

SWXess Maintenance Release

SMR14 Release Guide (Version 4.10)

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Table of Contents

1	Introd	luction		4							
1.1	Purpo	se and Sco	pe	4							
1.2			Document								
1.3 1.4		,									
1.5											
2	Summary										
2.1	-										
	2.1.3		ment to QOD Liquidity Provider Identification via RDI								
2.2			anges vs Interfaces and Services								
3			unges vs interruces and services								
4	-		ges								
- 4.1			native Trading								
4.1											
	4.1.1 4.1.2		of Behavior for Amending Down Order Quantitiesed Suspension of Structured Products via CONNEXOR								
	4.1.2		ment to QOD Liquidity Provider Identification via RDI								
4.2	Marke	t and Refer	rence Data	13							
4.3											
4.4	Other	Services		13							
	4.4.1	Sponsor	ed Access (SA)	13							
5	Techn	ical Chang	es	14							
5.1			Interface Changes								
5.2			QOD Liquidity Provider Identification via RDI								
5.3											
_	5.3.1		nt Trade Reconciliation Report								
6			act								
6.1			d Regulations								
7	Overv	iew of Doc	uments and Artefacts	17							
8	Migra	tion		19							
8.1			ot								
8.2		9	on								
	8.2.1	Transact	ional Data								
		8.2.1.1	Orders								
		8.2.1.2 8.2.1.3	On- and Off Order Book Trades Delayed Publication of Off Order Book Trades and Off Exchange Trades								
		8.2.1.4	Transaction Reports								
8.3	SWXes	s Migration	n Weekends	20							
	8.3.1		ivities								
	8.3.2										
		8.3.2.1	Membertest Stage 1 (Interface Changes)	20							
		8.3.2.2	Membertest Stage 2 (Functional & Interface Changes)								

endix B	Terms and Abbreviations	27
endix A	Known Issues	26
9.5.1 9.5.2		
SWXess	Intraday Recovery Tests	24
9.4.1 9.4.2	Performance Load Tests	23 24
Clearing	g and Settlement During Member Test Phase	23
Testing	Activities During Member Test Phase	23
8.3.3 8.3.4	Production Migration Schedule	21 21
	8.3.4 Testing Scope of Clearing Trading Load Tele 9.4.1 9.4.2 SWXess 9.5.1 9.5.2 endix A	8.3.4 Connectivity Testing Checklist During Migration Testing Activities During Member Test Phase Scope of Member Test Phase

1 Introduction

1.1 Purpose and Scope

This document provides all relevant information for SMR14 including functional and technical changes, regulatory impact, relevant documents and artefacts, configuration changes, migration plan and testing activities.

1.2 Structure of this Document

This document contains information relevant to both business audience and technical audience. The target audience of major sections is indicated with pictograms and text. The major sections are given below.

	Audience	Major Sections
r r	Business and Technical Audience	2 Summary
		3 Key Dates
		7 Overview of Documents and Artefacts
		8 Migration
		9 Testing Activities During Member Test Phase
血	Business Audience	4 Functional Changes
_		6 Regulatory Impact
φ [‡]	Technical Audience	5 Technical Changes

1.3 Revision History

Version	Description
1.00	Initial version
2.00	 Information regarding the following topics added: Enhancement to QOD Liquidity Provider Identification via RDI Documents and Artefacts Membertest Migration Schedule
2.10	Change in section "Key Dates": Participant Trade Reconciliation Report will be implemented with MT2
3.00	Changes in section "Automated Suspension of Structured Products via CONNEXOR" New dates for Intraday Recovery Tests
4.00	Stage 1 and 2 completed. Regulatory impact described. Production migration schedule added. New dates for Intraday Recovery Tests
4.10	Change in section "Automated Suspension of Structured Products via CONNEXOR"

1.4 References

Document Reference	Subject
SIX Swiss Exchange messages	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/market-data/news-tools/swiss-exchange-messages.html
Trading Rules	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading/trading-provisions/regulation.html
Trading Guides	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading/trading-provisions/regulation.html#trading-guides
Forms	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading/participation.html#application-forms
SMR Releases	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading.html#swxess-maintenance-releases
MSC Messages	https://secure.six-swiss-exchange.com/member_section/it/messages.html
Interface Specifications, Manuals and Guides	https://secure.six-swiss-exchange.com/member_section/it/manuals.html
Release Documents	https://secure.six-swiss-exchange.com/member_section/it/release_docs.html

1.5 Contact

Market Operations

If you have business related questions, please do not hesitate to contact Market Operations.

Торіс	Service Desk	Phone	Email
Participant Configuration	Member Services	+41 58 399 2473	member.services@six-group.com
Reporting			
Clearing & Settlement			
Billing			
Mistrades and Cancelations	Exchange	+41 58 399 2475	helpdesk.exc@six-group.com
Emergency Deletions	Operations		
Suspensions			
Instrument Reference Data	Static Data Operations	+41 58 399 2490	zulassung@six-group.com

Local Support Centers

If you have technical questions, please do not hesitate to contact your Local Support Center.

Service Desk	Phone	Email
Local Support Center Geneva	+41 58 399 5642	lsg@six-group.com
Local Support Center London	+44 20 7864 4364	lsl@six-group.com
Local Support Center Zurich	+41 58 399 2400	lsz@six-group.com

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Find further contact information in the <u>SIX Swiss Exchange Contact Center</u> of the SIX Swiss Exchange website.

2 Summary



Business and Technical Audience

2.1 Introduction

SIX Swiss Exchange will introduce a new maintenance release of the SWXess trading platform. SWXess Maintenance Release 14 (SMR14) will contain required interface changes for SWXess participants.

