



# **FUJITSU Software**

## **Interstage AR Processing Server V1.1.1**

### **Installation Guide**

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# Preface

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## Purpose of this document

This document explains how to install, uninstall, set up, and remove the setup for Interstage AR Processing Server.

## Intended readers

This document is intended for system operation administrators who will perform tasks on Interstage AR Processing Server, such as installation and setup.

Users who reference this document will be able to obtain an overview of Interstage AR Processing Server, as well as information on how to install, uninstall, set up, and remove the setup. Readers of this document are also assumed to have knowledge of:

- Smart devices
- Operating system that will be used with this product
- Web servers
- Databases

## Structure of this document

This document is structured as follows:

### Chapter 1 Server

Explains how to install Interstage AR Processing Server on servers.

### Chapter 2 Smart devices

Explains how to install Interstage AR Processing Server on smart devices.

### Chapter 3 Server

Explains how to set up Interstage AR Processing Server on servers.

### Chapter 4 Smart devices

Explains how to set up Interstage AR Processing Server on smart devices.

### Chapter 5 Setup removal

Explains how to remove the setup of Interstage AR Processing Server from a server.

### Chapter 6 Setup removal for smart devices

Explains how to remove the setup of Interstage AR Processing Server from a smart device.

### Chapter 7 Uninstallation from a server

Explains how to uninstall Interstage AR Processing Server from a server.

### Chapter 8 Smart devices

Explains how to uninstall Interstage AR Processing Server from a smart device.

### Chapter 9 Migration

Explains notes and procedures for migration to or from an Interstage AR Processing Server.

## Abbreviations

This manual uses the following abbreviations for the operating systems:

Official name	Abbreviation	
Microsoft Windows Server 2012 R2 Foundation	Windows Server 2012 R2	Windows
Microsoft Windows Server 2012 R2 Standard		
Microsoft Windows Server 2012 R2 Datacenter		

Official name	Abbreviation	
Microsoft Windows Server 2012 Foundation	Windows Server 2012	
Microsoft Windows Server 2012 Standard		
Microsoft Windows Server 2012 Datacenter		
Microsoft Windows Server 2008 R2 Standard	Windows Server 2008 R2	
Microsoft Windows Server 2008 R2 Enterprise		
Microsoft Windows Server 2008 R2 Datacenter		
Microsoft Windows Server 2008 R2 Foundation		
Windows 8.1	Windows 8.1	
Windows 8.1 Pro		
Windows 8.1 Enterprise		
Windows 8	Windows 8	
Windows 8 Pro		
Windows 8 Enterprise		
Red Hat Enterprise Linux 6 (for Intel64)	RHEL 6	Linux
Red Hat Enterprise Linux 7 (for Intel64)	RHEL 7	

## Notations

In this manual, text that must be replaced by the user is denoted in *italicsWithMixedCase* (for example, *installDir*).

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# Part 1 Installation

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This chapter explains the installation of Interstage AR Processing Server.

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# Chapter 1 Server

This section explains how to install Interstage AR Processing Server.

## 1.1 Tasks required before installation

L

### 1.1.1 Install required packages

If installing the Linux version, ensure that the required packages have been installed. Refer to "Operating environment" in the *Overview* for details on required packages.

### 1.1.2 Check users

Setup and setup removal will not execute normally if the users below exist.

If that is the case, take appropriate action, such as changing their names, for example.

W

- arsvdmpg

L

- arsvdmpg

W

## 1.2 Installation in Windows

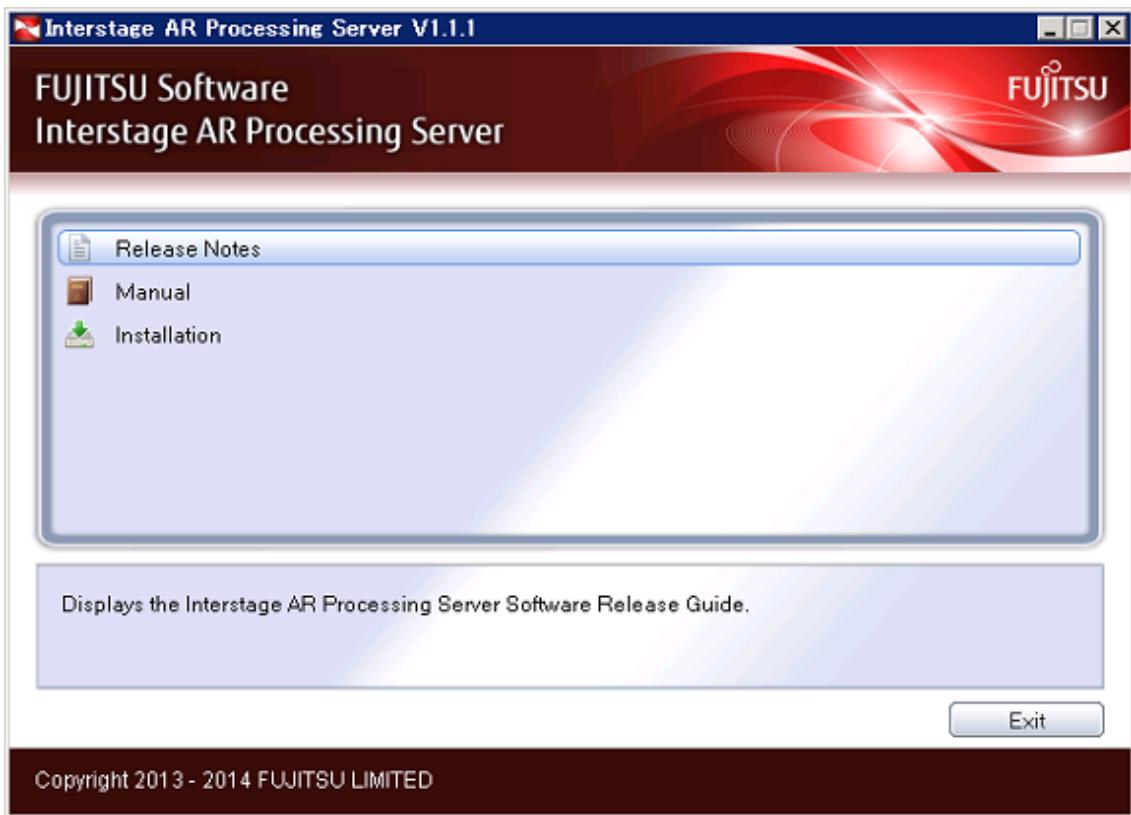
This section explains how to install the Windows version. [1.2.5 Troubleshooting](#) If issues arise during installation, refer to "[1.2.5 Troubleshooting](#)" and take the corresponding corrective action.

### 1.2.1 Run the installation

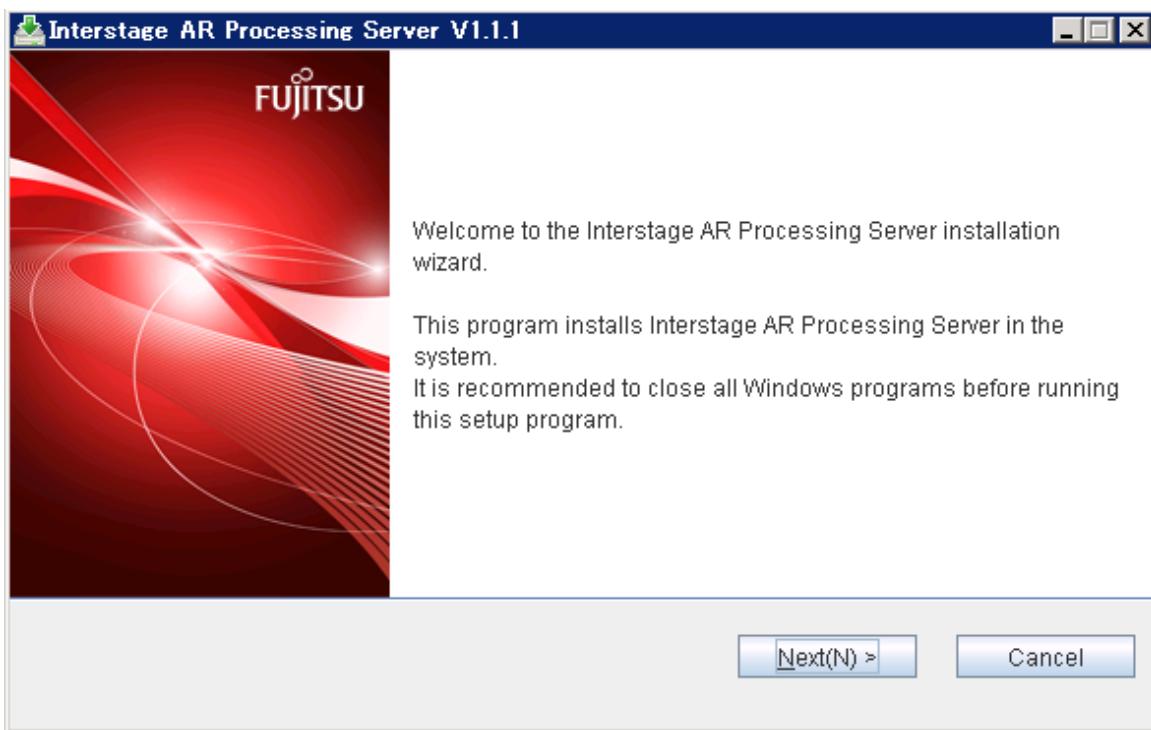
1. Log in as a computer administrator or as a member of the Administrators group.
2. Insert the installation DVD in the computer DVD drive.
3. The installer will start automatically, displaying a feature selection window. If the installer does not start automatically, execute autorun.exe to start it manually. Select **Installation**.



Always execute autorun.exe as an administrator.



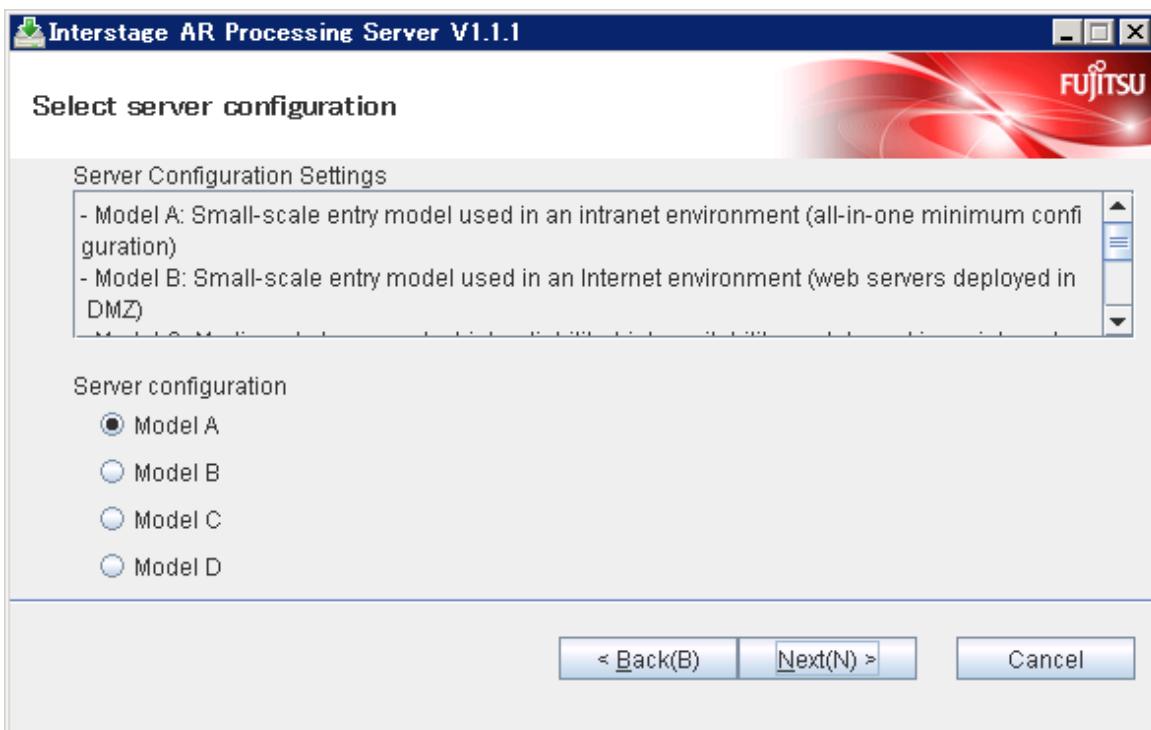
4. In the window below, click **Next**.



