

Xetra^ò Release 11.0

Front End Installation Guide

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1 Introduction

1.1 Purpose of this Guide

This guide is designed for the exchange member system administrator and provides information on the use of the Xetra Front End software installation kit. In addition this document describes the Xetra Front End software packages for a MISS (Member Integration System Server) and WS (Workstation), including the trading application and VALUES API (Virtual Access Link Using Exchange Services Application Programmable Interface) on the supported OS platforms.

This guide provides detailed information on the Xetra Front End software installation kit, including a systematic walk through of the necessary planning, installation and verification procedures.

If one of the described procedures or instructions causes an exception or event that is neither covered in this guide nor in "Gate Front End Installation Guide", please contact the Customer Technical Support.

For Xetra Frankfurt, ISE, XIM and SCOACH:

Customer Technical Support

Phone: +49 / (0)69 / 211-18400 FAX: +49 / (0)69 / 211-18401 e-mail: cts@deutsche-boerse.com

For Xetra-Vienna:

Customer Technical Support

Phone: +49 / (0)69 / 211-11740 FAX: +49 / (0)69 / 211-18401 e-mail: cts@deutsche-boerse.com



All changes and updates are marked with a light blue shadow.

Note: All commands and screenshots in this document refer to the installation of a production installation kit. The commands and screenshots for the simulation and advanced simulation installation kit differ slightly from each other.

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1.2 Organisation of this Guide

This guide contains the following parts:

• Chapter 1 - Introduction (this chapter)

An introduction to the Xetra Front End software package for MISS and WS, with a description of the accompanying installation kit and general information (not platform specific) for planning the installation.

• Chapter 2 – Installing Front End Software on Sun Solaris

Detailed instructions for the installation of the Front End software for MISS and WS.

• Chapter 3 – Installing Front End Software on Windows

Detailed instructions for the installation of the Front End software for MISS and WS.

• Chapters 4 - Xetra Configuration

Detailed description of the Xetra configuration procedure using the "XETRAprepareExchange" tool and the "Configuration Utility" tool on a MISS.

• Chapter 5 – Verifying the Xetra Installation

Description of a basic verification of the Xetra 11 installation and configuration through the startup of GATE 3.5 and Xetra 11 architecture.

Chapter 6 – Appendices

Reference material to assist during the installation:

- A "Installation Worksheet"
- B "TCP port allocation for Xetra"
- C "Configuration files"
- D "Java License Agreement and Copyright Notice of Sun Microsystems"

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1.3 Overview Xetra Release 11.0

Xetra is an electronic trading system. The system addresses the most important requirements of the developments in international markets. The system implements the following software products:

- Client/server architecture with central hosts and the respective MISS and WS on the member site
- VALUES API (<u>V</u>irtual <u>Access Link Using Exchange Service Application Programming Interface) as an open interface for third party applications and Xetra applications</u>
- Xetra applications using a Java based Graphical User Interface (GUI), e.g. the Xetra J-Trader.

For a detailed description of the functions and features of the Xetra trading applications refer to:

• "Xetra Release 11.0 J-Trader User Manual"

For a detailed description of the operation and technical features of the Xetra front end, see the

• "Xetra Release 11.0 Front End Operations Guide".

For a detailed description of all technical changes of the Xetra 11.0 trading application refer to:

• "Xetra Release 11.0 – Technical Description"

For a detailed description of VALUES API refer to:

- "Xetra Release 11.0 VALUES API Modification Announcement"
- "Xetra Release 11.0 VALUES API Member Front End Development Guide"

For a detailed description of Front End Overview and network setup refer to:

- "Common MISS-based Front End Technical Overview"
- "Network Access to Exchange Applications"

For a detailed description of GATE installation and configuration refer to:

- "GATE 3.5 Front End Installation Guide
- "GATE 3.5 Front End Operations Guide"

Details about Enhanced Broadcast Solution and Enhanced Transaction Solution will be provided in the members only section of the Deutsche Boerse webpage (Trading&Clearing/Members Only).

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1.4 Document modification in Xetra Release 11.0 compared to Xetra 10.1

Chapter	Nature of Change	Comment
	Added / changed Xetra Release 11.0	CHANGED

For a detailed description of setting up and/or configuration of the Environment FF2 refer to Chapter 4 and 5 in this document.

1.5 Use of Environment Numbers

This section explains the exchange specific environment numbers that are used in the front end system. Environment numbers apply to GATE and Xetra, and they differ between Production, Simulation and Advanced Simulation.

Before proceeding with the installation, please check which environment numbers to use for the desired configuration.

The following environment numbers apply:

	Production	Simulation	Advanced Simulation
GATE (XX)	90	91	93
Xetra – Frankfurt (YY)	51	52	53
Xetra – Frankfurt 2 (YY)	61	62	n/a
Xetra – Vienna (YY)	68	69	n/a
Xetra – ISE (YY)	55	n/a ¹⁾	n/a
Xetra – XIM (YY)	57	n/a ¹⁾	n/a
Xetra – Frankfurt (\$\$\$)	FFM	FFM	FFM
Xetra – Frankfurt 2 (\$\$\$)	FF2	FF2	n/a
Xetra – Vienna (\$\$\$)	VIE	VIE	n/a
Xetra – ISE (\$\$\$)	ISE	n/a	n/a
Xetra – XIM (\$\$\$)	XIM	n/a	n/a

¹⁾ The Simulation for Irish Stock Exchange and Xetra International Market will be part (markets) of Xetra Frankfurt Simulation Back end.

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1.6 Subscription of Third Party Private Broadcast Streams

Normally, only the member is authorised to subscribe to his own private broadcast streams. In addition, and depending on existing clearing relationships, clearing members are authorised to subscribe to all private trade confirmations stream of their non clearing member.

It is possible to authorise a member or service provider to subscribe to one or more private broadcast streams of a different member. This authorization is carried out by Deutsche Börse AG on the Xetra Back End after a respective request. In order to receive these streams, the authorised member has to add them in his MISS subscription list (sublist.dat).

1.7 Contents of Installation Kit

The Installation Kit for the Xetra Front End software package for the MISS and WS contains all components required to install a Xetra MISS and/or Xetra WS on the following platforms

- Sun Solaris 10 HW 03/05 or higher and
- Microsoft Windows Server 2003 with SP 2 and
- Microsoft Windows XP Professional with SP2 or higher (Intel).

In particular the Xetra Release 11.0 Installation Kit contains the following material:

- Software Xetra Release 11.0: BESS and Xetra J-Trader (Java based Trading GUI).
- The installation/configuration scripts for both the MISS and workstations on all supported platforms are delivered by Deutsche Börse AG; the Installation Notes give additional information.
- Installation notes.

A set of readme files contain a short description of the installation procedures and the latest changes not contained in this guide:

Readme File	Subject
readmer110.xetra	Xetra 11.0 Production
readmer110s.xetra	Xetra 11.0 Simulation
readmer110a.xetra	Xetra 11.0 Advanced Simulation

Should the contents of this installation guide differ from that in the readme files, use the information given in the readme files as it is more accurate and up to date.

The installation kit is delivered via FTP to the member MISS(s) defined as report nodes. Alternatively the Xetra and GATE software kits can be downloaded from the website www.deutsche-boerse.com => Trading & Clearing / Members only / Xetra / Floor / Xetra Information / Xetra Software / Xetra 11.0.

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1.8 Assumptions Used in this Guide

In the preparation of this guide, the following assumptions are made:

- The exchange member has a system administrator available to perform the installation, who is familiar with the operating system and network software to be used..
- The current version of GATE is installed correctly on the exchange member machines. This process is described in the "GATE Front End Installation Guide".

1.9 Multiple Exchange Support Capability

Xetra is used as a trading platform by different European exchanges (e.g. Deutsche Börse, Wiener Börse, Irish Stock Exchange, Bulgarian Stock Exchange). Consequently the installation kit equals applies for all participating exchanges. The installation procedure will be described in this document.

1.10 Other Xetra Guides Available to Members

The following additional guides are available for the member's system administrators:

- "Common Front End Sizing Guidelines"
- "Common Front End Technical Overview"
- "Network Access to Exchange Applications"
- "Gate 3.5 Front End Installations Guide"
- "Gate 3.5 Front End Operations Guide"
- "Xetra 11.0 Front End Operations Guide"
- "Xetra 11.0 Final Technical Release Notes"

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1.11 Conventions used in this Guide

The following typographic conventions are used in this guide.

Keyboard Input

<ENTER> Press the Enter or Return Key on the keyboard.

<Ctrl+C> Press and hold the CTRL Key on the keyboard then press the C Key

"Please type these words exactly as shown" [RETURN]

Screen Display

This shows the screen display for non-Windows applications.

Windows from GUI-applications are depicted through screenshots.

Getting Attention

This paragraph is highlighted for special attention!

Examples

This is an example of an example as presented in the text.

1.12 Copyright Notice

The distributed Xetra software installs the Java Runtime Environment (JRE) from Sun Microsystems. Please take note of the corresponding SUN Microsystems Binary Code License Agreement, which is included in Appendix E of this document.

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2 Installing Xetra Front End Software on Sun Solaris

This chapter describes the installation of the Front End software for the MISS and the WS on Sun Solaris platform.

2.1 Overview

The Xetra Front End software installation kit contains all binary files, libraries and scripts necessary to install or upgrade, configure and verify a MISS on both Sun Solaris and Windows platforms, in either simulation or production or advanced simulation mode.

Before performing the installation, please check that the system is configured in accordance with the "Common Sizing Guidelines".

