FUJITSU Software
Interstage Application Server

Installation Guide (Server Package)

Windows

Preface

Purpose of This Document

This document describes the software required for installing Interstage, and the resources, installation method and uninstallation method of Interstage.

This manual is written for users who will install the server package of Interstage. For details on installing the client package, refer to the Installation Guide which is included with the client package.

Interstage can be operated securely using the Interstage Java EE Admin Console/Interstage Management Console. For details on a model that provides secure operation, refer to "Appendix B Secure Operation from the Interstage Java EE Admin Console/Interstage Management Console".

Who Should Read this Document?

It is assumed that readers of this document have some knowledge of the following:

- Basic knowledge of the OS used

Structure of This Document

The structure of this manual is as follows:

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Contents

Chapter 1 Installation Scenarios

This section explains the types of Interstage Application Server "Server Package" that can be installed.

The following types of Interstage Application Server Package can be installed.

- Application Server

  Select this to install the Application Server functions of Interstage Application Server.

- Admin Server (Enterprise Edition only)

  Select this to install the Admin Server functions of Interstage Application Server.

- Web Package

  Select this to install the Web Package functions of Interstage Application Server.

  Install the Web Package to set up a web server environment on the business front-end system.

The Application Server function types that can be installed are as follows:

- Typical installation

  Select this to use the standard functions following a simple installation.

- Custom installation

  Select this to install the minimum set of functions, or to use a version of JDK/JRE other than JDK 6.

When the installation is executed, the environment that is required for using Interstage is set up automatically. After the installation is complete, the Interstage Java EE Admin Console/Interstage Management Console can be used for simple operation.

1.1 Functions that can be Used

1.1.1 Enterprise Edition: Application Server

If the Typical installation is selected, the functions shown in "This cannot be changed" and "Selected" in the table below are installed. If the Custom installation is selected, it is possible to select the functions that are installed.

Function		Default status
Application Server basic functions		This cannot be changed
Java EE (*1)		Selected
Multilanguage Service	Multilanguage Service Basic Function	Not selected
	Database Linkage Service	Not selected
	EventService	Not selected
	MessageQueueDirector	Not selected
	Portable-ORB	Not selected
	CORBA Service Development Tool	Not selected
Web Server (Interstage HTTP Server)		Not selected
Web Server (Interstage HTTP Server 2.2)		Not selected
Secure Communication Service		Selected
Single Sign-on	Interstage Single Sign-on Business server (*2)	Not selected

Function		Default status
	Interstage Single Sign-on Authentication server	Not selected
	Interstage Single Sign-on Repository server	Not selected
Information Management Service	Interstage Directory Service	Selected
	Interstage data store	Selected
Interstage Management Console		Not selected
Web Server Connector (for Interstage HTTP Server)		Not selected
J2EE Compatible (*3)		Not selected
Web Server Connector (for Interstage HTTP Server 2.2)		Not selected
Framework		Not selected
Java EE 6 (*4)		Not selected
Java SE	6	Selected
	7	Not selected
Other compatible functions	Sample Application	Not selected

*1 This is a GlassFish v2.1-based implementation of Java EE 5. Do not install the "Java EE" function when using it as a Managed Server.

*2 This is a server that provides access control for web-based services. When using Interstage HTTP Server 2.2 on the web server, select the Interstage HTTP Server 2.2 functions.

When using JAAS API, also select the following functions to match the execution environment.

[When using Java EE]

Java EE or Web Server Connector (for Interstage HTTP Server)

[When using Java EE6]

Java EE6 or Web Server Connector (for Interstage HTTP Server 2.2)

[When using J2EE]

J2EE Compatible

*3 Install the "J2EE Compatible" function when using it as a Managed Server or Combined Server.

*4 This is a GlassFish v3.1-based implementation of Java EE 6. Additionally, do not install the "Java EE 6" function on a server that is managed by this product.

1.1.2 Enterprise Edition: Admin Server

In Enterprise Edition, the following functions are installed if Admin Server is selected.

Function		Default status
Application Server basic functions		This cannot be changed
Web Server (Interstage HTTP Server)		This cannot be changed
Secure Communication Service		This cannot be changed
Information Management Service	Interstage Directory Service	This cannot be changed
	Interstage data store	This cannot be changed
Interstage Management Console		This cannot be changed
Java SE	6	This cannot be changed

Note

The following functions are implicitly installed.

- Interstage JMX Service

- Interstage JServlet (OperationManagement)

1.1.3 Standard-J Edition: Application Server

If the Typical installation is selected, the functions shown in "This cannot be changed" and "Selected" in the table below are installed. If the Custom installation is selected, it is possible to select the functions that are installed.

Function		Default status
Application Server basic functions		This cannot be changed
Java EE (*1)		Selected
Web Server (Interstage HTTP Server)		Not selected
Web Server (Interstage HTTP Server 2.2)		Not selected
Secure Communication Service		Selected
Single Sign-on	Interstage Single Sign-on Business server (*2)	Not selected
	Interstage Single Sign-on Authentication server	Not selected
	Interstage Single Sign-on Repository server	Not selected
Information Management Service	Interstage Directory Service	Selected
	Interstage data store	Selected
Interstage Management Console		Not selected
Web Server Connector (for Interstage HTTP Server)		Not selected
J2EE Compatible		Not selected
Web Server Connector (for Interstage HTTP Server 2.2)		Not selected
Framework		Not selected
Java EE 6 (*3)		Not selected
Java SE	6	Selected
	7	Not selected
Other compatible functions	Sample Application	Not selected

*1 This is a GlassFish v2.1-based implementation of Java EE 5.

*2 This is a server that provides access control for web-based services. When using Interstage HTTP Server 2.2 on the web server, select the Interstage HTTP Server 2.2 functions.

When using JAAS API, also select the following functions to match the execution environment.

[When using Java EE]

Java EE or Web Server Connector (for Interstage HTTP Server)

[When using Java EE6]

Java EE6 or Web Server Connector (for Interstage HTTP Server 2.2)

[When using J2EE]

J2EE Compatible

*3 This is a GlassFish v3.1-based implementation of Java EE 6.

1.1.4 Web Package

The functions shown in the table below can be used if "Web Package" is selected as the server type.

Function		Default status
Application Server basic functions		This cannot be changed
Web Server (Interstage HTTP Server)		This cannot be changed
Web Server (Interstage HTTP Server 2.2)		This cannot be changed
J2EE Common Resource		This cannot be changed
Web Server Connector (for Interstage HTTP Server)		This cannot be changed
Web Server Connector (for Interstage HTTP Server 2.2)		This cannot be changed
Web Server Monitor (Enterprise Edition only)		This cannot be changed
Secure Communication Service		This cannot be changed
Interstage Management Console		This cannot be changed
Software Development Kit		This cannot be changed
Java SE	6	This cannot be changed

Note

The following functions are implicitly installed.

- J2EE Compatible

- Interstage JMX Service

- Interstage JServlet (Operation Management)

Chapter 2 System Requirements

This section explains the system requirements.

2.1 Operating System

- Microsoft® Windows Server® 2003, Standard Edition (*1)

- Microsoft® Windows Server® 2003, Enterprise Edition (*1)

- Microsoft® Windows Server® 2003, Standard x64 Edition (*1)

- Microsoft® Windows Server® 2003, Enterprise x64 Edition (*1)

- Microsoft® Windows Server® 2003 R2, Standard Edition (*1)

- Microsoft® Windows Server® 2003 R2, Enterprise Edition (*1)

- Microsoft® Windows Server® 2003 R2, Standard x64 Edition (*1)

- Microsoft® Windows Server® 2003 R2, Enterprise x64 Edition (*1)

- Microsoft® Windows Server® 2008 Standard (*1), (*3)

- Microsoft® Windows Server® 2008 Enterprise (*1), (*3)

- Microsoft® Windows Server® 2008 Datacenter (*1), (*3), (*4)

- Microsoft® Windows Server® 2008 Standard without Hyper-V (*1), (*3)

- Microsoft® Windows Server® 2008 Enterprise without Hyper-V (*1), (*3)

- Microsoft® Windows Server® 2008 Datacenter without Hyper-V (*1), (*3)

- Microsoft® Windows Server® 2008 Foundation (*1), (*3)

- Microsoft® Windows Server® 2008 R2 Standard (*2), (*3)

- Microsoft® Windows Server® 2008 R2 Enterprise (*2), (*3)

- Microsoft® Windows Server® 2008 R2 Datacenter (*2), (*3), (*4)

- Microsoft® Windows Server® 2008 R2 Foundation (*2), (*3)

- Microsoft® Windows® Small Business Server 2011 Essentials

- Microsoft® Windows Server® 2012 Datacenter (*3)

- Microsoft® Windows Server® 2012 Standard (*3)

- Microsoft® Windows Server® 2012 Foundation (*3)

*1 Apply Service Pack 2 or higher.

*2 Apply Service Pack 1 or higher.

*3 Not supported if Server Core is selected as the installation type.

*4 Version x64 only

2.2 Required Packages

To use this product, the packages shown below are required.

When this product is installed in an environment to which each of the packages has not been deployed, it is installed using the installer for this product.

Item	Package	Remarks

1	Microsoft Visual C++ 2005 SP1 Redistributable Package (x86)	Requires Windows Installer 3.0 or later.
2	FJSVcir (CIRuntime Application)	This is "Uninstall (middleware)", the tool which is common to all Fujitsu middleware products. It is used to manage the information about Fujitsu middleware products that are installed, and to remove these products.
3	FJQSS	This is the information collection tool which is common to all Fujitsu middleware products.

2.3 Software Compatibility Issues

Do not install Application Server on the same system as any of the software/packages in the following table.

Number	Product Name	Version
1	Interstage Application Server	V8.0 or later (*1) (*2)
2	Interstage Studio	V8.0 or later (*2)
3	Interstage Service Integrator	V9.0.0 or later (*2)
4	Interstage Job Workload Server	V9.3 or later
5	Interstage Application Development Cycle Manager	V10 or later
6	Interstage Shunsaku Data Manager	V7
7	Interstage XML Business Activity Recorder	V10 or later
8	Interstage List Works	V6 or later
9	Systemwalker CentricMGR (Operation Management Client)	V10.0 or later (*3), (*4)
10	Systemwalker CentricMGR (Operation Management Server)	V10.0 or later (*4)
11	Systemwalker Centric Manager (Operation Management Client)	V11.0 or later (*3), (*4)
12	Systemwalker Centric Manager (Operation Management Server)	V11.0 or later (*4)
13	Systemwalker Centric Manager (*5)	V13.4.0 or later
14	Systemwalker Software Configuration Manager	V14 or later
15	Systemwalker IT Change Manager	V14 or later
16	Systemwalker Service Catalog Manager	V14 or later
17	Systemwalker Service Quality Coordinator Enterprise Edition (*6)	V13.4 or later
18	ServerView Resource Orchestrator Cloud Edition	V3 or later

*1 This cannot be installed more than once in the same operating system, regardless of the version level or edition.

*2 If the OS is Windows Server x64 Editions, the various products that support operations in 64-bit mode cannot be installed in the same system either.

*3 This cannot be installed on a machine on which "Multilanguage Service" or "J2EE Compatible" is installed.

*4 This software cannot be installed with the Web Package function.

*5 Systemwalker Centric Manager cannot be installed on a machine on which the Single Sign-on server is installed.

*6 This cannot be installed on a machine on which the Systemwalker Service Quality Coordinator Enterprise Edition Dashboard/Browser Agent is installed.