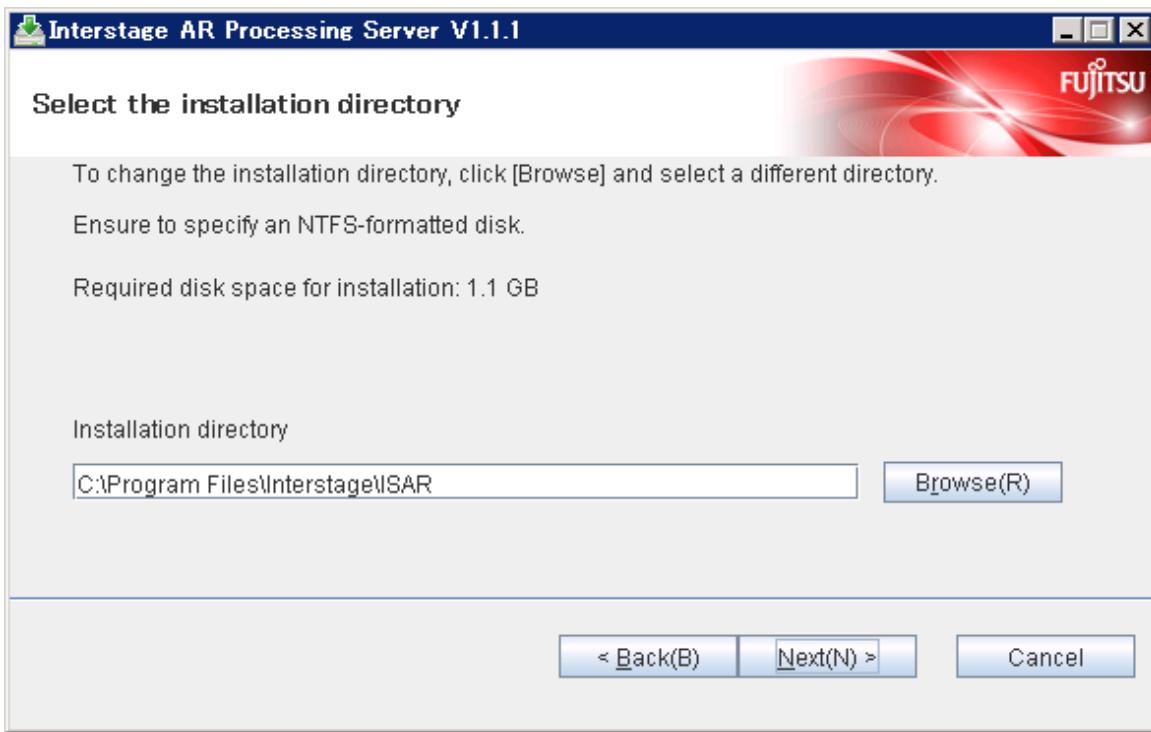
5. In the window to select the server configuration, select the Interstage AR Processing Server model to be installed, and then click **Next**.



Refer to the *Overview* for details on each of the models in Interstage AR Processing Server.



6. Specify the installation directory for Interstage AR Processing Server. To install in the default directory, click **Next**. To change the installation directory, click **Browse**, specify the desired directory, and then click **Next**.



Note the following regarding the name of the installation directory:

- It can contain the following characters:
  - Alphanumeric characters
  - Spaces

- Hyphens
  - Underscores
  - Parentheses
  - It can be up to 45 characters long.
  - If it ends with a space, a formatting error occurs.
  - If the user specifies a directory and clicks **Next**, but then clicks **Back** to return to specify a different one, then the directory that was initially specified might still exist- delete it if not required.
- 

## 1.2.2 Configure the web server

1. Enter the FQDN or IP address of the web server, and then click **Next**.

If Model A is selected, enter the FQDN or IP address of the local host.

If Model C is selected, enter the virtual IP address to be set in the load balancer. The specified FQDN or IP address can be up to 256 characters long (RFC 2396 format), and is a mandatory field. However, do not enter "localhost", "127.0.0.1", or "::1".



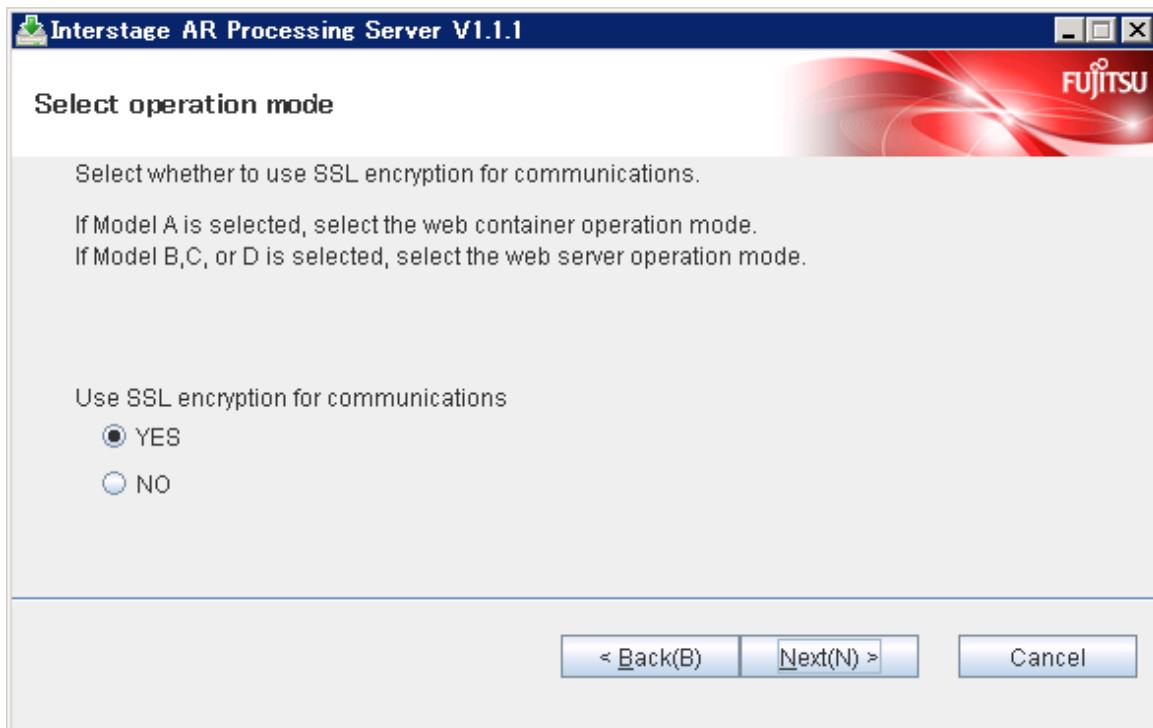
### Note

- Notes on the FQDN or IP address
  - The only check performed is to confirm the specified value is in RFC 2396 format.
  - This check does not guarantee communications from the device.

2. Select the operation mode, and then click **Next**.

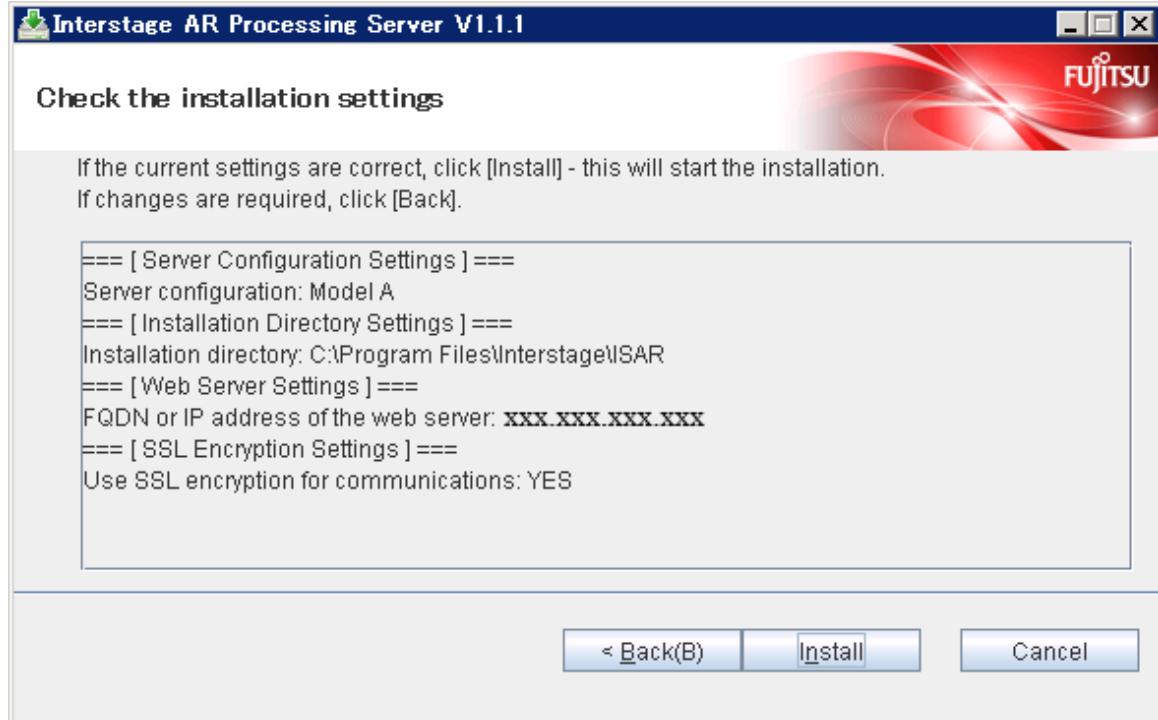
If Model A is specified, select the web container operation mode.

If Model B, C, or D is specified, select the web server operation mode. Select **YES** to enable SSL encryption of communications, or **NO** otherwise.



### 1.2.3 Check the installation settings

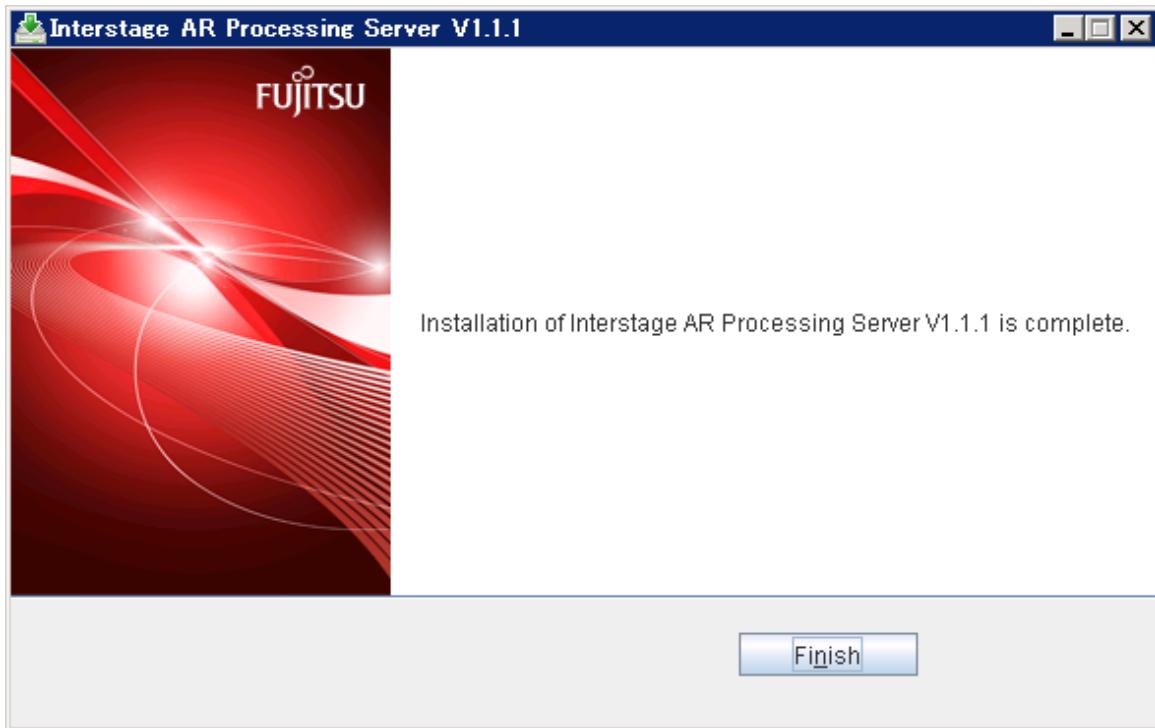
Check the displayed settings, and then click **Confirm**.



