Eurex Circular 068/18

Eurex Exchange's T7 Disaster Recovery Test on 13 October 2018

Summary

On Saturday, **13 October 2018**, Eurex T7 will participate in a world-wide Disaster Recovery (DR) test scenario organised by the Futures Industry Association (FIA). Eurex Exchange will offer a test scenario according to its T7 disaster recovery concept.

This particular DR scenario simulates an outage of the Equinix data centre (FR2) facility.

Attachment:

- T7 Disaster Recovery Concept – Interface Configuration Details

Date: 18 September 2018

Recipients: All Trading Participants of Eurex Deutschland and Vendors

Authorized by:
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Target groups:

- Front Office/Trading
- IT/System Administration
- Auditing/Security Coordination

Related Eurex circulars:
096/17, 057/18

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Eurex Exchange's T7 Disaster Recovery Test on 13 October 2018

On Saturday, 13 October 2018, Eurex T7 will participate in the 2018 Futures Industry Association (FIA) Disaster Recovery Test, offering a test scenario for Eurex Exchange's T7 disaster recovery concept. Please find more details about the 2018 FIA Disaster Recovery Test under the following link:

https://bcp.fia.org/events/2018-fia-disaster-recovery-test

Participation is optional but highly recommended for all Eurex Trading Participants to ensure easy transition in case of a real disaster. Participants are recommended to register for participation on the FIA website:

https://secure.fia.org/bcp/test-registration.asp

Xetra will be offering a disaster recovery test on the same day, allowing both Eurex Trading Participants and Xetra Members to test disaster recovery (DR) connectivity simultaneously.

This particular DR scenario simulates an outage of the entire Equinix data center (FR2) facility in. In such a disaster recovery scenario, Eurex Exchange's T7 infrastructure regularly used for its T7 simulation will be re-used to serve as disaster recovery production infrastructure.

During a DR test exercise, production reference data will be used, including User IDs, T7 GUI SSH keys and ETI sessions. Changes which have been made to this reference data will **NOT** be copied back to the production environment after the test. It is not advisable to perform any changes to this data during the test exercise.

While order entry, modification and deletion will be possible during the DR test exercise, any order book or trading information created during the DR test exercise will **NOT** be transferred back to the production environment.

The following Eurex T7 interfaces will be available during the DR test exercise:

- Eurex T7 Trader- and Admin-GUI
- Enhanced Transaction Interface (ETI)
- Eurex Market Data Interface (MDI)
- Eurex Enhanced Market Data Interface (EMDI)
- Reference Data Interface (RDI)
- Reference Data File (RDF) from production - provided by CTS on request
- Common Report Engine (CRE)

Trading Participants who take part in the DR test exercise can expect to receive market data via MDI/EMDI, can read reference data via RDI or request RDF from Customer Technical Support (CTS). Order and quote entry will be possible via ETI and Trader GUI.

The following Eurex T7 interfaces will **NOT** be available during the DR test exercise:

- Extended Market Data Service
- Enhanced Order Book Interface
- FIX Trading Interface

Eurex Clearing's C7 will not participate in the DR test exercise, therefore the FIXML Clearing Interface will **NOT** be available.

Please refer to the attached document "T7 Disaster Recovery Concept - Interface Configuration Details" for further details on the test scenario and all required network changes.

The document is also available on the Eurex website www.eurexchange.com under the link:

Technology > T7 Trading architecture > System documentation > Release 6.1 > Network Access

After the DR test has been completed, the regular production environment will be made available for a certain time period in order to allow Trading Participants to adapt their configurations.

Schedule

Due to the intercontinental participation in the Futures Industry Association DR test, the DR test window will be available in the afternoon (Central European Summer Time) following this schedule:

- Start of DR scenario test 14:00 CEST
- End of DR scenario test 16:00 CEST
- Start of production environment re-connect test 17:00 CEST
- End of production environment re-connect test 19:00 CEST

The DR test will be completed with a re-connection test to the Equinix data centre starting at 17:00 CEST. As part of the re-connect test, participants can also test the connectivity after the decommissioning of the first two low-frequency trading gateways in the T7 production environment (see Eurex circular 057/18).

The production environment will remain up unattended for the rest of the weekend.

If you have any questions or need further information, please contact your Technical Key Account Manager using your VIP number or via e-mail to: cts@deutsche-boerse.com.

