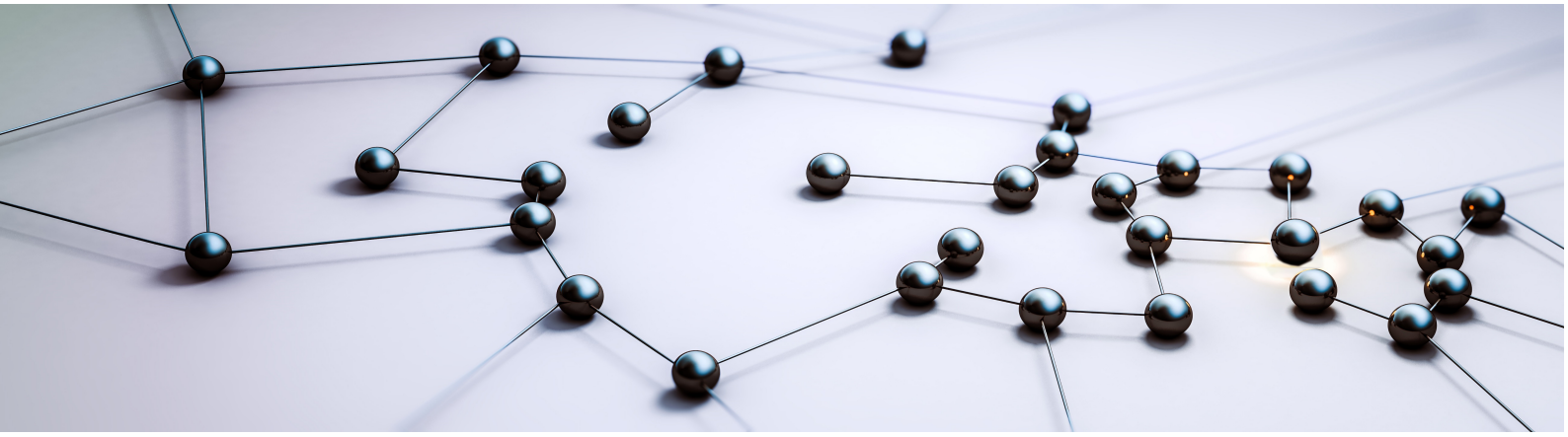
FUJITSU

FUJITSU Enterprise Postgres 10



Installation and Setup Guide for Server Assistant

Windows/Linux

J2UL-2379-01ENZ0(00)
August 2018

Preface

Purpose of this document

This document describes how to install, uninstall and set up the FUJITSU Enterprise Postgres Server Assistant.

Intended readers

This document is intended for those who install and operate FUJITSU Enterprise Postgres.

Readers of this document are assumed to have general knowledge of:

L
- PostgreSQL
- SQL
- Linux

W
- PostgreSQL
- SQL
- Windows

Structure of this document

This document is structured as follows:

Chapter 1 Overview of Installation

Describes the features that can be installed, and provides an overview of installation methods

Chapter 2 Installation and Uninstallation of the Linux Server Assistant

Describes how to install and uninstall the FUJITSU Enterprise Postgres Server Assistant (Linux Server Assistant)

Chapter 3 Installation and Uninstallation of the Windows Server Assistant

Describes how to install and uninstall the FUJITSU Enterprise Postgres Server Assistant (Windows Server Assistant)

Chapter 4 Setup and Operation of the Mirroring Controller Arbitration Server

Describes the setup to be performed after installation

Appendix A Estimating Memory Requirements

Describes the formulas for estimating memory requirements

Appendix B Procedure when Modifying the Oracle JRE Installation

Describes the procedure to follow when modifying the Oracle JRE installation.

Export restrictions

Exportation/release of this document may require necessary procedures in accordance with the regulations of your resident country and/or US export control laws.

Issue date and version

Edition 1.0: August 2018

Copyright

Copyright 2018 FUJITSU LIMITED

Contents

Chapter 1 Overview of Installation....1
1.1 Features that can be Installed....1
1.2 Installation Types....1
1.2.1 New Installation....1
1.2.2 Reinstallation....1
1.3 Installation Procedure....1
1.3.1 Installation in Interactive Mode....1
1.3.2 Installation in Silent Mode....2
1.4 Uninstallation....2

Chapter 2 Installation and Uninstallation of the Linux Server Assistant....3
2.1 Operating Environment....3
2.1.1 Required Operating System....3
2.1.2 Related Software....4
2.1.3 Excluded Software....4
2.1.4 Required Patches....4
2.1.5 Hardware Environment....4
2.1.6 Disk Space Required for Installation....5
2.1.7 Supported System Environment....5
2.2 Installation....5
2.2.1 Pre-installation Tasks....5
2.2.2 Installation in Interactive Mode....6
2.2.3 Installation in Silent Mode....8
2.3 Uninstallation....9
2.3.1 Uninstallation in Interactive Mode....9
2.3.2 Uninstallation in Silent Mode....10