Do not forcibly quit installation, otherwise results cannot be guaranteed.

## **1.2.4 Check completion**

Click **Finish**. There is no need to restart the operating system once installation is complete.

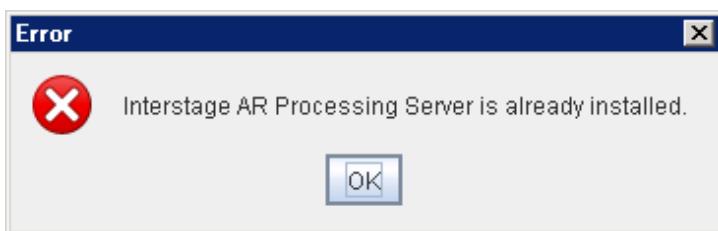


## **1.2.5 Troubleshooting**

This section explains the actions to take when issues arise during installation.

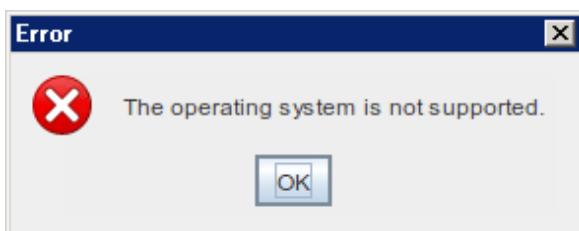
### **1.2.5.1 The installation was run but Interstage AR Processing Server is already installed**

The error below is displayed if the user clicks **Next** on the installation start window but Interstage AR Processing Server is already installed. Click **OK** to end the installation.



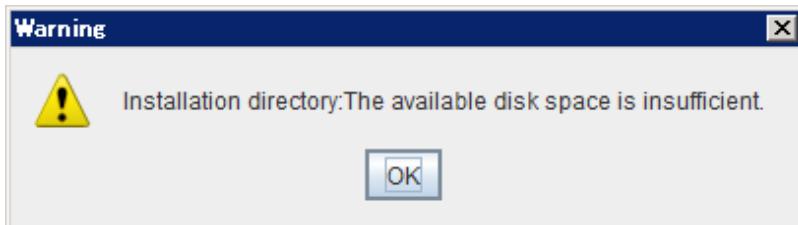
### **1.2.5.2 The installation was run on an unsupported operating system**

The error below is displayed if the user clicks **Next** on the installation start window on an operating system not supported by Interstage AR Processing Server. Click **OK** to end the installation.



### 1.2.5.3 The installation was run but disk space was insufficient

The error below is displayed if the user clicks **Next** on the installation start window but disk space is insufficient. Click **OK** to return to the installation directory configuration window.



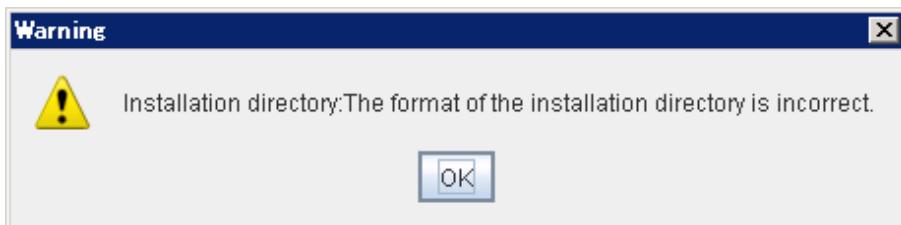
### 1.2.5.4 Installation directory check

The error below is displayed if the specified installation directory is in a non-existent drive, is a non-empty directory, or is an empty directory to which the administrator has not been assigned full control permissions. Click **OK** to return to the installation directory configuration window.

Either change the installation directory, or delete all directories and files contained in the specified installation directory. If required, back up resources before deleting.



The error below is displayed if the specified installation directory contains invalid characters or is more than 45 characters long. Click **OK** to end the installation.

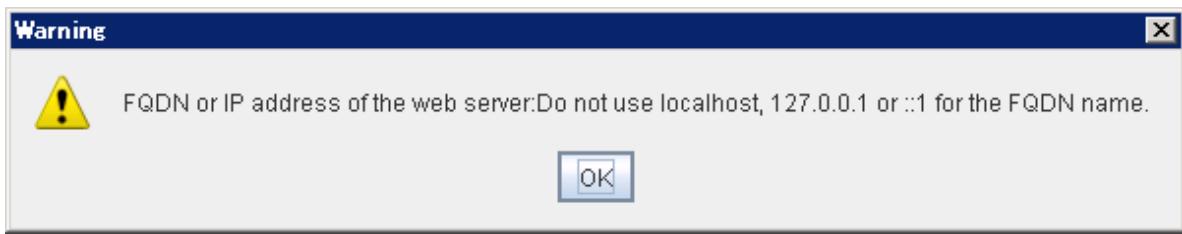


### 1.2.5.5 Invalid values in the FQDN or IP address of the web server

The error below is displayed if the specified FQDN or IP address of the web server is more than 256 characters long, or if an invalid value is specified as the host name or literal IP address. Click **OK** to return to the web server configuration window.

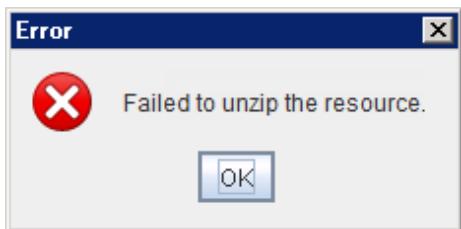


The error below is displayed if "localhost", "127.0.0.1", or "::1" is specified. Click **OK** to return to the web server configuration window.



### 1.2.5.6 Failed to extract resources

The error below is displayed if the specified installation directory exists, but the administrator has not been assigned full control permissions to it. Click **OK** to end the installation.



## L 1.3 Installation in Linux

### 1.3.1 Run the installation

1. Log in as a superuser (root) to the server on which Interstage AR Processing Server will be installed.
2. Insert the product DVD in the computer DVD drive, and mount it.

```
mount -t iso9660 -r /dev/deviceFileName dvdRomMountPoint
```

3. Execute the installation command.

```
# cd dvdRomMountPoint  
# ./setup.sh
```

4. In the installation start screen, enter "y" to start the installation, or "n" to end it.

```
Interstage AR Processing Server V1.1.1 Install Wizard  
Product name: Interstage AR Processing Server Standard Edition  
Version: V1.1.1  
Company name: Fujitsu Limited  
Start installation?  
[y,n]  
=>
```

5. In the Server Configuration Settings screen, check the description, and then press Enter.

```
==== [ Server Configuration Settings ] ====  
- Model A: Small-scale entry model for an intranet environment (all-in-one minimum configuration)  
- Model B: Small-scale entry model for an Internet environment (deploy the web server to a DMZ)  
- Model C: Medium- to large-scale, high-reliability, high-availability model for an intranet environment (multi-server configuration)  
- Model D: Medium- to large-scale, high-reliability, high-availability model for an Internet environment (in addition to the above, web servers are deployed to a DMZ)  
Refer to the Overview for information on system configurations and models.  
[Press Enter key]
```

6. Enter the number of the server configuration to be installed.

```
===[ Server Configuration Settings ] ===  
Input Server configuration  
[1:Model A,2:Model B,3:Model C,4:Model D][ENTER:1]  
=>
```

7. Enter the FQDN or IP address of the web server (this is mandatory).

```
===[ SSL Encryption Settings ] ===  
If Model A is selected, enter the FQDN or IP address for the host.  
Input FQDN or IP address of the web server.  
=>
```

8. Select the operation mode.

```
===[ SSL Encryption Settings ] ===  
If Model A was selected, select the web container operation mode.  
If Model B, C, or D is selected, select the web server operation mode.  
Input Use SSL encryption for communications  
[1:YES,2:NO][ENTER:1]  
=>
```

9. In the installation confirmation screen, enter "y" to start the installation using the displayed settings. To reconfigure a setting, enter the item number of the relevant setting (for example, enter "1" to change the setting for the server configuration - this will cause the Server Configuration Settings screen to be displayed again).

```
===[ Installation Directory Settings ] ===  
Installation directory(Can't Change): /opt/FJSVar  
===[ Server Configuration Settings ] ===  
1.Server configuration: Model A  
===[ Web Server Settings ] ===  
2.FQDN or IP address of the web server: xxx.xxx.xxx.xxx  
===[ SSL Encryption Settings ] ===  
3.Use SSL encryption for communications: YES  
  
Do you install it by this setting? Please input the item number when setting it again.  
[y,q,number]  
=>
```

10. Start the installation.

```
installing...  
  
Interstage AR Processing Server Standard Edition is being installed now.  
100% #####  
  
Interstage AR Processing Server Standard Edition install completed.
```



Do not forcibly quit installation, otherwise results cannot be guaranteed.

## 1.3.2 Troubleshooting

### 1.3.2.1 AR is already installed

The error below is displayed and installation ends if the user enters "y" in the installation start screen.

```
Interstage AR Processing Server is already installed.
```

### 1.3.2.2 The installation was run on an unsupported operating system

The error below is displayed and installation ends if the user enters "y" in the installation start screen on an operating system not supported by Interstage AR Processing Server.

```
The operating system is not supported.
```

### 1.3.2.3 The installation was run but disk space was insufficient

The error below is displayed and installation ends if the user enters "y" in the installation start screen.

```
The available disk space is insufficient.
```

### 1.3.2.4 Installation directory check

The error below is displayed if the installation directory is not empty. Delete the opt/FJSVar, /etc/opt/FJSVar, and /var/opt/FJSVar directories, or delete all the directories and files contained in these directories. If required, back up resources before deleting.

```
The installation directory does not exist, or the directory is not empty.
```

### 1.3.2.5 Server configuration selection

The error below is displayed and the user is prompted for a new value if the specified server configuration is not 1, 2, 3, or 4.

```
Select "Model A", "Model B", "Model C", or "Model D".  
==== [ Server Configuration Settings ] ====  
Input Server configuration  
[1:Model A,2:Model B,3:Model C,4:Model D][ENTER:1]  
=>
```

### 1.3.2.6 Operation mode selection

The error below is displayed and the user is prompted for a new value if the specified operation mode is not 1 or 2.

```
Select "YES" or "NO".  
==== [ SSL Encryption Settings ] ====  
If Model A was selected, select the web container operation mode.  
If Model B, C, or D is selected, select the web server operation mode.  
Specify whether to use SSL encryption for communications.  
[1:YES,2:NO][ENTER:1]  
=>
```

### 1.3.2.7 Invalid values in the FQDN or IP address of the web server

The error below is displayed and the user is prompted for a new value if the specified FQDN or IP address of the web server is more than 128 characters long, or if an invalid value is specified as the host name or literal IP address.

```
Enter the host name or IP address using up to 128 characters.
```

The error below is displayed and the user is prompted for a new value if "localhost", "127.0.0.1", or "::1" is specified.

```
Do not use "localhost", "127.0.0.1", or "::1" as the FQDN name.
```

### 1.3.2.8 A package required for installation was not found

If a package required for installation of the product is missing, the message below is output, followed by the list of missing packages.

```
The package necessary for the installation of the product does not exist.
```

## 1.4 Silent installation

This section explains the silent installation of Interstage AR Processing Server.

