIEL' – Yield 'BAPO' – Basis points.
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MiFIDQtyinMsrmtUnitNotation

Field Name	*MiFID Qty in Measurement Unit Notation*
Description	*Indication of measurement units in which the quantity in measurement unit is expressed.* *Possible values:* *'TOCD' – tons of carbon dioxide equivalent* *Or* *{ALPHANUM-25} otherwise.*
Used For	*Cash and Derivatives*
Format	*Text*
Tech Format	*character*
Length	*25*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MifidQuantity

Field Name	MiFID Quantity
Description	Number of units of the financial instrument. The nominal or monetary value of the financial instrument. Possible values: - For quantity expressed as number of units: maximum of 18 digits with a maximum of 17 decimals. - For quantity expressed as monetary or nominal value: maximum of 18 digits with a maximum of 5 decimals. Note 1: Decimal separator is '.' (full stop).
Used For	Cash and Derivatives
Format	Text

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Tech Format	character
Length	20
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MifidQuantityMeasurementUnit

Field Name	*MiFID Quantity Measurement Unit*
Description	*The equivalent amount of commodity or emission allowance traded expressed in measurement unit* *Possible values:* *- For quantity expressed as number of units: maximum of 18 digits with a maximum of 17 decimals.* *Note: Decimal separator is '.' (full stop).*
Used For	*Cash and Derivatives*
Format	*Text*
Tech Format	*character*
Length	*20*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MinimumSize

Field Name	Minimum Size
Description	Minimum Size Percentage to be applied to the declaration amount.
Used For	Cash
Format	Price
Tech Format	unsigned integer 64
Length	8
Possible Values	(See field description)
Used In	BlockPriceControlFile (9018)

MinimumPrice

Field Name	Minimum Price
Description	Minimum Price of the order. Price with decimals on x characters, with '.' as a separator
Used For	Cash
Format	Price
Tech Format	Decimals
Length	32
Possible Values	(See field description)
Used In	CashTickSizeReferentialFile (9020)

MMTAgencyCrossTradeIndicator

Field Name	*MMT Agency Cross Trade Indicator*
Description	*Defines the agency cross trade indicator following MMT level 3.3.*

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	Possible values: - 'ACTX': Agency Cross Trade - '-': No Agency Cross Trade
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTAlgorithmicIndicator

Field Name	MMT Algorithmic Indicator
Description	Defines the algorithmic indicator following MMT level 3.9. Possible values: - 'ALGO': Algorithmic Trade - '-': No Algorithmic Trade
Used For	Cash
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTBenchmarkIndicator

Field Name	MMT Benchmark Indicator
Description	Defines the benchmark indicator or the reference price indicator following MMT level 3.5. Possible values: - 'BENC': Benchmark Trade - 'RFPT': Reference Price Trade - '-': No Benchmark or Reference Price Trade
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTContributiontoPrice

Field Name	MMT Contribution to Price
Description	Defines the contribution to price or the price discovery process following MMT level 3.8. Possible values: - 'P': Plain-Vanilla Trade - 'NPFT': Non-Price Forming Trade (formerly known as the Technical Trade) - 'TNCP': Trade not Contributing to the Price Discovery Process

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Used For	*Cash and Derivatives*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MMTDuplicativeIndicator

Field Name	*MMT Duplicative Indicator*
Description	*Defines the duplicative indicator following MMT level 5.* *Possible values:* *- 'DUPL': Duplicative Trade Report (reported to more than one APA)* *- '-': Unique Trade Report*
Used For	*Cash*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MMTMarketMechanism

Field Name	MMT Market Mechanism
Description	Defines the fundamental functional market mechanism that has facilitated the trade following MMT level 1.
Used For	Cash and Derivatives
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Central Limit Order Book 2 = Quote Driven Market 5 = Periodic Auction (= Uncrossing)
Used In	FullTradeInformationFile (9030)

MMTModificationIndicator

Field Name	MMT Modification Indicator
Description	Defines the modification indicator following MMT level 3.4. Possible values: - 'CANC': Trade Cancellation - 'AMND': Trade Amendment - '-': New Trade
Used For	Cash and Derivatives
Format	Text
Tech Format	character

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Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTNegotiationIndicator

Field Name	*MMT Negotiation Indicator*
Description	*Defines the negotiation indicator or pre-trade transparency waiver following MMT level 3.2.* *Possible values:* *- 'N': Negotiated Trade* *- 'NLIQ': Negotiated Trade in Liquid Financial Instruments* *- 'OILQ': Negotiated Trade in Illiquid Financial Instruments* *- 'PRIC': Negotiated Trade Subject to Conditions Other Than The Current Market Price* *- 'ILQD': Pre-Trade Transparency Waiver for illiquid instrument on an Side* *- 'SIZE': Pre-Trade Transparency Waiver for above standard market size on an SI* *- '-': No Negotiated Trade*
Used For	*Cash*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

MMTOffBookAutomatedIndicator

Field Name	*MMT Off Book Automated Indicator*
Description	*Defines the off book automated indicator following MMT level 3.7.*
Used For	*Cash and Derivatives*
Format	*Enumerated*
Tech Format	*character*
Length	*1*
Possible Values	*M = Off Book Non-Automated* *Q = Off Book Automated* *- = (Hyphen) Unspecified or does not apply*
Used In	*FullTradeInformationFile (9030)*

MMTPostTradeDeferral

Field Name	*MMT Post Trade Deferral*
Description	*Defines the post trade deferral or enrichment type following MMT level 4.2.* *Possible values for the original trade:* *- 'LMTF': Limited Details Trade* *- 'DATF': Daily Aggregated Trade* *- 'VOLO': Volume Omission Trade* *- 'FWAF': Four Weeks Aggregation Trade* *- 'IDAF': Indefinite Aggregation Trade* *- 'VOLW': Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form*

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	Possible values for the subsequent enrichment trade: - 'FULF': Full Details of Earlier "Limited Details Trade (LMTF)" - 'FULA': Full Details of Earlier "Daily Aggregated Trade (DATF)" - 'FULV': Full Details of Earlier "Volume Omission Trade (VOLO)" - 'FULJ': Full Details of Earlier "Four Weeks Aggregation Trade (FWAF)" - 'COAF': Full Details in Aggregated Form of Earlier "Volume Omission Trade, Eligible for Subsequent Enrichment in Aggregated Form (VOLW)" Possible values if neither apply: - '-': Not Applicable / No Relevant Deferral or Enrichment Type
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTPublicationMode

Field Name	MMT Publication Mode
Description	Defines the publication mode or post-trade deferral reason following MMT level 4.1. Possible values: - '-': Immediate Publication - '1': Non-Immediate Publication - 'LRGS': Non-Immediate Publication: Deferral for "Large in Scale" - 'ILQD': Non-Immediate Publication: Deferral for "Illiquid Instrument" - 'SIZE': Non-Immediate Publication: Deferral for "Size Specific"
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

MMTSpecialDividendIndicator

Field Name	MMT Special Dividend Indicator
Description	Defines the special dividend indicator following MMT level 3.6. Possible values: - 'SDIV': Special Dividend Trade - '-': No Special Dividend Trade
Used For	Cash
Format	Text
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

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MMTTradingMode

Field Name	MMT Trading Mode
Description	Differentiates transactions by defining the trading mode under which the trade was executed following MMT level 2.
Used For	Cash and Derivatives
Format	Enumerated
Tech Format	character
Length	1
Possible Values	1 = Undefined Auction (= Uncrossing) 2 = Continuous Trading 3 = At Market Close Trading 4 = Out of Main Session Trading I = Scheduled Intraday Auction (= Uncrossing) K = Scheduled Closing Auction (= Uncrossing) O = Scheduled Opening Auction (= Uncrossing) U = Unscheduled Auction (= Uncrossing)
Used In	FullTradeInformationFile (9030)

MMTTransactionCategory

Field Name	*MMT Transaction Category*
Description	*Defines the transaction category following MMT level 3.1.* *Possible values:* *- 'D': Dark Trade* *- 'RPRI': Trade that has Received Price Improvement* *- 'TPAC': Package Trade (excluding Exchange for Physicals)* *- 'XFPH': Exchange for Physicals Trade* *- '-': None apply (a standard trade for the Market Mechanism and Trading Mode)*
Used For	*Cash and Derivatives*
Format	*Text*
Tech Format	*character*
Length	*4*
Possible Values	*(See field description)*
Used In	*FullTradeInformationFile (9030)*

Mnemonic

Field Name	Mnemonic
Description	Mnemonic code of the instrument. This field is not populated for every instrument.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	5
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

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MulticastGroupIP

Field Name	Multicast Group IP
Description	Defines the IP number (IP v4).
Used For	Cash
Format	Text
Tech Format	character
Length	15
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

N

NameExchangeOfReference

Field Name	*Name Exchange Of Reference*
Description	*Indicates the instrument's Exchange of Reference by its Name.*
Used For	*Cash*
Format	*character*
Length	*25*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

NAVCurrency

Field Name	*NAV Currency*
Description	*Code of the NAV currency (ISO 4217-3A).*
Used For	*Cash*
Format	*character*
Length	*3*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

NAVHighCollar

Field Name	*NAVHighCollar*
Description	*Indicates the High collar applied on the NAV order book of ETF MTF. It is derived from the creation fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

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NAVLowCollar

Field Name	*NAVLowCollar*
Description	*Indicates the low collar applied on the NAV order book of ETF MTF. It is derived from the redemption fees of the primary market. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

NAVPublicationTime

Field Name	*NAV Publication Time*
Description	*Indicates the official NAV publication time. (Time in number of seconds since the beginning of the day).*
Used For	*Cash*
Format	*unsigned integer 32*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Used In	*CashStandingDataFile (9007)*

NominalCurrency

Field Name	Nominal Currency
Description	Code of the nominal currency (ISO 4217-3A).
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

NotionalCurrency

Field Name	Notional Currency
Description	Currency in which the notional is denominated following ISO 4217 standard.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

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NumberInstrumentCirculating

Field Name	Number Instrument Circulating
Description	For stocks: this is the total number of shares issued by the company. For Fix Income: this is the number of Fix Income still to be repaid.
Used For	Cash
Format	Quantity
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

O

OptiqSegment

Field Name	Optiq Segment
Description	An Optiq segment is a universe of instruments sharing common trading properties. Instruments have the flexibility to be moved from one partition to another within an Optiq segment.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Equities 9 = Indices
Used In	CashStandingDataFile (9007)

OrderEntryQualifier

Field Name	Order Entry Qualifier
Description	Field indicating the state of the Order Entry for the current market state.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = Order Entry/Cancel/Modify Disabled 1 = Order Entry/Cancel/Modify Enabled 3 = Cancel Only 4 = Order Entry Only
Used In	TimetableFile (9001)

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Order Side

Field Name	Order Side
Description	Indicates the side of the order. Please note that the value Cross is used only for the Order Entry, it will never be populated in the Market Data feed.
Used For	Cash and Derivatives
Format	Enumerated
Length	1
Possible Values	1 = Buy 2 = Sell 3 = Cross [i]
Conditions	Provided only for non anonymous market.
Used In	FullTradeInformationFile (9030)

OriginalReportTimestamp

Field Name	Original Report Timestamp
Description	Timestamp of trade reporting to the Exchange (Text formatted following ISO 8601: hh:mm:ss.mmmµµµnnnZ where mmm for the milliseconds µµµ for the microseconds nnn for the nanoseconds Z is for UTC").
Used For	Cash and Derivatives
Format	Epoch Time in Nanoseconds
Tech Format	XML timeNano
Length	19
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

P

PartitionID

Field Name	Partition ID
Description	Identifies uniquely an Optiq partition across all the Exchange partitions.
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007)

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PartitionType

Field Name	Partition Type
Description	Indicates the type of Partition, either Order Entry or Drop Copy. Use of Order Entry and Drop Copy gateways require separate and individual setup of the Logical access to each service.
Used For	Cash
Format	Enumerated
Tech Format	character
Length	2
Possible Values	OE = Order Entry DC = Drop Copy
Used In	CashStandingDataFile (9007)

ParValue

Field Name	*Par Value*
Description	*Par Value (also called Nominal value) for Instrument. For Fixed Income it represents the par amount to be repaid at maturity (not including interest revenue) (to be calculated with the Amount Decimals).*
Used For	*Cash*
Format	*Amount*
Tech Format	*unsigned integer 64*
Length	*8*
Possible Values	*From 0 to 2^64-2*
Used In	*CashStandingDataFile (9007)*

PatternID

Field Name	Pattern ID
Description	Numerical Pattern identifier available as a characteristic of an instrument in Standing Data file and message, and used in the MDG timetable message. Cash Markets only.
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007) TimetableFile (9001)

PreviousNAV

Field Name	*Previous NAV*
Description	*Indicates the previous official Net Asset Value (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*

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Used In	*CashStandingDataFile (9007)*

PhaseId

Field Name	Phase Id
Description	Indicates the phase of the instrument.The length for this field is maximum possible value length.
Used For	Cash
Format	Enumerated
Tech Format	XML text50
Length	50
Possible Values	1 = Inaccessible 2 = Closed 3 = Call 4 = Uncrossing 5 = Continuous
Used In	TimetableFile (9001)

PhaseQualifier

Field Name	Phase Qualifier
Description	Indicates the Phase Qualifier (no multiple phase possible at the same time even if this field is a bitmap). - bit in position 0 – No Qualifier: indicates that no phase qualifier are applicable (0: No ; 1: Yes) - bit in position 1 – Call BBO Only (Cash Only): indicates a call on BBO only phase (0: No ; 1: Yes) - bit in position 2 – Trading At Last (Cash Only): indicates a trading at last phase (TaL) phase (0: No ; 1: Yes) - bit in position 3 – Random Uncrossing (Cash Only): indicates a random uncrossing phase (0: No ; 1: Yes) Format: Numerical value expressed in base 2, prefixed with '0b'.
Used For	Cash
Format	Bitmap
Tech Format	unsigned integer 16
Length	2
Possible Values	0 = No Qualifier 1 = Call BBO Only (Cash Only) 2 = Trading At Last (Cash Only) 3 = Random Uncrossing (Cash Only)
Used In	TimetableFile (9001)

PhaseTime

Field Name	Phase Time
Description	Time of Phase start (Text formatted following ISO 8601: hh:mm:ssZ where Z is for UTC").
Used For	Cash
Format	Integer Time in hhmmss
Tech Format	XML timeSec
Length	9
Possible Values	(See field description)
Used In	TimetableFile (9001)

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PortNumber

Field Name	Port Number
Description	Defines the port number.
Used For	Cash
Format	Numerical
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007)

PriceDecimals

Field Name	Price / Index Level Decimals
Description	Indicates the number of decimals for each Price / Index Level related to this Symbol Index
Used For	Cash
Format	Decimal Places
Tech Format	unsigned integer 8
Length	1
Possible Values	From 0 to 2^8-2
Used In	CashStandingDataFile (9007)

PriceMultiplier

Field Name	*Price Multiplier*
Description	*Number of units of the financial instrument that are contained in a trading lot. Price multiplier coefficient for instrument unit price.*
Used For	*Cash*
Format	*Numerical*
Tech Format	*unsigned integer 32*
Length	*4*
Possible Values	*From 0 to 2^32-2*
Used In	*FullTradeInformationFile (9030)*

PriceMultiplierDecimals

Field Name	*Price Multiplier Decimals*
Description	*Number of decimals for the field Price Multiplier.*
Used For	*Cash*
Format	*Numerical*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*From 0 to 2^8-2*
Used In	*FullTradeInformationFile (9030)*

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PublicationDateNextTradableNAV

Field Name	*Publication Date Next Tradable NAV*
Description	*Publication Date of the next tradable NAV (in number of days since the 1st of January 1970).*
Used For	*Cash*
Format	*XML date*
Length	*8*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

Q

QuantityDecimals

Field Name	Quantity Decimals
Description	Indicates the number of decimals for each Quantity related to this Symbol Index
Used For	Cash
Format	Decimal Places
Tech Format	unsigned integer 8
Length	1
Possible Values	From 0 to 2^8-2
Used In	CashStandingDataFile (9007)

QuantityNotation

Field Name	Quantity Notation
Description	Indication of the type of measurement (e.g. number of units, nominal, monetary value, etc.) in which the transaction is expressed. Possible values: "UNT" - Units "FMT" - Facial Amount "-" - Not Applicable
Used For	Cash
Format	Text
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

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R

RatioDecimals

Field Name	Ratio / Multiplier Decimals
Description	Indicates the number of decimals for each Ratio / Multiplier related to this Symbol Index
Used For	Cash
Format	Decimal Places
Tech Format	unsigned integer 8
Length	1
Possible Values	From 0 to 2^8-2
Used In	CashStandingDataFile (9007)

RebroadcastIndicator

Field Name	Rebroadcast Indicator
Description	Indicates if this message is resent or new (1 if resent, 0 otherwise). For a snapshot, this field will always be set to '1'.
Used For	Cash and Derivatives
Format	Numerical ID
Length	1
Possible Values	From 0 to 2^8-2
Used In	FullTradeInformationFile (9030)

ReferencePriceType

Field Name	Reference Price Type
Description	Indicates the type of Price that will be used for the block Price Control table.
Used For	Cash
Format	Enumerated
Tech Format	Unsigned Integer 8
Length	1
Possible Values	1 = Last Traded Price 2 = Volume Weighted Average Price (VWAP) 3 = Adjusted Closing Price (ACP)
Used In	BlockPriceControlFile (9018)

RepoIndicator

Field Name	*Repo Indicator*
Description	*Indicates whether the instrument listed underlies any loan contracts, meaning it has been admitted to the Deferred Settlement system and/or to the lending market.*
Used For	*Cash*
Format	*Enumerated*
Tech Format	*unsigned integer 8*
Length	*1*

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Possible Values	*0 = Instrument neither eligible for the SRD, nor eligible for the Loan and Lending Market* *1 = Instrument eligible for the SRD and for the Loan and Lending Market* *2 = Instrument eligible for the SRD long only* *3 = Instrument eligible for the Loan and Lending Market and for the SRD long only* *4 = Easy-to-borrow Instrument eligible for the SRD and the for Loan and Lending Market* *5 = Instrument eligible for the Loan and Lending Market* *8 = Non significant*
Used In	*CashStandingDataFile (9007)*

ReutersRICCode

Field Name	*Reuters RIC Code*
Description	*Indicates the Reuters RIC Code.*
Used For	*Cash*
Format	*character*
Length	*13*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

S

Session

Field Name	Session
Description	Current market session.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = Session 0 1 = Session 1 2 = Session 2 3 = Session 3 4 = Session 4 5 = Session 5 6 = Session 6 7 = Session 7 8 = Session 8 9 = Session 9
Used In	TimetableFile (9001)

SettlementDelay

Field Name	Settlement Delay
Description	Gives the number of trading days that represents the period between the trade date and the settlement date (delivery and payment) for an instrument to be cleared and settled. Permitted Values - From 0 to 30 (Standard values) - X: This value is assigned by default if none provided.

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	- Z: This value is assigned for Lending/Borrowing instruments. This value is especially interpreted to manage the associated management rules (D+3).
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	2
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

SixMonthsADV

Field Name	*6 Months ADV*
Description	*Indicates the 6 months average daily volume (number of shares) traded on the ETF-MTF platform (to be calculated with Quantity Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

SixMonthsADVExchangeOfRef

Field Name	*6 Months ADV Exchange Of Reference*
Description	*Indicates the 6 months average daily volume (number of shares) traded on the exchange of reference (to be calculated with Quantity Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

SourceIPRange

Field Name	Source IP Range
Description	Defines the primary and secondary IP range (IP v4). This IP Range is given to clients to allow these IP in client firewall. It will be the same for a line (A or B) on primary and secondary feed. A range from IP 123.123.123.0 to 25 will be set like this: 123.123.123.0/25.
Used For	Cash
Format	Text
Tech Format	character
Length	20
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

StartTimeVwap

Field Name	Start Time Vwap

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Description	Start time for the Volume Weight Average price computation period (Text formatted following ISO 8601: hh:mm:ssZ where Z stands for UTC).
Used For	Cash
Format	Intraday Time in Seconds
Tech Format	XML timeSec
Length	9
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

StrikeCurrency

Field Name	*Strike Currency*
Description	*Code of the strike currency (ISO 4217-3A).*
Used For	*Cash*
Format	*Alphanumerical ID*
Tech Format	*character*
Length	*3*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

StrikeCurrencyIndicator

Field Name	*Strike Currency Indicator*
Description	*Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply.* *This is the case for strike instruments in pennies. The currency will be 'GBP', Strike Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.*
Used For	*Cash*
Format	*Enumerated*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*0 = Change rate not applied to the strike price* *1 = Change rate applied to the strike price*
Used In	*CashStandingDataFile (9007)*

StrikePrice

Field Name	*Strike Price*
Description	*The strike price of an option/warrant is the specified price at which the underlying can be bought (in the case of a call/right to buy) or sold (in case of a put/right to sell) by the holder (buyer) of the option/warrant contract, at the moment he exercises his right against a writer (seller) of the option/warrant.* *To be calculated with Strike Price Decimals.*
Used For	*N/A*
Format	*Price*
Tech Format	*signed integer 64*
Length	*8*

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Possible Values	*From -2^63+1 to 2^63-1*
Used In	*CashStandingDataFile (9007)*

StrikePriceDecimals

Field Name	*Strike Price Decimals*
Description	*Indicates the number of decimals for Strike Price related to this Symbol Index*
Used For	*Cash*
Format	*Decimal Places*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*From 0 to 2^8-2*
Used In	*CashStandingDataFile (9007)*

SymbolIndex

Field Name	Symbol Index
Description	Exchange identification code of the instrument. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence of the Symbol Index and with the instrument characteristics is provided in the standing data messages and associated files.
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 32
Length	4
Possible Values	From 0 to 2^32-2
Used In	CashStandingDataFile (9007)

SubscriptionFee

Field Name	*Subscription Fee*
Description	*Indicates the redemption fees in the primary market used as order limits for NAV trading order book. Information expressed in basis points (bps) (to be calculated with the Price/Index Level Decimals).*
Used For	*Cash*
Format	*Decimals*
Length	*32*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

T

TaxCode

Field Name	*Tax Code*
Description	*Tax deduction code to which the instrument belongs.*
Used For	*Cash*

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Format	*Enumerated*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*0 = Not eligible to PEA* *3 = Eligible to PEA* *9 = Not Applicable*
Used In	*CashStandingDataFile (9007)*

TickSize

Field Name	Tick Size
Description	Tick Size applied between the current Minimum Price and the next Minimum Price. Tick size on x characters, with . as a separator
Used For	Cash
Format	Price
Tech Format	Decimals
Length	32
Possible Values	(See field description)
Used In	CashTickSizeReferentialFile (9020)

TickSizeIndexID

Field Name	Tick Size Index ID
Description	ID of the tick size table available in the Tick Table file.
Used For	Cash
Format	Numerical ID
Tech Format	unsigned integer 16
Length	2
Possible Values	From 0 to 2^16-2
Used In	CashStandingDataFile (9007) CashTickSizeReferentialFile (9020)

TotalExpenseRatio

Field Name	*Total Expense Ratio*
Description	*Total Expense Ratio (TER): total costs associated with managing and operating a fund.*
Used For	*Cash*
Format	*unsigned integer 16*
Length	*2*
Possible Values	*From 0 to 2^16-2*
Used In	*CashStandingDataFile (9007)*

ThresholdLISPostTrade120mn

Field Name	*Threshold LIS Post Trade 120mn*

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Description	Defines the amount of an order to benefit from the LIS Trade Deferred publication to 120 min (to be calculated with the Amount Decimals).
Used For	Cash
Format	Amount
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

ThresholdLISPostTrade60mn

Field Name	Threshold LIS Post Trade 60mn
Description	Defines the amount of an order to benefit from the LIS Trade Deferred publication to 60 min (to be calculated with the Amount Decimals).
Used For	Cash
Format	Amount
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

ThresholdLISPostTradeEOD

Field Name	Threshold LIS Post Trade EOD
Description	Defines the amount of an order to benefit from the LIS Trade Deferred publication to EOD (to be calculated with the Amount Decimals).
Used For	Cash
Format	Amount
Tech Format	unsigned integer 64
Length	8
Possible Values	From 0 to 2^64-2
Used In	CashStandingDataFile (9007)

TradeReference

Field Name	Trade Reference
Description	Reference of the trade reported to the Exchange.
Used For	Cash and Derivatives
Format	Alphanumerical ID
Tech Format	character
Length	30
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

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TradeType

Field Name	Trade Type
Description	Type of trade.
Used For	Cash and Derivatives
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Conventional Trade (Cash and Derivatives) 5 = Guaranteed Cross Trade (Cash and Derivatives) 24 = Trade Cancellation (Cash and Derivatives) 39 = Guaranteed Cross – Negotiated deal NLIQ (Liquid) 40 = Guaranteed Cross – Negotiated deal OILQ (illiquid)
Used In	FullTradeInformationFile (9030)

TradingCurrency

Field Name	Trading Currency
Description	Code of the currency (ISO 4217-3A).
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	3
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

TradingCurrencyIndicator

Field Name	Trading Currency Indicator
Description	Indicates whether the 'price expression' is in the Currency or in a ratio of this Currency. Use Currency Coefficient field to identify the ratio to apply. This is the case for instruments traded in pennies. The currency will be 'GBP', Trading Currency Indicator sets to '1' and Currency Coefficient set to '0.001'.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = Change rate not applied to the traded price 1 = Change rate applied to the traded price
Used In	CashStandingDataFile (9007)

TradingDateTime

Field Name	Trading Date Time

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Description	Date and time when the transaction was executed. Date and time in the following format: YYYY-MM-DDThh:mm:ss.ddddddZ. Where: - 'YYYY' is the year. - 'MM' is the month. - 'DD' is the day. - 'T' constant 'T' letter used as separator between YYYY-MM-DD and hh:mm:ss.ddddddZ. - 'hh' is the hour. - 'mm' is the minute. - 'ss.dddddd' is the second and its fraction of a second. - 'Z' constant 'Z' letter that stands for UTC time.
Used For	Cash and Derivatives
Format	Text
Tech Format	character
Length	27
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

TradingPeriod

Field Name	Trading Period
Description	Provides the current trading period.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	1 = Opening (Cash) 2 = Standard (Cash) 3 = Closing (Cash)
Used In	TimetableFile (9001)

TransactionType

Field Name	*Transaction Type*
Description	*Transaction type or publication type.*
Used For	*Cash*
Format	*Enumerated*
Tech Format	*unsigned integer 8*
Length	*1*
Possible Values	*1 = Plain Vanilla Trade* *2 = Dark Trade* *3 = Benchmark Trade* *4 = Technical Trade* *5 = Give-up/Give-in Trade* *6 = Ex/Cum dividend Trade* *7 = Trade With Condition* *15 = Summary Report*
Used In	*FullTradeInformationFile (9030)*

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TransparencyIndicator

Field Name	Transparency Indicator
Description	Used to define the transparency of the trade.
Used For	Cash
Format	Enumerated
Tech Format	unsigned integer 8
Length	1
Possible Values	0 = Lit/Regular Trade
Used In	FullTradeInformationFile (9030)

TypeOfCorporateEvent

Field Name	Type Of Corporate Event
Description	Indicates the last type of corporate event that has occurred on an instrument, such as detachment of rights, or of coupons. The data item is automatically calculated by the adjustment application but in case of problem or error, the data item value could be modified manually, particularly for purging the order book in case of absence of corporate event. This data has to be treated in consideration of the date of the event included into the header of the message. Valid values are: 00 – No specific event 01 – Dividend Payment in Cash *02 – Interest payment (Fix Income for which the price is not expressed in% of the nominal, only)* 03 - Interest Payment (%) 04 – Split 05 – Bonus (i.e. attribution) *06 – Subscription* *07 – Share allocation* *08 – Share swap* 09 – Reverse split *10 – Merger* 12 – Capital Reduction *15 – Optional corporate events(dividend option)* *17 – Purge of the order book (purge is initiated manually in the absence of a corporate event, for example, following the modification of the variable tick of the listed instrument)* 18 – Rights 19 – Bonus and Rights 20 – Bonus also entitled for Rights 21 – Rights also entitled for Bonus 23 - Price and Shares Adjustment 24 - Price and Shares Adjustment (No Purge)
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	2
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

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TypeOfMarketAdmission

Field Name	Type Of Market Admission
Description	Indicates the type of market to which an instrument has been listed.
Used For	Cash
Format	Enumerated
Tech Format	character
Length	1
Possible Values	A = Instruments traded on the primary market B = Instruments traded on the secondary market C = Instruments traded on the New Market D = Non-regulated market / instruments traded on the free market ('Marche Libre') F = Non listed G = Regulated Market / Non equities H = Regulated Market / Equities / Segment A I = Regulated Market / Equities / Segment B J = Regulated Market / Equities / Segment C K = Regulated Market / All securities / Special Segment L = Regulated Market / Equities / Other instruments 6 = Off Market 7 = Gold, Currencies, and Indices 9 = Foreign
Used In	CashStandingDataFile (9007)

U

UMTF

Field Name	*UMTF*
Description	*Indicates the instrument code based on 'Uniform MTF' symbology.*
Used For	*Cash*
Format	*character*
Length	*6*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

UnderlyingISINCode

Field Name	Underlying ISIN Code
Description	Underlying ISIN. **For Repo:** Underlying instrument (instrument used in the loan quotation system) for loan contracts on centralized lending market. **For Warrant:** Gives the trading code of the underlying listed instrument of a warrant.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character

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Length	12
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

UnderlyingMIC

Field Name	Underlying MIC
Description	Identifies the market to which an instrument' underlying belongs by its MIC (Market Identification Code), according to ISO 10383. Refer to MIC field to have all the authorized values.
Used For	Cash
Format	Alphanumerical ID
Tech Format	character
Length	4
Possible Values	(See field description)
Used In	CashStandingDataFile (9007)

UnderlyingName

Field Name	*Underlying Name*
Description	*Indicates the full name of the ETF underlying.*
Used For	*Cash*
Format	*character*
Length	*102*
Possible Values	*(See field description)*
Used In	*CashStandingDataFile (9007)*

UnderlyingReturnType

Field Name	*Underlying Return Type*
Description	*Indicates the dividend treatment applied.*
Used For	*Cash*
Format	*XML Text33*
Length	*33*
Possible Values	*1 = Net Total Return* *2 = Price Return* *3 = Total Return*
Used In	*CashStandingDataFile (9007)*

UnderlyingSegmentation

Field Name	*Underlying Segmentation*
Description	*Indicates the underlying asset segmentation.*
Used For	*Cash*
Format	*Enumerated*
Length	*1*

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Possible Values	*1= Equity* *2 = Fixed Income* *3 = Mixed* *4 = Alternative* *5 = Currency* *6 = Commodities*
Used In	*CashStandingDataFile (9007)*

V

Venue

Field Name	Venue
Description	Identification of the venue where the transaction was executed using the ISO 10383 segment MIC for transactions executed on a trading venue. Otherwise the BIC is sent following ISO 9362.
Used For	Derivatives
Format	Alphanumerical ID
Tech Format	character
Length	11
Possible Values	(See field description)
Used In	FullTradeInformationFile (9030)

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APPENDIX A: SBE DISCLAIMER

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APPENDIX B: DOCUMENT HISTORY

DOCUMENT NAME	OPTIQ COMMERCIAL FILES SPECIFICATIONS
PROJECT NAME	
LOCATION	
VERSION NUMBER	1.2.11

DOCUMENT HISTORY

REVISION NO./ VERSION NO.	DATE	CHANGE DESCRIPTION
1.0.0	16/03/2018	First Release
1.1.0	28/03/2018	First Release - Reviewed
1.1.1	04/05/2018	Second Release
1.2.0	12/09/2018	**The following Fields have been added:** **CashStandingDataFile (9007):** Block Size, Block Price Control ID, Closing Price Type, ICB Code **The following Files have been added:** **BlockPriceControlFile (9018);** **The following Values have been added:** **Trade Type:** 25 = Out Of Market Trade **Order Entry Qualifier:** 4 = Order Entry Only **The following Fields have been updated:** **EMM:** 5 = Cash On Exchange Off Book flagged as applicable, 99 = Not Applicable (For indices and iNAV) flagged as applicable **Block Trade Code:** Flagged as applicable; **MMTModificationIndicator:** Flagged as applicable; **MiFIDInstrumentID:** Flagged as applicable;
1.2.1	19/10/2018	**The following Fields have been updated:** **Type of Corporate Event**: Updated list of Corporate Events **The following File has been updated:** **BlockPriceControlFile (9018):** flagged as for future use;
1.2.2	29/11/2018	**The following Field has been updated:** **Market Model**: 7 = Declaration Driven was added
1.2.3	19/12/2018	**The following Fields have been added:** **CashStandingDataFile (9007):** BPSLowCollar, BPSHighCollar added to EMM Pattern Repeating section; **The following Fields have been updated:** **CashStandingDataFile (9007):** Lot Size, InstUnitExp moved from StandingDataUnitary to EMM Pattern repeating section; **Note:** Both fields were set to deprecated in the main section and moved to the EMM repeating section due to the fact that both of them are targeted to have a different value depending on the EMM value;

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REVISION NO./ VERSION NO.	DATE	CHANGE DESCRIPTION
		Block Size, Block Price Control ID moved from StandingDataUnitary to EMM Pattern Repeating section; **The following File has been updated:** **BlockPriceControlFile (9018):** Reference to Future Use was removed;
1.2.4	25/02/2019	**The following Field has been added:** **CashStandingDataFile (9007):** Eligible for Margin**;** **The following Fields have been updated:** Account Type: Values reviewed accordingly with clients needs – further details provided in the conditions of the field; Trade Qualifier: Values reviewed;
1.2.5	09/05/2019	**The following section has been removed:** **3.4 Full Trade Information File (9030):** Section removed as no longer applicable. Field descriptons related to this File have also been removed.
1.2.6	23/07/2019	**The following Field has been added:** **CashStandingDataFile (9007):** Declaration Duration**;**
1.2.7	09/09/2019	**The following section has been amended:** **1.1 Introduction:** Minor amendments performed to remove mentions to a non-applicable file
1.2.8	08/10/2019	**The following Field was updated:** OptiqSegment: values have been updated. InstrmentCategory: values have been updated **The following Files has been updated:** **CashStandingDataFile (9007):** InstrumentCategoy has been flagged as applicable
1.2.9	06/11/2019	**The following File has been updated:** **CashStandingDataFile (9007):** AssetClass has been included
1.2.10	14/02/2020	**The following File has been updated:** **CashStandingDataFile (9007):** • ICB field deprecated status was removed. • ICB Code field has been set for future use. **The following Description has been updated:** **Settlement Delay:** 'X' was added as a possible value.
1.2.11	13/03/2020	**The following File has been updated:** **CashStandingDataFile (9007):** • 'Instrument Trading Code' is no longer flagged as "Not Applicable". Additionally, the field's length as been corrected from 12 to 15. **The following section has been added:** **3.5 - Full Trade Information File (9030)**

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ملحق (10)

Document title

Optiq Commercial - Kinematics Specifications

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PREFACE

PURPOSE

The purpose of this document is to detail Kinematics for Optiq Order Entry Gateway and Market Data Gateway messages.

TARGET AUDIENCE

This document should be read by the Exchange and Members using Optiq.

ASSOCIATED DOCUMENTS

The following list of the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- Optiq Commercial OEG Client Specifications – SBE Interface
- Optiq Commercial OEG Client Specifications – FIX 5.0 Interface
- Optiq Commercial Error List
- Optiq Commercial MDG Client Specifications
- Optiq Commercial File Specifications

WHAT'S NEW?

Version	Change Description
1.2.4	**The following Sections have been adjusted:** - **3.1.13 Breaching Ownership Limit:** removal of Ack message prior to Reject message - **3.1.14 Breaching Short Selling Limit:** removal of Ack message prior to Reject message

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1. OVERVIEW

1.1 INTRODUCTION

This document provides an overview of the exchange of messages between the Optiq Order Entry Gateway (OEG), the clients' systems and the Market Data Gateway (MDG). It includes:

- Typical trading scenarios and the corresponding public and private messages for these scenarios, and the different cases they may cover;
- The names and IDs of the messages sent;
- The events that trigger the transmission of messages.

This overview is meant to provide a description of the main structures and concepts used within this document, to facilitate the review of the individual topics and cases covered within.

The messages that are sent between trading members and Optiq are referred to as private messages whereas the messages that are sent by the external broadcasting systems are referred to as public messages.

Private messages are exchanged exclusively between the clients' system and the Optiq matching engine via order entry gateways, for example to request information from the system or to issue a command (e.g., enter an order). Private messages are also sent back by Optiq via order entry gateways (OEGs) to the client's system to provide the information requested, or confirm that a command has been successfully executed (or not), as well as to notify of trades, etc.

Public messages are sent by Optiq via MDG to provide to all subscribing clients with non-anonymized and anonymized Market data, such as orders entered, best limits, trades executed, market events, updated limits, etc.

The diagrams in this document express representative examples of message sequences and other scenarios can be figured out from the ones described inside that document. The details of the message contents may vary depending on the example.

The diagrams also endeavour to represent as close to reality as possible the sequence in which events and steps occur, and messages are sent. This introduction provides indication when such cases are not feasible to represent faithfully due to complexity of graphical representation.

For a complete description of the messages and their fields, please refer to the associated document:

- Optiq Order Entry Gateway Messages Specifications SBE;
- Optiq Order Entry Gateway Messages Specifications FIX;
- Optiq Market Data Gateway Messages Specifications.

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1.2 MESSAGE CODES AND NAMES

1.2.1 Central Order Book (COB)

1.2.1.1 Private Messages

Possible Direction:

- Inbound - Client ▶OEG (From Client To OEG)
- Outbound - Client ◀OEG (To Client From OEG)

Order Entry Gateway message identifiers, which include message codes and names, are provided throughout the message kinematics section as shown below:

- For Inbound messages (example for **NewOrder** message):



01 represents the SBE Bin Code.
[D] represents the FIX Code.

- For Outbound messages (example for **Ack** message):



03 represents the SBE Bin Code.
[8] represents the FIX Code.

