FUJITSU Enterprise Postgres 9.6

Installation and Setup Guide for Client

Preface

Purpose of This Document

This document describes how to install and set up the "FUJITSU Enterprise Postgres client feature".

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

- Windows

- PostgreSQL

- SQL

- Linux

- PostgreSQL

- SQL

- Oracle Solaris

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 Windows Client

   Describes how to install the FUJITSU Enterprise Postgres client feature (Windows client)

Chapter 3 Installation and Uninstallation of the Linux Client

   Describes how to install the FUJITSU Enterprise Postgres client feature (Linux Client)

Chapter 4 Installation and Uninstallation of the Solaris Client

   Describes how to install the FUJITSU Enterprise Postgres client feature (Solaris Client)

Chapter 5 Setup

   Describes the setup procedures to be performed after installation completes

Appendix A Installation in Silent Mode

   Provides specifications for installation in silent mode

Appendix B Uninstall (middleware)

   Describes the Uninstall (middleware) tool.

Appendix C Uninstall (middleware) Messages

   Describes the messages output by the Uninstall (middleware).

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Chapter 1 Overview of Installation

This chapter provides an overview of FUJITSU Enterprise Postgres installation.

1.1 Features that Can Be Installed

FUJITSU Enterprise Postgres provides features to enable access to the database from a variety of platforms and languages, as the connection environment for the client and the database server.

The FUJITSU Enterprise Postgres client package must be installed on the client system to use these features.

The following table shows the relationship between the platforms and the features provided by client packages.

Platform	features						pgAdmin
	JDBC	ODBC	.NET Data Provider	C language (libpq)	Embedded SQL (ECPG) in C language	Embedded SQL (ECOBPG) in COBOL	
Windows	Y	Y	Y	Y	Y	Y	Y
Linux	Y	Y		Y	Y	Y	
Solaris	Y	Y		Y	Y	Y	

Y: Supported

1.2 Installation Types

The following three 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 client feature 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

Perform multi-version installation to install different versions to the installed program files separately.

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 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 client feature.

Chapter 2 Installation and Uninstallation of the Windows Client

This chapter explains how to install and uninstall the Windows client.

2.1 Operating Environment

This section describes the operating environment required to use the Windows client.

2.1.1 Required Operating System

One of the following operating systems is required to use the Windows client:

- Windows(R) 7 Home Premium

- Windows(R) 7 Professional

- Windows(R) 7 Enterprise

- Windows(R) 7 Ultimate

- Windows(R) 8.1

- Windows(R) 8.1 Pro

- Windows(R) 8.1 Enterprise

- Windows(R) 10 Home

- Windows(R) 10 Education

- Windows(R) 10 Pro

- Windows(R) 10 Enterprise

- 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 Windows Server 2016 Datacenter

- Microsoft Windows Server 2016 Standard

- Microsoft Windows Server 2016 Essentials

2.1.2 Related Software

The following table lists the software compatible (that can operate) with the Windows client.

Before using any of these, confirm that the OS supports the software.

Table 2.1 Related software

No.	Software name	Version
1	Visual Studio	2008 2010 2012 2013 2015
2	.NET Framework	3.5 SP1 or later 4 4.5 4.6
3	C compiler (*1)	-
4	JDK or JRE	Java SE 6 or later
5	NetCOBOL	(*2)
	NetCOBOL for .NET	(*3)

*1: Only operations using the C compiler provided with the operating system are guaranteed.

*2: NetCOBOL is available in the following editions:

- NetCOBOL Base Edition V10.5.0 or later

- NetCOBOL Standard Edition V10.5.0 or later

- NetCOBOL Professional Edition V10.5.0 or later

- NetCOBOL Enterprise Edition V10.5.0 or later

*3: NetCOBOL for .NET is available in the following editions:

- NetCOBOL Standard Edition for .NET V5.0.0 or later

- NetCOBOL Professional Edition for .NET V5.0.0 or later

- NetCOBOL Enterprise Edition for .NET V5.0.0 or later

Note

Either the JDK or JRE included with Interstage Application Server, or the Oracle JDK or JRE can be used. It is recommended that the JDK or JRE included with Interstage Application Server is used.

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

Table 2.2 Connectable servers

OS	Software name
Windows Linux	- FUJITSU Software Enterprise Postgres Advanced Edition 9.5 or later - FUJITSU Software Enterprise Postgres Standard Edition 9.4 or later
Solaris	- FUJITSU Software Enterprise Postgres Standard Edition 9.6 or later

2.1.3 Excluded Software

There is no excluded software.

2.1.4 Hardware Environment

The following hardware is required to use the Windows client.

Memory

At least 256 MB of memory is required.

Mandatory hardware

None.

2.1.5 Disk Space Required for Installation

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

At the Windows (32-bit) client installation destination:

188 MB

At the Windows (64-bit) client installation destination:

187 MB

System folder:

100 MB

2.1.6 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.

2.1.7 Versions of Open-Source Software Used as the Base for FUJITSU Enterprise Postgres Drivers

The following table lists the versions of open-source software used as the base for the various FUJITSU Enterprise Postgres drivers.

Driver	Open-source software version
.NET Data Provider	Npgsql 2.2.7
JDBC	pgjdbc 9.4.1212
ODBC	psqlodbc 09.05.0400
libpq	PostgreSQL 9.6.2

2.2 Installation

This section explains how to install the Windows client.

2.2.1 Pre-installation Tasks

This section describes the operations to be performed before installing the Windows client.

Note that "*x.y* SP*z*" in sample windows indicates the version level of installed products.

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.

📝 Note

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For Windows(R) 7, Windows(R) 8.1, or Windows(R) 10, assign write privileges in advance to the user responsible for editing the hosts file.

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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 client 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

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

   Example

   ```
   C:\Program Files (x86)\Fujitsu\UpdateAdvisor\UpdateAdvisorMW>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.

   Example

   ```
   C:\Program Files (x86)\Fujitsu\UpdateAdvisor\UpdateAdvisorMW>uam remove -i update-
   number
   ```

Confirm service

The Windows Installer service must be running.

2.2.2 Pre-installation Considerations

This section describes points that the user must take into account prior to installation.

- In any of the following cases, the command given below must be executed to switch to installation mode before performing installation. After installation is complete, the next command given below must be executed to switch to execution mode.

    - A terminal server is installed in application server mode on Windows Server 2008

    - A remote desktop service is installed in application server mode on Windows Server 2008 R2, Windows Server 2012 or Windows Server 2012 R2

  Before installation:

  ```
  CHANGE USER /INSTALL
  ```

  After installation:

