DEUTSCHE BÖRSE

Member Section

Technical Connection - User Guide

Member Section

Technical Connection - User Guide

Version 1.1

08 April 2022

Table of Contents

1	Introduction	1
2	Technical Connection	1
2.1	Request user permission	1
2.2	Incident Tickets	6
2.3	Requests & Configuration	7
2.3.1	Leased Line and Internet Connections	9
2.3.2	10 Gbit/s Co-Location Connections	10
2.3.3	Sessions	10
2.3.4	Entitlement Configuration	11
2.3.5	Certificates	12
2.3.6	Self Service Certificates	13
2.3.7	Location Overview	13
2.3.8	Providers	14
2.3.9	Participants	15
2.3.10	Request Overview	15
2.3.11	Open Internet	16
2.4	Monitors and Statistics	16
2.5	API Hub	17
2.5.1	API Hub Overview	17
2.5.2	Creation of a new Application	18
2.5.3	Consumption of APIs (Description for User ID List Download and CUA User List Downlo	oad)
		20
2.5.4	Description of ALGO HFT Upload via API	21
2.5.5	Description of Client Identification Upload via API	22
3	Support Contacts	23

1 Introduction

This user guide outlines the enhancements within the "Technical Connection" area of the Member Section, which are part of the Member Section Release 2.3. This guide shall serve as guidance for Member Section users to ensure a smooth introduction of the release and seamless processing of e.g. maintenance of technical connection or the incidents ticket handling.

2 Technical Connection

Within the "Technical Connection" section clients can monitor and manage technical connections to the various trading and clearing systems or manage the technical Incident Tickets. The "Technical Connection" service is available on the side navigation of the Member Section landing page and visible for everyone with the respective permission.

To access the services within this section, the user permissions "Technical Connection Maintenance", "Approval Technical Connection Request", "Self Service Certificate Admin" or "Incident Ticket Maintenance" are needed depending on the service you want to access.

- 1. With the "Technical Connection Maintenance" permission you can create requests for connections or monitor connections. To approve such requests, the "Approval Technical Connection Request" permission is necessary.
- With the "Self Service Certificate Admin" permission you can access the API Hub and the area where it is possible to create accounts based on certificates or keys, such as T7 GUI, FIXML or Buy-In Agent.
- 3. With the "Incident Ticket Maintenance" permission you can create and manage technical incident tickets.

2.1 Request user permission

These user permissions can be requested either during a) the registration process for the Member Section or b) within the Member Section:

- a) Permission request during the registration process:
 - via self-registration: During the self-registration process clients are asked in step 3 to select permissions. The mentioned permissions are under the category "Technical Connection" (Figure 1). Once the permission was requested, it needs to be approved by the Central Coordinator.

Member Section

Technical Connection - User Guide

Version 1.1

22 March 2022

DEUTSCHE BÖRSE GROUP	
Self-Registration - Step 3 / 4	
Permissions	
i Note that each permission has to be approved by the responsible Central Coordinator who can be found after registered successfully under My Profile > Permissions.	and logged in
Please select the services you want to have access for by selecting the respective permissions in the list.	
Search	Q še He
1 Permission added	
> Company Administration	
> Invoices	
> Regulatory Reporting Hub	
V Technical Connection	
✓ Incident Ticket Maintenance	
Authorization for creation and tracking of incident tickets	Requested
Approval Technical Connection Request	
Administration and approval of of technical connection requests	Not granted
Technical Connection Maintenance	
Create and maintain of technical connection requests	Not granted
Self Service Certificate Admin	
Creation and maintainance self service certificate	Not granted
> Trading & Clearing Administration	
> eListing	
	Back Next

Figure 1 - Permission via self-registration

• by the Central Coordinator: If the Central Coordinator (CC) is creating the user account on behalf, at step 2 the CC is asked to select the relevant permissions for the user (Figure 2).

Technical Connection - User Guide

22 March 2022

≡ 🍙	Q DE 🛧 🕜
<i>8</i> _ℓ Central Coordinator	User Setup 2 / 3
$lpha_{\!$	Permissions
	Note that each permission has to be approved by the responsible Central Coordinator who can be found after registered successfully and logged in under My Profile > Permissions.
	Please select the services you want to have access for by selecting the respective permissions in the list.
	Search Q 🗄 🗄
	1 Permission added
	> Company Administration
	> Invoices
	> Regulatory Reporting Hub
	V Technical Connection
	Self Service Certificate Admin Creation and maintainance self service certificate Requested
	Incident Ticket Maintenance Authorization for creation and tracking of incident tickets Not granted
	Approval Technical Connection Request
	Administration and approval of of technical connection requests Not granted
	Technical Connection Maintenance
	Create and maintain of technical connection requests Not granted
Company Contacts	> Trading & Clearing Administration
DBAG Contacts	> WSS Online Plus
🖉 User Guides	> eListing
Contact Us	Back Next
	Imprint Data Privacy Technical Requirements Terms of Use

Figure 2 - Permission by the Central Coordinator

- b) Permission request within the Member Section:
 - by the user via "My Profile: Once you have access to the Member Section, you are able to request within "My Profile" under "Permission" the relevant permissions (Figure 3). The permission request needs to be approved by the Central Coordinator/Deputy.

