Fujitsu Enterprise Postgres 14 SP1

Installation and Setup Guide
for Server Assistant

Linux

FUJITSU

Preface

Purpose of this document

This document describes how to install and uninstall 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:

- PostgreSQL
- SQL
- Linux
- 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 Linux Server Assistant

Chapter 3 Installation and Uninstallation of the Windows Server Assistant

    Describes how to install and uninstall the Windows Server Assistant

Chapter 4 Setup of the Server Assistant

    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 JRE Installation

    Describes the procedure to follow when modifying the JRE installation.

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```

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Chapter 1 Overview of Installation

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

1.1 Features that can be Installed

The Server Assistant is provided as a Server Assistant package, which is installed on a different server (referred to as the arbitration server) to that of the database server.

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

Platform	Server Assistant
Linux	Y
Windows	Y

Y: Can be installed

Note

Use the Linux Server Assistant feature for scale out operations. The Windows Server Assistant feature is not available in a scale out environment.

1.2 Installation Types

The following installation types are available for FUJITSU Enterprise Postgres:

- New installation

- Reinstallation

- Multi-version installation

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.

1.2.3 Multi-Version Installation

FUJITSU Enterprise Postgres products can be installed on the same server if the product version (indicated by "x" in "x SPz") is different from that of any version of the product that is already installed.

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

- Multi-version installation

1.3.2 Installation in Silent Mode

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

New installations and multi-version 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:

- RHEL7.4 or later minor version

- RHEL8.2 or later minor version

- SLES 12 SP5

- SLES 15 SP3

Information

....

- The following packages are required for operations on RHEL7.

Package name	Remarks
gdb	Required to run FJQSS.
glibc	-
glibc.i686	-
iputils	Required for Mirroring Controller.
libgcc	-
libstdc++	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-
rsync	Required when using Pgpool-II.
sysstat	Required when using FJQSS. Set up the sar command after installation.
unzip	-
xz-libs	-
zlib	-

- The following packages are required for operations on RHEL8.

Package name	Remarks
gdb	Required to run FJQSS.
glibc	-
glibc.i686	-
iputils	Required for Mirroring Controller.

Package name	Remarks
libgcc	-
libstdc++	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-
rsync	Required when using Pgpool-II.
sysstat	Required when using FJQSS. Set up the sar command after installation.
unzip	-
xz-libs	-
zlib	-

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

Package name	Remarks
gdb	Required to run FJQSS.
glibc	-
glibc-32bit	-
iputils	Required for Mirroring Controller.
JRE 8	Required when using the installer or Server Assistant. The following JREs are available: - Oracle JRE Use update 31 or later of the 64-bit version. - OpenJDK Past the Java TCK (Technology Compatibility Kit)
libfreebl3	-
libgcc	-
libltdl7	-
liblzma5	-
libncurses5	-
libstdc++	-
libz1	-
rsync	Required when using Pgpool-II.
sysstat	Required when using FJQSS. Set up the sar command after installation.
unzip	-

- The following packages are required for operations on SLES 15.

Package name	Remarks
gdb	-
glibc	-
glibc-32bit	-
iputils	Required for Mirroring Controller.

Package name	Remarks
JRE 8	Required when using the installer or Server Assistant. The following JREs are available: - Oracle JRE Use update 31 or later of the 64-bit version. - OpenJDK Past the Java TCK (Technology Compatibility Kit)
libfreebl3	-
libgcc	-
libltdl7	-
liblzma5	-
libncurses5	-
libstdc++	-
libz1	-
rsync	Required when using Pgpool-II.
sysstat	Set up the sar command after installation.
unzip	-

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 Advanced Edition 14 or 14 SP1
Windows	FUJITSU Software Enterprise Postgres Advanced Edition 14

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.

Disk space required for installation

RHEL

Directory	Required disk space Unit: MB
/etc	1 + 1 (*1)
/var	1 + 2 (*1) +1 (*2)
/opt	248 (*1) +1 (*2)
serverAssistantInstallDir	360

*1: Uninstall (middleware) must be installed.

*2: Required for the installation of FJQSS.

SLES

Directory	Required disk space Unit: MB
/etc	1 + 1 (*1)
/var	1 + 2 (*1) +1 (*2)
/opt	2 (*1) +1 (*2)
serverAssistantInstallDir	3

*1: Uninstall (middleware) must be installed.