18 September 2018



T7 Disaster Recovery Concept

Interface Configuration Details

Version	4.0.0
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1 Introduction

This document provides an overview of Deutsche Börse's disaster recovery concept for the T7 trading system. It contains the required technical background information as well as functional features and limitations to enable participants to continue trading in a DR situation.

Furthermore, it provides information with regard to the scope of the yearly disaster recovery test (chapter 5). Please note: In a scheduled disaster recovery test, not all interfaces will be offered.

For an overall description of T7 network options, please refer to the respective document "N7 Network Access Guide" also available on the Eurex or Xetra website:

www.eurexchange.com -> *Technology -> T7 Trading architecture ->System documentation -> Release 6.1 -> Network Access*

www.xetra.com -> *Technology -> T7 Trading architecture -> System documentation -> Release 6.1 -> Network Access*

2 Disaster recovery scenario

The following description is relevant for installations connecting via redundant line WAN connection (Ethernet, E1/T1) outside of the Equinix data centre[1]. Customer installations inside Equinix are considered defunct in a disaster recovery (DR) scenario that results in a complete outage of the Equinix data centre.

Three types of customer installations have to be considered for the T7 DR scenario:

- Customer installations inside the Equinix data centre (CoLocation / Proximity)
- Customer installations connecting to the Frankfurt Access Point (customers in Germany)
- Customer installations connecting to remote Access Points (London, Paris, Amsterdam, Chicago, etc.)

Figure 1 depicts all three types of customer installations and their redundant connectivity to the T7 production back ends.

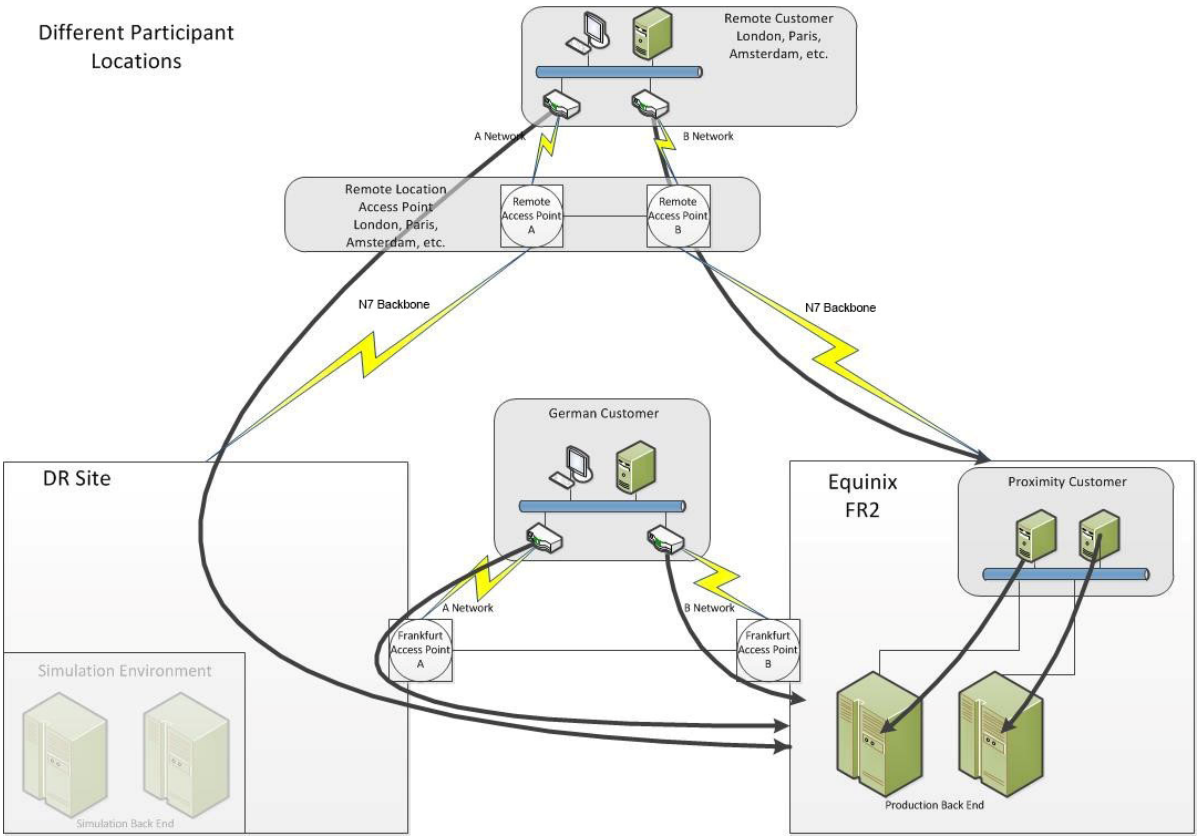


Figure 1, three location options for T7 connectivity

[1] Combined/iAccess is available in Hausen1 and Equinix, so it depends where the participant's tunnel is terminated as to whether he will still have connection. Tunnels in Equinix do not automatically move to Hau1.