SMR14 was introduced in the Membertest environment in a staged approach. Membertest stage 1 was introduced on 16 September 2024 and Membertest stage 2 on 21 October 2024.

SMR14 is scheduled to go live in the **Production Environment** on **9 December 2024**. There is no contingency date planned.

The key functionality of SMR14 were released into the Membertest environment in stages as follows:

Change	Stage 1	Stage 2	Section
Change of Behavior for Amending Down Order Quantities		₽	4.1.1
Automated Suspension of Structured Products via CONNEXOR			4.1.2
		*	4.1.3
Enhancement to QOD Liquidity Provider Identification via RDI			5.2
Other Technical Changes			5.3
Not related to SWXess: SIX MDDX changes for Bolsas y Mercados Españoles (BME)	a		
Not related to SWXess: SIX MDDX changes for Repo Trading Solutions (CO:RE Trading Platform)		4	

Required Interface Changes

Functional Changes

For further information on the stages and the functionalities of SMR14, please refer to section 3.

2.2 SMR14 Matrix Changes vs Interfaces and Services

The table below shows the changes introduced with SMR14 and the impact on interfaces and services.

<u></u>	= business change	Click on the section number to see the business description.
o ^{‡‡}	= technical change	Click on the section number to see the technical description.
	= no change	

						SWXe	ss Inte	rfaces	and Sei	rvices					
Changes	Business Changes only	ОП	фт	IMI	STI	SIX MDDX	RDI	SIX Trading User Interface	Sponsored Access FIX Drop Copy	TRI - Transaction Reporting Interface	TXR - Transaction Reconciliation Report	TRR - Participant Trade Reconciliation Report	ORR - Participant Order Reconciliation Report	Billing Report Interface	SCAP
Change of Behavior for Amending Down Order Quantities	4.1.1														
Automated Suspension of Structured Products via CONNEXOR	4.1.2														
Enhancement to QOD Liquidity Provider Identification via RDI							4.1.3 5.2								
Other Technical Changes												ە [‡] 5.3.1			

3 Key Dates



Business and Technical Audience

The following table shows the key dates of SMR14 as scheduled at this stage:

Date	Test	Prod	Activity			
3 June 2024		$\overline{\square}$	Initial Announcement of SMR14 and publication of SMR14 Release Guide and publication of affected SWXess interface specifications			
1 July 2024	V		Publication of updated SMR14 Release Guide and affected SWXess interface specifications			
9 September 2024	$\overline{\checkmark}$	$\overline{\checkmark}$	Confirmation of Start Membertest with publication of updated SMR14 Release Guide and affected SWXess interface specifications			
13/14 September 2024	$\overline{\checkmark}$		SMR14 Membertest Migration weekend stage 1			
15 September 2024	$\overline{\checkmark}$		Contingency Day - SMR14 Membertest Migration stage 1			
16 September 2024			SMR14 Membertest stage 1 live date and first trading day includes: - SIX MDDX changes for BME (not related to SWXess)			
12 October 2024	\checkmark		Performance Load Test			
18/19 October 2024	\checkmark		SMR14 Membertest Migration weekend stage 2			
20 October 2024	\checkmark		Contingency Day - SMR14 Membertest Migration stage 2			
21 October 2024			SMR14 Membertest stage 2 live date and first trading day includes: Change of Behavior for Amending Down Order Quantities Automated Suspension of Structured Products via CONNEXOR Enhancement to QOD Liquidity Provider Identification via RDI SIX MDDX changes for CO:RE (not related to SWXess) Other Technical Changes			
30 October 2024	$\overline{\checkmark}$		Intraday Recovery Test - On Book Matcher Partition 1 down			
4 November 2024		\square	Publication of updated Directives and Guidelines for SMR14 Production Publication of updated SMR14 Release Guide			
6 November 2024			Intraday Recovery Test - On Book Matcher Partition 2 down			
23 November 2024			Performance Load Test			
26 November 2024 (Tuesday)	\square		Intraday Recovery Test - MDDX Infrastructure down			
27 November 2024	$\overline{\checkmark}$		Intraday Recovery Test - Both On Book Matcher Partitions down			
28 November 2024 (Thursday)			Intraday Recovery Test - STI FIX Infrastructure down (Single FIX Gateway Failure and Double FIX Gateway Failure)			
4 December 2024			Intraday Recovery Test - Contingency			
7/8 December 2024		\square	SMR14 Production Migration weekend			
9 December 2024		$\overline{\checkmark}$	SMR14 Production live date and first trading day			

4 Functional Changes



Business and Technical Audience

4.1 Trading and Alternative Trading

4.1.1 Change of Behavior for Amending Down Order Quantities

Currently on SIX Swiss Exchange, if the total open quantity of an order is reduced, the order loses its original time priority and is given a new time stamp with a new OrderID. New with SMR14 and at the request of our participants, it will be possible for participants to reduce the total quantity of open orders without this resulting in a loss of time priority in the order book. In cases where this time priority preservation is possible, the OrderID of the order will also remain unchanged.