Chapter 3 Installation and Uninstallation of the Windows Server Assistant....12
3.1 Operating Environment....12
3.1.1 Required Operating System....12
3.1.2 Related Software....13
3.1.3 Excluded Software....14
3.1.4 Required Patches....14
3.1.5 Hardware Environment....14
3.1.6 Disk Space Required for Installation....14
3.1.7 Supported System Environment....14
3.2 Installation....14
3.2.1 Pre-installation Tasks....16
3.2.2 Installation in Interactive Mode....17
3.2.3 Installation in Silent Mode....18
3.3 Uninstallation....19
3.3.1 Uninstallation in Interactive Mode....19
3.3.2 Uninstallation in Silent Mode....20

Chapter 4 Setup and Operation of the Mirroring Controller Arbitration Server....23

Appendix A Estimating Memory Requirements....24
A.1 Mirroring Controller Arbitration Server Memory Requirements....24

Appendix B Procedure when Modifying the Oracle JRE Installation....25

Index....26

Chapter 1 Overview of Installation

This chapter provides an overview of FUJITSU Enterprise Postgres Server Assistant installation.

1.1 Features that can be Installed

FUJITSU Enterprise Postgres provides the Server Assistant to support the database servers from various platforms.

The Server Assistant is provided as a Server Assistant package, which is to be installed on systems connected to the database server.

The following table shows the relationship between the platforms and the features provided by the Server Assistant package.

Platform	Mirroring Controller arbitration server
Linux	Y
Windows	Y

Y: Can be installed

1.2 Installation Types

The following two installation types are available for FUJITSU Enterprise Postgres:

- New installation
- Reinstallation

1.2.1 New Installation

In initial installation, the FUJITSU Enterprise Postgres Server Assistant is installed for the first time.

1.2.2 Reinstallation

Perform reinstallation to repair installed program files that have become unusable for any reason.

1.3 Installation Procedure

The following installation procedures are available for FUJITSU Enterprise Postgres:

- Installation in interactive mode
- Installation in silent mode

Select the installation procedure that corresponds to your environment.

1.3.1 Installation in Interactive Mode

Interactive mode enables installation to be performed while the required information is entered interactively.

In the interactive mode installation, the FUJITSU Enterprise Postgres installer automatically determines the installation state of FUJITSU Enterprise Postgres. Install FUJITSU Enterprise Postgres using one of the following installation types in accordance with the installation state:

- New installation
- Reinstallation

1.3.2 Installation in Silent Mode

Silent mode enables installation to be performed without the need to enter any information interactively.

New installations can be performed in silent mode.

1.4 Uninstallation

Uninstallation removes the system files of the installed FUJITSU Enterprise Postgres Server Assistant.

Chapter 2 Installation and Uninstallation of the Linux Server Assistant

This chapter explains how to install and uninstall the Linux Server Assistant.

2.1 Operating Environment

This section describes the operating environment required in order to use the Linux Server Assistant.

2.1.1 Required Operating System

One of the following operating systems is required in order to use the Linux Server Assistant:

- RHEL6.5 (Intel 64) or later
- RHEL7.2 or later
- SLES 12 SP2 or later

Note

- The SELinux (Security-Enhanced Linux) feature is not supported for RHEL6.

Information

- The following packages are required for operations on RHEL6 (Intel64).

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-
unzip	-
xz-libs	-
zlib	-
glibc.i386	-

- The following packages are required for operations on RHEL7.

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-

Package name	Remarks
unzip	-
xz-libs	-
zlib	-
glibc.i386	-

- The following packages are required for operations on SLES 12.

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
ncurses-libs	-
nss-softokn-freebl	-
unzip	-
xz-libs	-
zlib	-
glibc-32bit	-
Oracle JRE 8	Required when using the installer or Mirroring Controller arbitration server. Use update 31 or later of the 64-bit version.

2.1.2 Related Software

No other software is required in order to use FUJITSU Enterprise Postgres.

The following table lists servers that can be connected to the Linux Server Assistant.

Table 2.1 Connectable servers

OS	Software name
Linux	- FUJITSU Software Enterprise Postgres Standard Edition 10
Windows	- FUJITSU Software Enterprise Postgres Advanced Edition 10

2.1.3 Excluded Software

There is no excluded software.

2.1.4 Required Patches

There are no required patches.

2.1.5 Hardware Environment

The following hardware is required in order to use the Linux Server Assistant:

Memory

At least 150 MB of memory is required.

Mandatory hardware

None.

2.1.6 Disk Space Required for Installation

The following table lists the disk space requirements of the corresponding directories for new installation of the Linux Server Assistant. If necessary, increase the size of the file system.

Table 2.2 Disk space required for installation

Directory	Required disk space Unit: MB
/etc	1 + 1 (*1)
/var	1 + 4 (*1)
/opt	105 (*1)
arbiterInstallDir	105

*1: Uninstall (middleware) must be installed.

2.1.7 Supported System Environment

This section describes the supported system environment.

TCP/IP Protocol

FUJITSU Enterprise Postgres supports version 4 and 6 (IPv4 and IPv6) of TCP/IP protocols.

Note

Do not use link-local addresses if TCP/IP protocol version 6 addresses are used.

2.2 Installation

This section describes how to install the Linux Server Assistant.

2.2.1 Pre-installation Tasks

Check the following system environment before installing the Linux Server Assistant.