Figure 2 displays the result of a DR scenario that renders the whole facility of Equinix data centre (FR2) inaccessible.

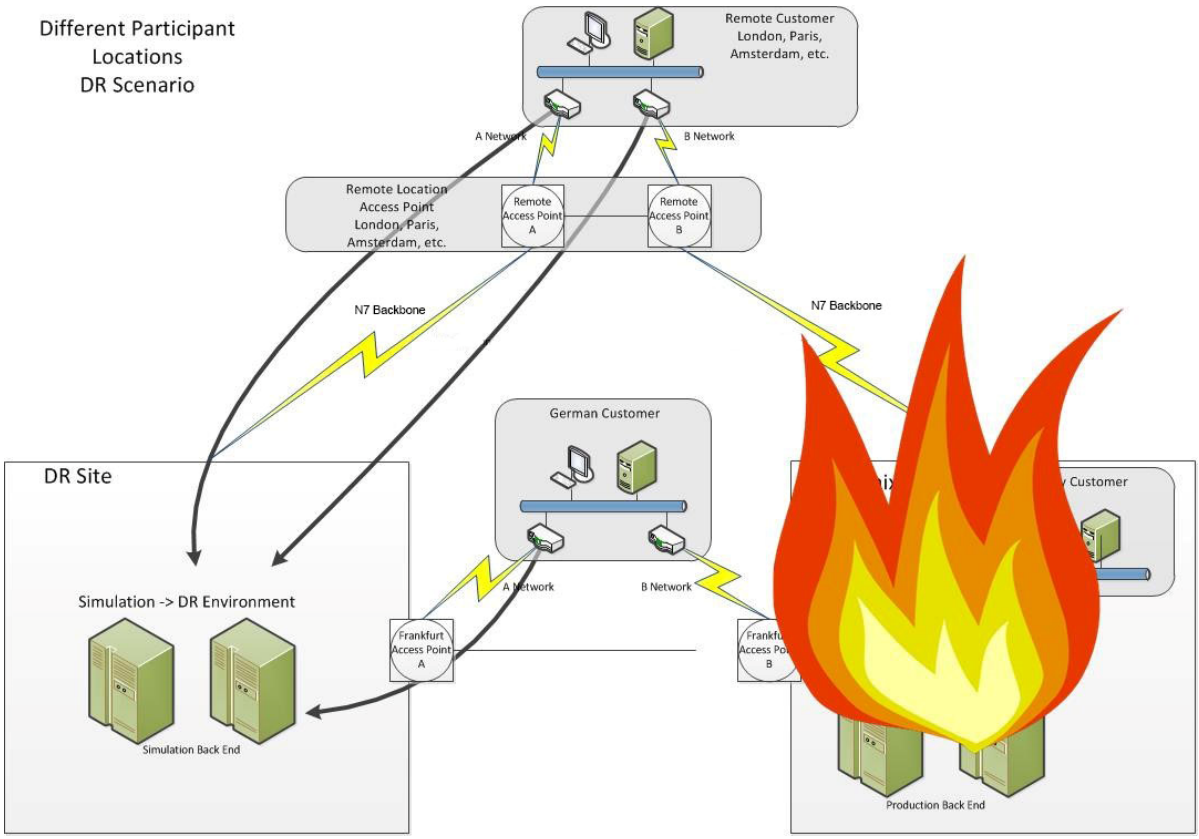


Figure 2, Disaster recovery scenario

In such a scenario customer installations, connecting to remote access points (i.e. London, Paris, Amsterdam, Chicago, etc.) will continue to use both leased lines connecting them to the local access point. The local access point continues to use backbone lines to Frankfurt, which are terminating in the DR data centre.

Customer installations connecting to the Frankfurt access point will be able to continue to use a single leased line connecting to the access point half located in the DR data centre.