2.4 Disk space

Drive/Folder	Application Server	XML Processor
Installation folder	1220 MB (*1)	
System drive	200 MB	45 MB
Temporary folder (Environment variable TEMP)	50 MB	

*1 To install JDK/JRE on a different drive to the installation folder, the following disk space is required.

- JDK 6: 195MB

- JRE 6: 110MB

- JDK 7: 200MB

- JRE 7: 120MB

Note

- The disk space requirements shown above have been calculated assuming a target drive using 32 KB per cluster. Approximately 1.5 times the stated disk space is required for a target drive using 64 KB per cluster.

- To install FJSVcir (CIRuntime Application), approximately 95MB of disk space will be required for the system drive.

- To install FJQSS, approximately 8MB of disk space will be required for the system drive.

2.5 Execution Environment

For details on the software required for application development and execution, refer to the "Supported Software" chapter of the Product Notes.

Chapter 3 Important Notes on Installation

This section contains notes about the following topics:

3.1 Notes when Windows Defender is Enabled

If the Interstage server functionality is installed when Windows Defender is enabled, the following messages may be output in the Windows Defender history and event viewer system log from Windows Defender.

- Windows Defender history message

  This program has potentially unwanted behavior.

- Event viewer system log

  Windows Defender Real-Time Protection agent has detected changes. Microsoft recommends you analyze the software that made these changes for potential risks. You can use information about how these programs operate to choose whether to allow them to run or remove them from your computer. Allow changes only if you trust the program or the software publisher. Windows Defender cannot undo changes that you allow.

These are used by the Windows Defender Real-Time Protection agent to monitor the registration of services software, so the server functionality can be used as they are without any problems.

The Windows Defender icon may also be displayed in the notice area of the taskbar during the installation. In this case, open Windows Defender, and click [Apply Actions] in the "Review changes to your computer settings" window.

3.2 When Windows(R) 8.3 Format (Short Name) Path Generation is Disabled

Interstage must be installed in an environment in which path generation for 8.3 format (short name) filenames is enabled. When Interstage is installed in a Windows(R) environment in which path generation for 8.3 format (short name) filenames is disabled, it may not always be possible to start the Interstage service.

Use the procedure shown below to check whether path generation for 8.3 format (short name) filenames is enabled. If it is disabled, change the settings so that it is enabled, then install Interstage.

3.2.1 Using the Registry to Check

1. Check the following registry setting:

   Registry name

   ```
   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsDisable8dot3NameCreation
   ```

   Values that are set:

   0: Enabled

   1: Disabled

2. If "1 (Disabled)" has been set for the registry in step 1, change the setting to "0 (Enabled)", then restart the machine.

3. Install Interstage.

3.2.2 Using the System Standard Command to Check

1. Execute the following command to confirm the value that is displayed in "disable8dot3":

   Command execution example

   ```
   C:\> fsutil behavior query disable8dot3
   disable8dot3 = 0
   ```

   disable8dot3 values:

   0: Enabled

   1: Disabled

2. If "1 (Disabled)" has been set for disable8dot3 in step 1, change the setting to "0 (Enabled)" then restart the machine.

   ```
   C:\> fsutil behavior set disable8dot3 0
   ```

3. Install Interstage.

3.3 Uninstall (middleware)

When this product is installed, "Uninstall (middleware)" will also be installed.

"Uninstall (middleware)" is the tool which is common to all Fujitsu middleware products. It is used to manage the information about Fujitsu middleware products that are installed, and to start the product uninstaller.

Note

- To uninstall Interstage, perform the uninstallation from "Uninstall (middleware)".

- This tool also manages information about Fujitsu middleware products other than Interstage. This tool must not be uninstalled, except when absolutely necessary.

If "Uninstall (middleware)" was uninstalled by mistake, reinstall it according to the following procedure:

1. Either log onto the installation target machine with a user name that belongs to the Administrators group, or switch to an account that has administrator privileges.

2. Insert the product DVD into the DVD-ROM drive.

3. Execute the installation command.

   ```
   <Installation DVD-ROM>\ISTAGE\cir\cirinst.exe
   ```

To uninstall this tool, perform the following procedure:

1. Start "Uninstall (middleware)" and check whether other Fujitsu middleware products still remain. The start method is as follows:

2. From the Start menu, execute [All Programs] > [Fujitsu] > [Uninstall (middleware)].

3. If there are no Fujitsu middleware products installed, execute the following uninstallation command:

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

4. The following message is displayed. Type **y** to continue. After a few seconds, the uninstallation is complete.

   ```
   This software is a common tool of Fujitsu products.
   ```

```
Are you sure you want to remove it?[y/n]:
```

5. After the uninstallation completes, the following folders (and their files) will still remain, therefore you must manually delete them.

```
%SystemDrive%\FujitsuF4CR
%ProgramData%\Fujitsu\FujitsuF4CR (other than Windows Server(R) 2003)
%ALLUSERSPROFILE%\Application Data\Fujitsu\FujitsuF4CR (for Windows Server(R) 2003)
```

Chapter 4 Installation Procedure

Installation of Interstage Application Server "Server Package" must be performed by a user who belongs to the Administrators group.

Use the typical installation option to install the standard components and functionality of the Interstage Application Server "Server Package", and use the custom installation option for cases in which you want to specify which components are to be installed.

- Characters that can be specified in the installation folder name

    - Alphanumeric characters (a to z; A to Z; 0 to 9)

    - Spaces ( )

    - Hyphens (-)

    - Underscores (_)

- During the installation, if Cancel is clicked to interrupt the installation, or the folder that has been set as the installation folder is changed to a different folder, it might cause folders that have already been created to remain. If necessary, delete these folders.

- During the installation, if an abnormality occurs during file copying, for example, a window urging restart of the computer is displayed. In this case, after the installation is complete, in the window for selecting system restart that is displayed, select either "Yes, restart computer now." or "No, restart computer later." and then click [Finish].

    During the installation, if an abnormality occurs during file copying, for example, the installation processing is completed when the computer is restarted. If "No, restart computer later." is selected, the computer must be restarted before the environment can be created.

Note

- If Windows Server® 2003 is used for the installation, the following problem may occur:

    After clicking [Browse] in the [Select Installation folder] window, the cursor disappears from the [Choose Folder] window and the folder path cannot be entered.

- Insert the installation DVD into the DVD-ROM drive of the machine on which Interstage is to be installed. If you connect to a remote DVD-ROM drive, the installer may not work correctly.

- Although the common components are installed after Interstage is installed, it may take a while before the corresponding window is displayed. Before restarting the machine, close the window that confirms that the installation is complete.

4.1 Pre-installation Preparation

4.1.1 Essential Tasks before Beginning Installation

- Interstage Application Server "Server Package" cannot be installed in an environment in which any of the products listed below has already been installed. If any of the following products is already installed, uninstall it before installing the Interstage Application Server "Server Package".

    - Client package of this software

    - An earlier version or another edition of this software

    - Interstage Business Application Manager

    - Interstage Studio

    - Interstage Security Director

    - Systemwalker CentricMGR or Systemwalker Centric Manager

- Ensure that all of the relevant items described in the System Requirements table are satisfied in the target environment.

- Close any applications that are running.

- Delete any unnecessary paths from the environment variables (PATH, CLASSPATH)

- When Interstage is installed, it might cause the installation to fail if resources that are used by Interstage such as disk and the registry (for example, event viewer, Explorer, registry editor) are used. Before starting the installation, exit all Windows® applications first.

- If you are installing this product on a system and using Microsoft(R) Internet Information Services as the Web server, be aware that the default setting (80) for the Web Server (Interstage HTTP Server/Interstage HTTP Server 2.2) port number is the same as the default value for the Microsoft(R) Internet Information Services port number. If you install this product without changing the port number, startup process errors will occur in the following services:
  - For Web Server (Interstage HTTP Server): "FJapache"
  - For Web Server (Interstage HTTP Server 2.2): "Interstage HTTP Server 2.2"
  Before installing, either stop Microsoft(R) Internet Information Services, or if you install Web Server on the same machine, change the port number to an unused port number (other than 80) to operate.

4.1.2 Changing the Terminal Services Mode

Execute the following command to change the Terminal Services to install mode.

```
CHANGE USER /INSTALL
```

Note

- If Interstage is installed while the Terminal Services are running in execute mode, the following may occur:

  - "Error number:0x80040702 DETAILS: Failed to load the dll. :odautosetup" is output

  - Message ihs10006 is output in the event viewer

  - Installation fails, and the following error message is displayed: "ERROR: is20102: Failed to start INTERSTAGE. Reason code (10)".

  In the cases shown above, uninstall Interstage, execute the following command, change the Terminal Services to install mode, and then reinstall Interstage.

```
CHANGE USER /INSTALL
```

After installing this component, execute the following command to switch from install mode to run mode.

```
CHANGE USER /EXECUTE
```

4.1.3 Notes on Using the Multiserver Management Function

All Managed Servers belonging to the Server Group must be installed in the same installation folder before the multiserver management function can be used. Even if the same folder name is specified for the installation folder, it may be treated as a different folder name by the use of the short path.

The installation folder name is treated as a short path in the following cases:

1. The installation folder name specified in the "Select installation folder" window at the time of installation contains a space or spaces, and

2. There is a folder name in the same layer as the folder specified in point 1 with the same first "n" (see Note) characters.

Note

"n" is as follows, depending on the number of folders with the same name. The number of folders is 2 to 9: 6 characters

- The number of folders is 10 to 99: 5 characters

- The number of folders is 100 to 999: 4 characters

Problem

In a multiserver environment, if the folder configuration between servers differs (the same folder name exists/does not exist) in the same layer as the installation folder, the short path will differ between servers even if the same name is specified for the installation folder.

As a result, the environment definition contents will differ between Managed Servers, and an error will occur when Managed Servers are added to the Server Group.

Name of server	Server A	Server B
Folder configuration of the installation destination	"C:\Interstage A" exists	There are no folders starting with "Inte" on the "C" drive
Specified installation folder name	"C:\Interstage B"	"C:\Interstage B"
Short path name of the installation folder	"C:\INTERS~2"	"C:\INTERS~1"

The short path name can be investigated by executing "dir /X" on the command prompt.

Action

Check the following points for all server installation folders in the multiserver environment.

1. Check whether there are other folder names with the same first 4-6 characters.

2. If a folder with the same name already exists, either change the installation folder name, or specify a folder name that does not contain spaces. Make the same settings for all servers.

In the above example, a folder name containing the "C:\Inters" part in Server A already exists. Either change this part to "C:\IS", or specify "C:\Interstage" or "C:\InterstageB" so that it does not contain spaces. Make the same settings for Server A and Server B.

If a folder with the same name is installed by mistake, uninstall the folder and then reinstall it setting a correct folder name according to the above guidelines.

4.2 Installing Application Server Functions (Typical Installation)

Insert the DVD in the DVD drive. The autorun program should launch automatically; if not, double-click the autorun icon in the root directory of the installation DVD to launch it. Click [Installation] to launch the installation wizard. The Server Type Selection page is displayed.

1. In the Server Type Selection page, select Install the Application Server, and then click [Next].

2. In the Installation Type Selection page, select Typical, and then click [Next].

   If you specify a Typical installation, and the port number you intend to use in Interstage is already in use, a warning message is output. In the Check Installation Settings page, select the Change check box and then change the port number. To change the port number, enter a number from 1 to 65535.

3. In the Check Installation Settings page, to start the installation using the displayed contents, click [Next] without removing the check mark from [Do not make any change]. This starts the installation.

To change the displayed contents, select the Change check box, and then click [Next].

1. In the Select Installation Folder page, click [Browse]. Set the installation destination for Interstage, and then click [Next].