- When there is a difference of kinematics between SBE Bin and FIX protocols, the flows are distinguished as shown below (example of CollarBreachConfirmation) :



The SBE Bin message Code is represented alongside the FIX kinematic.

- The exhaustive list of SBE Bin and FIX message codes and names is provided in the table below:

SBE Bin Message Code	SBE Bin Message Name	FIX Message Code
01	New Order	**D**
03	Ack	**8**
04	Fill	**8**
05	Kill	**8**
06	Cancel Replace	**G**

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SBE Bin Message Code	SBE Bin Message Name	FIX Message Code
07	Reject	**9**
12	Cancel Request	**F**
13	Mass Cancel	**q**
14	Mass Cancel Ack	**r**
15	Open Order Request	**AF**
17	Ownership Request Ack	**U29**
18	Ownership Request	**U18**
19	Trade Bust Notification	**8**
20	Collar Breach Confirmation	**G**
28	Price Input	**UI**
39	User Notification	**CB**
50	Instrument Synchronization List	**U50**
51	Synchronization Time	**U51**
100	Logon	**A**
101	Logon Ack	
102	Logon Reject	**3**
103	Logout	**5**
106	Heartbeat	**0**
107	TestRequest	**1**
108	TechnicalReject	

1.2.1.2 Public Messages

Possible Direction:

- Outbound - MDG ▶Client (From MDG To Client)

Market Data Gateway message identifiers, which include message codes and names, are provided throughout the message kinematics section as shown below:

For public messages sent to the Market:



- The exhaustive list of message codes and names is provided in the table below:

Message Code	Message Name
1001	Market Update
1015	Long Order Update
1003	Price Update
1004	Full Trade Information

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1005	Market Status Change
1006	Timetable
1007	Standing Data
1009	Statistics
1101	Start Of Day
1102	End Of Day
1103	Health Status
1104	Trade Retransmission Start
1105	Trade Retransmission End
2101	Start Of Snapshot
2102	End Of Snapshot

1.2.2 Cash on Exchange Off Book

1.2.2.1 Private Messages

- Private messages
- Below is the list of SBE and FIX message codes and names used for Block Trade order entry:

SBE Bin Message Code	SBE Bin Message Name	FIX Message Code	FIX Message Name
40	Declaration Entry	**AE**	TradeCaptureReport
41	Declaration Entry Ack	**AR**	TradeCaptureReportAck
42	Declaration Notice	**AR**	TradeCaptureReportAck
43	Declaration Cancel and Refusal	**AE**	TradeCaptureReport
46	Declaration Entry Rejection	**AR**	TradeCaptureReportAck
100	Logon	**A**	Logon
101	Logon Ack	**A**	Logon
102	Logon Reject	**3**	Reject
103	Logout	**5**	Logout
106	Heartbeat	**0**	Heartbeat
107	TestRequest	**1**	TestRequest

1.2.2.2 Public Messages

- The list of message codes and names provided in Public messages used for Block Trade is provided in the table below:

Message Code	Message Name
1001	Market Update
1004	Full Trade Information
1009	Statistics

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1005	Market Status Change
1006	Timetable

1.2.3 Graphical representations

The diagrams in this document represent the following components:

- The overall Optiq system which is the new integrated trading platform, shown as below:



- The Order Entry Gateway which is the private interface between clients and the matching engine:



- The Market Data Gateway (MDG) which sends public messages to the Market:



- The clients' systems, used by the client to send and receive private messages to and from the matching engine, here referred to as Broker:



- And the Market represents all the publicly available data sent by the exchange to all subscribers of the public feeds:



Note: for readability purposes the field names in the graphs are abbreviated, e.g. *Order Quantity* is referred to as *OrderQty*, etc.

1.2.4 Main Principles

A request sent by a client will usually:

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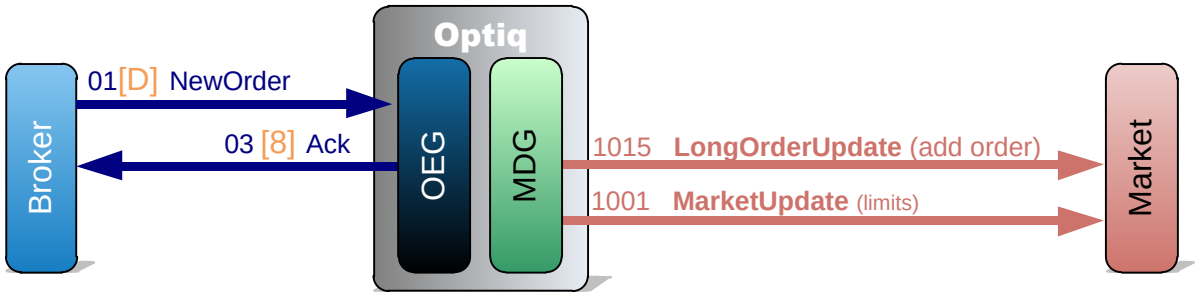
- Trigger an outbound acknowledgment message from the matching engine which is exclusively sent to this client, and in some cases this can be followed by other notification messages;
- Trigger one or several market data messages if the request has a direct impact on the Central Order Book (COB).

Below is an abbreviated, generic example of the interaction of messages, for the submission of a **NewOrder** (01) (FIX D) message:



When required diagrams may include division into steps of the scenarios displayed, that are delineated by dotted lines, and are denoted by the number of the step. Numbers denoting the steps in the diagram correspond to the numbers used in the explanation below the diagram.

More detailed diagrams may include additional details for the individual messages, such as, Side, Order Priority, Price, Quantity, etc.

1.2.5 Important Notes

1.2.5.1 Private and Public feed reconciliation

The following diagram explains how the members can reconcile their orders across the Private and Public data feed using the field named *Order Priority*. Please review the note on *Order Priority* field at the end of this section.

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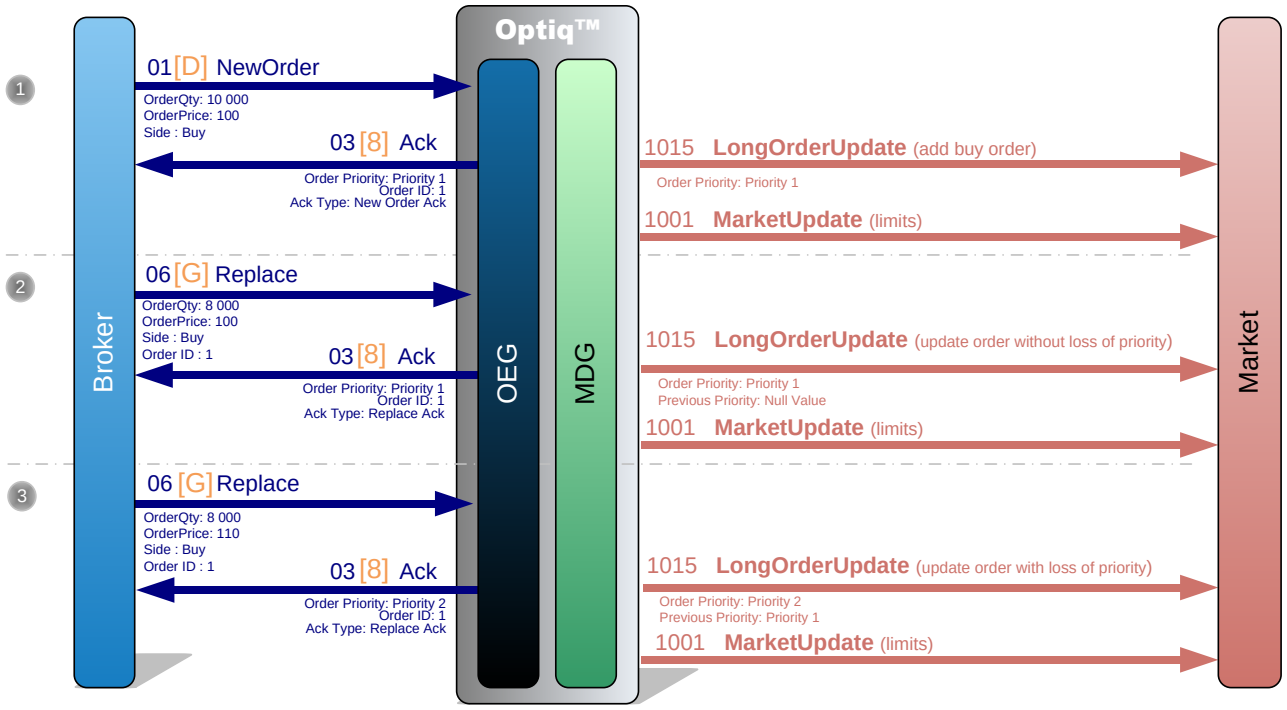

① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new buy order with a quantity of 10,000 and a price at 100.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order. This message provides the value of the *Order Priority* that is used in the market data feed as the order identifier.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market, by MDG, to add the order identified by its *Order Priority*, followed by another **MarketUpdate** (1001) message to update the limits.

② The same Broker sends a private **Replace** (06) (FIX G) (message to reduce the quantity of its order to 8,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order modification.

A public **LongOrderUpdate** (1015) message is sent to the market, by MDG, to update the order quantity, identified by its *Order Priority*, and another public **MarketUpdate** (1001) message to update the limits.

③ Then the same Broker sends another private **Replace** (06) (FIX G) message to change the price of its order to 110.

OEG sends back a private **Ack** (03) (FIX 8) message the successful receipt and technical processing of the order modification.

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A public **LongOrderUpdate (1015)** message is sent to the market to update the order price, identified by its *Previous Priority* and its new *Order Priority*, and another public **MarketUpdate** (1001) message to update the limits.

Note: *Order Priority* is a numeric value, representing the priority of the order. The order with the lowest value of *Order Priority* has the highest priority. *Order Priority* is unique per Symbol Index and EMM.

Order Priority is used as the order unique identifier for the market data feed. *Previous Priority* is populated only when there is an update with loss of priority and for deletion of orders.

Hence in case of update with loss of priority, clients should remove from their market sheet the order identified in the *Previous Priority* and add a new order with the *Order Priority* newly provided.

1.2.5.2 Trade, Collars and Full Trade Information generation

A public message **FullTradeInformation** (1004) is sent in a dedicated Post-Trade channel each time a **MarketUpdate** (1001) following a trade is disseminated to the market by MDG. But for readability purposes it is not shown on the kinematics diagrams.

And every time there is change in the reference price, dynamic collars are disseminated in the **MarketUpdate** (1001) message with the trade. But for readability purposes it is not shown on the kinematics diagrams.

Example:

The Last Traded Price of an instrument was 100, low dynamic collar was 95, and high dynamic collar was 105.

If a trade occurs and modifies the LTP to 101 (low dynamic collar is updated to 96, and high dynamic collar is updated to 106) then the following sequence of public messages will be sent by MDG:



However, to improve readability, in cases whenever trades occur and cause an update of the dynamic collars only the following message will be represented in the diagrams:



1.2.5.3 Simultaneity of Private Messages

In all the diagrams of this document multiple private messages resulting from the same event (eg. **Fill** (04) (FIX 8) messages due to a trade execution) are represented as if they were sent one by one:

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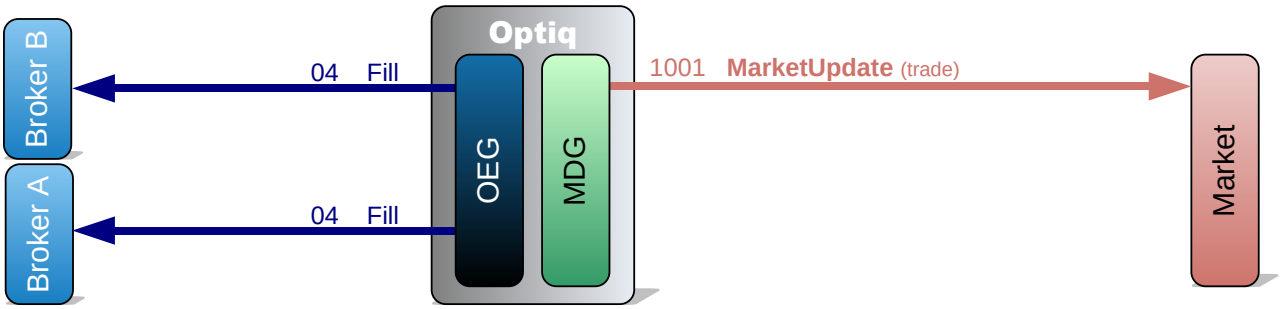
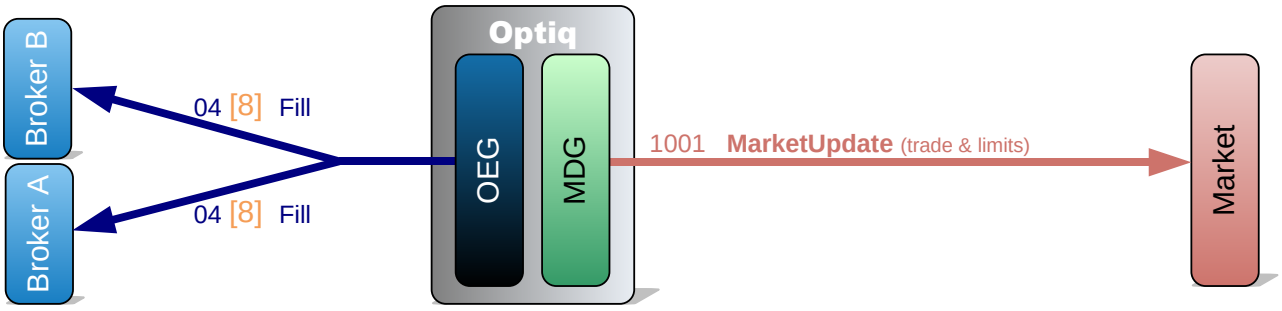


This is done to reduce complexity of the graphical representation and to improve readability. In reality such messages are sent at the same moment to the different brokers:



For the rest of this document please assume that messages resulting from the same event and sent to different clients are sent at the same moment.

1.2.5.4 Market Update and Long Order Update generation

All kinematics described in this document are common across Regulated Markets. The following conventions have been adopted:

- For all Cash Equities, Bonds, and ETF Regulated Markets Optiq MDG will provide **LongOrderUpdate** messages and **MarketUpdate** messages (containing only BBOs and not the depth of the order book).

  The **MarketUpdate** message always follows an **LongOrderUpdate** message when notifying a limit (BBO). In case of a trade a **MarketUpdate** message is disseminated for the trade, followed by an **LongOrderUpdate** message to update the book and another **MarketUpdate** message for the update of the limits (BBO).

Example:

After a trade takes place, the following MDG messages are displayed in the kinematics diagrams:

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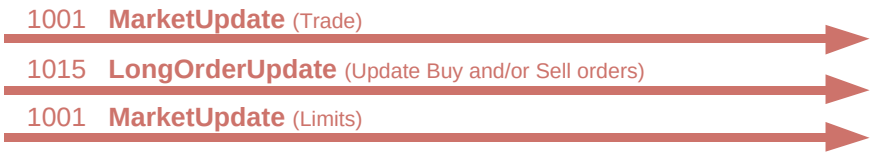
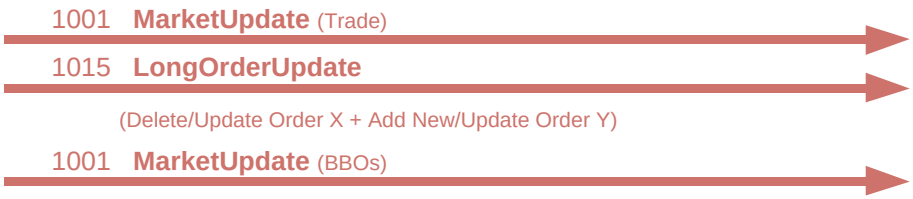


For Regulated Market , it should be read as followed:



Remark: There is **no** dissemination of the **market depth** in the MDG **MarketUpdate** (1001) message.

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2. COMMON KINEMATICS

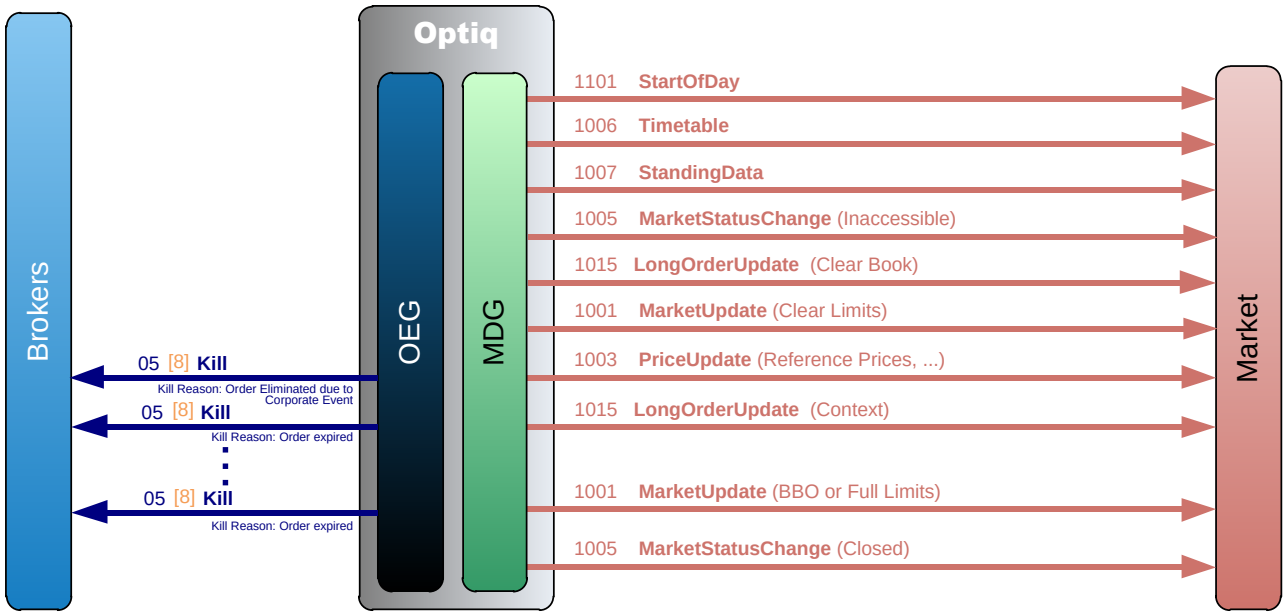
The following public messages contain repeating sections:

- PriceUpdate;
- LongOrderUpdate;
- MarketUpdate;
- MarketStatusChange.

Detailed information regarding repeating sections can be found in the documents **Optiq Commercial MDG Client Specifications**.

2.1 TRADING SESSION MANAGEMENT

2.1.1 Initialisation of a New Trading Day



At the initialization of each new trading day the Exchange sends the following public messages (the generation sequence is guaranteed to always be the same):

- **StartOfDay** (1101) message: It is always the first message of the day, which indicates the date of the trading session.
- **Timetable** (1006) message: It provides all the trading patterns that are used across all the instruments.
- **StandingData** (1007) message: For every single instrument it provides to the members all the necessary data for the trading day.
- **MarketStatusChange** (1005) message: For every single instrument it is sent with *Book State* set to 'Inaccessible', *Trading Period* set to 'Opening' and *Rebroadcast Indicator* set to '0'.

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- **LongOrderUpdate** (1015) message: For every single instrument on order driven market, the order book is cleared at the beginning of the day.

- **MarketUpdate** (1001) message: For every single instrument the limits are cleared at the beginning of the day.

- **PriceUpdate** (1003) message: For every single instrument, it provides all updated reference prices complementary to the BBO for trading (Closing Prices, Uncrossing Price, Valuation Prices, Min/Max Out of Session Trade Prices, Net Asset value for eligible instruments).

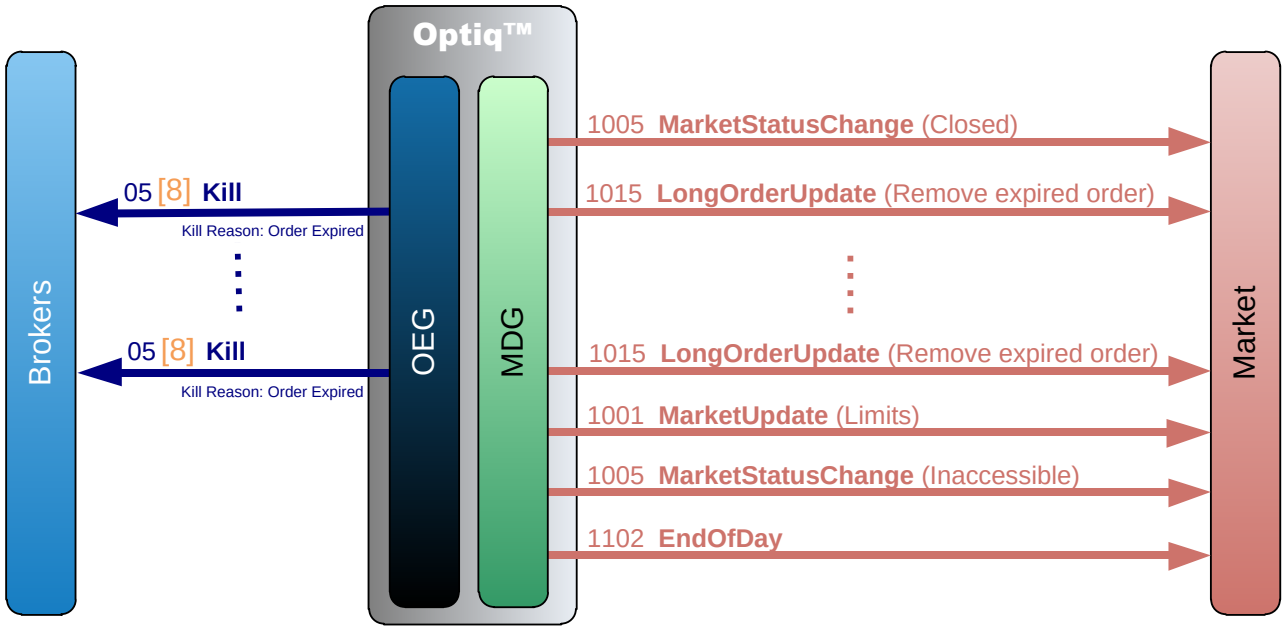
- **LongOrderUpdate** (1015) message: All the live orders are broadcasted at the beginning of each trading day for each eligible instrument, with *Rebroadcast Indicator* set to '1'. All the expired orders (GTD and GTC orders reaching expiry date) are removed from the scope of lives orders and not sent to the Market. Thus a private **Kill** (05) (FIX 8) message will be sent for each expired order.

- **MarketUpdate** (1001) message: For every single instrument it provides either the BBO for order-driven markets or all the limits for the other markets, with *Rebroadcast Indicator* set to '1'.
  If relevant, static and dynamic collars are also sent after the limits.

- **MarketStatusChange** (1005) message: For every single instrument a *Book State* set to 'Closed' is sent at the scheduled time.

On private messaging side, Changes due to previous trading day Corporate Events triggering cancellation of orders will be communicated as Kill (05) (FIX 8) messages at the start of day.

2.1.2 End Of Day



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At the end of the trading day, when the instrument is in Closed State, expired orders (Day orders only) are killed, thus a private **Kill** (05) (FIX 8) message along with a public **LongOrderUpdate** (1015) message will be sent for each expired order, along with **MarketUpdate** (1001) for the limits.

At the scheduled time a **MarketStatusChange** (1005) message is sent for the Inaccessible phase.

The public **EndOfDay** (1102) message is always the last message sent by the Exchange, it notifies that the platform and its network are now closed (members cannot send nor receive messages until the next trading day).

Note: Clients should be aware that orders eliminated at the end of the session will not be re-broadcast at the start of the next trading session. In case of disconnection at the end of the sessions, clients are advised to remove any expired Day orders from their book.

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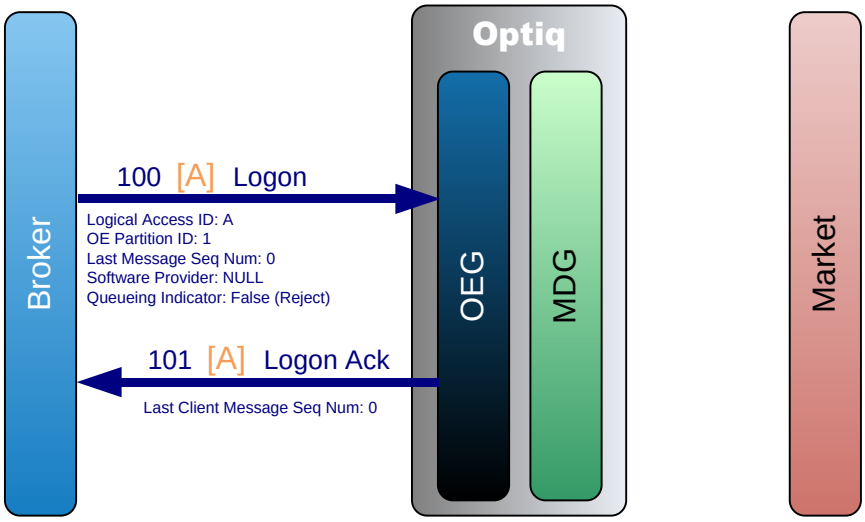
2.2 ADMIN MESSAGES

Please note that all administrative messages exchanged between the client and the exchange are issued per OE session (physical connection).

2.2.1 Successful Logon



At the beginning of each trading day the members must log on to the Order Entry Gateway prior to send any other message.

In order to initiate the connection the broker sends a **Logon** (100) (FIX A) message. If the logon is successful the OEG sends back a **LogonAck** (101) (FIX A) message.

While in SBE the sequence numbers start from 0, in FIX the sequence numbers start from 1.

No message is sent to the Market.

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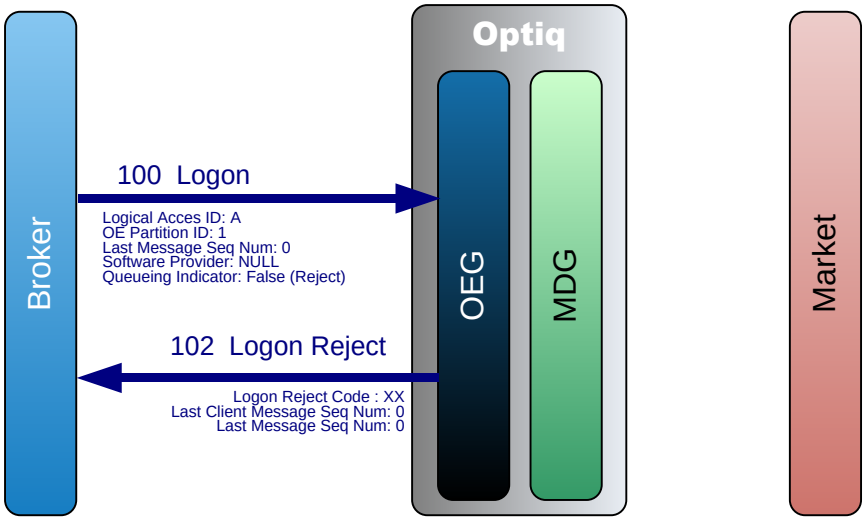
2.2.2 Logon Rejection

Logon rejection behaviour prescribed by the FIX protocol is different from that adopted for SBE, and for this case two different diagrams are provided, each one specific to the protocol. While at high level the behaviour might be different, the result of the Logon Rejection will be the same.

2.2.2.1 Logon Rejection in SBE



A broker sends a **Logon** (100) message in order to initiate the connection with the OEG. If for any reason the **Logon** (100) message is not accepted, the OEG sends back a **LogonReject** (102) message. No message is sent to the Market.

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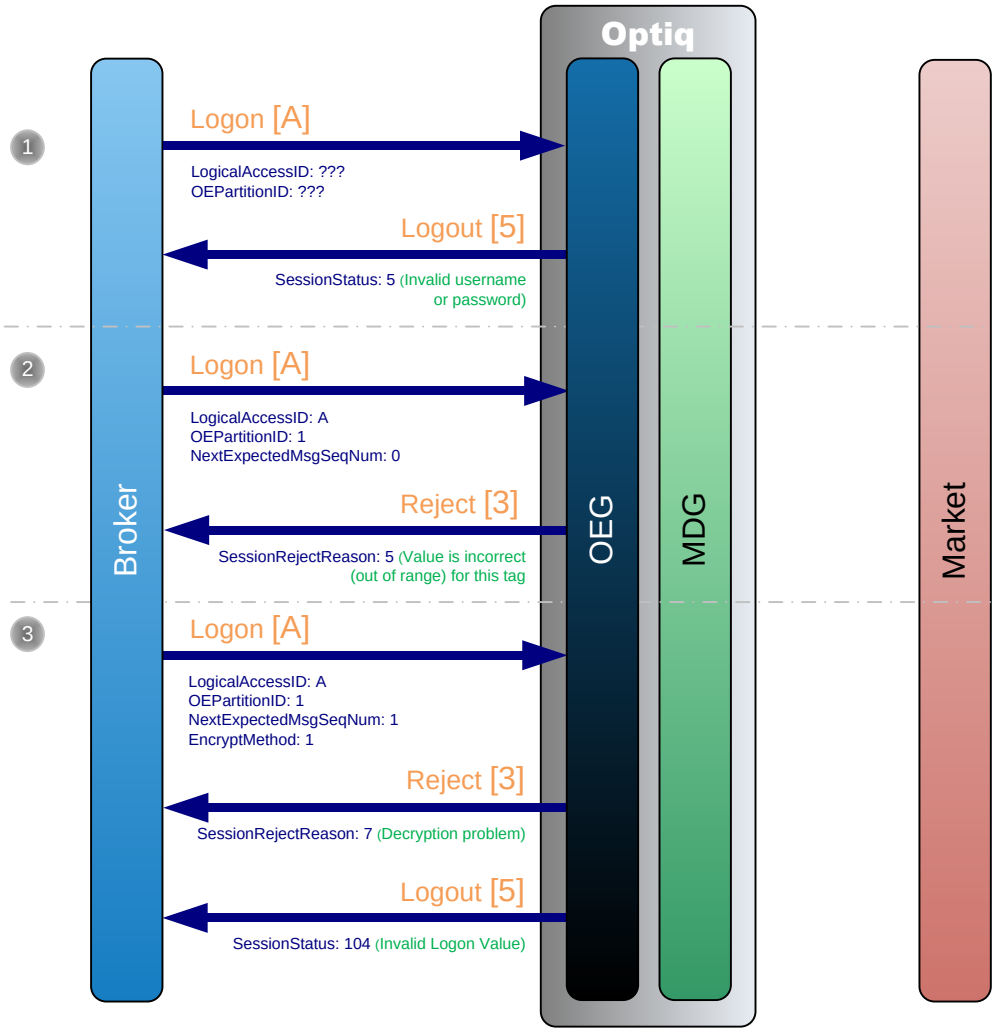
2.2.2.2 Logon Rejection in FIX



A broker sends a **Logon** (A) message in order to initiate the connection with the OEG. If for any reason the **Logon** (A) message is not accepted, the OEG sends back a **Logout** (5) message.

Additionally, OEG sends a **Reject** (3) message if the **Logon** (A) is poorly formatted.

① A broker sends a **Logon** (A) message in order to initiate the connection with the OEG. If the fields *LogicalAccessID* and *OEPartitionID* are wrong or not recognized for the associated *SenderCompID*, OEG sends back a **Logout** (5) message with *SessionStatus* set to '5' (Invalid username or password).

② A broker sends a **Logon** (A) message in order to initiate the connection with the OEG. If the field *NextExpectedMsqSeqNum* is set to '0', OEG sends back a **Reject** (3) message with SessionRejectReason set to '5' (Value is incorrect (out of range) for this tag).

③ A broker sends a **Logon** (A) message in order to initiate the connection with the OEG. If the value of the field *EncryptMethod* is different than '0', OEG sends back a **Reject** (3) message with SessionRejectReason set to '7' (Decryption Problem).

No message is sent to the Market.

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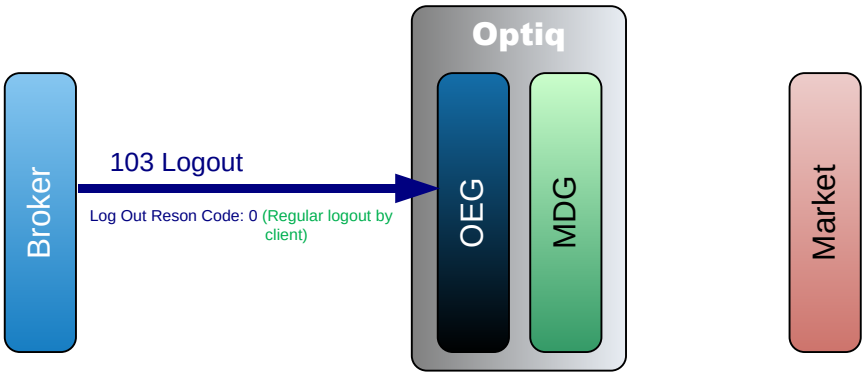
2.2.3 Logout

Logout behaviour prescribed by the FIX protocol is different from that adopted for SBE, and for this case two different diagrams and descriptions of steps are provided, each one specific to the protocol. While at high level the behaviour might be different, the result of the Logout from the system will be the same.

Logout is used to improve session management processes. This message identifies to the exchange if the client has disconnected on purpose or because of technical issue.

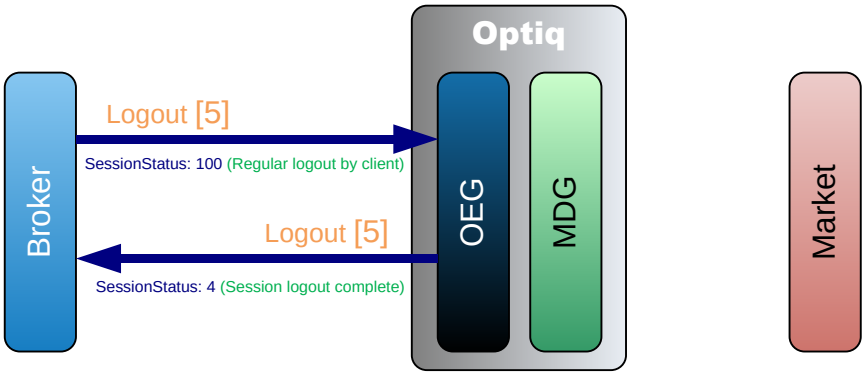
Note: This will trigger the Cancel on Disconnect mechanism (only on the specific orders on which it is enabled).

2.2.3.1 Logout in SBE



In order to log out the broker sends a **Logout** (103) message, OEG immediately closes the physical connection. No message is sent to the Market.

2.2.3.2 Logout in FIX



In order to log out the broker sends a **Logout** (5) message with *SessionStatus* set to '100' (Regular logout by client). In response OEG firstly sends back a **Logout** (5) confirmation message with *SessionStatus* set to '4' (Regular logout complete) and then closes the physical connection.

No message is sent to the Market.

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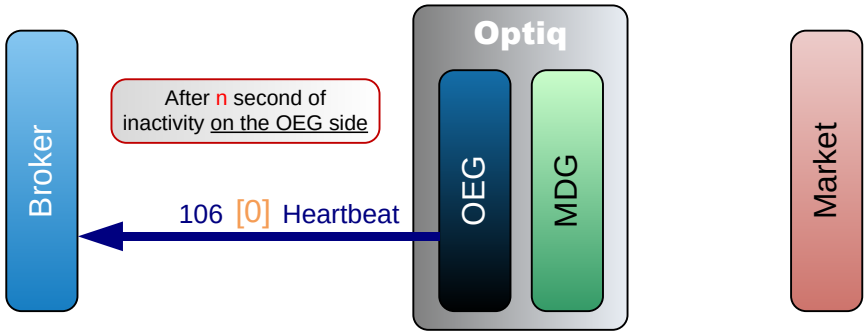
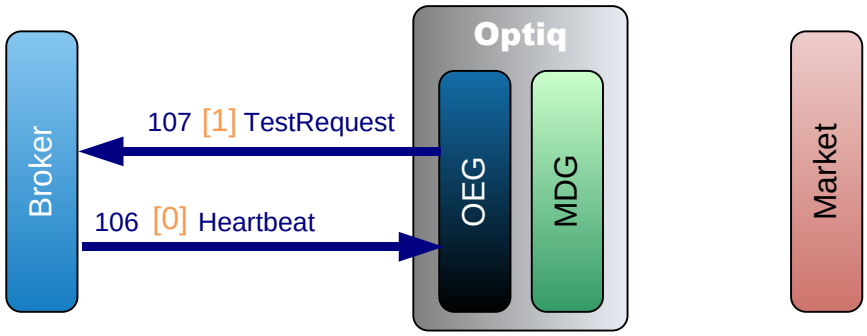
2.2.4 Heartbeat



After *n* second(s) of inactivity on its side (ie. when the OEG has not sent any message since *n* second(s)) the OEG sends a **Heartbeat** (106) (FIX 0) message to the broker. The broker does not have to respond anything; it is only a notification from the OEG.

Note: The value of *n* will be provided for each Optiq Segment in the *Connectivity Specifications*.

2.2.5 Test Request



Test Request from Exchange to Client

After *n* second(s) of inactivity on the broker side (i.e. when the OEG has not received any message since *n* second(s)) the OEG sends a **TestRequest** (107) (FIX 1) message to the broker.

The parameter *n* is identified per Optiq Segment in the Connectivity specifications as the period of inactivity.

For SBE:

- If the broker issues a message in the following *n* second(s), the **TestRequest** (107) is ignored. Note the message issued by the member can be an **Heartbeat** (106) message or any other application message (such as **NewOrder** (01), **CancelReplace** (06).
- If the broker does not issue any message in the following *n* second(s), the OEG closes the connection. (This triggers the Cancel on Disconnect mechanism on the orders for which it is enabled.)