  ```
  CHANGE USER /EXECUTE
  ```

- The following window may be displayed when the installation program is executed.

If the above window is displayed, follow the procedure below:

1. Perform the steps in the installation procedure until the [InstallShield Wizard Complete] window is displayed.

2. Click [Next] in the [InstallShield Wizard Complete] window.

3. The following window is displayed. Click [Finish].

4. Restart the system.

ℹ️ Information

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- If a [User Account Control] dialog box, such as the one shown below, is displayed when installation or uninstallation starts, click [Yes] to continue the operation.

If [No] is clicked, the [Error] dialog box will be displayed because continuing is not permitted.
Click [Retry] in the displayed [Error] dialog box to proceed with installation or uninstallation. To end operations, click [Cancel].

- If installation or uninstallation is suspended or processing terminates abnormally, a dialog box of the program compatibility assistant similar to the one below may be displayed.
  If this happens, click [This program installed correctly] or [This program uninstalled correctly] and continue operation.

2.2.3 Installation in Interactive Mode

The installation procedure is described below.

Note that "*x.y* SP*z*" in sample windows indicates the version level of products to install.

1. Stop applications and the client program

If the installation method is one of the following, the applications and the client program must be stopped:

- Reinstallation

Before starting the installation, stop the following:

- Applications that use the product

- pgAdmin

2. Insert the DVD

Insert the client program DVD in the DVD drive.

3. Run the installation

The installation menu is displayed. Click [Installation].

4. Select the product to install

Select the product to install, and then click [Next].
If a selected product can only be reinstalled, refer to "7. Check the settings".

📖 Information
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If multi-version installation is possible, the [Select Installation Method] window is displayed for each selected product. Select "Multi-version installation" and click [Next].

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5. Confirm the contents for installation

The [Confirm installation] window will be displayed.

If the settings are correct, click [Next] to start installation. Proceed to "8. Completion of installation".

To modify the settings, select [Modify] and click [Next].

6. Select the installation destination

If the installation method is one of the following, the [Select Destination Path] window is displayed for each product:

- New installation

- Multi-version installation

Select the installation destination, and then click [Next].

7. Check the settings

The [Confirm installation] window will be displayed.

If the settings are correct, click [Install] to start installation.

To modify the settings again, click [Back].

8. Completion of installation

The completion window is displayed. Click [Finish].

Note

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If subsequently installing .NET Framework 3.5 SP1 or later, or .NET Framework 4.0 or later

If you intend to subsequently install .NET Framework 3.5 or .NET Framework 4.0 or later, install .NET Framework and then run the pgx_NpgsqlRegister.exe command to set up Fujitsu Npgsql .NET Data Provider.

The pgx_NpgsqlRegister.exe command is installed in *fujitsuEnterprisePostgresClientFeatureInstallationFolder*\DOTNET \bin.

Refer to "2.4 Registering .NET Data Provider" for details.

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2.2.4 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.

1. Insert the DVD

Insert the client program DVD in the DVD drive.

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

2. Create an installation parameters CSV file

Consider the server type or features that will be required for system operations, and then create an installation parameters CSV file that uses the following specification format.

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

Refer to "Appendix A Installation in Silent Mode" for information on section names, parameter names, and values that can be specified.

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 on which the DVD is mounted.

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. Refer to "Appendix A Installation in Silent Mode" for details.

2.3 Uninstallation

This section describes the procedure for uninstalling the Windows client.

Note

- Before uninstalling the product, close the product program and all applications that are using it.

- 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.

2.3.1 Uninstallation in Interactive Mode

The uninstallation procedure is described below.

Note that "*x.y* SP*z*" in the following sample window indicates the version level of products to uninstall.

Information

If an error occurs while the product is being uninstalled, refer to "Appendix C Uninstall (middleware) Messages" and take the required action.

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

- pgAdmin

2. Start the Uninstall (middleware) tool

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 is displayed. Click [Finish].

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

6. Stop the Uninstall (middleware) tool

Click [Close].

2.3.2 Uninstallation in Silent Mode

The uninstallation procedure is described below.

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

- pgAdmin

2. Start the command prompt

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

3. Start the uninstaller

Execute the command below.

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

Example

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

X: Drive where the product is installed

Note

On Windows(R) 7, 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 "$x.y$ SPz" indicates the version and level of the FUJITSU Enterprise Postgres client feature.

- FUJITSU Enterprise Postgres Client (32bit) $x.y$ SPz

- FUJITSU Enterprise Postgres Client (64bit) $x.y$ SPz

4. Check the uninstallation results

The uninstaller result is output to the log file.

Log file

xyz is the number part when the version is $x.y$ SPz.

64-bit product:

```
Path name: %TEMP%\fsep_CLIENT64_0xyz_uninstall.log
```

32-bit product:

```
Path name: %TEMP%\fsep_CLIENT32_0xyz_uninstall.log
```

Return values

The following return values are returned:

Return values	Meaning
0	Uninstallation completed successfully.
64	Uninstallation failed because Uninstall (middleware) is running.
74	Failed to write product information (updating the registry).

Return values	Meaning
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.

2.4 Registering .NET Data Provider

This section explains how to register the .NET Data Provider feature using a command.

The command is installed in *fujitsuEnterprisePostgresClientFeatureInstallationFolder*\DOTNET\bin, when the FUJITSU Enterprise Postgres client feature is installed.

Name

pgx_NpgsqlRegister -- Register the .NET Data Provider GAC

Overview

```
pgx_NpgsqlRegister [option...]
```

Description

Execute this command to register the .NET Data Provider GAC in the following cases:

- To install .NET Framework 3.5 SP1, or .NET Framework 4.0 or later, after installing the Windows client

- To apply a .NET Data Provider update using the FUJITSU Enterprise Postgres update patch.

- If the installation of the Windows client returns an error because the registration of .NET Data Provider has not completed

Options

/x86

Specify this option to perform the setup on the 32-bit product.

/x64

Specify this option to perform the setup on the 64-bit product.

Diagnostics

Return value	Explanation
0	Completed successfully.
1	.NET Data Provider that will run on NET Framework 3.5 SP1 was registered normally. To run it on .NET Framework 4.0 or later, install the desired version of .NET Framework, and then execute the command again.
2	.NET Data Provider that will run on .NET Framework 4.0 or later was registered normally. To run it on .NET Framework 3.5 SP1, install .NET Framework 3.5 SP1, and then execute the command again.
105	The logged user does not have execute permission to this folder.
201	The command was not executed with administrator privileges.
202	The specified option is invalid.
203	The Windows client is not installed.

Return value	Explanation
204	.NET Framework 3.5 SP1, or .NET Framework 4.0 or later, is not installed. Install the missing software, and then execute the command again.
401	Failed to set the machine.config file. Ensure that the machine.config file exists.
402	
403	
404	

Comments

Execute this command with administrator privileges.

Examples

To perform the setup on the 32-bit product

```
> pgx_NpgsqlRegister.exe /x86
```

To perform the setup on the 64-bit product