Customer installations within the Equinix data centre (FR2) are considered to be non-functional in this DR scenario.

3 General considerations

In a disaster recovery scenario the T7 infrastructure regularly used for T7 simulation will be re-used to serve as disaster recovery production infrastructure.

The switch of the back ends and the transfer of reference data will not be instantaneous, but is expected to take up to four hours.

While most T7 interfaces will be available in the disaster recovery scenario a number of conceptual differences to regular production exist and have to be accounted for.

3.1 Functional

- Order books will be empty after switch to the DR environment.
- All keys and sequence numbers are reset and starting from "1" again.
- Trades of the current business day will not be transferred to T7 DR System but can still be inquired from the Clearing systems (Eurex: C7, Xetra: CCP).
- Limited number of partitions are running in the DR scenario
- A new RDF will be produced during DR start up and will be published by the DR back end (as well as further intraday updates) onto the Common Report Engine into the directory for environment 90 (prod).

3.2 Configuration for DR

3.2.1 Same as Production

- User IDs, ETI and FIX sessions will be used from production.
- All TCP and UDP Ports will be the same as for normal production.
- GUI Java WebStart Server will be the same as for normal production.
- FIX Gateway A Side Subnet will be the same as for normal production.
- All A-Stream multicast groups will be the same as for normal production for the T7 broadcast interfaces:
    - Market Data Interface (MDI)
    - Enhanced Market Data Interface (EMDI)
    - Extended Market Data Service (EMDS)
    - Market Signals (MS) - derivatives market only
    - Reference Data Interface (RDI)
- A-Stream Rendezvous Point (RP) will be the same as for normal production.
- A-Stream technical heartbeat will be the same as for normal production.
- CRE A-Side Subnet will be the same as for normal production.

3.2.2 Differ from Production

- ETI Trading Gateway and Partition Specific Gateway Subnets will differ from regular production!
- GUI Landing Pages and (Crypto) Proxy Servers will differ from regular production!
- Source IP addresses will differ from regular production for the T7 broadcast interfaces!
    - Market Data Interface (MDI)
    - Enhanced Market Data Interface (EMDI)
    - Extended Market Data Service (EMDS)
    - Market Signals (MS) - derivatives market only
    - Reference Data Interface (RDI)

See chapter 4 for full network details.

4 Disaster recovery network details

Due to the nature of the distributed T7 architecture, different interfaces will be configured in varying ways.

T7 interfaces whose production infrastructure is solely located in the Equinix data centre FR2 will switch to the simulation infrastructure and need to be accessed via simulation network addresses (i.e. ETI gateways).

Other T7 interfaces whose production infrastructure is distributed across both data centres will be able to continue to use the existing/remaining production infrastructure in the DR data centre (i.e. FIX gateways, multicast addresses).

In some cases, further changes need to be done by Deutsche Börse Group for example, to re-balance the number of ETI PS gateways with the number of ETI LF gateways, according to different requirements by a DR scenario compared to regular simulation.

4.1 T7 network details derivatives markets

4.1.1 Eurex T7

The following tables summarize all available interface connection details in a disaster recovery scenario for the T7 derivatives market Eurex (XEUR).

Interface	Connection option	URL / IP addresses	IP subnets	Ports	Protocol
GUI Landingpage	Internet	http://webgui.eurexchange.com/emergency/index.html		80	TCP/IP
	Leased line	http://193.29.93.173/emergency/index.html http://webgui.vpn.eurexchange.com/emergency/fqdn.html		80	TCP/IP
Java WebStart	Internet	193.29.90.190	-	80 / 443	TCP/IP
	Leased line	193.29.93.173	193.29.93.160/28	80 / 443	TCP/IP
GUI (Crypto)Proxies	Internet	193.29.90.235 192.29.90.236	193.29.90.224/27	80	TCP/IP
	Leased line - side A	193.29.89.225	193.29.89.224/28	80 / 8089	TCP/IP
	Leased line - side B	193.29.95.225	193.29.95.224/28		
Eurex ETI	**Gateway type**	**IP adresses Side A**	**IP adresses Side B**	**Ports**	**Protocol**
	PS trading gateways	193.29.89.129 192.29.89.130	193.29.89.161 193.29.89.162	19043	TCP/IP
	LF trading gateways	193.29.89.65 193.29.89.66 193.29.89.67 193.29.89.68	193.29.89.97 193.29.89.98 193.29.89.99 193.29.89.100	19006	TCP/IP
	Connection gateways	193.29.89.65	193.29.89.97	19008	TCP/IP