DEUTSCHE BÖRSE GROUP	Logged In as
≡ ゐ	😰 14 Task(s)
	My Profile
-	Personal Data
	Search
-	1 Permission added
	> Company Administration
	> eListing
	> Invoices
	> Regulatory Reporting Hub
	V Technical Connection
	Self Service Certificate Admin Creation and maintainance self service certificate Granted
	Approval Technical Connection Request Administration and approval of of technical connection requests Requested
	Technical Connection Maintenance Create and maintain of technical connection requests Not granted
Company Contacts	Incident Ticket Maintenance
DBAG Contacts	Authorization for creation and tracking of incident tickets Not granted
🖉 User Guides	
E Contact Us	Save
	Imprint Data Privacy Technical Requirements Terms of Use

Figure 3 - Permission by the user via "My Profile"

 by the Central Coordinator via "Portal User Administration": Once you have a user account for the Member Section, the Central Coordinator can assign the relevant permission under "Central Coordinator – Portal User Administration" by selecting the user and navigate to "Permission" and select the relevant permission and "Save" it (Figure 4). You will then have direct access to the relevant services within Technical Connection.

22 March 2022

≡ ゐ		۹	DE ★ 🕐
& Central Coordinator	User Account Details		[] ×
≥ _a Technical Connection	User Name: : User Role: Standard User Last Login: 23/01/2020 21:04:23		Active
	i i		C Edit
	V Technical Connection		
	Self Service Certificate Admin Creation and maintainance self service certificate		Granted
	Approval Technical Connection Request Administration and approval of of technical connection requests		Granted
	Technical Connection Maintenance Create and maintain of technical connection requests		Granted
Company Contacts	Incident Ticket Maintenance		
DBAG Contacts	Authorization for creation and tracking of incident tickets		Not granted
와 User Guides		Delete	Decet Decouverd
■ Contact Us	Lock	Delete	Reset Password

Figure 4 - Permission by the Central Coordinator via "Portal User Administration"

For a clear overview of the new navigation under the section "Technical Connection", please refer to the "<u>Technical Connection - Navigation Overview</u>" table. Based on their permission, users will no longer see all services but only those that they are entitled to see and use.

2.2 Incident Tickets

Here you can create and manage technical incident tickets. You will get here an overview of existing tickets. To create a new ticket, you need to click on "+ Create Ticket" (Figure 5).

<		Incident Tickets			
				4	- Create Ticket
Ticket No	Title	Service	Status	Contact	
20680247	redfd	Eurex Clearing GUI	New	1901 1743	>
20679464	next test	Börse Frankfurt	In progress		>
20679463	Test	Börse Frankfurt	In progress		>
20679462	Test CRQ	Börse Frankfurt	In progress	Chris Anderson	>
20679461	Test	Börse Frankfurt	In progress		>
20679304	Test 4	Eurex ETI (T7)	In progress		>
20679222	testing		New		>
20679221	tetee	ES CEESEG FIX Connectivity	New		>
20679220	testes	CEF Ultra+ (Xetra EMDI)	New		>
20679219	testte		New		>
20679218	testing	CEF Ultra	New		>
20679217	test	CEF	New		>
20679205	test	CCP	New		>
20679204	tst		New		>
20679203	test QR code		New		>
20678717	Test - Ticket 20636656		New		>
20678697	Test existing Ticket 20678696	5	New		>

Figure 5 - Incident Tickets

By selecting a ticket, you can access the details of a ticket which will allow you to:

- see the ticket history
- update or
- close

your tickets (Figure 6).

22 March 2022

<		Incident Ticket 20679464	
next test ^{Low}			Update Ticket Close Ticket Print Ticket
TICKET DETAILS $$	ATTACHMENTS TICKET HISTORY		
General Information			
Ticket No:	20679464	Environment:	Simulation
Title:	next test	Urgency:	Low
Contact:		Device:	
Incident Type:	Incident	Installation:	
Status:	In progress	Created At:	29.10.2020 09:53:06
Business Area:		Closed At:	
Service:		Changed At:	29.10.2020 09:53:08
Business ID:	PAKFR		
Our Contact Informati	on		
	Account Manager:		
Dele	egated Account Manager:		
	VIP Tel. No.: 06921110000		

Figure 6 - Ticket details

To access this section, you will need the user permission "Incident Ticket Maintenance". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3 Requests & Configuration

With the "Requests & Configuration" applications within the section "Technical Connection", Deutsche Börse Group provides its clients with a convenient and simple way to create requests for configuration changes (Requests) and with an overview of the inventory of technical connections/components (Configuration). This guide describes the area of configuration requests and gives examples of how to order, change or cancel connections and components.