```
> pgx_NpgsqlRegister.exe /x64
```

Chapter 3 Installation and Uninstallation of the Linux Client

This chapter explains how to install and uninstall the Linux client.

3.1 Operating Environment

This section describes the operating environment required to use the Linux client.

3.1.1 Required Operating System

One of the following operating systems is required to use the Linux client:

- RHEL6(Intel64) (*1)

- RHEL6(x86) (*1)

- RHEL7 (*2)

    *1: 6.5 or later
    *2: 7.2 or later

Information

Select the x86_64 architecture package when installing the 64-bit product.

Select the i386 to i686 architecture packages when installing the 32-bit product.

- The following packages are required for operations on RHEL6 (x86).

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
libtool-ltdl	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-
unixODBC	Required when using ODBC drivers
unzip	-
xz-libs	-
zlib	-

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

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
libtool-ltdl	-
ncurses-libs	-

Package name	Remarks
nss-softokn-freebl	-
redhat-lsb	-
unixODBC	Required when using ODBC drivers
unzip	-
xz-libs	-
zlib	-

- The following packages are required for operations on RHEL7.

Package name	Remarks
glibc	-
libgcc	-
libstdc++	-
libtool-ltdl	-
ncurses-libs	-
nss-softokn-freebl	-
redhat-lsb	-
unixODBC	Required when using ODBC drivers
unzip	-
xz-libs	-
zlib	-

3.1.2 Related Software

The following table lists the software required to use the Linux client.

Table 3.1 Related software

No.	Software name	Package name	Version
1	C compiler (*1)	gcc Other related packages	-
2	JDK or JRE	-	Java SE 6 or later
3	NetCOBOL	-	(*2)

*1: Only operations using the C compiler provided with the operating system are guaranteed.

*2: NetCOBOL is available in the following editions:

(RHEL7)

- NetCOBOL Base Edition V11.1.0 or later

- NetCOBOL Standard Edition V11.1.0 or later

- NetCOBOL Enterprise Edition V11.1.0 or later

(RHEL6)

- NetCOBOL Base Edition V7.3L10 or later

- NetCOBOL Standard Edition V7.3L10 or later

- NetCOBOL Enterprise Edition V7.3L10 or later

📖 Note
. . . .

Either the JDK or JRE included with Interstage Application Server, or the Oracle JDK or JRE can be used. It is recommended that the JDK or JRE included with Interstage Application Server is used.
. . . .

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

Table 3.2 Connectable servers

OS	Software name
Windows Linux	- FUJITSU Software Enterprise Postgres Advanced Edition 9.5 or later - FUJITSU Software Enterprise Postgres Standard Edition 9.4 or later
Solaris	- FUJITSU Software Enterprise Postgres Standard Edition 9.6 or later

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 to use the Linux client.

Memory

At least 70 MB of memory is required.

Mandatory hardware

None.

3.1.6 Disk Space Required for Installation

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

Table 3.3 Disk space required for installation

Directory	Required disk space Unit: MB
/etc	1 + 1 (*1)
/var	1 + 4 (*1)
/opt	85 (*1)
Installation destination of the client (32-bit)	80
Installation destination of the client (64-bit)	83

*1: Uninstall (middleware) must be installed.

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**

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

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3.1.8 Versions of Open-Source Software Used as the Base for FUJITSU Enterprise Postgres Drivers

The following table lists the versions of open-source software used as the base for the various FUJITSU Enterprise Postgres drivers.

Driver	Open-source software version
JDBC	pgjdbc 9.4.1212
ODBC	psqlodbc 09.05.0400
libpq	PostgreSQL 9.6.2

3.2 Installation

This section explains how to install the Linux client.

3.2.1 Pre-installation Tasks

Check the system environment for the following before the Linux client is installed.

Check the disk capacity

Check if sufficient free disk space is available for installing the Linux client.

Refer to "Table 3.3 Disk space required for installation" for information on disk space requirements.

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

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. FUJITSU Enterprise Postgres Client(64bit)  x.y SPz   (*1)
2. FUJITSU Enterprise Postgres Client(32bit)  x.y SPz   (*1)

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

```
Exiting Uninstaller.
```

*1: The notation "*x.y* SP*z*" indicates the version and level of the FUJITSU Enterprise Postgres client feature.

If the Linux client 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.

  Perform the reinstallation after removing the update.
. . . .

1. Display the applied updates

   Execute the following command to display the applied updates:

   Example

   ```
   # /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.

   Example

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

3.2.2 Installation in Interactive Mode

Install according to the following procedure:

The notation "*x.y* SP*z*" displayed in the window example of each procedure indicates the version and level of the FUJITSU Enterprise Postgres client feature, and similarly, "*<xy>*" in paths indicates the product version and level.

📝 Note
. . . .

The following characters can be used as input values:

Alphanumeric characters, hyphens and forward slashes
. . . .

1. Stop applications and the client program

If the installation method is one of the following, the applications and the client program must be stopped:

- Reinstallation

Before starting the installation, stop the following:

- Applications that use the product

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 client program DVD in 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 as shown below.
Type the number for the product to be installed, or "all", and press Enter.

```
The following products can be installed:
1: FUJITSU Enterprise Postgres Client (32bit) x.y SPz
2: FUJITSU Enterprise Postgres Client (64bit) x.y SPz

Select the product to be installed.
To select multiple products, separate using commas (,). (Example: 1,2)
[number,all,q](The default value is all): all

Selected product
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz

Do you want to install the above product?
y: Proceed to the next step
n: Select the product again
q: Quit without installing
[y,n,q](The default value is y): y
```

Information

- To execute a 32-bit application in a 64-bit environment, FUJITSU Enterprise Postgres Client (32bit) is required.

- The window below is displayed for each product that that was selected but has already been installed.

  To perform a reinstallation, type the number for the product and press Enter.

```
Select the method to install FUJITSU Enterprise Postgres Client (32bit) x.y SPz.
If performing a reinstallation, select the number of the product to be reinstalled.

1: FUJITSU Enterprise Postgres Client (32bit) x.y SPz        (*1)
q: Quit without installing
[number,q]:
```

  *1: Output if the installed product can undergo reinstallation.

  To perform a multi-version installation, type "m" and press Enter.

```
Select the method to install FUJITSU Enterprise Postgres Client (32bit) x.y SPz.
Select m for multi-version installation.

m: Multi-version installation                (*1)
q: Quit without installing
[m,q]:
```

  *1: Output if the installed product can undergo multi-version installation.

6. Check the settings

The window for checking the installation information is displayed as shown below.
If there is no problem with the settings, type "y" and press Enter to start the installation (refer to "9. Display the installation status").
To change the settings, type "c" and press Enter.

```
Product to be installed
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    New installation
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    New installation

Installation directory information
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    /opt/fsepv<xy>client32
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    /opt/fsepv<xy>client64

Start installation using the above information?
y: Start the installation
c: Change the information            (*1)
q: Quit without installing
[y,c,q](The default value is y): c    (*1)
```

*1: This option is not displayed if there is no information that can be modified.

If the user types "c", then the window mentioned in the next step is displayed.

7. Enter the installation directory

If the installation method is one of the following, the window below is displayed for each product:

- New installation

- Multi-version installation

Enter the directory and press Enter.

```
FUJITSU Enterprise Postgres Client (32bit) x.y SPz : Specify the installation directory.
[directory name,q](The default value is /opt/fsepv<xy>client32): /opt/fsepcl32
```

8. Check the changed settings

The changed settings are displayed as shown below.
If there is no problem with the settings, type "y" and press Enter.
To change the settings again, enter "c" and press Enter.

```
Product to be installed
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    New installation
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    New installation

Installation directory information
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    /opt/fsepcl32
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    /opt/fsepcl64

Start installation using the above information?
y: Start the installation
c: Change the information
q: Quit without installing
[y,c,q](The default value is y): y
```

9. Display the installation status

The installation completion status is displayed as shown below:

```
Starting installation.

FUJITSU Enterprise Postgres Client (32bit) x.y SPz Installation

Installation is complete.

FUJITSU Enterprise Postgres Client (64bit) x.y SPz Installation

Installation is complete.
```

10. Finish the installation

Upon completion, a message is displayed showing the status.
If installation was successful, a message like the one shown below 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.
. . . .

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.