The screenshots in the following sections contain Member IDs, WAN names, etc. that are examples only.

2.1.1 Software Requirements and Prerequisites

The version of Sun Solaris operating system specified in the "Common Front End Sizing Guidelines" should be correctly installed on the system. If the correct version of the operating system is not installed, the installation procedure will be terminated and the system rolled back to its previous state!

Important!

The Xetra Front End software for a MISS can only be installed if the GATE 3.5 software is installed and configured on the MISS. The procedure for installing GATE 3.5 software for a MISS is covered in the Front End Installation Guide GATE 3.5.

2.1.2 Planning the Installation

Responses to the various prompts from the installation procedure are provided here to ensure a successful installation of Xetra Front End software and cover general configuration parameters, usernames etc. To assist with the installation, the exchange provides a work sheet – for details see "Appendix A - Installation Worksheet".

Filling in this worksheet has several purposes:

- It conveniently summarises all the information needed to successfully complete an installation.
- It documents the system.
- It helps the Customer Technical Support to resolve any problems.

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2.1.3 Installation

The Xetra software kit can be used to upgrade an existing Xetra Release 10.1 installation. If Xetra Release 10.1 is found on the machine, the installation script prepares a rollback during the upgrade to release 11.0. The process of upgrading the existing Xetra Release runs unattended (without user interaction) if a previously successful installation is found by the installation procedure. For details please refer to chapter 2.2.

While performing a new installation, or if a corrupt Xetra installation is detected, the installation needs to be performed manually, as with previous Xetra Releases. For details please refer to chapter 2.3.

Attention!

Please make sure that no exchange software component (e.g. GATE or Xetra) is running during the upgrade or installation.

Important!

Before starting the Xetra Front End installation, login as root user. Otherwise, the installation will abort.

To start the installation (for simulation use instxetrar110s.sun, for advanced simulation use instxetrar110a.sun), enter the following commands:

 $chmod\ u+x\ instxetrar110.sun$

./instxetrar110.sun.

2.1.4 Performing a Rollback Restore

If the Customer Technical Support informs you to perform a rollback, execute the following statements:

chmod a + x rollbackxetrar110.sun

./rollbackxetrar110.sun restore

Attention!

You must not perform a rollback unless the Customer Technical Support advises you to do so. If you performed a rollback restore by accident please contact the Customer Technical Support immediately.

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2.2 Start MISS and WS Installation Procedure (Upgrade Installation)

The installation procedure for MISS and WS are described below. Once the installation procedures are completed successfully, there is a Configuration Utility available to verify the configuration of the desired MISSes.

Important!

Before starting to upgrade/install Xetra Front End software:

- login as root user, otherwise the installation aborts,
- make sure that the gateadm user is not logged into the system,
- make sure that processes with owner gateadm are not running,
- back up the system.

Attention!

Please make sure that no exchange software component (e.g. GATE)) is running during the installation.

2.2.1 Step 1 – Login as Root (MISS and WS)

At the login prompt:

su - root<ENTER>

At the password prompt:

Type the password for the user " root"

2.2.2 Step 2a – Access the Installation (MISS only)

All necessary files for the installation are received via FTP (/opt/gate/transferdir/releaseYY/sun/ (YY = see chapter 1.5)). The first step in preparing the new installation is to save the newly received installation kit files in a safe directory location. This directory location should be easily accessible from all MISSes and workstations.

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2.2.3 Step 2b - Access the Installation Source (WS only)

On the WS, mount the directory from the MISS where the installation files are located, if this is not done automatically. Alternatively, files can be copied via FTP. Be aware to use the correct transfer type.

2.2.4 Step 3 – Start the Installation Procedure (MISS and WS)

Change to the installation directory, where the files are copied. Depending upon whether the software release is for Simulation or Production or Advanced Simulation, type the appropriate command:

- > chmod a + x instxetrar110.sun (for Production)
- > ./instxetrar110.sun (for Production)

(For Simulation use instxetrar110s.sun, for Advanced Simulation use instxetra110a.sun)

The following messages appear on the screen:

```
# ./instxetrar110.sun
The following version of GATE is installed on this system
and will be used for XetraR110 :
application GateR35 GATE Rel.3.5 Generic Access To Exchanges (Env. 90)
... checking Operating System and version ...
OK ! Installing on supported Solaris 10 Hardware Revision 01/06
Upgrade-Installation of XetraR110 in order to upgrade XetraR100/XetraR101
OK: GATE Production software is not running.
Saving XetraR100 to prepare for a rollback ...
Create archive of XetraR100/Xetra101
Checking pre-conditions for rollback save ...
Rollback /opt/gate/rollback/XetraR100/R101_rollback.tar already exists
no further rollback will be done
Removing package XetraR100/101 to prepare Upgrade to XetraR110 ...
Saving the following files to /var/XETRA-directory!
Saving /var/XETRA/.XETRA.90.env ... to /var/XETRA/.XETRA.90.env__
Saving /opt/gate/base90/XETRA/cfg/XETRAmbr.ini ... to /var/XETRA/XETRAmbr.ini.90
Saving /opt/gate/base90/XETRA/.XetraR100.cfg ... to /var/XETRA/.XetraR100/101.cfg.90
removing /opt/gate/base90/XETRA ...
```

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```
Removal of <XetraR100/101> was successful.
Installing package XetraR110 ...
pkgadd -d ./xetrar110.sun XetraR110
Processing package instance <XetraR110> from </kits_prod/sun_1/xetrar110.sun>
Xetra Rel.11.0 - eXchange Electronic TRAding (Production)(sparc) 11.0.0.0
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All Rights Reserved.
This software is furnished under license and may be used and copied only in
accordance with the terms of this license and with the inclusion of the above
copyright notice. This software or any other copies thereof may not be provided
or otherwise made available to any other person. No title to, or ownership of,
the software is hereby transferred.
The information in this software is subject to change without notice and should
not be construed as a commitment by Deutsche Boerse AG.
Deutsche Boerse AG assumes no responsibility for the use or reliability of its
software on equipment which is not certified by Deutsche Boerse AG.
Starting installation in upgrade mode.
Using </opt/gate> as the package base directory.
## Processing package information.
## Processing system information.
   2 package pathnames are already properly installed.
## Verifying package dependencies.
## Verifying disk space requirements.
Installing Xetra Rel.11.0 - eXchange Electronic TRAding (Production) as <XetraR110>
## Executing preinstall script.
## Installing part 1 of 1.
/opt/gate/base90/XETRA/GUI/bin/start_xetra.sh
[ *** A couple of file names will show up here *** ]
/opt/gate/java/Solaris_JRE_1_6_0_11.tar
[ verifying class <none> ]
## Executing postinstall script.
```

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```
Renew csinfo file for exchange FFM ...

Renew csinfo file for exchange VIE ...

Renew csinfo file for exchange FF2 ...

OK ! File GATEsys.ini is already up-to-date.

Conversion of configuration files ...

Running configMenu.pl in batch mode ...

Changes Saved

Copying XETRA CDE files...

Creating XetraPrepareExchangeR110.dt OK!

Move XetraPrepareExchangeR110.dt OK!

Creating StartXetraTradingR110.dt OK!

Move StartXetraTradingR110.dt OK!

inflating Java Runtime ...

Installation of <XetraR110> was successful.

#
```

The Xetra software is installed in the following target directories

/opt/gate/baseXX/XETRA

If all actions complete successfully, the installation of the Xetra Front End software on the respective MISS or WS is finished.

If, for any reasons, the required activities do not successfully complete, the procedure terminates and roll back changes are made to the system.

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2.3 Start MISS and WS Installation Procedures (New Installation)

The installation procedure for MISS and WS are described below. Once the installation procedure is completed successfully, there is a XETRAprepareExchange Tool and a Configuration Utility available to assist in the configuration of the desired MISSes.

Important!

The minimum configuration for the Xetra Front End software is a single MISS as a stand-alone system. If you intend to install workstations, install and configure the MISS software on the MISS first. The procedures for installing the WS software is almost identical to the MISS installation procedure. The only differences are in the additional configuration settings, and certain MISS installation steps that are skipped by the WS installation procedure.

Important!

Before starting to install Xetra Front End software:

- login as root user, otherwise the installation aborts,
- make sure that the gateadm user is <u>not</u> logged into the system,
- make sure that processes with owner gateadm are not running,
- back up the system.

Attention!

Please make sure that no exchange software component (e.g. GATE) is running during the installation.

During the installation, the system prompts for the necessary configuration parameters, which are on the installation worksheet.

2.3.1 Step 1 – Login as Root (MISS and WS)

At the login prompt:

su - root<ENTER>

At the password prompt:

Type the password for the user " root"

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2.3.2 Step 2a – Access the Installation (MISS only)

All necessary files for the installation are received via FTP (/opt/gate/transferdir/releaseYY/sun/ (YY = see chapter 1.5)). The first step in preparing the new installation is to save the newly received installation kit files in a safe directory location. This directory location should be easily accessible from all MISSes and workstations.

2.3.3 Step 2b – Access the Installation Source (WS only)

On the WS, mount the directory from the MISS where the installation files are located, if this is not done automatically. Alternatively, files can be copied in via FTP. Be aware to use the correct transfer type.

2.3.4 Step 3 – Start the Installation Procedure (MISS and WS)

Change to the installation directory, where the files are copied. Depending upon whether the software release is for Production, Simulation or Advanced Simulation, type the appropriate command:

- > chmod a+x instxetrar110.sun (for Production)
- > ./instxetrar110.sun (for Production)

(For Simulation use instxetrar110s.sun, for Advanced Simulation use instxetra110a.sun)

The installation program now asks for specific information to configure the system, it creates the necessary directory structure on the machine and copies necessary binary files, configuration tools and library files to the disk.