2. In the Select Installation Folder for JDK 6 page, click [Browse]. Set the installation destination for JDK 6, and then click [Next].

   Note

   It is recommended that a new Interstage Application Server is installed in the standard folders.

3. In the Interstage Java EE Admin Console Settings page, select the security operating mode for the Interstage Java EE Admin Console. Select whether or not to use SSL encryption in the Interstage Java EE Admin Console, and then click [Next].

   Note

   If you have selected not to use SSL encryption, the ID and password used to access the Interstage Java EE Admin Console are transferred across the network unencrypted. Ensure that appropriate measures are in place to prevent interception of communication data.

4. In the [Java EE Function Port Number Settings] window, specify the port numbers to be used, and then click [Next]. If the port number is not changed, just click [Next].

The initial value for each port number is shown below. To change the port number, enter a number from 1 to 65535.

Function	Default port number
HTTP Listener Port	28080
HTTP Listener Port Number for Operation Management	12001
IIOP port	23600
IIOP_SSL port	23601
IIOP_MUTUALAUTH port	23602
JMX_ADMIN port	8686

5. In the "Select Java EE common folder" window, click [Browse], set the Java EE common folder, and then click [Next].

To change the Java EE common folder from the default value, specify a folder that does not already exist, or an empty folder.

When changing the Java EE common folder from the default value, paths containing spaces cannot be specified.

6. In the Check Installation Settings page, check the contents that have been entered. If the contents are correct, click [Install]. This starts the installation.

7. After the installation is complete, click [Finish].

4.3 Installing the Application Server Functions (Custom Installation)

Insert the DVD in the DVD drive. The autorun program should launch automatically; if not, double-click the autorun icon in the root directory of the installation DVD to launch it. Click [Installation] to launch the installation wizard. The Server Installation Type Selection page is displayed.

1. In the Server Type Selection page, select Install the Application Server, and then click [Next].

2. In the Installation Type Selection page, select Custom, and then click [Next].

3. In the Select Installation Folder page, click [Browse]. Set the installation destination for Interstage, and then click [Next].

4. In the Select Components to Install page, select the function to be installed, and then click [Next].

5. In the Selection of JDK or JRE page, select either JDK or JRE.

   Note

   When the Java Management Agent is used, it is necessary to install JDK6.

6. In the Select Installation Folder for JDK 7 (or JRE 7) page, click [Browse]. Set the installation destination for the selected JDK or JRE, and then click [Next].

   Note

   It is recommended that a new Interstage Application Server is installed in the default folders.

7. In the Select Installation Folder for JDK 6 (or JRE 6) page, click [Browse]. Set the installation destination for the selected JDK or JRE, and then click [Next].

   Note

   It is recommended that a new Interstage Application Server is installed in the default folders.

8. In the Interstage Management Console Settings page, select the security operating mode for the Interstage Management Console. Select whether or not to use SSL encryption in the Interstage Management Console, and then click [Next].

   Note

If you have selected not to use SSL encryption, the ID and password used to access the Interstage Management Console are transferred across the network unencrypted. Ensure that appropriate measures are in place to prevent interception of communication data.

9. In the Interstage Java EE Admin Console Settings page, select the security operating mode for the Interstage Java EE Admin Console. Select whether or not to use SSL encryption in the Interstage Java EE Admin Console, and then click [Next].

    Note

    -   If you have selected not to use SSL encryption, the ID and password used to access the Interstage Java EE Admin Console are transferred across the network unencrypted. For this reason, it is recommended that you take action to prevent communication data from being intercepted.

    -   This setting is valid for Java EE 5 function.

10. In the Port Number Setup page, specify the port numbers and then click [Next]. If there is no change to the port number, click [Next] again.

    The default port numbers are shown in the table. To change the port number, enter a number from 1 to 65535.

Function	Default port number
Interstage Management Console	12000
Web Server (Interstage HTTP Server)	80
Web Server (Interstage HTTP Server 2.2)	80
CORBA Service	8002 (Enterprise Edition only)

    Note

    -   The default values for the port numbers used by both "Web Server (Interstage HTTP Server)" and "Web Server (Interstage HTTP Server 2.2)" in the application server feature are set to 80. If installing simultaneously, change the default value of one or the other.

    -   If installing the Web Package features, the default value for the port number used by "Web server (Interstage HTTP Server 2.2)" is set to 8180. Change it if necessary.

    -   As the port numbers in the range below are always set as ephemeral ports, be careful when using them.

        -   For Windows Server(R) 2003: 1024 to 5000

        -   For Windows Server(R) 2008 or later: 49152 to 65535

11. In the Message Manual Installation page, select whether or not to refer to the Message Manual from the Interstage Management Console directly. If this is selected, you can refer to the manual of error messages that are output in the Interstage Management Console directly. Select [Install the Message Manual], and then click [Next].

12. (Enterprise Edition only) If MessageQueueDirector is selected, it must be installed on NTFS. If the Interstage installation folder is not NTFS, the [Select Installation Folder] window is displayed. Set the folder for installing MessageQueueDirector on NTFS, and then click [Next].

13. In the Select J2EE common folder page, set the creation destination for the J2EE common folder, and then click [Next].

    Note

    For details, refer to "Characters that can be specified in the installation folder name" in the "Chapter 4 Installation Procedure".

14. In the [Java EE Function Port Number Settings] window, specify the port numbers to be used, and then click [Next]. If the port number is not changed, just click [Next].

    The initial value for each port number is shown below. To change the port number, enter a number from 1 to 65535. The range that can be specified in the HTTP Listener Port becomes 5001-65535 when Web Server Connector/J2EE Compatible has been installed or it selects it at the same time.

Function	Default port number
HTTP Listener Port	28080

Function	Default port number
HTTP Listener Port Number for Operation Management	12001
IIOP port	23600
IIOP_SSL port	23601
IIOP_MUTUALAUTH port	23602
JMX_ADMIN port	8686

Note

- This setting is enabled for the Java EE 5 function.

- As the port numbers in the range below are always set as ephemeral ports, be careful when using them. Refer to "Port Tuning" in the Java EE Operator's Guide if you are going to use them

    - For Windows Server(R) 2003: 1024 to 5000

    - For Windows Server(R) 2008 or later: 49152 to 65535

15. In the "Select Java EE common folder" window, click [Browse], set the Java EE common folder, and then click [Next].

    To change the Java EE common folder from the default value, specify a folder that does not already exist, or an empty folder.

    When changing the Java EE common folder from the default value, paths containing spaces cannot be specified.

    Note

    - For details, refer to "Characters that can be specified in the installation folder name" in the "Chapter 4 Installation Procedure".

    - To change the Java EE common folder from the default value, specify a folder that does not already exist, or an empty folder.

    - When changing the Java EE common folder from the default value, paths that contain spaces cannot be specified.

    - This setting is enabled for the Java EE 5 function.

16. Authentication Information Settings for Java EE6 features

    Specify the Administrator user ID or the Administrator password in the "Java EE 6 Function Authentication Information Settings" window, and click [Next]. When confirming the Administrator password, enter the same string entered for the password.

    Note

    - Administrator user name

      Specify this item using up to 255 characters.

      The following symbols can also be used:

      - "_" (Underscores)

      - "-" (Hyphens)

      - "." (Periods)

    - Administrator password

      Specify this item using from 8 to 20 characters.

      The following symbols can also be used:

      - "_" (Underscores)

      - "-" (Hyphens)

      - " ' " (Apostrophes)

      - "." (Periods)

      - "@" (At signs)

      - "+" (Plus signs)

17. Port Number Settings for Java EE 6 Features

Specify the port numbers to be used by Interstage Java EE 6 DAS service in the "Java EE 6 Function Authentication Information Settings" window, and click [Next].

The default port number settings are shown below. To change a port number, refer to "Port Numbers" in the "Java EE Operator's Guide (Java EE 6 Edition)".

Function	Default port number
HTTP Listener Port	28282
HTTPS Listener Port	28383
HTTP Listener Port Number for Operation Management	12011
IIOP port	23610
IIOP_SSL port	23611
IIOP_MUTUALAUTH port	23612
JMX_ADMIN port	18686

Note

- The values set in this window are effective with Java EE 6 Features.

- As the port numbers in the range below are always set as ephemeral ports, be careful when using them. Refer to "Port Numbers" in the "Java EE Operator's Guide (Java EE 6 Edition)" if you are going to use them.

  - For Windows Server(R) 2003: 1024 to 5000

  - For other than Windows Server(R) 2008: 49152 to 65535

18. In the [Select the JDK to be used in the Java EE 6 function] window, select the JDK version to be used, and then click [Next]. This window is displayed when multiple versions of JDK have been installed, or are selected at the same time.

19. Settings for Java EE 6 Common Directory

Specify the Java EE 6 common directory. Note that the installation destination folder is set by default for this product. To change the default, click "Browse" and specify a folder.

Note

- Specify a path for the Java EE 6 Common Directory using the following characters:

  - Alphanumeric characters

  - ""

  - "+"

  - "-"

  - "@"

  - "."

  - "_"

  - "("

  - ")"

- To change the Java EE 6 common directory from the default value, specify a folder that does not already exist, or an empty folder.

- When changing the Java EE 6 common directory from the default value, paths that contain spaces cannot be specified.

- The values set in this window are effective with Java EE 6 Features.

20. In the Check Installation Settings page, check the contents that have been entered. If the contents are correct, click [Install]. This starts the installation.

21. After the installation is complete, click [Finish].

4.4 Installing the Admin Server Functions (Enterprise Edition Only)

Insert the DVD in the DVD drive. The autorun program should launch automatically; if not, double-click the autorun icon in the root directory of the installation DVD to launch it. Click [Installation] to launch the installation wizard. The Server Type Selection page is displayed.

1. In the Server Type Selection page, select [Install Admin Server], and then click [Next].

2. In the Check Installation Settings page, to start the installation using the displayed contents, click [Next] without removing the check mark from [Do not make any change]. This starts the installation.

   To change the displayed contents, select the Change check box, and then click [Next].

3. In the Select Installation Folder page, click [Browse]. Set the installation destination for Interstage, and then click [Next].

   Note

   If the folder that has been set as the installation folder is changed to a different folder, it might cause folders that have already been created to remain. If necessary, delete these folders.

4. In the Select Installation Folder for JDK 6 page, click [Browse]. Set the installation destination for JDK 6, and then click [Next].

   It is recommended that a new Interstage Application Server is installed in the standard folders.

5. In the Interstage Management Console Settings page, select the security operating mode for the Interstage Management Console. Select whether or not to use SSL encryption in the Interstage Management Console, and then click [Next].

   Note

   If you have selected not to use SSL encryption, the ID and password used to access the Interstage Management Console are transferred across the network unencrypted. For this reason, it is recommended that you take action to prevent communication data from being intercepted.

6. In the Port Number Setup page, specify the port number to be used by the Interstage Management Console and then click [Next]. If there is no change to the port number, click [Next] again.

   The default port numbers are shown in the table. To change the port number, enter a number from 1 to 65535.

Function	Default port number
Interstage Management Console	12000

7. In the Message Manual Installation page, select whether or not to refer to the Message Manual from the Interstage Management Console directly. If this is selected, you can refer to the manual of error messages that are output in the Interstage Management Console directly. Select [Install the Message Manual], and then click [Next].

8. In the Check Installation Settings page, check the contents that have been entered. If the contents are correct, click [Install]. This starts the installation.

9. After the installation is complete, click [Finish].

4.5 Installing the Web Package Functions

Insert the DVD in the DVD drive. The autorun program should launch automatically; if not, double-click the autorun icon in the root directory of the installation DVD to launch it. Click [Installation] to launch the installation wizard. The Server Type Selection page is displayed.