Table 1, Eurex T7 market network details in DR scenario, part 1/3

Eurex FIX Gateway	**Connection option**	**IP addresses**	**IP subnets**	**Ports**	**Protocol**
	Leased line - side A	90.150.253.31	90.150.253.0 / 24	Individually assigned	TCP/IP

All Eurex T7 broadcast interfaces	**Description**	**Rendezvous points**	**Ports**
	Rendezvous points Service A only	193.29.91.252/32	-
	Technical heartbeat Service A only	-	59086

Eurex MDI	**Description**	**Multicast groups Service A**	**Ports**	
			US-allowed products	**US-restricted products**
	Multicast groups	224.0.50.64-65 224.0.50.67-74 224.0.29.72-76	59000	59032
	Source networks	193.29.89.192/28	-	

Eurex EMDI	**Description**	**Multicast groups Service A**	**Ports**	
			US-allowed products	**US-restricted products**
	Multicast groups	224.0.50.0-9 224.0.50.12-63 224.0.29.2 - 55	Snapshot: 59000 Incremental: 59001	Snapshot: 59032 Incremental: 59033
	Source networks	193.29.89.0/27	-	

Eurex Market Signals	**Description**	**Multicast groups Service A**	**Ports**	
			US-allowed products	**US-restricted products**
	Reference Data	224.0.114.1	59000	-
	Eurex IOC liquidity Indicator for Options	224.0.114.128	59001	59033
	Intraday Volatility Forecast	224.0.114.132	59001	59033
	Risk Alerts	224.0.114.134	59001	59033
	Source networks	193.29.89.0/27	-	

Eurex Extended Markat Data Service (EMDS)	**Description**	**Multicast groups Service A**	**Ports**	
			US-allowed products	**US-restricted products**
	Ticker Feed	224.0.50.75	59000 Replay: 59001	59032 Replay: 59033
	Settlement prices	224.0.50.77		
	Intraday open interest data	224.0.50.78		
	Eurex T7 trades	224.0.50.79	Replay only: 59001	Replay only: 59033
	Source networks	193.29.89.192/28	-	

Eurex RDI	**Description**	**Mutlicast groups service A**	**Ports**
	Multicast groups	224.0.50.0	Snapshot: 59098
	Multicast groups	224.0.50.1	Incremental: 59099
	Source networks	193.29.89.192/28	-

Table 2, Eurex T7 market network details in DR scenario, part 2/3

Common Report Engine	Connection option	Gateway IP address	IP subnets	Ports	
				Public	Particip.
	Internet	193.29.90.132	-	2221	2222
	Leased line - side A	193.29.90.67	193.29.90.64/27		
Eurex EOBI	Description				
	Currently not available				

Table 3, Eurex T7 market network details in DR scenario, part 3/3

4.1.2 EEX T7

The European Energy Exchange (EEX) market running on T7 shares infrastructure with Eurex T7. Therefore, IP addresses for GUI servers, ETI and FIX gateways will be the same as for Eurex T7.

EEX multicast addresses differ from Eurex T7, but follow the same logic (only A-side, source network from simulation)

Interface	Connection option	URL / IP addresses		Ports	Protocol
GUI Landingpage	Internet	http://webgui.eurexchange.com/emergency/eex/index.html		80	TCP/IP
	Leased line	http://193.29.93.173/emergency/eex/index.html		80	TCP/IP
		http://webgui.vpn.eurexchange.com/emergency/eex/fqdn.html			
Java WebStart	Internet	193.29.90.190	-	80 / 443	TCP/IP
	Leased line	193.29.93.173	193.29.93.160/28	80 / 443	TCP/IP
GUI (Crypto)Proxies	Internet	193.29.90.235	193.29.90.224/27	80	TCP/IP
		192.29.90.236			
	Leased line - side A	193.29.89.225	193.29.89.224/28	80 / 8089	TCP/IP
	Leased line - side B	193.29.95.225	193.29.95.224/28		
EEX ETI	Gateway type	IP adresses Side A	IP adresses Side B	Ports	Protocol
	LF trading gateways	193.29.89.65 193.29.89.66 193.29.89.67 193.29.89.68	193.29.89.97 193.29.89.98 193.29.89.99 193.29.89.100	19006	TCP/IP
	Connection gateways	193.29.89.65	193.29.89.97	19008	TCP/IP
EEX FIX Gateway	Connection option	IP addresses	IP subnets	Ports	Protocol
	Leased line - side A	90.150.253.31	90.150.253.0 / 24	Individually assigned	TCP/IP