First of all, the availability of the GATE 3.5 software is checked. If an older GATE version or no GATE version at all is detected, the following error message is displayed:

#./instxetrar110.sun

ERROR! installed GATE-Version not compatible for XetraR110:

application GateR34

GATE Rel.3.4 Generic Access To Exchanges (Env. 90)

Please install compatible GATE-Version first - exiting!

If the correct GATE version is installed the following messages appear on the screen:

./instxetrar110.sun

The following version of GATE is installed on this system and will be used for XetraR110:

application GateR35 GATE Rel.3.5 Generic Access To Exchanges (Env. 90)

... checking Operating System and version ...

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OK! Installing on supported Solaris 10 Hardware Revision 01/06

No installation of XETRA Production found. Adding package XetraR110 in installation mode.

Continue installation? [y] [y,n,?]

The Xetra software is installed in the following target directories

/opt/gate/baseXX/XETRA

2.3.5 Step 4 - Interrupting the Installation (MISS and WS)

During the installation procedure, typing < q> as an answer forces the installation to quit. However, some system changes made during the installation are not reversed e.g. users created during installation are not removed.

2.3.6 Step 5 - Accept License Agreement (MISS and WS)

Processing package instance <XetraR110> from </kits_prod/sun_1/xetrar110.sun>

Xetra Rel.11.0 - eXchange Electronic TRAding (Production)(sparc) 11.0.0.0

.....

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by Installing the software you accept the License Agreement stated above.

Press <ENTER> to continue or <q> to quit installation:

Press <ENTER> to continue or, <q> to quit installation:

2.3.7 Step 6 - Check that CDE is Installed (MISS and WS)

Check if SUNW dtcor is already installed! SUNW dtcor is already installed as required!

Check if SUNWdtbas is already installed!



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SUNW dtbas is already installed as required!

Check if SUNW dtdte is already installed! SUNW dtdte is already installed as required!

Check if SUNWdtdst is already installed! SUNWdtdst is already installed as required!

2.3.8 Step 7 - Confirm Installation (MISS and WS)

You are about to begin installation of the XETRA Front End. The installation procedure will guide you through the following steps:

Enter information about the environment in which the XETRA Front End will be running.

A summary of all the information you have provided will be displayed for your confirmation.

After your confirmation, the actual installation of the XETRA Front End will take place.

Choosing the quit (q) option at any time will abort the installation procedure.

Choosing the help (?) option will display extra information.

Press <ENTER> to continue or <q> to quit installation:

Press <ENTER> to start installation, <q> to quit.

Press <?> to get help information.

2.3.9 Step 8 - Create a Front End Trader Account (MISS and WS)

The installation procedure sets up a new user account for testing purposes (default: XetraTrd). The installation procedure checks for the existence of this user and creates it if it does not already exist.

User and group section.

Enter the user name of the Xetra trader on this system.

(default: XetraTrd) [?,q]

Press < ENTER > to accept the default, or type another name or < q > to quit.

Enter the user id for the trader account XetraTrd (default 1911):

Press <Enter> to continue.

Press < ENTER > to accept the default or type a new User ID and press < ENTER > or <q > to quit.

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Next screen on WS only!

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Please enter the full qualified name of the copied XETRAmbr.ini-File:

Type the path, where the XETRAmbr.ini file was copied (WS only)

2.3.10 Step 9 – Confirm Configuration (MISS and WS)

The following choices were made so far during the installation of the XETRA Software. This information will be saved in the file >/opt/gate/base90/XETRA/.XetraR110.cfg< for your convenience.

You are about to install: XetraR110!

Base-Directory: [/opt/gate/base90/XETRA]

The Xetra Trader: [XetraTrd]

The name/address of this system: [egdbxxg] as MISS

Installation of the XETRA Software will now be performed based on the information you have provided. If you are not satisfied with the choices you have just made, rerun the installation script.

Press <ENTER> to continue or <q> to quit installation:

7

Press < ENTER > to start installation, < q > to quit.

Working, please wait...

Using </opt/gate> as the package base directory. ## Processing package information.

Processing system information.

1 package pathname is already properly installed.

Verifying package dependencies.

Verifying disk space requirements.

7

Installing Xetra Rel.11.0 - eXchange Electronic TRAding (Production) as <XetraR110>

Executing preinstall script.

Try to create [XetraTrd] on local system!

User created - please set password for XetraTrd!

The minimum length of the password is 5 characters!

New Password:

Type the new password (minimum 5 characters, alphanumeric, case-sensitive) and press < ENTER > .

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Re-enter new password:

Retype the new password and press < ENTER>.

7

passwd: password successfully changed for XetraTrd

2.3.11 Step 10 – Installation (MISS and WS)

Installing part 1 of 1.

/opt/gate/base90/XETRA/GUI/bin/start_xetra.sh
/opt/gate/base90/XETRA/GUI/cfg/CIADrivers.ini
/opt/gate/base90/XETRA/GUI/cfg/XTr.cfg
/opt/gate/base90/XETRA/GUI/cfg/XTrExch.cfg

Now a list of all copied files is displayed.

[verifying class <none>] ## Executing postinstall script.

OK! File GATEsys.ini is already up-to-date.

Copying Xetra CDE files...
Creating XetraPrepareExchangeR110.dt OK!
Move XetraPrepareExchangeR110.dt OK!
Creating StartXetraTradingR110.dt OK!
Move StartXetraTradingR110.dt OK!
inflating Java Runtime ...

Installation of <XetraR110> was successful.

If all the actions complete successfully, the installation of the Xetra Front End software on the respective MISS or WS is finished.

If, for any reason, the required activities do not successfully complete, the procedure terminates.

Note: No groups or users are deleted and /etc/system is not cleared.

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2.4 Environment Variables

The following environment variables are changed during the Sun Solaris installation. They are set by clicking on a GATE or Xetra icon.

Environment Variable	Description
LD_LIBRARY_PATH	System environment variable, points to VALUES API modules
SYS_CONFIG_FILE	System environment variable, points to config files.
PATH	System environment variable, points to the executables

2.5 Removing Front End Software from the System

To remove the Xetra Front End software from the system, use the pkgrm command. At the command prompt, type one of the following lines:

pkgrm XetraR110 (for Production)

pkgrm XetraR110S (for Simulation)

pkgrm XetraR110A (for Advanced Simulation)

All files and directories created by the pkgadd command are deleted.

Important!

A backup of all Xetra report directories located in /opt/gate/transferdir should be performed prior to removing the Xetra Front End software.

Note: No groups or users are deleted by the pkgrm command. The libXetraUsim.so, XETRAmbr.ini, sublist.dat files are saved in the /var/XETRA directory.

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3 Installing Xetra Front End Software on Windows

3.1 Software Requirements and Prerequisites

If the correct operating system is not installed, the installation procedure terminates and the system is restored to its previous state.

Important!

The Xetra Front End software for a MISS or WS can only be installed if the GATE 3.5 Front End software is installed. The procedure for installing GATE Front End software is covered in the "Front End Installation Guide GATE 3.5".

3.1.1 Software Requirements for Installation

The version of Windows operating system specified in the "Common Front End Sizing Guidelines" should be correctly installed on the system.

3.1.2 Planning the Installation

Responses to the various prompts from the installation procedure are provided here to ensure a successful installation of the Xetra Front End software. They cover mostly general configuration parameters, network addresses etc. To assist with the installation, the exchange provides a work sheet – see "Appendix A – Installation Worksheet".

Filling in this work sheet has several purposes:

- It conveniently summarises all information needed to successfully complete an installation.
- It documents the system.
- It helps the Customer Technical Support to resolve any problems.

3.1.3 Installation

The Xetra software can be used for upgrading an existing Xetra Release 10.1 installation. The process of upgrading the existing Xetra software will run automatically with a minimum of user interaction (only the start and the completion of the installation process has to be confirmed), if a previous successful installation has been found by the installation procedure.

Please refer to chapter 3.5 "Performing an unattended Installation" for information on how to upgrade an existing Xetra Release 10.1 installation completely without user interaction.

While updating from Xetra Release 10.1 to Release 11.0, the installation script prepares a rollback file containing the existing Xetra installation.

No rollback is necessary if the Xetra Release 11.0 installation fails. For details please refer to chapter 3.1.3.1 and chapter 3.2.

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If performing a new installation, or if the old Xetra Release 10.1 software is not installed correctly, the installation needs to be performed manually. For details please refer to chapter 3.3.

Attention!

Make sure that no exchange software component (e.g. GATE or Xetra or X-PERT) is running during the upgrade or installation.

Important!

Before starting to install the Xetra Front End software, log in either as Administrator, or as a user that is a member of the group Administrators, otherwise the installation is aborted.

3.1.3.1 Start Upgrade

To install the Xetra Front End software, Administrator authorization is required; otherwise, the setup Program does not run.

