Eurex Bonds Web Trading GUI for RFQ/RFO Quick Access Guide Version 1.0 (Simulation only)

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1 Introduction

This quick access guide describes the process of getting access to the Eurex Bonds Web Trading GUI for RFQ/RFO. At the time of the current release, the Eurex Bonds Web Trading GUI for RFQ/RFO is only available in the simulation environment.

1.1 Overview

Eurex bonds WebTrading is a mechanism for accessing the Eurex Bonds trading GUI without the need to administer the necessary software and hardware on on-site installations. The corresponding GUI is hosted and maintained at Eurex Bonds and members connect to it remotely.

This quick access guide shows the necessary steps that a member need s to perform in order to launch an instance of the trading, clearing or administrative GUI.

The options for connecting to the Deutsche Börse infrastructure that hosts the GUI connections are:

- Internet connections with certificate authentication
- Leased line connections with certificate authentication

For the access to the GUIs, the following rule applies

- Production and Simulation can be ordered for a single certificate. One certificate can be used to log into both environments at the same time, provided that the same Member ID is used

Should further assistance be required than provided in this guide, please contact the Technical Account Manager at Deutsche Börse by using the VIP number.

1.2 Checklist for certificate authentication

Below is a checklist of information and items that need to be available prior to the first connection to the WebTrading service with certificate based authentication:

- Web Browser with HTML 5 support is available (Firefox is recommended).
- Certificate has been ordered and downloaded from the Member Section[1]
- Certificate password received via email from Deutsche Börse, and the certificate is installed in the browser[2]
- https connections are possible using either leased lines or internet (both connection alternatives require port 443/top to be open)
- WebSocket connections are supported by the underlying network infrastructure (web proxies)

[1] For details, see section 6

[2] For details, see section 5

- For leased line connections, the hostname of the destination URL and its IP address have to be added to the "hosts" file or name server[3]
- Eurex Bonds trader ID
- Eurex bonds trader ID password

1.3 Login Overview

The general login logic into the WebTrading infrastructure is as follows:

1) Environment selection. Please see section 2 (Internet) or 3 (Leased Line)

2) Trader Login. Please see section 4

2 Certificate Authentication via Internet

In order to connect to the certificate based authentication via internet, a website (address depends on the environment) has to be opened in the trader's web browser.

Production: https://trade.eurex-bonds.com (not available yet)

Simulation: https://trade-simu.eurex-bonds.com

These websites are only accessible if a WebTrading client certificate is installed in the browser.

Please note that this connection requires https and WebSockets support, i.e. port 443/tcp needs to be open on the corresponding firewall and a modern Web Browser must be used (Firefox is recommended).

3 Certificate Authentication via Leased Line

In order to connect to the certificate based authentication via internet, a website (address depends on the environment and site) has to be opened in the trader's web browser.

Please note that the production environment is currently not yet available.

Production (Site a): https://trade-line-a.eurex-bonds.com:5443

Production (Site b) https://trade-line-b.eurex-bonds.com:5443

Simulation: (Site a) https://trade-line-simu-a.eurex-bonds.com:5443

Simulation: (Site b) https://trade-line-simu-b.eurex-bonds.com:5443

[3] For details, see section 3.1

These websites are only accessible if a WebTrading client certificate is installed in the browser.

Please note that this connection requires https and WebSockets support, i.e. port 443/tcp needs to be open on the corresponding firewall and a modern Web Browser must be used (Firefox is recommended).

3.1 Name Resolution

In order to allow a success handshake of the ssl-protocol, the server certificate needs to be verified by the browser. This means that the hostnames from section 3 and the corresponding IP addresses need to be known to the browser.

For certificate access via internet, this is done automatically, since this name resolution will be done using internet name servers. However, this fails for leased lines. Therefore, this name resolution needs to be configured in the Member network. There are two possibilities to do so:

1. The following hostnames and the corresponding IP addresses are configured in the name server of the member network (production not yet available):
    1. trade-line-a.eurex-bonds.com 90.152.253.100
    2. trade-line-b.eurex-bonds.com 90.153.253.100
    3. trade-line-simu-a.eurex-bonds.com 90.152.253.101
    4. trade-line-simu-b.eurex-bonds.com 90.153.253.101

2. The following hostnames and their corresponding IP addresses are configured in the “hosts” file of the used computer (/etc/hosts on UNIX systems, %SystemRoot%\system32\drivers\etc\hosts in Windows).