Check the disk space

Ensure that there is sufficient disk space to install the Linux Server Assistant.

Refer to "2.1.6 Disk Space Required for Installation" for information on disk space requirements.

If sufficient free disk space is unavailable, reconfigure disk partitions.

Set JAVA_HOME (SLES 12 only)

Ensure that Oracle JRE 8 is installed, and export the JAVA_HOME environment variable.

```
#export JAVA_HOME="oracleJre8InstallDir"
```

Refer to "Appendix B Procedure when Modifying the Oracle JRE Installation " for information on modifying Oracle JRE after installation.

Check the installed product and determine the installation method

Using the operation shown below, start Uninstall (middleware), and check the installed products.

Example

```
# /opt/FJSVcir/cimanager.sh -c
Loading Uninstaller...


Currently installed products
1. productName

Type [number] to select the software you want to uninstall.
[number,q]
=>q



Exiting Uninstaller.
```

If the Linux Server Assistant is already installed, perform reinstallation.

Remove applied updates

If you perform reinstallation, remove applied updates using the procedure shown below.

Note

If a product is installed without removing applied updates, the following will occur:

- Performing reinstallation

  If an update with the same update and version number is applied, an error informing you that the update has already been applied is displayed.

  Perform reinstallation after removing the update.

1. Display the applied updates

   Execute the following command to display the applied updates:

```
# /opt/FJSVfupde/bin/uam showup
```

2. Remove the updates

   Execute the command below to remove the updates. If an update with the same update number was applied more than once, the updates are removed in order, starting from the highest version number.

```
# /opt/FJSVfupde/bin/uam remove -i update-number
```

2.2.2 Installation in Interactive Mode

The installation procedure is described below.

Note

The following characters can be used as input values:

Alphanumeric characters, hyphens and forward slashes

Point

In interactive mode installation, the default values of the installation information are set. The following setting can be changed for a new installation.

- Installation directory

1. Stop the program

If the installation method is the following, the program must be stopped:

- Reinstallation

Before starting the installation, stop the following:

- Mirroring Controller arbitration process

  Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

  Example

```
$ mc_arb stop -M /mcarb_dir/arbiter1
```

2. Change to the superuser

Run the following command to switch to the superuser on the system.

```
$ su -
Password:******
```

3. Mount the DVD drive

Insert the Server Assistant program DVD into the DVD drive, and then execute the following command:

Example

```
# mount -t iso9660 -r -o loop /dev/dvd /media/dvd
```

/dev/dvd is the DVD drive device, and /media/dvd is the mount point (which must already exist before calling the command).

Note

If the DVD was mounted automatically using the automatic mount daemon (autofs), "noexec" is set as the mount option, so the installer may fail to start. In this case, use the mount command to remount the DVD correctly, and then run the installation. Note that the mount options of a mounted DVD can be checked by executing the mount command without any arguments.

4. Run the installation

Execute the following command:

Example

```
# cd /media/dvd
# ./install.sh
```

In the example above, /media/dvd is the DVD mount point.

5. Select the product to install

The list of installation target products is displayed.
Type the number for the product to be installed, or "all", and press Enter.

Information

- If the selected product has already been installed, a window for selecting reinstallation is displayed.
  To perform a reinstallation, type the number for the product and press Enter.

6. Check the settings

The window for checking the installation information is displayed.
Type "y" and press Enter to start the installation.
To change the settings, type "c", press Enter, and follow the on-screen instructions. This option is not displayed if there is no information that can be modified.

7. Check the changed settings

If the settings have been changed, the new installation information is displayed.
Type "y" and press Enter to start the installation.
To change the settings again, type "c" and press Enter.

8. Finish the installation

When the installation is complete, a message is displayed showing the status.
If installation was successful, the following message is displayed:

```
Installed successfully.
```

Note

If an error occurs during the installation, read the error message and remove the cause of the error, and then reexecute the install.sh command.

2.2.3 Installation in Silent Mode

Installation in silent mode can be performed only when the installation method is the following:

- New installation

See

Refer to the FUJITSU Enterprise Postgres product website for information on installation in silent mode, such as the installation parameters and error messages.

The installation procedure is described below.

1. Change to the superuser

Run the following command to switch to the superuser on the system.

```
$ su -
Password:******
```

2. Mount the DVD drive

Insert the Server Assistant program DVD into the DVD drive, and then execute the following command:

Example

```
# mount -t iso9660 -r -o loop /dev/dvd /media/dvd
```

/dev/dvd is the DVD drive device, and /media/dvd is the mount point (which must already exist before calling the command).

Note

If the DVD was mounted automatically using the automatic mount daemon (autofs), "noexec" is set as the mount option, so the installer may fail to start. In this case, use the mount command to remount the DVD correctly, and then run the installation. Note that the mount options of a mounted DVD can be checked by executing the mount command without any arguments.

3. Create an installation parameters CSV file

Create an installation parameters CSV file that uses the following specification format.

```
sectionName, parameterName, value
sectionName, parameterName, value
    :
```

Information

The templates for the installation parameters CSV file is "*mountPoint*/sample/sample_linux.csv"

4. Run the installation

Execute the following command:

Example

```
# cd /media/dvd
# ./silent.sh /home/work/inspara.csv
```

In the example above, /media/dvd is the DVD mount point, and /home/work/inspara.csv is the installation parameter CSV.