The following table gives an overview of the new functionality:

	Preservation of time priority is supported, i.e. the order will retain its time priority	Preservation of time priority is NOT supported, i.e. the order will lose time priority
Type of order modification	 Amending quantity down Amending visible quantity down Amending the Minimum Execution Quantity (MEQ) up or down Amending Full Execution Flag (Swiss EBBO LPs over OTI) 	 Amending any other field of the order other than quantity Amending quantity up Amending visible quantity up
Type of order	 Normal Market Orders Normal Limit Orders Iceberg Orders (resting in Central Limit Order book (CLOB) or Quote Driven Market (QDM) SwissAtMid Normal Orders (resting in Mid-Point Order Book (MPOB) SwissAtMid Block Orders (resting in MPOB) SwissAtMid Sweep Orders (resting in CLOB or QDM) Limit Plus Orders (resting both in CLOB and MPOB - active and inactive) Iceberg Plus Orders (resting both in CLOB and MPOB - active and inactive) Swiss EBBO Orders (resting in CLOB) Swiss EBBO LP Orders (resting in the European Best Bid Offer Order Book (EBBO)) Auction Volume Discovery Orders (resting in CLOB) Stop Loss / Stop Limit Orders (unplaced/not triggered) Quotes (resting in QDM) 	 Quote on Demand with Sweep Orders (amending quantity not supported) Quote on Demand non Sweep Orders (amending quantity not supported) Quote on Demand LP Orders (amending quantity not supported)

Even if an order retains its time priority in the order book, this does not necessarily mean it retains its matching priority in that order book. This is due to the different criteria used for matching in the different order books. The

following table gives an overview about whether an order's matching priority would be affected by the preservation of time priority:

Matching Priority Is Preserved	 CLOB (price/time priority) - including Plus Orders QDM (price/time priority) QDM with PVM (price/time priority) Unplaced Stop Loss / Stop Limit orders (trigger price/time priority) The above mentioned amended down orders preserve their time priority and also their matching priority because the price of the order does not change.
Matching Priority Could Be Changed	 MPOB (<u>quantity</u>/time) EBBO book (price/<u>quantity</u>/time priority) - only for EBBO LP orders, because only they rest in this order book In order books sorted by quantity/time or price/quantity/time, a decrease in total quantity will still result in a loss of quantity priority.

For all interfaces, participants should continue to use the current methods in place to modify order as follows:

- On the **Standard Trading Interface (STI)**, participants should continue to use the existing messages to modify an order. If time priority is preserved for an order amendment, then the *OrderID* (FIX Tag 37) returned in the "Execution Report" (MsgType=8) message will be the same value as in the last "Execution Report" (MsgType=8) message received for the order.
- On the OUCH Trading Interface (OTI), participants should continue to provide a new Replacement Order
 Token for amendments. If the time priority is preserved for an order amendment, then the field Order
 Number returned in the "Replaced Message" [U] will be the same value as in the last outgoing message received
 for the order.
- On the Quote Trading Interface (QTI), participants should continue to provide a new Quote Token for amendments. If the time priority is preserved for a quote amendment, then the field Order Reference Number returned in the "Quote Update Message" [U] will be the same value as in the last outgoing message received for the quote. In QTI this is only supported if there is no field amended that (on one or both sides of the quote) does not support preserving time priority. Otherwise Order Reference Number for both sides will change (as today).
- On the **ITCH Market Data Interface (IMI)**, if the time priority is preserved for an order amendment, then the *New Order Number* remains the same as the original *Original Order Number* on the "Order Replace Message" [U].
- On the SIX Multi-Dimensional Data FluX Interface (SIX MDDX), if the time priority is preserved for an order amendment, then the OrderId remains the same as the original OrderId in the "Detailed Order Book Message" [DO].

Important Note

Attempts to reduce the total quantity of an order whilst at the same time amending any other attributes will always result in a loss of time priority for that order.

Further Reading

- Standard Trading Interface (STI) Specification Orders and Executions (Version 2.78.0)
- OUCH Trading Interface (OTI) Specification (Version 1.22.0)
- Quote Trading Interface (QTI) Specification (Version 1.14.0)
- ITCH Market Data Interface (IMI) Specification (Version 1.22.0)
- SIX MDDX Interface Specification (Version 1.51.0)

4.1.2 Automated Suspension of Structured Products via CONNEXOR

According to Art. 11 of <u>Directive on Regular Reporting Obligations for Issuers of Equity Securities</u>, <u>Bonds, Conversion Rights, Derivatives and Collective Investment Schemes</u> (DRRO), issuers of listed derivatives must fulfil regular reporting obligations in connection with maintaining listing. Specifically, issuers must report the achievement of a threshold value that might affect the price or valuation of the derivative (e.g. in the case of barrier options). Issuers of derivatives that are terminated early are also obliged to inform the Exchange about the new termination date.

Market Makers and Liquidity Providers of Structured Products may further be obliged to initiate the suspension of products subject to one of these events.

As a result, Market Makers and Liquidity Providers of Structured Products are currently offered a two-step approach to fulfil their reporting duty and trading suspension:

- They must report the event via CONNEXOR Events "BREV" and "ERDM"
 This is required to fulfil their reporting obligations and allow an "Official Notice" to be published on the SIX Swiss Exchange website
- Path-dependent products must be suspended on the SWXess platform, while certain redeemed leverage products can be suspended on a voluntary basis via the Quote Trading Interface (QTI). This is required to suspend the products on the SWXess platform and prevent them from further trading.

This is in accordance with clause 16.1 of <u>Directive 3: Trading</u> for barrier events for path-dependent derivatives (BREV events), and clause 16.2 for issuer calls in leveraged products (ERDM events). The suspension via QTI is on a voluntary basis. See <u>SMR9.1 Participant Readiness</u> Guide and <u>SMR12 Release Guide</u> for further information on the introduction of the suspension of products by issuers via QTI.