For example, the following line can be added to the local hosts file (production not yet available):

```
# Hosts file

90.152.253.100        trade-line-a.eurex-bonds.com

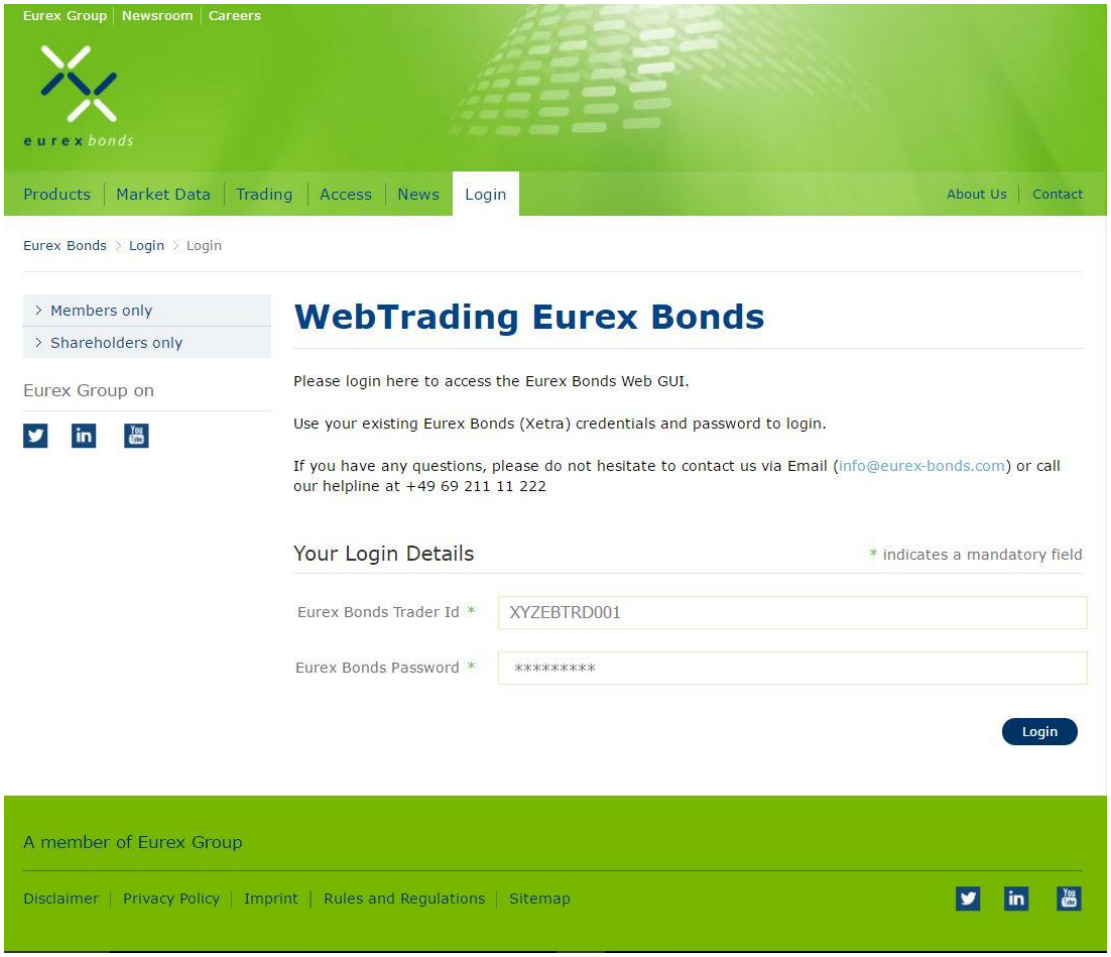
90.153.253.100        trade-line-b.eurex-bonds.com

90.152.253.101        trade-line-simu-a.eurex-bonds.com

90.153.253.101        trade-line-simu-b.eurex-bonds.com
```

4 GUI Access - Trader Login

In the login and password fields, enter your Eurex Bonds trader id and password.