Change to the directory where the Xetra Front End software installation kit is located, e.g. $C:\NETPUB\FTPROOT\ELEASEYY\WIN\ (YY = see chapter 1.5)$. Start the XetraR110.msi program using one of the following methods:

From the Windows Explorer

In C:INETPUBIFTPROOTIRELEASEYYIWINI (YY = see chapter 1.5) directory, double click one of the following files:

XetraR110.msi (for Production)

XetraR110s.msi (for Simulation)

XetraR110a.msi (for Advanced Simulation)

From the Command Prompt

Assuming that the kit is located in the directory *C:\INETPUB\FTPROOT\RELEASEYY\WIN* (YY = see chapter 1.5), type one of the lines shown below:

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110.msi (for Production)

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110S.msi (for Simulation)

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110A.msi (for Advanced Simulation)

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From the Start Menu

From the Start Menu, choose Run

Assuming that the kit is located in the directory *C:\INETPUB\FTPROOT\RELEASEYY\WIN* (YY = see chapter 1.5), type one of the lines shown below:

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110.msi (for Production)

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110S.msi (for Simulation)

msiexec /I C:\INETPUB\FTPROOT\RELEASEYY\WIN\XetraR110A.msi (for Advanced Simulation)

3.1.4 Performing a Rollback Restore

If the Customer Technical Support informs you to perform a rollback, execute the following statement: GATE_drive:\opt\gate\rollback\Rollba

Attention!

You must not perform a rollback restore unless the Customer Technical Support informs you to do so. If you perform a rollback restore by accident, please contact the Customer Technical Support immediately.

3.2 MISS and WS Installation Procedure (Upgrade Installation)

If the requirements fulfilled in chapter 3.1 are completed, the MISS installation procedure can be started.

Important!

Before starting to install the Xetra Front End software, log in either as Administrator, or as a user who is member of the group Administrators, otherwise the installation is aborted.

3.2.1 Step 1 – Logon as Administrator and start the XetraR110.msi Program

To install the Xetra Front End software for MISS, you need to have local administrator privileges or the setup program does not run.

Move to the directory where the Xetra Front End software installation kit is located: C:\INETPUB\FTPROOT\RELEASEYY\WIN (YY=see chapter 1.5). Start the XetraR110.msi package (XetraR110S.msi for Simulation, XetraR110A.msi for Advanced Simulation) using one of the methods described in the section 3.1.3.1.

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3.2.2 Step 2 - Access the Installation Source

After starting the XetraR110 (XetraR110S for Simulation, XetraR110A for Advanced Simulation) installation package, the following window is displayed:



Click on < Cancel > to quit.

First the availability of the GATE 3.5 software is checked. If an older GATE version or no GATE version at all is detected, the following error message is displayed:



Click on <OK> and abort the installation.

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Click on <Finish> and abort the installation. Then install the GATE 3.5 software as described in the "Front End Installation Guide GATE".

Once the GATE 3.5 software is installed and verified, proceed with step 3.

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3.2.3 Step 3 – Welcome Window



Click on < Upgrade > to continue.

Click on < Cancel > to quit.

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3.2.4 Step 4 – End of the Installation



Click on <Finish> to continue.

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3.3 MISS and WS Installation Procedure (New Installation)

If the requirements fulfilled in chapter 3.1 are completed, the installation procedure can be started.

Important!

The minimum configuration for the Xetra Front End software is one MISS as a stand-alone system. If also installing WS software on workstations, install and configure the MISS software on the MISS first. The procedure for installing WS software is almost identical to the MISS installation procedure.

Important!

Before starting to install the Xetra Front End software, log in either as Administrator, or as a user who is a member of the group Administrators, otherwise the installation is aborted.

3.3.1 Step 1 - Logon as Administrator and Start the XetraR110.msi Program

To install the Xetra Front End software for MISS, you need to have local administrator privileges or the setup program does not run.

Move to the directory where the Xetra Front End software installation kit is located: C:\INETPUB\FTPROOT\RELEASEYY\WIN\(YY=\) see chapter 1.5). Start the XetraR110.msi package (XetraR110S.msi for Simulation, XetraR110A.msi for Advanced Simulation) using one of the methods described in the section 3.1.3.1.

3.3.2 Step 2 - Access the Installation Source

After starting the XetraR110 (XetraR110S for Simulation, XetraR110A for Advanced Simulation) installation package, the following window is displayed:



Click on < Cancel > to quit.

First the availability of the GATE 3.5 software is checked. If an older GATE version or no GATE version at all is detected, the following error message is displayed:

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Click on <OK> and abort the installation. Then install the GATE 3.5 software as described in the "GATE Front End Installation Guide".

Once the GATE 3.5 software is installed and verified, proceed with step 3.

3.3.3 Step 3 - Welcome Window

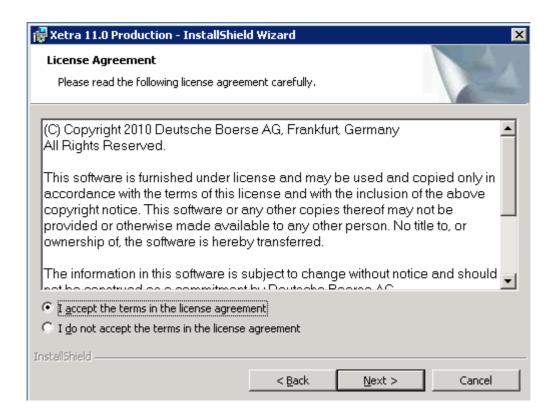


Click on <Next> to continue or click on <Cancel> to quit.

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3.3.4 Step 4 – Accept License Agreement

The XetraR110.msi (XetraR110S.msi for Simulation, XetraR110A.msi for Advanced Simulation) program displays the following copyright notice and asks for acceptance of the copyright before continuing.



Click on < Back> to return to the previous window.

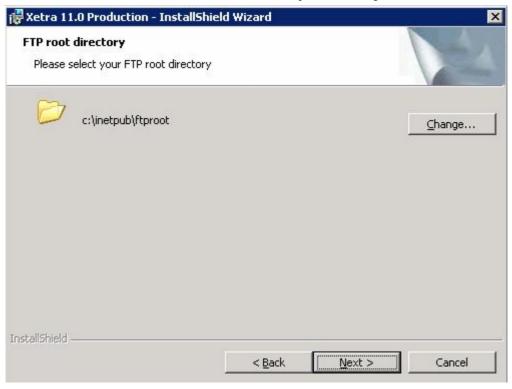
Click on <Next> to continue. Please note that the <Next> button is inactive until the "I accept..." checkbox is unmarked.

Click on < Cancel > to quit.

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3.3.5 Step 5 – Select FTP-Root Directory

The installation routine now asks to confirm or modify these settings.



Select path where the FTP root directory is stored

Click on < Back> to return to the previous window

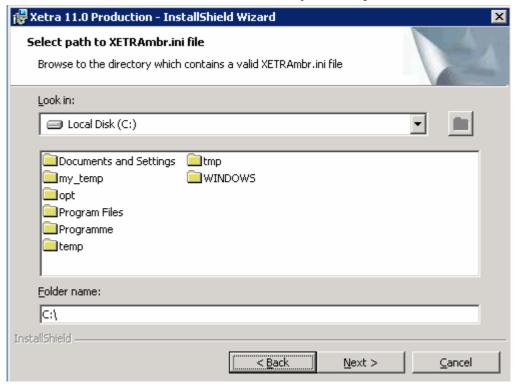
Click on < Next> to continue.

Click on < Cancel > to return to the previous window.

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3.3.6 Step 6 – Select path to XETRAmbr.ini File (WS only)

The installation routine now asks to confirm or modify the settings.



Select path where the XETRAmbr.ini file is stored

Click on < Back> to return to the previous window

Click on < Next> to continue.

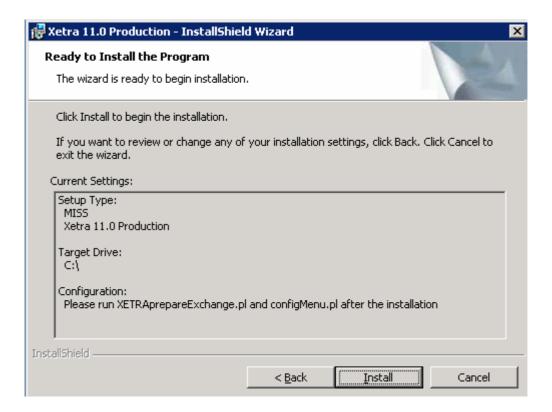
Click on <Cancel> to return to the previous window.

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3.3.7 Step 7 – Confirm Settings

The installation routine now asks to confirm or modify the entered settings.

Please check the settings before continuing.



Click on < Back> to return to the previous window.

Click on < Install > to continue.

Click on < Cancel > to quit.

The Xetra Front End software is now being installed on the MISS/WS.

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3.3.8 Step 8 – Finishing the Installation

The setup process has now completed all of its tasks.



Click on <Finish> to complete the setup.

When XetraR110.msi (XetraR110S.msi for Simulation, XetraR110A.msi for Advanced Simulation) is complete, the shortcuts are created in the *GATE Production* or *GATE Simulation* or GATE AdvSimu *Program* folder.