In order to provide for a faster and leaner process, new with SMR14, Market Makers and Liquidity Providers of Structured Products will no longer need to follow this two-step approach, but will only need to report the events to CONNEXOR Events. Once reported the products will then be automatically suspended on the SWXess platform according to the information provided to CONNEXOR. This change will significantly streamline and improve the workflow for our participants.

Please note that the automated suspension functionality applies only to structured products sent to CONNEXOR that are listed on the SIX Exchange. Also note that for Early Redemption events, only those with an effective date within T+2 will trigger the suspension of the product. The suspension of the product will always take place immediately, regardless of whether the effective date has been set to T, T+1 or T+2. If an event is sent with an effective date beyond T+2, the automatic suspension will **not** be triggered. In such cases the product will be Last Listed according to the submitted effective date in the ERDM event.

Please note that the above triggering suspension rules apply only to CONNEXOR Events containing an ERDM or Autocall Barrier events. For the Barrier events, "Knock-out", "Stop-loss on Underlying price" and "Stop-loss on Product price", the suspension will always be automatically triggered immediately regardless of the effective date provided.

There is no change regarding the publication of the suspension of the security concerned in the market data interfaces:

Interface	Message Type	Impacted Fields	Impact
SIX MDDX	Security Status Message [ST]	Trading State	"V" – Suspended
IMI	Orderbook Trading Action Message [H]		

If the Market Maker or Liquidity Provider has erroneously reported the suspension of a listed Structured Product via CONNEXOR, they should contact Exchange Operations (+41 (0)58 399 2475 / helpdesk.exc@six-group.com) to request the resumption of trading.

Issuers wishing to test the new automated suspension functionality during Membertest Stage 2, will need to do this by using eligible products that are present in (and therefore have been submitted to) the CONNEXOR Test environment. Please note that these products must be valid ISINs, i.e., the same as those submitted to the

Production environment. For ISINs to be accepted into the Membertest environment, the CONNEXOR helpdesk need to be informed in order to approve these special test products. Therefore, to ensure there are sufficient products available for testing, it is recommended that issuers submit any new products into both the Production and Test environments simultaneously and contact CONNEXOR for the processing of these test products so that they are available for testing.



For further assistance or guidance on testing this feature, issuers should please contact the **CONNEXOR helpdesk** (+41 (0) 58 399 3366 / connexor@six-group.com).



Important Note

The current functionality to suspend products via QTI has not been decommissioned with this change. This means that it is still possible for participants to suspend a product themselves via QTI. However please note that if a CONNEXOR Event is submitted for the above mentioned case prior to the QTI suspension, then the subsequent QTI message will be rejected (as the security will already have been automatically suspended on behalf of the participant by CONNEXOR). The QTI message would be rejected in this case with a Participant Trading Action Confirmation Message [I] with value "R".

If the QTI suspension message is sent before the CONNEXOR BREV or ERDM event is submitted, CONNEXOR will receive a "Suspension Rejected" response from the trading platform. The CONNEXOR Events overview screen will display this response with the feedback stating: "Suspension failed because the security is already suspended".



Further Reading

- Directive on Regular Reporting Obligations for Issuers of Equity Securities, Bonds, Conversion Rights,
 Derivatives and Collective Investment Schemes (DRRO)
- <u>Directive on Debt Securities with Specific Structures</u> (of 10 March 2021 / effective since 21 June 2021)
- Quote Trading Interface (QTI) Specification
- SMR9.1 Participant Readiness Guide
- SMR12 Release Guide

4.1.3 Enhancement to QOD Liquidity Provider Identification via RDI

Participants of SIX Swiss Exchange acting as Liquidity Providers (LPs) for Quote on Demand (QOD) require a dedicated QTI or OTI QOD LP user for this purpose. Moreover, a separate configuration must be set up for providing liquidity to the ETF/ETP QOD services as opposed to the Swiss Franc Bond QOD service.

Participants may identify registered LPs for QOD via a dedicated attribute in the Reference Data Interface (RDI):

Object	Attribute	Туре
Party	qodLiquidityProviderFlag	Boolean

New with SMR14, the RDI file will be enhanced so that participants will be able to identify not only if an LP provides liquidity for QOD but also newly the type of QOD Service for which the QOD LPs are registered. Therefore, in addition to the existing attribute above, the following three new attributes will be provided:

Object	Attribute	Туре
Party	qodEtfLiquidityProviderFlag qodBondLiquidityProviderFlag	Boolean

Object	Attribute	Туре
qodEuropeLiquidityProviderFlag		rFlag

Please note that it is possible for a QOD LP to be registered for none, one, two, or all three QOD Service Types simultaneously (QOD ETFs/ETPs, QOD Swiss Franc Bonds, ETF/ETP QOD Europe).



Please go to section 5.2 for a detailed technical description.



Further Reading

Reference Data Interface (RDI) Specification (Version 2.45.0)

4.2 Market and Reference Data

There are no changes for Market Data. The changes for Reference Data for SMR14 are already described above in section 2.1.3.

4.3 Billing

There are no billing changes for SMR14.

4.4 Other Services

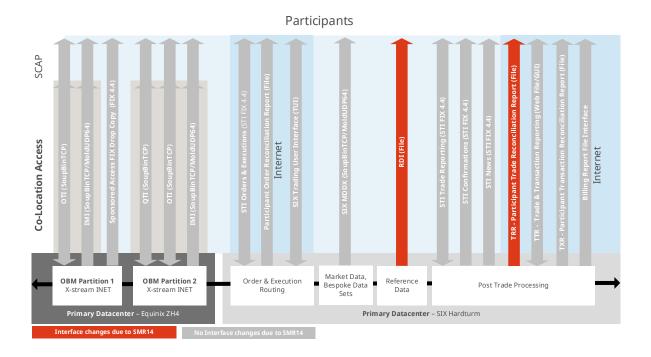
4.4.1 Sponsored Access (SA)

There are no changes for the Sponsored Access Service.