Table 4, EEX T7 market network details in DR scenario, part 1/2

All Eurex T7 broadcast interfaces

Description	Rendezvous points	Ports
Rendezvous points Service A only	193.29.91.252/32	-
Technical heartbeat Service A only	-	59086

EEX MDI

Description	Multicast groups Service A	Ports	
		US-allowed products	US-restricted products
Multicast groups	224.0.50.66	59000	59032
Source networks	193.29.89.192/28	-	-

EEX EMDI

Description	Multicast groups Service A	Ports	
		US-allowed products	US-restricted products
Multicast groups	224.0.50.10 224.0.50.11	Snapshot: 59000 Incremental: 59001	Snapshot: 59032 Incremental: 59033
Source networks	193.29.89.0/27	-	

EEX RDI

Description	Mutlicast groups service A	Ports
Multicast groups	224.0.29.0	Snapshot: 59098
Multicast groups	224.0.29.1	Incremental: 59099
Source networks	193.29.89.192/28	-

Common Report Engine

Connection option	Gateway IP address	IP subnets	Ports	
			Public	Particip.
Internet	193.29.90.132	-	2221	2222
Leased line - side A	193.29.90.67	193.29.90.64/27		

Table 5, EEX T7 market network details in DR scenario, part 2/2

4.2 T7 network details cash market

4.2.1 Xetra T7

The following tables summarize all available interface connection details in a disaster recovery scenario for Xetra T7.

Interface	Connection option	URL / IP addresses		Ports	Protocol
GUI Landingpage	Internet	http://webgui.xetra.com/emergency/index.html		80	TCP/IP
	Leased line	http://193.29.93.174/emergency/index.html		80	TCP/IP
		http:// webgui.vpn.xetra.com/emergency/fqdn.html			
Java WebStart	Internet	193.29.90.189	-	80 / 443	TCP/IP
	Leased line	193.29.93.174	-	80 / 443	TCP/IP
GUI (Crypto) Proxies	Internet	193.29.90.233	193.29.90.224/27	80	TCP/IP
		193.29.90.234			
	Leased line - side A	193.29.94.225	193.29.94.224/29	80 / 8089	TCP/IP
	Leased line - side B	193.29.94.233	193.29.94.232/29		
Xetra ETI	**Gateway type**	**IP subnets Side A**	**IP subnets Side B**	**Ports**	**Protocol**
	PS trading gateways	193.29.94.129	193.29.94.161	19043 19045	TCP/IP
	LF trading gateways	193.29.94.65	193.29.94.97	19006	TCP/IP
	Connection gateways	193.29.94.65	193.29.94.97	19008	TCP/IP
Xetra FIX Gateway	**Connection option**	**IP addresses**	**IP subnets**	**Ports**	**Protocol**
	Leased line - side A	90.152.253.41	90.152.253.0/24	Individually assigned	TCP/IP
All Xetra T7 broadcast interfaces	**Description**	**Rendezvous points**	**Ports**		
	Rendezvous points Service A only	185.102.253.252	-		
	Technical heartbeat Service A only	-	59086		
Xetra MDI	**Description**	**Multicast groups Service A**	**Ports**		
	Multicast groups	224.0.161.16 - 30	59000		
	Source networks	193.29.94.192/28	-		

Table 6, Cash market network details in DR scenario, part 1/2

Xetra EMDI	**Description**	**Multicast groups Service A**	**Ports**		
	Multicast groups	224.0.160.0 - 63	Snapshot: 59000 Incremental: 59001		
	Source networks	193.29.94.0/27	-		
Xetra Extended Markat Data Service (EMDS)	**Description**	**Multicast groups Service A**	**Ports**		
	All Trade Prices (ATP)	224.0.161.64	59000 Replay: 59001		
	Ticker feed	224.0.161.31			
	Source networks	193.29.94.192/28	-		
Xetra RDI	**Description**	**Mutlicast groups service A**	**Ports**		
	Multicast groups	224.0.161.0	Snapshot: 59098		
		224.0.161.0	Incremental: 59099		
	Source networks	193.29.94.192/28	-		
Common Report Engine	**Connection option**	**Gateway IP address**	**IP subnets**	**Ports**	
				Public	**Particip.**
	Internet	193.29.90.132	-	2221	2222
	Leased line - side A	193.29.90.67	193.29.90.64/27		
Xetra EOBI	**Description**				
	currently not available	-	-		
Xetra EOBI	**Description**				
	Currently not available				