In case of questions about trader credentials, please contact the corresponding help desk:

Market Supervision – Clearing Data +49 69 211 12 453

5 Certificate Import into browsers

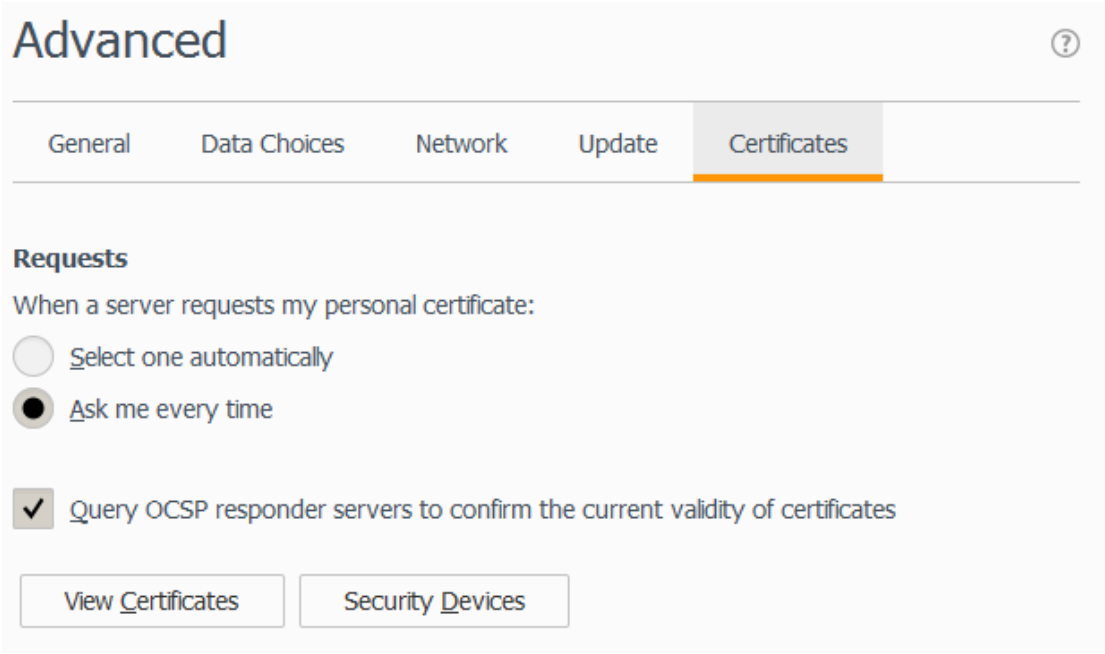
Once the certificate has been downloaded from the Member Section and the password has been received, the certificate needs to be imported it into the browser.

This needs to be done before the connection to WebTrading is made.

5.1 Firefox

The certificate can be imported into Firefox in the **Certificate Manager** window. It can be accessed as follows:

Tools → Options → Advanced → Certificates → View Certificates



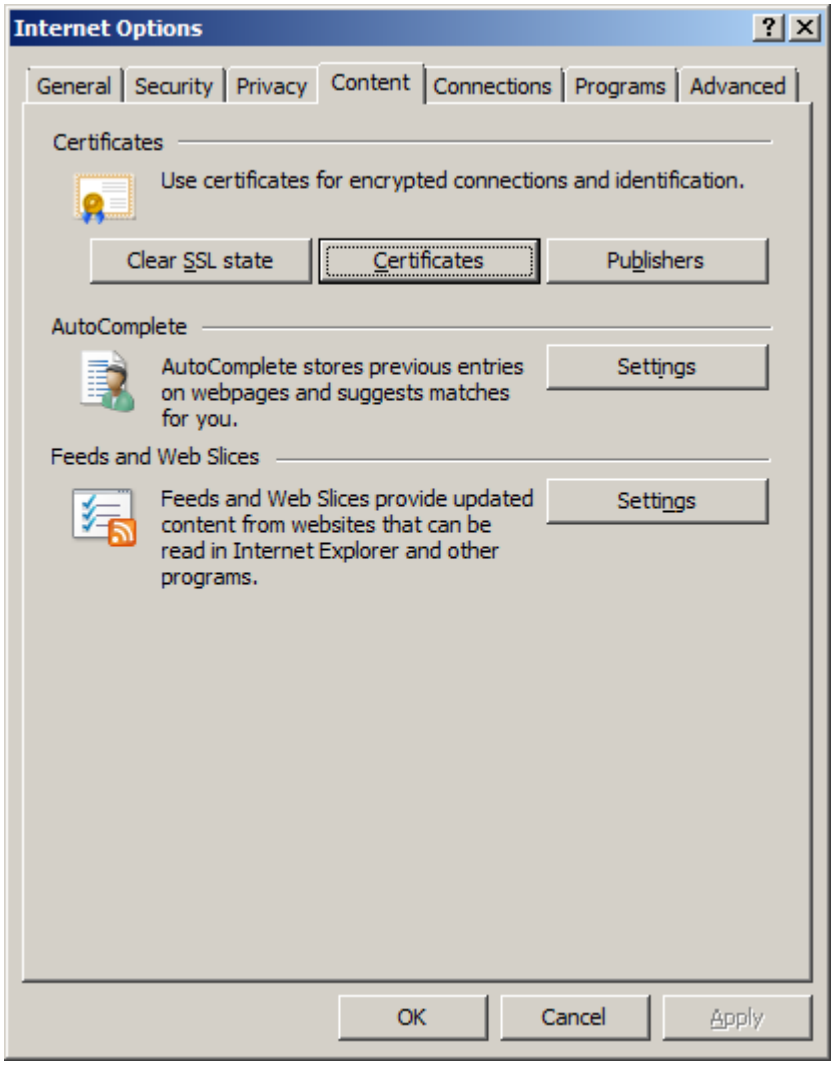
In order to import the certificate, the Certificates tab needs to be selected and then the Import… button needs to be clicked. The certificate password will be requested during the import process.