5 Technical Changes

Technical Audience

5.1 Overview SMR14 Interface Changes



5.2 Enhancement to QOD Liquidity Provider Identification via RDI

The following table shows the impacted object and fields:

Object	Fields	Impact	
Party	qodEtfLiquidityProviderFlag	New field	
	qodBondLiquidityProviderFlag	New field	
	qodEuropeLiquidityProviderFlag	New field	

Further Reading

Reference Data Interface (RDI) Specification (Version 2.45.0)

5.3 Other Technical Changes

5.3.1 Participant Trade Reconciliation Report

The following table shows the impacted fields:

Data Fields	Impact
tradingCssiRef	Fields removed due to SIX internal adjustments
gcmCssiRef	
ccpPartyRef	
ccpCssiRef	
publicationDelay	Changed – New Type
auxClearingType	New Field
secomOrderId	Field renamed to externalTradeMessageId



Further Reading

Participant Trade Reconciliation Report Specification (Version 1.53.0)

6 Regulatory Impact



Business Audience

The functional changes introduced with SMR14 necessitate changes to the trading rules and regulations. The following Directives are affected and have been amended accordingly:

- <u>Directives</u> of SIX Swiss Exchange AG
 - Directive 2: Technical Connectivity
 - Directive 3: Trading
 - Directive 5: Alternative Trading

6.1 Trading Rules and Regulations

The amended trading and reporting rules and regulations for SMR14 entering into force on 9 December 2024 are now published under the following links on the SIX Swiss Exchange website:

Document	Link
Directives	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading/trading-
	provisions/regulation.html#directives

The following table contains a detailed overview of the amendments to the **Trading Regulations** of SIX Swiss Exchange AG as of 9 December 2024.

The following material amendments have been made to the **Trading Rules**:

Document	Туре	Reference	Title
Directive 2:	Change	Clause 4.1 para. 2	Direct connectivity
Technical Connectivity	Change	Clause 5.1 para. 2	Technical layout
Directive 3: Change Cla		Clause 5.1.1 para. 3	Order – Definition
_	Change	Clause 5.1.2 para. 1 lit. c-d)	Order types
	Change	Clause 5.1.3 para. 1 lit. j)	Order specification
	Change	Clause 16.1 para. 1	Suspension of trading in derivatives with path-dependent structures
	Deletion	Clause 16.1 para. 2-5	Suspension of trading in derivatives with path-dependent structures
	Change	Clause 16.2 para. 1	Suspension of trading for leverage products subject to a current Active Product Package with early redemption
	Deletion	Clause 16.2 para. 2-3	Suspension of trading for leverage products subject to a current Active Product Package with early redemption
Directive 5:	Change	Clause 9.6 para. 1 lit. c)	Order types
Alternative Trading	Change	Clause 10.7 para. 1 lit. b)	Order types

7 Overview of Documents and Artefacts



Business and Technical Audience

Please find below the list of all documents and artefacts relevant to SMR14.



All items can be downloaded from the Member Section Manuals or Downloads pages at:

https://secure.six-swiss-exchange.com/member_section/it/manuals.html

https://secure.six-swiss-exchange.com/member_section/it/downloads.html

Status	Date	Subject	Reference
General			
Updated for SMR14	04.11.2024	SMR14 Release Guide (Version 4.00)	This document
Updated	28.05.2024	SWXess Business Recovery Guide (Version 8.20)	SWX-RECV-MAN-GUID-820
Updated		IT Related Frequently Asked Questions (FAQ) and Known Issues	See <u>Member Section</u>
SIX Trading Us	er Interface (TU	0)	
Unchanged	11.09.2023	SIX Trading User Interface - User Manual (Version 2.00)	SIX-TRD-UI-MAN-200
Direct Trading	Interfaces (OTI,	QTI, IMI)	
Updated for SMR14	22.05.2024	OUCH Trading Interface (OTI) Specification (Version 1.22.0)	SSX-OTI-TRD-SPEC-1.22.0
Updated for SMR14	22.05.2024	Quote Trading Interface (QTI) Specification (Version 1.14.0)	SSX-QTI-TRD-SPEC-1.14.0
Updated for SMR14	22.05.2024	ITCH Market Data Interface (IMI) Specification (Version 1.22.0)	SSX-IMI-TRD-SPEC-1.22.0
Standard Trad	ing Interface (ST	1)	
Updated for SMR14	17.05.2024	Standard Trading Interface (STI) Specification - Orders and Executions (Version 2.78.0)	SWX-SPEC-STI-PRE-2.78.0
Unchanged	15.01.2024	Standard Trading Interface (STI) Specification - Confirmations (Version 2.34.0)	SWX-SPEC-STI-CONF-2.34.0
Unchanged	15.01.2024	Standard Trading Interface (STI) Specification - Session Layer (Version 2.8.0)	SWX-SPEC-STI-SES-2.8.0
Unchanged	15.05.2023	Standard Trading Interface (STI) Specification - News (Version 2.11.0)	SWX-SPEC-STI-NEWS-2.11.0
Unchanged	26.05.2023	Standard Trading Interface (STI) Specification - Trade Reporting (Version 4.26.0)	SWX-SPEC-STI-TCRI-4.26.0
Unchanged	07.02.2024	Standard Trading Interface (STI) FIX 4.4 Repository (Version 13.0.1)	see Member Section <u>Downloads page</u>
Reference Dat	a Interface (RDI)		
Updated for SMR14	10.06.2024	Reference Data Interface (RDI) Specification (Version 2.45.0)	SWX-VCA-SPEC-RDI-2.45.0