1. In the Server Type Selection page, select [Install Web Package], and then click [Next].

2. In the Check Installation Settings page, to start the installation using the displayed content, click [Next] leaving the [Do not make any changes] option checked. This starts the installation.

   To change the displayed content, check the [Change] option, and then click [Next].

3. In the Select Installation Folder page, click [Browse]. Set the installation destination for Interstage, and then click [Next].

   Note

   If the installation folder is changed from the default, folders that have already been created may remain on the system. Delete if necessary.

4. In the Select Installation Folder for JRE 6 page, click [Browse]. Set the installation destination for JRE 6, and then click [Next].

   It is recommended to install a new Interstage Application Server in the standard folders.

5. In the Interstage Management Console Settings page, select the security operating mode for the Interstage Management Console. Select whether or not to use SSL encryption in the Interstage Management Console, and then click [Next].

   Note

   If you have selected not to use SSL encryption, the ID and password used to access the Interstage Management Console are transferred across the network unencrypted. For this reason, it is recommended that you take action to prevent communication data from being intercepted.

6. In the Port Number Setup page, specify the port numbers to be used by the Interstage Management Console and Web server, and then click [Next]. If there is no change to the port number, click [Next] again.

   The default port numbers are shown in the table. To change the port number, enter a number from 1 to 65535.

Function	Default port number
Interstage Management Console	12000
Web Server	80

7. In the Select J2EE common folder page, set the creation destination for the J2EE common folder, and then click [Next].

   Note

   For details, refer to "Characters that can be specified in the installation folder name" in the "Chapter 4 Installation Procedure".

8. In the Check Installation Settings page, verify the contents that have been entered. If the contents are correct, click [Install]. This starts the installation.

9. After the installation is complete, click [Finish].

4.6 Adding/Deleting Components for an Existing Installation

The Interstage Application Server "Server Package" supports addition/deletion of components for an existing installation. When adding components it is necessary to configure each respective component.

Note

If a component was added/removed, it will be necessary to restart the machine in order for Interstage to run normally. The machine must always be restarted.

4.6.1 Notes about Port Numbers

If adding features, check whether the port number specified by the feature to be added is being used by any running service. Also, check whether the port numbers specified for features to be added are the same as any of the port numbers specified for previously installed features.

If you are going to specify port numbers for the features to be added, pay attention to following points:

- If a service is running, a feature that is to be deleted cannot be used to specify port numbers used in that service. In such cases, stop services for the relevant feature and add the feature.

- If adding features to an environment where "Java EE features" or "Java EE 6 features" have been installed, it will not be checked whether the port numbers specified for features to be added are the same as any of the port numbers already set for "Java EE features" or "Java EE 6 features". If any port numbers are already being used for "Java EE features" or "Java EE 6 features", do not specify them as the port numbers for any features to be added.

4.6.2 Notes about Multiserver Management

If Interstage Application Server multiserver management is used, components cannot be added to or deleted from Managed Servers.

To add or delete components, delete the server from the Site first.

4.6.3 Uninstalling the Java EE 5/Java EE 6 Function

When the Java EE 5/Java EE 6 function is uninstalled using [Add or Remove Programs], JDK/JRE must not be uninstalled, and the JDK/JRE type must not be changed at the same time.

If the above changes are required, uninstall the Java EE 5/Java EE 6 function, then restart the installer and change the JDK/JRE status using [Add or Remove Programs].

4.7 Silent Installation

This section explains the silent installation of Interstage.

Normally, when this product is installed, the user is prompted to select the functionality required. However, with silent installation, the installation is executed according to the parameters specified before the installation is executed. The installation runs without user input. Note that silent installation can be used for new installations of Interstage.

Execute the silent installation according to the following procedure:

- 4.7.1 Create the Installation Parameter CSV File
- 4.7.2 Execute the Silent Installation

4.7.1 Create the Installation Parameter CSV File

Consider the server type or functionality that is required in the system operation, and then create the installation parameter CSV file according to the format shown below.

Note

The installation parameter CSV file samples are stored in the following directory:

```
<server package DVD>\ISTAGE\citool\sample
```

4.7.1.1 Format

Define the installation parameter CSV file in three column CSV format on each line.

```
section name,parameter name,settings
section name,parameter name,settings
          :
```

Set the following in each column:

Item	Content
Section name	Set the section name. Note that there are two types. These are as follows:
	"installinfo": Set the product information.

Item	Content
	"parameters": Set the settings parameter information of this product.
Parameter name	Set the parameter name. There are parameters which are enabled for each section.
Settings	Configure the settings.

Note

- The file cannot contain blank lines.

- Section names and parameter names cannot be omitted.

- Undefined parameters cannot be set on the line where the section name is "installInfo". Additionally, the same parameter cannot be set multiple times.

- If an undefined parameter was set on the line where the section name is "parameters", it will be ignored at the time of execution. Additionally, if the same parameter was defined multiple times, the settings on the line below will be valid.

4.7.1.2 List of Parameters

The parameters that can be set for each section are explained below.

4.7.1.2.1 installInfo Section

Parameter	Content
Name	Set the installer name. This parameter setting is mandatory. In this product, set the following fixed value: "isasinst"

Note

The parameters that can be used in the installInfo section are "softwareName", "OS", "Version", and "Edition". The settings for this parameter do not affect the silent installation.

Note that, in the settings of the above parameters above, a string comprised of at least one alphanumeric character, or symbol excluding double quotes (") and commas (,), is valid.

4.7.1.2.2 Parameters Section

Enterprise Edition

Parameter	Content
ServerType	Set the server type.
InstallType	Set the installation type.
InstallPath	Set the installation destination folder.
JavaSEKind	Set the Java SE JDK/JRE type.
JavaSE6InstallPath	Set the Java SE 6 installation destination folder.
JavaSE7InstallPath	Set the Java SE 7 installation destination folder.
JavaEE5HttpListenerPort	Set the "HTTP Listener Port" to be used in Java EE 5.
JavaEE5AdminListenerPort	Set the "Operation Management HTTP Listener Port" to be used in Java EE 5.
JavaEE5IiopPort	Set the "IIOP Port" to be used in Java EE 5.
JavaEE5IiopSSLPort	Set the "IIOP_SSL Port" to be used in Java EE 5.

Parameter	Content
JavaEE5IiopMutualauthPort	Set the "IIOP_MUTUALAUTH Port" to be used in Java EE 5.
JavaEE5JmxAdminPort	Set the "JMX_ADMIN Port" to be used in Java EE 5.
JavaEE5CommonDirectory	Set the "Java EE Common Directory" to be used in Java EE 5.
JavaEE5AdminSSL	Set the Interstage Java EE Admin Console security operating mode to be used in Java EE 5.
JavaEE6JdkVersion	Set the JDK version to be used in Java EE 6.
JavaEE6AdminUser	Set the Java EE 6 Administrator user ID.
JavaEE6AdminPassword	Set the Java EE 6 Administrator password.
JavaEE6DomainAdminPort	Set the "Operation Management HTTP Listener Port" to be used in Java EE 6.
JavaEE6HttpListenerPort	Set the "HTTP Listener Port" to be used in Java EE 6.
JavaEE6HttpsListenerPort	Set the "HTTPS Listener Port" to be used in Java EE 6.
JavaEE6IiopPort	Set the "IIOP Port" to be used in Java EE 6.
JavaEE6IiopSSLPort	Set the "IIOP_SSL Port" to be used in Java EE 6.
JavaEE6IiopMutualauthPort	Set the "IIOP_MUTUALAUTH Port" to be used in Java EE 6.
JavaEE6JmxAdminPort	Set the "JMX_ADMIN Port" to be used in Java EE 6.
JavaEE6CommonDirectory	Set the "Java EE 6 common directory" to be used in Java EE 6.
CorbaPort	Set the port number of the CORBA service to be used in the multilanguage service basic functionality.
MngConsolePort	Set the Interstage Management Console port number.
MngConsoleSSL	Set the Interstage Management Console security operating mode.
MngConsoleMessageManual	Set whether or not to install the Message Manual with the Interstage Management Console.
WebServerPort	Set the Web Server (Interstage HTTP Server) port number.
WebServer22Port	Set the Web Server (Interstage HTTP Server 2.2) port number.
J2eeCommonDirectory	Set the "J2EE Common Directory" to be used in J2EE compatibility.
FN_functionality name	If "custom" was specified in the InstallType parameter, set the "FN_functionality name" format parameter according to the functionality that is to be installed.

Standard-J Edition

Parameter	Content
ServerType	Set the server type.
InstallType	Set the installation type.
InstallPath	Set the installation destination folder.
JavaSEKind	Set the Java SE JDK/JRE type.
JavaSE6InstallPath	Set the Java SE 6 installation destination folder.
JavaSE7InstallPath	Set the Java SE 7 installation destination folder.
JavaEE5HttpListenerPort	Set the "HTTP Listener Port" to be used in Java EE 5.

Parameter	Content
JavaEE5AdminListenerPort	Set the "Operation Management HTTP Listener Port" to be used in Java EE 5.
JavaEE5IiopPort	Set the "IIOP Port" to be used in Java EE 5.
JavaEE5IiopSSLPort	Set the "IIOP_SSL Port" to be used in Java EE 5.
JavaEE5IiopMutualauthPort	Set the "IIOP_MUTUALAUTH Port" to be used in Java EE 5.
JavaEE5JmxAdminPort	Set the "JMX_ADMIN Port" to be used in Java EE 5.
JavaEE5CommonDirectory	Set the "Java EE Common Directory" to be used in Java EE 5.
JavaEE5AdminSSL	Set the Interstage Java EE Admin Console security operating mode to be used in Java EE 5.
JavaEE6JdkVersion	Set the JDK version to be used in Java EE 6.
JavaEE6AdminUser	Set the Java EE 6 Administrator user ID.
JavaEE6AdminPassword	Set the Java EE 6 Administrator password.
JavaEE6DomainAdminPort	Set the "Operation Management HTTP Listener Port" to be used in Java EE 6.
JavaEE6HttpListenerPort	Set the "HTTP Listener Port" to be used in Java EE 6.
JavaEE6HttpsListenerPort	Set the "HTTPS Listener Port" to be used in Java EE 6.
JavaEE6IiopPort	Set the "IIOP Port" to be used in Java EE 6.
JavaEE6IiopSSLPort	Set the "IIOP_SSL Port" to be used in Java EE 6.
JavaEE6IiopMutualauthPort	Set the "IIOP_MUTUALAUTH Port" to be used in Java EE 6.
JavaEE6JmxAdminPort	Set the "JMX_ADMIN Port" to be used in Java EE 6.
JavaEE6CommonDirectory	Set the "Java EE 6 common directory" to be used in Java EE 6.
MngConsolePort	Set the Interstage Management Console port number.
MngConsoleSSL	Set the Interstage Management Console security operating mode.
MngConsoleMessageManual	Set whether or not to install the Message Manual with the Interstage Management Console.
WebServerPort	Set the Web Server (Interstage HTTP Server) port number.
WebServer22Port	Set the Web Server (Interstage HTTP Server 2.2) port number.
J2eeCommonDirectory	Set the "J2EE Common Directory" to be used in J2EE compatibility.
FN_functionality name	If "custom" was specified in the InstallType parameter, set the "FN_functionality name" format parameter according to the functionality that is to be installed.

4.7.1.2.3 Parameters Section (for Selecting the Functionality)

If "custom" was selected in InstallType, use the parameters shown below that assign the installation functionality, and then select the installation functionality.