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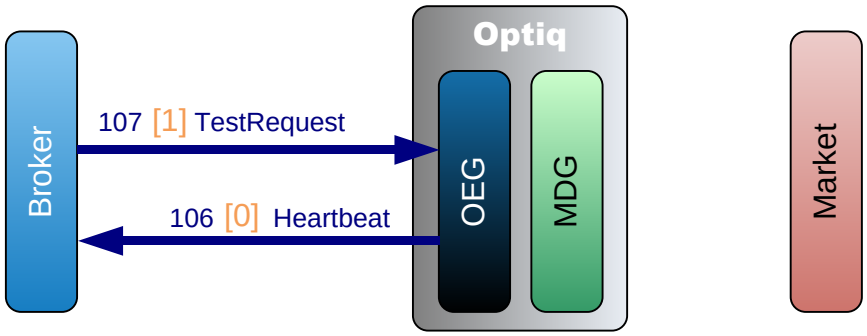
For FIX:

Broker has *n* seconds to answer with a **HeartBeat** (0) messages, containing the same value in *TestReqID* (112), as the one sent in the original **TestRequest** (1) message sent by the OEG.

- Following receipt of the TestRequest (1) message, and for the duration of the inactivity period broker may send other messages, including application messages and **HeartBeat** (0) messages. The application messages (such as **NewOrderSingle** (D), **CancelReplace** (G)) will be processed by OEG
- At the end of the period of inactivity if the broker has not answered with a **HeartBeat** (0) message that contains the expected value of *TestReqID* (112), the client will be disconnected. (This triggers the Cancel on Disconnect mechanism on the orders for which it is enabled.)

Test Request from Client to Exchange

The **TestRequest** (107) (FIX 1) message can also be sent by the Broker, in this case the OEG will respond with a **Heartbeat** (106) (FIX 0) message:



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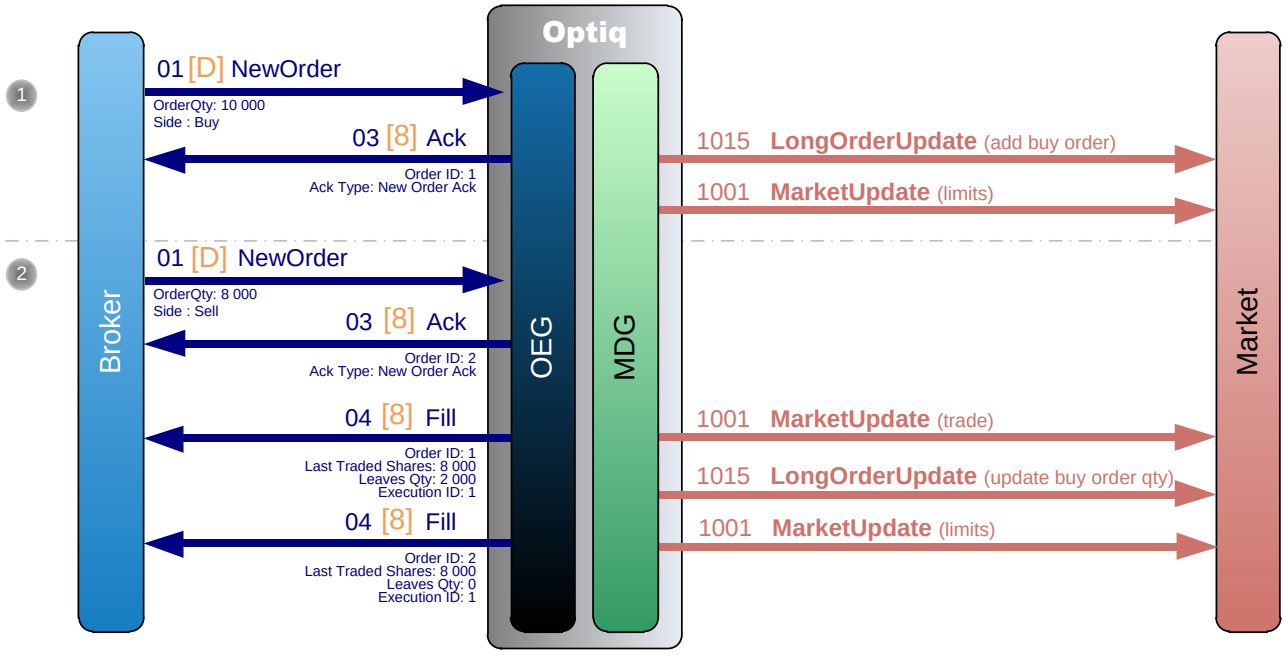
3. CENTRAL ORDER BOOK (COB)

3.1 ENTERING AN ORDER

3.1.1 Incoming Order Fully Matched



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 10,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

② Another Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 8,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to publish the trade execution.

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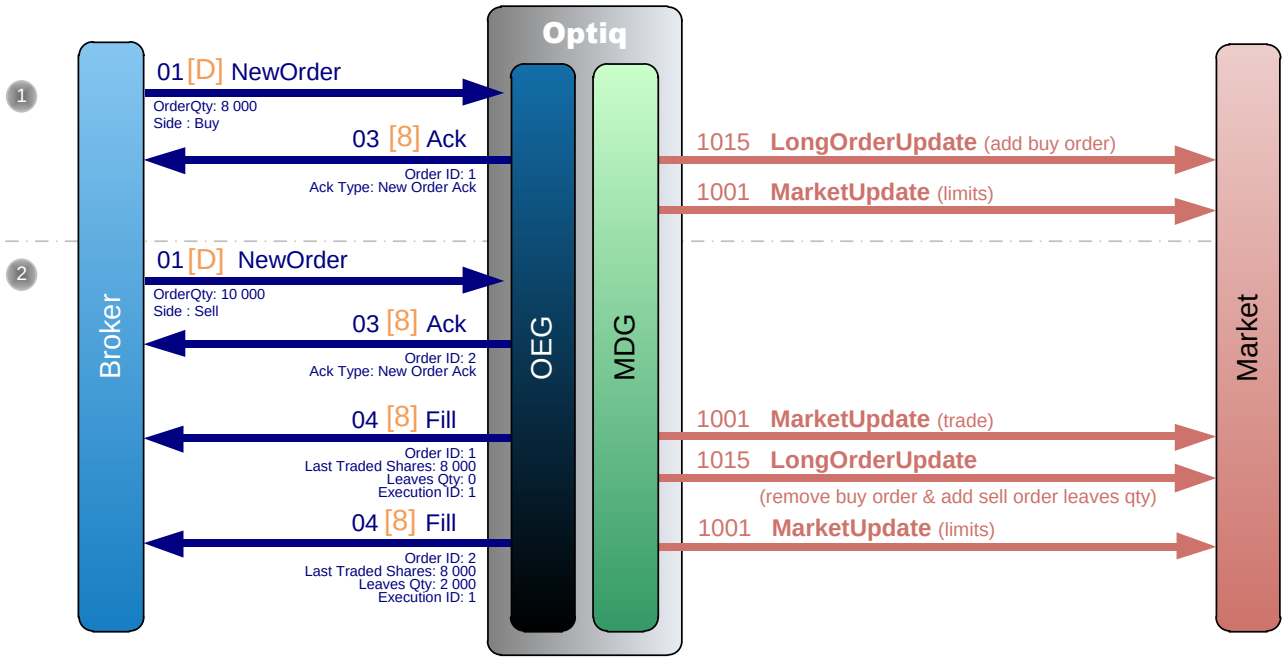
A public **MarketUpdate** (1001) message is sent to the market for the trade, along with a public **LongOrderUpdate** (1015) message to update the first order (Buy) with remaining quantity (2 000), followed by another **MarketUpdate** (1001) message to update the limits.

Note: There is no removal of the sell order in the last public **LongOrderUpdate** (1015) message as it is immediately matched and thus never enters the book.

3.1.2 Incoming Order Partially Matched



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 8,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

② Another Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 10,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

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A public **MarketUpdate** (1001) message is sent to the market for the trade along with a public **LongOrderUpdate** (1015) message to remove the Buy order and add the Sell order with its leaves quantity (2 000), followed by another **MarketUpdate** (1001) message to update the limits.

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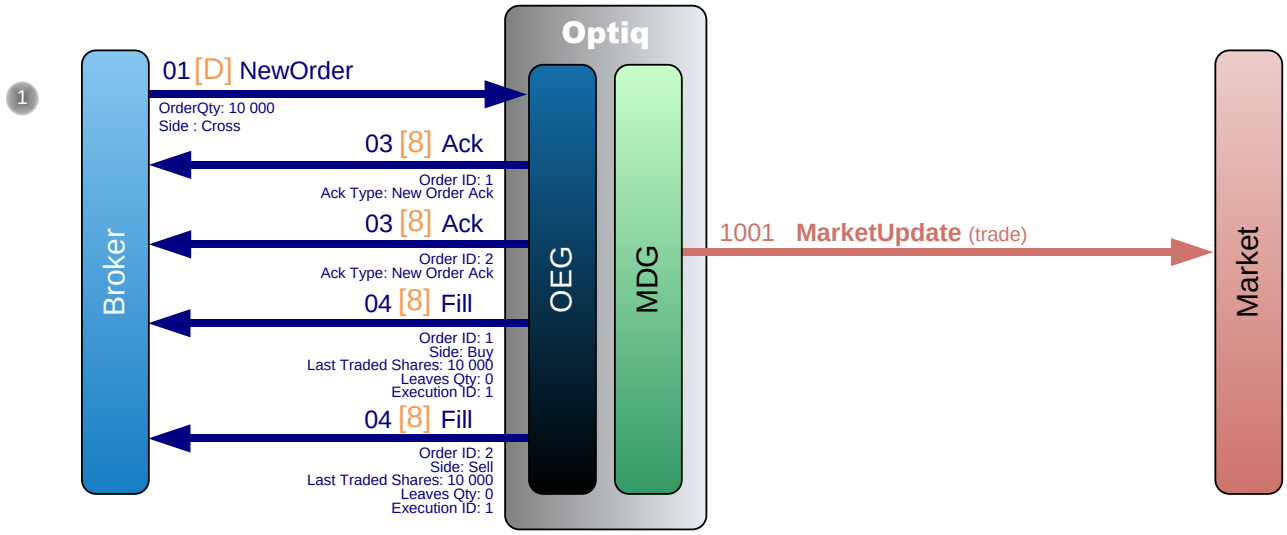
3.1.3 Cross Order (New Order with a Cross side)



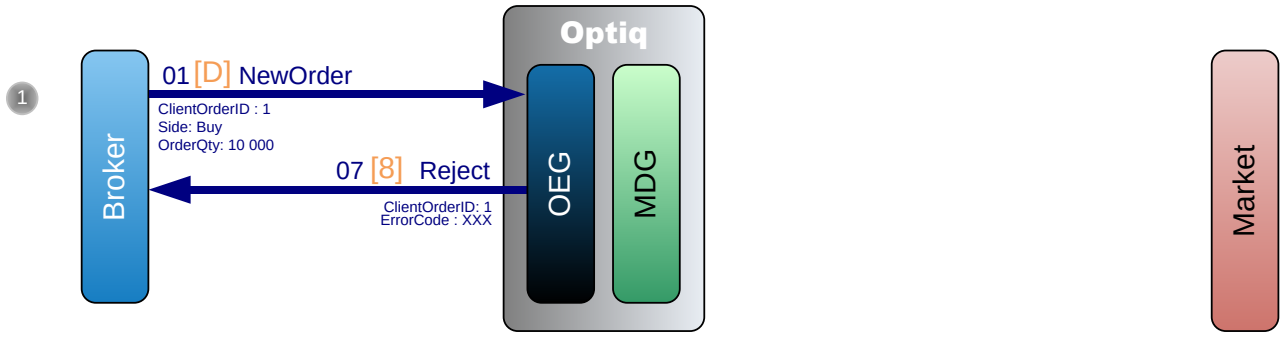
① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new order with a quantity of 10,000 and a Cross side.

OEG sends back two private **Ack** (03) (FIX 8) messages to confirm the successful receipt and technical processing of the cross order.

The entering Cross order is immediately filled for its total quantity of 10,000 and OEG sends back two private **Fill** (04) (FIX 8) messages to the broker to notify the trade full execution.

A public **MarketUpdate** (1001) message is sent to the market for the trade.

3.1.4 New Order Rejected due to Functional Reasons



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new buy order with a quantity of 10,000.

If the order is rejected OEG sends back a private **Reject** (07) (FIX 8) message with an Error Code. The reason of the rejection can be found using the Error Code within the *Error list document*. No message is sent to the Market.

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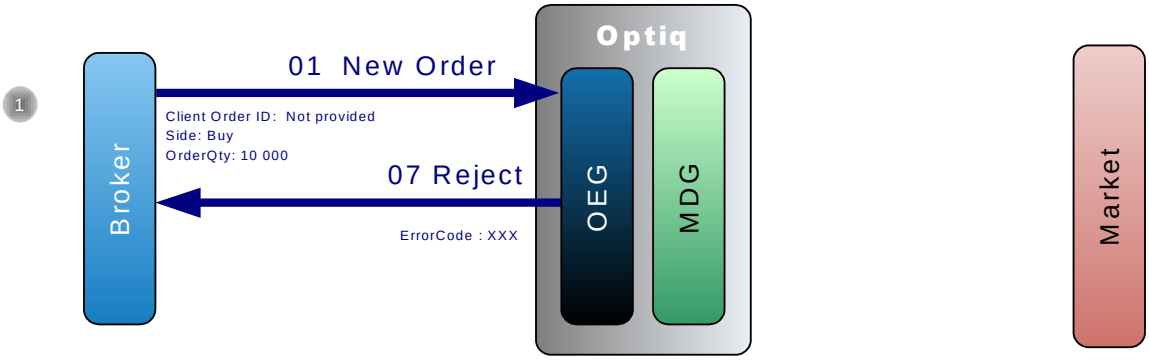
3.1.5 New Order Rejected due to Technical Reasons

① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new buy order lacking the field Client Order ID (FIX ClOrdID (11)).

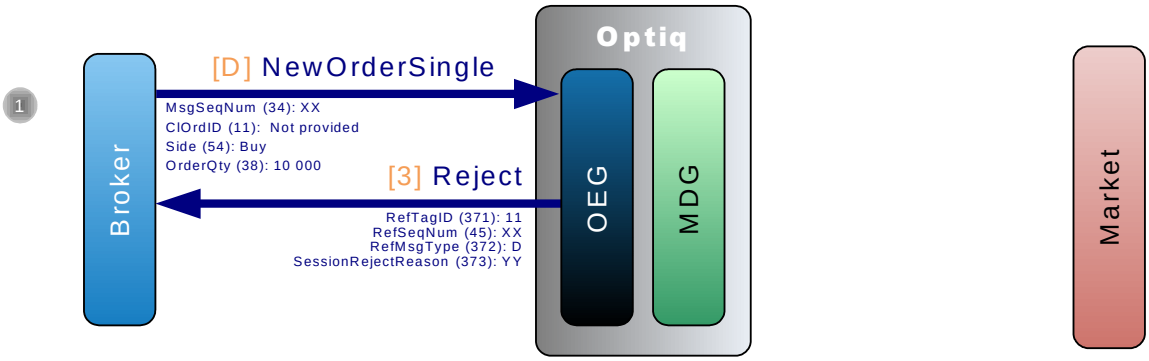
SBE Protocol:



OEG sends back a private **Reject** (07) message with the Error Code (4004 Missing Client Order ID). The reason of the rejection can be found using the Error Code within the *Error list document*.

No message is sent to the Market.

FIX Protocol:



OEG sends back a private **Reject** (3) message with a *SessionRejectReason (373)* (1 = Required Tag Missing).

No message is sent to the Market.

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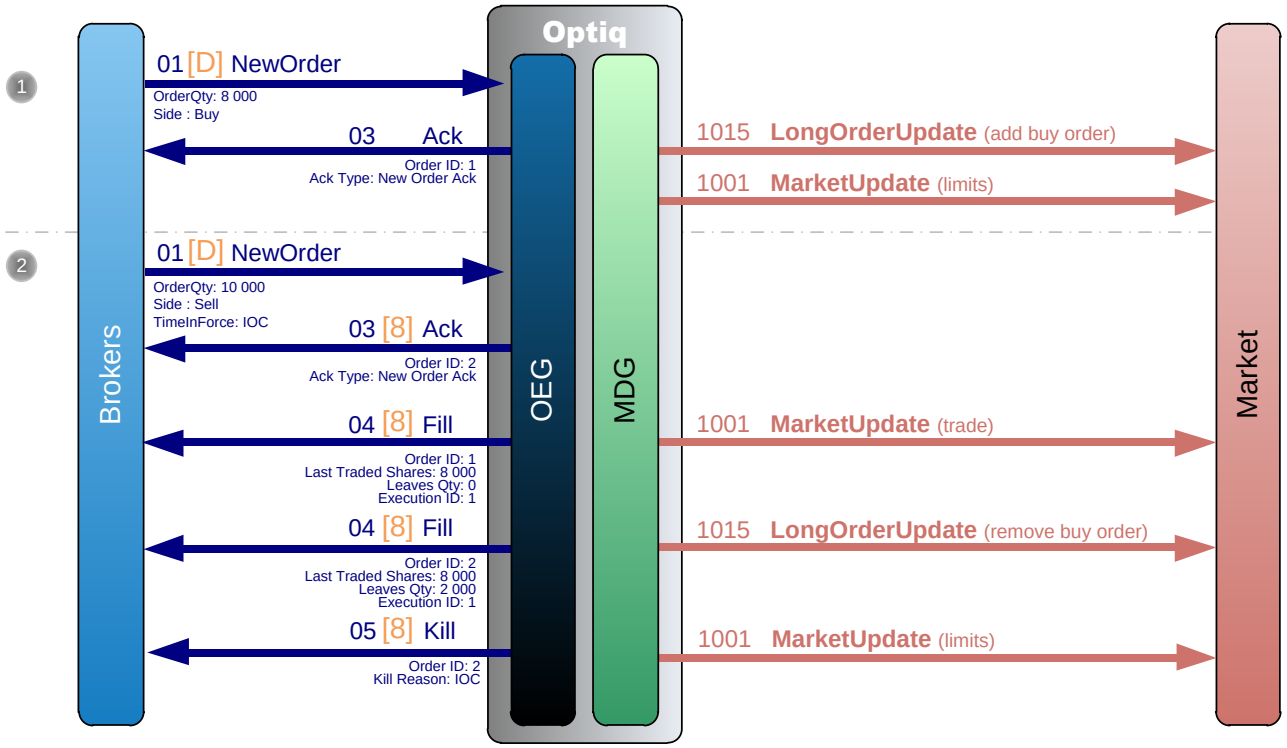
3.1.6 Immediate Or Cancel Order Partially Filled



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 8,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limit.

② Another Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 10,000 and a validity condition of Immediate or Cancel (IOC).

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The entering order immediately matches the first order for a quantity of 8,000 and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution. As the remaining quantity cannot be immediately filled, OEG sends back to the second Broker a **Kill** (05) (FIX 8) message to cancel it.

A public **MarketUpdate** (1001) message is sent to the market for the trade along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy), followed by another **MarketUpdate** (1001) message to update the limits.

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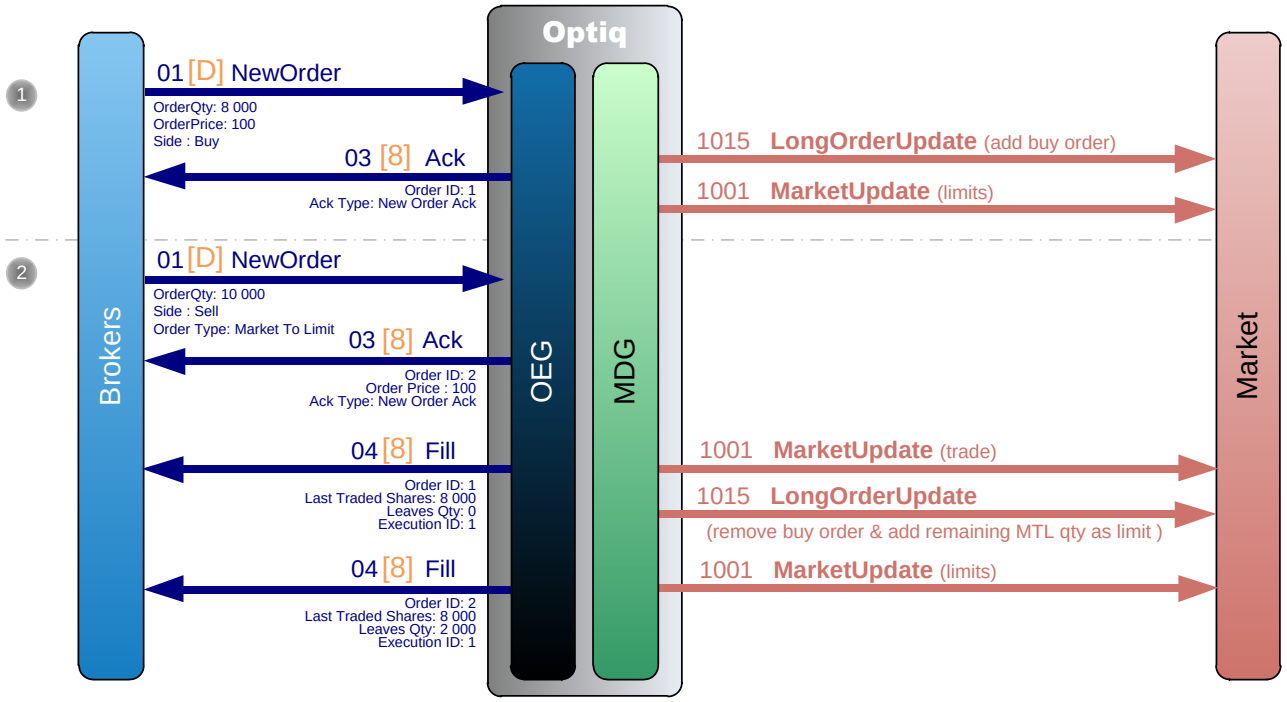
3.1.7 Market to Limit Order Partially Filled



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 8,000 a price of 100.

OEG sends back a private **Ack (03) (FIX 8)** to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② Another Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 10,000 and a Market To Limit (MTL) order type.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order, with *Ack Type*=New Order Ack, *Order Price*=100.

The entering order immediately matches the first order for a quantity of 8,000 and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

A public **MarketUpdate** (1001) message is sent to the market for the trade along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy) and add the remaining quantity of the MTL (sell) order transformed into a Limit order at the price of 100, followed by another **MarketUpdate** (1001) message to update the limits.

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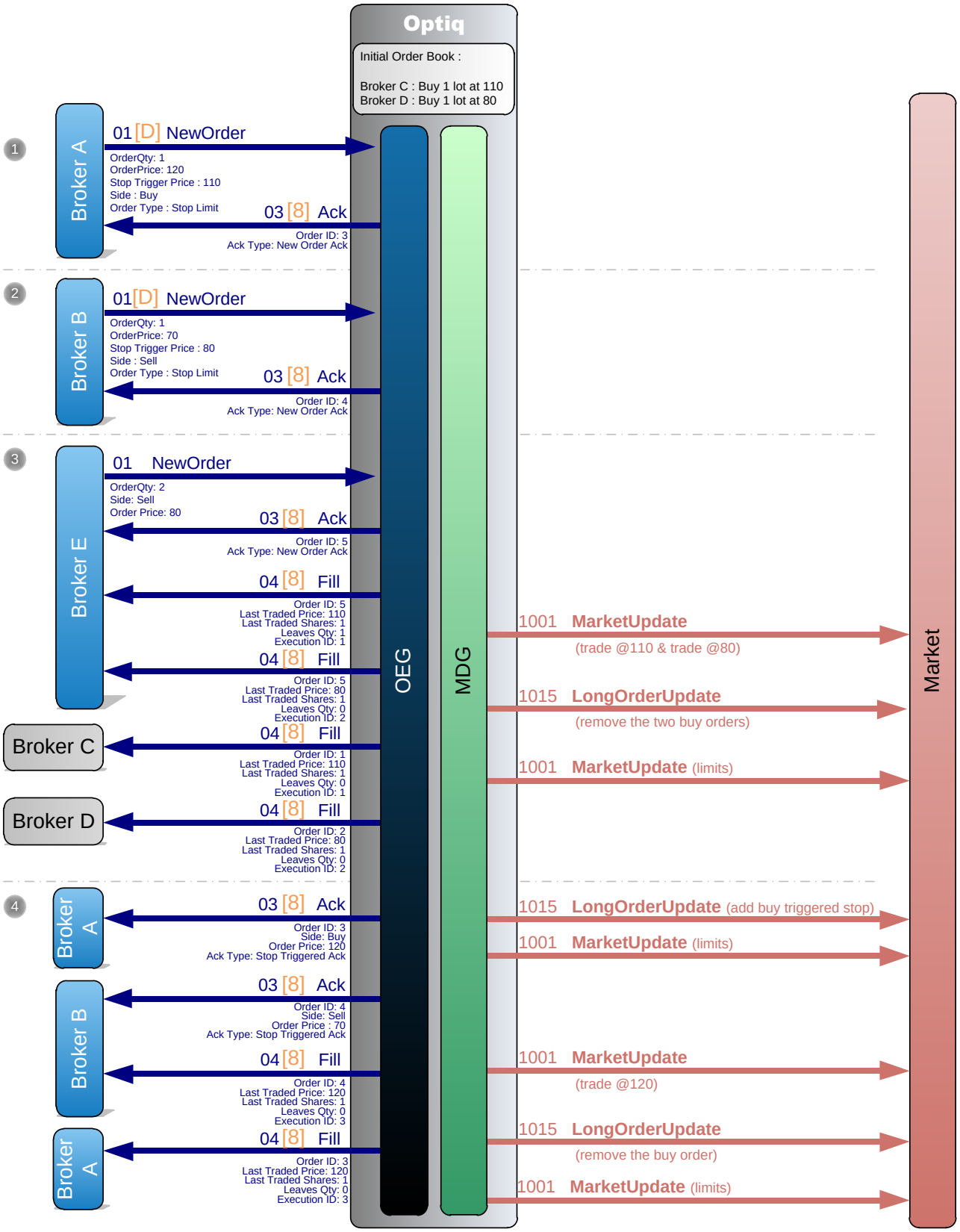
3.1.8 Triggered Stop Orders



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There are already two limit orders in the order book, one buy at price=110 and quantity=1 and another buy at price=80 and quantity=1.

① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Stop Limit Buy order with Trigger=110 and Price=120.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

No public message is generated.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Stop Limit Sell order with Trigger=80 and Price=70.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

No public message is generated.

③ **Broker E** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell Limit order with a quantity of 2 and a price of 80.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

This order matches the two Buy orders that are in the order book (price=110 and price=80), so OEG generates four private **Fill** (04) (FIX 8) messages, two for the Buy orders and two for the Sell order. And this triggers the two Stop Limit Orders.

A public **MarketUpdate** (1001) message is sent to the market for the two trades (at 110 and 80) and the updated limits, along with a public **LongOrderUpdate** (1015) message to remove the first two orders (Buy).

④ OEG sends a private **Ack** (03) (FIX 8) message to **Broker A** to confirm the trigger of the Stop Limit Buy order.

The triggered Stop Limit Buy order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the buy order (price=120).

OEG sends a private **Ack** (03) (FIX 8) message to **Broker B** to confirm the trigger of the Stop Limit Sell order.

The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker ('A' & 'B') to notify the trade execution at price=120.

A public **MarketUpdate** (1001) message is sent to the market for the trade (at 120) and the updated limits, along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy).

Note: The first Ack (for the new Stop order) and the second Ack (for the triggered Stop order) are differentiated by the *Ack Type*.

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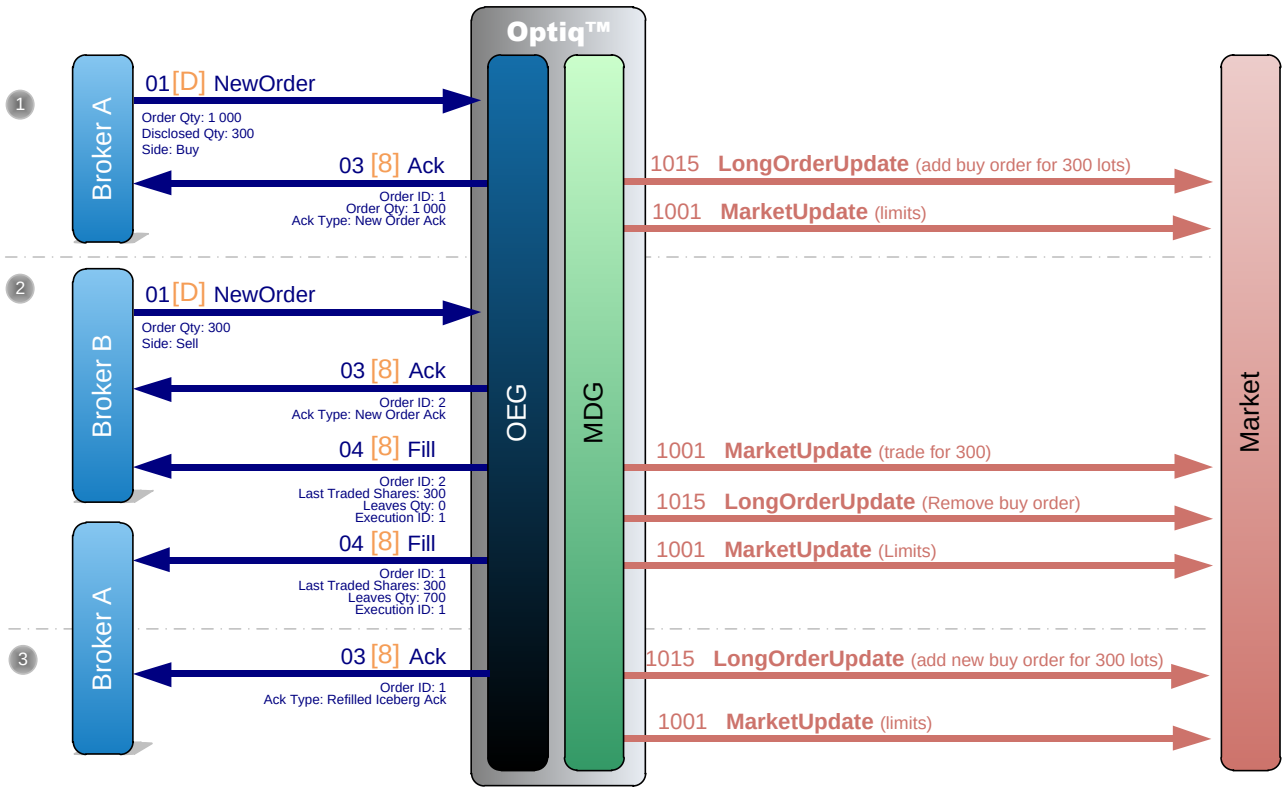
3.1.9 Iceberg Order Refilled



① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy Iceberg order with a quantity of 1,000 and a Disclosed Quantity of 300.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order for 300 lots and a public **MarketUpdate** (1001) message to update the limit.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 300.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution for a quantity of 300.

A public **MarketUpdate** (1001) message is sent to the market for the trade of 300 lots along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy) , followed by another **MarketUpdate** (1001) message to update the limits.

③ Then OEG sends a private **Ack** (03) (FIX 8) message to **Broker A** to notify the refill to the broker (Refilled Iceberg Ack) and provides the *Order Priority* of the order which allows to reconcile the order in private and public messages.

A public **LongOrderUpdate** (1015) message is sent to the market to add a new buy order of 300 lots along with a public **MarketUpdate** (1001) message to update the limit.

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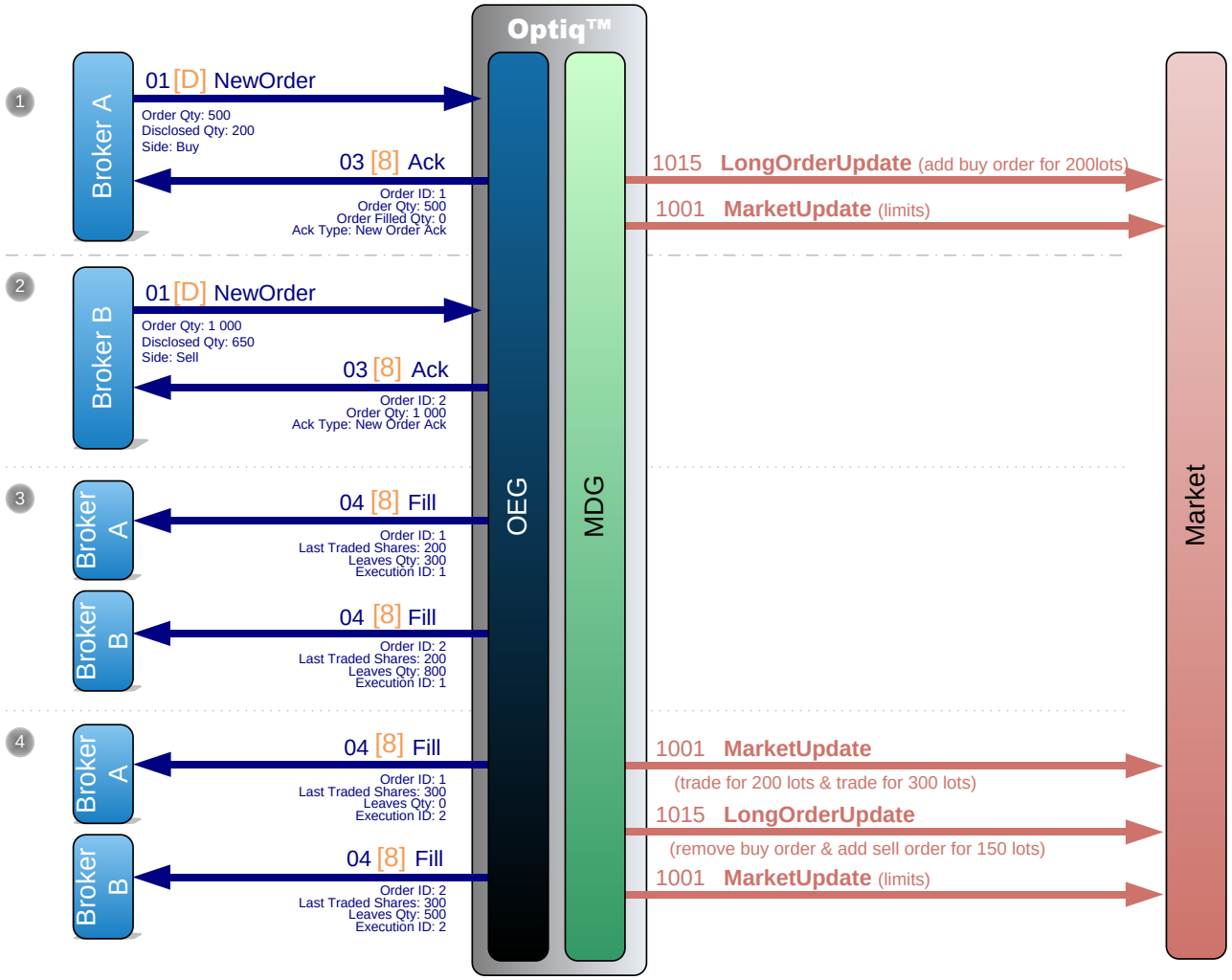
Note: In the case of the randomisation for the displayed quantity of the Iceberg order, the member must reconcile its order in the market data feed (by using the *Order Priority*) to know exactly the disclosed quantity of the order. Please note that the randomly refilled disclosed quantity can never be smaller than the original disclosed quantity.

Any Iceberg order that is entered into the book below the iceberg minimum amount (as defined by MiFID II), or has its total amount updated to be below this amount, will be automatically converted to a Limit order. This conversion will be indicated to the clients in the **Ack** (03) message, by the *Ack Type* = Iceberg Transformed to Limit due to Minimum size.

3.1.10 Iceberg Order Partially Filled



① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a total quantity of 500 and a disclosed quantity of 200.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order (qty=200) and a public **MarketUpdate** (1001) message to update the limit.

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② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a total quantity of 1,000 and a disclosed quantity of 650.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

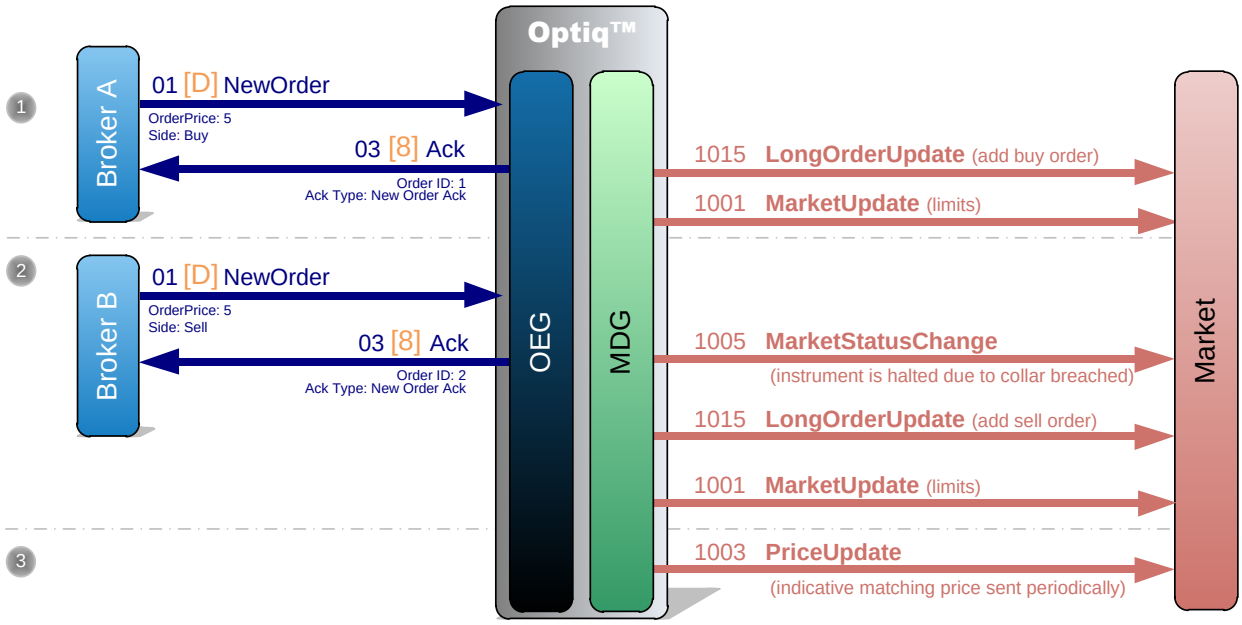
③ The entering order immediately matches the first order for an initial quantity of 200 (Buy order disclosed quantity) and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution according to disclosed quantity.