Note: Before starting the Xetra application, the GATE architecture must be started. Before starting the GATE architecture, the XETRAprepareexchange and the Configuration Utility must be started. The necessary steps are as follows:

- 1. Click Start \rightarrow Programs \rightarrow GATE Production (or Simulation, or AdvSimu) \rightarrow XetraPrepareExchange (on MISSes only)
- 2. Click Start \rightarrow Programs \rightarrow GATE Production \rightarrow Configuration Utility (on MISSes only)
- 3. Click Start \rightarrow Programs \rightarrow GATE Production \rightarrow XmenuR35 \rightarrow 1 \rightarrow 1.
- 4. Click Start → Programs → GATE Production → Start Xetra 11.0 Trading

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The table below briefly describes the purpose of the icons in the folder:

Icon	When Double-clicked
StartGateR35	Starts the communications architecture GATE (on WS only)
StopGateR35	Stops the communications architecture GATE (on WS only)
XetraPrepareExchange	Start the XETRAprepareExchange tool (on MISSes only)
XmenuR35	Starts the GATE administration menu (on MISSes only)
Configuration Utility	Starts the Configuration Utility (on MISSes only)
Start Xetra 11.0 Trading	Starts the new Xetra trading application

3.4 Xetra User and Group Accounts on Windows

The user and group accounts on the Windows platform have to be created manually. Please make sure that prior to the Xetra account setup the GATE account setup has been completed – for details see *GATE Front End Installation Guide 3.5*. Xetra requires a group for file-transfer users on MISSes only (default: "xetraft" or "xiseft" or "ximft" or "xetra2ft" or "xwbagft"), the file-transfer user accounts "xnet51/55/57/61/68" (production environment), "xnet52/62/69" (simulation environment), "xnet53" (advanced simulation), and at least one trader user (default: XetraTrd). The "xnetYY" accounts must be members of the exchange-specific file transfer group. The "XetraTrd" account must be member of the "gatetrd" group. Other users, as required, must be members of the group "gatetrd".

If a trader user is also required to be able to trade on the MISS, this user must be also part of the "gategrp" group.

Note: Every user within the gategrp group can start or stop the GATE architecture and all exchange Xervices!

3.4.1 Creation of User and Group Accounts

Before attempting to use or verify the Xetra Front End at least the following users and groups must be created manually:

- group "xetraft" (MISS and FFM only) / "xiseft" (MISS and ISE only) / "xximft" (MISS and XIM only) / "xetra2ft" (MISS and FF2 only) / "xwbagft" (MISS and VIE only)
- accounts "xnetYY" (MISS only) / "XetraTrd"

The procedure for the creation of users and groups on a MISS within an Active Directory and on a standalone MISS may differ slightly. Please consult the operating system documentation for further information.

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Important!

The passwords for the file-transfer users (xnetYY) are provided by Deutsche Börse!

User names and passwords of other users must be a minimum of 5 characters in length otherwise the login to Xetra is not possible.

3.4.2 User Rights Assignments

Irrespective of the Windows network identification settings (i.e. domain/active directory or workgroup member) the following user rights need to be assigned:

User/group	Rights Assignment
xetraft	log on locally (FFM only)
xiseft	log on locally (ISE only)
xximft	log on locally (XIM only)
xetra2ft	Log on locally (FF2 only)
Xwbagft	log on locally (VIE only)
xnetYY	log on locally
XetraTrd	log on locally

When using the Windows Active Directory it has to be taken into account, that a more complex 3 stage Security Policy Concept (Local Security Policy, Domain Security Policy and Domain Controller Security Policy) is being used. It is not sufficient to set the "log on locally" for the FTP accounts at the Local Security Policy level. These privileges must be set at the highest security level otherwise they may be overridden by the Domain / Domain Controller Settings.

3.5 Performing an Unattended Installation

In order to perform an unattended *upgrade* installation of a MISS or Workstation (see also section 3.1.3 "Upgrade Installation"), the following command should be executed from the command prompt:

C:\ msiexec /i XetraR110.msi /qn

Important!

Do not execute the above command on a system with an existing Xetra 11.0 installation. Otherwise Xetra 11.0 will be uninstalled without further user interaction.

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In order to perform an unattended *scratch* installation on Windows the following command should be executed from the command prompt:

C:\ msiexec /i XetraR110.msi PATH_TO_MBR_INI =< Path to XETRAmbr.ini>/qn

E.g., the command:

msiexec /i XetraR110.msi PATH_TO_MBR_INI=c:\temp /qn

installs Xetra on drive *C* using the Xetrambr.ini file located in the directory *C:\Temp*.

Starting the msiexec command with the additional flags /qn prevents GUI interaction during the installation.

3.6 Removing Front End Software from the System

To remove the Xetra Front End software from the system, proceed as follows:

- 1. Click Start → Settings → Control Panel
- 2. Click Add/Remove Programs
- 3. Highlight the application to remove.
- 4. Click the Remove Button.

Or the software can be uninstalled by double clicking the installation archive (XetraR110.msi, XetraR110S.msi or XetraR110A.msi)

The Add/Remove program only removes from the system those files created by setup.

All other files and directories must be manually deleted (e.g. .ini files, log files etc.).

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4 Xetra Configuration

4.1 Configuration of Xetra Front End Software (all platforms)

The configuration tool is part of the GATE software on a MISS. The XETRAprepareExchange tool is part of the Xetra architecture on a MISS.

Following an initial installation, the configuration has to be performed. The Configuration Utility Tool supports the member in configuring the system. Members, who are familiar with the installation and configuration procedure, may use an editor instead.

Upgrade installations use the configuration files of the previous version to configure the system during installation. Nevertheless the configuration tool is used to configure additional features like Multiple Exchanges, Multi Member Support, IP Multicast, new workstations etc. whenever the member decides to use these features.

Note that this chapter describes the Xetra specific configuration with the XETRAprepareExchange tool and the Configuration Utility tool. The GATE specific configuration can be found in the Front End Installation Guide GATE 3.5.

It is also possible to install GATE (first) and Xetra before configuring the whole system!

The Advanced Simulation environment is not available for Xetra Vienna and Xetra Frankfurt 2.

4.2 Start XETRAprepareExchange (MISS only)

This tool creates the directory structure for each exchange the member is assigned to (XX = see chapter 1.5). To start the tool, proceed (platform specific) as follows:

Sun Solaris

Start XETRAprepareExchange tool (as user root) on the MISS by typing the following at the Command Prompt Window:

>cd /opt/gate/baseXX/XETRA/bin

>./XETRAprepareExchange.pl

Windows:

From the Start Menu choose Programs/GATE Production.

Click on the XetraPrepareExchange Simu/Prod/Advanced Simu icon.

At the Command Prompt:

Type C:\lopt\gate\baseXX\XETRA\bin\XETRAprepareExchange.pl < RETURN > .

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In the Windows Explorer:

Choose the directory *C:loptlgate\baseXX\XETRA\bin* and double-click the file *XetraPrepareExchange.pl.*

4.2.1 Unattended Mode

It is possible to start the XETRAPrepareExchange tool in an unattended mode. Use the following syntax (\$\$\$ = see chapter 1.5):

Sun Solaris

>cd /opt/gate/baseXX/XETRA/bin

>./XETRAprepareExchange.pl -exch \$\$\$

Windows

Туре

C:\opt\gate\baseXX\XETRA\bin\XETRAprepareExchange.pl -exch \$\$\$

This command has to be repeated for each exchange to be prepared.

4.2.2 Attended Mode

After starting XETRAprepareExchange the following screen appears:

```
***** XETRA Exchange Configuration Tool *****

Prepare MISS for access to XETRA Exchanges

1 XETRA DUBLIN [Directories/Files missing]
2 XETRA FRANKFURT [Directories/Files missing]
3 XETRA VIENNA [Directories/Files missing]
4 XETRA INTERNATIONAL MARKET [Directories/Files missing]
5 XETRA FRANKFURT 2 [Directories/Files missing]
0 Return

Please select:
```

1) The Advanced Simulation environment is available for Xetra Frankfurt only.

Select any exchange, the Xetra member is assigned to.

Press < ENTER > to continue.

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```
Please select :1

xiseft group successfully created
xnet55 account successfully created

Please enter the password for xnet55 as provided by Deutsche Boerse:

New Password:
Re-enter new Password:
Passwd: password successfully changed for xnet55
Password successfully changed for user xnet55

Group xiseft successfully added to user gateadm
```

For Sun Solaris this tool creates the xetraft group and the xnetYY user. Enter the passwords for xnetYY given by the Deutsche Börse AG.

For Windows please create the users and groups manually.

Press < ENTER > to continue.

The directory structure for the selected exchange will be created:

Press <ENTER> to continue. The main menu of the XETRAprepareExchange tool is shown.

The selected exchange is installed:

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```
***** XETRA Exchange Configuration Tool *****

Prepare MISS for access to XETRA Exchanges

1 XETRA DUBLIN [installed]
2 XETRA FRANKFURT [Directories/Files missing]
3 XETRA VIENNA [Directories/Files missing]
4 XETRA INTERNATIONAL MARKET [Directories/Files missing]
5 XETRA FRANKFURT 2 [Directories/Files missing]
0 Return

Please select:
```

Members, who are assigned to more than one exchange, have to repeat this procedure for each exchange.

Select menu item <0> to quit or select menu item <2> to continue

```
Please select :2

xetraft group successfully created 
xnet51 account successfully created

Please enter the password for xnet51 as provided by Deutsche Boerse:

New Password:
Re-enter new Password:
Passwd: password successfully changed for xnet51
Password successfully changed for user xnet51

Group xetraft successfully added to user gateadm
```

For Sun Solaris this tool creates the xetraft group and the xnetYY user. Enter the passwords for xnetYY given by the Deutsche Börse AG.

For Windows please create the users and groups manually.

Press < FNTFR > to continue.

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The directory structure for the selected exchange will be created:

Press < ENTER > to continue. The main menu of the XETRAprepareExchange tool is shown.

The selected exchange is installed:

Members, who are assigned to more than one exchange, have to repeat this procedure for each exchange.

Select menu item <0> to quit or select menu item <3> to continue.