Technical Connection - User Guide

22 March 2022

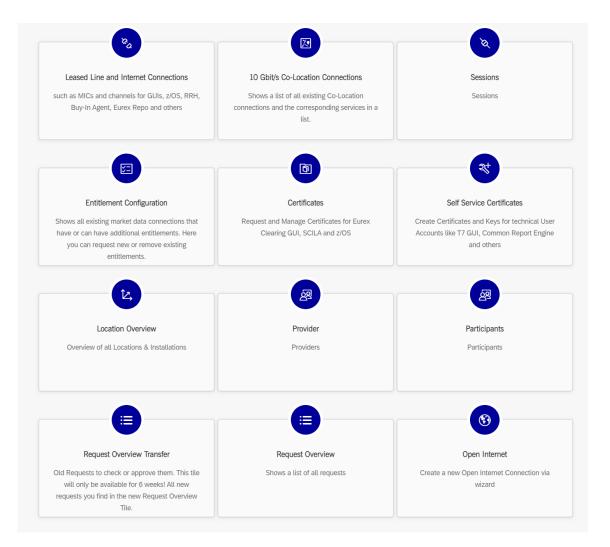


Figure 7 – Overview of services available under "Requests & Configuration"

By clicking on the tiles for the different components, you will always be led to an overview of the existing components, configurations and provider and participant relations. You can start to request new connections in this area or change and cancel existing requests. Within such an overview you also have the possibility to filter information, see details or export all data in machine readable formats.

To access this section, the user permission "Technical Connection Maintenance", "Approval Technical Connection Request" or "Self Service Certificate Admin" is required. Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.1 Leased Line and Internet Connections

Clients can request a new connection, change a connection or cancel a connection to the trading and clearing systems of Deutsche Börse Group such as MICs and channels for GUIs, z/OS, RRH, Buy-In Agent, Eurex Repo and others.

With a right-click on the overview table (Figure 8), you can filter and sort every column. By clicking on the arrow in the respective row, you will see the details of this connection. Via the export button on the upper right conner, an export with all information from this overview including details can be generated. The available formats are XML and json. The "Open Request" column shows if there is an open request existing for this component which has not been completed yet. To change or cancel a connection, you need to select the line(s) by clicking the little checkboxes in the row(s). The buttons "Change Connection" and "Cancel Connection" are active then.

Leased Line and Internet Connections								
ionnection]						Ŀ		
Circuit	Location	Bandwidth	Installation	Logical Line/MIC	Billing ID	Open Request		
A Sort Ascending	FRA- Friesstr. 26 (DC)	64 Kbit/s	1064859-74-1	V1064859-L188		>		
V Filter								
	Sort Ascending	Circuit Location [A: Sort Ascending PRA- Friestin: 26 (DC) IF Sort Descending PRA- Friestin: 26 (DC)	Structure Location Bandwidth (Bics) Location Bandwidth (#. Sont Ascending PA+ Prestit: 26 (DC) 64 Kotts (#. Sont Ascending PA+ Prestit: 26 (DC) 64 Kotts	Structure) Location Bandwidth Installation [A:: Sont Ascending PA+ Prest: 26 (DC) 64 Kbits 106465-74-1 IF Sont Decending PA+ Prest: 26 (DC) 64 Kbits 106465-74-1	Constitution Location Bandwidth Installation Location Location 6 (box) Kerstein 26 (CC) 64 Kobs 1064859-74-1 V1064859-L188 1 = 5 on Descending File 1064859-74-1 V1064859-L188	Ortschrift Loadon Berchrifth Instaliation Logical Line/MIC Bling ID (B. Sort According FBA- Frestr. 28 (DC) 64 Hots 1064859-74-1 V1064859-188 Bling ID Image: Tell Sort Descending FBA- Frestr. 28 (DC) 64 Hots 1064859-74-1 V1064859-188 Endocember 2010		

Figure 8 - Overview column

By clicking on ">" (Figure 8) you will find more information about the member's connection, such as bandwidth, IP and location data (Figure 9). Also, the components of the member's Multi Interface Channel are visible here.

<				Service: CCP	
Ø	Circuit: L1064859-L125 Location: FRA- Friesstr. 26 (Bendwidth: 64 Kbit/s		n: 1064859-74-1 C: V1064859-L188 D: N/A		
SERVICE DATA					
General				Connection	
	Business ID	PAKER		Media:	N/A
	Router	R010768		Interface:	N/A
	IP-Address	090.053.012.002		Room descr.:	N/A
	Access Point	AP-FRA021		Part of building:	N/A
	Access Point IP-Address	: N/A		Floor:	N/A
				Room no.:	N/A
				Rack no.:	N/A
				Rack Unit:	N/A
				Rack Position:	N/A
				Provider:	Telekom
Date					
	Activation				
	Installation				

Figure 9 - Member connection details

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approve technical connection requests". To request a new connection, you need to add the service for, e.g. Cash T7 (XFRA) GUI Channel along with the connection, location details and bandwidths which is required. Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.2 10 Gbit/s Co-Location Connections

Here a list of all existing Co-Location connections and the corresponding services is shown in a table. This table allows you to request a new connection of bandwidth 10Gbit/s and shared bandwidths as well as to cancel existing connections. The table offers the same functions for sorting, filtering, exporting and seeing connection details as for the leased line and internet connections.