Enterprise Edition

Parameter	Functionality
FN_JAVAEE5	Java EE 5
FN_CORBA	Multilanguage Service Basic Functionality
FN_OTS	Database Linkage Service

Parameter	Functionality
FN_ES	Event Service
FN_MQD	MessageQueueDirector
FN_PORB	Portable-ORB
FN_CORBA_DEVTOOL	CORBA Service Development Tool
FN_WEBSERVER	Web Server (Interstage HTTP Server)
FN_WEBSERVER22	Web Server (Interstage HTTP Server 2.2)
FN_SECURE_COMMUNICATION	Secure Communication Service
FN_SSO_BS	Interstage Single Sign-on (Business Server)
FN_SSO_AS	Interstage Single Sign-on (Authentication Server)
FN_SSO_RS	Interstage Single Sign-on (Repository Server)
FN_DIRECTORY_SERVICE	Interstage Directory Service
FN_DATA_STORE	Interstage data store
FN_MANAGEMENT_CONSOLE	Interstage Management Console
FN_WEBSERVER_CONNECTOR	Web Server Connector (for Interstage HTTP Server)
FN_J2EE	J2EE Compatibility
FN_WEBSERVER_CONNECTOR22	Web Server Connector (for Interstage HTTP Server 2.2)
FN_JAVAEE6	Java EE 6
FN_JAVASE6	Java SE 6
FN_JAVASE7	Java SE 7
FN_FRAMEWORK	Framework
FN_SAMPLE_APL	Sample Application

Standard-J Edition

Parameter	Functionality
FN_JAVAEE5	Java EE 5
FN_WEBSERVER	Web Server (Interstage HTTP Server)
FN_WEBSERVER22	Web Server (Interstage HTTP Server 2.2)
FN_SECURE_COMMUNICATION	Secure Communication Service
FN_SSO_BS	Interstage Single Sign-on (Business Server)
FN_SSO_AS	Interstage Single Sign-on (Authentication Server)
FN_SSO_RS	Interstage Single Sign-on (Repository Server)
FN_DIRECTORY_SERVICE	Interstage Directory Service
FN_DATA_STORE	Interstage data store
FN_MANAGEMENT_CONSOLE	Interstage Management Console
FN_WEBSERVER_CONNECTOR	Web Server Connector (for Interstage HTTP Server)
FN_J2EE	J2EE Compatibility
FN_WEBSERVER_CONNECTOR22	Web Server Connector (for Interstage HTTP Server 2.2)
FN_JAVAEE6	Java EE 6
FN_JAVASE6	Java SE 6
FN_JAVASE7	Java SE 7

Parameter	Functionality
FN_FRAMEWORK	Framework
FN_SAMPLE_APL	Sample Application

4.7.1.3 Parameter Details

The section explains the content to be set for each parameter.

4.7.1.3.1 ServerType

Enterprise Edition

Content	Set the server type to be installed. Select one of: Application Server Admin Server WebPackage
Related functionality	Common
Valid settings	application [Application Server functionality] management [Admin Server functionality] webpackage [WebPackage functionality]
Default value	application
Remarks	

Standard-J Edition

Content	Set the server type to be installed. Select one of: Application Server WebPackage
Related functionality	Common
Valid settings	application [Application Server functionality] webpackage [WebPackage functionality]
Default value	application
Remarks	

4.7.1.3.2 InstallType

Content	Set the server type to be installed. This parameter is enabled if "application" was selected in InstallType. Select one of: typical installation custom installation full functionality installation
Related functionality	Common
Valid settings	typical [Typical installation] custom [Custom installation] full [Full functionality installation]
Default value	typical

Remarks	If the custom installation was specified, select the functionality that is to be installed using the "FN_functionality name" parameter. If the "FN_functionality name" parameter does not exist, or all the settings are "N", only the mandatory functionality will be installed.

4.7.1.3.3 InstallPath

Content	Set the installation destination of the program files.
Related functionality	Common
Valid settings	Path string Specify a path of 64 characters or less including the drive name. Use spaces, or alphanumeric characters that do not include the following: / : ; * ? " < > ( ) | # % ^ ! Note: ":" can only be used after the drive letter.
Default value	C:\Interstage
Remarks	

4.7.1.3.4 JavaSEKind

Content	Set the Java SE type (JDK or JRE) that is to be installed.
Related functionality	Java SE 6 Java SE 7
Valid settings	JDK JRE
Default value	JDK
Remarks	If Java EE 5 or Java EE 6 has been selected, JDK will be installed regardless of the setting of this parameter.

4.7.1.3.5 JavaSE6InstallPath

Content	Set the Java SE 6 installation destination.
Related functionality	Java SE 6
Valid settings	Path string Specify a path of 64 characters or less including the drive name. Use spaces, or alphanumeric characters that do not include the following: / : ; * ? " < > ( ) | # % ^ ! Note: ":" can only be used after the drive letter. The same path as JavaSE7InstallPath cannot be specified.
Default value	%IS_HOME%\JDK6 *%IS_HOME% is the installation destination for this product.
Remarks	The default value is fixed, regardless of the JDK/JRE type that is installed.

4.7.1.3.6 JavaSE7InstallPath

Content	Set the Java SE 7 installation destination.
Related functionality	Java SE 7
Valid settings	Path string Specify a path of 64 characters or less including the drive name. Use spaces, or alphanumeric characters that do not include the following: / : ; * ? " < > ( ) | # % ^ ! Note: ":" can only be used after the drive letter. The same path as JavaSE6InstallPath cannot be specified.
Default value	%IS_HOME%\JDK7 *%IS_HOME% is the installation destination for this product.
Remarks	The default value is fixed, regardless of the JDK/JRE type that is installed.

4.7.1.3.7 JavaEE5HTTPListenerPort

Content	Set the HTTP listener port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535)
Default value	28080
Remarks	To install the web server connector, specify a range between 5001 and 65535.

4.7.1.3.8 JavaEE5AdminListenerPort

Content	Set the operation management HTTP listener port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	12001
Remarks	

4.7.1.3.9 JavaEE5IiopPort

Content	Set the IIOP port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23600
Remarks	

4.7.1.3.10 JavaEE5IiopSSLPort

Content	Set the IIOP_SSL port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23601
Remarks	

4.7.1.3.11 JavaEE5IiopMutualauthPort

Content	Set the IIOP_MUTUALAUTH port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23602
Remarks	

4.7.1.3.12 JavaEE5JmxAdminPort

Content	Set the JMX_ADMIN port to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	8686
Remarks	

4.7.1.3.13 JavaEE5CommonDirectory

Content	Set the path of the Java EE common directory to be used in Java EE 5.
Related functionality	Java EE 5
Valid settings	Path string Specify a path of 50 characters or less including the drive name. Use spaces, or alphanumeric characters that do not include the following: / : ; * ? " < > ( ) | # % ^ ! Note: ":" can only be used after the drive letter. To change the default value, specify a folder that does not already exist, or an empty folder. When changing the default value, a path that contains spaces cannot be specified.
Default value	%IS_HOME%\F3FMisjee\var

	*%IS_HOME% is the installation destination for this product.
Remarks	

4.7.1.3.14 JavaEE5AdminSSL

Content	Set the Java EE Admin Console security operating mode (when SSL encrypted communication is used). To use SSL encryption, specify "Y". If you do not want to use SSL encryption, specify "N".
Related functionality	Java EE 5
Valid settings	Y N
Default value	Y
Remarks	

4.7.1.3.15 JavaEE6JdkVersion

Content	Set the JDK version to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	JDK6 JDK7
Default value	JDK7
Remarks	This parameter is enabled if both Java SE 6 and Java SE 7 are installed. If only one is installed, the Java SE JDK to be installed will be selected automatically, regardless of the setting of this parameter.

4.7.1.3.16 JavaEE6AdminUser

Content	Set the Java EE 6 Administrator user ID.
Related functionality	Java EE 6
Valid settings	String (up to 255 characters) Note: In addition to alphanumeric characters, the following can also be used: "_" (Underscores) "-" (Hyphens) "." (Periods)
Default value	admin
Remarks	

4.7.1.3.17 JavaEE6AdminPassword

Content	Set the Java EE 6 Administrator password.
Related functionality	Java EE 6
Valid settings	String (from 8 to 20 characters) Note: In addition to alphanumeric characters, the following can also be used:

	"_" (Underscores)
	"-" (Hyphens)
	" ' " (Apostrophes)
	"." (Periods)
	"@" (At signs)
	"+" (Plus signs)
Default value	None.
Remarks	This parameter must be configured when installing Java EE 6. You must also take care how you handle the installation parameter CSV file that sets this parameter, since it is sensitive information.

4.7.1.3.18 JavaEE6DomainAdminPort

Content	Set the "Operation Management HTTP Listener Port" to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	12011
Remarks	

4.7.1.3.19 JavaEE6HttpListenerPort

Content	Set the "HTTP Listener Port" to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	28282
Remarks	

4.7.1.3.20 JavaEE6HttpsListenerPort

Content	Set the "HTTPS Listener Port" to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	28383
Remarks	

4.7.1.3.21 JavaEE6IiopPort

Content	Set the IIOP Port to be used in Java EE 6.

Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23610
Remarks	

4.7.1.3.22 JavaEE6IiopSSLPort

Content	Set the IIOP_SSL Port to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23611
Remarks	

4.7.1.3.23 JavaEE6IiopMutualauthPort

Content	Set the IIOP_MUTUALAUTH Port to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	23612
Remarks	

4.7.1.3.24 JavaEE6JmxAdminPort

Content	Set the JMX_ADMIN Port to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Numeric (1-65535) Note: The value that is specified cannot be the same as another port number.
Default value	18686
Remarks	

4.7.1.3.25 JavaEE6CommonDirectory

Content	Set the path of the Java EE 6 common directory to be used in Java EE 6.
Related functionality	Java EE 6
Valid settings	Path string Use alphanumeric characters and the following: ' + - @ . _ ( ) Note: ":" can only be used after the drive letter.

	To change the default value, specify a folder that does not already exist, or an empty folder.
	When changing the default value, a path that contains spaces cannot be specified.
Default value	%IS_HOME%\F3FMisje6\var
	*%IS_HOME% is the installation destination for this product.
Remarks	

4.7.1.3.26 CorbaPort

Enterprise Edition

Content	Set the CORBA service port number.
Related functionality	Multilanguage Service Basic Functionality
Valid settings	Numeric (1-65535)
	Note: The value that is specified cannot be the same as another port number.
Default value	8002
Remarks	

4.7.1.3.27 MngConsolePort

Content	Set the port number to be used with the Interstage Management Console.
Related functionality	Interstage Management Console
Valid settings	Numeric (1-65535)
	Note: The value that is specified cannot be the same as another port number.
Default value	12000
Remarks	

4.7.1.3.28 MngConsoleSSL

Content	Set the Interstage Management Console security operating mode (when SSL encrypted communication is used). To use SSL encryption, specify "Y". If you do not want to use SSL encryption, specify "N".
Related functionality	Interstage Management Console
Valid settings	Y
	N
Default value	Y
Remarks	

4.7.1.3.29 MngConsoleMessageManual

Content	Set whether or not to install the Message Manual that is used with the Interstage Management Console. To install the Message Manual, specify "Y". If you do not want to install the Message Manual, specify "N".

Related functionality	Interstage Management Console
Valid settings	Y
	N
Default value	Y
Remarks	

4.7.1.3.30 WebServerPort

Content	Set the port number to be used with Web Server (Interstage HTTP Server).
Related functionality	Web Server (Interstage HTTP Server)
Valid settings	Numeric (1-65535)
	Note: The value that is specified cannot be the same as another port number.
Default value	80
Remarks	If you are installing Web server (Interstage HTTP Server) and Web server (Interstage HTTP Server 2.2) at the same time, you must change one of their port numbers, because their default values are the same.