④ The two orders then match for 300 (the remaining quantity of the Buy order) and OEG sends a private **Fill (04) (FIX 8)** message to each broker to notify the trade execution.

A public **MarketUpdate** (1001) message is sent to the market for a trade of 200 lots, a trade of 300 lots along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy) and add the Sell order for a disclosed quantity of 150 lots, followed by another **MarketUpdate** (1001) message to update the limits.

Note: Partially traded Iceberg orders are not subject to the checks of minimum quantity.

3.1.11 Breaching a Collar with Suspension



① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with price=5, which is lower than the low static collar.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

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The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with price=5.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

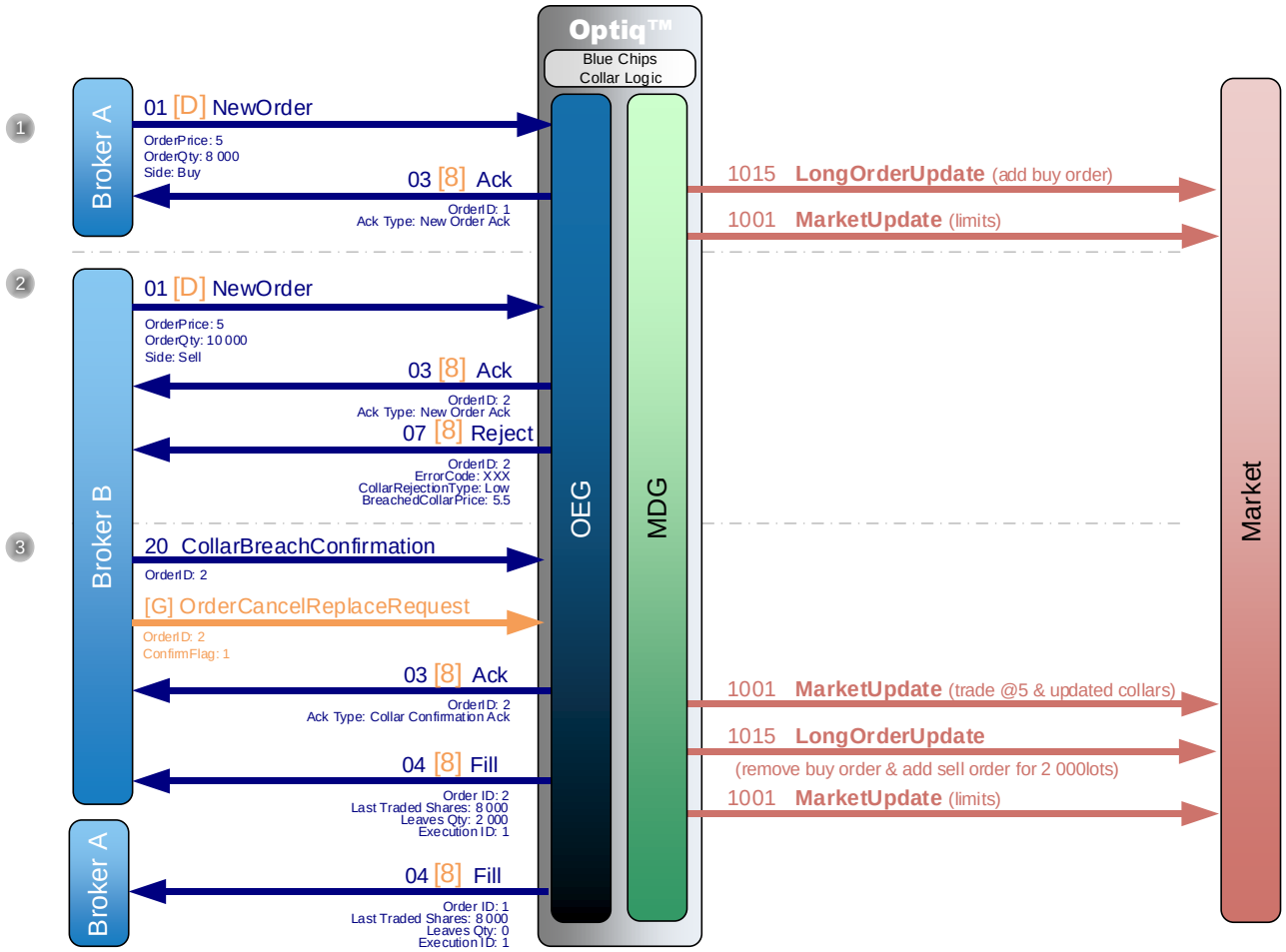
The instrument is automatically Reserved because of a potential trade outside of the collars. A public **MarketStatusChange** (1005) message is sent to the market.

A public **LongOrderUpdate** (1015) (FIX D) message is sent to the market to add the order (Sell) in the order book and a public **MarketUpdate** (1001) message to update the limits.

③ Then a public **PriceUpdate** (1003) message is sent periodically to broadcast the Indicative Matching Price (IMP), as the instrument is suspended.

3.1.12 Breaching a Collar with Confirmation (No Reservation)

In the following example the instrument is configured with a Collar Logic applied to Blue Chips.



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① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 8,000 and a price=5, which is lower than the low collar.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 10,000 and a price=5.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order and private **Reject** (07) (FIX 8) message to reject/request confirmation for the order which is breaching the dynamic collar, and thus would match outside it.

③ **Broker B** sends a private **CollarBreachConfirmation** (20) (FIX G) message to confirm the order and OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order. (Please note that only one message should be sent to confirm, two messages are represented in the diagram because they are different for FIX and for SBE).

The dynamic collars are correspondingly updated around the low collar so the entering order matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

A public **MarketUpdate** (1001) message is sent to the market for a trade and the new collars updated around this trade, along with a public **LongOrderUpdate** (1015) message to remove the first order (Buy) and add the sell order for its remaining quantity (2 000), followed by another **MarketUpdate** (1001) message to update the limits.

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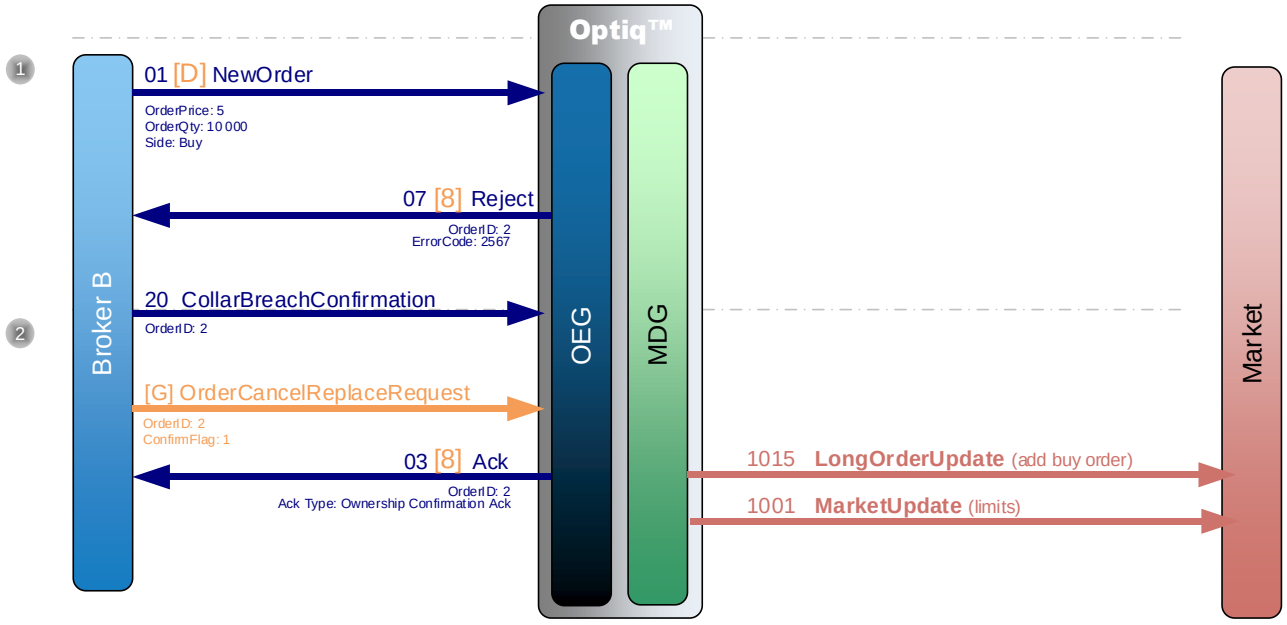
3.1.13 Breaching Ownership Limit with Confirmation

In the following example the instrument is configured with a Ownership Checks set to “Checks Activated with Confirmation”.



① **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 10,000 and a price=5.

OEG sends back a private **Reject** (07) (FIX 8) message to reject/request confirmation for the order which is breaching the Ownership Limit.

② **Broker B** sends a private **CollarBreachConfirmation** (20) (FIX G) message to confirm the order and OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order. (Please note that only one message should be sent to confirm, two messages are represented in the diagram because they are different for FIX and for SBE).

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

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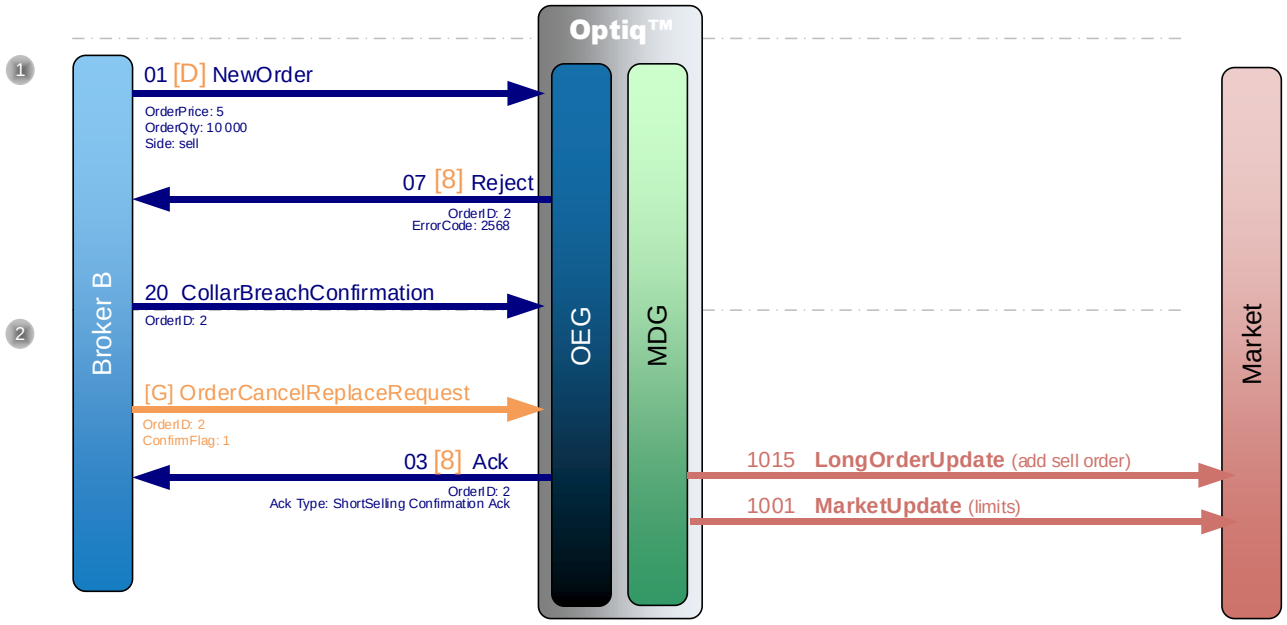
3.1.14 Breaching Short Selling Limit with Confirmation

In the following example the instrument is configured with a Short Sell Checks set to “Checks Activated with Confirmation”.



① **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 10,000 and a price=5.

OEG sends back a private **Reject** (07) (FIX 8) message to reject/request confirmation for the order which is breaching the Short Selling Limit.

② **Broker B** sends a private **CollarBreachConfirmation** (20) (FIX G) message to confirm the order and OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order. (Please note that only one message should be sent to confirm, two messages are represented in the diagram because they are different for FIX and for SBE).

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

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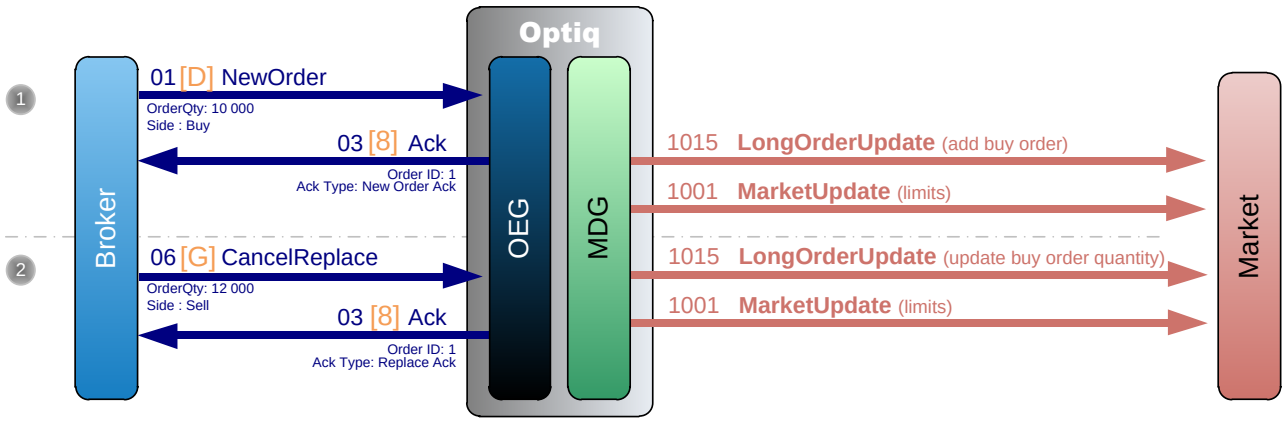
3.2 Modifying an Order

3.2.1 Modifying an Unmatched Order



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new buy order with a quantity of 10,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② The same Broker sends a private **CancelReplace** (06) (FIX G) message to modify the order by increasing the quantity up to 12,000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order modification.

MDG sends a public **LongOrderUpdate** (1015) message to the market to update the quantity of the previously entered order, followed by another **MarketUpdate** (1001) message to update the limits.

Note: In case of a change of an order ownership, i.e. when the **CancelReplace** (06) (FIX G) is sent from another OE Session, it will follows the same kinematic (no message is sent to the previous owner of the order).

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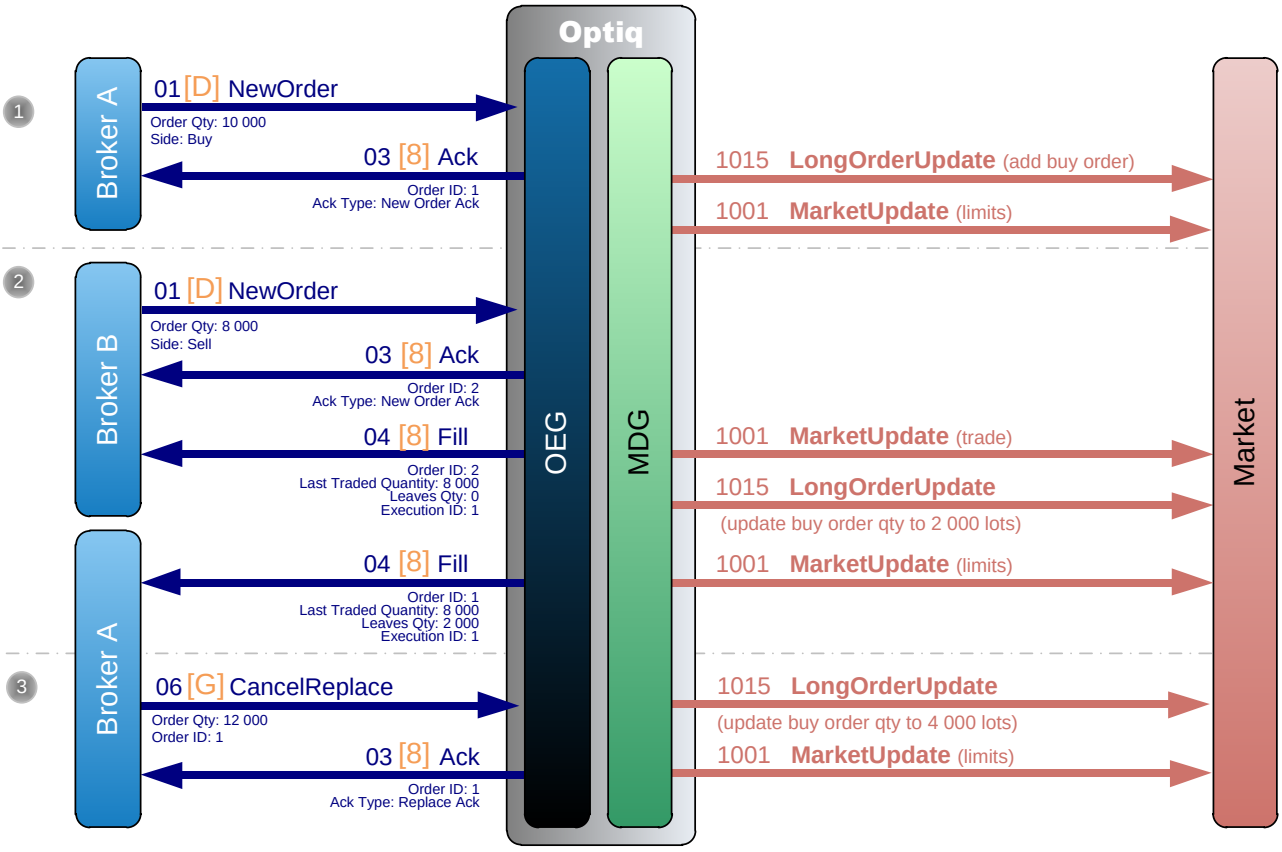
3.2.2 Modifying a partially matched order



① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 10 000.
OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate (1015)** message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 8 000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

A public **MarketUpdate** (1001) message is sent to the market for a trade along with a public **LongOrderUpdate (1015)** message to update the first order (Buy) quantity to 2 000, followed by another **MarketUpdate** (1001) message to update the limits.

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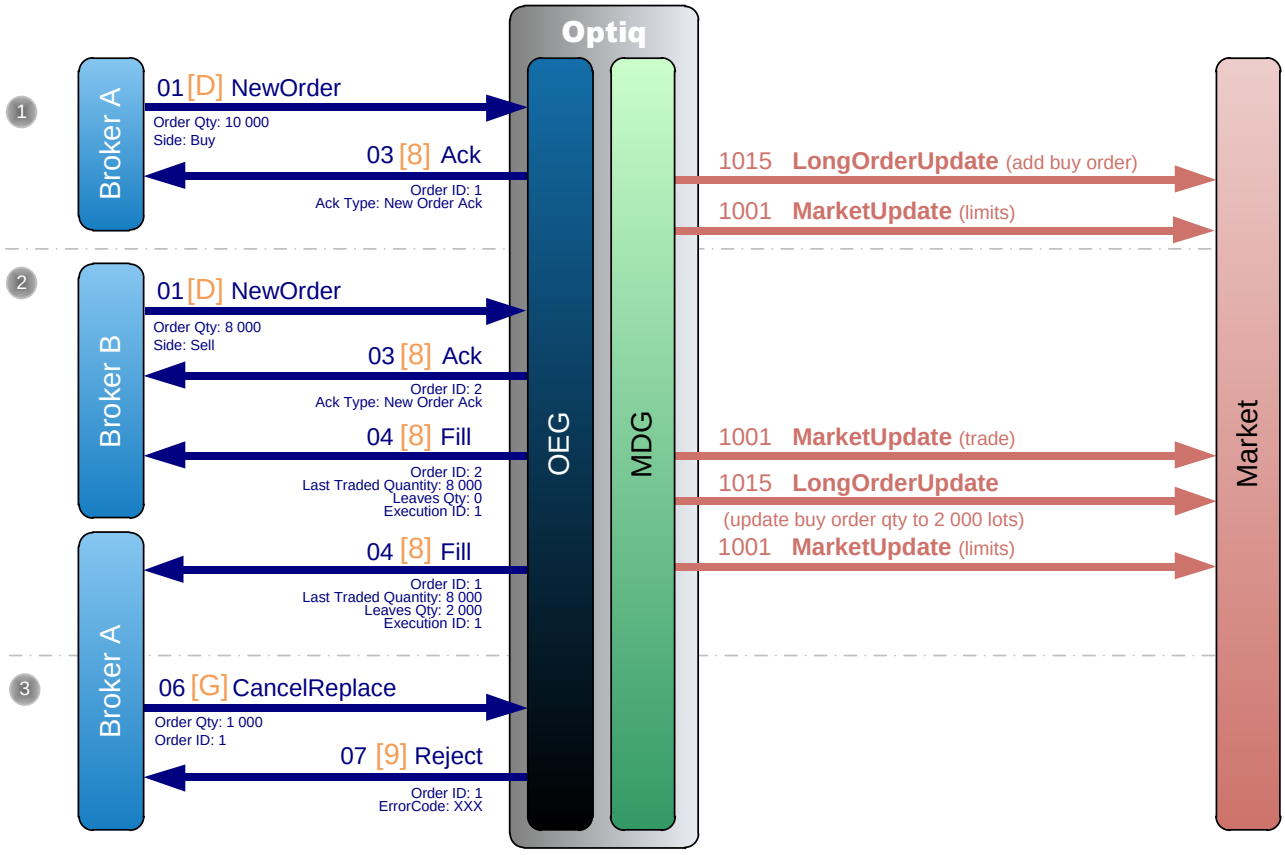
③ Later, **Broker A** sends a private **CancelReplace** (06) (FIX G) message to modify the quantity of his Buy order. As he wants the leaves quantity to be equal to 4 000 after the modification, the broker indicates a quantity of 12,000 (as 8,000 have already matched).

OEG sends back a **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order modification.

A public **LongOrderUpdate (1015)** message is sent to the market to update the order quantity to 4 000 lots and a public **MarketUpdate** (1001) message to update the limit.

3.2.3 Rejected Modification



① **Broker A** sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 10 000.
OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② **Broker B** sends a private **NewOrder** (01) (FIX D) message to enter a new Sell order with a quantity of 8 000.

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

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The entering order immediately matches the first order and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

A public **MarketUpdate** (1001) message is sent to the market for a trade along with a public **LongOrderUpdate** (1015) message to update the first order (Buy) quantity to 2 000, followed by another **MarketUpdate** (1001) message to update the limits.

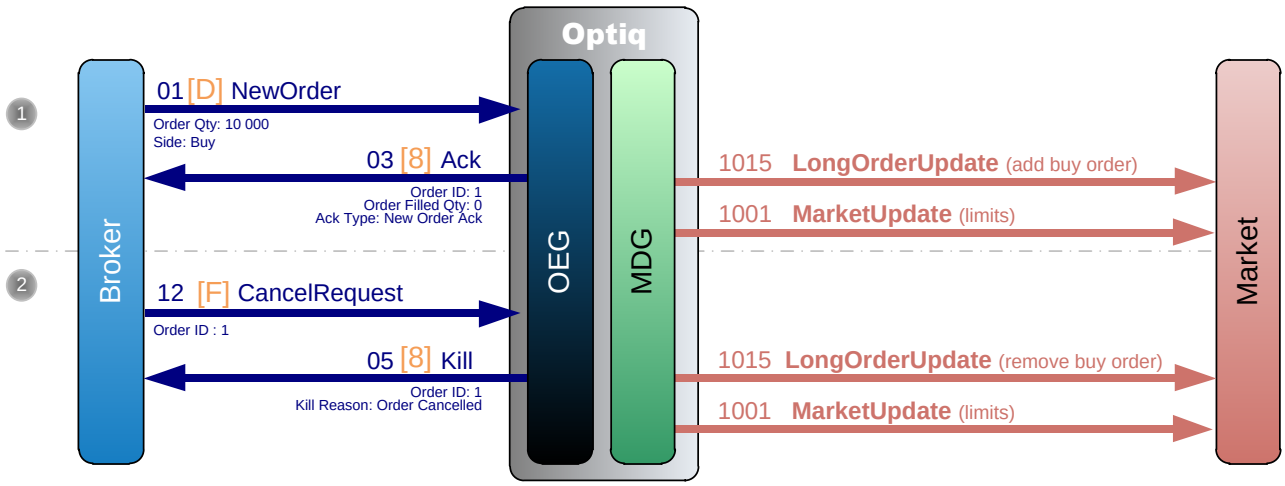
③ Later, **Broker A** sends a private **CancelReplace** (06) (FIX G) message to modify the quantity of his Buy order. The broker indicates a quantity of 1 000.

OEG sends back a private **Reject** (07) (FIX 9) message to reject the replace operation as the quantity to be modified is no longer available. So the remaining quantity of 2 000 stays in the order book.

Note: If the broker attempts to change the quantity of an order to a value less or equal to the quantity already traded, the order modification will be rejected. In this example, new quantity of 8 000 will be rejected, a new quantity of 8 001 will be accepted.

3.3 CANCELLING AN ORDER

3.3.1 Cancelling an Unmatched Order



① A Broker sends a private **NewOrder** (01) (FIX D) message to enter a new Buy order with a quantity of 10 000 lots.
OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order.

The order enters the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a public **MarketUpdate** (1001) message to update the limit.

② Later the same Broker sends a private **CancelRequest** (12) (FIX F) message to cancel the previously entered order.

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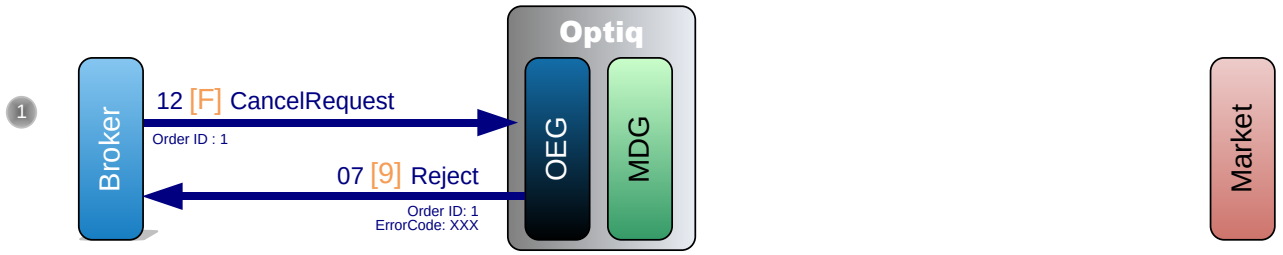
OEG sends back a private **Kill** (05) (FIX 8) message to confirm that the order request has been cancelled.

A public **LongOrderUpdate** (1015) message is sent to the market to remove the Buy, followed by another **MarketUpdate** (1001) message to update the limits.

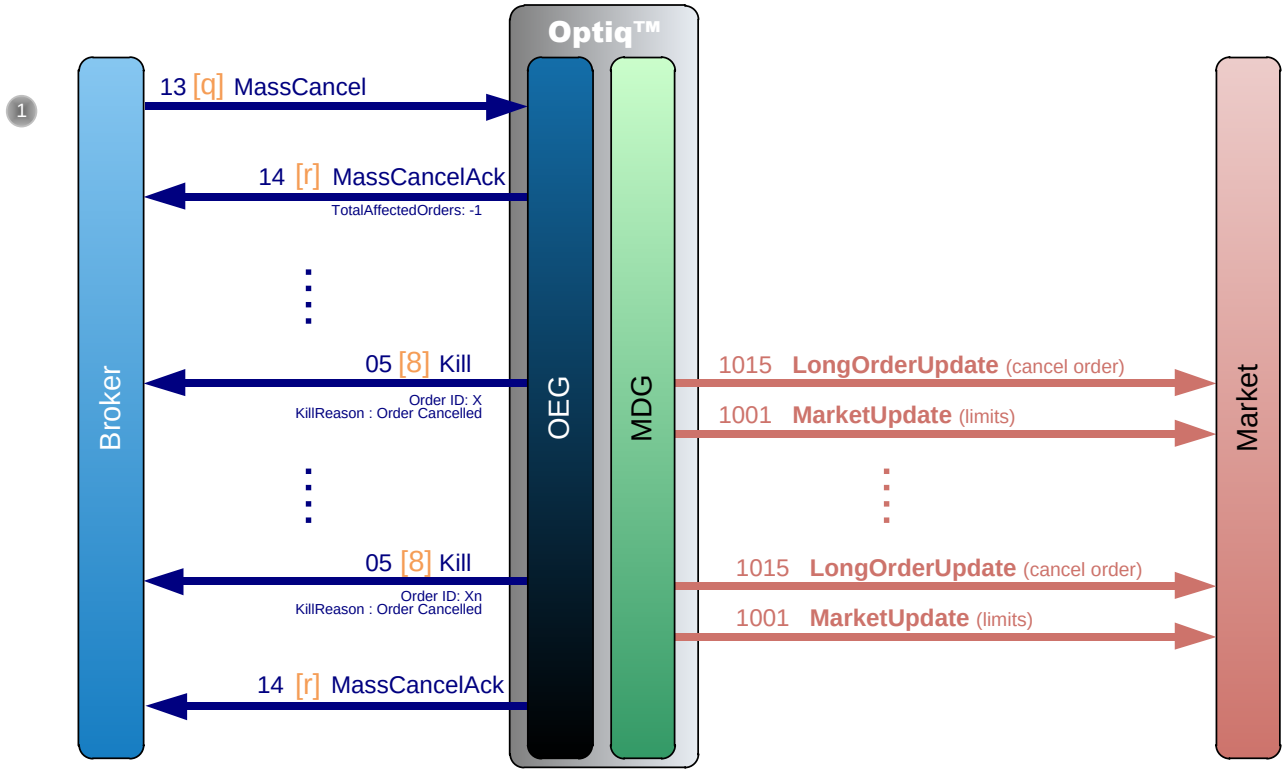
3.3.2 Rejected Order Cancellation



① A Broker sends a private **CancelRequest** (12) (FIX F) message to cancel an order that has already matched.

OEG sends back a private **Reject** (07) (FIX 9) message to reject the cancellation.

3.3.3 Mass Cancellation



① A Broker sends a private **MassCancel** (13) (FIX q) message to cancel some of his orders matching specific criterions.

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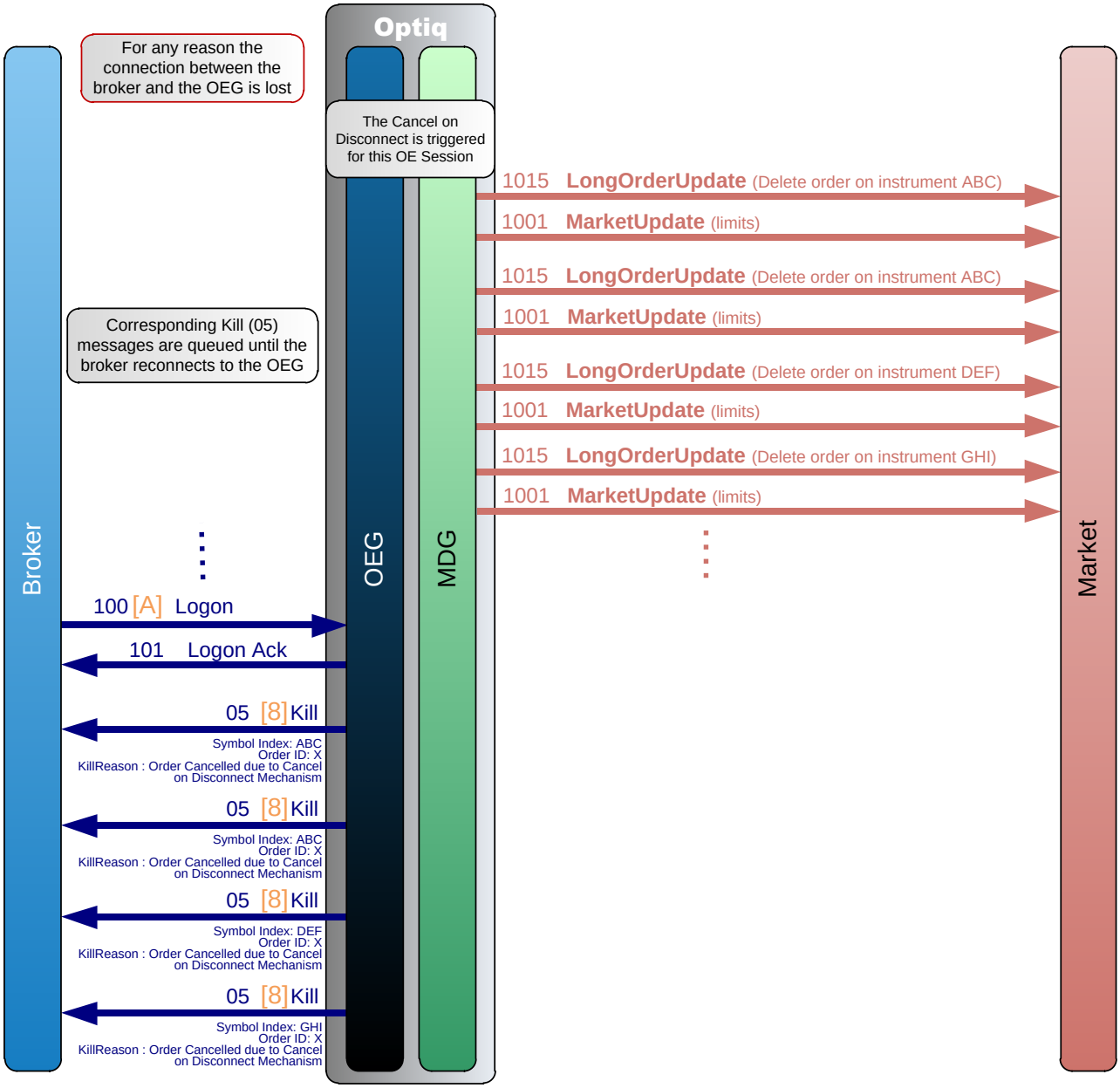
OEG sends back a private **MassCancelAck** (14) (FIX r) message followed by a private **Kill** (05) (FIX 8) message for each affected order detailing the killed orders; the mass cancellation process is ended by a new private **MassCancelAck** (14) (FIX r) message notifying the total affected orders.

A public **LongOrderUpdate** (1015) message is sent to the market to remove the killed orders along with a public **MarketUpdate** (1001) message to update the limits; both messages are sent for each affected instrument.

3.3.4 Cancel on Disconnect Mechanism



The diagram represents a generic case of loss of connection (physical) between a client and a partition.

When a connection is lost between the broker and OEG, for any reason, the Cancel on Disconnect (CoD) mechanism is triggered for all OE Sessions concerned by the connection outage. Once the mechanism is triggered, all live orders not flagged to be persisted and belonging to the corresponding

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OE Session(s) are immediately cancelled for their remaining quantity, regardless of order type and validity type.

For each order cancelled a public **LongOrderUpdate** (1015) message is sent to the market to remove the order and a public **MarketUpdate** (1001) message to update the limits.

For each cancelled order a **Kill** (05) (FIX 8) message is generated and queued until the client reconnects.

When the Broker reconnects with a **Logon** (100) (FIX A) message, if the logon is successful the OEG sends back a **LogonAck** (101) (FIX A) message.

Once the connection is re-established, the Broker immediately receives the **Kill** (05) (FIX 8) messages that have been queued.

Note: Scope of Cancel on Disconnect only includes orders sent during the current day. Orders entered during a previous business day are not in scope of Cancel on Disconnect and are not impacted.