If the silent installer ends in an error, a message is output to the log file and return values are returned.

2.3 Uninstallation

This section describes how to uninstall the Linux Server Assistant.

Note

Before uninstalling the product, close the product program.

2.3.1 Uninstallation in Interactive Mode

The uninstallation procedure is described below.

Information

If an error occurs while the product is being uninstalled, refer to "Uninstall (middleware) Messages" in the FUJITSU Enterprise Postgres product website, and take the required action.

1. Stop the program

Before starting the uninstallation, stop the following:

- Mirroring Controller arbitration process

  Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

  Example

```
$ mc_arb stop -M /mcarb_dir/arbiter1
```

2. Change to the superuser

Run the following command to switch to the superuser on the system.

```
$ su -
Password:******
```

3. Start Uninstall (middleware)

Execute the following command:

```
# /opt/FJSVcir/cimanager.sh -c
```

4. Select the product

Enter the number for the product to be uninstalled, and press Enter.

5. Start the uninstallation

To start the uninstallation, type "y" and press Enter.

To display the list of products again, type "b" and press Enter.

6. Finish the uninstallation

If uninstallation is successful, the message below is displayed.

The installation directory may remain after uninstallation. If it is not required, delete it.

```
Uninstalling...

productName is being uninstalled now.
    100% ##############################


The following products have been uninstalled successfully:
    productName

Uninstallation of "productName" has completed successfully.



Exiting Uninstaller.
```

2.3.2 Uninstallation in Silent Mode

The uninstallation procedure is described below.

1. Stop the program

Before starting the uninstallation, stop the following:

- Mirroring Controller arbitration process

  Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

  Example

```
$ mc_arb stop -M /mcarb_dir/arbiter1
```

2. Change to the superuser

Run the following command to switch to the superuser on the system.

```
$ su -
Password:******
```

3. Run the uninstallation

Execute the following command:

The installation directory may remain after uninstallation. If it is not required, delete it.

Example

```
# /opt/fsepv<x>assistant/setup/suninst.sh
```

In the example above, /opt/fsepv<*x*>assistant is the installation directory, and "<*x*>" indicates the product version.

4. Check the uninstallation results

The uninstaller result is output to the log file.

Log file

In "xyz" below, "*x*" is the product version, "*z*" is the product level, and for this release, "*y*" is 0.

```
/var/log/fsep_SERVER_ASSISTANT_xyz_uninstall.log
```

Return values

The following return values are output:

Return value	Meaning
0	Completed successfully.
13	Processing was interrupted.
15	The resources required for uninstallation do not exist.
19	A process is running.
60	An error occurred in Uninstall (middleware).
62	Uninstall (middleware) was started.
63	Uninstall (middleware) has not been installed, or there are no execution privileges.
99	A system error occurred.
100	The command argument is invalid.
106	The command was not executed with administrator privileges.

Chapter 3 Installation and Uninstallation of the Windows Server Assistant

This chapter explains how to install and uninstall the Windows Server Assistant.

3.1 Operating Environment

This section describes the operating environment required in order to use the Windows Server Assistant.

3.1.1 Required Operating System

One of the following operating systems is required in order to use the Windows Server Assistant:

- Microsoft(R) Windows Server(R) 2008 Standard
- Microsoft(R) Windows Server(R) 2008 Enterprise
- Microsoft(R) Windows Server(R) 2008 Datacenter
- Microsoft(R) Windows Server(R) 2008 Foundation
- Microsoft(R) Windows(R) Web Server 2008
- Microsoft(R) Windows Server(R) 2008 Standard without Hyper-V
- Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V
- Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V
- Microsoft(R) Windows Server(R) 2008 R2 Datacenter
- Microsoft(R) Windows Server(R) 2008 R2 Enterprise
- Microsoft(R) Windows Server(R) 2008 R2 Standard
- Microsoft(R) Windows Server(R) 2008 R2 Foundation
- Microsoft(R) Windows(R) Web Server 2008 R2
- Microsoft(R) Windows Server(R) 2012 Datacenter
- Microsoft(R) Windows Server(R) 2012 Standard
- Microsoft(R) Windows Server(R) 2012 Essentials
- Microsoft(R) Windows Server(R) 2012 Foundation
- Microsoft(R) Windows Server(R) 2012 R2 Datacenter
- Microsoft(R) Windows Server(R) 2012 R2 Standard
- Microsoft(R) Windows Server(R) 2012 R2 Essentials
- Microsoft(R) Windows Server(R) 2012 R2 Foundation
- Microsoft(R) Windows Server(R) 2016 Datacenter
- Microsoft(R) Windows Server(R) 2016 Standard
- Microsoft(R) Windows Server(R) 2016 Essentials
-

Note

- The following features of Windows Server(R) 2016 are not supported:
  - Server Core