Table 7, Cash market network details in DR scenario, part 2/2

4.2.2 Xetra Vienna T7

The following tables summarize all available interface connection details in a disaster recovery scenario for Xetra Vienna T7

Interface	Connection option	URL / IP addresses		Ports	Protocol
GUI Landingpage	Internet	http://webgui.xetra.com/emergency/xvie/index.html		80	TCP/IP
	Leased line	http://193.29.93.174/emergency/xvie/index.html		80	TCP/IP
		http://webgui.vpn.xetra.com/emergency/xvie/fqdn.html			
Java WebStart	Internet	193.29.90.189	-	80 / 443	TCP/IP
	Leased line	193.29.93.174	-	80 / 443	TCP/IP
GUI (Crypto)Proxies	Internet	193.29.90.233	193.29.90.224/27	80	TCP/IP
		193.29.90.234			
	Leased line - side A	193.29.94.225	193.29.94.224/29	80 / 8089	TCP/IP
	Leased line - side B	193.29.94.233	193.29.94.232/29		
Xetra ETI	**Gateway type**	**IP subnets Side A**	**IP subnets Side B**	**Ports**	**Protocol**
	Trading gateways (LF only)	193.29.94.65	193.29.94.97	19006	TCP/IP
	Connection gateways	193.29.94.65	193.29.94.97	19008	TCP/IP
Xetra FIX Gateway	**Connection option**	**IP addresses**	**IP subnets**	**Ports**	**Protocol**
	Leased line - side A	90.152.253.41	90.152.253.0/24	Individually assigned	TCP/IP
All Xetra T7 broadcast interfaces	**Description**	**Rendezvous points**	**Ports**		
	Rendezvous points Service A only	185.102.253.252	-		
	Technical heartbeat Service A only	-	59086		
Xetra MDI	**Description**	**Multicast groups Service A**	**Ports**		
	Multicast groups	224.0.161.32 - 38	59000		
	Source networks	193.29.94.192/28	-		

Table 8, Vienna cash market network details in DR scenario, part 1/2

Xetra EMDI	Description	Multicast groups Service A	Ports		
	Multicast groups	224.0.160.64 - 95	Snapshot: 59000 Incremental: 59001		
	Source networks	193.29.94.0/27	-		
Xetra Extended Markat Data Service (EMDS)	Description	Multicast groups Service A	Ports		
	All Trade Prices (ATP)	224.0.161.68	59000 Replay: 59001		
	Ticker feed	224.0.161.39			
	Source networks	193.29.94.192/28	-		
Xetra RDI	Description	Mutlicast groups service A	Ports		
	Multicast groups	224.0.161.1	Snapshot: 59098		
		224.0.161.1	Incremental: 59099		
	Source networks	193.29.94.192/28	-		
Common Report Engine	Connection option	Gateway IP address	IP subnets	Ports	
				Public	Particip.
	Internet	193.29.90.132	-	2221	2222
	Leased line - side A	193.29.90.67	193.29.90.64/27		
Xetra EOBI	Description				
	Currently not available				

Table 9, Vienna cash market network details in DR scenario, part 2/2

4.2.3 Xetra Dublin T7

The following tables summarize all available interface connection details in a disaster recovery scenario for Xetra Dublin T7