Interstage AR Processing Server is usually installed by entering the required information in dialog format as the installation is run. However, silent installation allows the installation to be performed without entering any information in dialog format. Note that silent installation can be used for new installations of Interstage AR Processing Server. However, as with normal installations (using dialog format), an overwrite installation will still result in an error.

Silent installation is executed using the following procedure:

1. Create an installation parameter CSV file
2. Run the silent installation

### 1.4.1 Create an installation parameter CSV file

Consider the required information in accordance with "Tasks required before installation" and then create an installation parameter CSV file using the following format:

A sample of the installation parameter CSV file is stored in the directory shown below.

```
W
dvd\ISAR\Disk1\sample
L
# su <RETURN>
# mount -t iso9660 -r /dev/mnt dvdRomMountPoint<RETURN>
# dvdRomMountPoint/installer\ConfigFiles/sample
```

#### 1.4.1.1 Specification format

Enter data in the installation parameter CSV file using CSV format with three columns per line.

```
sectionName, parmName, value
sectionName, parmName, value
:
```

Configure the information below in each column.

Item	Description
sectionName	Section name. The following two types are available: "installInfo": Sets product information. "parameters": Sets parameter information for this product.
parmName	Parameter name. Each section has a valid parameter.
value	Setting value.



- Blank lines cannot be included.
- When performing tasks in Linux, use LF(\n) as the line feed for CSV files.
- The section name and parameter name cannot be omitted.
- Undefined parameters cannot be configured in lines with the section name "installInfo". Also, the same parameter cannot be specified more than once.
- Undefined parameters configured in lines with the section name "parameters" will be ignored when executed. Also, if the same parameter is defined more than once, then the one defined last will be used.
- The following symbols are not allowed:
  - Caret (^)?

- Less than sign (<)
  - Greater than sign (>)
  - Question mark (?)
  - Asterisk (\*)
  - Ampersand (&)
  - Pipe (|)
  - Semicolon (;)
- .....

#### 1.4.1.2 List of parameters

This section describes the parameters that can be configured in each section.

##### 1. installInfo section

Parameter name	Description
Name	Configures the installer name. This parameter setting is mandatory. The fixed value below should be configured for this product: isarinst



The parameters "softwareName", "OS", "Version", and "Edition" can be used in the "installInfo" section. Values set in these parameters do not affect silent installation.

Valid values for the above parameters are strings comprising at least one alphanumeric character or symbol, excluding double quotation marks ("") and commas (,).

.....

##### 2. parameters section

Parameter name	Description
InstallPath	Configures the installation directory.
InstallModel	Configures the server configuration to be installed.
WebServerHost	Configures the FQDN or IP address of the web server.
WebServerSSL	Configures whether to use SSL encryption for communications.

#### 1.4.1.3 Parameter details

This section explains the configuration details for each parameter.

##### InstallPath

Description	Configures the installation directory for the product.
Valid values	Path string - Specify a path containing up to 45 characters (including the drive name) - It can contain the following characters: Alphanumeric characters Spaces

	<p>Hyphens</p> <p>Underscores</p> <p>Parentheses</p> <p>Note: Colons can be used as the character that follows the drive name.</p>
Default value	%ProgramFiles%\Interstage\ISAR
Remarks	<p>Only valid in Windows.</p> <p><b>L</b> In Linux, the installation directory is fixed as /opt/FJSVar.</p>

### InstallModel

Description	Configures the server configuration to be installed.
Valid values	<p>Model A</p> <p>Model B</p> <p>Model C</p> <p>Model D</p>
Default value	Model A
Remarks	<p><b>L</b> Enclose the value in single quotation marks. For example, 'Model A'. If the value is not enclosed, an error will occur.</p>

### WebServerHost

Description	Configures the FQDN or IP address of the web server.
Valid values	<p>Specify the FQDN or IP address in RFC 2396 format.</p> <p>Note, however, that "localhost", "127.0.0.1", and "::1" cannot be used.</p>
Default value	myhost
Description	If "myhost" is specified, input will be required during setup.

### WebServerSSL

Description	Configures whether to use SSL encryption for communications.
Valid values	<p>YES</p> <p>NO</p>
Default value	YES
Remarks	

### 1.4.1.4 Configuration notes

This section describes settings that require particular attention when creating an installation parameter CSV file.

Even if valid values have been specified for individual parameters in the installation parameter CSV file, a certain combination of features or the runtime environment itself can sometimes cause these set values to become invalid, or lead to failed silent installation, or failed construction or operation of the environment following silent installation. Exercise caution accordingly.

#### All parameters

If an unrelated parameter is configured in a feature that will be installed, appropriate values must still be set to ensure that basic checks can be performed, such as the range of strings or numeric values that can be input. Note, however, that this will not affect the installation.

**W**

#### "InstallPath"

For the installation directory, do not specify a path that ends in a space followed by a number, since this will result in an error.

**W**

#### Parameters in "XXXPath" or "XXXDirectory" format

If either of the following conditions is satisfied, silent installation will fail. Check the installation environment in advance.

- A directory that cannot be written to is specified
- The capacity of the specified directory or drive is insufficient

**L**

#### "InstallModel"

Enclose the value in single quotation marks. For example, 'Model A'. If the value is not enclosed, an error will occur.

### 1.4.1.5 Run the silent installation

Refer to "Operating environment" in the *Overview* before running the silent installation.

Also check the file against the issues mentioned in "Configuration notes", and then store this file in any directory.

**W**

Log in as an administrator, insert the installation DVD-ROM in the computer DVD-ROM drive, and execute the following command from the command prompt (note that if the installer window is displayed by automatic startup, the installer must be ended before executing the command).

```
dvdRomDrive\ISAR\Disk1\isarsilentinstall.bat -s installParmCsvFile -l errorLogFile [-c]
```



#### Note

- Specify the full name of the installation parameter CSV file and of the error log file. Enclose the value in double quotation marks if it contains spaces.
- Specify an existing directory with write permissions as the error log file directory. Note that if a file with the same name as the specified error log file already exists, it will be overwritten during execution.
- Note that a User Account Control (UAC) warning message may be displayed when silent installation is executed in Windows Server 2008 R2 - if this happens, allow installation to proceed. This warning message can be prevented by disabling User Account Control.
- If -c is specified, the batch file will only check the content of the installation parameter CSV file - it will not perform installation.
- The error log file will only contain entries if an error occurs.

**L**

Insert the installation DVD-ROM in the computer DVD-ROM drive and execute the isarsilentinstall.sh shell script. This operation must be executed as a superuser.

```
# su <RETURN>
# mount -t iso9660 -r /dev/mnt dvdRomMountPoint <RETURN>
# dvdRomMountPoint/installer/ConfigFiles/isarsilentinstall.sh -s installParmCsvFile -l errLogFile [-c]
```



#### Note

- Specify the full name of the installation parameter CSV file and of the error log file.
- Specify an existing directory with write permissions as the error log file directory. Note that if a file with the same name as the specified error log file already exists, it will be overwritten during execution.

### 1.4.1.6 Check the installation results

Check the command return value and the message in the error log file. The command return values are explained below.

## Meaning of the return value

Return value	Meaning	Action
0	Installation was successful	—
1	CSV format check error	Take action according to the message output to the log.
2	No installInfo,Name error	<ul style="list-style-type: none"> <li>- Ensure that installInfo,Name is specified.</li> </ul>
3	installInfo invalid value specification error	<ul style="list-style-type: none"> <li>- Only specify acceptable values in the section name and parameter name.</li> </ul>
4	installInfo duplication error	<ul style="list-style-type: none"> <li>- Ensure that only one installInfo,Name is specified.</li> </ul>
5	Value length error	<ul style="list-style-type: none"> <li>- Ensure that isarinst is specified.</li> </ul>
8	No parameters error	<ul style="list-style-type: none"> <li>- At least one parameter must be specified.</li> </ul>
32	Ended in an error: Other	<p>Collect the data listed below and contact Fujitsu technical support.</p> <ul style="list-style-type: none"> <li>- %TEMP% \ISARinst.log</li> <li>- %ProgramData%\Fujitsu\FujitsuF4CR\cir\logs\cirlog.X\log[.X] (where X is a number)</li> <li>- Error log file specified in -l option</li> </ul>
33	Ended in an error: Parameter check error	Command line argument error.
34	Ended in an error: Installer-related error  Duplicate startup or similar	Check "Uninstall (middleware)", or ensure that the installer of another product has not started. If a different product installer is running, end it and then reexecute the silent installation.
35	Ended in an error: Installation cannot be run due to conflicting installation	<p>Check "Incomplete Install" in "Uninstall (middleware)" and remove the conflicting installation.</p> <p>Alternatively, remove according to <a href="#">7.1.3 Installation resources deletion</a> and then, reexecute the silent installation.</p>
36	Error during silent installation:  If the installation process cannot continue due to input value checks or if a prerequisite condition has not been satisfied.	Review the content of the installation parameter CSV file.
37	Ended in an error: CSV file error	<p>The CSV file contains invalid characters</p> <p>Action: Ensure that the installation parameter CSV file does not contain any of the following characters:</p> <ul style="list-style-type: none"> <li>- Cater (^)</li> <li>- Less than sign (&lt;)</li> <li>- Greater than sign (&gt;)</li> <li>- Question mark (?)</li> <li>- Asterisk (*)</li> <li>- Ampersand (&amp;)</li> <li>- Pipe ( )</li> <li>- Semicolon (;)</li> </ul>
38	Error in the error log file path	<p>Review the error log file path specified in -l option.</p> <ul style="list-style-type: none"> <li>- Is it in path format?</li> </ul>

Return value	Meaning	Action
		- Does the error log file storage directory path exist? - Have write permissions for the error log file been configured correctly?

If the return value is 36, open the error log file and check the detailed error information. Error information is explained below.

Error information
ui.requirement.id=ISAR_exlusiveCheck ui.errorMsg=Interstage AR Processing Server is already installed.
ui.requirement.id=ISAR_OSCheck ui.errorMsg=The operating system is not supported.
ui.requirement.id=ISAR_reqEnoughDiskSpace ui.errorMsg=The available disk space is insufficient.
ui.requirement.id=ISAR_reqValidPath ui.errorMsg=The installation directory does not exist, or the directory is not empty.
ui.input.id=ISAR_PARAM_InstallPath ui.errorMsg=The format of the installation directory is incorrect.
ui.input.id=ISAR_PARAM_WebServerHost ui.errorMsg=Enter the host name or IP address using up to 256 characters.
ui.artifact.id=checkHostNameCmd_ISAR_PARAM_WebServerHost ui.errorMsg=Do not use localhost, 127.0.0.1 for the FQDN name.

If no error information was output to the error log file, check the points below:

- Has an invalid configuration value been specified as the installation model?
- Has an invalid configuration value been specified for SSL encryption?
- Has a path name ending in a space followed by a number been specified for the installation directory?

## 1.5 If Model B, C, or D is selected

---

If Model B, C, or D is selected, install the products listed below. Refer to each product manual for information on how to install it.

### For small-scale entry models used in an Internet environment:

- Interstage Application Server V11 or later
- Load balancer

### For medium- to large-scale, high reliability, high availability models used in an intranet environment:

- Interstage Application Server V11 or later
- Symfoware Server Standard Edition V12 or later
- Load balancer

### For medium- to large-scale, high reliability, high availability models used in an Internet environment:

- Interstage Application Server V11 or later
- Symfoware Server Standard Edition V12 or later
- Load balancer

## Chapter 2 Smart devices

An application must be installed to use the client authoring tool provided by Interstage AR Processing Server on a smart device.

### 2.1 Installing the Android version

An application to execute client authoring is provided with Interstage AR Processing Server.