  - Nano Server
  - Windows Server Container
- The TCP/IP protocol must be installed.
- One of the following basic software products is required if performing failover that is linked to the cluster software of the operating system:
  - Microsoft(R) Windows Server(R) 2008 Enterprise
  - Microsoft(R) Windows Server(R) 2008 Datacenter
  - Microsoft(R) Windows Server(R) 2008 Enterprise without Hyper-V
  - Microsoft(R) Windows Server(R) 2008 Datacenter without Hyper-V
  - Microsoft(R) Windows Server(R) 2008 R2 Datacenter
  - Microsoft(R) Windows Server(R) 2008 R2 Enterprise
  - Microsoft(R) Windows Server(R) 2012 Datacenter
  - Microsoft(R) Windows Server(R) 2012 Standard
  - Microsoft(R) Windows Server(R) 2012 Essentials
  - Microsoft(R) Windows Server(R) 2012 Foundation
  - Microsoft(R) Windows Server(R) 2012 R2 Datacenter
  - Microsoft(R) Windows Server(R) 2012 R2 Standard
  - Microsoft(R) Windows Server(R) 2012 R2 Essentials
  - Microsoft(R) Windows Server(R) 2012 R2 Foundation
  - Microsoft(R) Windows Server(R) 2016 Datacenter
  - Microsoft(R) Windows Server(R) 2016 Standard
  - Microsoft(R) Windows Server(R) 2016 Essentials

3.1.2 Related Software

There is no software related to FUJITSU Enterprise Postgres.

Note

- The following programs are installed during installation of FUJITSU Enterprise Postgres:
  - Microsoft Visual C++ 2010 Redistributable version 10.0.30319.01
  - Microsoft Visual C++ 2013 Redistributable version 12.0.40649.5

  Do not uninstall the above programs as they are required for running FUJITSU Enterprise Postgres.

The following table lists servers that can be connected to the Windows Server Assistant.

Table 3.1 Connectable servers

OS	Product name
Linux Windows	- FUJITSU Software Enterprise Postgres Standard Edition 10 - FUJITSU Software Enterprise Postgres Advanced Edition 10

3.1.3 Excluded Software

There is no excluded software.

3.1.4 Required Patches

There are no required patches.

3.1.5 Hardware Environment

The following hardware is required in order to use the Windows Server Assistant:

Memory

At least 256 MB of memory is required.

Mandatory hardware

None.

3.1.6 Disk Space Required for Installation

The disk space shown below is required for new installation of the Windows Server Assistant.

Windows Server Assistant installation destination:

162 MB

System folder:

100 MB

3.1.7 Supported System Environment

This section describes the supported system environment.

TCP/IP protocol

FUJITSU Enterprise Postgres supports version 4 and 6 (IPv4 and IPv6) of TCP/IP protocols.

Note

Do not use link-local addresses if TCP/IP protocol version 6 addresses are used.

File system

You can install FUJITSU Enterprise Postgres only if the system folder is an NTFS volume.

3.2 Installation

This section describes how to install the Windows Server Assistant.

Note

- The installation must be performed by a user with administrator privileges (a user ID that belongs to the Administrators group).
- Stop all applications before starting the installation.
- The Windows Installer service must be running.

- If antivirus software is installed, the system may crash, fail to start, or stop responding during installation or when starting after installation. Set the scan exclusions so that the installation directory and the resource allocation directory are not scanned for viruses.
- In either of the following cases, it is necessary to switch to install mode by executing the command shown below before installation. Also, after the installation is completed, execute the command shown below to switch back to execute mode.
  - In Windows Server(R) 2008, the terminal server is installed in application server mode.
  - In Windows Server(R) 2008 R2, Windows Server(R) 2012, Windows Server(R) 2012 R2 or Windows Server(R) 2016, the remote desktop service is installed in application server mode.

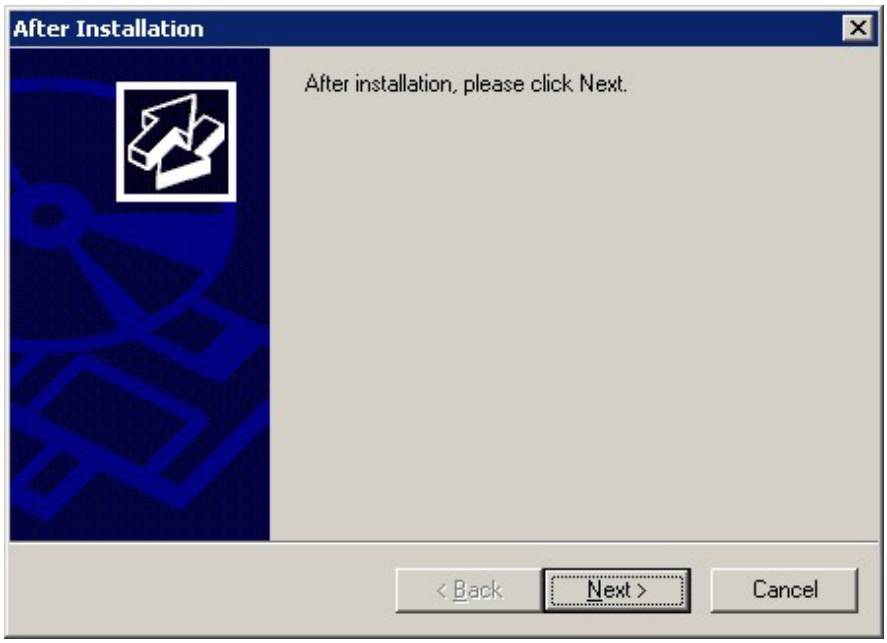
  [Before the installation]

```
CHANGE USER /INSTALL
```

  [After the installation]

```
CHANGE USER /EXECUTE
```

- The following window may be displayed when executing the installation program:



If this window is displayed, perform the following operations:

1. Perform the installation steps until the [InstallShield Wizard Complete] window is displayed.
2. At the window shown above, click [Next].