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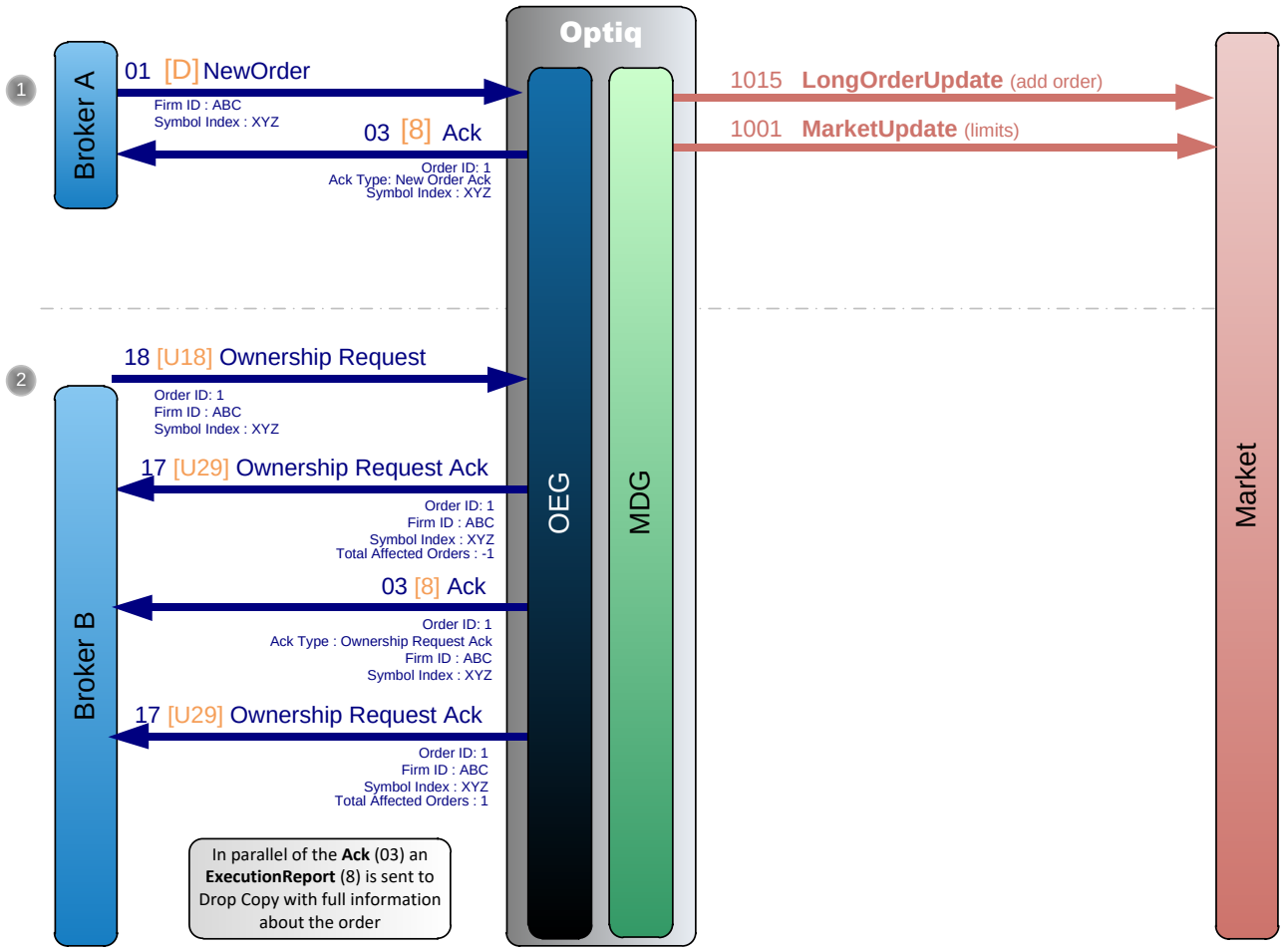
3.4 OWNERSHIP REQUEST

3.4.1 Ownership request for a specified order ID



① A Broker A sends a private **NewOrder** (01) (FIX D) message to enter a new order.

OEG sends back an **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order (*Order ID* = 1).

The order enters into the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

② Another participant, Broker B sends an **Ownership Request** (18) (FIX U18) to request the ownership of the previous order (*Order ID* = 1) sent by Broker A.

OEG sends back an **Ownership Request Ack** (17) (FIX U29) message to Broker B, to confirm the reception of the request (with *Total Affected Orders* = -1).

OEG sends back an **Ack** (03) (FIX 8) message to Broker B, to give the detail of the order (*Order ID* = 1). In parallel of the **Ack** (03) (FIX 8) an **ExecutionReport** (8) is sent to Drop Copy with full information about the order.

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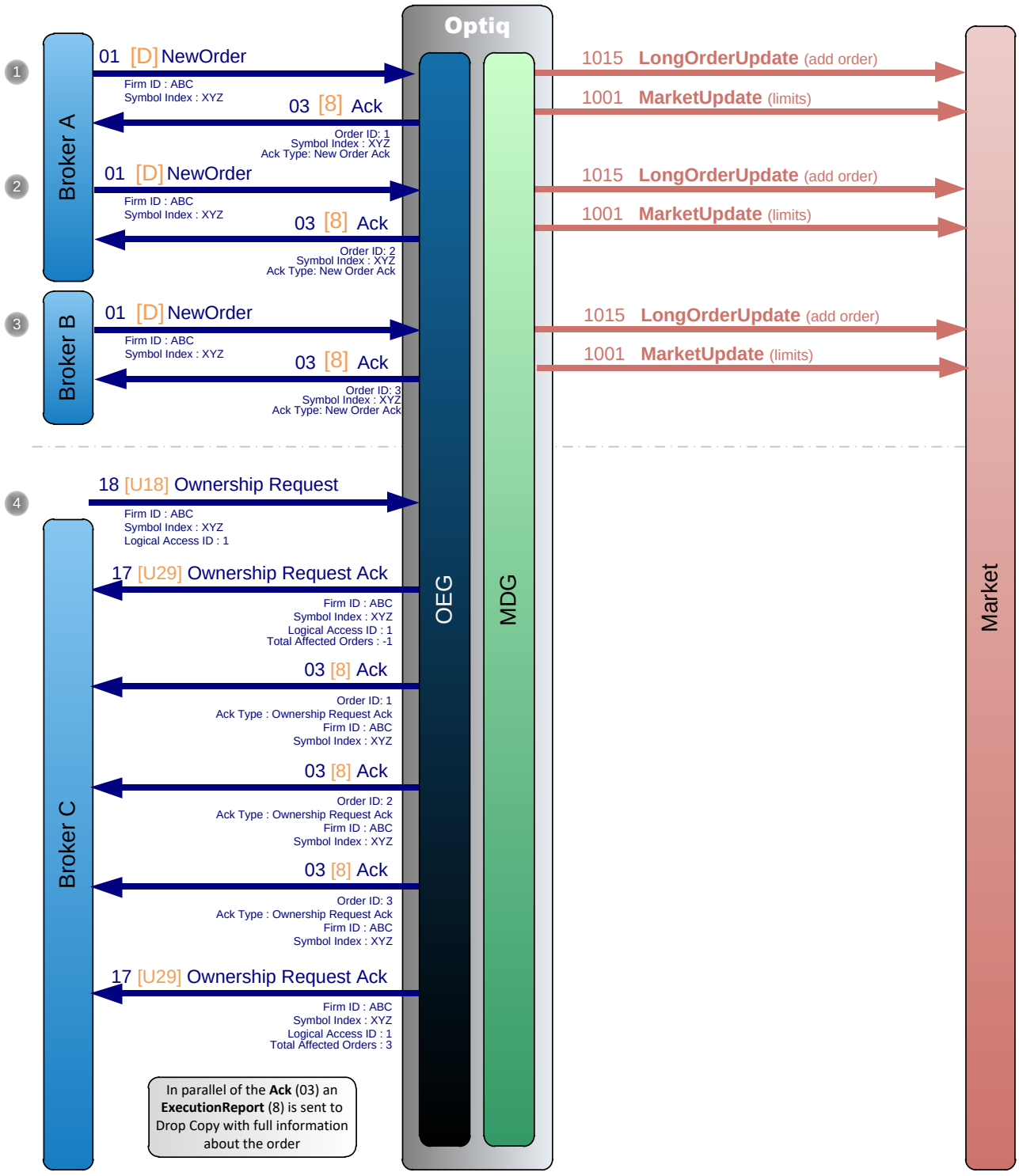
OEG sends back another **Ownership Request Ack** (17) (FIX U29) message to Broker B, to confirm the successful change of ownership of the order (*Order ID* = 1) from Broker A's OE session to Broker B's OE session (*Total Affected Orders* = 1). Broker A does not receive any messages of this exchange and following the transfer of ownership all unsolicited messages for the affected order are sent to Broker B.

3.4.2 Ownership request for a Logical Access or OE Session



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Logical Access ID and *OE Session ID* are provided by clients in the **Logon** (100) message.

① A Broker A sends a private **NewOrder** (01) (FIX D) message to enter a new order on instrument XYZ.

The order is entered through the OE session 1A (Logical Access ID = 1, OE Partition ID = A).

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order (*Order ID* = 1).

The order enters into the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

② Broker A sends another private **NewOrder** (01) (FIX D) message to enter a new order instrument XYZ.

The order is entered through the OE session 1A (Logical Access ID = 1, OE Partition ID = A).

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order (*Order ID* = 2).

The order enters into the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

③ Broker B sends a private **NewOrder** (01) (FIX D) message to enter a new order instrument XYZ.

The order is entered through the OE session 1B (Logical Access ID = 1, OE Partition ID = B).

OEG sends back a private **Ack** (03) (FIX 8) message to confirm the successful receipt and technical processing of the order (*Order ID* = 3).

The order enters into the order book without matching and a public **LongOrderUpdate** (1015) message is sent to the market to add the order and a **MarketUpdate** (1001) message to update the limits.

④ Another participant, Broker C sends an **Ownership Request** (18) (FIX U18) to request the ownership of the orders of the *Logical Access ID* = 1 for the instrument XYZ.

The request is entered through the OE session 2A (Logical Access ID = 2, OE Partition ID = A).

OEG sends back an **Ownership Request Ack** (17) (FIX U29) message to Broker C, to confirm the reception of the request (with *Total Affected Orders* = -1).

OEG sends back an **Ack** (03) (FIX 8) message to Broker C for each order (*Order ID* = 1, 2 and 3) for the instrument XYZ that are owned by the Logical Access 1. In parallel of each **Ack** (03) (FIX 8) message an **ExecutionReport** (8) is sent to Drop Copy with full information about the order.

OEG sends back another **Ownership Request Ack** (17) (FIX U29) message to Broker C to confirm the successful change of ownership of the orders belonging to the Logical Access ID =1 for the instrument XYZ. The ownership of *Order ID* = 1 and 2 from Broker A's OE session and *Order ID* = 3 from Broker B's OE session transfer to Broker C's OE session (*Total Affected Orders* = 3). Brokers A and B do not receive any messages of this exchange, and following the transfer of ownership all unsolicited messages for the affected orders are sent to Broker C.

Note: All specified Logical Access IDs and OE Sessions belong to the same Firm.

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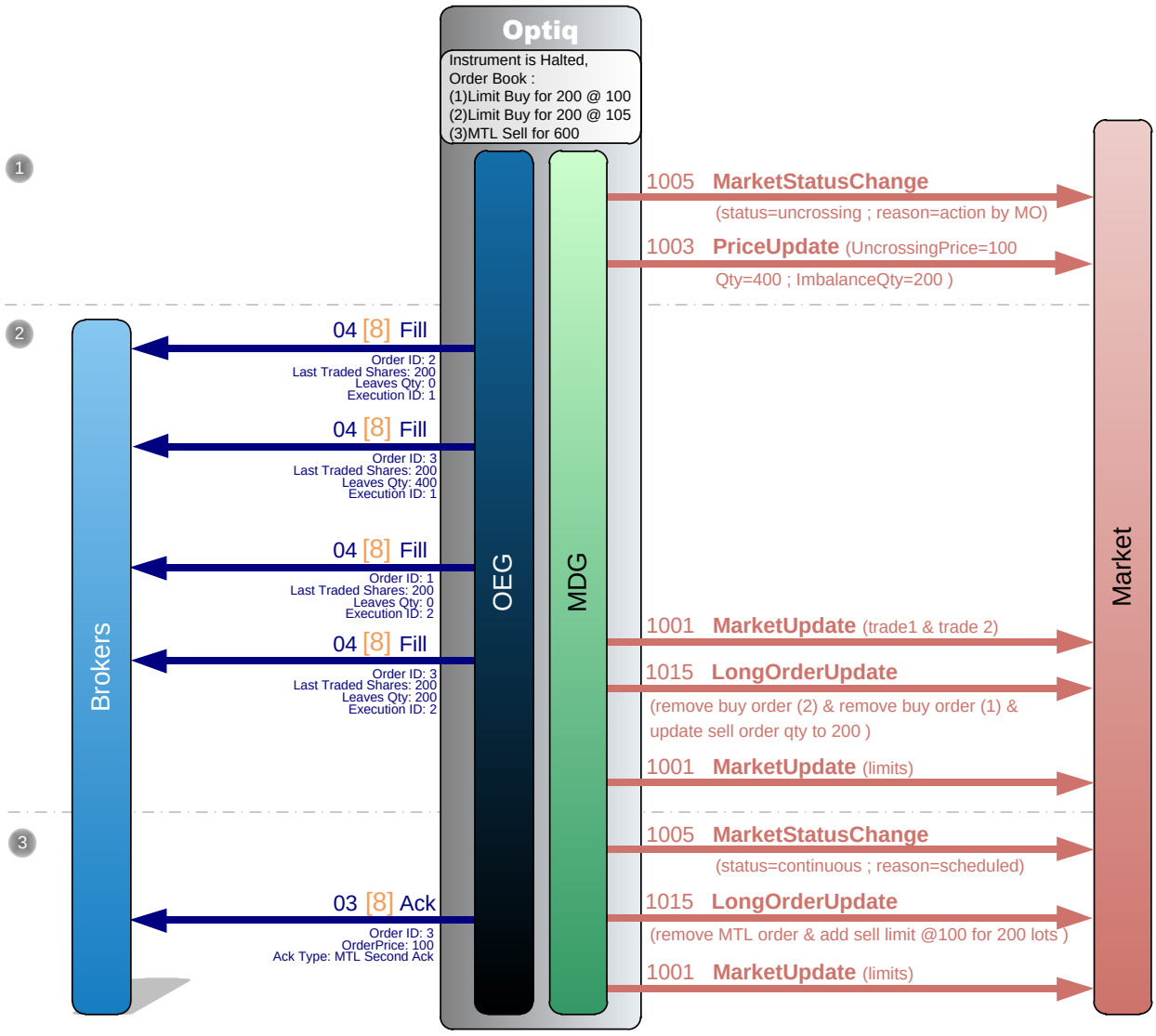
3.5 Opening/Uncrossing

3.5.1 Market To Limit on Opening



There are already two Limit orders in the order book, one Buy at price=100 and quantity=200 and another Buy at price=105 and quantity=200. And there is also one Sell Market To Limit order with quantity=600. The last traded price is 100.

① The instrument reopens (is unsuspended). A first public message **MarketStatusChange** (1005) message is sent to the market to notify the resumption of trading on the instrument along with a public **PriceUpdate** (1003) message to broadcast the Uncrossing Price.

② The Sell order matches with the best Buy order (2) for 200 and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution. Then the Sell order matches with the Buy order (1) for 200 and OEG sends back a private **Fill** (04) (FIX 8) message to each broker to notify the trade execution.

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A public **MarketUpdate** (1001) message is sent to the market for both trades along with a public **LongOrderUpdate** (1015) message to remove the Buy order (2) and the Buy order (1) and update the quantity of the Sell order to 200 lots.

At the end of the uncrossing processing MDG sends a **MarketUpdate** (1001) message to broadcast the updated values of each limit that has changed during the uncrossing, or only the BBO depending on the market.

③ A public **MarketStatusChange** (1005) message is sent to the market to indicate that the instrument is now in a continuous phase.

Directly after the change of phase, a public **LongOrderUpdate** (1015) message is sent to the market to modify the Sell MTL order to a Sell Limit order at 100 for 200 lots. (when the instrument switches to a Continuous trading phase, all MTL orders partially or not executed always become Limit orders at the uncrossing price for their remaining quantity).

An **Ack** (03) message is sent to the broker with *Ack Type* = MTL Second Ack, for the transformation of the MTL order into a Limit order.

A public **MarketUpdate** (1001) message is sent to the market to update the limits.

Note: At the beginning of each uncrossing processing a **PriceUpdate** (1003) message is sent to the market to broadcast the uncrossing price (even if it is equal to the last IMP broadcasted). During each uncrossing processing there is always only one public **MarketUpdate** (1001) message sent to the market to update the limits, which is sent at the very end of the processing.

3.6 UNSOLLICITED MESSAGES

3.6.1 Asynchronous messages

3.6.1.1 Statistics Message



The public **Statistics** (1009) message is sent to the market after each trade, it includes only the information that needs to be updated. It can include minimum and maximum traded prices for daily, yearly and lifetime periods along with the cumulative volume since the start of the trading day and the percentage of variation of the traded price versus the last reference price.

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3.6.1.2 Automatic IMP Calculation

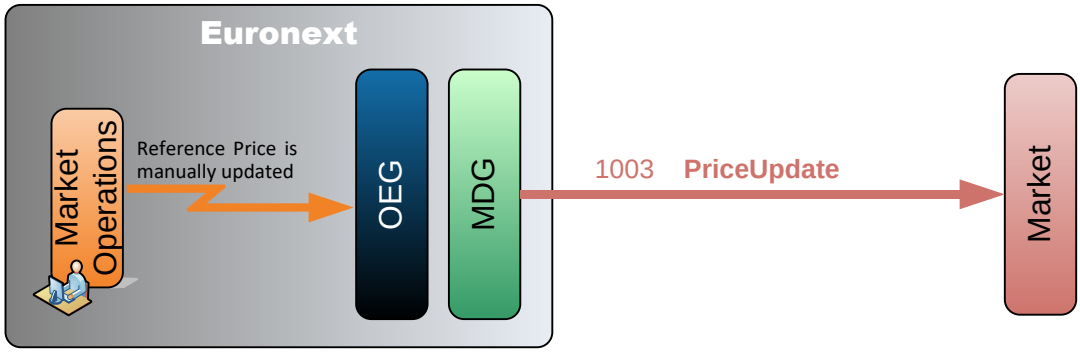


A public **PriceUpdate** (1003) message is sent periodically to the market when the instrument is in a Call or Suspended phase to broadcast the Indicative Matching Price (IMP).

Note: The IMP is broadcasted only if the IMP price or quantity have changed from the values previously sent.

3.6.2 Actions Performed By Market Operations

3.6.2.1 Reference Price Update



Market Operations send a private command to Optiq to update the reference price on the given instrument.

A manual update by Market Operations of the reference price on a given instrument covers:

- Dynamic Collar Reference Price modification by Market Operations,
- Static Collar Reference Price modification by Market Operations,
- Last Adjusted Closing Price modification by Market Operations,
- Last Traded Price modification by Market Operations command (if the Dynamic Collar Reference Source is not 'External').

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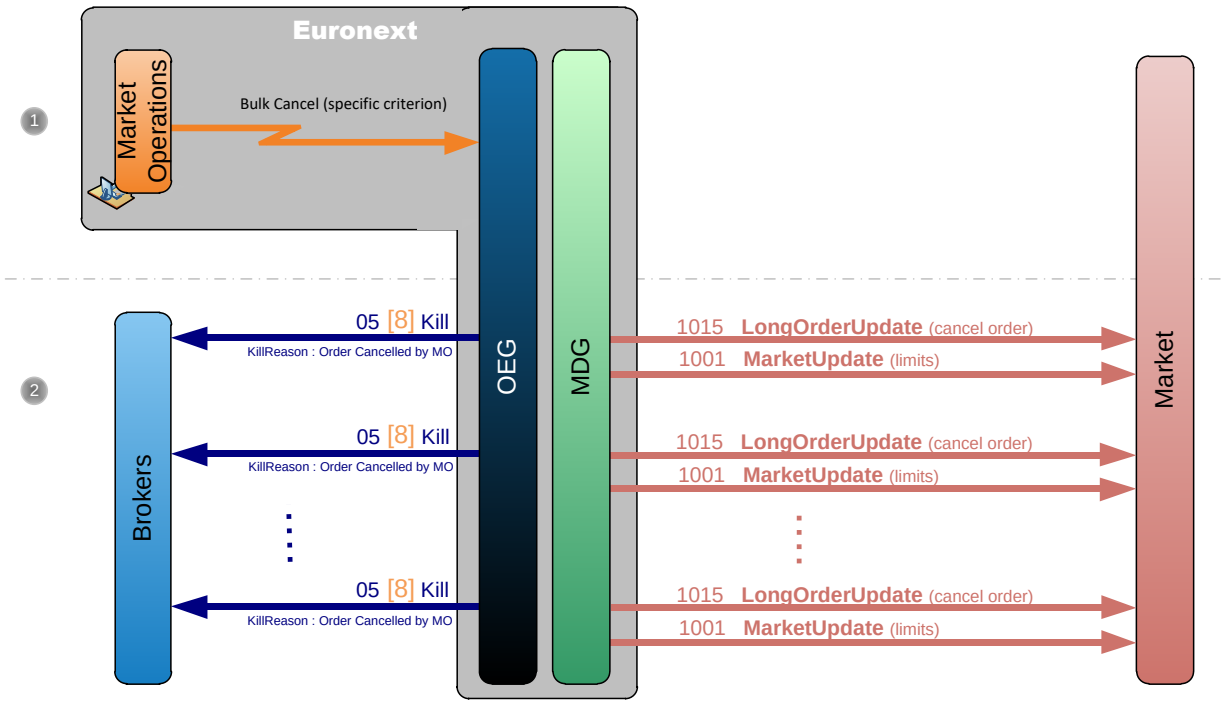
Optiq sends a public **PriceUpdate** (1003) message to broadcast the new prices.

3.6.2.2 Bulk Order Cancellation



① Market Operations cancel orders matching a specified criterion.

② Optiq sends a private **Kill** (05) (FIX 8) message for each cancelled order to the broker who entered the order, and as many public **LongOrderUpdate** (1015) and **MarketUpdate** (1001) messages per instrument to the market to respectively remove the cancelled orders and update the limits.

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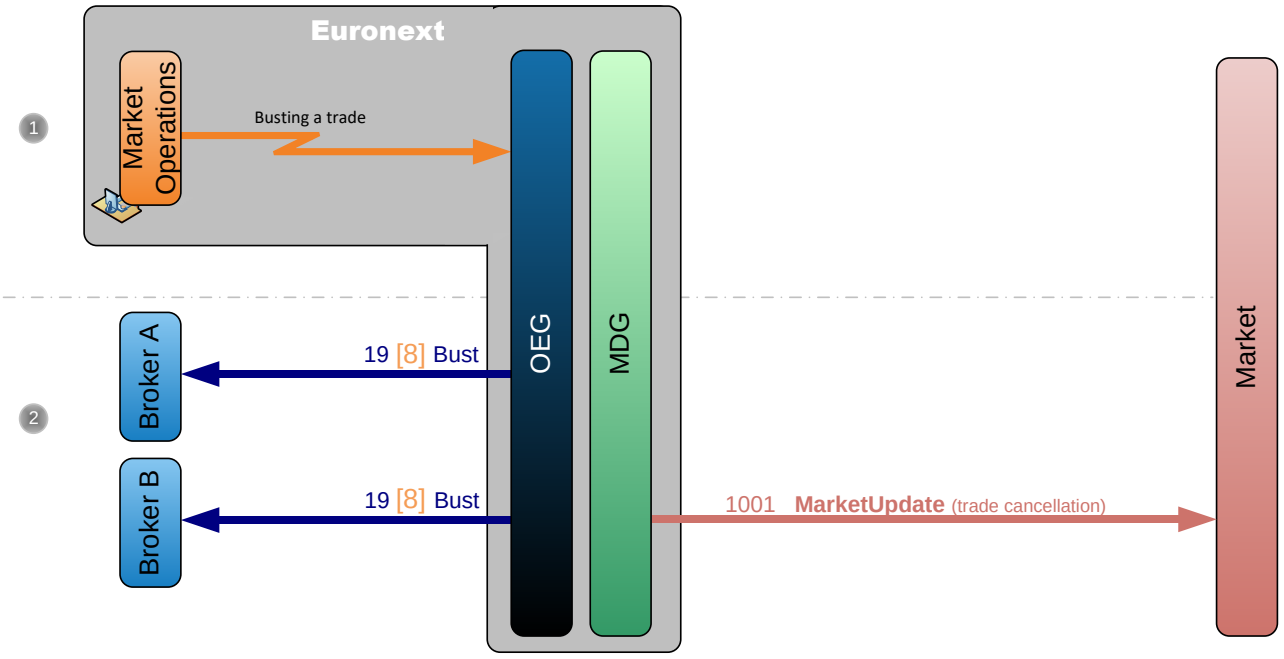
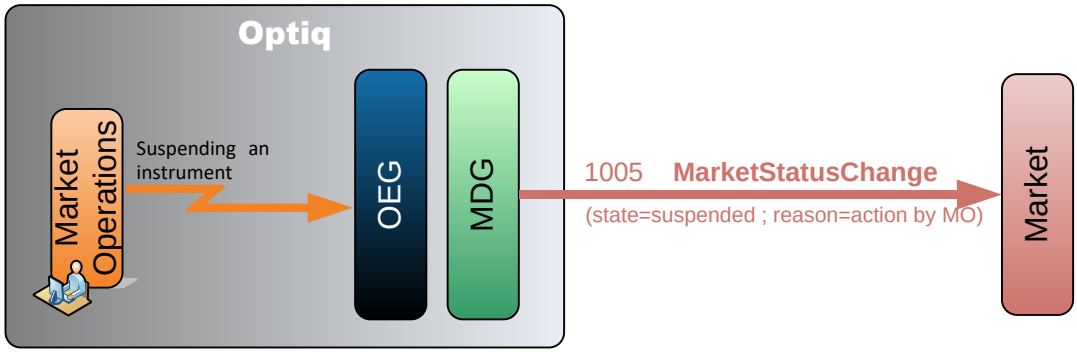
3.6.2.3 Trade Cancellation



① Market Operations busts a trade on behalf of two brokers.

② Optiq sends a private **TradeBustNotification** (19) (FIX 8) message for the cancelled trade to the brokers who entered the orders and a public **MarketUpdate** (1001) message to remove the cancelled orders.

3.6.2.4 Suspending an Instrument



Market Operations suspends a specific instrument.

Optiq sends a public **MarketStatusChange** (1005) message to the market to indicate that the instrument has been suspended.

3.7 MARKET STATUS CHANGES

This section is dedicated to all market publications that deal with changes of Market Status on Cash markets, which are communicated via the **MarketStatusChange** (1005) message.

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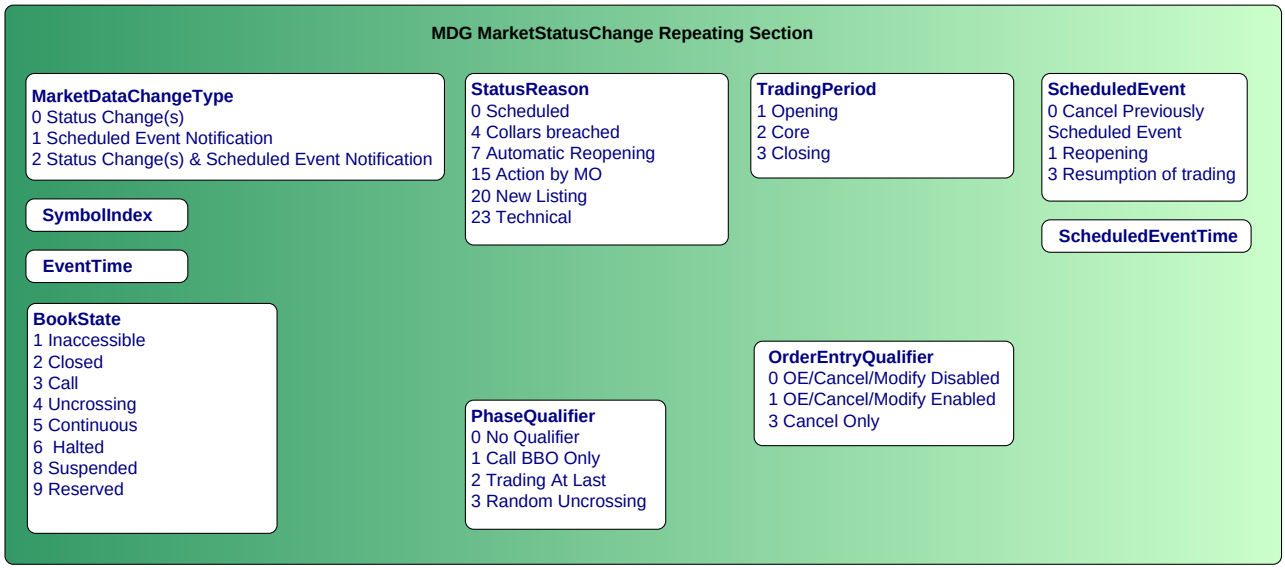
The Optiq MDG **MarketStatusChange** (1005) is common across Markets, including Cash, Warrants and off-book data publication. For all markets, the Market Status of an instrument can be determined using the following fields:

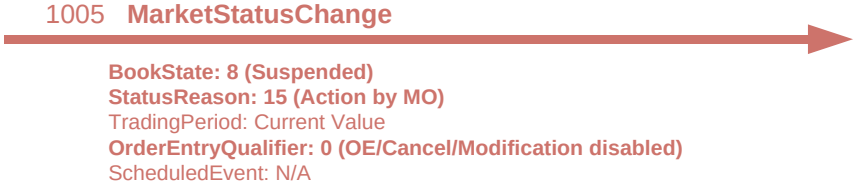
- **Instrument State**: Market State of the Instrument
- **Status Reason**: Instrument State origin
- **Trading Mode**: Specifics during a trading phase that do not impact the Instrument State
- **Trading Period**: indicates the trading period
- **Order Entry Qualifier**: Describes whether order entry is allowed for the instrument, and depends on Instrument State, Trading Mode and global availability
- **Scheduled Event**: Market Event notification
- **Scheduled Time**: Scheduled Event associated time if required

The possible Market Status values on Cash markets are as follows:



One of the main improvements of this message is that it always provides the full state of the instrument. The updated instrument state values will appear accordingly in the updated fields, and the unchanged values from the previous state will persist. Using this method, no interpretation as all required information is provided each time the message is sent.

In the following Market Status change example, an instrument is manually suspended by Market Operations with Order entry disabled:



In the following diagrams some values of the **MarketStatusChange** (1005) message are set to 'Current Value'. It means that the value is the same as the one sent in the previous **MarketStatusChange** (1005) message. In

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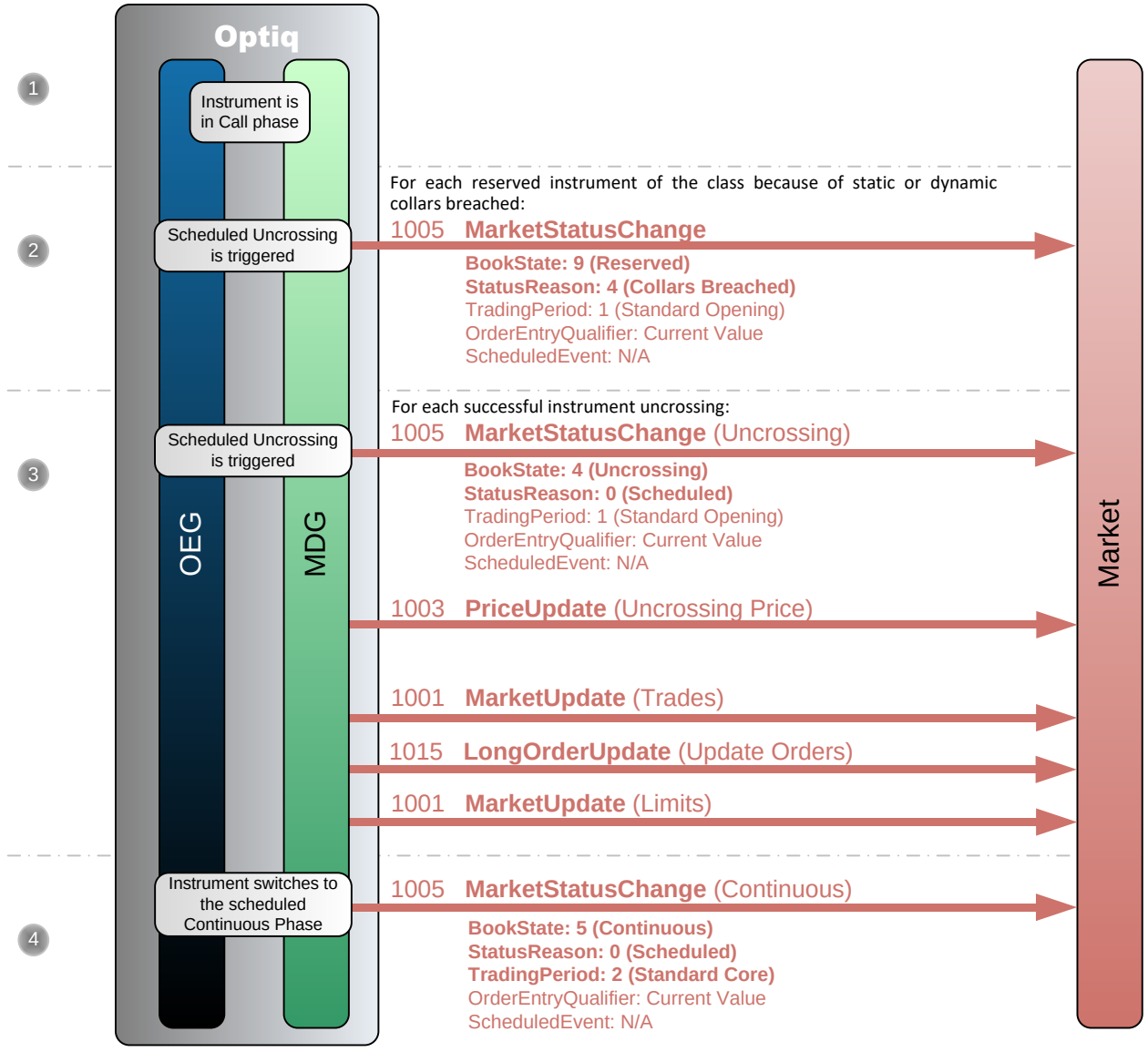
fact the value will be populated in the message, here they are set to 'Current Value' to highlight that previous values that are still valid are populated even if they have not changed.

3.7.1 Automatic Market Status Changes

3.7.1.1 Scheduled Uncrossing



① The instrument is in a Call trading phase as defined in the **TimeTable** and by the pattern associated to this instrument. (Please note that all the scheduled state changes are notified and described in the pattern of the instrument.)

② When the Uncrossing is triggered if the uncrossing price is outside of the collars (the uncrossing price is greater than the High Collar for example) the instrument is automatically Reserved and a **MarketStatusChange** (1005) message is disseminated to the market.

③ When the Uncrossing is triggered if the uncrossing price lies within the collars the uncrossing is performed and a public **MarketStatusChange** (1005) message is disseminated to the market.

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Note: In the case of a Blue Chip uncrossing, the *Trading Mode* value is '2' (Random Uncrossing).

Right after the status change a public **PriceUpdate** (1003) message is sent to the market with the uncrossing price and the quantity at which the uncrossing is performed.

For each trade generated a public **MarketUpdate** (1001) is sent for the trade along with a public **LongOrderUpdate (1015)** message to update the corresponding orders.

At the end of the uncrossing process a public **MarketUpdate** (1001) message is sent to update the values of each limit that has changed.

④ A public **MarketStatusChange** (1005) message is sent to the market to indicate that the instrument is now in a continuous phase.

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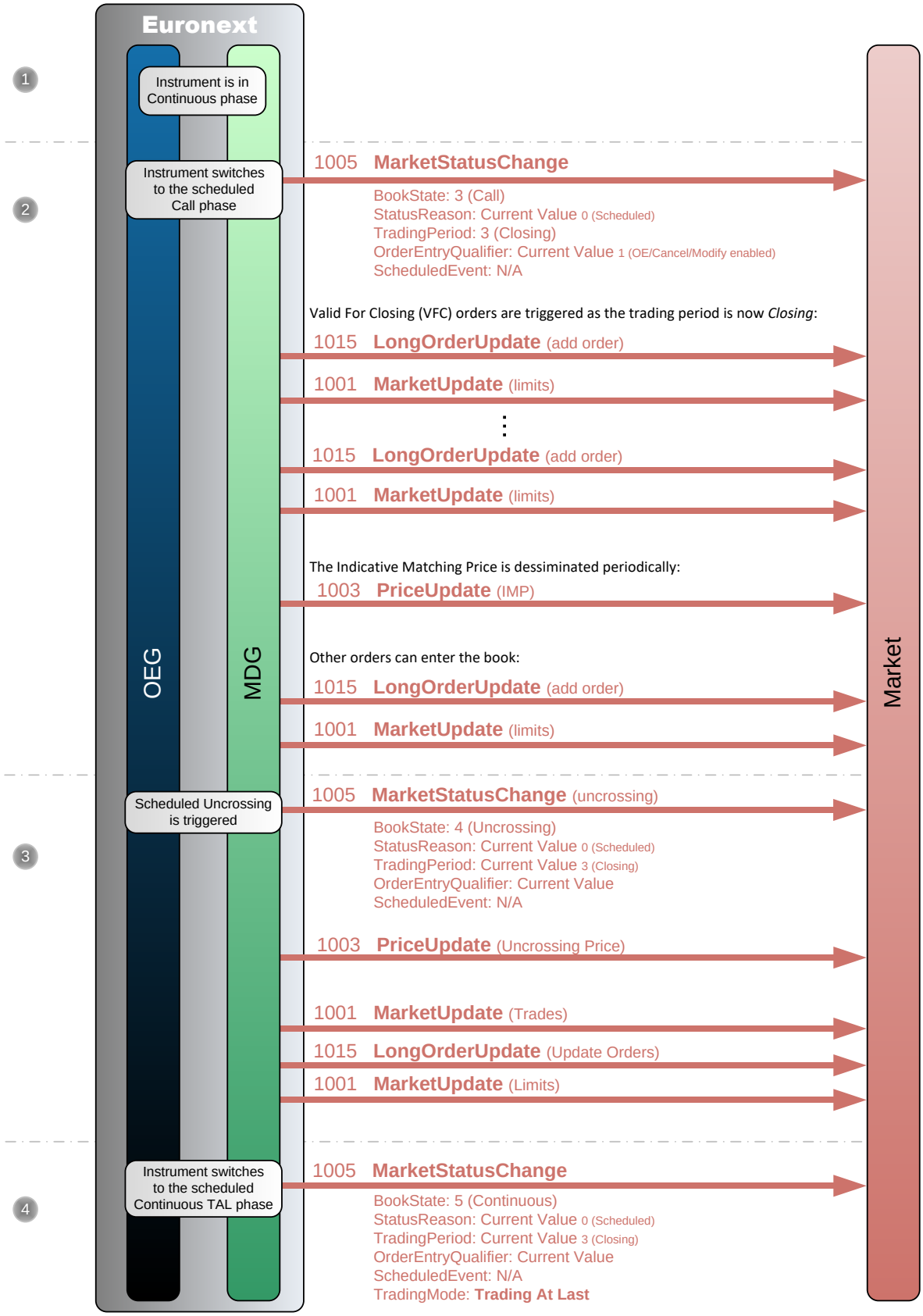
3.7.1.2 Scheduled Continuous TAL



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① The instrument is in a Continuous trading phase as defined in the **TimeTable** and by the pattern associated to this instrument. (Please note that all the scheduled state changes are notified and described in the pattern of the instrument.)