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approve technical connection requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.3 Sessions

Within this area you can request new sessions, change sessions or cancel sessions for different markets which are using Deutsche Börse's infrastructure. To access this section, you will need the user permission "Technical Connection Maintenance" or "Approve technical connection requests". Before you can start the wizards for requesting, changing or cancelling sessions, the market for which the action should be performed needs to be selected by clicking on the respective tile (Figure 10).

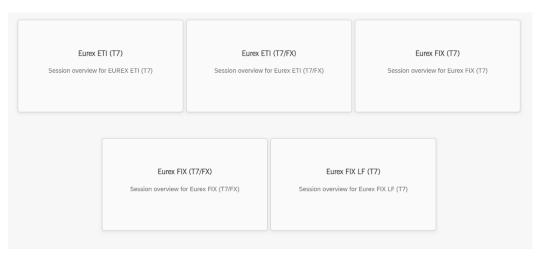


Figure 10 - Market Selection

Consequently, you can see the overview of the sessions for this market and start the wizards to:

- request a new session (Figure 11)
- change or cancel sessions or

• reset the password

It is possible to filter and sort columns and see the details of the session (Figure 12) by clicking on the little arrow in each row. The export function is also available for exporting all sessions of this overview including their details.

<					Xetra ETI (T7)			
	ew Session Change Sessi	ion Cancel Session	Reset Session Password					
	Session ID	Name		Installation 1	Installation 2	Installation 3	Installation 4	Open Request
	901204320	PAK/FR901204320	≜ Sort Ascending	-2 FRA- Kruppstr. 121-127 10 Gbit/s				>
			V Filter					

Figure 11 - New Session request

		Session: PAKFR901204320
Session ID	901204320	Installation 1: 1081720-11-2 FRA- Kruppstr. 121-127 10 Gbitts
Session Name	PAKFR901204320	Installation 2: N/A
Capacity Type	ETI Session HF	Installation 3: N/A
		Installation 4: N/A
GENERAL MEMBER LAN IP-N	T TRADING GATE	WAY
	Description:	1064859-XETRA ETI PROD-001
	Business ID:	PAKFR
	Billing ID:	202601
	Business Unit Type:	
	Environment:	T7 Production
MEMBER LAN IP-NET		
	Installation 1.	090 229 015 000/24
	Installation 2:	
	Installation 3:	
	Installation 4:	
TRADING GATEWAY		
	Trading Gateway 1:	ΝΔ

Figure 12 - Session details

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approve technical connection requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.4 Entitlement Configuration

Here all existing Xetra Market Data and EOBI connections that have or can have additional entitlements are shown. You can request new entitlements or remove existing entitlements. To access this section, you will need the user permission "Technical Connection Maintenance" or

"Approve technical connection requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.5 Certificates

This section will give an overview of the existing Certificates (Figure 13) for Eurex Clearing GUI, z/OS or SCILA. Here it is possible to cancel, renew or request new certificates for the Eurex Clearing GUI. The table also provides the information of the validity of each certificate. You can filter and sort the columns with a right-click, export the certificate data or see the details by clicking on the little arrow in each row. Via the certificate details it is possible to download the certificate (Figure 14).

<		Eurex Clearing	GUI		_
New Certificate Renew Certificate Cancel C	Certificate				G
Business ID	Description	Valid to	Billing ID	Open Request	
ABOFR	1027709-ABCFR_CLEARSIMU_003				>
ABCFR	1027709-ABCFR_CLEARSIMU_004				>
ABOFR	1027709-ABCFR_CLEARSIMU_005				>
GDBXX	1027709-GDBXX_CLEARPROD_004				>
GDBXX	1027709-GDBXX_CLEARSIMU_004				>
GDBXX	1027709-GDBXX_CLEARSIMU_005				>
GDBXX	1027709-GDBXX_CLEARSIMU_010				>
SIMAA	1027709-SIMAA_CLEARSIMU_002				>
SIMAA	1027709-SIMAA_CLEARSIMU_003				>
SIMAA	1027709-SIMAA_CLEARSIMU_004				>
XYZFR	1027709-XYZFR_CLEARSIMU_002				>
XYZFR	1027709-XYZFR_CLEARSIMU_003				>
XYZFR	1027709-XYZFR_CLEARSIMU_004				>
SIMAF	1027709-SIMAF_CLEARSIMU_002	25.10.2018			>
SIMAH	1027709-SIMAH_CLEARSIMU_002	25.10.2018			>
SIMCC	1027709-SIMCC_CLEARSIMU_001	25.10.2018			>
GDBMC	1027709-GDBMC CLEARPROD 002	21.12.2018			>