3. The window shown below is displayed. Click [Finish].

Information

- If a [User Account Control] dialog box is displayed at the start of the installation, click [Yes] to continue processing:

  If [No] is clicked, permission to continue is denied and an [Error] dialog box will be displayed.
  To continue the installation, click [Retry] at the [Error] dialog box. To end the installation, click [Cancel].

- If installation is suspended or processing terminates abnormally, a [Program Compatibility Assistant] dialog box may be displayed. Click [This program installed correctly] and continue operation.

3.2.1 Pre-installation Tasks

This section describes the tasks to be performed before installing the Windows Server Assistant.

Check the disk space

Ensure that there is sufficient disk space to install FUJITSU Enterprise Postgres.

Refer to "3.1.6 Disk Space Required for Installation" for information on disk space requirements.

hosts file settings

Using an editor, add the IP address and server name of the connected server to the \System32\drivers\etc\hosts file in the folder where Windows is installed.

Check the installed product and determine the installation method

Using the operation shown below, start Uninstall (middleware), and check the installed products.

In Windows, click [All Programs] or [All apps], then [Fujitsu], and then [Uninstall (middleware)].

If the Windows Server Assistant is already installed, perform reinstallation.

Remove applied updates

If you perform reinstallation, remove applied updates using the procedure shown below.

Note

If a product is installed without removing applied updates, the following will occur:

- Performing reinstallation

  If an update with the same update and version number is applied, an error informing you that the update has already been applied is displayed.

1. Display the applied updates

   Execute the following command to display the applied updates:

```
C:\>uam showup
```

2. Remove the updates

   Execute the command below to remove the updates. If an update with the same update number was applied more than once, the updates are removed in order, starting from the highest version number.

```
C:\>uam remove -i update-number
```

3.2.2 Installation in Interactive Mode

The installation procedure is described below.

Point

In interactive mode installation, the default values of the installation information are set. The following setting can be changed for a new installation.

- Installation directory

1. Stop the program

If the installation method is the following, the program must be stopped:

- Reinstallation

Before starting the installation, stop the following:

- Mirroring Controller arbitration process

  Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

  Example

```
> mc_arb stop -M D:\mcarb_dir\arbiter1
```

2. Insert the DVD

Insert the Server Assistant program DVD into the DVD drive.

3. Run the installation

The installation menu is displayed. Click [Installation].

4. Select the product to install

The [Installation product] window is displayed.
Select the product to install, and then click [Next].
If a selected product can only be reinstalled, refer to "6. Check the settings".

5. Confirm the contents for installation

The [Confirm installation] window will be displayed.

Click [Next] to start the installation.

To modify the settings, select [Modify], and then click [Next]. Follow the on-screen instructions.

6. Check the settings

The [Confirm installation] window will be displayed. Click [Install] to start the installation.

To modify the settings again, click [Back].

7. Completion of installation

The completion window is displayed. Click [Finish].

3.2.3 Installation in Silent Mode

Installation in silent mode can be performed only when the installation method is one of the following:

- New installation

The installation procedure is described below.

See

Refer to the FUJITSU Enterprise Postgres product website for information on installation in silent mode, such as the installation parameters and error messages.

1. Insert the DVD

Insert the Server Assistant program DVD into the DVD drive.

The [Install Menu] window is displayed. Click [Finish].

2. Create an installation parameters CSV file

Create an installation parameters CSV file that uses the following specification format.

```
sectionName, parameterName, value
sectionName, parameterName, value
     :
```

Information

The template for the installation parameters CSV file is "Z:\sample\sample_windows.csv (Z is the drive on which the DVD is mounted.).

3. Start the command prompt

In Windows, right-click [Command Prompt] and then select [Run as administrator].

4. Run the installation

Execute the following command:

```
Z:\>silent.bat c:\temp\inspara.csv
```

Z: The drive into which the DVD is inserted.

c:\temp\inspara.csv: The installation parameter CSV file name.

If the silent installer ends in an error, a message is output to the log file and return values are returned.

3.3 Uninstallation

This section describes how to uninstall the Windows Server Assistant.

Note

- Before uninstalling the product, close the product program.
- Log in using an account that has administrator privileges and then execute the command, or switch to an account that has administrator privileges and then uninstall the product.

Information

- If a [User Account Control] dialog box such as the following is displayed at the start of the uninstallation, click [Yes] to continue processing:

  If [No] is clicked, permission to continue is denied and an [Error] dialog box will be displayed.
  To continue the uninstallation, click [Retry] in the [Error] dialog box. To end the operation, click [Cancel].