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 client program DVD in 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

Consider the features that will be required for system operations, and then create an installation parameters CSV file that uses the following specification format.

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

Refer to "Appendix A Installation in Silent Mode" for information on the installation parameters CSV file.

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. Refer to "Appendix A Installation in Silent Mode" for details.

3.3 Uninstallation

This section describes the procedure for uninstalling the Linux client.

Note

Before uninstalling the product, close the product program and all applications that are using it.

3.3.1 Uninstallation in Interactive Mode

Uninstall according to the following procedure:

The notation "$x.y$ SPz" displayed in the window example of each procedure indicates the version and level of the FUJITSU Enterprise Postgres client feature.

Information

If an error occurs while the product is being uninstalled, refer to "Appendix C Uninstall (middleware) Messages" and take the required action.

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

2. Change to the superuser

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

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

3. Start the 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.

```
Loading Uninstaller...


Currently installed products
1. FUJITSU Enterprise Postgres Client(64bit)  x.y SPz
2. FUJITSU Enterprise Postgres Client(32bit)  x.y SPz

Type [number] to select the software you want to uninstall.
[number,q]
=>1
```

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.

```
FUJITSU Enterprise Postgres Client(64bit)
    Description: FUJITSU Enterprise Postgres Client(64bit)
    Version: x.y SPz
    Manufacturer: Fujitsu Limited.
    Install directory: /opt/fsepcl64
```

```
   Date of install: 2015-6-2


Starting the uninstall of the software. Are you sure you want to continue?
[y,b,q]
=>y
```

6. Finish the uninstallation

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

```
Uninstalling...

FUJITSU Enterprise Postgres Client(64bit) is being uninstalled now.
    100% ############################


The following products have been uninstalled successfully:
    FUJITSU Enterprise Postgres Client(64bit)

Uninstallation of "FUJITSU Enterprise Postgres Client (64bit) x.y SPz" has completed
successfully.


Exiting Uninstaller.
```

3.3.2 Uninstallation in Silent Mode

Uninstall according to the following procedure:

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

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<xy>client64/setup/suninst.sh
```

In the example above, /opt/fsepv<xy>client64 is the installation directory, and "<xy>" indicates the product version and level.

4. Check the uninstallation results

The uninstaller result is output to the log file.

Log file

xyz is the number part when the product version level is *x.y* SP*z*.

64-bit products

```
Path name:/var/log/fsep_CLIENT64_0xyz_uninstall.log
```

32-bit products

```
Path name:/var/log/fsep_CLIENT32_0xyz_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 has occurred.
100	The command argument is invalid.
106	The command was not executed with administrator privileges.

Chapter 4 Installation and Uninstallation of the Solaris Client

This chapter explains how to install and uninstall the Solaris client.

4.1 Operating Environment

This section describes the operating environment required to use the Solaris client.

4.1.1 Required Operating System

One of the following operating systems is required to use the Solaris client:

- Solaris 10

- Solaris 11

4.1.2 Related Software

The following table lists the software required to use the Solaris client.

Table 4.1 Related software

No.	Software name	Version
1	Sun WorkShop Compiler C (*1)	4.2 or later
2	JDK or JRE	Java SE 6 or later
3	NetCOBOL	(*2)

*1: "Sun WorkShop Compiler C" is a component provided with the following products:

- Oracle Solaris Studio 12.2 or later

- Sun Studio 12

- Sun Studio 11

- Sun Studio 10

- Sun Studio 9

- Sun Studio 8

*2: NetCOBOL is available in the following editions:

- NetCOBOL Base Edition V10.5.0 or later

- NetCOBOL Standard Edition V10.5.0 or later

- NetCOBOL Professional Edition V10.5.0 or later

- NetCOBOL Enterprise Edition V10.5.0 or later

Note

Either the JDK or JRE included with Interstage Application Server, or the Oracle JDK or JRE can be used. It is recommended that the JDK or JRE included with Interstage Application Server is used.

The following table lists servers that can be connected to the Solaris client.

Table 4.2 Connectable servers

OS	Software name
Windows Linux	- FUJITSU Software Enterprise Postgres Advanced Edition 9.5 or later - FUJITSU Software Enterprise Postgres Standard Edition 9.4 or later
Solaris	- FUJITSU Software Enterprise Postgres Standard Edition 9.6 or later

4.1.3 Excluded Software

There is no excluded software.

4.1.4 Required Patches

There are no required patches.

4.1.5 Hardware Environment

The following hardware is required to use the Solaris client.

Memory

At least 70 MB of memory is required.

Mandatory hardware

None.

4.1.6 Disk Space Required for Installation

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

Table 4.3 Disk space required for installation

Directory	Required disk space Unit: MB
/etc	1 + 1 (*1)
/var	1 + 4 (*1)
/opt	100 (*1)
Installation destination of the client (32-bit)	79
Installation destination of the client (64-bit)	88

*1: Uninstall (middleware) must be installed.

4.1.7 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.

. . . .

4.1.8 Versions of Open-Source Software Used as the Base for FUJITSU Enterprise Postgres Drivers

The following table lists the versions of open-source software used as the base for the various FUJITSU Enterprise Postgres drivers.

Driver	Open-source software version
JDBC	pgjdbc 9.4.1212
ODBC	psqlodbc 09.05.0400
libpq	PostgreSQL 9.6.2

4.2 Installation

This section explains how to install the Solaris client.

4.2.1 Pre-installation Tasks

Check the system environment for the following before the Solaris client is installed.

Check the disk capacity

Check if sufficient free disk space is available for installing the Solaris client.

Refer to "4.1.6 Disk Space Required for Installation" for information on disk space requirements.

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

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. FUJITSU Enterprise Postgres Client(64bit)  x.y SPz   (*1)
2. FUJITSU Enterprise Postgres Client(32bit)  x.y SPz   (*1)

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



Exiting Uninstaller.
```

*1: The notation "$x.y$ SPz" indicates the version and level of the FUJITSU Enterprise Postgres client feature.

If the Solaris client 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.

  Perform the reinstallation after removing the update.

. . . .

1. Display the applied updates

   Execute the following command to display the applied updates:

   Example

   ```
   # /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.

   Example

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

Notes on installing in a non-global zone

Note the following when installing Solaris client in a non-global zone of Solaris 10 or Solaris 11.

- Set the non-global zone where the installation will take place as a whole root zone. When creating a non-global zone, do not create inherit-pkg-dir.
  The password of the root user will not be created after the non-global zone is created. Set the zone environment by logging in to the non-global zone using "zlogin -C".

- Assign one or more logical network instances from the global zone.

- Set the privileges for accessing the DVD drive in a non-global zone.

📑 **See**

. . . .

Refer to the relevant Solaris manual for information on how to set up a zone.

. . . .

4.2.2 Installation in Interactive Mode

Install according to the following procedure:

The notation "*x.y* SPz" displayed in the window example of each procedure indicates the version and level of the FUJITSU Enterprise Postgres client feature, and similarly, "*<xy>*" in paths indicates the product version and level.

📑 **Note**

. . . .

The following characters can be used as input values:

Alphanumeric characters, hyphens and forward slashes

. . . .