**W** `InstallDir\mobileclient\android\ARClientAuthoring.apk`

`InstallDir\mobileclient\android\ARClientDev.apk`

**L** `/opt/FJSVar/mobileclient/android/ARClientAuthoring.apk`

`/opt/FJSVar/mobileclient/android/ARClientDev.apk`

When installing on a smart device, select an installation method that is suited to the style of business and user.



#### Example

The example below installs the application on the smart device by connecting to a PC via USB (the USB connection method varies for different smart devices - refer to the relevant smart device manual for details).

1. Copy the native application to the PC.
2. Select **Unknown sources** on the smart device, to allow installation of the application obtained via USB.
  1. On the **Settings** screen, tap **Security**,
  2. Select **Unknown sources**.
3. Connect the smart device to the PC using a USB cable.
4. If the PC does not recognize the driver, then install it.
5. On the PC, select the smart device using Windows Explorer - if the PC does not recognize the smart device, refer to the smart device manual.
6. Copy the native application from the PC to the mounted smart device.
7. On the PC taskbar, select **Safely remove hardware and eject media** and release the mounted device.
8. On the smart device:
  1. Start the application with the file management feature and select the native application. If there is no application with a file management feature, then install one.
  2. In the installation screen, start the installation.
  3. Upon completion, on the **Settings** screen, **Security** menu, clear **Unknown source**.

### 2.2 Installing the iOS version

The executable file for the client authoring tool (iOS) is not offered as a product, because Apple Inc. does not permit distribution of executable files.

To execute the client authoring tool on iOS, the client company must enter into a contract with Apple Inc. and build the client authoring tool before it can be used.

Refer to the *Developer's Guide* for details on how to build the client authoring tool.

### 2.3 Installing the Windows version

An application to execute client authoring is provided with Interstage AR Processing Server. The application installer is stored in:

**W** `InstallDir\mobileclient\Windows\ARClientSetup.msi`

**L** /opt/FJSVar/mobileclient/Windows/ARClientSetup.msi

This section explains how to install the product.

1. Copy the installer to the Windows smart device.
2. Run the installer as a user with administrator privileges.
3. The installer screen will be displayed - wait for the installation to be completed.
4. Perform one of the following procedures to run the application:
  - a. In the Windows **Search** charm, type "Authoring", and select the application from the displayed list.
  - b. From **Start** or **Apps**, select **Interstage AR > Authoring**.



Ensure that the most recent Windows update has been applied before using this product.

# Part 2 Setup

---

This chapter explains how to setup Interstage AR Processing Server on servers and smart devices.

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<a href="#">Chapter 4 Smart devices</a> .....	35

# Chapter 3 Server

Setup must be performed in accordance with the environment used before using Interstage AR Processing Server.

## 3.1 Setup required for each model

The setup command can be used to set up Interstage AR Processing Server according to the selected model.

### If Model A or B is selected

If Model A or B is selected, the setup for the database and web container required to use the AR server will be executed automatically and at the same time.

- Database setup
  - Creates the AR database
  - Registers and starts the AR services
- Web container setup
  - Integrated settings for the web container and AR database
  - Deploys the AR server feature module to the web container, and registers and starts services

### If Model C or D is selected

If Model C or D is selected, information for the web server and web container of the parameter file will be specified in the configuration file.



The AR server environment will be initialized when setup is executed. If required, backup resources before reexecuting the setup.

## 3.2 Tasks required before setup

Ensure that the following tasks are performed before setup.

### 3.2.1 Check the port number

Interstage AR Processing Server uses port numbers for its database and web container features. Before installing, ensure that none of the ports below is already in use by another program - if this happens, then revise the parameter file before setup (the file is referenced during setup).

Also check the port numbers for the web server, AP server, and DB server that will be used for Models B, C, and D.

Item No.	Features	Details	Port number	Modifiable
1	Database feature	Port that the client connects to	9201	N
2	Web container feature (domain)	HTTP listener port for operation management	9101	Y
3		HTTP listener port	9108	Y
4		JMX connector listener port for operation management	9109	Y
5		HTTPS listener port	9110	Y
6		Connection port for the message broker	9111	Y

Item No.	Features	Details	Port number	Modifiable
7		IIOP (ORB) listener port	9112	Y
8		IIOP/SSL listener port for mutual authentication	9113	Y
9		IIOP/SSL listener port	9114	Y
10	Web container feature (REST API/overlay application)	HTTP listener port	9102	Y
11		HTTPS listener port	9104	Y
12	Web container feature (data management console)	HTTP listener port	9103	Y
13		HTTPS listener port	9105	Y

- Database feature  
Port number for accessing the database.
- Web container feature (domain)  
Port number for operations relating to the AR processing server.
- Web container feature (REST API/overlay application)  
Port number used when utilizing the REST API or overlay application provided by this product (refer to the *Reference Guide* for details).
- Web container feature (data management console)  
Port number for accessing the data management console provided by this product.

### 3.2.2 Check the setup parameters

This section describes the content of the parameter file referenced during setup, as well as details of input checks. The parameter file stores parameters input from the window during installation, as well as parameters that can be changed by the user during setup.

The directory is shown below.

**W** `installDir\setup_parameter\arsv_setup_parameters.txt`

**L** `/etc/opt/FJSVar/setup_parameter/arsv_setup_parameters.txt`

Item No.	Description	Parameter file		Wind ow input	Input check		
		Key	Default value		Possible characters	Lowe r limit	Upper limit
1	Installation model	INSTALL_MODEL	Model A	Y	Model A, Model B, Model C, Model D	—	—
2	Database port number	PGPORT	9201	—	Numbers	1	65535
3	Web server FQDN/IP	WEBSERVER_HOST	None	Y	Characters that can be used in the host name or IP address.  Note that "localhost", "127.0.0.1", and "::1" cannot be used.	—	—
4	Operation mode	WEBSERVER_SSL	YES	Y	YES, NO	—	—
5	HTTP listener port for operation management	DOMAIN_ADMINPORT	9101	—	Numbers	1	65535

Item No.	Description	Parameter file		Wind ow input	Input check		
		Key	Default value		Possible characters	Lowe r limit	Upper limit
6	HTTP listener port	DOMAIN_INSTANCEPORT	9108	—	Numbers	1	65535
7	JMX connector listener port for operation management	DOMAIN_JMX_PORT	9109	—	Numbers	1	65535
8	HTTPS listener port	HTTP_SSL_PORT	9110	—	Numbers	1	65535
9	Connection port for the message broker	JMS_PORT	9111	—	Numbers	1	65535
10	IIOP (ORB) listener port	ORB_LISTENER_PORT	9112	—	Numbers	1	65535
11	IIOP/SSL listener port for mutual authentication	ORB_MUTUAL_AUTH_PORT	9113	—	Numbers	1	65535
12	IIOP/SSL listener port	ORB_SSL_PORT	9114	—	Numbers	1	65535
13	Web server HTTPS port	WEB_SSL_PORT	443	—	Numbers	1	65535
14	Web server HTTP port	WEB_PORT	80	—	Numbers	1	65535
15	Backup directory	BACKUP_DIR	 <i>installDir</i> backup  /var/opt/FJSVarbackup	—	Up to 127 characters	—	—
16	HTTP listener port (REST API)	AR_DBSERVICE_PORT	9102	—	Numbers	1	—
17	HTTPS listener port (REST API)	AR_DBSERVICE_SSL_PORT	9104	—	Numbers	1	—
18	HTTP listener port (data management console)	AR_CONSOLE_PORT	9103	—	Numbers	1	—
19	HTTPS listener port (data management console)	AR_CONSOLE_SSL_PORT	9105	—	Numbers	1	—



- Do not specify directories using the Windows 8.3 format.
- During setup, no error is generated, even if an incorrect path is specified for the web server or the backup directory.
- Specify the correct path in the parameter file, and perform the setup again.
- Ensure that the console can be accessed using the specified web server host FQDN/IP. If the connection fails, remove the setup, specify a valid FQDN/IP, and then execute the setup again.

## 3.3 Setup (Windows)

---

### 3.3.1 Executing the setup

1. Log in as administrator to the server on which Interstage AR Processing Server will be set up.
2. Execute the setup batch script.

```
"installDir\bin\setup\arsv_setup.bat"
```

3. Setup will start.

```
Interstage AR Processing Server SETUP START.
```

4. Ensure that the setup is complete.

```
Interstage AR Processing Server SETUP END.
```



#### Note

- Ensure that the directories below have been deleted (if they still remain after reexecuting setup, delete them before performing setup operations).
  - *installDir\fjje6\_domainsroot*
- Ensure that the installation process is complete before starting the command prompt window to execute the setup command. The command prompt must be started by a user with administrator privileges. To do that, from the context menu, select **Run as administrator**.
- Creating operating system users  
If model A or B is selected, a user (arsvdmpg) will be added automatically to access the database features. Do not change or delete any settings such as the password. If settings are changed or deleted, the product may not operate correctly.
- Completing the setup  
It may take some time to setup the web container features. If an error occurs during access immediately following setup, wait for a few moments before reconnecting.

### 3.3.2 Troubleshooting measures during setup

---

If an error occurs during setup, return to the pre-setup state, and check if there are any issues with the parameter file referenced during setup.

A log file is output with the execution progress of the setup. If setup fails, check the log file below.

```
"installDir\logs\ISARinst.setup.log"
```

#### Incorrect specification of the parameter file

A continuously output message such as the one below indicates that the parameter file may have been specified incorrectly:

```
** cmd execute failure number
*** FAILURE featureName setup **
```

Check the content of the parameter file.

- Are any keys missing or incorrect?
- Do the values contain invalid characters?
- Is the specified port number already being used?

#### The automatically generated user (arsvdmpg) already exists

An output message such as the one below indicates that the automatically generated user (arsvdmpg) already exists:

```
net user arsvdmpg ***** /add Account already exists
```

Ensure that the automatically generated user does not exist, and then execute the setup again.

## L 3.4 Setup (Linux)

### L 3.4.1 Executing the setup

1. Log in as a superuser (root) to the server on which Interstage AR Processing Server will be setup.
2. If Model A or B is selected, configure /etc/hosts as shown below:

```
arServerIpAddress hostName
```



#### Example

Example /etc/hosts

192.0.2.0 hostname

3. Execute the setup script.

```
/opt/FJSVar/bin/setup/arsv_setup.sh
```

4. Setup will start.

```
Interstage AR Processing Server SETUP START.
```

5. Ensure that the setup is complete.

```
Interstage AR Processing Server SETUP END.
```



#### Note

- Ensure that the directories below have been deleted (if they still remain after reexecuting setup, delete them before performing setup operations).
  - /var/opt/FJSVar/fjje6\_domainsroot

### L 3.4.2 Troubleshooting measures during setup

If an error occurs during setup, return to the pre-setup state, and check if there are any issues with the parameter file referenced during setup.

A log file is output with the execution progress of the setup. If setup fails, check the log file below.

```
/var/opt/FJSVar/logs/ISARinst.setup.log
```

#### Required packages are not installed

An output message such as the one below indicates that packages required for setup have not been installed - if this occurs, install the required packages (refer to "Operating environment" in the *Overview* for details).

```
error while loading shared libraries: libreadline.so.5: cannot open shared object file: No such file or directory
```

#### Failed web container startup

An output message such as the one below indicates that web container startup has failed - if this occurs, add *webContainerIpAddress* and *hostName* to /etc/hosts:

There is a process already using the admin port 9101 -- it probably is another instance of a GlassFish server.



## Example

Example /etc/hosts

192.0.2.0 hostname

### Incorrect specification of the parameter file

A continuously output message such as the one below indicates that the parameter file may have been specified incorrectly:

```
** cmd execute failure number
*** FAILURE featureName setup **
```

Check the content of the parameter file.

- Are any keys missing or incorrect?
- Do the values contain invalid characters?
- Is the specified port number already being used?

### The automatically generated user (arsvdmpg) already exists

An output message such as the one below indicates that the automatically generated user (arsvdmpg) already exists:

```
The automatically generated user (arsvdmpg) already exists.
```

Ensure that the automatically generated user does not exist, and then execute the setup again.