Status	Date	Subject	Reference
SIX MDDX			
Updated for SMR14	03.09.2024	SIX MDDX Interface Specification (Version 1.51.0)	SSX-MDDX-SPEC-1.51.0
Trade and Tra	nsaction Reporti	ng (TTR)	
Updated for SMR14	10.06.2024	Transaction Reporting Interface Specification (TRI - CH Style) (Version 4.22.0)	SER-TRX-INT-CH-4,22.0
Unchanged	21.07.2023	Transaction Reporting Interface (TRI - CH) Validation Concept and Error Codes (Version1.4.0)	SER-TRX-EER-CH-140
Unchanged	21.07.2023	Transaction Reporting Interface Specification (TRI - EU Style) (Version 1.15.0)	SER-TRX-INT-EU-1.15.0
Transaction R	econciliation Rep	oort (TXR)	
Unchanged	15.01.2024	Participant Transaction Reconciliation Report Specification (Version 1.9.0)	SSX-SWXS-SPEC-TXR-1.9.0
Trade Reconci	liation Report (TI	RR)	
Updated for SMR14	10.06.2024	Participant Trade Reconciliation Report Specification (Version 1.53.0)	SSX-SWXS-SPEC-TRR-1.53.0
Order Reconci	liation Report (O	rr)	
Unchanged	12.01.2024	Participant Order Reconciliation Report Specification (Version 1.32.0)	SSX-SWXS-SPEC-ORR-1.32.0
Billing Report			
Unchanged	08.01.2024	Billing Report File (BRI) Interface Specification (Version 1.37.0)	SWX-SPC-BRI-1.37.0
Sponsored Acc	ess Service		
Unchanged	09.05.2023	Sponsored Access FIX Drop Copy Interface Specification (Version 1.42.0)	SSX-SA-FDC-SPEC-1.42.0
Unchanged	16.04.2020	Sponsored Access File Interface (SFI) Specification (Version 1.7.0)	SSX-SA-SFI-SPEC-1.7.0
Buyback Prog	ram		
Unchanged	27.04.2020	BPS Reporting Application Interface Specification (Version 1.8.0)	see Member Section BPS Downloads page

8 Migration



Business and Technical Audience

8.1 Migration Concept

The central SWXess infrastructure and all associated interfaces will be upgraded to SMR14 using a staged approach for the Membertest environment. The upgrade of the Production environment will take place over a single migration weekend. The SMR14 changes will become active on the Monday after the migration weekend.

The upgrade to SMR14 requires the migration of transactional data as well as participant and instrument reference data. In addition, the migration to SMR14 requires configuration changes. SIX Swiss Exchange will ensure that the technical and business upgrade and the migration impact on participants, ISVs, ASPs as well as data vendors is as minimal as possible.

The business and technical migration concepts and approaches are currently being evaluated. SIX Swiss Exchange will publish further details about the migration to SMR14 in an update of this Release Guide in advance of the start of Membertest stage 1.



Required Action

Participants, ISVs and ASPs will need to upgrade their trading applications and other infrastructure on the Membertest stage 1 and during Production Migration weekends.

8.2 Business Migration

8.2.1 Transactional Data

8.2.1.1 Orders

All order books will be migrated to SMR14 during the migration by SIX Swiss Exchange. As a result of the migration, no active orders will be deleted from the order books and participants do not have to take any action in this regard.

8.2.1.2 On- and Off Order Book Trades

The on order book and off order book trades will be migrated to SMR14 during the migration and therefore no post-trade processing restrictions apply.

On the Monday after the migration, it will be possible to correct and cancel on order book trades which were executed or reported on the day before the migration by contacting Exchange Operations (helpdesk.exc@six-group.com / +41 58 399 2475). Countertrades for trades executed on the day before the migration may also be carried out either by Exchange Operations or by participants themselves.

On the Monday after the migration, SIX Swiss Exchange may on request correct and cancel off order book trades which were executed or reported on the day before the migration on behalf of participants. It will also be possible for participants to correct and cancel these off order book trades themselves. Countertrades for off book trades executed on the day before the migration may be carried out either by Exchange Operations or by participants themselves.

Unmatched two-sided trade reports from before the migration will match against two-sided trade report legs entered after the migration. The same behavior applies to Delivery Reports.

8.2.1.3 Delayed Publication of Off Order Book Trades and Off Exchange Trades

Off order book and off exchange trades which have been reported before the migration and are subject to delayed publication according to Annex C: Delayed Publication of <u>Directive 3: Trading</u> will be published via Market Data Interfaces as usual after the migrations if applicable.

8.2.1.4 Transaction Reports

The Transaction Reports will be migrated to SMR14 during the migration and therefore no post-trade processing restrictions apply.

8.3 SWXess Migration Weekends

8.3.1 Main Activities

The main activities during the migration weekends will be:

SIX Swiss Exchange:

- Upgrade of trading platform to SMR14

Participants, Data Vendors, ISVs and ASPs

- Update Member Own Applications (MOAs (if required))
- Verify connectivity and log in after upgrade (strongly recommended)

During the platform migration weekends, SIX Swiss Exchange will inform participants about the current status via System Status in the Member Section.

8.3.2 Membertest Migration Schedule

Please find below an overview of the Membertest migration schedule for the rollout of functionality over both Membertest stage 1 and Membertest stage 2.