1. Stop applications and the client program

If the installation method is one of the following, the applications and the client program must be stopped:

- Reinstallation

Before starting the installation, stop the following:

- Applications that use the product

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 client program DVD in the DVD drive, and then execute the following command:

Example

```
# /usr/sbin/mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /dvd/dvd0
```

/dev/dsk/c0t6d0s2 is the DVD drive device, and /dvd/dvd0 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 /dvd/dvd0
# ./install.sh
```

In the example above, /dvd/dvd0 is the DVD mount point.

5. Select the product to install

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

```
The following products can be installed:
1: FUJITSU Enterprise Postgres Client (32bit) x.y SPz
2: FUJITSU Enterprise Postgres Client (64bit) x.y SPz

Select the product to be installed.
To select multiple products, separate using commas (,). (Example: 1,2)
[number,all,q](The default value is all): all

Selected product
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz

Do you want to install the above product?
y: Proceed to the next step
```

```
n: Select the product again
q: Quit without installing
[y,n,q](The default value is y): y
```

Information

・・・

- To execute a 32-bit application in a 64-bit environment, FUJITSU Enterprise Postgres Client (32bit) is required.

- The window below is displayed for each product that that was selected but has already been installed.

  To perform a reinstallation, type the number for the product and press Enter.

```
Select the method to install FUJITSU Enterprise Postgres Client (32bit) x.y SPz.
If performing a reinstallation, select the number of the product to be reinstalled.

1: FUJITSU Enterprise Postgres Client (32bit) x.y SPz       (*1)
q: Quit without installing
[number,q]:
```

  *1: Output if the installed product can undergo reinstallation.

  To perform a multi-version installation, type "m" and press Enter.

```
Select the method to install FUJITSU Enterprise Postgres Client (32bit) x.y SPz.
Select m for multi-version installation.

m: Multi-version installation                 (*1)
q: Quit without installing
[m,q]:
```

  *1: Output if the installed product can undergo multi-version installation.

・・・

6. Check the settings

The window for checking the installation information is displayed as shown below.
If there is no problem with the settings, type "y" and press Enter to start the installation (refer to "9. Display the installation status").
To change the settings, type "c" and press Enter.

```
Product to be installed
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    New installation
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    New installation

Installation directory information
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    /opt/fsepv<xy>client32
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    /opt/fsepv<xy>client64

Start installation using the above information?
y: Start the installation
c: Change the information             (*1)
q: Quit without installing
[y,c,q](The default value is y): c    (*1)
```

*1: This option is not displayed if there is no information that can be modified.

If the user types "c", then the window mentioned in the next step is displayed.

7. Enter the installation directory

If the installation method is one of the following, the window below is displayed for each product:

- New installation

- Multi-version installation

Enter the directory and press Enter.

```
FUJITSU Enterprise Postgres Client (32bit) x.y SPz : Specify the installation directory.
[directory name,q](The default value is /opt/fsepv<xy>client32): /opt/fsepcl32
```

8. Check the changed settings

The changed settings are displayed as shown below.
If there is no problem with the settings, type "y" and press Enter.
To change the settings again, enter "c" and press Enter.

```
Product to be installed
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    New installation
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    New installation

Installation directory information
  FUJITSU Enterprise Postgres Client (32bit) x.y SPz
    /opt/fsepcl32
  FUJITSU Enterprise Postgres Client (64bit) x.y SPz
    /opt/fsepcl64

Start installation using the above information?
y: Start the installation
c: Change the information
q: Quit without installing
[y,c,q](The default value is y): y
```

9. Display the installation status

The installation completion status is displayed as shown below:

```
Starting installation.

FUJITSU Enterprise Postgres Client (32bit) x.y SPz Installation

Installation is complete.

FUJITSU Enterprise Postgres Client (64bit) x.y SPz Installation

Installation is complete.
```

10. Finish the installation

Upon completion, a message is displayed showing the status.
If installation was successful, a message like the one shown below 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.

. . . .

4.2.3 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.

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 client program DVD in the DVD drive, and then execute the following command:

Example

```
# /usr/sbin/mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /dvd/dvd0
```

/dev/dsk/c0t6d0s2 is the DVD drive device, and /dvd/dvd0 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

Consider the features that will be required for system operations, and then create an installation parameters CSV file that uses the following specification format.

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

Refer to "Appendix A Installation in Silent Mode" for information on the installation parameters CSV file.

Information

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

4. Run the installation

Execute the following command:

Example

```
# cd /dvd/dvd0
# ./silent.sh /home/work/inspara.csv
```

In the example above, /dvd/dvd0 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. Refer to "Appendix A Installation in Silent Mode" for details.

4.3 Uninstallation

This section describes the procedure for uninstalling the Solaris client.

Note

Before uninstalling the product, close the product program and all applications that are using it.

4.3.1 Uninstallation in Interactive Mode

Uninstall according to the following procedure:

The notation "$x.y$ SPz" displayed in the window example of each procedure indicates the version and level of the FUJITSU Enterprise Postgres client feature.

Information

If an error occurs while the product is being uninstalled, refer to "Appendix C Uninstall (middleware) Messages" and take the required action.

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

2. Change to the superuser

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

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

3. Start the 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.

```
Loading Uninstaller...


Currently installed products
1. FUJITSU Enterprise Postgres Client(64bit)  x.y SPz
2. FUJITSU Enterprise Postgres Client(32bit)  x.y SPz

Type [number] to select the software you want to uninstall.
[number,q]
=>1
```

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.

```
FUJITSU Enterprise Postgres Client(64bit)
    Description: FUJITSU Enterprise Postgres Client(64bit)
    Version: x.y SPz
    Manufacturer: Fujitsu Limited.
    Install directory: /opt/fsepcl64
    Date of install: 2015-6-2


Starting the uninstall of the software. Are you sure you want to continue?
[y,b,q]
=>y
```

6. Finish the uninstallation

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

```
Uninstalling...

FUJITSU Enterprise Postgres Client(64bit) is being uninstalled now.
    100% ############################


The following products have been uninstalled successfully:
    FUJITSU Enterprise Postgres Client(64bit)

Uninstallation of "FUJITSU Enterprise Postgres Client (64bit) x.y SPz" has completed
successfully.


Exiting Uninstaller.
```

4.3.2 Uninstallation in Silent Mode

Uninstall according to the following procedure:

1. Stop applications and the client program

Before starting the uninstallation, stop the following:

- Applications that use the product

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<xy>client64/setup/suninst.sh
```

In the example above, /opt/fsepv<xy>client64 is the installation directory, and "<xy>" indicates the product version and level.

4. Check the uninstallation results

The uninstaller result is output to the log file.

Log file

xyz is the number part when the product version level is x.y SPz.