- If uninstallation is suspended or processing terminates abnormally, a dialog box of the Program Compatibility Assistant similar to the one shown below may be displayed. Click [This program uninstalled correctly] and continue operation.

3.3.1 Uninstallation in Interactive Mode

The uninstallation procedure is described below.

Information

If an error occurs while the product is being uninstalled, refer to "Uninstall (middleware) Messages" in the FUJITSU Enterprise Postgres product website, and take the required action.

1. Stop the program

Before starting the uninstallation, stop the following:

Mirroring Controller arbitration process

1. Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

   Example

   ```
   > mc_arb stop -M D:\mcarb_dir\arbiter1
   ```

2. Unregister the Mirroring Controller arbitration process from the Windows service.

   Execute the mc_arb command in unregister mode to unregister the Mirroring Controller arbitration process from the Windows service.

   Example

   ```
   > mc_arb unregister -M D:\mcarb_dir\arbiter1
   ```

3. Delete registrations related to the event log.

   If messages are output to the event log, DLLs are registered in accordance with "Preparatory Tasks for the Output of Error Logs to the Event Log (Windows)" in the Cluster Operation Guide (Database Multiplexing). Delete these registrations so that no unnecessary issues occur.

   - Delete registration for the default event source name

     Example)
     The example below deletes a DLL of a 64-bit product registered under the default event source name. "<*x*>" indicates the product version.

     ```
     > regsvr32 /u "c:\Program Files\Fujitsu\fsepv<x>assistant64\lib\mcarbevent.dll"
     ```

   - Delete registration for other event source names

     DLL registration is performed so that messages output to the event log are output to any event source named by the user.

     Accordingly, it is necessary to delete the DLL registration. Do this for any event source name.

     Example)
     The example below deletes a DLL of a 64-bit product registered under the event source name "Mirroring Controller arbiter1". "<*x*>" indicates the product version.

     ```
     > regsvr32 /u /i:"Mirroring Controller arbiter1" "c:\Program Files\Fujitsu
     \fsepv<x>assistant64\lib\mcarbevent.dll"
     ```

   - If installing multiple versions

     If error logs are set to be output to the event log, use the DLL path name that you took note of previously as explained in "Preparatory Tasks for the Output of Error Logs to the Event Log (Windows)" in the Cluster Operation Guide (Database Multiplexing) to reregister the default event source name.

Note

Ensure that you delete the DLLs before the uninstallation. If you perform the uninstallation without doing so, you may not be able to delete the DLLs at a later time.

2. Start Uninstall (middleware)

In Windows, click [All Programs] or [All apps], then [Fujitsu], and then [Uninstall (middleware)].

3. Select the software

Select the product to be uninstalled from [Software Name], and then click [Remove].

4. Start the uninstallation

Click [Uninstall].

5. Finish the uninstallation

The uninstallation completion window will be displayed. Click [Finish].

The installation folder may remain after uninstallation. If it is not required, delete it.

6. Stop Uninstall (middleware)

Click [Close].

3.3.2 Uninstallation in Silent Mode

The uninstallation procedure is described below.

1. Stop the program

Before starting the uninstallation, stop the following:

Mirroring Controller arbitration process

1. Execute the mc_arb command in stop mode to stop the Mirroring Controller arbitration process.

   Example

   ```
   > mc_arb stop -M D:\mcarb_dir\arbiter1
   ```

2. Unregister the Mirroring Controller arbitration process from the Windows service.

   Execute the mc_arb command in unregister mode to unregister the Mirroring Controller arbitration process from the Windows service.

   Example

   ```
   > mc_arb unregister -M D:\mcarb_dir\arbiter1
   ```

3. Delete registrations related to the event log.

   If messages are output to the event log, DLLs are registered in accordance with "Preparatory Tasks for the Output of Error Logs to the Event Log (Windows)" in the Cluster Operation Guide (Database Multiplexing). Delete these registrations so that no unnecessary issues occur.

   - Delete registration for the default event source name

     Example)
     The example below deletes a DLL of a 64-bit product registered under the default event source name. "<*x*>" indicates the product version.

     ```
     > regsvr32 /u "c:\Program Files\Fujitsu\fsepv<x>assistant64\lib\mcarbevent.dll"
     ```

   - Delete registration for other event source names

     DLL registration is performed so that messages output to the event log are output to any event source named by the user.

     Accordingly, it is necessary to delete the DLL registration. Do this for any event source name.

     Example)
     The example below deletes a DLL of a 64-bit product registered under the event source name "Mirroring Controller arbiter1". "<*x*>" indicates the product version.

     ```
     > regsvr32 /u /i:"Mirroring Controller arbiter1" "c:\Program Files\Fujitsu
     \fsepv<x>assistant64\lib\mcarbevent.dll"
     ```

   - If installing multiple versions

     If error logs are set to be output to the event log, use the DLL path name that you took note of previously as explained in "Preparatory Tasks for the Output of Error Logs to the Event Log (Windows)" in the Cluster Operation Guide (Database Multiplexing) to reregister the default event source name.