② When the instrument switches to the Call trading phase a public **MarketStatusChange** (1005) message is disseminated to the market.

As the trading period is now *Standard **Closing*** the VFC and VFU orders are triggered and enter the order book. For each order entering the book a public **LongOrderUpdate (1015)** to add the order is sent to the market along with a public **MarketUpdate** (1001) message for the limits.

During the Call phase the IMP is disseminated periodically with a public **PriceUpdate** (1003) message.

During the Call phase orders can be entered, modified and cancelled. It will affect the value of the IMP.

③ When the Uncrossing is triggered if the uncrossing price lies within the collars the uncrossing is performed and a public **MarketStatusChange** (1005) message is disseminated to the market.

Right after the status change a public **PriceUpdate** (1003) message is sent to the market with the uncrossing price and the quantity at which the uncrossing is performed.

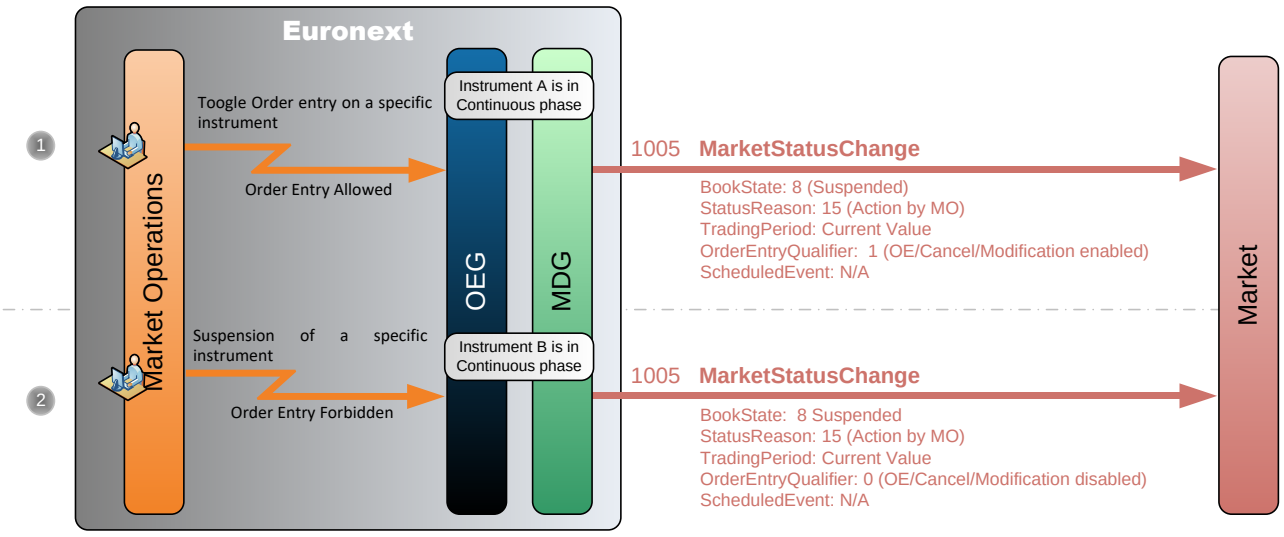
For each trade generated a public **MarketUpdate** (1001) is sent for the trade along with a public **LongOrderUpdate (1015)** message to update the corresponding orders.

At the end of the uncrossing process a public **MarketUpdate** (1001) message is sent to update the values of each limit that has changed.

④ A public **MarketStatusChange** (1005) message is sent to the market to indicate that the instrument is now in a continuous Trading At Last (TAL) phase.

3.8 Market Status Changes Due To Manual Intervention

3.8.1 Instrument Suspended by Market Operations



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① The instrument A is in a Continuous trading phase as defined in the **TimeTable** and by the pattern associated to this instrument.

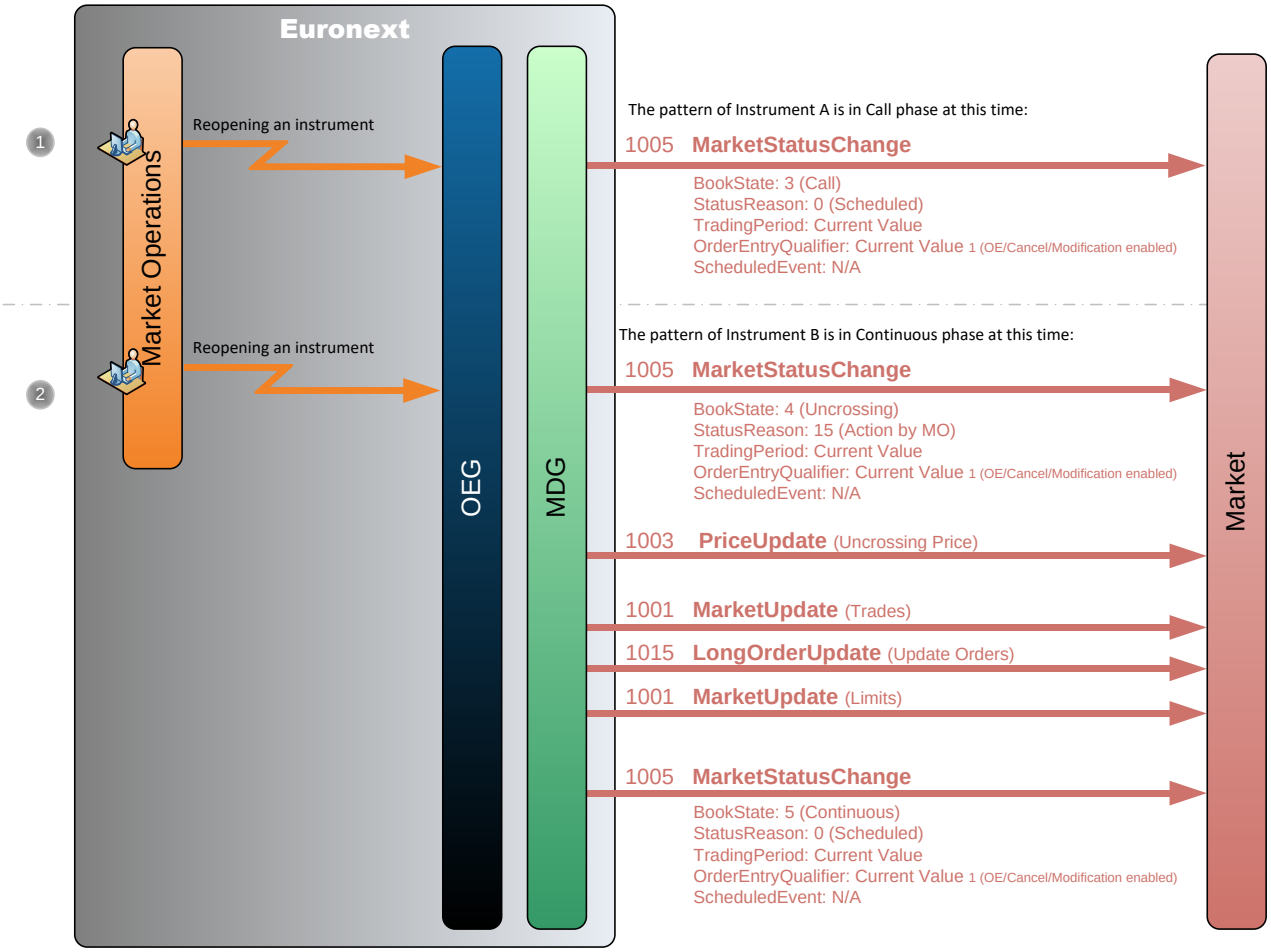
Market Operations suspends the instrument and let the Order Entry enabled, it is notified to the market by a public **MarketStatusChange** (1005) message.

② The instrument B is in a Continuous trading phase as defined in the **TimeTable** and by the pattern associated to this instrument.

Market Operations suspends the instrument and disables the Order Entry, it is notified to the market by a public **MarketStatusChange** (1005) message.

Note: The IMP is no longer disseminated if the phase was a Call phase, and no trading is possible in Continuous phase.

3.8.2 Instrument Reopened by Market Operations



① Market Operations reopens the instrument A, hence the instrument comes back to a Call trading phase as defined by its pattern at this time. It is notified to the market by a public **MarketStatusChange** (1005) message.

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② Market Operations reopens the instrument B, hence the instrument will come back to a Continuous trading phase as defined by its pattern at this time. Before coming back to Continuous an Uncrossing is performed.

When the Uncrossing is triggered if the uncrossing price lies within the collars the uncrossing is performed and a public **MarketStatusChange** (1005) message is disseminated to the market.

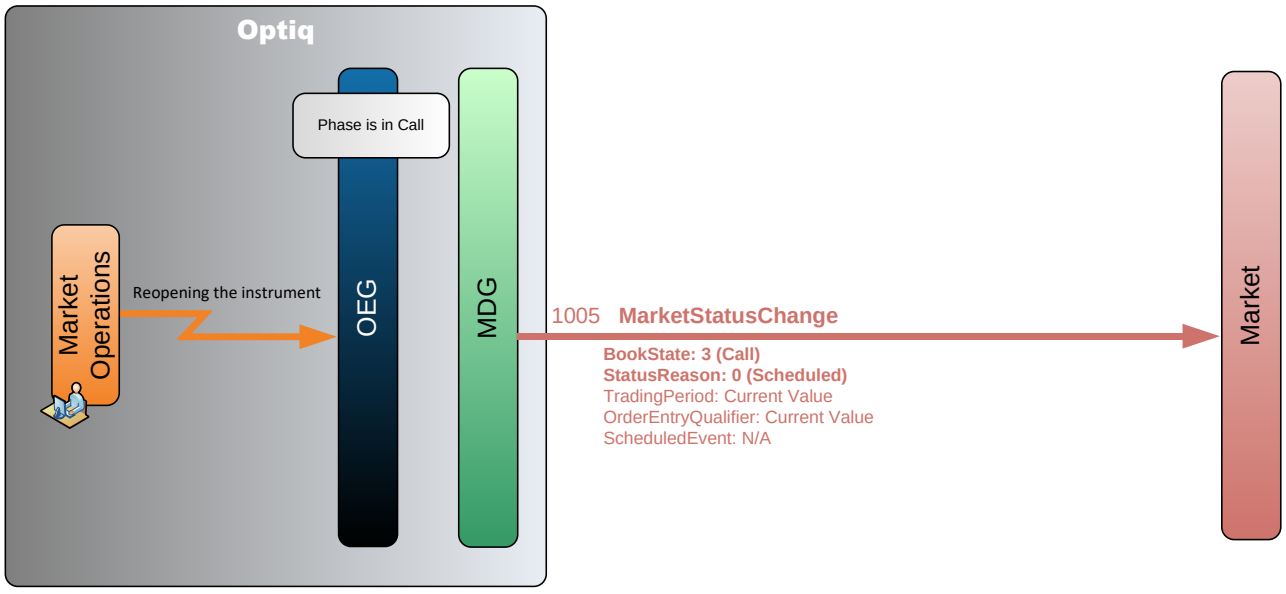
Right after the status change a public **PriceUpdate** (1003) message is sent to the market with the uncrossing price and the quantity at which the uncrossing is performed.

For each trade generated a public **MarketUpdate** (1001) is sent for the trade along with a public **LongOrderUpdate (1015)** message to update the corresponding orders.

At the end of the uncrossing process a public **MarketUpdate** (1001) message is sent to update the values of each limit that has changed.

When the uncrossing is fully performed the instrument switches to a Continuous trading phase. It is notified to the market by a public **MarketStatusChange** (1005) message.

3.8.3 Instrument Reopened in Call phase



Market Operations reopens a specific instrument that was previously suspended.

Optiq sends a public **MarketStatusChange** (1005) message to the market to indicate that the instrument has resumed the original scheduled phase (Call in this case).

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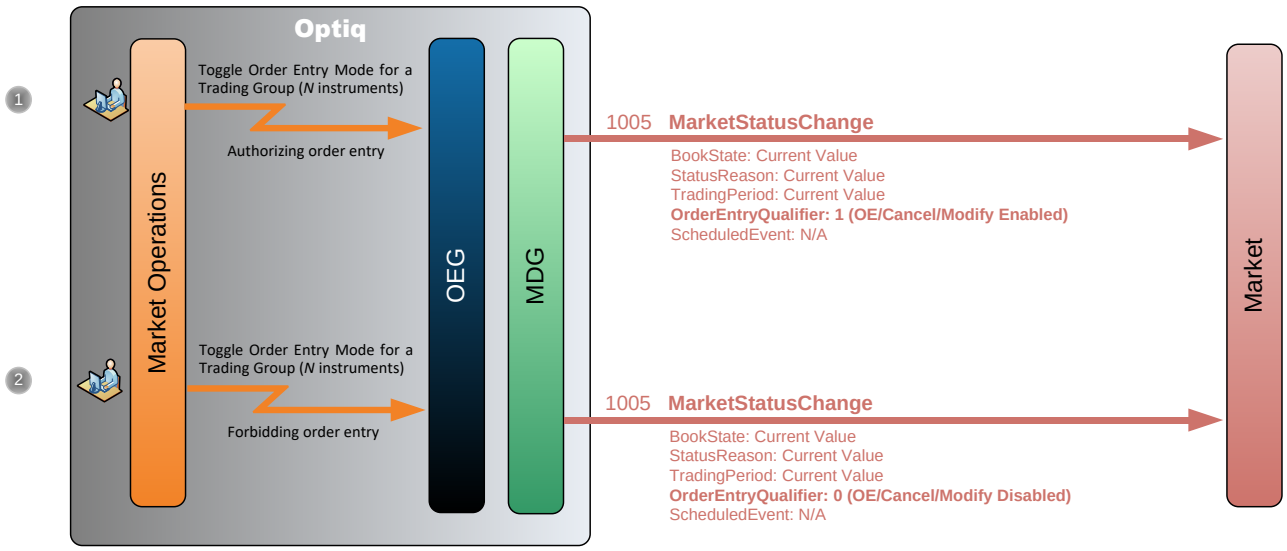
3.8.4 Market Operations Update Instrument Order Entry Mode for a Trading Group



① Market Operations updates order entry authorization for a Trading Group.
A public **MarketStatusChange** (1005) message is sent to the market for each instrument of the Trading Group to indicate that order entry is now authorized.

② Market Operations updates order entry authorization for a Trading Group.
A public **MarketStatusChange** (1005) message is sent to the market for each instrument of the Trading Group to indicate that order entry is now forbidden.

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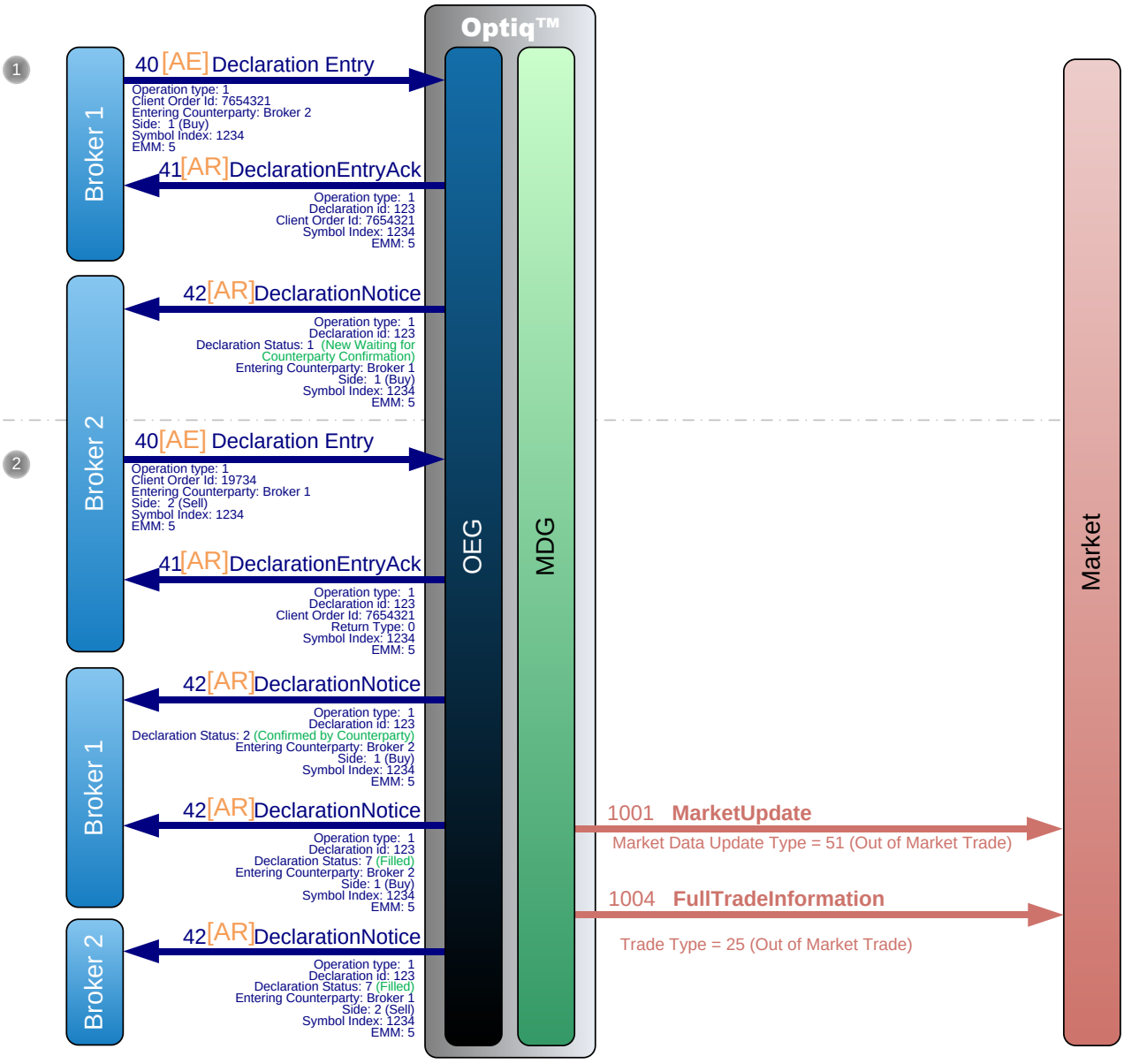
4. CASH ON EXCHANGE OFF BOOK

4.1 SUCESSFUL SINGLE SIDED DECLARATION

The diagram below illustrates the successful submission of a single sided declaration with Operation Type set to 1 = Declaration of a trade outside the book.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

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The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status "New, waiting for counterparty Confirmation".

② Broker 2 sends a private **DeclarationEntry** (40) message to confirm the declaration by entering a new Sell declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The entering declaration immediately matches the first declaration and OEG sends back a private a **DeclarationNotice** (42) to Broker 1 for the confirmation of its counterparty, and two private **DeclarationNotice** (42) messages to each broker for the execution.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the trade.

Notes:

- If the characteristics of the Declaration submitted by Broker 1 and the one submitted by Broker 2 match, then the **DeclarationEntryAck** (41) sent back to the Broker 2 contains the same Declaration ID as the one sent to Broker 1. All following **DeclarationNotice** (42) messages carry the same Declaration ID value.

- If the characteristics of the Declarations do not match, then the **DeclarationEntryAck** (41) sent back to Broker 2 gets a new Declaration ID, and the declaration is entered into the book as another "entering" declaration and remains in the system awaiting other potential matches.

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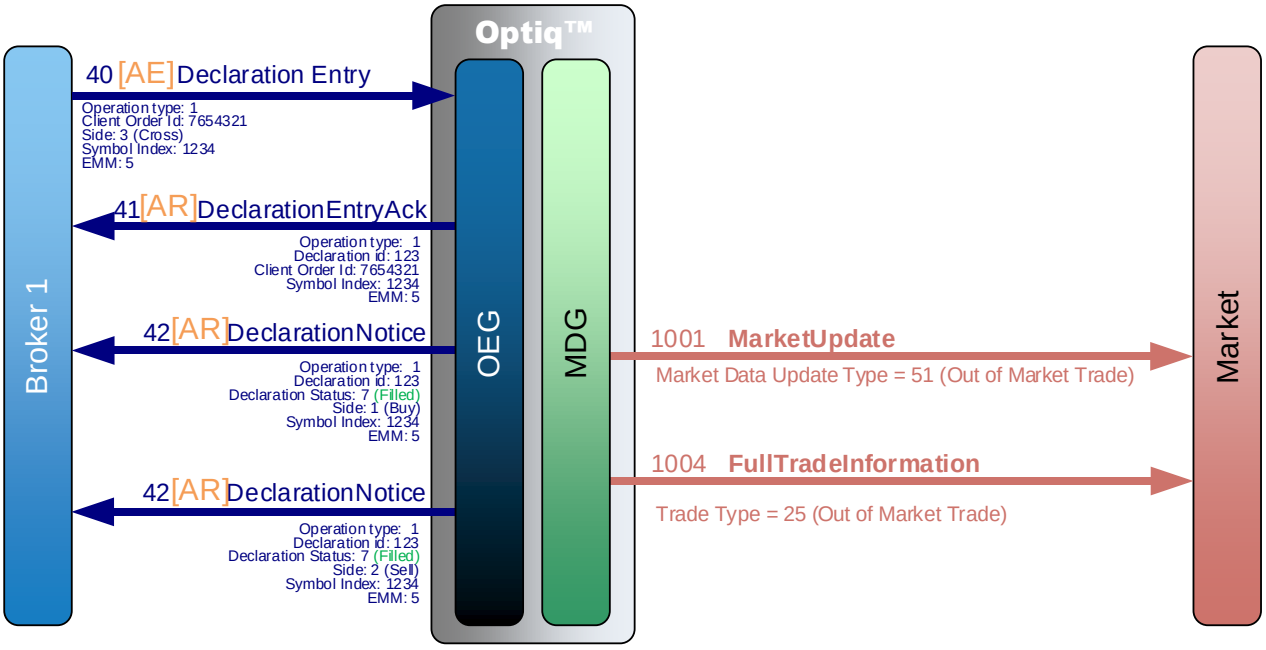
4.2 SUCESSFUL DUAL SIDED DECLARATION

The diagram below illustrates the successful submission of a dual sided declaration with operation Type set to 1 = Declaration of a trade outside the book.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Cross declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

Then OEG sends to Broker 1 two **DeclarationNotice** (42) message with the status “Filled” for each side of the Cross declaration.

Public **MarketUpdate** (1001) and **FullTradeInformation** (1004) messages are sent to the market for the trade.

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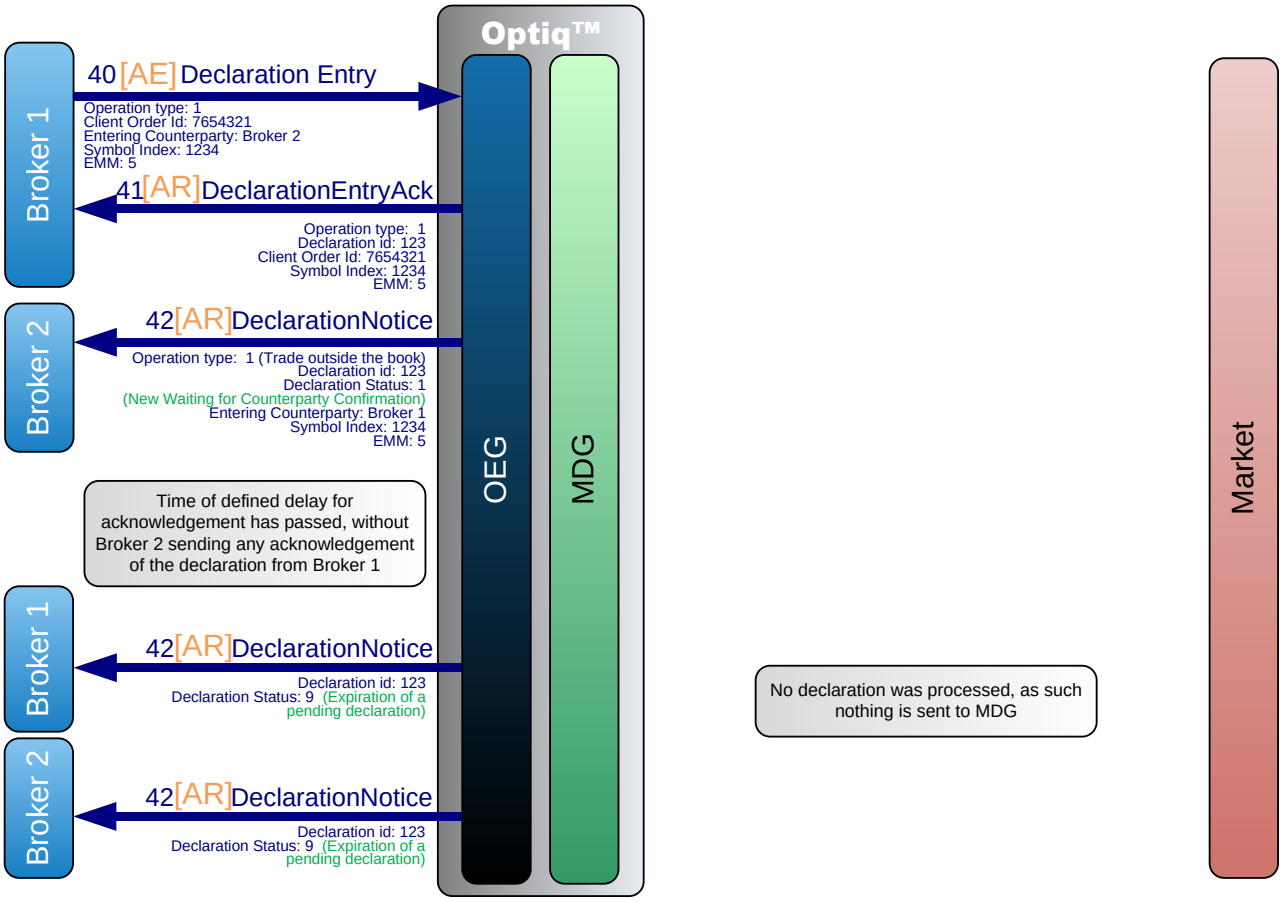
4.3 SUCESSFUL SINGLE SIDED DECLARATION EXPIRED

The diagram below illustrates the successful submission of a declaration with Operation Type set to 1 = Declaration of a trade outside the book.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status “New, waiting for counterparty Confirmation”.

② After the time of defined delay [1] has passed without a confirmation of the counterparty, the declaration is expired.

OEG sends two private **DeclarationNotice** (42) messages to each broker for the expiration.

[1] Configured at trading group level

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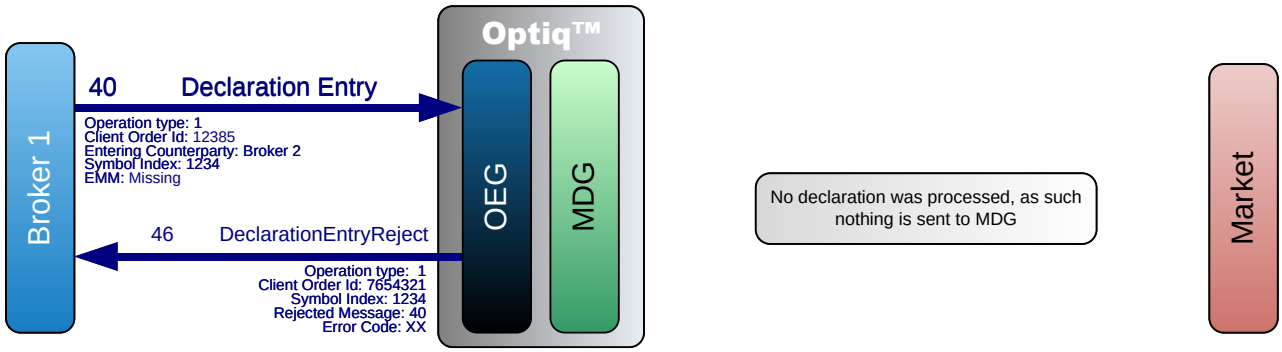
4.4 DECLARATION REJECTED

The diagram below illustrates the submission of a declaration with Operation Type set to 1 = Declaration of a trade outside the book that is rejected by the system. The behaviour is different between SBE and FIX, below there is a diagram for each one them.

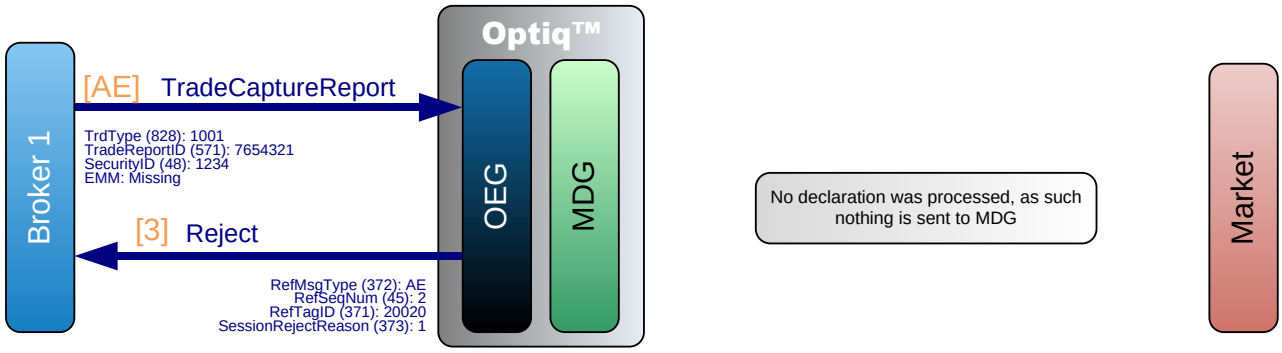
4.4.1 SBE



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new declaration.

OEG sends back a private **DeclarationEntryReject** (46) message to reject the declaration as a mandatory field (EMM) is missing.

4.4.2 FIX



① Broker 1 sends a private **TradeCaptureReport** (AE) message to enter a new declaration.

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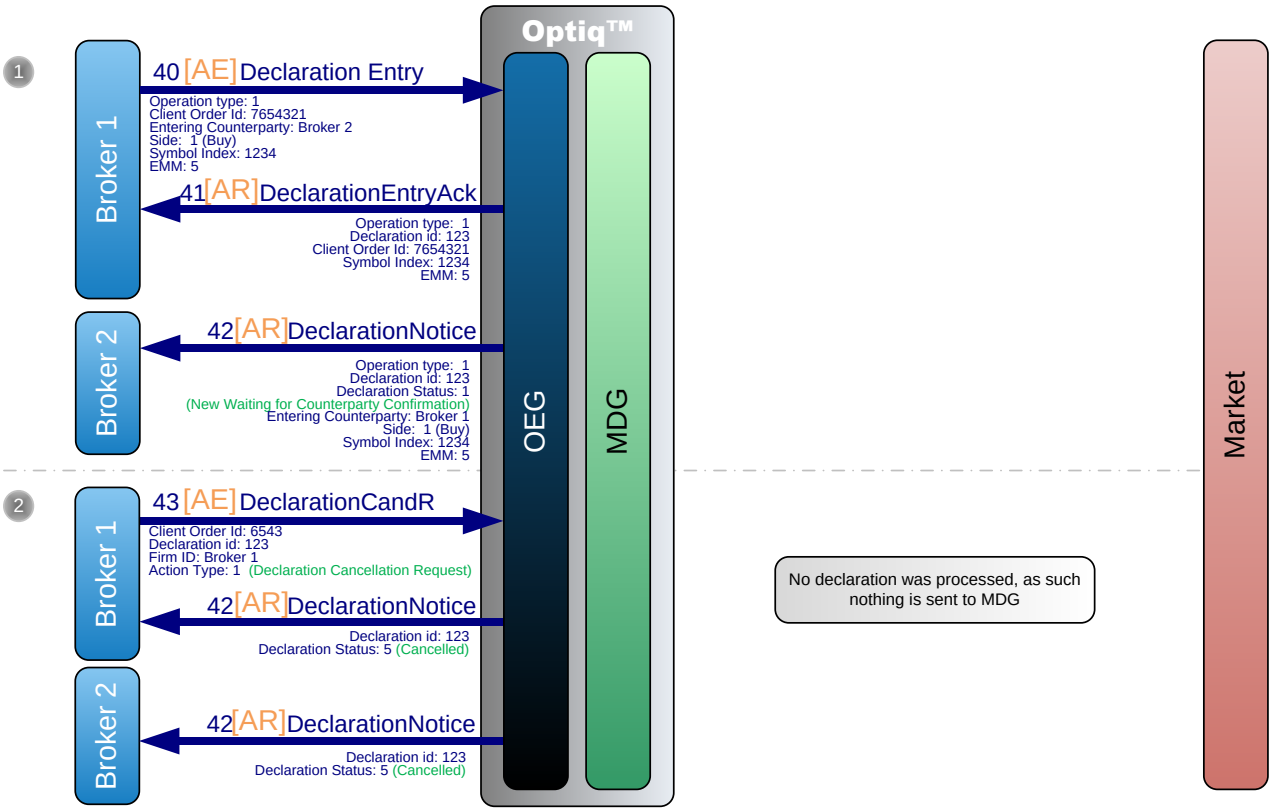
OEG sends back a private **Reject** (3) message to reject the declaration as a mandatory tag (20020 = EMM) is missing.

Notes:

- FIX Protocol contains an extra level of checks when compared to SBE, meaning, all syntax and data type validations are done upfront. A Reject (3) is used to reject all those issues and contains four tags that allow the user to identify the reason why the message is being rejected:
  - **RefMsgType (372):** provides the code of the message being rejected. It's filled with all the values available for MsgType (35) ;
  - **RefSeqNum (45):** provides the message sequence number of the message being rejected, available on the MsgSeqNum (34);
  - **RefTagID (371):** provides de tag why the message is being rejected;
  - **SessionRejectReason (373)**: provides the reason why the message is being rejected;

4.5 CANCELLATION OF A DECLARATION BEFORE MATCHING (BUY OR SELL)

The diagram below illustrates the cancellation of a declaration with Operation Type set to 1 = Declaration of a trade outside the book before it matches, meaning, before the counterpart confirms it.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

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OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status “New, waiting for counterparty Confirmation”.

② Broker 1 sends a private **DeclarationCancelRefusal** (43) message to request the cancellation of its declaration not yet confirmed by the counterparty.

OEG sends two private **DeclarationNotice** (42) messages to each counterparty for the cancellation of the declaration.

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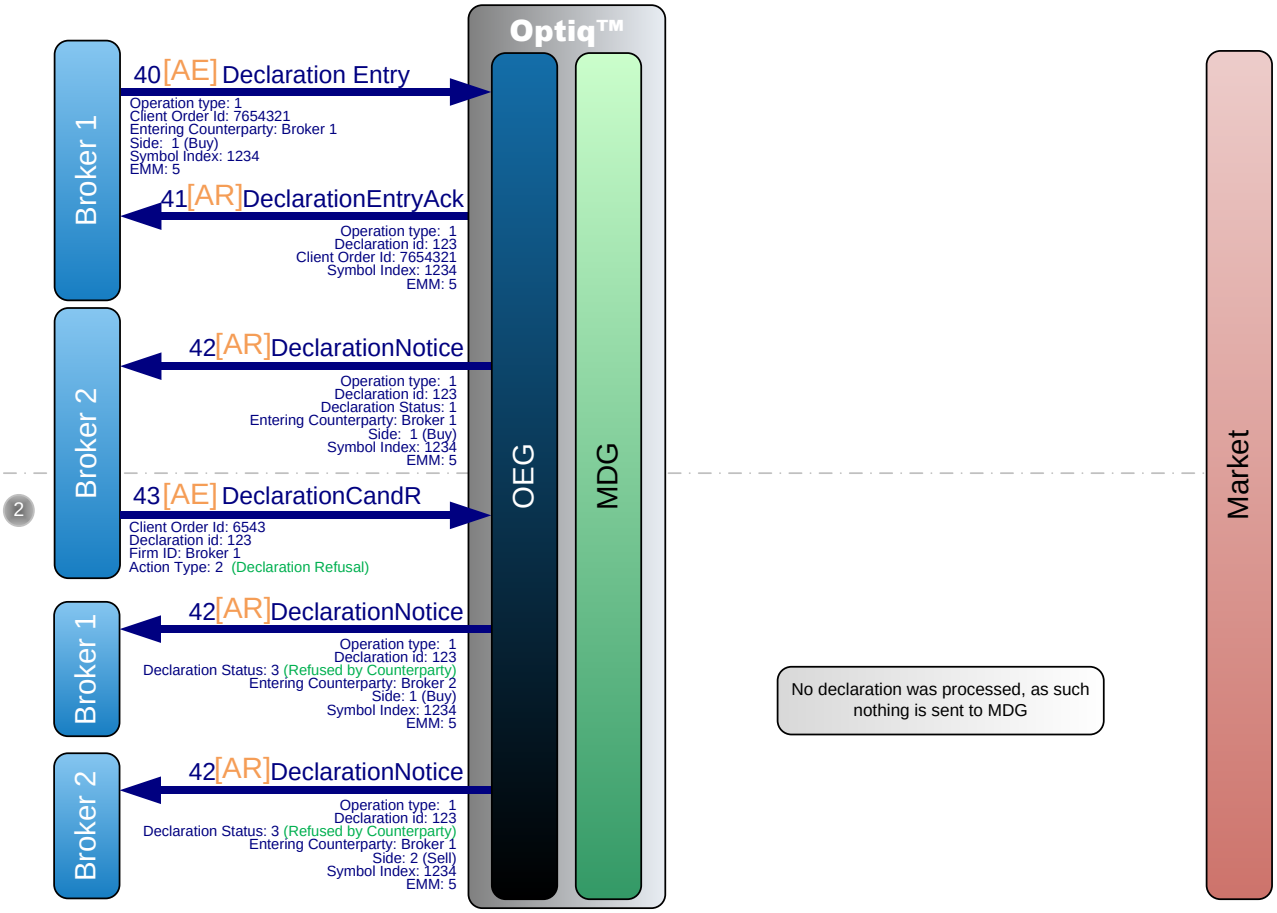
4.6 REFUSAL OF SINGLE SIDED DECLARATION BY RECEIVING BROKER

The diagram below illustrates the successful submission of a declaration with Operation Type set to 1 = Declaration of a trade outside the book not accepted by the Counterpart.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status “New, waiting for counterparty Confirmation”.