4.7.1.3.31 WebServer22Port

Content	Set the port number to be used with Web Server (Interstage HTTP Server 2.2).
Related functionality	Web Server (Interstage HTTP Server 2.2)
Valid settings	Numeric (1-65535)
	Note: The value that is specified cannot be the same as another port number.
Default value	80
Remarks	If you are installing Web Server (Interstage HTTP Server) and Web Server (Interstage HTTP Server 2.2) at the same time, you must change one of their port numbers, because their default values are the same.

4.7.1.3.32 J2eeCommonDirectory

Content	Set the path of the J2EE common directory.
Related functionality	J2EE compatibility
Valid settings	Path string
	Specify a path of 50 characters or less including the drive name.
	Use spaces, or alphanumeric characters that do not include the following:
	/ : ; * ? " < > ( )	# % ^ !
	Note: ":" can only be used after the drive letter.
Default value	C:\Interstage\J2EE\var\deployment
Remarks	

4.7.1.3.33 FN_functionality Name

Content	Set whether or not to install the corresponding functionality. This parameter is enabled if "custom" was set in the InstallType parameter.
Related functionality	Common
Valid settings	Y
	N
Default value	N
Remarks	For details on the parameter names, refer to "4.7.1.2.3 Parameters Section (for Selecting the Functionality)".

4.7.1.4 Notes on Settings

This section explains the settings that are required when the installation parameter CSV file is created.

In the installation parameter CSV file, even if valid values have been set for each parameter, depending on the combination of functionality selected or runtime environment, note that the settings may not become enabled, or the silent installation, or environment build or operation after that, may fail.

4.7.1.4.1 All Parameters

When setting a parameter that in fact has nothing to do with the installation functionality, appropriate values must be set so that basic checks, such as the range for strings and numerics that can be entered, for example, are performed. However, this has no impact on the installation.

4.7.1.4.2 "XXXPath" or "XXXDirectory" Format Parameter

In the cases shown below, the silent installation will fail. Check the installation environment beforehand.

 - A read-only folder was specified

 - The amount of space for the folder or drive that was specified is insufficient

4.7.1.4.3 "XXXPort" Format Parameter

A check for duplicate port numbers is made between the range of valid port numbers for the parameter and other values that were set for the port number. However, if the port that was specified is being used, the silent installation will fail. Check the installation environment beforehand.

4.7.1.4.4 WebServerPort/WebServer22Port

If simultaneously installing Web Server (Interstage HTTP Server) and Web Server (Interstage HTTP Server 2.2) with the application server feature (server type), a silent installation using the default values will fail because the default port number values are the same. You must explicitly specify (that is, change from the default value) either WebServerPort or WebServer22Port, and then perform installation.

4.7.1.4.5 JavaEE6JdkVersion

If only one of JavaSE 6 and Java SE 7 has been selected, the Java SE JDK that is installed will be enabled, regardless of the settings.

4.7.1.4.6 JavaSEKind

If Java EE or Java EE 6 is installed, JRE will be ignored even if it is specified, and JDK will be installed.

4.7.1.4.7 JavaEE5HttpListenerPort

The valid range of port numbers when the web server connector is installed at the same time is 5001-65535 (normally, this is 1-65535). However, if a value of less than 5001 was set in the corresponding condition, the silent installation will succeed but the Java EE 5 functionality environment build or operation will fail.

4.7.2 Execute the Silent Installation

This section explains how to execute the silent installation.

4.7.2.1 Pre-installation Tasks

On the machine that is used to perform the silent installation, check "4.1 Pre-installation Preparation".

Additionally, check the content of the installation parameter CSV file that is to be used, check whether "4.7.1.4 Notes on Settings" applies to the settings, and then store the installation parameter CSV file in any folder.

4.7.2.2 Perform the Installation

Insert the installation DVD into the DVD-ROM drive of the machine on which Interstage is to be installed, and then execute the command shown below from the command prompt.

Note that, if the installer screen was displayed as a result of automatic start, exit the installer before executing the command.

```
(DVD-ROM drive)\ISTAGE\Disk1\issilentinstall.exe -s <installation parameter CSV file> -l <log file>
```

Notes

- Specify the path for the installation parameter CSV file and the log file. If the path contains blank spaces, enclose it in double quotes (").

- For the log files folder, specify an existing folder for which the user has write permission. Additionally, files with the same name as the specified log will be overwritten.

- In Windows Server(R) 2008 or later, a User Account Control (UAC) warning message may be displayed, however installation continues. Note that it is possible to disable the display by deactivating the User Account Control.

- If an environment variable used in this product cannot be set because the length of the variable exceeded its maximum allowable length, a warning message will be displayed before the installation finishes. In this case, wait for the installation to finish, set the variable to the value below, and restart the machine:

  - *PATH: <installation_folder>\path.txt*

  - *CLASSPATH: <installation_folder>\classpath.txt*

- If the terminal service was changed to installation mode before installation, change it to execution mode after installation:

```
CHANGE USER /EXECUTE
```

4.7.2.3 Check the Installation Results

Check the command return values and result codes defined in the log file.

An explanation of each command return value is shown below.

Return value	Description
0	The installation was successful.
< 0	The silent installation failed.
	The return values are output as in "ResultCode" of the log file (for details, refer to "4.7.2.4 Check the Log File, and the Actions that Should be Taken").
1	A timeout (3600 seconds) occurred before the silent installation finished.
	Check the silent installation execution process - the process name is "*setup.exe*" or "*_is<X>.exe*" (where *<X>* is 1-4 digits in Hex).

Return value	Description
	In machines of low spec, this may take a while. In this case, check the log file to see whether the installation was successful.
2	Failed to read the log file.
	Check the log file to see whether the installation was successful - if it does not exist, it is possible that the specified log file is not appropriate. In this case, specify a different log file and re-execute.
3	Failed to parse the log file.
	Check the log file to see whether the installation was successful.
10	Executed using an invalid parameter.
	Ensure that the specified parameters are correct.
11	Installer failed.
	If a message was output immediately before, collect the data and contact Fujitsu technical support.
522	There was insufficient system drive space, therefore the installation of FJSVcir(CIRuntime Application) failed. To install FJSVcir, 85MB of disk space will be required for the system drive. Reserve system drive space by also including the functionality that is to be installed in the estimate.
769-787	Failed to parse the installation parameter CSV file. Using the error message that was output immediately before as a reference, review the installation parameter CSV file.
789	The installation parameter CSV file does not exist. Check whether the installation parameter CSV file that was specified exists.
793	The value that was set in the installation parameter CSV file is invalid. Check the installation parameter CSV file settings.
1058	"Uninstall (middleware", or the installer of another product, is starting. Stop the corresponding process, and then re-execute.
Other	An unknown error occurred.
	If the following data and the message immediately before were output, collect the data and then contact Fujitsu technical support.
	Return values
	Installation parameter CSV file that was used
	Silent installation log file
	The following files that are output to the system folder (normally, this is "C:\Windows"):
	isasinst.log
	isasinst.cir.log
	The set of FJSVcir(CIRuntime Application) log files that are stored under the "C:\FujitsuF4CR\cir\logs" folder

4.7.2.4 Check the Log File, and the Actions that Should be Taken

Check the command return values and result codes defined in the log file.

An explanation of each result code is shown below.

ResponseResult value	Description
0	The installation was successful.
-1	The installation failed.
	Provide Fujitsu technical support with the isasinst.log files under the Windows system root folder.

-3	An error related to the target system environment/settings occurred. Check whether "Essential Tasks before Beginning Installation" have been performed in the execution environment, or whether "Notes on settings" applies to the content that was set in the installation parameter CSV file. Interstage resources exist under the installation folder, Interstage of a different version/level or edition has already been installed Insufficient disk space There is software that cannot coexist with this one. The port set when the response file was created was being used.
All other cases	A system error may have occurred. Collect the following information, and then contact Fujitsu technical support. Installation parameter CSV file that was used Log file isasinst.log, which is output to the system folder (Normally, this is output as "C:\Windows\isasinst.log").

Note

- The final results will be written to "ResultCode" in the [ResponseResult] section of the log file when the silent installation finishes. During the installation, "0", which shows that the installation succeeded, will be set, therefore check this setting after the silent installation has finished.

4.8 Post-installation

This section explains the following aspects of post-installation:

4.8.1 When Interstage Application Server "Server Package" is installed onto an NTFS formatted drive

When Interstage Application Server "Server Package" is installed onto an NTFS formatted drive, the files and folders located in the installation folder will inherit the permissions settings of the folder into which Interstage Application Server "Server Package" is installed.

Assign either of the following permissions to the installation folder:

- Administrator user (full control) and SYSTEM group (full control)

- Administrators group (full control)

To prevent access to folders or files installed onto an NTFS formatted drive by an unspecified user, access authority can be changed by executing the *issetfoldersecurity* command after the installation.

For details on the *issetfoldersecurity* command, refer to "issetfoldersecurity" in the "Interstage Setup Commands" chapter of the Reference Manual (Command Edition).

For a general user (a user that is not an Administrator user and does not belong to the Administrators group) to be able to execute the following Interstage operations, that user must have access authority to all folders or files under the Interstage installation folder. In this case, as above, use the *issetfoldersecurity* command to specify the user name (or group name).

- Execution of the following CORBA Service Commands:

    - *odlistns*

    - *IDLc*

    - *odlistir*

- Operation of a CORBA program that uses the odwin.dll

- Execution of the EJB Service Command

- Execution of the WorkUnit Management Command

- Operation of the Interstage API

- Execution of the Event Service Command

- Execution of the JMS Operating Command

- When utilizing a JMS listener that uses Durable Subscription

- Execution of the Backup Command

- When using encryption such as SSL and signature processing for use of the Interstage certificate environment

4.8.2 Environment Variable Settings

In order to install Interstage Application Server "Server Package", it is necessary that the path of the folder of each specific component of the Java integrated development environment and operation test environment be set in the PATH environment variable, and that the paths of the respective Java class library and Jar file be set in the CLASSPATH environment variable. The Interstage Application Server installation program will automatically modify the Windows environment variables PATH and CLASSPATH. However, if the length limit of the PATH and/or CLASSPATH variables is exceeded at this time, the modification will fail and one of the following error messages will be displayed.

- Unable to set environment variable required for Interstage Application Server for Server. See files below to set PATH variable for system environment variable.

- Unable to set environment variable required for Interstage Application Server for Server. See files below to set CLASSPATH for user environment variable.

- Unable to set environment variable required for Interstage Application Server for Server. See files below to set PATH variable for system environment variable and CLASSPATH variable for user environment variable.

Setting PATH and CLASSPATH

If the automatic modification of the PATH and CLASSPATH variables should fail during the installation process, manually set the environment variable PATH according to the following procedure.

1. Display the contents (variable values) of the PATH and CLASSPATH environment variables by accessing the Control Panel, and selecting System > Detailed Settings.

   Windows Server 2003: access the Control Panel, and select System > Detailed Settings > Environment Variables.

   In Windows Server 2008, select [Control panel] > [System] > [System detailed settings] and then click the environment variable button on [Detailed settings] displayed in the pop-up menu [System property].

2. Delete any unnecessary paths.

3. Add the values found in the following files to the respective environment variable:

   C:\Interstage\path.txt

   Add the value found in this file to the system environment variable, PATH.

   C:\Interstage\classpath.txt

   Add the value found in this file to the system environment variable, CLASSPATH.