Note

Ensure that you delete the DLLs before the uninstallation. If you perform the uninstallation without doing so, you may not be able to delete the DLLs at a later time.

2. Start the command prompt

In Windows, right-click [Command Prompt] and then select [Run as administrator].

3. Run the uninstallation

Execute the following command:

The installation directory may remain after uninstallation. If it is not required, delete it.

Example

```
X:> installFolder\suninst.bat
```

X: Drive on which the product is installed

Note

In Windows Server(R) 2008, and Windows Server(R) 2008 R2, an empty folder may remain in the [Start] menu after the uninstallation - if this happens, then click [Start], point to [All Programs], right-click one of the options below, and then click [Delete]: The notation "*x* SP*z*" indicates the version and level of the FUJITSU Enterprise Postgres Server Assistant.

- FUJITSU Enterprise Postgres Server Assistant (64bit) *x* SP*z*

4. Check the uninstallation results

Uninstaller results will be output to the log file.

Log file

In "xyz" below, "*x*" is the product version, "*z*" is the product level, and for this release, "*y*" is 0.

```
%TEMP%\fsep_SERVER_ASSISTANT_xyz_uninstall.log
```

Return values

The following return values are output:

Return value	Description
0	Uninstallation completed successfully.
64	Uninstallation failed because Uninstall (middleware) is running.
74	Failed to write product information (updating the registry).
79	Failed to read product information (viewing the registry).
144	The command was not executed with administrator privileges.
251	An error occurred when running a system function.
255	An internal inconsistency occurred.

Chapter 4 Setup and Operation of the Mirroring Controller Arbitration Server

See

Refer to "Database Multiplexing Mode" in the Cluster Operation Guide (Database Multiplexing) for information on setting up and operating the Mirroring Controller arbitration server.

Appendix A Estimating Memory Requirements

This appendix explains how to estimate the memory.

A.1 Mirroring Controller Arbitration Server Memory Requirements

This section describes the formula for estimating database multiplexing memory requirements for the arbitration server.

Use the following formula to obtain a rough estimate of memory requirements:

```
Memory usage of the database multiplexing feature for the arbitration server
                                = Peak memory usage of the Mirroring Controller arbitration
processes
                                   + Peak memory usage of the Mirroring Controller commands

Peak memory usage of the Mirroring Controller arbitration processes=100 MB

Peak memory usage of the Mirroring Controller commands=50 MB * Number of commands executed
simultaneously
```

Appendix B Procedure when Modifying the Oracle JRE Installation

This appendix describes the procedure to follow when modifying the Oracle JRE installation.

The Oracle JRE, of which the installation destination is specified in the JAVA_HOME environment variable when installing FUJITSU Enterprise Postgres, is used by the Mirroring Controller arbitration server.

Therefore, when updating or reinstalling Oracle JRE after installing FUJITSU Enterprise Postgres, it is necessary to restart the Mirroring Controller arbitration process, therefore follow the procedure below to modify the Oracle JRE installation:

1. Stop the Mirroring Controller arbitration process.

   Refer to the Cluster Operation Guide (Database Multiplexing) for details.

2. Modify the Oracle JRE installation.

3. Change the installation environment to be used by Mirroring Controller.

   Set the JAVA_HOME environment variable to the installation destination of Oracle JRE 8, and use the mc_update_jre_env command to change the installation environment to be used by the Mirroring Controller arbitration server.
   This procedure must be executed by the superuser.

   Example

   /opt/fsepv<*x*>assistant/bin is the installation directory where the Server Assistant product is installed.

   ```
   $ su -
   Password:******
   # export JAVA_HOME="oracleJre8InstallDir"
   # /opt/fsepv<x>assistant/bin/mc_update_jre_env
   ```

4. Start the Mirroring Controller arbitration process.

   Refer to the Cluster Operation Guide (Database Multiplexing) for details.

Index

[C]

Check the disk space.....5,16
Check the installed product and determine the installation method 5,16

[D]

Disk Space Required for Installation.....5,14

[E]

Estimating Memory Requirements.....24
Excluded Software.....4,14

[F]

Features that can be Installed.....1

[H]

Hardware Environment.....4,14
hosts file settings.....16

[I]

Installation.....14
Installation and Uninstallation of the Linux Server Assistant....3
Installation and Uninstallation of the Windows Server Assistant 12
Installation in Interactive Mode.....1,6,17
Installation in Silent Mode.....2,8,18
Installation Procedure.....1
Installation Types.....1

[M]

Mirroring Controller Arbitration Server Memory Requirements 24

[N]

New Installation.....1

[O]

Operating Environment.....3
Operating environment.....12

[P]

Pre-installation Tasks.....5
Procedure when Modifying the Oracle JRE Installation.....25

[R]

Reinstallation.....1
Related Software.....4,13
Remove applied updates.....6,16
Required Operating System.....3,12
Required Patches.....4,14

[S]

Setup and Operation of the Mirroring Controller Arbitration Server.....23
Supported System Environment.....5,14

[T]

TCP/IP Protocol.....5
TCP/IP protocol.....14

[U]

Uninstallation.....2,9,19
Uninstallation in Interactive Mode.....9,19
Uninstallation in Silent Mode.....10,20