64-bit products

```
Path name:/var/log/fsep_CLIENT64_0xyz_uninstall.log
```

32-bit products

```
Path name:/var/log/fsep_CLIENT32_0xyz_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 has occurred.
100	The command argument is invalid.
106	The command was not executed with administrator privileges.

Chapter 5 Setup

This chapter describes the setup procedures to be performed after installation completes.

5.1 Configuring Environment Variables

Configure the following environment variables when using client commands.

5.1.1 Windows

PATH environment variable

> Add "*installationFolder*\bin".

PGLOCALEDIR environment variable

> Add "*installationFolder*\share\locale".

Examples of environment variable configurations are shown below.

Example

```
> SET PATH=%ProgramFiles%\Fujitsu\fsepclient32\bin;%PATH%
> SET PGLOCALEDIR=%ProgramFiles%\Fujitsu\fsepclient32\share\locale
```

5.1.2 Linux and Solaris

PATH environment variable

> Add "*installationDirectory*/bin".

MANPATH environment variable

> Add "*installationDirectory*/share/man".

PGLOCALEDIR environment variable

> Add "*installationDirectory*/share/locale".

LD_LIBRARY_PATH environment variable

> Add "*installationDirectory*/lib".

32-bit products

LD_LIBRARY_PATH environment variable

> Add "*installationDirectory*/lib".

64-bit products

LD_LIBRARY_PATH_64 environment variable

> Add "*installationDirectory*/lib".

Examples of environment variable configurations are shown below.

Example

This example is specific to 64-bit Linux.

Note that "*<xy>*" indicates the product version and level.

```
$ PATH=/opt/fsepv<xy>client64/bin:$PATH ; export PATH
$ MANPATH=/opt/fsepv<xy>client64/share/man:$MANPATH ; export MANPATH
```

```
$ PGLOCALEDIR=/opt/fsepv<xy>client64/share/locale ; export PGLOCALEDIR
$ LD_LIBRARY_PATH=/opt/fsepv<xy>client64/lib:$LD_LIBRARY_PATH ; export LD_LIBRARY_PATH
```

```
$ PGLOCALEDIR=/opt/fsepv<xy>client64/share/locale ; export PGLOCALEDIR
$ LD_LIBRARY_PATH=/opt/fsepv<xy>client64/lib:$LD_LIBRARY_PATH ; export LD_LIBRARY_PATH
```

Appendix A Installation in Silent Mode

This appendix provides specifications for installation in silent mode.

Note that "*<xy>*" in paths indicates the product version and level.

A.1 Specification Format

The installation parameters CSV file, which is specified as the argument for the silent installer, has three columns per line in CSV format.

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

Enter the following settings in respective columns.

Item	Settings	Optional
sectionName	Specify the section name. There are two types of section names: "installInfo": Set the product information. "parameters": Set the parameter information for this product.	Mandatory
parameterName	Specify the parameter name. Each section has a valid parameter.	Mandatory
value	Specify the value.	Optional

Note

- Blank lines cannot be included.

- Section names and parameter names cannot be omitted.

- Undefined parameters cannot be set in lines where the section name is "installInfo". Also, note that the same parameter cannot be specified multiple times.

- Specify at least one line with the section name "parameters".

- Undefined parameters specified in lines within the "parameters" section will be ignored during execution. Note that when the same parameter is specified multiple times, the settings in the lowest line will be valid.

- The setting values for lines where the section name is "installInfo" may contain alphanumeric characters (at least one), and symbols, excluding double quotation marks (") and commas (,).

- Do not use the following halfwidth characters in the setting values for lines with the section name "parameters".

  W Windows: # $ & ' = ^ ~ | @ ` [ ] ; < > / tab

  S L Linux and Solaris: " # $ & = ' ( ) ^ ~ \ | @ ` [ ] { } ; : < > tab

Information

The templates for the installation parameters CSV file are as follows:

  W - Windows client: Z:\sample\sample_windows.csv (where Z is the drive on which the DVD is mounted.)

  L - Linux client: *mountPoint*/sample/sample_linux.csv

  S - Solaris client: *mountPoint*/sample/sample_solaris.csv

A.2 List of Parameters

This section describes the parameters that can be set for each section.

installInfo section

The parameters that can be set in the installInfo section are shown below.

No.	Type	Parameter		Description
1	Software ID	**Parameter name**	Name	Mandatory. Specify the software identifier. For this software, specify the following value: "FUJITSU Enterprise Postgres"
		Value/Range	String	
		Default value	None	

Information

....

- In addition to "Name", the following parameters can be used in the "installInfo" section.

    - softwareName

    - OS

    - Version

    - Edition

- Note that specifying a parameter name other than "Name" and the parameters listed above will result in an error.

- The values set in these parameters do not affect silent installation.

....

Example

```
installInfo,Name,FUJITSU Enterprise Postgres
```

parameters section

The parameters that can be set in the parameters section are shown below.

No.	Parameter		Description
1	**Parameter name**	Client32InstallExecute	Optional. Specify whether to run the installation of the client (32-bit). Y: Install N: Do not install
	Value/Range	Y or N	
	Default value	Y	
2	**Parameter name**	Client32InstallPath	Optional. Specify the installation destination of the client (32-bit). **W** A root folder (such as C:\) cannot be specified. **S** **L** A root directory cannot be specified.
	Value/Range	Path name	
	Default value	**W** Windows(32-bit) %ProgramFiles%\Fujitsu\fsepclientx32 Windows(64-bit) %ProgramFiles(x86)%\Fujitsu\fsepclient32	

No.	Parameter		Description
		S **L** Linux or Solaris /opt/fsepv<*xy*>client32	
3	**Parameter name**	Client64InstallExecute	Optional. Specify whether to run the installation of the client (64-bit). Y: Install N: Do not install This parameter is ignored on 32-bit operating systems.
	Value/Range	Y or N	
	Default value	Y	
4	**Parameter name**	Client64InstallPath	Optional. Specify the installation destination of the client (64-bit). This parameter is ignored on 32-bit operating systems. **W** A root folder (such as C:\) cannot be specified. **S** **L** A root directory cannot be specified.
	Value/Range	Path name	
	Default value	**W** Windows(64-bit) %ProgramFiles%\Fujitsu\fsepclient64 **S** **L** Linux or Solaris /opt/fsepv<*xy*>client64	

Example

```
parameters,Client32InstallExecute,Y
parameters,Client32InstallPath,
parameters,Client64InstallExecute,Y
parameters,Client64InstallPath,
```

A.3 Messages and Return Values

Messages are output when errors are detected during parametric analysis.

If an error occurs during installation of the product, a message is output to the log.

Log file

xyz is the number part when the product version level is *x.y* SP*z*.

W

Windows