Please note, that the certificate has the file format .p12. Therefore, it maybe necessary to choose the correct file type before selecting the certificate.

5.2 Internet Explorer

The certificate can be imported into the Internet Explorer in the Certificates window. It can be accessed as follows:

Tools → Internet Options → Content → Certificates



In order to import the client certificate, the Personal tab needs to be selected and then the Import button needs to be clicked. The certificate password will be requested during the import process. Please note, that the certificate has the file format .p12. Therefore, it will be necessary to choose the correct file type before selecting the certificate.

5.3 Certificate Password Change

Due to security considerations, a change of the certificate password might be considered. The following steps describe how to change the password. This can be done easily by exporting the certificate from the browser.

5.3.1 Firefox

Firefox allows exporting all certificates available. This implies that the certificate can be exported by anyone using the certificate. In order to change the password, the Backup button needs to be clicked. The new password can then be set during the export process.

5.3.2 Internet Explorer

The certificate needs to be flagged as exportable during the import process. Please be aware that this certificate then can be exported and moved to another computer by anyone who can access the browser with the corresponding user id. Therefore, it is highly recommended to perform this procedure only in a “secure” environment with a user id which supposed not to use the certificate. It is also highly recommended to delete the certificate from the browser after the export. During the export process the Yes, export the private key option needs to be selected. The new password needs to be entered then during the export process