Figure 13 - Existing Certificate overview for Eurex Clearing GUI

		Certificate: 1027709-SIMAF_CLEARSIMU_002		
৯	Business ID: SIMAF Description: 1027709-SIMAF_CLEARSIMU_002 Valit to: 25.10.2018 Billing ID:			
		of an account. The involving for accounts continues to be performed according to the current price list.		
Please note that th		of an account. The involong for accounts continues to be performed according to the current price list.		
	the validity expiration of a certificate does not automatically affect the validity Contact: Email:	of an account. The involving for accounts continues to be performed according to the current price list.		
Please note that th	the validity expiration of a certificate does not automatically affect the validity Contact: Email:	of an account. The involcing for accounts continues to be performed according to the current price list.	Download	

Figure 14 - Certificate download

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approve technical connection requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.6 Self Service Certificates

This section allows you to manage technical accounts/users for:

- 1. EurexOTC Clear FpML Account
- 2. T7 GUIs
- 3. FIXML Account
- 4. Eurex Repo Certificates
- 5. Eurex Clearing GUIs Network Configuration
- 6. Margin Calculator API Account
- 7. Buy-In Agent Account
- 8. T7 WebApp
- 9. Report Engine User
- 10. Upload Engine User

To access this section, you will need the user permission "Self Service Certificate Admin". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.7 Location Overview

The "Location Overview" table will give you a clear overview of all locations with the associated installations, markets and services.

Within this section, you can start the wizard for moving and deleting whole installations. To see the detailed information for base and sub installation (Figure 15) and to start the wizard, you can click on the blue highlighted IDs as shown below (Figure 16). The router configuration (Figure 17) can be found here on the blue highlighted routers in the base installation.

<				
ocation - Base Installation	Sub Installation	Services	Components	
> adof 1				
> Bartholomäusweg 26				
> Feststr. 189				
 FRA- Friesstr. 26 (DC) 				
✓ 1064859-57-0				
	1064859-57-1			
× 1064859-74-0				
	1064859-74-1	CCP	L1064859-L125, R010768, V1064859-L188	
× 1064859-78-0				
	1064859-78-1		L1064859-L58	
> FRA- Hanauer Landstr. 324-326				
> Friedenstr. 34				
> ginsterweg 6				
> hauptstrasse 13				
> hauptstrasse_mai				
> hauptstraße 4				
> Juli13				

22 March 2022

Figure 15 - Base Installation view

<					
Installation Overview: 1064859-74-0				Expand all	Nove Installation
Description	Bandwidth	Billing ID	MIC ID	Business ID	Open Request
ROUTER: R007826					
V ROUTER: R010768					
ETHERNET: L1064859-L125 (FRA- Friesstr. 26 (DC))					

Figure 16 – Installation overview

	ROUTER: R010768	
IP ADDRESS ROUTER CONFIG		
LAN-Interface	IP-Address	
R010768-E0	090.203.243.021	
ROUTER CONFIG		
Router Configuration Date	Router Configuration Filename	Download
	No deta	Router Config File

Figure 17 - Router configuration

<								
Installation Overview: 1064859-115-5 (IP-Net:	10)						Expand all 0	Jancel Installation
Description				Bandwidth	Billing ID	MIC ID	Business ID	Open Request
 ROUTER: R011032 								
 ETHERNET: PAKRH-ETH-1 (Bartholomäuswag 26) 								
 CLASS: V1064859-L216 (Bartholomäusweg 26) 								
Cash T7 Transaction Services				2 Mbit/s			PAKER	
1064859-CASH T7 MIC-1								
> RRH ISE OBCE FIX								
leaved .								

Figure 18 - Sub Installation view

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.8 Providers

Below you see an overview of the different provider services (Figure 19). Within the sections "CCP (ECAG) Clearing", "Market Data" and "GUI Channel" a new provider relation can be requested, or existing relation can be canceled. Within the section "Sessions" you will see the list of sessions which are hosted at the respective provider infrastructure.

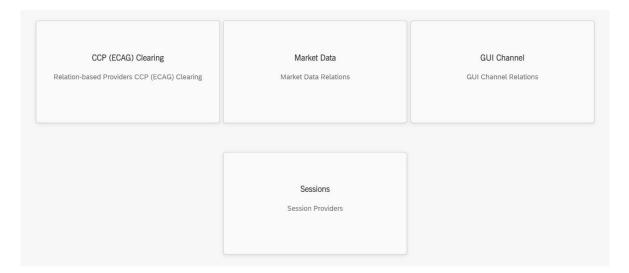


Figure 19 - Providers services

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.9 Participants

Within the sections "CCP (ECAG) Clearing", "Market Data" and "GUI Channel" a new participant relation can be requested, or existing relation can be canceled. Within the section "Sessions" you will see the list of sessions which are hosted at the respective participant infrastructure. To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.10 **Request Overview**

The table below (Figure 20) contains all current requests and request drafts in the Member Section. You have the possibility to filter for the status and a time period. It is also possible to sort the columns and get an export. Details of the request can be accessed by clicking on the little arrow in each row.