4. Save the variable settings, and then restart the system.

   Note

If the environment variables have not been successfully set, neither Interstage nor any of the services will be operational. After completing the manual settings according to the procedure described above and restarting the system, Interstage and each of the services will automatically start.

4.8.3 Checking the Certificate Fingerprint for Interstage Java EE Admin Console SSL Encrypted Communication

If "Use SSL encryption" was selected for the security operating mode during Interstage installation, a certificate is generated for Interstage Java EE Admin Console SSL encrypted communication. To verify that the connection from the Web browser to the Interstage Java EE Admin Console functions correctly, check the certificate fingerprint as described below.

If "Do not use SSL encryption" was selected, the certificate is not generated, and this check is unnecessary.

To check the certificate fingerprint, execute the following:

```
cd [Java EE common folder]\domains\interstage\config
[JDK folder]\bin\keytool -list -keystore keystore.jks -alias s1as -storepass changeit -v
```

The certificate fingerprint is displayed as follows:

```
MD5:  0B:CD:73:56:9F:6B:68:1D:69:3D:FC:3F:75:D7:80:3C
SHA1: 60:7B:C5:85:E0:F5:70:41:00:94:D2:D8:D7:43:3D:29:DC:D2:6A:08
```

Record the fingerprint that is output.

This Interstage certificate is generated automatically by the product to activate SSL encryption of communication between the Interstage Java EE Admin Console and the Web browser immediately following installation. For enhanced security, certificates issued by a CA can be used. For details on how to switch to using CA certificates, refer to "Java EE Application Security Functionality", "SSL" in the "Java EE Function Security" chapter of the Java EE Operator's Guide.

4.8.4 Checking the Certificate Fingerprint for Interstage Management Console SSL Encrypted Communication

If "Use SSL encryption" was selected for the security operating mode during Interstage installation, a certificate is generated for Interstage Management Console SSL encrypted communication. To verify that the connection from the Web browser to the Interstage Management Console functions correctly, check the certificate fingerprint as described below.

If "Do not use SSL encryption" was selected, the certificate is not generated, and this check is unnecessary.

To check the certificate fingerprint, execute the following:

```
cd [SSL environment settings command storage destination]
cmdspcert.exe -ed [Interstage installation folder]\gui\etc\cert -nn SSLCERT | find "FINGERPRINT"
```

For details on the command storage destinations, and other details, refer to "cmdspcert" in the "SSL Environment Setting Commands" chapter of the Reference Manual (Command Edition).

The certificate fingerprint is displayed as follows:

```
FINGERPRINT(MD5):    40 79 98 2F 37 12 31 7C AE E7 B4 AB 78 C8 A2 28
FINGERPRINT(SHA1):   07 28 BE 26 94 89 6D F9 ... <(20 bytes of data are displayed in hexadecimal
notation.)
FINGERPRINT(SHA256): F7 16 00 6E A1 6E A2 14 ... <(32 bytes of data are displayed in hexadecimal
notation.)
```

Record the fingerprint that is output.

This certificate is generated automatically by this product to use SSL encryption for communication between the Interstage Management Console and the web browser immediately after installation. To enhance security, it is possible to switch to an application that uses a certificate issued by the CA. For details on how to switch applications, refer to "Customizing SSL Encrypted Communication for the Interstage Management Console" in the "Security" chapter of the Operator's Guide.

4.8.5 Setting up Web Applications Quickly Using ijsmartsetup

The *ijsmartsetup* command is provided so that you can quickly start using web applications that are Java EE 5 compatible, even without knowledge of this product. For details, refer to "ijsmartsetup" in the "Java EE Operation Commands" chapter of the Java EE Operator's Guide.

4.9 Dealing with Problems During Installation

4.9.1 Action to take if Automatic Setup Fails

If the automatic setup fails during the installation, a dialog showing the abnormality is output. In this case, take the following action.

If the installation install is completed, take action according to the message showing the abnormality in the automatic setup that is output in the dialog and event viewer, and complete the setup using the *isinitservice* command. For details of the *isinitservice* command, refer to the Reference Manual (Command Edition).

If the installation fails, take action according to the message showing the abnormality in the automatic setup that is output in the dialog and event viewer, and re-install "FJapache".

Commands and storage directories for DLL files used until Interstage Application Server V6.0L10

The commands offered in each service and the storage directories for DLL files have changed from Interstage Application Server V7.0 for processing to recognize storage directories configured before Interstage Application Server V6.0, the old storage directory must be changed to match the configuration of the new storage directory.

If the configuration of the old storage directory is not changed, the *issetcompatiblepath* command can be used to copy commands and DLL files to the old storage directory. For details of the *issetcompatiblepath* command, refer to the Reference Manual (Command Edition).

4.9.2 If an Error Occurs During FJapache Service Start Process

Check if the port number specified for the Web Server (Interstage HTTP Server) is already being used by other services (such as Interstage HTTP Server 2.2, Microsoft(R) Internet Information Services, etc) - if it is, then either stop that service or specify another port number. For details on methods for setting the port number for the Web Server (Interstage HTTP Server), refer to "Setting Port Numbers Used for Individual Services" in Product Notes.

If there are no problems with the port number settings, refer to the Event Viewer to check whether messages are being output - if they are, then refer to the Messages manual and take the action indicated by the message.

4.9.3 If an Error Occurs During Interstage HTTP Server 2.2 Service Restart Process

Check if the port number specified for the Web Server (Interstage HTTP Server 2.2) is already being used by other services (such as Interstage HTTP Server, Microsoft(R) Internet Information Services, etc) - if it is, then either stop that service or specify another port number. For details on methods for setting the port number for Web Server (Interstage HTTP Server 2.2), refer to "Setting Port Numbers Used for Individual Services" in Product Notes.

If there are no problems with the port number settings, refer to the Event Viewer to check whether messages are being output- if they are, then refer to the Messages manual and take the action indicated by the message.

4.9.4 Notes on Handling Servlet Service Error Messages Output when the Web Package is Installed

This section describes recovering from the following Servlet Service error message that may be generated when the Web Package is installed.

Could not make the Servlet Service environment default settings.

This error indicates that the initialization settings for running an IJServer and the Web server on separate servers could not be made.

If necessary, on the server machine used for the IJServer and the Web server, in each Interstage Management Console click [System] > [Settings] > [Update System Settings] > [Servlet Service Settings] > [Run Web server and WorkUnit on the same machine?] > [No].

4.9.5 If the td11052 Warning Message is Output in the Event Viewer

The following warning message may be output in the event viewer at the time of installation.

TD: WARNING: td11052: Automatic startup of work unit failed(IJServer-definition error)

If this happens, it does not mean there is a problem so ignore the message.

4.9.6 If the Java EE Function Setup Fails

The Java EE function-related message below is output, and the Interstage Java EE DAS and Interstage Java EE Node Agent services might fail to start up.

- It failed in the execution of ijinit.

If this happens, then complete installation and execute the *ijinit* command to initialize the Java EE operating environment. For details on the *ijinit* command, refer to the Java EE Operator's Guide.

4.9.7 If the Java EE 6 Function Setup Fails

If the message "An error occurred in a setup of Java EE 6" is displayed in the dialog box during installation, refer to the isasinst.log (this is normally: "c:\Windows\isasinst.log") output to the system folder.

If a message beginning with IJ6INIT is output to the above file, follow the action advised in it to remove the cause of the error, and then perform installation again.

Chapter 5 Notes on Specific Features

This section contains notes about the following topics:

5.1 Notes on Using Web Server

The Web server operating environment is not created immediately after the Admin Server function is installed. If you need to run a Web server on a system in which the Admin Server function is installed, create the Web server operating environment using the *ihscreate* command. For details on the *ihscreate* command, refer to "ihscreate" in the "Interstage HTTP Server Operation Commands" chapter of the Reference Manual (Command Edition).

5.2 Notes on Using Interstage Data Store

5.2.1 Port Number Used

The initial value of the port number used by Interstage data store services is [9700].

To change the initial value of the port number used by Interstage data store services, change it to a number that is not being used by another application or Interstage data store using the following command:

```
%IS_HOME%\Enabler\server\bin\omschangeport.exe -u "New port number"
```

To change the Interstage data store services port number, the following conditions must be met:

- An Interstage data store service must be running.

- The Interstage Directory Service repository must not be running.

The port number used by the Interstage data store service is defined in the file below.

The value defined in "OMS_SERVICE=" is the port number used by the Interstage data store service.

%IS_HOME%\Enabler\server\param\enabler.conf

The initial value of the port number used by the repository is a number between 6000 and 65535 that was not being used when the repository was generated. To change the value, specify a number not being used by another application or Interstage data store using the *omschangeport* command:

```
%IS_HOME%\Enabler\server\bin\omschangeport.exe "Repository name" -pn "New port number"
```

Check the port number used by the Interstage data store using the command shown below:

```
%IS_HOME%\Enabler\server\bin\omslist.exe -l
[Example]
----------------------------------------
rep001:   server=host01    port=6000    XF
rep002:   server=host01    port=6001    XF
----------------------------------------
```

The "port" value is the port number used by the Interstage data store.

5.3 Notes on Using JDK/JRE

Characters recommended for the host name

Use the following characters for the host name:

- Uppercase (A to Z)

- Lowercase (a to z)

- Numbers (0 to 9) (*1)

- Hyphens ("-") (*2)

- Periods (".") (*2)

*1 Numbers cannot be used after the last periods of the host name.

*2 Hyphens and periods cannot be used as the first character of the host name. Periods cannot be specified after the host name.

Characters used in the host name must not violate RFC2396.

In the javax.management.remote.JMXServiceURL class that was added from JDK/JRE 5.0, the host names that can be specified follow RFC2609. RFC2609 has the constraint that periods (".") cannot be specified after the host name for RFC2396.

If JDK/JRE is used, underscores ("_") cannot be used in the host name.

If non-recommended characters such as underscores are used in the host name, the installation processing period is extended and an error dialog informing you that the Interstage Operation Tool service failed to start is displayed at the time of installation.

Although installation processing continues after the error dialog is displayed, an error dialog informing you that the creation of the IJServer failed.

After the installation is complete, and you log in to the Interstage Management Console, the following message is output, and Interstage operations cannot be executed.

IS: ERROR: is40003: Could not connect to Interstage JMX service

If an error is displayed because non-recommended characters were used in the host name, refer to "Characters recommended for the host name" above, and modify the host name.

Java Monitoring

JDK must be installed to use Java monitoring.

Chapter 6 Uninstallation Procedure

6.1 Pre-uninstallation

Essential Tasks before Beginning Uninstallation

- Close any applications that are running.

- To register ServerMachineMonitor and ServerMachineMonitorAgent in a service, execute the *isunsetsmm* command and *isunsetsmma* command.

Tasks before Uninstalling Interstage Directory Service

Execute the following tasks before uninstalling the Interstage Directory Service.

1. Check whether any repositories of Interstage Directory Service are running using the *ireplist* command.

   (Example: They are running)

   ```
   > ireplist <RETURN>
   ----------------------------------------------------------------------
   No Repository Status
   -- ---------- -------
    1 rep001     Active
   ----------------------------------------------------------------------
   ```

   (Example: They have not been started)

   ```
   > ireplist <RETURN>
   ----------------------------------------------------------------------
   No Repository Status
   -- ---------- --------
    1 rep001     Stopped
   ----------------------------------------------------------------------
   ```

2. If the Repository is running, stop the Repository using the *irepstop* command.

   (Example: When the Repository name is rep001)

   ```
   > irepstop -R rep001 <RETURN>
   ```

3. Back up the repositories if necessary.

   For details, refer to "Backing up and Restoring Interstage Directory Service" in the "Operating and Maintaining Repositories" chapter of the Interstage Directory Service Operator's Guide.