② In case Broker 2 is unwilling or for whatever reason unable to confirm the declaration, Broker 2 sends a private **DeclarationCancelRefusal** (43) message to refuse the declaration, with Action Type set to “Declaration Refusal”.

In this case OEG sends two private **DeclarationNotice** (42) messages to each broker for the refusal of the declaration.

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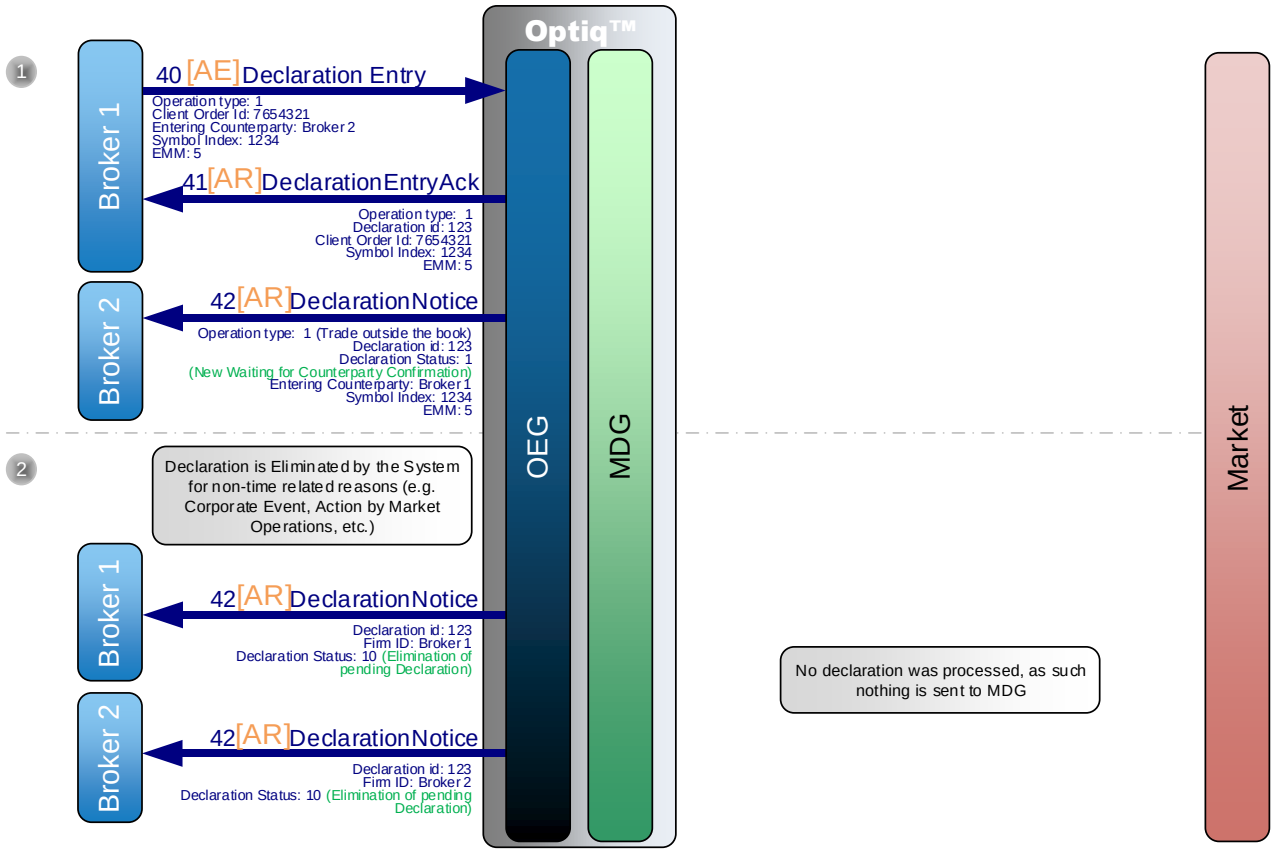
4.7 ELIMINATION OF DECLARATION BY THE SYSTEM

The diagram below illustrates the successful submission of a declaration with Operation Type set to 1 = Declaration of a trade outside the book that is eliminated by the system for some reason, e.g, as a consequence of a Market Operations action or when the Trading Session closes and there are declarations still waiting to be confirmed by the Counterpart.



① Broker 1 sends a private **DeclarationEntry** (40) message to enter a new Buy declaration.

OEG sends back a private **DeclarationEntryAck** (41) message to confirm the successful receipt and technical processing of the request.

The OEG sends to the counterparty, Broker 2, a **DeclarationNotice** (42) message with the status “New, waiting for counterparty Confirmation”.

② If before the time of defined delay has not yet passed a non-time related event may occur that would cause elimination of the declaration. Such an even could be, but is not limited to, occurrence of a Corporate Event, or an action by the Market Operations.

In this case OEG sends two private **DeclarationNotice** (42) messages to each broker for the elimination of the declaration.

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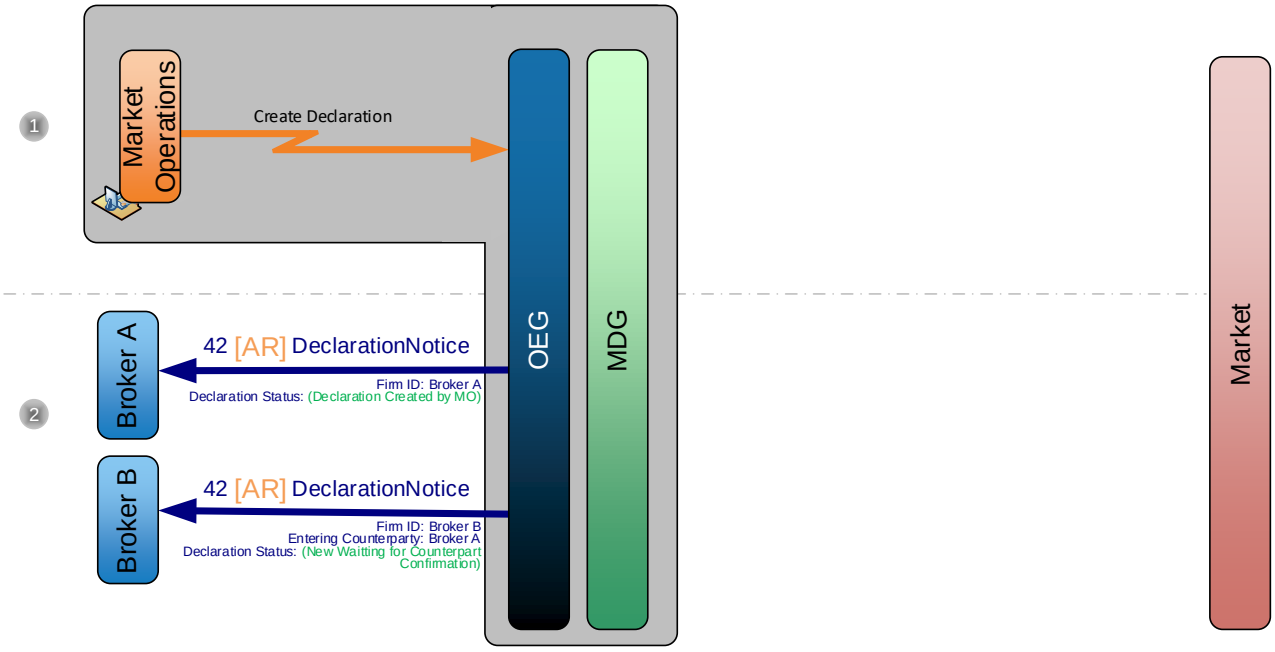
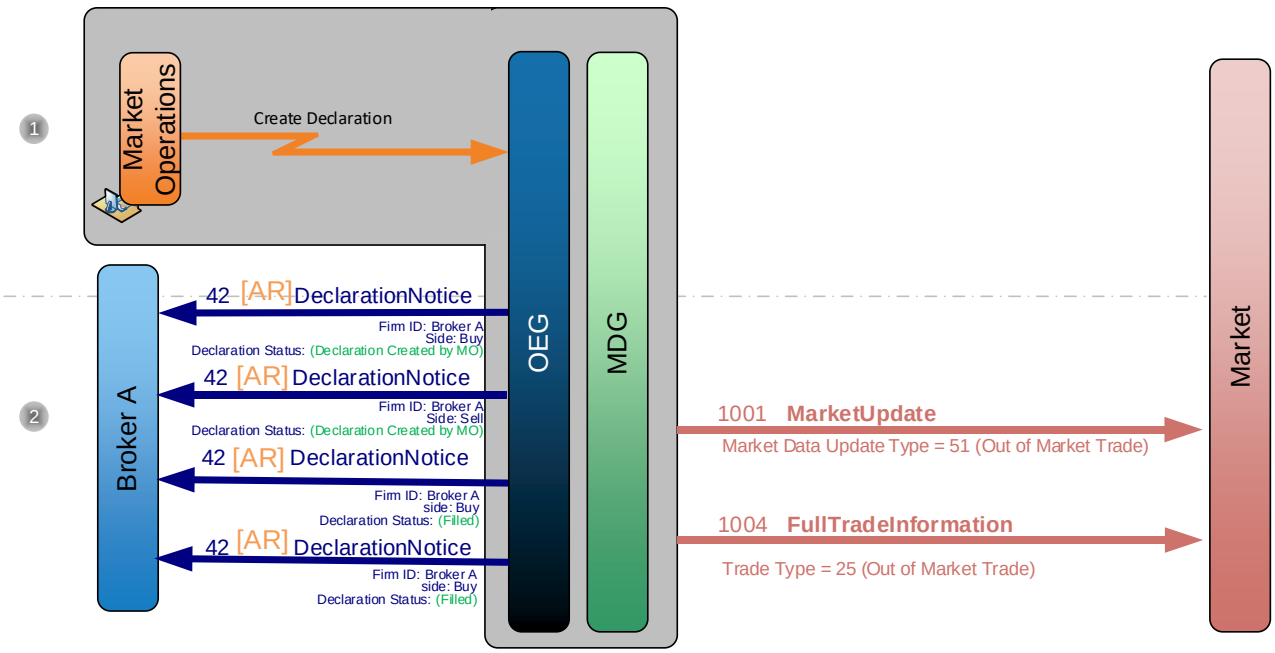
4.8 CREATE SINGLE SIDED DECLARATION BY MARKET OPERATIONS



① Market Operations creates a single sided declaration on behalf of a broker.

② Optiq sends a private **Declaration Notice** (42) (FIX AR) message for Broker A (requester of the declaration creation) and a private **Declaration Notice** (42) (FIX AR) for the Entering Counterparty (Broker B). No MDG message is sent.

4.9 CREATE DUAL SIDED DECLARATION BY MARKET OPERATIONS



① Market Operations creates a dual sided declaration on behalf of a broker.

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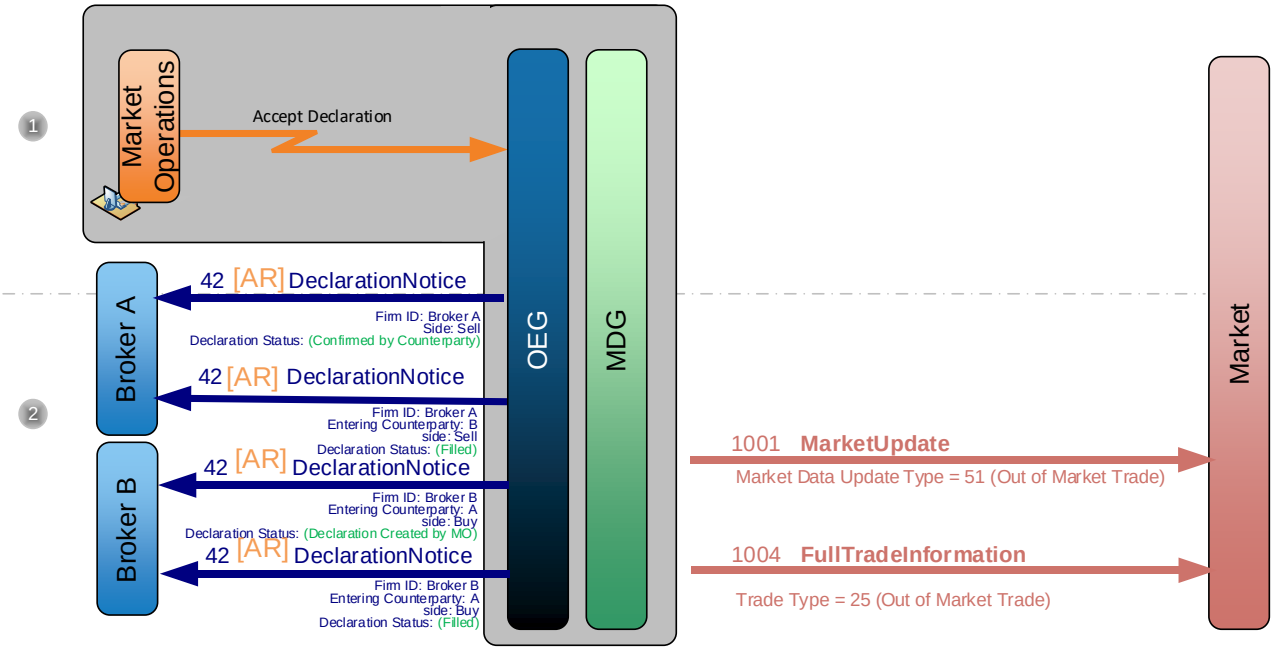
② Optiq sends two private **Declaration Notice** (42) (FIX AR) message for Broker A (requester of the declaration creation) to indicate the declaration was successfully created and two private **Declaration Notice** (42) (FIX AR), one per side, to communicate the matching. Regarding public messages, a **MarketUpdate** (1001) and **Full Trade Information** (1004) message are sent to communicate the trade.

4.10 ACCEPT DECLARATION ON BEHALF OF A MEMBER



① Market Operations accepts a declaration on behalf of a broker.

② Optiq sends one private **Declaration Notice** (42) (FIX AR) to indicate the declaration was confirmed and **Declaration Notice (42)** (FIX AR) to indicate the Declaration was created by MO and two private **Declaration Notice (42)** (FIX AR) to communicate the matching. Regarding public messages, a **MarketUpdate** (1001) and **Full Trade Information** (1004) message are sent to communicate the trade.

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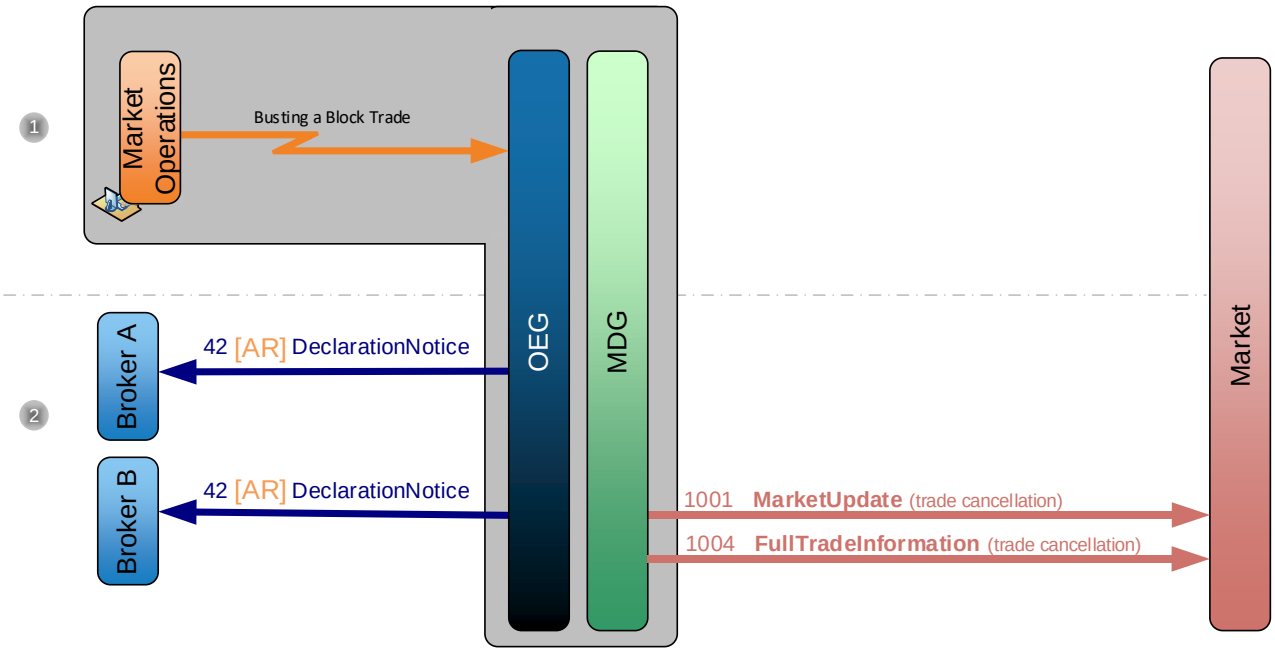
4.11 TRADE CANCELLATION BY MARKET OPERATIONS



① Market Operations busts a trade on behalf of two brokers.

② Optiq sends a private **Declaration Notice** (42) (FIX AR) message for the cancelled trade to the brokers who entered the declarations and a public **MarketUpdate** (1001) and **Full Trade Information** (1004) message to remove the cancelled trade.

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APPENDIX A: DOCUMENT HISTORY

DOCUMENT NAME	OPTIQ COMMERCIAL KINEMATICS SPECIFICATIONS
PROJECT NAME	
LOCATION	
VERSION NUMBER	1.2.4

DOCUMENT HISTORY

REVISION NO./ VERSION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0.0	16/03/2018	ITS – BA Team	First Release
1.1.0	28/03/2018	ITS – BA Team	First Release- Reviewed
1.2.0	05/04/2018	ITS – BA Team	**The following Sections have been updated:** - **1.2.3 Cash On Exchange Off Book:** Contains the list of all Private and Public messages for Block Trade - **4. Cash On Exchange Off Book:** Contains all kinematics regarding Block Trade **The following Sections have been Removed:** - **2.8 Indicative Price Limits Inputs:** ○ 2.8.1 Valuation Price by Liquidity Provider ○ 2.8.2 AIP (Alternative Indicative Price) using Member Firm Price
1.2.1	19/10/2018	ITS – BA Team	**The following Sections have been updated:** - **4.9 Create Dual Sided Declaration by Market operations** - **4.10 Accept Declaration on Behalf of a member**
1.2.2	19/12/2018	ITS – BA Team	**The following Diagram has been updated:** - 4.7 Elimination of a Declaration by the System: Add Declaration Status value;
1.2.3	24/04/2019	ITS – BA Team	**The following Sections have been added:** - **3.1.13 Breaching Ownership Limit** - **3.1.14 Breaching Short Selling Limit**
1.2.4	21/01/2020	ITS – BA Team	**The following Sections have been adjusted:** - **3.1.13 Breaching Ownership Limit:** removal of Ack message prior to Reject message - **3.1.14 Breaching Short Selling Limit:** removal of Ack message prior to Reject message

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ملحق (11)

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Author

Euronext

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INTRODUCTION

Drop Copy is a service, providing near real-time copies of trade reports & order messages, usually used by members for risk management, back-offices and compliance teams.

Clients require a dedicated connection to receive Drop Copy messages, which can be setup with configuration that fits their needs.

The scope of data in Drop Copy could provide client messages for various (or all of their) Logical Accesses, for one, or across different Optiq Segments.

This version of the document covers activity on the Cash market only.

Note:

This document is provided for informational purposes only, and should be consulted alongside its associated documents, as outlined below.

GLOSSARY

This section provides a list of some terms & abbreviations commonly used in this document. Please note that some of these terms are described in more details in the dedicated sections within this document or in the associated Optiq specifications documents.

- **Order Entry Gateway (OEG):** is the software that manages the access for exchanges' clients, and acts as the private interface between the clients and the Optiq matching engine.
- **Market Data Gateway (MDG):** is the software that provides high-speed, real-time market data (public messages) for the Exchange's markets.
- **Matching Engine (ME):** is the software that manages the trading services for the Exchange's markets.
- **Optiq Segment:** defines a universe of instruments habitually sharing common trading properties. An Optiq Segment can contain one or several asset classes. An Optiq Segment access is setup through a Logical Access.
- **Partition:** is a technical subdivision of an Optiq Segment. An Optiq Segment may be comprised of at least one or several partitions, physically independent one from another, but connected to each other within the context of the Optiq Segment. Instruments may move from one partition to another within an Optiq segment.
- **Logical Access:** is an OEG (Order Entry Gateway) entry point, setup for clients to connect to a single Optiq Segment, containing the technical configuration for the client's connectivity. Multiple logical accesses can share the same SFTI line. Individual Logical Accesses are required for connection to the trading OEG and the Drop Copy gateways.
- **OE Session:** the individual physical connection, to a single Partition. A single Logical access may have as many OE sessions as there are partitions in the Optiq segment. The OE sessions connectivity rules are different for the OEG and Drop Copy gateways.

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- **Central Order Book (COB)**: Optiq Trading Platform's order book, managed in Optiq, in which all submitted orders for on-exchange, on-book handling and any modifications thereto are held until matched, expired or withdrawn.

ASSOCIATED DOCUMENTS

The following list of the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- Optiq Commercial OEG Client Specifications FIX 5.0
- Optiq Commercial OEG Client Specifications SBE
- Optiq Commercial Kinematics Specifications
- Optiq Commercial Error List
- Optiq Commercial File Specifications

WHAT'S NEW?

Version	Change Description
1.1.4	**The following field has been updated:** ○ NestedPartyID (524) and PartyID (448) size was increased from 11 to 16;

NOT APPLICABLE / FUTURE USE

In preparation for various functionalities expected to be implemented in the future on Optiq a number of messages and fields were added and flagged "For Future Use".

Details of functionalities flagged in the specifications as for 'Future Use' or 'Not Applicable [N/A]' are provided for information purposes only, and may change significantly until such time as the finalized specifications for the relevant service are communicated to clients.

The associated messages and effective use of fields will not be technically supported. Use of these fields in inbound messages will lead the message to be rejected by the system.

This behavior applies to:

- **Fields** flagged as 'For Future Use', 'Pending Regulatory Approval' or 'Not Applicable [N/A]';
- **Values** flagged with '[D]';

Note: Fields and Values for future use or not applicable, in the messages structures, are represented in *italic,*

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grey and with [N/A] preceding the field description.

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1. FUNCTIONAL OVERVIEW

Drop Copy can only be used to receive messages. A Drop Copy connection cannot be used to submit any other trading and trading-related commands or to perform any other operation on the market.

The data provided via Drop Copy is based on the same data that is provided via regular client Order Entry session / private messages, however is provided separately to allow for:

- use a different network / connectivity bandwidth from that used by the private order entry messages used for trading purposes
- protect from inadvertent provision of commands, as it doesn't allow for order & command data entry, but only allows for receipt of events that have occurred on the market for follow-up purposes
- grouping of data from various connections a client may have on the market into a single source of data via a drop copy connection
- simpler integration, as only a limited number of messages are provided, and all messages provided are always provided in FIX 5.0 protocol

1.1 MAIN FUNCTIONAL FEATURES OF THE SERVICE

- Drop Copy service is provided in FIX 5.0 protocol
- For the Cash markets these services in Optiq are provided for Order and Trade messages using the FIX **ExecutionReport** (8) message for COB and **TradeCaptureReportAck** (AR) message for Block Trade.
- Clients will have the ability to select the scope of instrument and Member code activity that their Drop Copy access will receive. On creation or modification of configuration of the individual Drop Copy connections clients may select:
  - One or more Optiq Segments
  - Firm ID (Member Code))
  - Logical Access
  - Type of Messages to receive
- If desired, clients may order multiple Drop Copy logical accesses

♦ Selection of Optiq Segment

Clients may choose to assign to their Drop Copy logical access one or more Optiq Segments or Services on which they have trading rights, or in the future, are setup as the Risk Manager. As such a single Drop Copy logical access can receive messages from multiple segments of Optiq (cross-segment).

The following Optiq Segments are available for selection:

- Equities

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- Fixed Income

♦ Member Code (or Firm ID)

A Drop Copy logical access may be assigned a member code (or Firm ID) with which the client is setup to trade on the Exchange markets, or which they are identified as managing (e.g. in their role of Risk Manager).

In case a single legal entity possesses multiple member codes (Firm IDs), or if those member codes are managed by the same Risk Manager, a single Drop Copy logical access can be setup to receive data for multiple member codes.

For maximum flexibility, data for the same member code may be setup (and provided) to multiple different Drop Copy logical accesses.

For Example: A back-office handling a specific member code may setup a Drop Copy access, and the same member code may be assigned to a Drop Copy access for the Risk Manager following that member code)

♦ Logical Access

A Drop Copy logical access is assigned at least one Trading (OEG) Logical access that belongs to at least one of the member codes setup for that Drop Copy logical access.

A single member code may trade on Exchange markets with multiple Logical accesses, either for back-up and reduction of operational risk purposes, or when accessing multiple segments.

- The default setup for the Cash markets Optiq Drop Copy logical access is to assign (and receive data for) all Trading (OEG) Logical Accesses setup for that member code
- Information for a single Trading (OEG) Logical access, or all Trading (OEG) Logical accesses belonging to a member code, may be setup to be sent to multiple different Drop Copy logical accesses.
- If required, clients could choose to segregate their Drop Copy connections to receive information for a single Trading (OEG) Logical Accesses, a sub-set, but not all trading Logical Accesses, per Drop Copy account.

  For Example: A Sponsored Access client of a member firm A may request a Drop Copy logical access for their own activity performed under a dedicated trading logical access, at the same time back-office handling all activity of that member firm A may setup a separate Drop Copy logical access which will receive data for all activity, including that of the Sponsored Access client).

♦ Type of Messages

Clients will be able to choose in the configuration of their Drop Copy Logical Access the type of messages they'd like to receive, from the list below:

- Order messages from the Central Order Book (COB);

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- Trade messages from COB [default service];
- Block Trade for filled declarations or cancelled trades between declarations

The message types listed above could be combined to be received by a single Drop Copy Logical Access.

For more details on the events covered in scope of messages sent via Drop Copy for the various levels of service identified please refer to the dedicated section within this document.

1.2 DETAILS OF THE MESSAGE TYPES

♦ Order Messages from COB

The Order messages in Drop Copy service provides clients with a copy of orders submitted by the client to the segment(s) selected.

- If the client chooses to receive either order messages only, or both trade and order messages, they'll receive copies of acknowledgement, triggering, modification and cancellation of orders using the FIX **ExecutionReport** (8) messages.
  - Please note that cancellation of orders, with validity type of GTD / GTC /GTM that are eliminated for the end of the previous session, and those eliminated due to Corporate Events will be sent in the Drop Copy at the start of the next trading session, with the field OrdStatus (tag: 39) set to value 3 (Done for Day)
- The scope of order copies sent will be defined by the member code(s), trading (OEG) Logical access(es) and/or Optiq Segment(s) assigned & authorized for the Drop Copy Logical access.
- *Drop Copy ExecutionReport (8) messages are not generated for LP Quote submissions, however corresponding messages are sent in case such submission matches and generates a trade.*

♦ Trade Messages from COB [Default Service]

Drop Copy service provides clients with a copy of their COB trades. This is the default level of service for Trade messages.

- If the client chooses to receive trade messages only, or both trade and order messages, they'll receive copies of trade confirmation messages using the FIX **ExecutionReport** (8) message.
- The scope of trade copies sent will be defined by the member code(s), trading (OEG) Logical access(es) and/or Optiq Segment(s) assigned & authorized for the Drop Copy Logical access.
- *As for any other trades, Drop Copy **ExecutionReport** (8) messages are sent (in scope of the Trade messages) when an LP Quote is matched and generates a trade.*

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♦ Block Trade Messages

Upon specific request, Client's Drop Copy access may be setup to receive copies of the Trade reporting messages. In scope of Block Trade messages Drop Copy connection would transmit a copy of the **TradeCaptureReportAck** (AR) messages.

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2. TECHNICAL OVERVIEW

2.1 CONNECTIVITY TO DROP COPY

To receive Drop Copy (DC) messages client should connect to the gateway(s) dedicated to Drop Copy services. More information on DC connectivity is provided below.

♦ Connection Information

To connect to the Drop Copy service clients require a dedicated DC Logical Access which can be obtained using existing Connectivity request forms. Please see section “Subscribing to the Service”.

With the creation of this DC logical access clients will also be provided with the Drop Copy ID, and the associated connectivity information to which they are to connect.

As Drop Copy service may provide cross-segment information, connectivity information for the service will be included in the Standing data file, in the section associated to connectivity. For more details on the standing data files clients should review the *Optiq Commercial File Specification* document.

Standing data files may contain connectivity information for multiple Drop Copy IDs, which represent different Drop Copy connectivity information. Clients must use only the connectivity information for the Drop Copy ID they were assigned. Any attempts at connecting to other Drop Copy IDs will be rejected.

♦ Drop Copy Logon & Administrative Messages

To receive Drop Copy messages clients first need to successfully connect to the Drop Copy gateway, by sending a **Logon** (A) message.

- Upon successful logon client will receive a **Logon** (A) message providing the sequence number of the last message received from the client
- In case of an unsuccessful logon clients will receive a **Reject** (3) message

For Drop Copy client should set the field “Exchange ID” with the Identifier of the exchange, defined in PE DB. For more details on the standing data files clients should review the *Optiq Commercial – Persistence Engine – Referential Information* document

- SBE: In the field *Exchange ID* provided in outgoing messages
- FIX: For fields *TargetCompID* (Tag: 56) and *SenderCompID* (Tag: 49) as needed in incoming and outgoing messages

Heartbeat (0) / **TestRequest** (1) for the Drop Copy gateway behave in a similar manner to the one of the Optiq trading OEGs. As with the trading OEGs the delay of inactivity parameter for the Drop Copy gateway is provided in the connectivity specifications document.

Drop Copy gateway is available only for sending copies of messages to clients, and not for any instructions to be submitted to the Exchange. As such some of the fields in the **Logon** (A) message (listed below) are

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not relevant or applicable when connecting to the Drop Copy Gateway, and if provided will be handled as described below.

As limited number of messages is received by the Drop Copy gateway from the clients, in order to maintain their Drop Copy connection active, just like on the trading OEG, it is expected that clients' system either sends **Heartbeat** (0) messages within the pre-defined delay of inactivity interval, or replies to the Exchange's **TestRequest** (1) messages.

The overview below of the fields used in the administrative messages provides more details on their use by the Drop Copy gateway:

Field Name	FIX Tag	Use in Drop Copy
HeartBtInt	108	While FIX allows clients to set a value for Heartbeat interval, in Optiq this value will be restricted to the maximum allowed by the exchange, and made available in configuration of the segment.
EncryptMethod	98	Always set to zero (0)
OEPartitionID	21019	Field used, and must be specified with OE Partition ID setup for the Drop Copy gateway ID. If not provided, or provided with an incorrect Drop Copy gateway ID – Logon will not be accepted.
LogicalAccessID	21021	Field used, and must be specified with the Logical Access ID setup for the Drop Copy connection.
NextExpectedMsgSeqNum	789	Mandatory to be provided. The field always indicates the sequence number of the next message the client is expecting to receive from the Drop Copy gateway. For the first logon of the day the field must be set to one (1).
Queueing Indicator	21020	Mandatory to be provided and while it won't be functionality used for Drop Copy the value provided in the field is must be set to one of the possible values for this field as described in the FIX specifications.
DefaultApplVerID	1137	Mandatory to be provided and should be set by default to 9 = FIX50SP2
Software Provider	21050	Optional field in which clients may provide details of the software provider used for their solution. This field may be used by the exchange for improved troubleshooting and service purposes.

ResendRequest (2) and **SequenceReset** (4) behavior in Drop Copy gateway follows the same behavior as for a trading OEG. The handling of the main cases for these messages is provided in the *Optiq Commercial OEG Client Specifications - FIX 5.0 Interface* document.

♦ Throughput Limits

The messages sent via Drop Copy are provided in real-time, as events on the trading platform occur.

Drop copy logical accesses do not have a throughput limit. Inbound throttling is not applicable to the Drop copy connections and outbound message are not subject to throttling and will be sent as soon as processed.

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2.2 DATA COMPATIBILITY BETWEEN PROTOCOLS

Clients are urged to carefully review the guidelines of format identified in the message specifications for both SBE and FIX on format in which data should be sent in private messages, to ensure the most appropriate correct interpretation of the data.

2.3 SCOPE OF EVENTS & ASSOCIATED MESSAGES

This document provides details of the Drop Copy service provided to the Exchange Members covered by Optiq.

Via the Drop Copy service clients receive messages associated only to the application messages (e.g. New Order, Fill) exchanged through the trading Order Entry gateways / partitions.

Administrative messages [e.g. Logon (A)] are only used to technically connect to the Drop Copy service. Sending to the clients of the copies equivalent to the administrative messages from the trading Order Entry gateways / partitions is not in scope the Drop Copy service.

When setting up their Drop Copy connection clients may choose the type of application messages to receive via the service. Sections below provide more details on the possible scope associated to the selection of messages.

LP Quote submissions are not sent via the Drop Copy (in the scope of the Orders), but are generated when quotes trade (in the scope of the Trades).

♦ Order Messages for COB

For the Order related Drop copy client will receive all order related messages which are submitted to COB.

The events (and associated SBE messages) that trigger sending of **ExecutionReport** (8) for orders are:

- An Acknowledgement of a new order submission.
- Triggering or conversion of previously submitted orders (*e.g. Stop*)
- Notification generated by client's use of **Ownership Request** (18) / (FIX U18) message
- Cancellation of an order
  - Please note, that GTD / GTC /GTM orders eliminated for the end of the previous session, and those eliminated due to Corporate Events will be sent in the Drop Copy at the start of the next trading session, with the field OrdStatus (tag: 39) set to value 3 (Done for Day)
  - Please note that GTD, GTC, GTM orders purged due to breach of Ownership, Credit or Short Selling Limit or due to the suspension of an Investor or Clearing Account will be sent in the Drop Copy at the start of the next trading session, with the field OrdStatus (tag: 39) set to value 4 (Cancelled) and ExecType (tag: 150) set to x = Order Cancelled due to breach of Ownership Limit or y = Order

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Cancelled due to breach of Credit Limit or z = Order Cancelled upon CSD request or B = Order Cancelled due to breach of Short Selling Limit;

- Modification of an order

Mapping of SBE and FIX messages and values are provided in the table below for these various cases.

Event	SBE			FIX (ExecutionReport (8))	
	Message	Field	Value	ExecType (150) Value	OrdStatus (39) Value
Acknowledgement of a new order submission	Ack (03)	Ack type	0 = New Order Ack	0 = New	0 = New
	Ack (03)	Ack type	2 = Order Creation By Market Operations	i = Order Creation By Market Operations	0 = New
Triggering or conversion of previously submitted orders	Ack (03)	Ack type	3 = Stop Triggered Ack [C]	L = Triggered or Activated by System	S = Stop Triggered Ack
	Ack (03)	Ack type	5 = Refilled Iceberg Ack [C]	e = Refilled Iceberg Ack	0 = New
	Ack (03)	Ack type	6 = MTL Second Ack [C]	L = Triggered or Activated by System	T = MTL Second Ack
	Ack (03)	Ack type	14 = Iceberg Transformed to Limit due to Minimum size [C]	h = Iceberg Transformed to Limit due to Minimum size	0 = New
	Ack (03)	Ack type	16 = VFU/VFC Triggered Ack [C]	L = Triggered or Activated by System	Q = VFU VFC Triggered Ack
Notification generated by client recovery messages	Ack (03)	Ack type	15 = Ownership Request Ack [C]	k = Ownership Request Ack	I = Order Status
Cancellation of an order	Kill (05)	N/A	N/A	4 = Cancelled	4 = Cancelled
Modification of an order	Cancel Replace (06)	N/A	N/A	5 = Replaced	5 = Replaced

♦ Trade Messages for COB [Default Service]

For the Trade related Drop copy client will receive all trade execution messages from COB.

The trading events that trigger sending of **ExecutionReport (8)** messages for trades are:

- Trade execution
- Cancellation of a Trade (Trade Bust)

Mapping of SBE and FIX messages and values for the trade related events are provided in the table below:

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Event	SBE Message	FIX (ExecutionReport (8))	
		ExecType (150) Value	OrdStatus (39) Value
Trade Execution	Fill (04)	F = Trade (partial fill or fill)	1 = Partially filled
	Fill (04)	F = Trade (partial fill or fill)	2 = Filled
Trade Cancellation	Trade Bust Notification (19)	H = Trade Cancel	H = Trade Cancel

♦ Block Trade Messages

To receive messages associated to the Filled or Cancelled Trades Declarations from the system, clients must specifically request for this configuration to be setup. This should be identified on the setup of the type of messages to receive for the Drop Copy trade service either on creation of the associated Logical access, or on request to modify it.

The events that trigger sending of **TradeCaptureReportAck** (AR) messages for Block Trade Declarations are:

- Declaration being Filled
- Cancellation of a Matched Declaration

Mapping of SBE and FIX values for the declarations are provided in the table below:

Event	SBE (Declaration Notice (42))	FIX (TradeCaptureReportAck (AR))
	Values in Field *Declaration Status*	Values in Field *TrdRptStatus* (939)
Declaration Filled	7 = Filled	19 = Filled
Trade Cancelled	5 = Cancelled	2 = Cancelled

♦ Order & Trade Messages

If a client subscribes to receive both Order & Trade messages, they'll receive all message identified available by default in scope of the two individual services of: Orders messages and the Trade messages.

2.4 DROP COPY BEHAVIOR IN CASE OF FAILURE

Behavior of drop copy in case of failure is described in the *Optiq Commercial High Availability and Business Continuity* (it will be provided later) document.