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```
Please select :3

xwbagft group successfully created 
xnet68 account successfully created

Please enter the password for xnet68 as provided by Deutsche Boerse:

New Password:
Re-enter new Password:
passwd: password successfully changed for xnet68
password successfully changed for user xnet68

Group xwbagft successfully added to user gateadm
```

For Sun Solaris this tool creates the xwbagft group and the xnetYY user. Enter the passwords for xnetYY given by the Deutsche Börse AG.

Press < ENTER > to continue.

The directory structure for the selected exchange will be created:

Press < ENTER > to continue. The main menu of the XETRAprepareExchange tool is shown.

The selected exchange is installed:

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```
***** XETRA Exchange Configuration Tool *****

Prepare MISS for access to XETRA Exchanges

1 XETRA DUBLIN [installed]
2 XETRA FRANKFURT [installed]
3 XETRA VIENNA [installed]
4 XETRA INTERNATIONAL MARKET [Directories/Files missing]
5 XETRA FRANKFURT 2 [Directories/Files missing]
0 Return

Please select:
```

Select menu item <0> to quit or select menu item <4> to continue.

```
Please select :4

xximft group successfully created 
xnet57 account successfully created

Please enter the password for xnet57 as provided by Deutsche Boerse:

New Password:
Re-enter new Password:
passwd: password successfully changed for xnet57
password successfully changed for user xnet57

Group xximft successfully added to user gateadm
```

For Sun Solaris this tool creates the xximft group and the xnetYY user. Enter the passwords for xnetYY given by the Deutsche Börse AG.

Press < ENTER > to continue.

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The directory structure for the selected exchange will be created:

```
../../XETRA_XIM successfully created
../../XETRA_XIM/lib successfully created
../../XETRA_XIM/data successfully created
../../XETRA_XIM/data/ROB successfully created
../../XETRA_XIM/data/ROBArchive successfully created
../../XETRA_XIM/data/active successfully created
../../XETRA_XIM/data/archive successfully created
../../XETRA_XIM/data/archive successfully created
../../XETRA_XIM/data/exclList.dat successfully created
../../XETRA_XIM/data/mmlogin.dat successfully created
../../XETRA_XIM/data/mmstreams.dat successfully created
../.././transferdir/refdat57 successfully created
../../../transferdir/release57 successfully created
../../../transferdir/reports57 successfully created
```

Press < ENTER > to continue. The main menu of the XETRAprepareExchange tool is shown.

The selected exchange is installed:

Select menu item <0> to quit or select menu item <5> to continue.

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```
Please select :5

xetra2ft group successfully created 
xnet61 account successfully created

Please enter the password for xnet61 as provided by Deutsche Boerse:

New Password:
Re-enter new Password:
passwd: password successfully changed for xnet61
password successfully changed for user xnet61

Group xetra2ft successfully added to user gateadm
```

For Sun Solaris this tool creates the xetra2ft group and the xnetYY user. Enter the passwords for xnetYY given by the Deutsche Börse AG.

Press < ENTER > to continue.

The directory structure for the selected exchange will be created:

Press < ENTER > to continue. The main menu of the XETRAprepareExchange tool is shown.

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***** XETRA Exchange Configuration Tool *****

Prepare MISS for access to XETRA Exchanges

1 XETRA DUBLIN [installed]
2 XETRA FRANKFURT [installed]
3 XETRA VIENNA [installed]
4 XETRA INTERNATIONAL MARKET [installed]
5 XETRA FRANKFURT 2 [installed]
0 Return

Please select:

Select menu item <0> to quit.

4.3 Start the Configuration Utility tool

After preparing the directory structure for the exchange(s), as described in chapter 4.2

To support the configuration, use the configuration worksheet in Appendix A.

Important!

Before starting to install the Xetra Configuration Utility Tool, log in as gateadm.

The Configuration Utility can be started via the Xmenu by selecting the item *Configuration Utility* or platform specific as described below:

Sun Solaris

>cd /opt/gate/baseXX/bin

>./configMenu.pl

(XX: 90 for Production, 91 for Simulation, 93 for Advanced Simulation)

Windows:

From the *Start Menu* choose *Programs/GATE Production (GATE Simulation , GATE AdvSim)* Click on the *Configuration Utility* icon.

or

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7

Type C:\lopt\gate\baseXX\bin\configMenu.pl < RETURN > .

(XX: 90 for Production, 91 for Simulation, 93 for Advanced Simulation)

or

8

Choose the directory C:\opt\gate\baseXX\bin\ and double-click the file configMenu.pl.

4.4 Required Minimum Configuration

The most important point of the Configuration Utility, after a new installation, is the menu option *Required Minimum Configuration* in the main menu.

Prior to performing the *Required Minimum Configuration* for Xetra it is necessary to have completed the GATE installation. For information how to perform the *GATE Required Minimum Configuration* please consult the *GATE Front End Installation Guide*.

It is possible to configure GATE and XETRA in one step.

MISS group ID must be identical within a Xetra MISS group and unique within the Member Environment, so that the member has no two MISS groups with the same MISS group ID.

The Advanced Simulation environment is available for Xetra Frankfurt only.

Please follow the instructions on the following screens. The configuration is done step by step.

When the Configuration Utility starts, the following menu is displayed:

***** Configuration Utility *****

Configuration Menu

- 1 MISS/WS Architecture Configuration
- 2 Multicast Configuration
- 3 GATE Configuration
- 4 XETRA Configuration
- 5 Required Minimum Configuration

0 Return

Please Select:

Select menu item <5> Required Minimum Configuration.

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```
***** Configuration Utility *****
     Required Minimum Configuration
 1
           XETRA FRANKFURT Miss Configuration
 2
           XETRA FRANKFURT Member Id
 3
           XETRA FRANKFURT MISS Group Id
           XETRA FRANKFURT Sublist file
 5
           XETRA VIENNA Miss Configuration
 6
           XETRA VIENNA Member Id
 7
           XETRA VIENNA MISS Group Id
 8
           XETRA VIENNA Sublist file
 9
           XETRA FRANKFURT 2 Member Id
10
           XETRA FRANKFURT 2 Miss Configuration
11
           XETRA FRANKFURT 2 MISS Group Id
12
           XETRA FRANKFURT 2 Sublist file
13
          XETRA DUBLIN Miss Configuration
  VVVVVV
            VVVVV
    Return
u/d line up/down
                         uu/dd page up/down
Please Select:
```

The Advanced Simulation environment is available for Xetra Frankfurt only.

All missing Xetra specific entries to perform a successful start of the application are listed in this menu. Note that these menu items depend on the used configuration files and that they may differ according to the member and the exchange(s).

Select any menu item to enter the missing information. If this information is entered correctly, the selected menu item is marked as <DONE>.

Select menu item <1> XETRA Frankfurt MISS Configuration <ENTER>.

```
***** Configuration Utility *****

MISS/WS Architecture Configuration

1 Add a MISS
2 Add a WS
3 Change / Show MISS
4 Change / Show WS
5 Remove a MISS
6 Remove a WS

0 Return

Please Select:
```

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Select menu item <3> Change / Show MISS < ENTER>

```
***** MISS/WS Architecture Configuration Menu *****

Change / Show MISS

1 EGDBXXO (6578)

0 Return

Please Select:
```

Select menu item <1> EGDBXXO <ENTER>

```
**** MISS/WS Architecture Configuration Menu ****
     Change MISS EGDBXXO (6578)
   MISS LAN name_
                                                    __[EGDBXXO]
 2 MISS device ID
                                                    [6578]
 3 Primary MISS position____
 4 Republisher in LAN
                                                          [Y]
 5 Security MISS
                                                          [Y]
 6 XETRA FRANKFURT MISS
   XETRA VIENNA MISS
 8 XETRA FRANKFURT 2 MISS
 9 XETRA DUBLIN MISS
10 XETRA INTERNATIONAL MARKET MISS
0
    Return
Please Select:
```

Select menu item <6> XETRA FRANKFURT MISS <ENTER>

Select menu items <1> to <4>

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```
***** MISS/WS Architecture Configuration Menu *****

XETRA FRANKFURT MISS

1 XETRA FRANKFURT MISS_______[Y]

2 XETRA FRANKFURT WAN name_______[XMGDBXXO]

3 XETRA FRANKFURT Retransmission MISS______[Y]

0 Return

Please Select:
```

Select menu item <0> four times to return to the previews menu < ENTER>

```
***** Configuration Utility *****
      Required Minimum Configuration
      <DONE> XETRA FRANKFURT Miss Configuration
              XETRA FRANKFURT Member Id
  3
              XETRA FRANKFURT MISS Group Id
              XETRA FRANKFURT Sublist file
  5
              XETRA VIENNA Miss Configuration
  6
             XETRA VIENNA Member Id
  7
             XETRA VIENNA MISS Group Id
            XETRA VIENNA Sublist file
XETRA FRANKFURT 2 Member Id
XETRA FRANKFURT 2 Miss Configuration
XETRA FRANKFURT 2 MISS Group Id
XETRA FRANKFURT 2 Sublist file
  8
 9
 10
 11
 12
             XETRA DUBLIN Miss Configuration
 13
   vvvvv
              VVVVV
 0 Return
 u/d line up/down uu/dd page up/down
Please Select:
```

Select menu item <2> XETRA FRANKFURT Member Id to continue