On Saturdays and Sundays, your Local Support Center will be available between 10:00 and 16:00 CEST.

8.3.2.1 Membertest Stage 1 (Interface Changes)

The Membertest stage 1 has been completed.

8.3.2.2 Membertest Stage 2 (Functional & Interface Changes)

The Membertest stage 2 has been completed.

8.3.3 Production Migration Schedule

On Saturday and Sunday during Production migration, your Local Support Center will be available between 10:00 and 20:00 CEST.

Date	Time (CEST)	Activity
Fri 06 Dec 2024	-	Last Trading Day with SMR13
Sat 07 Dec 2024	All day	Upgrade SWXess Trading Platform to SMR14
	Approx. 16:30	Confirmation will be published on the system status page in the Member Section (and MSC Alert for Subscribers) that the upgrade has been completed.
	Following confirmation until 20:00	SWXess systems are running, connectivity is possible, however markets are closed and orders/quotes will be rejected.
Sun 08 Dec 2024	11:00 – 20:00	SWXess systems are running, connectivity is possible, however markets are closed and orders/quotes will be rejected.
Mon 09 Dec 2024	As from 06:00	First trading day on SMR14 in Production environment (P01)

8.3.4 Connectivity Testing Checklist During Migration

On the migration weekend, after the SWXess trading platform upgrade has been completed, the SWXess interfaces will be available for testing according to the schedule in section 8.3.2 and 8.3.3 as shown in the following table:

Interface	Available via	Status	Recommended Testing Activities
SCAP	-	Fully available: SCAP network and VPN tunnel connectivity reestablished	Test network is up Test VPN tunnel status is up (e.g. ping 146.109.99.254
Co-Location Access (P01 only)	-	Fully available: Network connectivity established	Test Co-Location Access network status is up
STI	SCAP	Available without business functionality: Session management test can be performed Application messages are rejected (closed for input) No morning snapshots are sent and therefore no open orders can be seen. Morning Snapshot will only be available on Monday morning	Test network connectivity of your SenderCompIDs (IP/Port) Test login
RDI	SCAP	Fully available: Reference data can be downloaded. The date of the file is 20241209	Download RDI Files Process RDI files
IMI	SCAP and Co- Location Access (P01 only)	Available without market updates: User Logins enabled Heartbeat messages are sent UDP re-requester available Reference Data available	Test network connectivity Test login Test set-up and reception of messages
ОТІ	SCAP and Co- Location Access (P01 only)	Available without business functionality: User login enabled Application messages are rejected Error "R" (the order is not allowed at this time)	Test network connectivity Test login

Interface	Available via	Status	Recommended Testing Activities
QTI	SCAP and Co- Location Access (P01 only)	Available without business functionality: User logins enabled Application messages are rejected Error "R" (quote not allowed at this time)	Test network connectivity Test login
SIX MDDX	SCAP	Available without market updates: User logins enabled Heartbeat messages are sent	Test network connectivity Test login

9 Testing Activities During Member Test Phase



Technical Audience

9.1 Scope of Member Test Phase

SIX Swiss Exchange strongly recommends that all Participants, Independent Software Vendors (ISVs), Application Service Providers (ASPs) and data vendors perform the following actions during the Member Test phase:

- Test Member Own Applications (MOAs) and verify that they are in-line with the latest SMR14 interface specifications, including full loop test with clearing and settlement as well as transaction reporting upload and download according to the new specifications. Please make sure that you test your business processes and back office workflows.
- Participate in the scheduled tests organized by SIX Swiss Exchange:
 - SWXess Intraday Recovery Tests
 - Performance Load Tests
 - Background Load Tests

Please contact Member Services (<u>member.services@six-group.com</u> / +41 58 399 2473) if you require assistance with testing in the Membertest environment.

9.2 Clearing and Settlement During Member Test Phase

The SIX SIS link for Clearing and Settlement is available during the Member Test phase except during Performance Load Tests and Background Load Tests. We recommend running full loop tests as soon as possible with your MOAs and back office systems.

9.3 Trading Hours and Availability

The trading hours and the availability of the Membertest environment remain unchanged for the SMR14 Member Test phase. Please refer to the following links for details:

Environment calendar	https://www.six-group.com/en/products-services/the-swiss-stock-exchange/market-data/news-tools/environment-calendar.html
Trading hours	https://www.six-group.com/dam/download/the-swiss-stock-exchange/trading/trading-provisions/trading-hours/trading-hours-membertest.pdf

9.4 Load Tests

9.4.1 Performance Load Tests

During the SMR14 Member Test phase, SIX Swiss Exchange will hold Performance Load Tests in the Membertest environment on the dates given in the table below.

Date	Time (CEST)	Load Generated	
12.10.2024	10:00 to 15:00	The detailed load pattern will be published in a separate MSC Message before each test.	Add to calendar
23.11.2024	10:00 to 15:00	The detailed load pattern will be published in a separate MSC Message before each test.	Add to calendar

You are invited to participate in the tests to verify your applications under high load. You are allowed to generate limited transaction load. No registration is required. You are kindly requested to leave your market data clients running and connected during the Performance Load Test, even if you do not participate in the test.

9.4.2 Background Load Tests

SIX Swiss Exchange will hold Background Load Tests each Tuesday and Thursday evening from 18:00 to 20:00 CEST using the following load distribution:

Time (CEST)	QPS Load	OTPS Load	FTPS Load
18:00 to 20:00	5000	500	250

You are invited to participate and allowed to generate own transaction load up to your test capacity.