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3. MESSAGE STRUCTURE FOR INDIVIDUAL CASES

FIX **ExecutionReport** (8) and **TradeCaptureReportAck (AR)** messages covers multiple cases of messages sent back to the clients. For use of Drop Copy the list of cases is limited, and the list of fields and possible values is provided in the sections below on a case by case basis.

- Values present in SBE in the field Trade Type that are identified as not in use, or in use only by market data messages are not present in FIX, and are not used in Drop Copy
- Timestamps in Drop Copy messages are provided as follows:
  - All COB messages contain either *BookINTime* (21002) or *TransactTime* (60), whichever one is applicable
  - The actual time of message being sent out to client by the Drop Copy gateway is in the header of the FIX message *SendingTime* (52)

♦ Notes on Representation of Messages & Cases

- While full set of usable fields and values are present in the overall message structure, described in the FIX message specifications to accommodate all required cases, only the fields and values that are used in each individual case are listed in the tables below.
- The graphic representation conventions used in this section are the same as those used in *Optiq Commercial OEG Client Specifications - FIX 5.0 Interface* document, notably the use of table border outlines to represent repeating sections. Where useful and applicable, tables below provide multiple repetitions of the rows, to represent data provided via the repeating sections.
- The “M/C” column in the tables for each message below provides presence of the field in each individual case, and uses the notation identified below. Please note – the values in this field may differ from the overall Presence value provided in the FIX message specifications documents.
  - M: Mandatory for FIX 5.0 protocol,
  - A: Always provided by the Exchange even if not Mandatory for FIX protocol
  - C: Conditional
  - O: Optional
  - F: Future Use

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- Future Use fields are provided in the structure, to indicate fields that would become active in future versions of Optiq, but are not going to be provided for the current version of implementation. These fields will NOT be present in the messages sent by the Drop Copy until the implementation of the associated functionalities.

- In the tables for each case, column "Value Examples" is left blank where the fields are either not applicable to the case, or are for future use.

3.1 ORDER MESSAGES FOR COB

Examples of various Order message cases are provided below in individual sections

Acknowledgement of New Order

Message: ExecutionReport (8)

Sample values provided in this example represent an acknowledgement of a newly entered Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0011000*
11	ClOrdID	String	20	From -2^63 to 2^63-1	A	Identifier of an Order assigned by the Client when submitting an order to the Exchange	*10*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange defined ID of an instrument	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Always set to 8	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	C	Exchange Market Mechanism	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by ME	*5*
39	OrdStatus	Char	1	0 = New	M	Order status	*0*
21004	OrderPriority	Int	20	From 0 to 2^64-1	C	Rank / priority of an order. Order with lowest value in OrderPriority has the highest priority	*2*
44	Price	Price	20	From -2^63 to 2^63-1	C	Instrument price per quantity unit	*25*
38	OrderQty	Qty	20	From 0 to 2^64-1	C	Total order quantity, per quantity unit	*1050*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order (quantity open for further execution)	*1050*
17	ExecID	String	10	From 0 to 2^32-2	M	Set to NA for non-trade related messages	*NA*
150	ExecType	Char	1	0 = New i = Order Creation By Market Operations e = Refilled Iceberg Ack h = Iceberg Transformed to Limit due to Minimum size	M	Identifies the current order status	*0*
99	StopPx	Price	20	From -2^63+1 to 2^63-1	C	Stop Trigger Price / Mandatory for Stop orders	
1138	DisplayQty	Qty	20	From 0 to 2^64-1	C	Maximum quantity shown to market participants (for Iceberg Order only)	
20175	TriggeredStopTimeInForce	Char	1	0 = Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)	C	Specifies the maximum validity of an triggered stop order. On triggering of a Stop order the value in this field is populated in the field TimeInForce (59).	
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*59786*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	*7*
110	MinQty	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	C	Minimum quantity to be executed upon order entry (else the order is rejected).	
21013	AckPhase	Char	1	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended	A	Indicates the trading phase during which the Matching Engine has received the order	*1*
21014	AckQualifiers	MultipleCharValue	3	*0 = Dark Indicator (Future Use)* 1 = Queue Indicator	A	Field used to provide additional information on the corresponding order.	*0 0*
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*30597*
432	ExpireDate	LocalMktDate	8	Date	C	Date of order expiration (last day the order can trade) for GTD orders	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*0*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	C	Type of Order	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	A	Specifies the maximum validity of an order.	*0*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction Populated in Drop Copy only if provided on order entry by the client.	*0*
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. Populated in Drop Copy only if provided on order entry by the client.	*Free Text*
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. Populated in Drop Copy only if provided on order entry by the client.	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
9941	TechnicalOrdType	Char	1	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining	C	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system.	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*59*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*95*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified	*5*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*300*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value. Populated only if provided in the original order message	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified. Populated only if provided in the original order message	*4*
126	*ExpireTime*	*UTCTimestamp*	*27*	*Date & Time*	*C*	*Time of order expiration for validity type GTT*	
21015	STPAggressorIndicator	Int	1	0 = Cancel resting order [C] 1 = Cancel incoming order [C] 9 = Disable STP [C]	C	Field used as instruction for order handling.	
21016	DisclosedQtyRandIndicator	Int	1	0 = No 1 = Yes	C	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	
21018	CancelOnDisconnectionIndicator	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	A	Indicates if order is in scope of the Cancel On Disconnect mechanism or is persisted	*1*
1094	*PegPriceType*	*Int*	*1*		*F*	*Future Use*	
211	*PegOffsetValue*	*Int*	*3*		*F*	*Future Use*	
	Message Trailer				**M**		

♦ Triggering of a Previously Submitted Order

Message: ExecutionReport (8)

Sample values provided in this example represent triggering of a previously entered Stop Limit order (becomes Limit) with Time in Force for the triggered order set to Day on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0011000*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
11	ClOrdID	String	20	From -2^63 to 2^63-1	A	Identifier of an Order assigned by the Client when submitting an order to the Exchange	*11*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange defined ID of an instrument	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Always set to 8	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	C	Exchange Market Mechanism	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by ME	*7*
39	OrdStatus	Char	1	Q = VFU/VFC Triggered Ack S = Stop Triggered Ack T = MTL Second Ack	M	Order status	*S*
21004	OrderPriority	Int	20	From 0 to 2^64-1	C	Rank / priority of an order. Order with lowest value in OrderPriority has the highest priority	*95*
44	Price	Price	20	From -2^63 to 2^63-1	C	Instrument price per quantity unit	*25*
38	OrderQty	Qty	20	From 0 to 2^64-1	C	Total order quantity, per quantity unit	*1000*
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order (quantity open for further execution)	*1000*
17	ExecID	String	10	From 0 to 2^32-2	M	Set to NA for non-trade related messages	*NA*
150	ExecType	Char	1	L = Triggered or Activated by System	M	Identifies the current order status	*L*
20175	TriggeredStopTimeInForce	Char	1	0 = Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)	C	Specifies the maximum validity of an triggered stop order. On triggering of a Stop order the value in this field is populated in the field TimeInForce (59).	
1138	DisplayQty	Qty	20	From 0 to 2^64-1	C	Maximum quantity shown to market participants (for Iceberg Order only)	
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*29636*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	*7*
110	MinQty	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	C	Minimum quantity to be executed upon order entry (else the order is rejected).	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21013	AckPhase	Char	1	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended	A	Indicates the trading phase during which the Matching Engine has received the order	*1*
21014	AckQualifiers	MultipleCharValue	3	*0 = Dark Indicator (Future Use)* *1 = Queue Indicator*	A	Field used to provide additional information on the corresponding order.	*0 0*
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*617*
432	ExpireDate	LocalMktDate	8	Date	C	Date of order expiration (last day the order can trade) for GTD orders	
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*0*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	C	Type of Order	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	A	Specifies the maximum validity of an order.	*0*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction Populated in Drop Copy only if provided on order entry by the client.	*0*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. Populated in Drop Copy only if provided on order entry by the client.	*Free Text*
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. Populated in Drop Copy only if provided on order entry by the client.	
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
9941	TechnicalOrdType	Char	1	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining	C	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system.	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 2	C	Number of NestedPartyID entries.	*2*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*678*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*5*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*95*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified	*3*
126	*ExpireTime*	*UTCTimestamp*	*27*	*Date & Time*	*C*	*Time of order expiration for validity type GTT*	
21015	STPAggressorIndicator	Int	1	0 = Cancel resting order [C] 1 = Cancel incoming order [C] 9 = Disable STP [C]	C	Field used as instruction for order handling.	
21016	DisclosedQtyRandIndicator	Int	1	0 = No 1 = Yes	C	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	
21018	CancelOnDisconnectionIndicator	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	A	Indicates if order is in scope of the Cancel On Disconnect mechanism or is persisted	*1*
1094	*PegPriceType*	*Int*	*1*		*F*	*Future Use*	
211	*PegOffsetValue*	*Int*	*3*		*F*	*Future Use*	
	Message Trailer				**M**		

♦ Notification After Ownership Request

Message: ExecutionReport (8)

Sample values provided in this example represent an notification sent for an existing Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0011000*
11	ClOrdID	String	20	From -2^63 to 2^63-1	A	Identifier of an Order assigned by the Client when submitting an order to the Exchange	*157*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange defined ID of an instrument	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Always set to 8	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	C	Exchange Market Mechanism	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by ME	*94856*
39	OrdStatus	Char	1	I = Order Status	M	Order status	*I*
21004	OrderPriority	Int	20	From 0 to 2^64-1	C	Rank / priority of an order. Order with lowest value in OrderPriority has the highest priority	*682*
44	Price	Price	20	From -2^63 to 2^63-1	C	Instrument price per quantity unit	*205*
38	OrderQty	Qty	20	From 0 to 2^64-1	C	Total order quantity, per quantity unit	*500*
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order (quantity open for further execution)	*500*
17	ExecID	String	10	From 0 to 2^32-2	M	Set to NA for non-trade related messages	*NA*
150	ExecType	Char	1	k = Ownership Request Ack I = OrderMassStatusRequest Ack	M	Identifies the current order status	*k*
99	StopPx	Price	20	From -2^63+1 to 2^63-1	C	Stop Trigger Price / Mandatory for Stop orders	
1138	DisplayQty	Qty	20	From 0 to 2^64-1	C	Maximum quantity shown to market participants (for Iceberg Order only)	
20175	TriggeredStopTimeInForce	Char	1	0 = Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)	C	Specifies the maximum validity of an triggered stop order. On triggering of a Stop order the value in this field is populated in the field TimeInForce (59).	
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*9514*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	*7*
110	MinQty	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	C	Minimum quantity to be executed upon order entry (else the order is rejected).	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21013	AckPhase	Char	1	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended	A	Indicates the trading phase during which the Matching Engine has received the order	*1*
21014	AckQualifiers	MultipleCharValue	3	*0 = Dark Indicator (Future Use)* *1 = Queue Indicator*	A	Field used to provide additional information on the corresponding order.	*0 0*
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*9967*
432	ExpireDate	LocalMktDate	8	Date	C	Date of order expiration (last day the order can trade) for GTD orders	
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*0*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	C	Type of Order	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	A	Specifies the maximum validity of an order.	*0*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction Populated in Drop Copy only if provided on order entry by the client.	*0*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. Populated in Drop Copy only if provided on order entry by the client.	*Free Text*
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. Populated in Drop Copy only if provided on order entry by the client.	*957856*
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
9941	TechnicalOrdType	Char	1	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining	C	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system.	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*66558*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*3*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*95*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified	*5*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*300*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value. Populated only if provided in the original order message	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified. Populated only if provided in the original order message	*4*
126	*ExpireTime*	*UTCTimestamp*	*27*	*Date & Time*	*C*	*Time of order expiration for validity type GTT*	
21015	STPAggressorIndicator	Int	1	0 = Cancel resting order [C] 1 = Cancel incoming order [C] 9 = Disable STP [C]	C	Field used as instruction for order handling.	
21016	DisclosedQtyRandIndicator	Int	1	0 = No 1 = Yes	C	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	
21018	CancelOnDisconnectionIndicator	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	A	Indicates if order is in scope of the Cancel On Disconnect mechanism or is persisted	*1*
1094	*PegPriceType*	*Int*	*1*		*F*	*Future Use*	
211	*PegOffsetValue*	*Int*	*3*		*F*	*Future Use*	
	Message Trailer				**M**		

♦ Cancellation of an Order

Message: ExecutionReport (8)

Sample values provided in this example represent a message sent for cancellation of a Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0011000*
11	ClOrdID	String	20	From -2^63 to 2^63-1	A	Identifier of an Order assigned by the Client when submitting an order to the Exchange	*89*
41	OrigClOrdID	String	20	From -2^63 to 2^63-1	A	Client order ID of the original order.	*35*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange defined ID of an instrument	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Always set to 8	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	C	Exchange Market Mechanism	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by ME	*598*
39	OrdStatus	Char	1	3 = Done for Day 4 = Cancelled C = Expired	M	Order status	*4*
21004	OrderPriority	Int	20	From 0 to 2^64-1	C	Rank / priority of an order. Order with lowest value in OrderPriority has the highest priority	*27*
44	Price	Price	20	From -2^63 to 2^63-1	C	Instrument price per quantity unit	*56*
38	OrderQty	Qty	20	From 0 to 2^64-1	C	Total order quantity, per quantity unit	*10*
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order (quantity open for further execution)	*10*
17	ExecID	String	10	From 0 to 2^32-2	M	Set to NA for non-trade related messages	*NA*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
150	ExecType	Char	1	3 = Done for Day 4 = Cancelled a = Cancelled by STP b = Order Cancelled due to Cancel On Disconnect Mechanism C = Expired O = Eliminated by corporate event U = Order Cancelled by Market Operations V = Cancelled due to a Kill command X = Remaining quantity killed (IOC) x = Order Cancelled due to breach of Ownership Limit y = Order Cancelled due to breach of Credit Limit z = Order Cancelled upon CSD request B = Order Cancelled due to breach of Short Selling Limit E = Order Cancelled due to Instrument not being Eligible for Margin	M	Identifies the current order status	*4*
99	StopPx	Price	20	From -2^63+1 to 2^63-1	C	Stop Trigger Price / Mandatory for Stop orders	
1138	DisplayQty	Qty	20	From 0 to 2^64-1	C	Maximum quantity shown to market participants (for Iceberg Order only)	
20175	TriggeredStopTimeInForce	Char	1	0 = Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)	C	Specifies the maximum validity of an triggered stop order. On triggering of a Stop order the value in this field is populated in the field TimeInForce (59).	
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*9756*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	*9*
110	MinQty	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	C	Minimum quantity to be executed upon order entry (else the order is rejected).	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21013	AckPhase	Char	1	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended	A	Indicates the trading phase during which the Matching Engine has received the order	*1*
21014	AckQualifiers	MultipleCharValue	3	*0 = Dark Indicator (Future Use)* *1 = Queue Indicator*	A	Field used to provide additional information on the corresponding order.	*0 0*
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*12*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*65537*
432	ExpireDate	LocalMktDate	8	Date	C	Date of order expiration (last day the order can trade) for GTD orders	
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*0*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	C	Type of Order	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	A	Specifies the maximum validity of an order.	*0*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction Populated in Drop Copy only if provided on order entry by the client.	*10*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. Populated in Drop Copy only if provided on order entry by the client.	*Free Text*
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. Populated in Drop Copy only if provided on order entry by the client.	19765
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*1*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
9941	TechnicalOrdType	Char	1	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining	C	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system.	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. Populated in Drop Copy only if provided on order entry by the client.	*1*
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*9976*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*3*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*3674*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*4*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID** provided in scope of the clearing data	*995887*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*5*
126	*ExpireTime*	*UTCTimestamp*	*27*	*Date & Time*	*C*	*Time of order expiration for validity type GTT*	
21015	STPAggressorIndicator	Int	1	0 = Cancel resting order [C] 1 = Cancel incoming order [C] 9 = Disable STP [C]	C	Field used as instruction for order handling.	
21016	DisclosedQtyRandIndicator	Int	1	0 = No 1 = Yes	C	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	
21018	CancelOnDisconnectionIndicator	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	A	Indicates if order is in scope of the Cancel On Disconnect mechanism or is persisted	*0*
1094	*PegPriceType*	*Int*	*1*		*F*	*Future Use*	
211	*PegOffsetValue*	*Int*	*3*		*F*	*Future Use*	
	Message Trailer				**M**		

♦ Modification of an Order

Message: ExecutionReport (8)

Sample values provided in this example represent a modification of an existing Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0011000*
11	ClOrdID	String	20	From -2^63 to 2^63-1	A	Identifier of an Order assigned by the Client when submitting an order to the Exchange	*11*
41	OrigClOrdID	String	20	From -2^63 to 2^63-1	A	Client order ID of the original order.	*7*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange defined ID of an instrument	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Always set to 8	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	C	Exchange Market Mechanism	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by ME	*15*
39	OrdStatus	Char	1	5 = Replaced	M	Order status	*5*
21004	OrderPriority	Int	20	From 0 to 2^64-1	C	Rank / priority of an order. Order with lowest value in OrderPriority has the highest priority	*57*
44	Price	Price	20	From -2^63 to 2^63-1	C	Instrument price per quantity unit	*25*
38	OrderQty	Qty	20	From 0 to 2^64-1	C	Total order quantity, per quantity unit	*150*
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order (quantity open for further execution)	*150*
17	ExecID	String	10	From 0 to 2^32-2	M	Set to NA for non-trade related messages	*NA*
150	ExecType	Char	1	5 = Replaced	M	Identifies the current order status	*5*
99	StopPx	Price	20	From -2^63+1 to 2^63-1	C	Stop Trigger Price / Mandatory for Stop orders	
1138	DisplayQty	Qty	20	From 0 to 2^64-1	C	Maximum quantity shown to market participants (for Iceberg Order only)	
20175	TriggeredStopTimeInForce	Char	1	0 = Day 1 = Good Till Cancel 6 = Good till Date C = Good Till Month (GTM)	C	Specifies the maximum validity of an triggered stop order. On triggering of a Stop order the value in this field is populated in the field TimeInForce (59).	
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering trader**	*6786*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order submission results from trading as matched principal, on own account or as any other capacity.	*7*
110	MinQty	Qty	20	Value '0' by default and depending to a minimum value for the given instrument and/or market type	C	Minimum quantity to be executed upon order entry (else the order is rejected).	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21013	AckPhase	Char	1	1 = Continuous Trading Phase 2 = Call Phase 3 = Halt Phase 5 = Trading At Last Phase 6 = Reserved 7 = Suspended	A	Indicates the trading phase during which the Matching Engine has received the order	*1*
21014	AckQualifiers	MultipleCharValue	3	*0 = Dark Indicator (Future Use)* *1 = Queue Indicator*	A	Field used to provide additional information on the corresponding order.	*0 0*
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*9702*
432	ExpireDate	LocalMktDate	8	Date	C	Date of order expiration (last day the order can trade) for GTD orders	
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*0*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	C	Type of Order	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	A	Specifies the maximum validity of an order.	*0*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction Populated in Drop Copy only if provided on order entry by the client.	*0*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. Populated in Drop Copy only if provided on order entry by the client.	*Free Text*
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. Populated in Drop Copy only if provided on order entry by the client.	
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
9941	TechnicalOrdType	Char	1	1 = Index trading arbitrage 2 = Portfolio strategy 3 = Unwind order 4 = Other orders (default) 5 = Cross margining	C	Indicates the origin of the order; for example, manual entry, or an order coming from a Program Trading system.	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified	*3*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified	*4*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*300*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value. Populated only if provided in the original order message	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified. Populated only if provided in the original order message	*5*
126	*ExpireTime*	*UTCTimestamp*	*27*	*Date & Time*	*C*	*Time of order expiration for validity type GTT*	
21015	STPAggressorIndicator	Int	1	0 = Cancel resting order [C] 1 = Cancel incoming order [C] 9 = Disable STP [C]	C	Field used as instruction for order handling.	
21016	DisclosedQtyRandIndicator	Int	1	0 = No 1 = Yes	C	Indicates whether the client requests or not a randomization for the disclosed quantity of his iceberg order.	
21018	CancelOnDisconnectionIndicator	Int	1	0 = Per Default Configuration 1 = Order not in the scope of Cancel On Disconnect	A	Indicates if order is in scope of the Cancel On Disconnect mechanism or is persisted	*1*
1094	*PegPriceType*	*Int*	*1*		*F*	*Future Use*	
211	*PegOffsetValue*	*Int*	*3*		*F*	*Future Use*	
	Message Trailer				**M**		

3.2 TRADE MESSAGES FOR COB

Examples of various Trade message cases are provided below in individual sections

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♦ Trade Execution (Full or Partial Fill)

Message: ExecutionReport (8)

Sample values provided in this example represent a newly executed Trade, with details of either fully or partially filled order. A Trade message contains the required details of the order that participated and for the order specific data each participant receives the details associated to their order. Example below is for a Full fill of a Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
60	TransactTime	UTCTimestamp	27	Timestamp	A	Indicates the time of message transmission In ExecutionReport (8) it is provided only in case of Fill or Partial Fill.	*20180312 08593000 0011000*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Gives the type of SecurityID.	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	A	Defines the Exchange Market Mechanism applied on each platform.	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by the matching engine, unique per instrument and EMM. ClOrdID (11) is not provided in unsolicited messages, however the order can be identified using the provided OrderID (37)	*9756482*
39	OrdStatus	Char	1	1 = Partially filled 2 = Filled	M	Order status	*2*
44	Price	Price	20	From -2^63 to 2^63-1	O	Instrument price per quantity unit (to be calculated with Price/Index Level Decimals).	*25*
38	OrderQty	Qty	20	From 0 to 2^64-1	O	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).	*100*
31	LastPx	Price	20	From -2^63 to 2^63-1	A	Price at which order is filled	*002475*
32	LastQty	Qty	20	From 0 to 2^64-1	A	Quantity of the fill	*100*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Indicates the remaining quantity of an order, i.e. the quantity open for further execution (to be calculated with Quantity Decimals).	*0*
17	ExecID	String	10	From 0 to 2^32-2	M	The ExecID is unique per instrument and per day. It is the unique identifier of a trade per instrument. This field is provided in case of fill, partial fill or trade cancellation.	*9856741*
150	ExecType	Char	1	F = Trade G = Trade Creation by Market Operation	M	Describes the specific ExecutionReport while OrdStatus (39) will always identify the current order status (e.g. Partially Filled).	*F*
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries.	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*59786*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order that participated in the trade results from trading as matched principal, on own account or as any other capacity.	*7*
21010	TradeType	Int	2	1 = Conventional Trade (Cash and Derivatives) 5 = Guaranteed Cross Trade (Cash and Derivatives) 39 = Guaranteed Cross – Negotiated deal NLIQ (Liquid) 40 = Guaranteed Cross – Negotiated deal OILQ (illiquid)	C	Type of trade	*1*
21023	ExecPhase	Char	1	1 = Continuous Trading Phase 2 = Uncrossing Phase 3 = Trading At Last Phase	A	Indicates the trading phase during which the trade has occurred.	*1*
21080	TradeQualifier	MultipleCharValue	13	0 = Uncrossing Trade 1 = First Trade Price 2 = Passive Order 3 = Aggressive Order *4 = Trade Creation by Market Operations (Future Use)*	A	Trade Qualifier. This field can contain up to 7 values, space delimited, provided in different positions.	*2*
375	ContraBroker	String	20	From 0 to 2^64-1	C	ID of the Counterpart Firm in specific cases	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*9875*
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity (to be calculated with Quantity Decimals).	*100*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	A	Type of Order.	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C = Good Till Month (GTM)	C	Specifies the maximum validity of an order	*0*
552	NoSides	NumInGroup	1	Always set to 1	A	Two fill messages are sent for Cross orders	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction. Populated in Drop Copy only if provided on order entry by the client.	
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. This field is part of the clearing data. Populated in Drop Copy only if provided on order entry by the client.	
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing data.	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. This field is part of the clearing data. Populated in Drop Copy only if provided on order entry by the client.	
582	CustOrderCapacity	Int	1	1 = For own account 2 = For clearing members house account 3 = For account of another member present 4 = For any other customer account	C	Type of customer trading Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified	*4*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*300*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value. Populated only if provided in the original order message	*C*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified. Populated only if provided in the original order message	*5*
	Message Trailer				**M**		

♦ Cancellation of a Trade

Message: ExecutionReport (8)

Sample values provided in this example represent a cancellation of a previously executed Trade. The details of the order that participated in the cancelled trade are for a Full fill of a Limit order with Day validity on instrument with Symbol Index *1110530* in Central order book.

Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
21002	BookINTime	UTCTimestamp	27	Timestamp	A	Time of order creation in ME	*20180312 08593000 0021000*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Gives the type of SecurityID.	*8*
20020	EMM	Int	2	1 = Cash and Derivative Central Order Book (COB)	A	Defines the Exchange Market Mechanism applied on each platform.	*1*
37	OrderID	String	20	From 0 to 2^64-2	M	Numerical order identifier assigned by the matching engine, unique per instrument and EMM. ClOrdID (11) is not provided in unsolicited messages, however the order can be identified using the provided OrderID (37)	*9756482*
39	OrdStatus	Char	1	H = Cancel Trade	M	Order status	*H*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
38	OrderQty	Qty	20	From 0 to 2^64-1	O	Total order quantity, per quantity unit (to be calculated with Quantity Decimals).	*100*
31	LastPx	Price	20	From -2^63 to 2^63-1	A	Price at which order is filled	*002475*
32	LastQty	Qty	20	From 0 to 2^64-1	A	Quantity of the fill	*100*
151	LeavesQty	Qty	20	From -1 to 2^64-2	M	Remaining quantity of an order is provided as value '-1' for Trade cancellation.	*-1*
17	ExecID	String	10	From 0 to 2^32-2	M	The ExecID is unique per instrument and per day. It is the unique identifier of a trade per instrument. In case of Cancellation this field contains the same value as the one provided in field ExecRefID, which identifies the ID of the trade being cancelled.	*587*
150	ExecType	Char	1	H = Cancel Trade	M	Describes the specific ExecutionReport while OrdStatus (39) will always identify the current order status (e.g. Partially Filled).	*H*
453	NoPartyIDs	NumInGroup	1	Always set to 1	A	Number of PartyID entries.	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **Entering Trader**	*59786*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID value	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
29	LastCapacity	Char	1	7 = Dealing on own account (DEAL) 8 = Matched principal (MTCH) 9 = Any other capacity (AOTC)	A	Indicates whether the order that participated in the trade results from trading as matched principal, on own account or as any other capacity.	*7*
21010	TradeType	Int	2	24 = Trade Cancellation (Cash and Derivatives)	C	Type of trade	*1*
21023	ExecPhase	Char	1	1 = Continuous Trading Phase 2 = Uncrossing Phase 3 = Trading At Last Phase	A	Indicates the trading phase during which the trade has occurred.	*1*
21080	TradeQualifier	MultipleCharValue	13	0 = Uncrossing Trade 1 = First Trade Price 2 = Passive Order 3 = Aggressive Order *4 = Trade Creation by Market Operations (Future Use)*	A	Trade Qualifier. This field can contain up to 7 values, space delimited, provided in different positions.	*2*
375	ContraBroker	String	20	From 0 to 2^64-1	C	ID of the Counterpart Firm in specific cases	
21019	OEPartitionID	Int	5	From 0 to 2^16-1	A	Identifies uniquely an OE Optiq partition by which the engine is reached.	*10*
21021	LogicalAccessID	Int	10	From 0 to 2^32-1	A	Identifier of the Logical Access.	*9875*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
19	ExecRefID	String	10	Sequential number. From 0 to 2^32-1	C	The ExecRefID is an unique identifier of a trade being cancelled. In the original Trade message this value is provided in the field ExecID (17). This field is provided in case of trade cancellation.	*587*
14	CumQty	Qty	20	From 0 to 2^64-2	M	Cumulated quantity is provided as value '-1' for Trade cancellation.	*-1*
40	OrdType	Char	1	1 = Market 2 = Limit 3 = Stop-Market / Stop-Market on quote 4 = Stop limit / Stop on quote limit K = Market to limit *P = Peg (Future Use)* X = Iceberg	A	Type of Order.	*2*
59	TimeInForce	Char	1	0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good till Date (GTD) 7 = At the Close *A = Good for Time (GTT)* B = Good for auction (GFA) C =Good Till Month (GTM)	C	Specifies the maximum validity of an order	*0*
552	NoSides	NumInGroup	1	Always set to 1	A	Two fill messages are sent for Cross orders	*1*
54	Side	Char	1	1 = Buy 2 = Sell	M	Indicates the side of the order.	*1*
577	ClearingInstruction	Int	4	0 = Process normally (formerly Systematic posting) 8 = Manual mode 9 = Automatic posting mode 10 = Automatic give-up mode	C	Clearing Instruction. Populated in Drop Copy only if provided on order entry by the client.	
58	Text	String	18	Alphanumeric	O	Free Text is manually entered by the trader issuing the order. This field is part of the clearing data. Populated in Drop Copy only if provided on order entry by the client.	

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
20053	ClearingAccount	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing data.	
6399	AccountCode	Int	1	1 = Client 2 = House 6 = Liquidity Provider 9 = Managed Client 10 = Foreign 11 = Managed Foreign 12 = Liquidity Contract 13 = Undertakings for Collective Investment	A	Indicates the account type for which the order is entered. For example, an order can be entered for a client account, a house account or a liquidity provider account. Value 2 is only for BSE and BVMT. Values from 6 to 13 are only for BVMT.	*2*
20021	LPRole	Int	1	1 = Liquidity Provider or Market Maker	C	Liquidity Provider Role identifies the type of the Liquidity Provider when AccountCode is equal to "Liquidity Provider".	
7443	PostingAction	MultipleCharValue	17	1 = Leg 1	O	Posting action code (Open/Close) for the order. This field is part of the clearing data. Populated in Drop Copy only if provided on order entry by the client.	
582	CustOrderCapacity	Int	1	1 = For own account 2 = For clearing members house account 3 = For account of another member present 4 = For any other customer account	C	Type of customer trading Populated in Drop Copy only if provided on order entry by the client.	
539	NoNestedPartyIDs	NumInGroup	1	From 1 to 3	C	Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Client ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	3 = Client ID	C	Identifies the type or role of the NestedPartyID (524) specified	*3*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Clearing Firm ID**	*463*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified	*4*
524	NestedPartyID	String	16	Alphanumeric	C	This use of the repeating group is to provide **Investor ID**	*300*

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Tag	Field Name	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value. Populated only if provided in the original order message	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified. Populated only if provided in the original order message	*5*
	Message Trailer				**M**		

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3.3 BLOCK TRADE MESSAGES

Examples of various Block Trade declarations message cases are provided below in individual sections.

♦ "Filled" Declaration Notice

Message: TradeCaptureReportAck (AR)

Sample values provided in this example represent a notice that a declaration has been Filled, for an instrument with Symbol Index *1110530*.

Tag	Field	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
571	TradeReportID	String	20	From -2^63+1 to 2^63-1	A	Unique identifier of trade capture report.	*15*
1003	TradeID	String	20	From 0 to 2^64-2	A	The unique ID assigned by the matching engine to the trade entity, once it is received or matched.	*15*
939	TrdRptStatus	Int	2	19 = Filled	A	Trade Report Type.	*19*
828	TrdType	Int	2	1001 = Declaration of a trade outside the book	A	Type of Operation	*1004*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Gives the type of SecurityID.	*8*
20020	EMM	String	2	5 = Cash On Exchange Off book	A	Defines the Exchange Market Mechanism applied on each platform.	*5*
60	TransactTime	UTCTimestamp	27	Timestamp	A	Indicates the time of message transmission	*0180312084539000000000*
552	NoSides	NumInGroup	1	From 1 to 2	A	Number of sides.	*1*

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Tag	Field	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
20053	Clearing Account	String	16	Alphanumeric	C	Clearing Account Number. Client account number identifying the investor's account. This field is part of the clearing data.	*1235*
54	Side	Char	1	1 = Buy 2 = Sell	A	Indicates the side of the order	*1*
53	Quantity	Qty	20	From 0 to 2^64-2	A	Number of traded or ordered units	
44	Price	Price	20	From -2^63+1 to 2^63-1	A	Instrument price per quantity unit	
453	NoPartyIDs	NumInGroup	1	Always set to 2	A	Number of PartyID entries.	*2*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **CounterParty ID**	*7894*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID (448) value.	*C*
452	PartyRole	Int	3	17 = Contra Broker	A	Identifies the type or role of the PartyID (448) specified.	*17*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **CounterParty ID**	*7894*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID (448) value.	*C*
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
539	NoNestedPartyIDs	NumInGroup	1	If Provided, from 1 to 3		Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the Investor ID	6754
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	C
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the PartyID (524) specified.	5
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the Contra Investor ID	4576

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Tag	Field	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	C
538	NestedPartyRole	Int	3	39 = Contra Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified.	39
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the Clearing Firm ID	9987
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	C
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified.	4
10055	SettlPeriod	Int	2	From 0 to 30	C	Indicates the settlement delay in trading days, from 0 to 30 days Provided only if the SettlementFlag (9970) is set to 1 = True	*1*
9970	SettlementFlag	Char	1	0 = False 1 = True	A	Indicates whether the trade must be settled or not. (0: Not Settled ; 1: Settled)	*1*
9971	GuaranteeFlag	Char	1	1 = Cleared but not Guaranteed 2 = Cleared and Guaranteed	C	Indicates if the trade is guaranteed or not (for clearing purposes) Provided only if the SettlementFlag (9970) is set to 1 = True	*2*
1839	TradePriceCondition	Int	1	15 = Non-price forming trade (NPFT) 101 = Plain Vanilla Trade 102 = Trade Not Contributing to Price Discovery Process	A	Contribution to price formation or the price discovery process. Provided only if set in the inbound messages by the client.	*101*
	Message Trailer				**M**		

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♦ "Trade Cancelled" Declaration Notice

Message: TradeCaptureReportAck (AR)

Sample values provided in this example represent a notice that a declaration that was previously filled, has been cancelled, for an instrument with Symbol Index *1110530*.

Tag	Field	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
	Message Header				**M**		
1003	TradeID	String	20	From 0 to 2^64-2	A	The unique ID assigned by the matching engine to the trade entity, once it is received or matched.	*15*
939	TrdRptStatus	Int	2	2 = Cancelled	A	Trade Report Type	*2*
48	SecurityID	String	10	From 0 to 2^32-2	M	Exchange identification code of the instrument, represented by SecurityID. This identifier is unique per triplet: MIC, ISIN and currency. The correspondence between the SecurityID and the instrument characteristics is provided in the standing data messages and associated files.	*1110530*
22	SecurityIDSource	String	1	8 = Symbol Index	M	Gives the type of SecurityID.	*8*
20020	EMM	String	2	5 = Cash On Exchange Off book [C]	A	Defines the Exchange Market Mechanism applied on each platform.	*5*
453	NoPartyIDs	NumInGroup	1	Always set to 2	A	Number of PartyID entries.	*1*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **CounterParty ID**	*7894*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID (448) value.	*C*
452	PartyRole	Int	3	17 = Contra Broker	A	Identifies the type or role of the PartyID (448) specified.	*17*
448	PartyID	String	16	Alphanumeric	A	In this case provides the **CounterParty ID**	*9487*
447	PartyIDSource	Char	1	C = Generally accepted market participant identifier	A	Source of PartyID (448) value.	*C*

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Tag	Field	Format	Len	Possible Values	M/C	Short Description, Compatibility Notes & Conditions	Value Example
452	PartyRole	Int	3	36 = Entering Trader	A	Identifies the type or role of the PartyID (448) specified.	*36*
539	NoNestedPartyIDs	NumInGroup	1	If Provided, from 1 to 3		Number of NestedPartyID entries.	*3*
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the **Investor ID**	*6754*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	5 = Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*5*
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the **Contra Investor ID**	*4576*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	39 = Contra Investor ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*39*
524	NestedPartyID	String	16	Alphanumeric	C	In this case provides the **Clearing Firm ID**	*9987*
525	NestedPartyIDSource	Char	1	C = Generally accepted market participant identifier	C	Source of NestedPartyID value.	*C*
538	NestedPartyRole	Int	3	4 = Clearing Firm ID	C	Identifies the type or role of the NestedPartyID (524) specified.	*4*
	Message Trailer				**M**		

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APPENDIX A: REVISION HISTORY

DOCUMENT HISTORY

REVISION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
1.0.0	22/05/2018	ITS - BA	First Release
1.1.0	07/09/2018	ITS - BA	**The following section have been added:** ○ 1.2 Block Trade Messages ○ 4.3 Block Trade Messages **The following section have been updated:** ○ 1.1 Type of Messages ○ 3.3 Block Trade Messages **The following fields have been removed:** ○ DarkExecutionInstruction (20052) ○ QuoteReqID (131) ○ RFQAnswerIndicator (21037) ○ RFQConfirmationIndicator (21038) ○ TradingSessionID (336) ○ UndisclosedPrice (2004) ○ UndisclosedIcebergType (2005)
1.1.1	08/12/2018	ITS - BA	**The following field has been added:** ○ ClearingAccount (20053) was added to replace Account (1) in order to allow the accommodation of the 16 char's that are required;
1.1.2	25/02/2019	ITS - BA	**The following field has been added:** ○ AccountCode (6399): values were added depending on specific client's needs;
1.1.3	28/03/2019	ITS - BA	**The following field has been updated:** ○ ExecType (150): values added to accommodate CCM functionality: ○ x = Order Cancelled due to breach of Ownership Limit; ○ y = Order Cancelled due to breach of Credit Limit;

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REVISION NO.	DATE	AUTHOR	CHANGE DESCRIPTION
			○ z = Order Cancelled upon CSD request; ○ B = Order Cancelled due to breach of Short Selling Limit; ○ E = Order Cancelled due to Instrument not being Eligible for Margin;
1.1.4	03/05/2019	ITS - BA	**The following field has been updated:** ○ NestedPartyID (524) and PartyID (448) size was increased from 11 to 16;

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