<		_	Requests			
Filter by status Oct 2, 2020 - Mar 31, 2021	Image: The provide the matrix of the mat	1				4
Request ID	Request Type	Status	Next Action by	Created by	Created at	Case IDs
31000618	New Connection	Draft	Parkbank AG	Test User	29.03.2021	>
31000345	New Open Internet	Draft	Parkbank AG	Test5 Sinnerschrader	23.11.2020	>
31000344	New Connection	Draft	Parkbank AG	Test5 Sinnerschrader	23.11.2020	>
31000343	New ETI Session	Draft	Parkbank AG	Test5 Sinnerschrader	23.11.2020	>
31000333	New RRH Session	Draft	Parkbank AG	Robert Loew	19.11.2020	>

Figure 20 - Filter function for status and a time period

Drafts ("Draft" status) can be deleted, approved (= sent to Deutsche Börse AG) or processed (Figure 21). After approval, you can follow the status of the request in the table. After the first approval, requests that involve more than one participant have the status "Waiting for 3rd party approval". These requests cannot be changed by the first party and must be confirmed by the second party. In order to cancel an already approved request, please contact your Technical Key Account Manager (TKAM) as soon as possible. Completed and closed requests will be removed from the list after 180 days.

<		New Connection Request: 31000618			
Request ID: 31000618 Request Type: New Connection Status: Dist	Nect Action by - Pentaeria A Ontend by - Tare User Oreined at: 29.03.302 UR REQUEST REQUEST DETAILS TECHNICAL CONTRACT A	21	TERMS AND COMPRESS		
Request Type Case ID Status Oreated at Contexts at Net Action by	ы Defi Test User 1 8 06 3 2021 • Revision AG • Revision AG • Revision 22-127				
Service	Contract Par	rther	Price		
Cash T7 (XFRA) Transaction Services	Deutsche Br	lörse AG	Pricelist/Conditions		
REQUEST DETAILS					
	: FRA- Kruppet: 121-127 i: Parkbank AG		Room descr. 5.04 Part of building. Equinix		
Alas			Floor: Ground Floor		
	Kruppstr. 121-127		Room no.: 5.04		
				Ecit Request Delete Request Reject Reque	st Print Request Approve Request

Figure 21 - Draft status

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.3.11 Open Internet

Here you can create a new EEX Open Internet Connection via wizard. To request a new connection, you need to fill in the type of service, business ID and environment for this connection. To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.4 Monitors and Statistics

This section allows clients to check the connection status of the member's sessions as well as round-trip times and other statistical information (Figure 22).

	2	
Connection Monitors	Roundtrip Statistics	TCP/IP Statistics
View connections for ETI sessions	View statistical roundtrip times for ETI sessions	TCP/IP Statistics
	8	
	Special Monitors	
	Special Monitors	

Figure 22 - Monitors and Statistics overview

To access this section, you will need the user permission "Technical Connection Maintenance" or "Approval Technical Connection Requests". Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.5 API Hub

The Member Section API Hub is an application, which allows users to subscribe to REST based APIs, which are provided by Deutsche Börse Group, using cloud infrastructure. These APIs can be used in the user's implementations to read or post data. Detailed information about how to request the permission and where in the navigation to find this service are available under chapter 2.1.

2.5.1 API Hub Overview

The "API Hub" application can be found in the Member Section under "Technical Connection" (Figure 23):

~	DEUTSCHE BÖRSE GROUP	
≡	<u>ଜ</u>	
8/	Central Coordinator	Technical Connection
na D	Technical Connection	
8	Trading&Clearing Administration	■ ≪
1	Company Administration	
\$ <u></u>	Invoices	API Hub
1	eListing	API Hub
	Resources	Pit Hilds

Figure 23 - API Hub application

Opening this application reveals the APIs, for which the user has access. With the introduction of the Member Section Release 2.3, on 12 July 2021 the following APIs will be available via the API Hub (Figure 24):

- CUA User List Download
- User ID List Download
- ALGO HFT Upload
- Client Identification Upload

Once an API is selected (Figure 25), you are presented with some general and technical details, such as the base path, which is the URL to the metadata of the API. If the API is relevant for you, you need to create a so-called "Application", to be able to connect to the API. This can be done by clicking on the "+" button in the applications section. The section "Example" presents the swagger-based metadata of the API, showing all entities with possible operations.