```
Please enter your XETRA FRANKFURT Member Id (e.g. ABCFR) actual value: []
Please enter input and finish with RETURN
>>
```

Please enter your member ID and press < ENTER >

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```
***** Configuration Utility *****
    Required Minimum Configuration
1
    <DONE> XETRA FRANKFURT Miss Configuration
    <DONE> XETRA FRANKFURT Member Id_
 2
                                                        _[GDBXX]
 3
           XETRA FRANKFURT MISS Group Id
 4
           XETRA FRANKFURT Sublist file
 5
           XETRA VIENNA Miss Configuration
 6
           XETRA VIENNA Member Id
7
           XETRA VIENNA MISS Group Id
8
           XETRA VIENNA Sublist file
9
          XETRA FRANKFURT 2 Miss Configuration
10
          XETRA FRANKFURT 2 Member ID
          XETRA FRANKFURT 2 MISS Group Id
11
          XETRA FRANKFURT 2 Sublist file
12
          XETRA DUBLIN Miss Configuration
13
  VVVVV
            VVVVV
   Return
Please Select:
```

Select menu item <3> XETRA FRANKFURT MISS Group Id to continue

```
Please enter XETRA FRANKFURT MISS Group Id (single character)
actual value: []
Please enter input and finish with RETURN
>>
```

Please enter your XETRA FRANKFURT MISS Group ID and press < ENTER >

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```
***** Configuration Utility *****
    Required Minimum Configuration
    <DONE> XETRA FRANKFURT Miss Configuration
 2
    <DONE> XETRA FRANKFURT Member Id_
                                                   ____[GDBXX]
 3
    <DONE> XETRA FRANKFURT MISS Group Id______
                                                          ____[4]
 4
           XETRA FRANKFURT Sublist file
 5
           XETRA VIENNA Miss Configuration
 6
           XETRA VIENNA Member Id
7
           XETRA VIENNA MISS Group Id
8
           XETRA VIENNA Sublist file
9
           XETRA FRANKFURT 2 Miss Configuration
          XETRA FRANKFURT 2 Member ID
10
           XETRA FRANKFURT 2 MISS Group Id
11
12
           XETRA FRANKFURT 2 Sublist file
          XETRA DUBLIN Miss Configuration
13
  VVVVVV
            VVVVV
    Return
Please Select:
```

Select menu item <4>XETRA FRANKFURT Sublist.dat to continue

```
***** Configuration Utility *****

XETRA FRANKFURT Sublist Configuration Menu

1 Private Broadcast
2 Public Broadcast

0 Return

Please Select:
```

Select menu item <1> Private Broadcast and press <ENTER>

```
Please Select: 1
Please enter member id [GDBXX]
```

Press < ENTER >

The following menu will create the file sublist.dat with all its entries:

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```
Please Select: 1
Please enter member id [GDBXX] ***** Configuration Utility *****
    XETRA FRANKFURT Sublist for GDBXX
                                          [ new state (old state) ]
    [A] Private recoverable trade confirmation_____
                                                         ___[Y (N)]
    [B] Private recoverable order confirmation____[Y (N)]
                                                 [Y (N)]
 3
    [E] Private recoverable quote request
    [F] Private recoverable OTC order confirmation____[Y (N)]
 4
 5
    [G] Private recoverable CCP trade confirmation_____
                                                         ___[Y (N)]
    [H] Private recoverable Specialist specific information__[Y (N)]
7
    [I] Private recoverable Issuer specific information ____[Y (N)]
    [M] Private recoverable Matching event____
                                                       ____[Y (N)]
9
     [O] Private unreliable All Order confirmation____[Y (N)]
    [R] Private unreliable Quote confirmation_____
                                                       ____[Y (N)]
    Return
Please Select:
```

Select menu items <1> to <6> to select or deselect private broadcast streams and press <ENTER> to return.

```
Please enter member id [GDBXX] ***** Configuration Utility *****

XETRA FRANKFURT Sublist Configuration Menu

1 Private Broadcast
2 Public Broadcast
0 Return

Please Select:
```

Select menu item <2> Public Broadcast and <ENTER>

```
***** Configuration Utility *****

XETRA FRANKFURT Sublist for Public Broadcasts

1 [W] Public unreliable ATP broadcast_______[Y (N)]

2 [X] Public unreliable broadcast______[Y (N)]

0 Return

Please Select:
```

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Select menu item <1> to <2> to select or unselect public unreliable broadcast streams and press <ENTER> twice to return

```
***** Configuration Utility *****
    Required Minimum Configuration
    <DONE> XETRA FRANKFURT Miss Configuration
    <DONE> XETRA FRANKFURT Member Id_
 2
                                                            __[GDBXX]
    <DONE> XETRA FRANKFURT MISS Group Id_
 3
                                                                [4]
 4
    <DONE> XETRA FRANKFURT Sublist file
 5
           XETRA VIENNA Miss Configuration
 6
           XETRA VIENNA Member Id
 7
           XETRA VIENNA MISS Group Id
 8
           XETRA VIENNA Sublist file
9
           XETRA FRANKFURT 2 Miss Configuration
10
           XETRA FRANKFURT 2 Member ID
11
           XETRA FRANKFURT 2 MISS Group Id
12
          XETRA FRANKFURT 2 Sublist file
13
          XETRA DUBLIN Miss Configuration
  VVVVVV
            VVVVV
    Return
Please Select:
```

Enter <0> to return to the Required Minimum menu. Members, who are assigned to more than one exchange (e.g. Xetra Frankfurt and/or Xetra Vienna and/or Xetra Frankfurt 2), have to repeat this procedure by selecting menu item <5> to <12>.

The Advanced Simulation environment is available for Xetra Frankfurt only.

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The minimum configuration is completed. Exit the main menu and save your changes.

```
***** Configuration Utility *****
     Configuration Menu
    MISS/WS Architecture Configuration
    Multicast Configuration
 3
    GATE Configuration
 4
   XETRA Configuration
   Required Minimum Configuration
 0
    Return
Please Select: 0
Do you want to save the changes in the configuration files and exit?
y => save and exit
n => no save but exit
c => just continue
y(es)/n(o)/c(ontinue): y
Changes Saved
```

As soon as the required minimum configuration is done, the application can be started. If this is performed successfully, use the created files XETRAmbr.ini and sublist.dat on the MISS to install additional MISS and workstations.

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4.5 IP Multicast

To configure IP Multicast, start the Configuration Utility as described in chapter 4.3.

```
***** Configuration Utility *****
     Configuration Menu
    MISS/WS Architecture Configuration
    Multicast Configuration
    GATE Configuration
 3
    XETRA Configuration
 4
    Required Minimum Configuration
 0
    Return
Please Select: 0
Do you want to save the changes in the configuration files and exit?
y => save and exit
n => no save but exit
c => just continue
y(es)/n(o)/c(ontinue): y
Changes Saved
```

Select menu item <2> Multicast Configuration

```
***** Configuration Utility *****

Multicast Configuration

1 List Multicast Groups
2 Add Multicast Group
3 Remove a Multicast Group
4 Assign XETRA Streams to Multicast Groups

0 Return

Please Select:
```

Select menu item <2> to add a multicast group:

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```
***** MISS/WS Architecture Configuration Menu *****

List of multicast addresses configured in Gate:

224.1.0.0 (1)
239.254.1.60 (2)
239.254.1.61 (3)
239.254.1.62 (4)
239.254.1.63 (5)
239.254.1.64 (6)

0 Return

Please Press Enter to Continue
```

Select menu item <4> from the Multicast Configuration Menu to assign XETRA streams to the multicast groups:

```
***** Configuration Utility *****

Assign XETRA Streams to Multicast Groups

1 Assign XETRA_FFM Streams to Multicast Groups
2 Assign XETRA_VIE Streams to Multicast Groups
3 Assign XETRA_FF2 Streams to Multicast Groups
4 Assign XETRA_ISE Streams to Multicast Groups
5 Assign XETRA_XIM Streams to Multicast Groups
0 Return