*2: Required for the installation of FJQSS.

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 only)

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

```
#export JAVA_HOME="Jre8InstallDir"
```

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

Executable Users

Installation and uninstallation is performed by one of the following users.

- superuser

  On the system, run the following command to become superuser.

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

- System Administrator

  Check the OS documentation for system administrators.

Note

When you execute a command as a system administrator, there are multiple commands that require superuser privileges.

Check the OS documentation before setting. Specify all in the command field.

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, determine the installation method to use:

- Reinstallation

- Multi-version installation

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
   ```

   ### Note

   If the installation directory/lib is set in the environment variable LD_LIBRARY_PATH for the running user, remove the installation directory/lib from LD_LIBRARY_PATH.

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 or a multi-version 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. 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
```

Here /dev/dvd is the device name for the DVD drive (which may vary depending on your environment), and /media/dvd is the mount point (which may need to be created 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. Run the installation

Execute the following command:

Example

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

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

4. 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 been installed, a window for selecting reinstallation or multi-version installation is displayed for each product. Follow the on-screen instructions to select the installation method.

5. 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.

6. 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.

7. 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 one of the following:

- New installation

- Multi-version 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. 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
```

Here /dev/dvd is the device name for the DVD drive (which may vary depending on your environment), and /media/dvd is the mount point (which may need to be created 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.

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

3. 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. Start Uninstall (middleware)

Execute the following command:

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

3. Select the product

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

4. Start the uninstallation

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

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

5. 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.

💠 See
....

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

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. 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.

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) 2016 Datacenter

- Microsoft(R) Windows Server(R) 2016 Standard

- Microsoft(R) Windows Server(R) 2016 Essentials

- Microsoft(R) Windows Server(R) 2019 Datacenter

- Microsoft(R) Windows Server(R) 2019 Standard

- Microsoft(R) Windows Server(R) 2019 Essentials

- Microsoft(R) Windows Server(R) 2022 Datacenter

- Microsoft(R) Windows Server(R) 2022 Standard

- Microsoft(R) Windows Server(R) 2022 Essentials

Note

- The following features of Windows Server(R) 2016, Windows Server(R) 2019 and Windows Server(R) 2022 are not supported:

    - Server Core

    - Nano Server

    - Windows Server Container

- The TCP/IP protocol must be installed.

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++ 2015-2019 Redistributable version 14.24.28127.4

    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	Software name
Linux	FUJITSU Software Enterprise Postgres Advanced Edition 14 or 14 SP1
Windows	FUJITSU Software Enterprise Postgres Advanced Edition 14

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:

380 MB

System folder:

268 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.

- The remote desktop service is installed in application server mode, 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.

   [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, the [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 the Windows Server Assistant.

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 name of the server to be connected 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, determine the installation method to use:

- Reinstallation

- Multi-version installation

Remove applied updates

If you perform reinstallation as the installation method, 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 or a multi-version installation.

- Installation folder

. . . .

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".

Information
・・・

If the selected product has been installed, a window for selecting reinstallation or multi-version installation is displayed for each product. Follow the on-screen instructions to select the installation method.
・・・

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

- Multi-version 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
     :
```

....

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

....

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

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- 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

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- 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.

🔩 See
. . . .

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

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

Example

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

X: Drive on which the product is installed

Chapter 4 Setup of the Server Assistant

The Server Assistant is a feature that is installed and used on the arbitration server, so its setup is performed as the arbitration server setup.

See

. . . .

Refer to "Setting Up 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 Server Assistant Memory Requirements

This section describes the formula for estimating memory requirements for the Server Assistant.

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

```
Memory usage of the Server Assistant
                          = 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 JRE Installation

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

The JRE, of which the installation destination is specified in the JAVA_HOME environment variable when installing FUJITSU Enterprise Postgres, is used by the Server Assistant.

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

1. Stop the Mirroring Controller arbitration process.

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

2. Modify the JRE installation.

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

   Set the JAVA_HOME environment variable to the installation destination of JRE 8, and use the mc_update_jre_env command to change the installation environment to be used by the Server Assistant.
   This procedure must be executed by the superuser.

   Example

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

   ```
   $ su -
   Password:******
   # export JAVA_HOME="Jre8InstallDir"
   # /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.

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