## 3.5 If Model A is selected (for small-scale entry models used in an intranet environment)

### If using basic authentication

Install and build the following product to configure basic authentication using Model A:

- Interstage Application Server V11

Refer to [3.6.1 Interstage Application Server V11 \(web server layer\)](#) for details on how to configure an environment for integrating the web server (Interstage Application Server) with an AR processing server (such as the data management console).

### If using SSL communications

The AppCache feature will not operate effectively in Android 4.4 or later, iOS8 or later, or Windows, unless an SSL certificate signed by the certificate authority (CA) is used. Therefore, a certificate signed by the CA must be configured in the web container to perform SSL communications.



## Note

To specify settings in the keystore or truststore, use the keytool command stored in the directory below:

```
installDir\components\STFISAR_HJDK7\jdk7\bin
```

```
/opt/FJSVar/components/STFISAR_HJDK7/jdk7/bin
```

Refer to the JDK7 specifications for details on keytool command specifications.

W

L



## See

The keystore/truststore passwords specified in the keytool command are written to the file below and should be confirmed (note that only administrators can reference it):

W `installDir\bin\setup\work\masterpassfile.txt`

L `/opt/FJSVar/bin/setup/work/masterpassfile.txt`

1. Back up the keystore file below:

W `installDir\fjje6_domainsroot\domains\domain1\config\keystore.jks`

L `/var/opt/FJSVar/fjje6_domainsroot/domains/domain1/config/keystore.jks`

2. If using an existing alias, delete the relevant public key/private key pair registered in the keystore.



If the alias is 'newcert'

W `keytool -delete -alias newcert -keystore installDir\fjje6_domainsroot\domains\domain1\config\keystore.jks`

L `keytool -delete -alias newcert -keystore /var/opt/FJSVar/fjje6_domainsroot/domains/domain1/config/keystore.jks`

3. Generate a new public key/private key pair in the keystore using any alias, and specify the X.500 identifiers below in accordance with the X.500 identifier specifications and the CA procedure:

X.500 identifier	Meaning
CN (Common Name)	Full name For a server certificate, use FQDN or the IP address (*1)
OU (Organization Unit)	Organizational unit (for example, department)
O (Organization)	Organization (for example, company)
L (Locality)	Town or region (for example, suburb)
ST (State or Province)	State or province
C (Country)	Country name code (ISO 3166)

\*1: If the FQDN or the IP address of the URL do not match the CN, a host name detection error will occur when performing SSL communications.



The example below uses RSA key generation algorithm with 2048-bit key length, SHA1 with RSA signature algorithm, 'newcert' alias, and 365-day validity period.

W `keytool -genkeypair -alias newcert -keyalg RSA -keysize 2048 -sigalg SHA1withRSA -dname "CN=example.jp, OU=Example Organization Unit, O=Example Organization, L=Example City, ST=Example Prefecture, C=JP" -validity 365 -keystore installDir\fjje6_domainsroot\domains\domain1\config\keystore.jks`

L `keytool -genkeypair -alias newcert -keyalg RSA -keysize 2048 -sigalg SHA1withRSA -dname "CN=example.jp, OU=Example Organization Unit, O=Example Organization, L=Example City, ST=Example Prefecture, C=JP" -validity 365 -keystore /var/opt/FJSVar/fjje6_domainsroot/domains/domain1/config/keystore.jks`

4. Specify the private key password (press **Enter** to ensure that it matches the keystore password).

5. Generate a certificate signing request (CSR) from the keystore.

### Example

The example below uses the alias 'newcert' and the CSR file name 'newcert.csr'.

**W**  
keytool -certreq -alias newcert -file newcert.csr -keystore *installDir\fjje6\_domainsroot\domains\domain1\config\keystore.jks*

**L**  
keytool -certreq -alias newcert -file newcert.csr -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/keystore.jks

6. Send a CSR to the CA and obtain the following:

- Certificate signed by the CA
- CA root certificate
- Intermediate CA certificate (if required)

7. Register the CA root certificate in the keystore.

### Example

The example below uses the alias 'ca\_root' and the certificate file name 'ca\_root.cer'.

**W**  
keytool -importcert -alias ca\_root -file ca\_root.cer -trustcacerts -keystore *installDir\fjje6\_domainsroot\domains\domain1\config\keystore.jks*

**L**  
keytool -importcert -alias ca\_root -file ca\_root.cer -trustcacerts -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/keystore.jks

8. If required, sequentially register intermediate CA certificates in the keystore, beginning with the highest layer of certificate.

### Example

The example below uses the alias 'ca\_inter' and the certificate file name 'ca\_inter.cer'.

**W**  
keytool -importcert -alias ca\_inter -file ca\_inter.cer -trustcacerts -keystore *installDir\fjje6\_domainsroot\domains\domain1\config\keystore.jks*

**L**  
keytool -importcert -alias ca\_inter -file ca\_inter.cer -trustcacerts -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/keystore.jks

9. Register the obtained certificate in the keystore.

### Example

The example below uses the alias 'newcert' and the certificate file name 'mycert.cer'.

**W**  
keytool -importcert -alias newcert -file mycert.cer -trustcacerts -keystore *installDir\fjje6\_domainsroot\domains\domain1\config\keystore.jks*

**L**  
keytool -importcert -alias newcert -file mycert.cer -trustcacerts -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/keystore.jks

10. Back up the truststore file below:

**W**  
*installDir\fjje6\_domainsroot\domains\domain1\config\cacerts.jks*

**L**  
/var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/cacerts.jks

11. Register the CA root certificate in the truststore.

## Example

The example below uses the alias 'ca\_root' and the certificate file name 'ca\_root.cer'.

**W** keytool -importcert -alias ca\_root -file ca\_root.cer -trustcacerts -keystore installDir \fjje6\_domainsroot\domains\domain1\config\cacerts.jks

**L** keytool -importcert -alias ca\_root -file ca\_root.cer -trustcacerts -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/cacerts.jks

12. If required, sequentially register intermediate CA certificates in the keystore, beginning with the highest layer of certificate.

## Example

The example below uses the alias 'ca\_inter' and the certificate file name 'ca\_inter.cer'.

**W** keytool -importcert -alias ca\_inter -file ca\_inter.cer -trustcacerts -keystore installDir \fjje6\_domainsroot\domains\domain1\config\cacerts.jks

**L** keytool -importcert -alias ca\_inter -file ca\_inter.cer -trustcacerts -keystore /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config/cacerts.jks

13. Specify the certificate that was registered using arsvsetSSL.bat in each of the web container ports.

## Example

The example below uses the alias 'newcert'.

**W** arsvsetSSL.bat newcert

**L** arsvsetSSL.sh newcert

14. Ensure that the update datetime of the web container domain.xml stored in the directory below has been modified, and restart the web container:

**W** installDir\fjje6\_domainsroot\domains\domain1\config

**L** /var/opt/FJSVar/fjje6\_domainsroot/domains/domain1/config

## **3.6 If Model B is selected (for small-scale entry models used in an Internet environment)**

Install and build the following product to build Model B.

- Interstage Application Server V11 (web server layer)

### Note

Note that communications will not use SSL encryption between the web server and web container if Model B is used, even if under **Select operation mode**, **Use SSL encryption** is set to **YES**.

### **3.6.1 Interstage Application Server V11 (web server layer)**

In addition to the AP server and DB server layers built as a result of the AR server setup process, a web server layer must be built for Model B. Refer to the product manual for details on how to install and set up the web server.

Use Interstage Application Server to configure the connection to the AR processing server. Configure the AR processing server access directories as shown below when configuring the web server:

```
http://arServerFqdnOrIpAddress: httpListenerPortNumber/arsvdm/
http://arServerFqdnOrIpAddress: httpListenerPortNumber/arsvdm/
http://arServerFqdnOrIpAddress: httpListenerPortNumber/arsvfdm/
```

Also configure settings in the web server for integration with web applications created by the user.

 **Note**

The data management console (arsvdm) provided by the AR server has built-in operating system authentication. Configure the settings to suit your environment if authenticating users on the web server.

Refer to the product manual for details on the configuration procedure.

## **3.7 If Model C is selected (for medium- to large-scale, high reliability, high availability models used in an intranet environment)**

Install and build the following products to build Model C.

- Symfoware Server Standard Edition V12 (DB server layer)
- Interstage Application Server V11 (AP server layer)
- Load balancer

 **Note**

- Interstage AR Processing Server supports open source interfaces such as the Symfoware Server SQL interface. Support for native interfaces is not offered.

The load balancer enables access to AR processing servers deployed to multiple AP servers. Build the DB server for shared use by the AP servers. The settings for each product are described below. Refer to the relevant product manual for details on the configuration procedure. Note that environment settings must be configured for each AP server.

The AR server settings for products to be built are described below.

### **3.7.1 Symfoware Server Standard Edition V12 (DB server layer)**

Configure the DB server. The user information for the databases created here will be used in AP server settings described later in the document. Refer to the product manual for details on how to install and set up the DB server. When setup is complete, configure settings using the procedure below.

1. Create the following databases, which will be used by the AR processing server.
  - Database name: arsvdm  
Used by data management features.
  - Database name: arsvfdm  
Used by file data management features.
2. Create the tables for each of the databases. Execute the SQL statements stored in the directory shown below:

**W** *installDir\bin\setup\data*

**L** */opt/FJSVar/bin/setup/data*

- Database name: arsvdm  
Execute createDataManagerTable.sql to create the tables (lock, qtype, qattribute, qentity, qvalue).
- Database name: arsvfdm  
Execute createFileManagerTable.sql to create the tables (filelock, fileproperties).

3. For tables that require the arsvdm database default values, import the data. Use the data stored in the directory shown to import:

*installDir\bin\setup\data*

*/opt/FJSVar/bin/setup/data*

- Table name: qtype  
Imports defaultQTypeStructure.txt.
- Table name: qattribute  
Imports defaultQAttributeStructure.txt.

4. Configure the client authentication settings to allow connection from the client (AP server) to the database. If multiple AP servers are used, configure the settings for each of them.

### 3.7.2 Interstage Application Server V11 (AP server layer)

Refer to the product manual for details on how to install and set up the AP server. When setup is complete, configure settings using the procedure below.



#### Note

Apply urgent updates to the Interstage Application Server included with Interstage Application Server. Refer to the **readme** for specific update numbers.

1. Create a script based on the one below to configure a connection to the database. The example below shows a batch file when a single cluster is built in Windows:

```
set DOMAIN_ADMINPORT=%HTTP listener port for AP server operation management%
set DOMAIN_ADMINPORT=%HTTP listener port for AP server operation management%
set ARSVDMDB=arsvdm
set ARSVFDMDB=arsvfdm
set ARCLUSTER=%Name of cluster that deploys the app%
set PGPORT=%DB server port number%
set PGUSER=%User name for database built on DB server%
set PGPASSWORD=%User password for database built on DB server%
set ARDB=%DB server IP address%
set PSDIR=%Installation directory for the application server included with Interstage Application Server%
call %PSDIR%\F3FMisje6\glassfish\bin\asadmin.bat --port %DOMAIN_ADMINPORT% create-jdbc-connection-pool --datasourceclassname org.postgresql.ds.PGSimpleDataSource --restype javax.sql.DataSource --property portNumber=%PGPORT%:password=%PGPASSWORD%:user=%PGUSER%:databaseName=%ARSVDMDB%:SocketTimeout=60:ServerName=%ARDB% %ARSVDMDB%
call %PSDIR%\F3FMisje6\glassfish\bin\asadmin.bat --port %DOMAIN_ADMINPORT% create-jdbc-connection-pool --datasourceclassname org.postgresql.ds.PGSimpleDataSource --restype javax.sql.DataSource --property portNumber=%PGPORT%:password=%PGPASSWORD%:user=%PGUSER%:databaseName=%ARSVFDMDB%:SocketTimeout=60:ServerName=%ARDB% %ARSVFDMDB%
call %PSDIR%\F3FMisje6\glassfish\bin\asadmin.bat --port %DOMAIN_ADMINPORT% create-jdbc-resource --connectionpoolid %ARSVDMDB% --target %ARCLUSTER% jdbc/ARDataManager
call %PSDIR%\F3FMisje6\glassfish\bin\asadmin.bat --port %DOMAIN_ADMINPORT% create-jdbc-resource --connectionpoolid %ARSVFDMDB% --target %ARCLUSTER% jdbc/ARFileDataManager
```

2. Modify the settings of the configuration file used by Interstage AR Processing Server (FILE\_STORE\_BASEDIR descriptor in arsvfdmwebapi.properties) to suit the environment - the configuration file directory is shown below:

*installDir\conf*

*/opt/FJSVar/conf*

To manage files that are common to all AP servers, the FILE\_STORE\_BASEDIR descriptor in arsvfdmwebapi.properties must reference the same directory on all AP servers. Create a shared directory and configure permissions settings to allow full control access from the AP server(s) being used.