<		API Hub			
User ID List Download					
Base Path: https://dbg-api-dev.apimanagement.hana.ondemi	nand.com:443/UserIdDownload				
DESCRIPTION APPLICATIONS EXAMPLE					
This API is integrated into the Member Section and pr	provides a list of User IDs, which are linked	to the consumer's organization.			
Applications					
					+
Name Versio	ion	Last Modified	API Key	Actions	
		No data			
Example					
Eample here					



2.5.2 Creation of a new Application

Creating a new application requires you to fill the following information:

- Name (mandatory)
- Description
- Contact E-Mail (mandatory)
- Technical Contact

Clicking on the create button "+" will provide the interaction with the API Developer Portal, hosted in the SAP Business Technology Platform and set up all necessary data in the background for you to interface with the respective API (Figure 26).

Member Section

Technical Connection - User Guide

Version 1.1

22 March 2022

<			API Hub			
User ID List Download	_			Create	New Application	×
DESCRIPTION APPLICATIONS	EXAMPLE			*Name:		
DESCRIPTION APPLICATIONS	EXAMPLE			Test Application		
				Description:		
This API is integrated into the Mem	ber Section and provi	des a list of User I	Ds, which are linked to	This application is use	ed for documentation purpo	ses
the consumer's organization.				*Email:		
				max.mustermann@d	eutsche-boerse.com	
Applications				Technical Contact:		
				Karl Tester		C
			+			
Name Version	Last Modified	API Key	Actions	<		
	No data					
Example						
Eample here						
						Create

Figure 25 - Creating an application

Once the application has been created, you will receive the API key, which is used to authenticate member's for being allowed to consume the API (Figure 27).

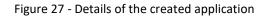
✓ Success
Application has been created
Please find below your API key
Please copy and store your API key somewhere safe
In case you lose it, the only way to recover it is by regenerating the API key
API Key: Elzia2uvAmBgOeiZA
ОК

Figure 26 - API key

The details of the newly created application can be found in the applications section, including several actions that can be performed (Figure 28):

- Copy the API key
- Refresh the API key
- Delete the application

Applications					
					+
Name	Version	Last Modified	API Key	Actions	
Test Application		4/15/21, 9:45 AM	E1zia2uvAmBg0eiZA		



2.5.3 Consumption of APIs (Description for User ID List Download and CUA User List Download)

As the APIs are hosted in the cloud, each device with internet access is able to consume them. Using the base path, presented in the API Hub application, a request for data consumption can be prepared. In order to authenticate you to be allowed to make use of the API, the API key needs to be provided in the HTTP header of the request, using the following key-value pair:

- Key
 - apikey
- Value
 - The API key value of the created application

A fully prepared request will then look like this (Figure 29):

GET	GET v https://dbg-api-dev.apimanagement.hana.ondemand.com:443/UseridDownload						
Params	Author	ization	Headers (8)	Body	Pre-request Script	Tests	Settings
Post	Postman-Token ③				<calculated is="" request="" sent="" when=""></calculated>		
 Host 	Host (1)					<calculated is="" request="" sent="" when=""></calculated>	
🖌 User	User-Agent (i)				PostmanRuntime/7.26.8		
Acce	Accept (3)				*/*		
Acce	Accept-Encoding (3)				gzip, deflate, br		
Conr	Connection (3)			keep-alive			
🖌 apike	ey						E1zia2uvAmBg0eiZA

Figure 28 - Request for data consumption

By adding the suffix /\$metadata to the URL and sending out the request, you will be able to see all entities, with their respective properties and data types.

In the background, the API key is verified for authenticity and code injection policies are being applied. If all policies were processed successfully, you will see the API response in the HTTP body.