The SIX SIS link for Clearing and Settlement is not available during Performance Load Tests and Background Load Tests.

9.5 SWXess Intraday Recovery Tests

9.5.1 Activities

We have scheduled recovery tests on the dates given in the table below. During these tests, you have the possibility to verify the behavior of your applications during a recovery.

Date	Time (CET)	Activity	
30.10.2024	14:00-17:00	Intraday Recovery Test – On Book Matcher partition 1 down	Add to calendar
06.11.2024	14:00-17:00	Intraday Recovery Test - On Book Matcher partition 2 down	Add to calendar
26.11.2024	14:00-17:00	Intraday Recovery Test - MDDX Infrastructure down	-Add to calendar
27.11.2024	14:00-17:00	Intraday Recovery Test - Both On Book Matcher Partitions down	Add to calendar
28.11.2024	09:30-12:00 14:00-17:00	Intraday Recovery Test - STI FIX Infrastructure down: Single Fix Gateway Failure and Double FIX Gateway Failure	Add to calendar
04.12.2024	14:00-17:00	Intraday Recovery Test - Contingency date	Add to calendar



Hint

You can download all calendar entries mentioned above here (zip file):

https://www.six-group.com/dam/download/market-data/news/environment-calendar/ical/six-swiss-exchange-smr14-activities.zip



Further Reading

For full details on the testing activities, please refer to the document "SWXess Business Recovery Guide for Participants" (version 8.20) in the Member Section.

https://secure.six-swiss-exchange.com/member_section/it/manuals.html

9.5.2 Information During Intraday Recovery Tests

For system status during the upgrade, please visit the **Membertest status page** in the Member Section.

 $https://secure.six-swiss-exchange.com/member_section/system_status_test.html\\$

If you wish to receive MSC Alerts by SMS or email regarding the recovery, please subscribe to priority "3- Low" alerts on the "My Subscriptions" page in the Member Section at:

https://secure.six-swiss-exchange.com/member_section/user_subs_admin.html

Appendix A Known Issues

Open known issues will be published and tracked in the <u>SIX Member Section</u> as they arise.



Further Reading

IT Related Frequently Asked Questions (FAQ) and Known Issues

Appendix B Terms and Abbreviations

Term/Abbreviation	Explanation
APP	Active Product Package for Leverage Products
ASP	Application Service Provider
BME	Bolsas y Mercados Españoles
BPS	Buyback, Price Stabilization, Sales during Buyback Program
BRI	Billing Report File Interface
CLOB	Central Limit Order Book
CO:RE	Repo Trading Solutions (CO:RE Trading Platform)
CSD	Central Security Depository
EBBO	European Best Bid and Offer
ESMA	European Securities and Markets Authority
ETF	Exchange Traded Funds
ETP	Exchange Traded Products
FDC	Sponsored Access – FIX Drop Copy Interface
FIX	Financial Information eXchange Protocol
FMIA	Financial Markets Infrastructure Act
FMIO	Financial Markets Infrastructure Ordinance
FoK	Order with validity Fill or Kill
FTPS	FIX Transactions (orders) per Second (STI)
IMI	ITCH Market Data Interface
ISV	Independent Software Vendor
IoC	Order with validity Immediate or Cancel
ISP	Independent Service Provider
MEQ	Minimum Execution Quantity
MIC	Market Identifier Code
MiFID	Markets in Financial Instrument Directive
MiFIR	Markets in Financial Instruments Regulation
MMT	Market Model Typology
MOA	Member Own Application
МРОВ	Mid-Point Order Book (SwissAtMid)
MTF	Multilateral Trading Facility as defined by FMIA
OBM	On Book Matcher
OHS	Organized Trading Facility as defined by FMIA
ORR	Order Reconciliation Report
OTI	OUCH Trading Interface

Term/Abbreviation	Explanation
OTPS	OUCH Transactions (orders) per Second (OTI)
PBBO	Primary Best Bid and Offer of the displayed Central Limit Order Book of the primary exchange
QDM	Quote Driven Market
QOD	Quote on Demand trading service
QPS	Quotes per Second (QTI)
QTI	Quote Trading Interface
RDI	Reference Data Interface
RSP	Routing Service Provider
RTS	Regulatory Technical Standard
SA	Sponsored Access
SCAP	SIX Common Access Portal
SEB	Swiss EBBO
SFI	Sponsored Access File Interface
SIX MDDX	SIX MDDX Multi-Dimensional Data fluX™ interface
SMP	Self-Match Prevention
SMR	SWXess Maintenance Release
STI	Standard Trading Interface
Swiss EBBO	Swiss EBBO trading service
SwissAtMid	SIX Swiss Exchange at Midpoint trading service
SWXess	Name of the SIX Swiss Exchange trading platform
TAL	Trading-At-Last
TRI	Transaction Reporting Interface
TRR	Trade Reconciliation Report
TTR	Trade and Transaction Reporting
TXR	Transaction Reconciliation Report
UI	User Interface
XOFF	Market Identifier Code for Off Exchange Transactions – Listed Instruments
XQMH	Market Identifier Code for SIX Swiss Exchange AG – Structured Products
XQOD	Market Identifier Code for SIX Swiss Exchange AG – Quote on Demand
XSEB	Market Identifier Code for SIX Swiss Exchange AG – Swiss EBBO
X-stream INET	Name of NASDAQ OMX platform
XSWM	Market Identifier Code for SIX Swiss Exchange AG – SwissAtMid
XSWX	Market Identifier Code for SIX Swiss Exchange AG

Pfingstweidstrasse 110

8005 Zurich

Switzerland

T +41 58 399 2111