## Example

Modification example (Windows)

```
- arsvfdmwebapi.properties  
"FILE_STORE_BASEDIR = sharedDirectory\\arsvfdm_data"
```

Escape the path delimiter "\" with another backslash, that is, "\\".

3. Copy all configuration files to the web container library directory below:

The directory contains the configuration files below:

```
arsvadmui.properties  
arsvdmc.properties  
arsvfdm_mimetype.properties  
arsvfdmwebapi.properties  
arsvlogging.properties
```

The directory for copying the web container directory is shown below.

**W**  
**L**  
%Java EE 6 commonDir%\domains\domain1\lib\classes  
%Java EE 6commonDir%/domains/domain1/lib/classes/

4. Copy the JDBC data source library published by the DB server to the library used by the web server - the target directory is listed below:

**W**  
**L**  
%Java EE 6 commonDir%\domains\domain1\lib  
%Java EE 6 commonDir%/domains/domain1/lib/classes/

The directory of the Symfoware client JDBC data source module to be added to the library is listed below:

**W**  
**L**  
symfowareClientInstallDir\JDBC\lib\postgresql-jdbc4.jar  
/opt/symfoclient64/jdbc/lib/postgresql-jdbc4.jar

5. Copy the library below, which is used by Interstage AR Processing Server, to the web container library directory (the directory to which the JDBC data source has been deployed). The library provided by Interstage AR Processing Server is installed in the directory below:

**W**  
**L**  
installDir\lib  
/opt/FJSVar/lib

The modules to be added are listed below:

```
arsvadmui.jar  
arsvcmn.jar  
arsvdm.jar  
arsvfdm.jar  
arsvnativelibloader.jar
```

6. Deploy the following war files, which are provided by Interstage AR Processing Server, to the AP server(s).

**W**  
installDir\webapps\arsvdmc.war  
installDir\webapps\arsvdm.war  
installDir\webapps\arsvfdm.war  
  
**L**  
/opt/FJSVar/webapps/arsvdmc.war  
/opt/FJSVar/webapps/arsvdm.war  
/opt/FJSVar/webapps\arsvfdm.war

7. Web applications created by the user should also be deployed to the AP server(s).

### 3.7.3 Load balancer

To distribute the load across the AP servers, configure settings according to the manual.

## **3.8 If Model D is selected (for medium- to large-scale, high reliability, high availability models used in an Internet environment)**

---

Install and build the following products to build Model D:

- Symfoware Server Standard Edition V12 (DB server layer)
- Interstage Application Server V11 (AP server layer/web server layer)
- Load balancer

Model D comprises the Model C configuration with an added web server layer construction. This section describes only the web server layer construction. Refer to [3.7 If Model C is selected \(for medium- to large-scale, high reliability, high availability models used in an intranet environment\)](#) for details on other configurations. The AR server settings for products to be built are described below. If multiple web servers are used, configure the environment settings for each of them.

### **3.8.1 Interstage Application Server V11 (web server layer)**

---

Refer to the product manual for details on how to install and set up the web server.

Configure the environment for integrating the web server and AR processing server. The AR processing server can be accessed as described below:

```
http://apServerFqdnOrIpAddress:portNumberConfiguredInApServer/arsvdmc/  
http://apServerFqdnOrIpAddress:portNumberConfiguredInApServer/arsvdm/  
http://apServerFqdnOrIpAddress:portNumberConfiguredInApServer/arsvfdm/
```

Also configure settings in the web server for connecting to web applications created by the user.

## **3.9 Tasks required after setup**

---

To check if Interstage AR Processing Server has been set up correctly, access the data management console from the AR data management client and ensure that login is possible.

1. Access the data management console from the browser. The URL varies depending on the configuration: Refer to the following:



- Model A with SSL encryption

```
https://arServerName:httpsListenerPortForDataMgmtConsole/arsvdmc/
```

- Model A without SSL encryption

```
http://arServerName:httpsListenerPortForDataMgmtConsole/arsvdmc/
```

- Model B, C, or D with SSL encryption

```
https://webServerName:httpsListenerPortForDataMgmtConsole/arsvdmc/
```

- Model B, C, or D without SSL encryption

```
http://webServerName:httpsListenerPortForDataMgmtConsole/arsvdmc/
```

2. Ensure that the login window is displayed, and log in using an account that can be authenticated by the operating system.

3. Ensure that the scenario management window is displayed.



- If logging in to the data management console, do not use an account that contains spaces in the ID or password.

- If accessing from the server, the data management console can be called from the **Start** menu.
  - When confirming access, adequately configure firewalls to suit the environment used.
  - If accessing from the data management console, register the site as a trusted website using your browser security settings.
  - If the login window is not displayed, check if the AR processing server can be accessed from the AR data management client.
- 

# Chapter 4 Smart devices

Setup must be performed before using client authoring or the overlay application provided by Interstage AR.

## 4.1 Setup for Android

Configure the settings below to use features such as overlay application or client authoring on Android:

- Account settings

Configure the settings required to connect to a server running Interstage AR Processing Server.

- Recognition mode settings

Select the recognition type to be used.

- Certificate settings

If using a smart device with Android 4.4 or later, configure the certificate settings to perform SSL communication with Interstage AR Processing Server using a self-certificate.

### 4.1.1 Account settings

Configure an account for a server running Interstage AR Processing Server.

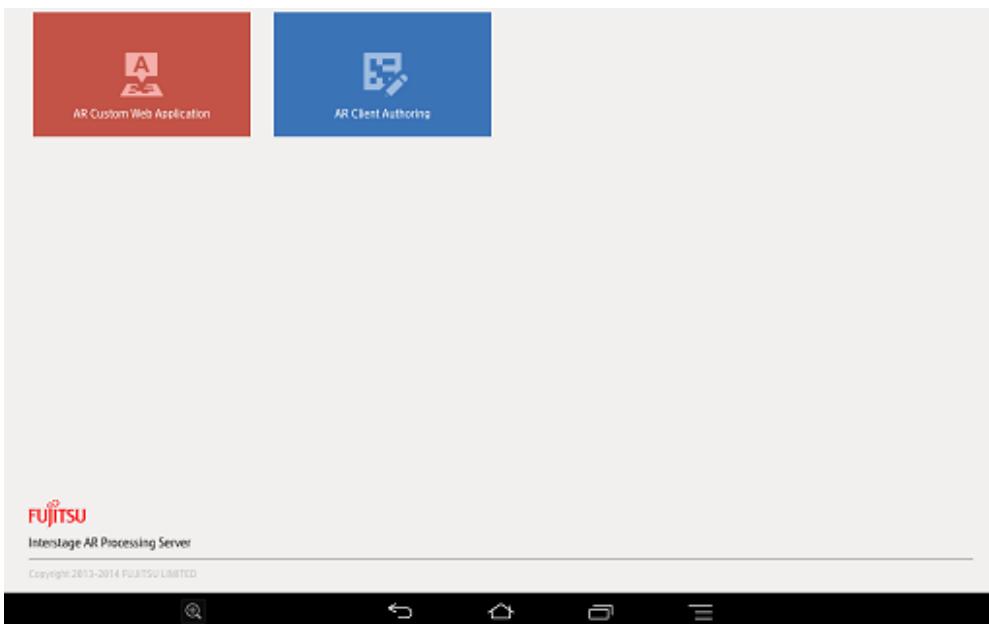


#### Note

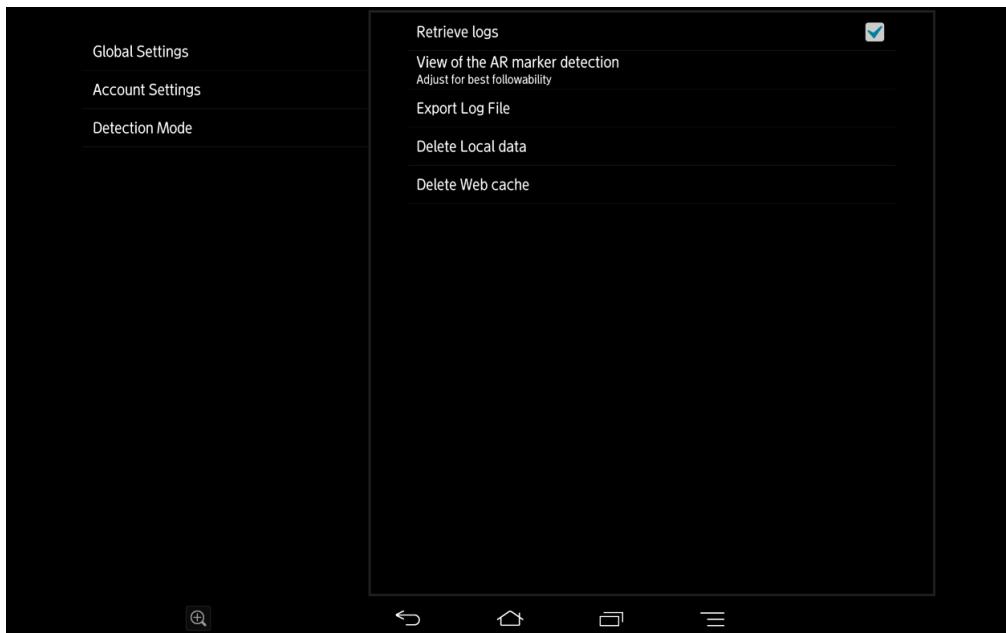
- An account must be created for the AR server if performing client authoring or similar tasks.
- Multiple accounts cannot be configured for a single AR server.
- For information on how to configure accounts for overlay applications developed by a system developer, check with the developer directly.

Follow the procedure below to configure an account:

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. In the status bar, tap the menu icon, and then select **Settings**.



3. From the menu list, tap **Account Setting**.



4. In the **Account Setting** window, select **Add New Account**.
5. In the **Account Type Selection** window, select **AR server account**.
6. Input the account information to the AR server, and then select **Register**.

- URL

Enter the server URL, according to the server configuration.

 **Example**

- Model A with SSL encryption

`https://arServerName:httpsListenerPortForRestApi`

- Model A without SSL encryption

`http://arServerName:httpsListenerPortForRestApi`

- Model B, C, or D with SSL encryption

`https://webServerName:webServerHttpsListenerPortForRestApi`

- Model B, C, or D without SSL encryption

`http://webServerName:webServerHttpsListenerPortForRestApi`

- ID and password

If the server uses basic authentication, then enter the account information (no input is required if basic authentication is not used).

7. If obtaining resources from a file management server other than Interstage AR Processing Server, configure the connection information required for basic authentication, in accordance with the system configuration (for servers with no basic authentication, this is not necessary, since there is no need to store the individual account settings).
  1. Select **Add New Account**.
  2. From the **Account Type Selection** window, select **Other account**. If an AR server account has already been created, there is no need to select the account type.
  3. Enter the account information to a file management server other than an Interstage AR Processing Server and select **Register**.

 **Point**

AR processing server account names are prefixed with an asterisk (\*) in the **Account List** window.

Up to ten accounts can be configured as "other accounts".

.....

Follow the procedure below to edit or delete information for registered AR server accounts or for other accounts (for overlay applications developed by a system developer, check with the developer directly).