Please Select:
```

Select menu item <1> to assign XETRA FFM streams to the multicast groups

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****	Configuration Utility ****	
	Assign XETRA_FFM Streams to Multicast Groups	
1	Set one Multicast Address for all XETRA_FFM Stre	ams
11	PRIVATE_RECOVERABLE_STREAM_TYPE PUBLIC_UNRELIABLE_MARKET_STREAM_TYPE PUBLIC_UNRELIABLE_TICKER_STREAM_TYPE PUBLIC_UNRELIABLE_QUOTE_REQUEST_STREAM_TYPE PUBLIC_UNRELIABLE_STATE_STREAM_TYPE PUBLIC_UNRELIABLE_NEWS_STREAM_TYPE INTERNAL_STREAM_1 INTERNAL_STREAM_2 PUBLIC_UNRELIABLE_ALL_TRADE_PRICES_STREAM_TYPE PRIVATE_SPECIALIST_STREAM_TYPE PRIVATE_ISSUER_STREAM_TYPE	[224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)] [224.1.0.0 (1)]
	vvvv vvvvv	[221:1:0:0 (1)]
0	Return	
	line up/down uu/dd page up/down e Select:	

Select menu item < 1 > to assign one multicast address to all streams or select the corresponding stream and choose a multicast group:

After assigning streams and multicast groups, return to the main menu and save the changes.

Before removing an existing multicast group (by using menu option "3 Remove Multicast Group" from the Multicast Configuration Menu), it is necessary to delete all assigned streams by selecting the item "Assign XETRA \$\$\$ Streams to Multicast Groups" and initialise the corresponding streams by choosing [N/A] or assigning another multicast group to this stream.

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5 Verifying the Xetra Installation

Note:

Do not use the root account to start the architecture on a Sun Solaris MISS, otherwise the <u>gateadm</u> will not be able to restart the GATE Front End software due to file protection violations.

The GATE Front End software must be running on the MISS and WS before starting Xetra. Refer to the "GATE Front Installation Guide" for the GATE Front End software.

Important!

Please note that after completing the local installation procedure, testing and verifying the system cannot be performed before the USIM (User Security Interface Manager) library has been received via FTP. This library is delivered via FTP by Deutsche Börse AG and it is exchange specific. This library has to be requested for each exchange the member is assigned to.

To enable this to be received without problems Sun Solaris users should first login to the FTP account xnetYY, and if prompted, change the passwords using the passwords supplied by Deutsche Börse.

If this is not done, the file transfer will fail and it is not possible to login to the Xetra Front End to verify the system.

Note that these accounts (xnetYY) for initial installations (on Sun Solaris) will be created by the XETRAprepareExchange tool, see chapter 4.2.

The USIM files will be transferred to the exchange specific releaseXX directory of all MISSes upon request by the Customer Technical Support.

During the "Start-of-Day" procedure the USIM file will automatically be copied into the appropriate platform and exchange dependant directory according the following path:

Solaris /opt/gate/baseXX/XETRA_\$\$\$/lib/libXetraUsim.so Windows "GATE_Drive":\opt\gate\baseXX\XETRA_\$\$\$\lib\XetraUsim.dll

where \$\$\$ has to be replaced by the corresponding exchange identifier (e.g. FFM for Xetra Frankfurt, VIE for Xetra Vienna, FF2 for Xetra Frankfurt 2, ...).

If any problems during the installation occur do not hesitate to call the exchange specific Member Services (unit of department Markets Services).

5.1.1 Step 1 – Configuration

In case of an initial installation, use the configuration tools XETRAprepareExchange and Configuration Utility to configure the system first, see chapter 4. Upgrade installations use the valid configuration files for configuration.

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5.1.2 Step 2 – Start Xetra MISS

Log on as gateadm and start the MISS on the server by typing the following at the command prompt window:

```
cd /opt/gate/base90/bin (for Production)
cd /opt/gate/base91/bin (for Simulation)
cd /opt/gate/base93/bin (for Advanced Simulation)
./Xmenu.pl
```

Alternatively the Xmenu icon can be used.

****	MISS 6578 Production (Base90) *****
	Main Menu
1 2 3 4 5 6 7 8	Start/Stop of Communications Architecture Xervice Management Pre-schedule start/stop of Communication Architecture Display system status Display exception log Display message log Configuration utility GateWatch Commands
0	Return
Pleas	e Select:

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In the main menu select: menu item <1> Start/Stop of Communications Architecture

```
***** MISS 6578 Production (Base90) *****

Start/Stop of Communications Architecture

1 Startup Communications Architecture (Start-of-day)
2 Start Communications Architecture (Intra-day)
3 Shutdown Communications Architecture (End-of-day)
4 Stop Communications Architecture (Intra-day)

0 Return

Please Select:
```

In the Start/Stop Communications Architecture menu select:

Startup Communications Architecture (Start-of-Day)

5.1.3 Step 3 – Check MISS System Status

To verify the actual system status, start the Xmenu script via the icon or the command line.

Select menu item <4> "Display system status" and then <2> "Status of Xervices"

Status of Xervices		
BASIC_ARCHITECTURE	AVAILABLE	
SECURITY	AVAILABLE	
MSG_LOGGING	AVAILABLE	
SESSION	AVAILABLE	
GATEWATCH_SERVER	AVAILABLE	
GATEWATCH_CLIENT	AVAILABLE	
XETRA_FFM	AVAILABLE	
XETRA_RETRANSMISSION_FFM	AVAILABLE	
XETRA_VIE	AVAILEBLE	
XETRA_RETRANSMISSION_VIE	AVAILABLE	
XETRA_FF2	AVAILABLE	
XETRA_RETRANSMISSION_FF2	AVAILABLE	
Press <enter> to continue</enter>		

Only Xetra Frankfurt will be available in XETRA 11 Advanced Simulation.

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5.1.4 Step 4 – Start Xetra Application on WS

Log on as gateadm and start the WS using the "StartGateR35"-icon starts the communication links with the MISS.

Use the Xmenu on the MISS to check if the WS is connected via menu item <4> "Display system status" and <3> "List of active LAN connections for this device".

Once the GATE architecture has started on the WS, click on the "Start Xetra 11.0 Trading"-icon to start the Xetra trading system.

Log in to the trading application and open the *Market Overview* window, which displays overall market data for a specific product or profile. Test the Market Overview during trading hours with an actively traded product. If the window shows market data, it may be safely assumed that the Xetra WS was installed properly.

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6 Appendix A - Installation Worksheet

6.1 Introduction

This installation worksheet is provided to help install the Xetra Front End software package.

The installation procedure of the installation kit for the MISS and WS package allows for easy installation and configuration of the software. To correctly configure the software, the installation procedure requires some user-specific details about the hardware, and some information provided by the exchange.

The installation worksheet has three main purposes:

- It conveniently collects all the information required during the installation process.
- It documents the system.
- It helps the Customer Technical Support to resolve any problems.

The worksheet is divided into several sections:

- A Hardware Configuration Details
- B Configuration Information Supplied by the Exchange
- C MISS Configuration Details
- D Workstation Configuration Details

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6.2 Sections

6.2.1 Section A – Hardware Configuration Details

Write down the details of the systems configuration:

Free Disk Space

6.2.2 Section B – Configuration Information Supplied by the Exchange

Please fill out the following details:

The Xetra Member ID

The FTP password for xnetYY for simulation and production

6.2.3 Section C – MISS Configuration Details

Domain Name or Workgroup which is used (Windows only)

LAN-Host name

WAN-Host name (provided by exchange)

Broadcast Address of MISSes / Multicast Environment Address

Logical Device ID of the MISS A (Range 1-9999)

Logical Device ID of the MISS B (Range 1-9999)

MISS Group ID

6.2.4 Section D – Workstation Configuration Details

Logical Device ID of each workstation (Range 20000-29999).

Hostname of each workstation

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6.3 Xetra Front End Installation Worksheet

Customer Technical Support: +49 / (0)69 / 211 1 84 00

A - Hardware Configuration Details

	MISS A	MISS B
Free Disk Space		

B - Configuration Information provided by Deutsche Börse

Member ID	
FTP xnetYY Password	

C - MISS Configuration Details

	MISS A	MISS B
Domain Name (Windows XP/2003 Only)		
LAN-Host name		
WAN-Host name		
Logical Device ID		
MISS Group ID		

D - Workstation Configuration Details

WS Number	Primary MISS device ID	Logical Device- ID	WS Hostname
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Date____

Prepared By _____

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7 Appendix B - TCP Port Allocation for Xetra

7.1 Allocation of TCP Ports

The Xetra Front End software requires TCP ports as depicted in the table below. These will be allocated automatically for you during the installation process. The default values are shown in the following table: Unless you experience specific problems with your installation you are recommended to keep the default values. Refer to Front End Operations Guide Xetra Release 11.0 for further information.

Xetra replaces @@ with the corresponding environment number (51, 52, 53, 55, 57, 61, 62, 68, 69).

Port Name	Port
XETRA_APPLICATION_MANAGER_LISTENPORT	1@@50
XETRA_WAN_TRANSPORT_MANAGER_LISTENPORT	1@@51
XETRA_BROADCAST _SERVER_LISTENPORT	1@@52
XETRA_DATA_SERVER_LISTENPORT	1@@53
XETRA_INST_SEARCH_ENGINE_LISTENPORT	1@@56
XETRA_ BROADCAST_RETRANSMITTER_BESS_PORT	1@@57
XETRA_BROADCAST_SERVER_BESS_TO_BESS_PORT	1@@58
XETRA_BROADCAST_SERVER_LISTENPORT	1@@60
XETRA_DATA_SERVER_BESS_PORT	1@@11

IMPORTANT: Please note, that the tcp-port 1@@57 is used for the inter-MISS-communication, which means that, this port must be opened on any firewall devices within the multicast domain.

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8 Appendix C - Configuration Files

This section describes the Xetra configuration files. Xetra BESS contains the following configuration files:

8.1 XETRAsys.ini

The content of XETRAsys.ini is used to configure the common Xetra BESS settings. These settings are checksum-protected and may not be changed by the member.

8.2 XETRAmbr.ini

The XETRAmbr.ini file contains for each exchange the member-specific settings that are required for correct operation of the Xervices on a MISS. Each exchange to be supported on the MISS must be featured here.

Exchange specific sections are named as [XETRA_\$\$\$.*], where \$\$\$ is FFM or ISE or XIM or VIE or FF2

8.3 sublist.dat

The sublist dat file details the required broadcast streams for the current installation.

8.4 exclList.dat

The content of exclList.dat is used to configure the exclusion of broadcast sub-streams for the current installation.

8.5 mmlogin.dat (Multi Member only)

In a Multi Member MISS environment the mmlogin.dat serves the purpose to specify which accounts are admissible for each member. Broadcast Validation must be enabled as a prerequisite.

8.6 mmstreams.dat (Multi Member only)

In a Multi Member MISS environment the mmstreams.dat is a means to specify access to broadcast streams of other members. Broadcast Validation must be enabled as a prerequisite.

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9 Appendix D - Java License Agreement and Copyright Notice

9.1 Sun Microsystems Binary Code License Agreement

for the JAVA SE RUNTIME ENVIRONMENT (JRE) VERSION 6

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