dy Co	obies (3) Headers (11) Test Results 🔀 Status: 200 DK Time 429 ms Scat: 631 KB Save Response -
Pretty	Raw Preslew Visualize XML + 🛱
1	2val version="1.0" encoding="utf-8"25
	edwo:Edwo:Version="1.0" xmins:edwo:"http://schemas.microsoft.com/ado/2007/05/edmx" xmins:m="http://schemas.microsoft.com/ado/2007/05/dataservices/metadata" xmins:sap="http://schemas.microsoft.com/ado/2007/05/dataservices/metadata" xmins:sap="http://schemas.microsoft.com/ado/2007/05/dataservices/metadatataservices/metada
3	<pre>(edm:DataService/ersion="2.8")</pre>
4	<pre><schema namespace="28F_API_HUB_USER_ID_LIST_SRV" sap:schema-version="1" xml:lang="en" xmlns="http://schemas.microsoft.com/ado/2008/09/edm"></schema></pre>
5	<pre>cEntityType Name*"ExacUserId* sap:content-version*"1"></pre>
6	(key)
7	<propertyref name*tmemberid*=""></propertyref>
8	<propertyref name="UserId"></propertyref>
9	<propertyref name="NarketId"></propertyref>
10	
11	<pre>(Property Hease "Networks" failer "Asile" Salise" Salise" say index = "faile" say</pre>
12	(Property Name="UserId" Type="Edm.String" Nullable="false" MaxLength="6" sap:unicode="false" sap:label="User ID" sap:creatable="false" sap:updatable="false" sap:sortable="false" sap:filterable="false" sap:filterable="false" sap:sortable="false" sap:sortable="false" sap:filterable="false" sap:filterable="false" sap:sortable="false" sap:sortable="false" sap:filterable="false" sap:sortable="false" sap:sortab
13	(Property Name="Warketid" Type="Edm.String" Nullable="false" Namlength="2" sapinaloce="false" sapinalable="false" sapinalable=
14	<property false="</td></tr><tr><td>15</td><td><pre>(Property hase=" firsthme")sys="ido.String" hasingth="40" name="Technical" nullable="false" nullesle="faile" sap:filterable="false=" sap:label="false" sap:sortable="false" sap:unicode="false" sap:updatable="false" septe<="" september="faile" td="" type="Edn.Boolean"></property>
16	<pre>cmparty hear lasting* log="fo.Strig" Milate* fois* Materia" apunicade* fois* apulatele "mae foist of apurchastate* fois* apundatates* fois* satisfieremie* fois*/</pre>
17	(Property Name="Group" Type="Edm.String" Nullable="false" MaxLength="10" sap:unicode="false" sap:label="Group" sap:creatable="false" sap:updatable="false" sap:sortable="false" sap:sortable="false="sap:sortable="false="sap:sortable="false="sap:sortable="false="f
18	(Property Name*"Phone" Type*"Edn.String" Nullable*"false" Maxiength*"30" septemicode*"false" septemicode*"false

Figure 29 - Example: Metadata of the API

2.5.4 Description of ALGO HFT Upload via API

This API allows clients to upload the ALGO HFT files programmatically. To upload ALGO HFT files via the API, two calls are needed:

1. Fetch the CSRF token

Perform a **HEAD** call to the Basepath of the API with the following Header:

X-CSRF-Token: fetch

The Response will deliver a Header with key "X-CSRF-Token" which will be used in the next call.

2. Upload the file

Perform a **POST** call to the Path <**Base Path>/Files** with the following parameters:

Header: apikey: <API Key from the Application created> X-CSRF-Token: <Token Received from the first call> slug: JSON String with the following Structure: {"fileName":"<filename>","marketIdentificationCode":"<MIC Code>","memberId":"<Member ID>","environmentId":"<Environment>","fileTypeId":"002","email":"<E-Mail>"}

Slug Parameter explanation:

filename: filename for the uploaded file marketIdentificationCode: XMIC of the market. Possible values: XEUR, XETR, XFRA memberID: MemberID for the uploaded file environmentID: Environment for the uploaded file. Possible values: P (Production), S (Simulation) fileTypeId: type of file (always 002) email: The email to be used for the upload response

Example Slug:

{"fileName":"upload.csv","marketIdentificationCode":"XEUR","memberId":"GDBXX","environmentId":" S","fileTypeId":"002","email":"max.mustermann@deutsche-boerse.com"}

Body:

Binary content of the file.

2.5.5 Description of Client Identification Upload via API

The API allows clients to upload the Client Identification (short codes) files programmatically. To upload files via this API, two calls are needed:

1. Fetch the CSRF token

Perform a **HEAD** call to the Basepath of the API with the following Header:

X-CSRF-Token: fetch

The Response will deliver a Header with key "X-CSRF-Token" which will be used in the next call.

2. Upload the file

Perform a **POST** call to the Path **<Base Path>/Files** with the following parameters:

Header:

apikey: <API Key from the Application created>
X-CSRF-Token: <Token Received from the first call>
slug: JSON String with the following Structure:
{"fileName":"<filename>","marketIdentificationCode":"<MIC Code>","memberId":"<Member
ID>","environmentId":"<Environment>","fileTypeId":"001","email":"<E-Mail>"}

Slug Parameter explanation:

filename: filename for the uploaded file marketIdentificationCode: XMIC of the market. Possible values: XEUR, XETR, XFRA memberID: MemberID for the uploaded file environmentID: Environment for the uploaded file. Possible values: P (Production), S (Simulation) fileTypeId: type of file (always 001) email: The email to be used for the upload response

Example Slug:

{"fileName":"upload.csv","marketIdentificationCode":"XEUR","memberId":"GDBXX","environmentId":" S","fileTypeId":"001","email":"max.mustermann@deutsche-boerse.com"}

Body:

Binary content of the file.

3 Support Contacts

For queries related to the enhancements of the "Technical Connection" section in the Member Section, please contact your Technical Key Account Manager via your VIP number or send an email to <u>cts@deutsche-boerse.com</u>. For general question about the Member Section, please contact our Member Section team via <u>member.section@deutsche-boerse.com</u>.