Interface	Connection option	URL / IP addresses		Ports	Protocol
GUI Landingpage	Internet	http://webgui.xetra.com/emergency/xdub/index.html		80	TCP/IP
	Leased line	http://193.29.93.174/emergency/xdub/index.html		80	TCP/IP
		http://webgui.vpn.xetra.com/emergency/xdub/fqdn.html			
Java WebStart	Internet	193.29.90.189	-	80 / 443	TCP/IP
	Leased line	193.29.93.174	-	80 / 443	TCP/IP
GUI (Crypto)Proxies	Internet	193.29.90.233	193.29.90.224/27	80	TCP/IP
		193.29.90.234			
	Leased line - side A	193.29.94.225	193.29.94.224/29	80 / 8089	TCP/IP
	Leased line - side B	193.29.94.233	193.29.94.232/29		
Xetra ETI	**Gateway type**	**IP subnets Side A**	**IP subnets Side B**	**Ports**	**Protocol**
	Trading gateways (LF only)	193.29.94.65	193.29.94.97	19006	TCP/IP
	Connection gateways	193.29.94.65	193.29.94.97	19008	TCP/IP
Xetra FIX Gateway	**Connection option**	**IP addresses**	**IP subnets**	**Ports**	**Protocol**
	Leased line - side A	90.152.253.41	90.152.253.0/24	Individually assigned	TCP/IP
All Xetra T7 broadcast interfaces	**Description**	**Rendezvous points**	**Ports**		
	Rendezvous points Service A only	185.102.253.252	-		
	Technical heartbeat Service A only	-	59086		
Xetra MDI	**Description**	**Multicast groups Service A**	**Ports**		
	Multicast groups	224.0.161.40 - 46	59000		
	Source networks	193.29.94.192/28	-		

Table 10, Dublin cash market network details in DR scenario, part 1/2

Xetra EMDI	Description	Multicast groups Service A	Ports		
	Multicast groups	224.0.160.96 - 103	Snapshot: 59000		
			Incremental: 59001		
	Source networks	193.29.94.0/27	-		
Xetra Extended Markat Data Service (EMDS)	Description	Multicast groups Service A	Ports		
	All Trade Prices (ATP)	224.0.161.72	59000 Replay: 59001		
	Ticker feed	224.0.161.47			
	Source networks	193.29.94.192/28	-		
Xetra RDI	Description	Mutlicast groups service A	Ports		
	Multicast groups	224.0.161.2	Snapshot: 59098		
		224.0.161.2	Incremental: 59099		
	Source networks	193.29.94.192/28	-		
Common Report Engine	Connection option	Gateway IP address	IP subnets	Ports	
				Public	Particip.
	Internet	193.29.90.132	-	2221	2222
	Leased line - side A	193.29.90.67	193.29.90.64/27		
Xetra EOBI	Description				
	Currently not available				

Table 11, Dublin cash market network details in DR scenario, part 2/2

5 Disaster recovery test scope

Disaster recovery test exercises will be performed once a year on a weekend (usually Saturday). DR test exercises haven been aligned with the yearly FIA business continuity test (see https://bcp.fia.org). Participation in the DR test exercise is optional but highly recommended for all trading and clearing participants to ensure easy transition in case of a real disaster.

During a DR test exercise, production reference data will be used, including User IDs, T7 GUI SSH keys and ETI sessions. Changes done to these reference data will not be copied back to production after the test. It is not advised to perform any changes to this data during the test exercise.

Any order book or trading information created during the DR test exercise will not be transferred back to production.

The scope of DR test exercises is as follows:

The following T7 interfaces will be available during the DR test exercise

- Enhanced Transaction Solution (ETI)
- T7 Market Data Service (MDI)
- T7 Enhanced Market Data Service (EMDI)
- T7 GUI
- Reference Data Interface (RDI)
- Reference Data File (RDF)
- Common Report Engine (CRE)

Customers participating in the DR test exercise can

- receive market data via MDI, EMDI and T7 GUI
- read reference data via RDI
- receive Reference Data File (RDF) - provided by CTS on request
- enter orders and quotes via ETI and T7 GUI
- access CRE

The following T7 interfaces will not be available during the DR test exercise

- FIX Gateway
- Enhanced Order Book Interface
- Extended Market Data Service
- Market Signals (MS)

The Xetra classic trading system and the Clearing systems C7 and CCP are not participating in the DR test exercise. No data generated during a DR test exercise is forwarded to any Clearing system.

6 Change log

The change log describes on a higher level, what changed in the latest version of the document over older versions.

No	Chapter, page	Date	Change
1.0.0		27 Sept 2013	Initial version the Eurex Exchange's T7 Disaster Recovery Concept
2.0.0	All	25 July 2016	Added EOBI, EMDS and Eurex Market Signals
3.1.1	All	31 August 2017	Change to common document including T7 cash markets and EEX
4.0	All	29 August 2018	Adhere to T7 Release 6.1 (e.g. Partition Specific Gateway, etc…), added Introduction