4. Delete all repositories using the *irepconfig* command.

   (Example: When the Repository name is rep001)

   ```
   > irepconfig delete -R rep001 <RETURN>
   ```

Tasks before Uninstalling JTS

Execute the following tasks before stopping the services of the database linkage service.

1. Check whether the OTS system and resource management program are running using the *otsalive* command.

   (Example: They are running)

   ```
   > otsalive <RETURN>
   ---------------------------------------------------------------------
       OTS system                          START-TIME 1999/06/27 10:17:26
       OTS Resource    resourcedef1        START-TIME 1999/06/27 11:50:12
       OTS Resource    resourcedef2        START-TIME 1999/06/27 12:50:12
   ---------------------------------------------------------------------

   (Example: They have not been started)

   > otsalive <RETURN>
   ---------------------------------------------------------------------
        Nothing
   ---------------------------------------------------------------------
   ```

2. If they are running, stop the OTS system using the *otsstop* command.

   Also, stop the resource management program using the *otsstoprsc* command. If it was operated using the *isstart* command, stop it using the *isstop* command.

   ```
   > otsstop  <RETURN>
   > otsstoprsc  -n resourcedef1 <RETURN>
   > otsstoprsc  -n recourcedef2 <RETURN>
   ```

3. Evacuate or delete user resources in the folder in which the database linkage service was installed. If a dump file is output, delete it.

   The dump file is stored under Interstage installation folder\ots\var.

4. Delete any unnecessary information that is registered in CORBA Service. If this is not deleted, there is no need to register the settings for the OTS system operating environment (*otssetup* command), the resource management program (*otssetrsc* command), and the server application (CORBA application) after reinstalling database linkage service.

   - Delete the registered server application information using the *OD_impl_inst* command and the *OD_or_adm* command.

   - Delete the registered resource management program information using the *otssetrsc* command.

   ```
   > otssetrsc -d -n resourcedef1 <RETURN>
   > otssetrsc -d -n resourcedef2 <RETURN>
   ```

   - Delete the OTS system operating environment using the *otssetup* command.

   ```
   >otssetup -d <RETURN>
   ```

Tasks before Uninstalling Interstage Java EE

   - Before uninstalling an Interstage Java EE that performs cluster service linkage, and the Java EE common directory is created on the shared disk and referenced from multiple nodes, change the target from the standby node to the active node.

6.2 Uninstallation

Before uninstalling Interstage Application Server "Server Package", close any applications that are running. Uninstallation of Interstage Application Server "Server Package" must be performed by a user who belongs to the Administrators group.

1. To uninstall the Interstage Application Server "Server Package", use the following program menu path:

    - [If the operating system is neither Windows(R) 8 nor Windows Server(R) 2012]

      Click [Start], point to [All Programs] (*1), click [Fujitsu], and then execute "Uninstall (middleware)".

      *1: This is the name of the menu in Windows Server(R) 2003, but it may be different in other versions.

    - [If the operating system is Windows(R) 8 or Windows Server(R) 2012]

      Execute "Uninstall (middleware)" in the application window.

2. From the list of products, select "Interstage Application Server Enterprise Edition" or "Interstage Application Server Standard-J Edition", and then click [Remove]. The next window is displayed. Check that you have selected the correct product, and if so, click [Uninstall].

3. After the uninstallation is complete, close the Interstage uninstallation completion window and "Uninstall (middleware)" window, and then restart the machine.

Note

- The uninstallation might fail while the service startup is being processed immediately after the machine is started. If this happens, wait for a while and then re-execute the uninstallation.

- The **Cancel** button is inactive during the uninstallation.

6.2.1 XML Processor Uninstallation

Refer to "6.4 Uninstalling XML Processor".

6.3 Post-uninstallation

- To reinstall Interstage after the uninstallation, the system must be restarted before Interstage is reinstalled.

  Before reinstalling Interstage, first delete the previously installed resources.

- If the path in the PATH and CLASSPATH environment variables has been set manually, it might remain even after the uninstallation processing. Delete any unnecessary paths from the environment variables.

- Delete the folders listed below if they still exist (in this case, the folders were installed to C:\Interstage.

    - C:\Interstage\etc

    - C:\Interstage\var

    - C:\Interstage\var\rc

    - C:\Interstage\var\repository (*1)

    - C:\Interstage\F3FMihs (*2)

    - C:\Interstage\F3FMahs (*3)

    - C:\Interstage\jdk7 (*4)(*5)

    - C:\Interstage\jre7 (*4)(*5)

    - C:\Interstage\jdk6 (*4)(*5)

    - C:\Interstage\jre6 (*4)(*5)

    - C:\Interstage\ODWIN\etc

    - C:\Interstage\ODWIN\var

    - C:\Interstage\td\bin

    - C:\Interstage\td\etc

    - C:\Interstage\td\isp

- C:\Interstage\td\var (*6)

- C:\Interstage\td\trc

- C:\Interstage\MessageQueueDirector

- C:\Interstage\Enabler

- C:\Interstage\EJB\var

- C:\Interstage\EJB\etc

- C:\Interstage\eswin\etc

- C:\Interstage\eswin\var

- C:\Interstage\Extp\etc

- C:\Interstage\F3FMsso\ssocm

- C:\Interstage\F3FMsso\ssoatcsv (*7)

- C:\Interstage\F3FMsso\ssoatcag (*7)

- C:\Interstage\F3FMsso\ssofsv (*7)

- C:\Interstage\F3FMsso\ssoatzag (*7)

- C:\Interstage\GUI\trcfolder

- C:\Interstage\IREP

- C:\Interstage\IREPSDK

- C:\Interstage\J2EE

- C:\Interstage\jms\etc

- C:\Interstage\jms\var

- C:\Interstage\jms

- C:\Interstage\ots\etc (*8)

- C:\Interstage\ots\var (*8)

- C:\Interstage\F3FMisjee

- C:\Interstage\F3FMisje6 (*9)

*1 If "Repository Storage Destination" of the business configuration management function has been changed, delete it. Do not delete this folder if you intend to reuse previous information in the next installation. Information can be reused by specifying the same folder in the next installation.

*2 The Web server (Interstage HTTP Server) environment definition file and log file are saved here. If necessary, move them from this location before the delete operation.

*3 The Web server (Interstage HTTP Server 2.2) environment definition file and log file are saved here. If necessary, move them from this location before the delete operation.

*4 If JDK/JRE is installed to a different folder, delete that folder.

*5 After installing Interstage, if other applications are installed or updated, they may copy files to the JDK or JRE installation folder.

These types of files are not deleted even when Interstage is uninstalled. To remove these files, delete them after uninstalling Interstage.

Example:

WMPNS.jar is copied to the folder below when Windows Media Player is updated after an Interstage installation:

If JDK is installed

[JDK installation destination]\jre\lib\applet

If JRE is installed

[JRE installation destination]\lib\applet

*6 If the Systemwalker CentricMGR Operation Management Server or the Systemwalker Centric Manager Operation Management Server has been installed, do not delete C:\Interstage\td\var\IRDB.

*7 The Interstage Single Sign-on environment definition file is saved here. If necessary, move it from this location before the deletion.

*8 If there are files or folders under the folder, delete everything including those files or folders.

*9 The Java EE 6 environment definition file and log file are saved here. Before deleting this folder, back up the files in the folder if required.

- This product uses the "Microsoft Visual C++ 2005 Redistributable Package". Delete the package if necessary, using "Add or Remove Programs" in the Windows Control Panel.

- To reinstall Interstage following an uninstallation, first restart the system, delete the previously installed resources, and then reinstall Interstage.

- If the path in the PATH and CLASSPATH environment variables has been set manually, it may remain even after the uninstallation processing. Delete any unnecessary paths from the environment variables.

- "." may remain in the CLASSPATH system environment variable. Delete this if necessary.

- If the Terminal Services is in install mode, execute the following command to change it to execute mode.

```
CHANGE USER /EXECUTE
```

- If the oms account is not normally used and is unnecessary, delete it.

- If "Interstage PCMI(isje6)" remains as a service after the uninstallation of Interstage Java EE 6, execute the following command to delete it.

```
sc delete "Interstage PCMI(isje6)"
```

- If Java EE 6 common directories remain after uninstallation of Interstage Java EE 6, back them up if necessary and then delete them. However, for the purpose of cluster service linkage, if the Java EE6 common directory has been created on the shared disk and is referenced from multiple nodes, do not delete down to the final node.

6.4 Uninstalling XML Processor

If the Fujitsu XML Processor has been installed, a separate uninstall operation is required to uninstall it. The operation is the same as that used to uninstall Interstage Application Server "Server Package". After the uninstallation is complete, delete the Fujitsu XML Processor Jar files that have been set to the CLASSPATH.

Appendix A Installing the Fujitsu XML Processor

To use the Fujitsu XML processor, a separate installation operation is required. Insert the product DVD which includes the server function into the DVD drive, double-click \XML\setup.exe and follow the instructions of the installer screens.

If the confirmation dialog box for system restart opens when Fujitsu XML processor installation is competed, be sure to restart the system.

- The Fujitsu XML Processor manual can be referenced as follows, after installation of the Fujitsu XML Processor.

    - If the operating system is neither Windows 8 nor Windows Server 2012

      Click [Start], point to [All Programs], and then click [Fujitsu XML Processor V5.2]

    - If the operating system is Windows 8 or Windows Server 2012

      Click the application window, and then click [Fujitsu XML Processor V5.2]

- Although both the old and new versions of the Fujitsu XML Processor may be displayed in "Add or Remove Programs" (*1) the Fujitsu XML Processor has been replaced with the new version and there is no impact on operations.

  *1: This is the name in Windows Server(R) 2003, but it may be different in other versions.

- If the terminal service starts the installer in execution mode, shut down the installer and execute the following command to change the terminal service to install mode.

    - After installation is completed, execute the following command to change to execute mode.

    - Installation will not be normal if it is performed in execution mode. After uninstalling the Fujitsu XML Processor, change the terminal service to install mode and perform installation again.

  [Before installation]

```
CHANGE USER /INSTALL
```

  [After installation]

```
CHANGE USER /EXECUTE
```

Appendix B Secure Operation from the Interstage Java EE Admin Console/Interstage Management Console

The Interstage Java EE Admin Console/Interstage Management Console integrates the operation view for Interstage Application Server services to allow centralized control.

The information in this chapter is for secure operation from the Interstage Java EE Admin Console/Interstage Management Console of Standalone Server standard installations.

For details on the Interstage Java EE Admin Console, refer to the Java EE Operator's Guide.

For details on the Interstage Management Console, refer to "Login Authentication for the Interstage Management Console" in the "Configuring the Interstage Management Console" chapter of the Operator's Guide.

The following configuration items must be set to ensure secure operation from the Interstage Java EE Admin Console/Interstage Management Console on a Standalone Server standard installation:

- Place a "No Entry" system applications section on the machine used for installing Interstage to keep out non-trusted users.

- Disable all remote login services to the OS.

- During installation, when the "Interstage Java EE Admin Console Settings"/"Interstage Management Console Settings" dialog is displayed, select [Use SSL encryption].

- Limit users of the Interstage Management Console to those who have responsibility imposed by a role, and those who will not act dishonestly. For details on roles, refer to the Operator's Guide.

- Limit users of the Interstage Java EE Admin Console to those who have responsibility, and those who will not act dishonestly. For details, refer to the Java EE Operator's Guide.