```
Path name: %TEMP%\fsep_CLIENT_media_0xyz.log
```

S **L**

Linux or Solaris

```
Path name: /var/log/fsep_CLIENT_media_0xyz_install.log
```

Messages and return values

CSV file errors

The following messages are output if errors are detected while parsing CSV files.

Return value	Message	Explanation and actions
4	CSV file error:code = 1, Invalid CSV error.	There is an error in the specification format of the CSV file.

Return value	Message	Explanation and actions
4	CSV file error:code = 2, installInfo/Name is required.	There is an error in the specification format of the CSV file.
4	CSV file error:code = 3, Invalid installInfo key.	There is an error in the installInfo specification. Or the section name is invalid.
4	CSV file error:code = 4, Duplicated installInfo key.	The same parameter has been defined more than once in installInfo.
4	CSV file error:code = 5, Invalid character length.	No setting value has been specified, or the specified string is too long.
4	CSV file error:code = 6, Invalid character format or encoding.	An invalid character has been specified in the installation parameters CSV file.
4	CSV file error:code = 8, Parameter is required.	The "parameters" section has no lines.
20	The input file does not exist.	The input file does not exist.
21	The value of @1@ is incorrect,the value is @2@.	The value is incorrect. Specify the correct value. The parameter name is displayed in @1@. The specified value is displayed in @2@.
22	The value same at @1@ and @2@ is specified.	The same value is specified in different parameters. Specify different values. The parameter name is displayed in @1@ and @2@.
23	The @2@ of @1@ already exists.	The path already exists. Specify a different path. The parameter name is displayed in @1@. The specified value is displayed in @2@.
24	Drive @2@ of @1@ does not exist.	The drive does not exist. Specify an existing drive. The parameter name is displayed in @1@. The specified value is displayed in @2@.
28	There is no product for installation.	There is no product to be installed. Specify "Y" for either or both of the following parameters: Client32InstallExecute Client64InstallExecute
29	**W** Windows USAGE : silent.bat inputfile **S** **L** Linux or Solaris USAGE : silent.sh inputfile	The argument specified in the command is incorrect. Specify the correct argument.

Product installer errors

The following return values are returned when errors occur while the product installer is running.

W

Windows

Return value	Explanation
0	Completed successfully.
1	Failed to register .NET Data Provider. (*)

Return value	Explanation
2	Failed to register the ODBC drivers.
14	The resources required for installation do not exist on the media.
32	The same version of the same product is already installed.
60	An error occurred in Uninstall (middleware).
64	Failed to install because Uninstall (middleware) is running.
65	Failed to install Uninstall (middleware).
74	Failed to write to the registry.
79	Failed to load the registry.
86	A newer version of the product is already installed.
88	The Japanese version and overseas version of the product cannot be installed on the same machine.
129	The operating system is not supported.
142	Insufficient disk space at the installation destination.
144	The command was not executed with administrator privileges.
220	Failed to create a Folder in the installation Folder.
221	Failed to create files in the installation Folder.
251	An error occurred when running a system function.
255	An internal inconsistency occurred.

*1: Refer to "2.4 Registering .NET Data Provider", and then register .NET Data Provider.

S L Linux or Solaris

Return value	Explanation
0	Completed successfully.
11	A product that cannot coexist with FUJITSU Enterprise Postgres has been installed.
12	The operating system is not supported.
13	Processing was interrupted.
14	The resources required for installation do not exist on the media.
15	The resources required for installation do not exist.
16	Unable to change the permission because the directory does not exist.
17	Failed to install because a required package is missing.
19	A process is running.
30	Failed to copy the installation resources.
31	Upgrade installation cannot be performed.
32	The same version of the same product is already installed.
60	An error occurred in Uninstall (middleware).
61	Failed to install Uninstall (middleware).
62	Uninstall (middleware) was started.

Return value	Explanation
63	The uninstallation cannot be performed either because Uninstall (middleware) does not exist or because there are no execution privileges.
99	A system error occurred.
106	The command was not executed with administrator privileges.

A.4 CSV File Format

The format of CSV files is based on RFC4180, with the following specifications.

Records

- Separate each record with a "CRLF" newline (operation is not guaranteed with only a "CR" or "LF" newline).

- Specify a newline at the end of a file.

- Separate each field within a record with a halfwidth comma ",".

Format	Record		
aaa,bbb,ccc	aaa	bbb	ccc

- If several commas are entered in succession, or if a comma precedes a newline, the data following the comma is regarded as empty.

Format	Record		
aaa,,ccc	aaa		ccc
aaa,bbb,	aaa	bbb	

- You cannot specify a header.

Format	Record		
	field1	field2	field 3
aaa,bbb,ccc	aaa	bbb	ccc

Double quotation marks

- Enclose fields that contain newlines, double quotation marks, or commas in double quotation marks.

Format	Record		
"aaa","bb b","ccc"	aaa	bb b	ccc
"aaa","bb,b","ccc"	aaa	bb,b	ccc

- If a double quotation mark is used in a field enclosed with double quotation marks, the first double quotation mark is regarded as an escape character.

Format	Record		
"aaa","bb""b","ccc"	aaa	bb"b	ccc

📖 Note

An error occurs in the following cases:

- Each space, tab, or whitespace character is recognized as one character, and will cause a parameter error.

- A space is entered before or after a field enclosed with double quotation marks.

```
"zzz ", "yyy ", " xxx "
```

- The number of fields differs between records.

```
aaa,bbb
aaa,bbb,ccc
aaa,bbb,ccc,ddd
```

- Fields enclosed with double quotation marks and fields not enclosed with double quotation marks are both used.

```
aaa,"bbb",ccc
"xxx",yyy,"zzz"
```

- The double quotation escape characters are not positioned correctly.

```
"aaa","bb"""b","ccc"
```

- Double quotation marks enclose the entire field.

```
"aaa,bbb,ccc"
```

Appendix B Uninstall (middleware)

B.1 Features that are Installed

W **[Windows]**

Feature	Package name	Component name	Remarks	Selectively installed?
Common tool	FJSVcir	CIRuntime Application	Controls the installation and uninstallation of Fujitsu middleware products. Manages the installation information of Fujitsu middleware products and includes a management function for viewing installation information and launching the uninstaller of each product. ("Uninstall (middleware)")	No

S **L** **[Linux/Solaris]**

Feature	Package name	Component name	Remarks	Selectively installed?
Common tool	FJSVcir	CIRuntime Application	Controls the installation and uninstallation of Fujitsu middleware products. Manages the installation information of Fujitsu middleware products and includes a management function for viewing installation information and launching the uninstaller of each product. ("Uninstall (middleware)")	No

B.2 Notes

B.2.1 Notes on the Uninstall (middleware) Tool

"Uninstall (middleware)" is a tool used by Fujitsu middleware products. It performs information management for middleware products, and also, launching the uninstaller for removing these products from the installed systems.

🔲 Note

- To uninstall FUJITSU Enterprise Postgres, uninstall from "Uninstall (middleware)".

This tool manages information about other Fujitsu middleware products as well as FUJITSU Enterprise Postgres. For this reason, do not uninstall it unless absolutely necessary. If you have accidentally uninstalled this tool, re-install it as described below.

[Windows]

1. Log on to the machine to be installed using a user name belonging to the Administrators group, or switch to an account with administrator privileges.

2. Insert the server program DVD in the drive device.

3. Execute the installation command.

```
z:\CIR\Windows\cirinst.exe
```

In the example above, z is the drive on which the DVD is mounted.

[Linux/Solaris]

1. Log in as a superuser to the installation target machine, or switch to a user with administrative privileges.

2. Insert the product media in the drive.

3. Execute the installation command.

   [Linux]

   ```
   # /media/dvd/CIR/Linux/cirinst.sh
   ```

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

[Solaris]