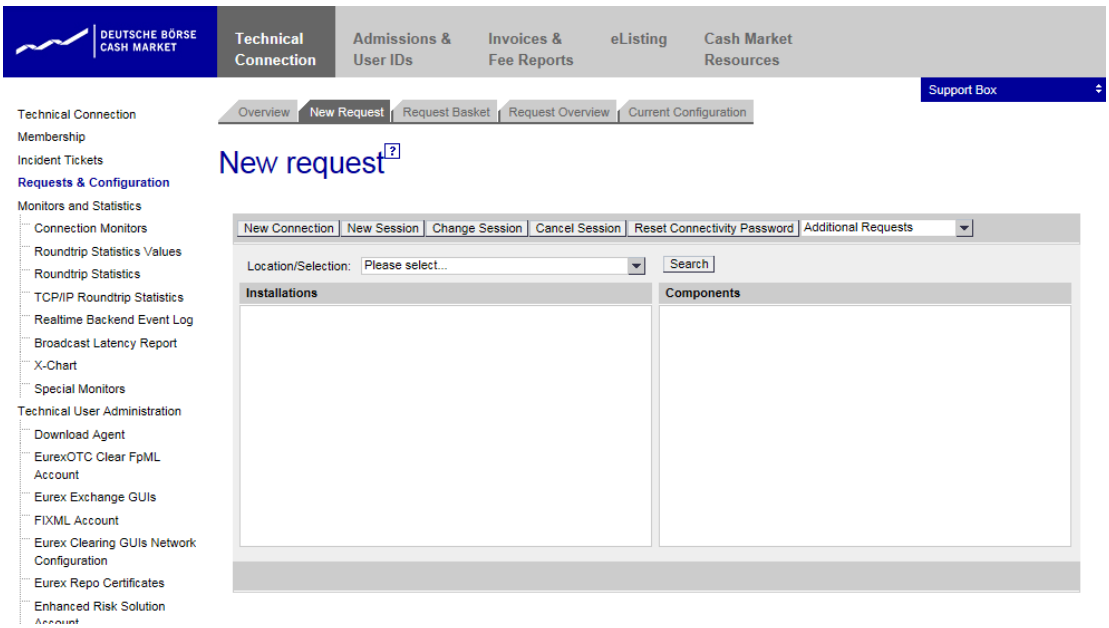
6 Member Section

Details of the connectivity options assigned to a Member can be found in the Member Section.

6.1 Ordering Access to WebTrading

Access to WebTrading needs to be ordered in the Member Section:

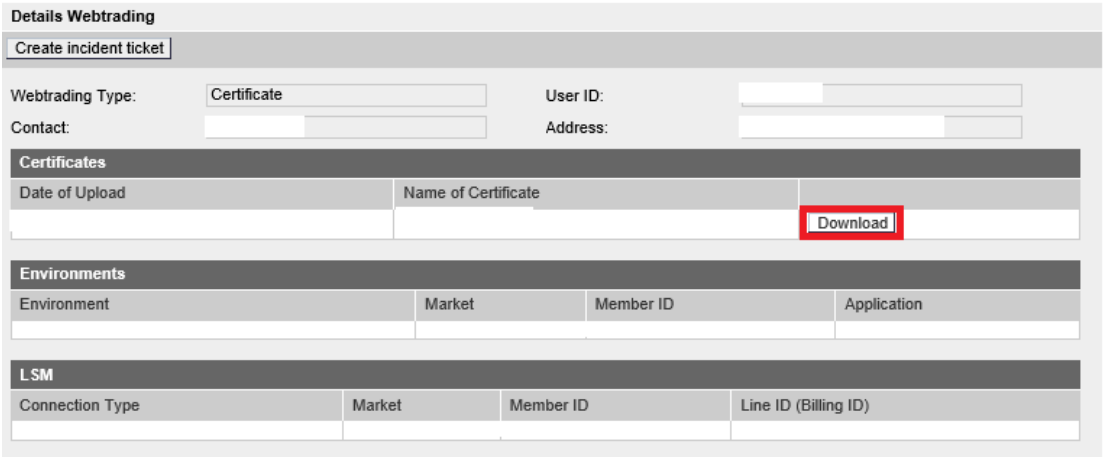
1. Log in at https://member.deutsche-boerse.com
2. At the top, select Technical Connection
3. Along the left-hand side, select Requests & Configuration
4. Click on New Request
5. Click on New Connection
6. Select WebTrading and click on Next step in order to proceed



6.2 Downloading Certificates

Certificates must be downloaded from the online Member Section:

1. Log in at https://member.deutsche-boerse.com
2. At the top, select Technical Connection
3. Along the left-hand side, select Requests & Configuration
4. Select the Current Configuration tab
5. Select the WEBTRADING installation
6. Choose the certificate to be downloaded in the Components box
7. The certificate can then be downloaded from the box containing the details of the certificate



If it is not possible to download the certificate, then please contact the Technical Account Manager at Deutsche Börse by using the VIP number.

7 Frequently Asked Questions

7.1 General

1. Are production and simulation environments supported on the same certificate?

Production and simulation are both available on one certificate. One certificate can be used to log in to both environments at the same time, if the same Member ID is used.

However, please not that at the time of the writing of the current version of this document, the production environment is not yet available.

7.2 Certificates

1. Can I have multiple connections with multiple certificates?

This is possible. Firstly, ensure that all necessary certificates are imported into the browser, then, when prompted to by the browser, select the certificate to be used and proceed to connect. In order to use another certificate, a restart of the browser is needed.

2. How will I receive my certificate password?

The certificate password is sent to the email address of the “owner” as selected during the ordering process.

3. I have lost my certificate password

Because we do not store passwords in the Member Section, it is necessary to order a replacement certificate.

4. Can I use the same certificate for internet based and leased line based connections?

Yes