```
# /dvd/dvd0/CIR/Solaris/cirinst.sh
```

In the example above, /dvd/dvd0 is the DVD mount point.

- If you uninstall this tool as described below.

   1. Check that there are no Fujitsu middleware products installed in the system.
      You can check this by using "Uninstall (middleware)", which is launched by the command below.

      [Windows]

      Select [All Programs] > [Fujitsu] > [Uninstall (middleware)]

      [Linux/Solaris]

      ```
      /opt/FJSVcir/cir/bin/cimanager.sh -c
      ```

      -c : CUI

   2. If no Fujitsu middleware products have been installed, then issue the command below.

      [Windows]

      ```
      %SystemDrive%\FujitsuF4CR\bin\cirremove.exe
      ```

      [Linux/Solaris]

      ```
      # /opt/FJSVcir/bin/cirremove.sh
      ```

   3. At the uninstallation confirmation prompt, enter "y".

      ```
      This software is a common tool of Fujitsu products.Are you sure you want to remove
      it?[y/n]:
      ```

      Uninstallation will start.

Appendix C Uninstall (middleware) Messages

C.1 Messages output by FJSVcir

FSP_FJSVCIR_CIRINST: ERROR: 101: CIRINST101: Administrator privilege is required.

Description

The user does not have administrator privileges.

Action method

Login with administrator privileges and run the command again.

FSP_FJSVCIR_CIRINST: ERROR: 102: CIRINST102: Failed to create *%s*

Parameters

%s: Directory name

Description

Failed to create a directory during the installation.

Action method

Creating the directory might have failed for some reason. Run the installer again, or run cirinst command again. If the problem persists, check the system log.

FSP_FJSVCIR_CIRINST: ERROR: 103: CIRINST103: It is required at least *%d* MB

Parameters

%d: Disk spaces

Description

Insufficient disk space.

Action method

Confirm that the system has sufficient disk spaces.

[Windows] FSP_FJSVCIR_CIRINST: ERROR: 104: CIRINST104: Failed to copy CIR files.

[Linux][Solaris] FSP_FJSVCIR_CIRINST: ERROR: 104: CIRINST104: Failed to copy CIR installer files.

Description

Failed to copy files required for the installation.

Action method

Copying the files failed for some reason. Run the installer again, or run cirinst command again. If the problem persists, check the system log.

FSP_FJSVCIR_CIRINST: ERROR: 105: CIRINST105: Failed to copy JRE.

Description

Failed to copy JRE required for installation.

Action method

Copying the files failed for some reason. Run the installer again, or run cirinst command again. If the problem persists, check the system log.

FSP_FJSVCIR_CIRINST: ERROR: 106: CIRINST106: Failed to copy CIR

Description

Failed to copy files during the installation.

Action method

Copying the files failed for some reason. Run the installer again, or run cirinst command again. If the problem persists, check the system log.

FSP_FJSVCIR_CIRINST: ERROR: 107: CIRINST107: invalid option.

Description

An invalid option was specified.

Action method

Specify a valid option. [-c]: CUI

FSP_FJSVCIR_CIRINST: ERROR: 108: CIRINST108: JRE which should be deployed is not bundled.

Description

An appropriate JRE for this system is not bundled.

Action method

Confirm that the product supports the platform.

FSP_FJSVCIR_CIRINST: ERROR: 109: CIRINST109: Unsupported OS.

Description

Unsupported operating system.

Action method

Confirm that the product supports the operating system.

L   ### FSP_FJSVCIR_CIRINST: ERROR: 185: CIRINST185: lsb_release was not found. Please install the package below.
- redhat-lsb

Description

lsb_release command was not found.

Action method

Add redhat-lsb package and then execute install again.

L   ### FSP_FJSVCIR_CIRINST: ERROR: 186: CIRINST186: lsb_release was not found.

Description

lsb_release command was not found.

Action method

Add the relevant package and then execute install again.

FSP_FJSVCIR_CIRINST: ERROR: 201: CIRINST201: Administrator privilege is required.

Description

The user does not have administrator privileges.

Action method

Login with administrator privileges and run the command again.

FSP_FJSVCIR_CIRINST: ERROR: 203: CIRINST203: Failed to delete files.

Description

Failed to delete FJSVcir files.

Action method

Deleting the files failed for some reason. Run cirremove command again. If the problem persists, check the system log.

FSP_FJSVCIR_CIRINST: ERROR: 205: CIRINST205: invalid option.

Description

Invalid option is specified.

Action method

No option is supported. Retry without any options.

Specified installation parameters file was not found.

Description

Specified installation parameters file was not found. (silent mode)

Action method

Specify the installation parameters file.

It failed to install.See log for details

Description

An error occurred during install. (silent mode)

Action method

Collect the files stored in the following directories.

[UNIX]

/var/opt/FJSVcir/cir/logs/cirlog0.log.0

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\logs\cirlog0.log.0

Parameters are invalid.Please specifiy valid parameters.

Description

Invalid option is specified. (silent mode)

Action method

Specify a valid option.

Internal data is broken.

Description

Internal data used by this product is corrupt.

Action method

Collect the files stored in the following directories and contact Fujitsu technical support:

/var/opt/FJSVCIR/cir/

/etc/opt/FJSVCIR/cir/CIR.properties

%ProgramData%\Fujitsu\FujitsuF4CR\cir\

C.2 Messages output by Uninstall (middleware)

It has already been running in another process.

Description

An attempt was made to start Uninstall (middleware) more than once. Alternatively, an attempt was made to start Uninstall (middleware) while the installer was starting.

Action method

End any Uninstall (middleware) that have already started. Alternatively, start Uninstall (middleware) after the installer has ended.

Specified option is invalid.

Description

An invalid option was specified.

Action method

Specify valid options and run the command again.

Please enter a valid option.

Description

An invalid character was entered. Valid characters are y, n, or item numbers.

Action method

Enter a valid character.

Failed to uninstall of the following software packages:

Description

Failed to uninstall the software listed in this message.

Action method

Confirm the information shown after this message and take the appropriate action.

Unable to uninstall the software as it is referred from more than one software.

Description

Failed to uninstall the software because it is used by other software.

Action method

No specific action is required.

Unable to uninstall the software as the software is mandatory.

Description

Failed to uninstall the software because it is required by another program.

Action method

No specific action is required.

Internal data is broken.

Description

Internal data used by this product is corrupt.

Action method

Collect the files stored in the following directories and contact Fujitsu technical support:

[UNIX]

/var/opt/FJSVCIR/cir/

/etc/opt/FJSVCIR/cir/CIR.properties

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\

Unable to uninstall the software you were about to uninstall as the existence of the software is a precondition for the operation of another software.

Description

Failed to uninstall the software because it is required by another program.

Action method

No specific action is required.

The program terminated abnormally.

Description

The program has terminated abnormally.

Action method

Collect the files stored in the following directories and contact Fujitsu technical support:

[UNIX]

/var/opt/FJSVCIR/cir/

/etc/opt/FJSVCIR/cir/CIR.properties

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\

An unexpected error has occurred during uninstall.

Description

An error occurred during uninstall.

Action method

Collect the files stored in the following directories and contact Fujitsu technical support:

/var/opt/FJSVCIR/cir/

/etc/opt/FJSVCIR/cir/CIR.properties

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\

It failed to uninstall.See log for details.

Description

An error occurred during uninstall. (silent mode)

Action method

Collect the files stored in the following directories.

[UNIX]

/var/opt/FJSVcir/cir/logs/cirlog0.log.0

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\logs\cirlog0.log.0

Failed to initialize the temp directory.

Description

Can not start Uninstall (middleware) because failed to initialize the temp directory.

Action method

Run Uninstall (middleware) again. If the problem persists, check whether other processes have accessed the files in the following directories.

[UNIX]

/var/opt/FJSVcir/cir/temp/meta_db

[Windows]

%ProgramData%\Fujitsu\FujitsuF4CR\cir\temp\meta_db

[Notice]Need to restart for uninstall completion.

Description

Uninstallation was completed. (silent mode)

Action method

Restart the system.

Index