#### **Editing account information**

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. In the status bar, tap the menu icon and select **Settings**.
3. Tap **Account Setting**.
4. Information for registered accounts will be displayed - tap the account to be edited.
5. In the **Account Information Input** window, edit the account, and then tap **Register**.

#### **Deleting account information**

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. In the status bar, tap the menu icon and select **Settings**.
3. Tap **Account Setting**.
4. Tap and hold the account to be deleted from the registered account information.
5. In the confirmation dialog box, tap **OK**.

### **4.1.2 Recognition mode settings**

---

Select the recognition mode to use to achieve AR (for overlay applications developed by a system developer, check with the developer directly).

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. In the status bar, tap the menu icon and select **Settings**.
3. Select **Recognition mode**.
4. Select the recognition mode to be used.
  - AR marker  
Identifies the target using an AR marker.
  - Location Data  
Identifies the target using Location Data.
  - Beacon  
Identifies the target using a beacon.
  - Barcode  
Identifies the target using a barcode.



#### **Note**

.....

- It is not possible to have all modes set to OFF - at least one mode must be ON to use AR.
  - If using Location Data as the recognition mode, access to location services must be enabled in the settings on your smart device.
  - If using beacon as the recognition mode, Bluetooth must be enabled in the settings on your smart device.
- .....

### 4.1.3 Certificate settings

---

Before specifying settings on the smart device, deploy the certificate obtained on the server through the certificate authority to the client storage (refer to [3.5 If Model A is selected \(for small-scale entry models used in an intranet environment\)](#) for details on how to create a certificate). Follow the procedure below to install a certificate on the client:

1. From **Settings**, open **Security**.
2. From **Install certificates**, select the prepared certificate - this will start certificate installation. In the prompt for the certificate name, specify a name that is easy to manage.
3. Tap **Trusted credentials > User**, and ensure that the installed certificate is listed.



A PIN or password must be set for the lock on the device screen in order to install the certificate.



- On some models, the used certificate may be deleted after installation.
- Ensure that you specify the device settings time within the period of validity of the certificate, otherwise the certificate will remain invalid.

## 4.2 Setup for iOS

---

Configure the settings below to use features such as overlay application or client authoring on iOS:

- Account settings  
Configure the settings required to connect to a server running Interstage AR Processing Server.
- Recognition mode settings  
Select the recognition type to be used.
- Certificate settings  
If using a smart device with iOS8 or later, configure the settings to perform SSL communication with Interstage AR Processing Server using a self-certificate.

### 4.2.1 Account settings

---

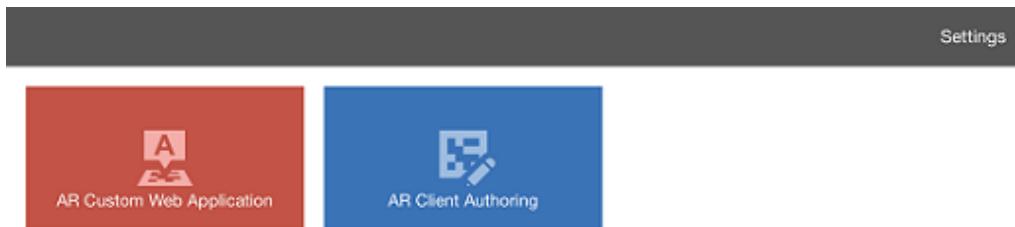
Configure an account for a server running Interstage AR Processing Server.



- An account must be created for the AR server if performing client authoring or similar tasks.
- Multiple accounts cannot be configured for a single AR server.
- For information on how to configure accounts for overlay applications developed by a system developer, check with the developer directly.

Follow the procedure below to configure an account:

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. From the displayed menu, select **Settings**.



3. From the menu list, tap **Account Setting**.
  4. In the **Account Setting** window, select **Add New Account**.
  5. In the **Account Type Selection** window, select **AR server account**.
  6. Input the account information to the AR server, and then select **Register**.
    - URL  
Enter the server URL, according to the server configuration.
-  **Example**
- 
- Model A with SSL encryption  
*https://arServerName:httpsListenerPortForRestApi*
  - Model A without SSL encryption  
*http://arServerName:httpListenerPortForRestApi*
  - Model B, C, or D with SSL encryption  
*https://webServerName:webServerHttpsListenerPortForRestApi*
  - Model B, C, or D without SSL encryption  
*http://webServerName:webServerHttpListnerPortForRestApi*
- 
- ID and password  
If the server uses basic authentication, then enter the account information. No input is required if basic authentication is not used.
7. If obtaining resources from a file management server other than Interstage AR Processing Server, configure the connection information required for basic authentication. For servers with no basic authentication, this is not necessary, since there is no need to store the individual account settings. Create this in accordance with the system configuration.
    1. Select **Add New Account**.
    2. From the **Account Type Selection** window, select **Other account**. If an AR server account has already been created, there is no need to select the account type.
    3. Enter the account information to a file management server other than an Interstage AR Processing Server and select **Register**.

## Point

AR processing server account names are prefixed with an asterisk (\*) in the **Account List** window.

Up to ten accounts can be configured as "other accounts".

Follow the procedure below to edit or delete information for registered AR server accounts or for other accounts (for overlay applications developed by a system developer, check with the developer directly).

### **Editing account information**

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the application.
2. From the displayed menu, select **Settings**.
3. From the menu list, tap **Account Setting**.
4. Information for registered accounts will be displayed - tap the account to be edited.
5. In the **Account Information Input** window, edit the account, and then tap **Register**.

### **Deleting account information**

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the application.
2. From the displayed menu, select **Settings**.
3. From the menu list, tap **Account Setting**.
4. Tap and hold the account to be deleted from the registered account information.
5. In the confirmation dialog box, tap **OK**.

## **4.2.2 Recognition mode settings**

Select the recognition mode to use to achieve AR (for overlay applications developed by a system developer, check with the developer directly).

1. In the list of smart device applications, tap the **InterstageAR Authoring** or **InterstageAR Dev** icon to start the client authoring tool.
2. From the displayed menu, select **Settings**.
3. Select **Recognition Mode**.
4. Select the recognition mode to be used.
  - AR marker  
Identifies the target using an AR marker.
  - Location Data  
Identifies the target using location data.
  - Barcode  
Identifies the target using a barcode.

## Note

- It is not possible to have all modes set to OFF - at least one mode must be ON to use AR.
- If using Location Data as the recognition mode, access to location services must be enabled in the settings on your smart device.

## **4.2.3 Certificate settings**

Follow the procedure below to install a certificate on the client:

1. Download the certificate deployed to the Web server to the client, or send it to the client by email.

2. On the smart device, select the certificate to display its information.
3. Tap **Install**.

You can check the installed certificate by tapping **Settings > General > About**.

## 4.3 Setup for Windows

---

Configure the settings below to use features such as overlay application or client authoring on iOS:

- Account settings

Configure the settings required to connect to a server running Interstage AR Processing Server.

- Recognition mode settings

Select the recognition type to be used.

- Camera settings

Select the camera to be used.

- Certificate settings

Configure the settings to perform SSL communication with Interstage AR Processing Server using a self-certificate.

### 4.3.1 Account settings

---

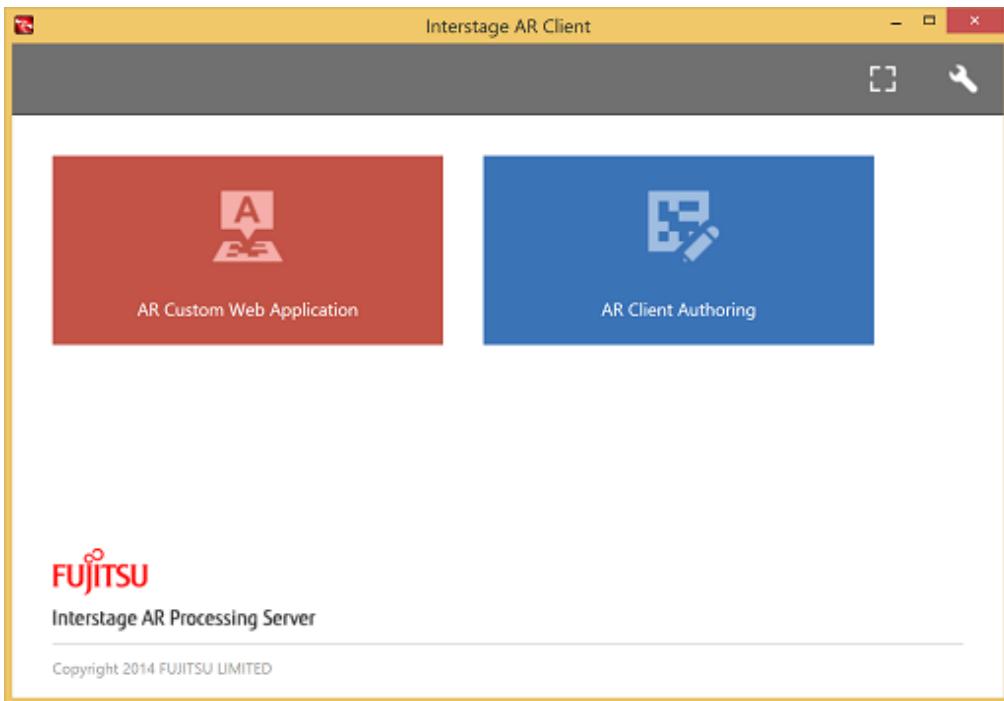
Configure an account for a server running Interstage AR Processing Server.



- An account must be created for the AR server if performing client authoring or similar tasks.
- Multiple accounts cannot be configured for a single AR server.
- For information on how to configure accounts for overlay applications developed by a system developer, check with the developer directly.

Follow the procedure below to configure an account:

1. In the list of smart device applications, under **InterstageAR**, tap the **Authoring** or **Dev** icon to start the application.
2. At the top-right of the window, tap the **Settings** icon .



3. In the **Account Setting** window, select **Add New Account**.
4. In the **Account Type Selection** window, select **AR server account**.
5. Input the account information to the AR server, and then select **Register**.

- URL

Enter the server URL, according to the server configuration.

 **Example**

- Model A with SSL encryption  
*https://arServerName:httpsListenerPortForRestApi*

- Model A without SSL encryption  
*http://arServerName:httpListenerPortForRestApi*

- Model B, C, or D with SSL encryption  
*https://webServerName:webServerHttpsListenerPortForRestApi*

- Model B, C, or D without SSL encryption  
*http://webServerName:webServerHttpListnerPortForRestApi*

- ID and password

If the server uses basic authentication, then enter the account information. No input is required if basic authentication is not used.

6. If obtaining resources from a file management server other than Interstage AR Processing Server, configure the connection information required for basic authentication. For servers with no basic authentication, this is not necessary, since there is no need to store the individual account settings. Create this in accordance with the system configuration.

1. Select **Add New Account**.

2. From the **Account Type Selection** window, select **Other account**. If an AR server account has already been created, there is no need to select the account type.

3. Enter the account information to a file management server other than an Interstage AR Processing Server and select **Register**.

## Point

AR processing server account names are prefixed with an asterisk (\*) in the **Account List** window.

Up to ten accounts can be configured as "other accounts".

Follow the procedure below to edit or delete information for registered AR server accounts or for other accounts (for overlay applications developed by a system developer, check with the developer directly).

### Editing account information

1. In the list of smart device applications, under **InterstageAR**, tap the **Authoring** or **Dev** icon to start the application.
2. At the top-right of the window, tap the **Settings** icon .
3. Information for registered accounts will be displayed - tap the account to be edited.
4. In the **Account Information Input** window, edit the account, and then tap **Register**.

### Deleting account information

1. In the list of smart device applications, under **InterstageAR**, tap the **Authoring** or **Dev** icon to start the application.
2. At the top-right of the window, tap the **Settings** icon .
3. Tap and hold the account to be deleted from the registered account information.
4. Release your fingertip once the display effects render a rectangle around the account information.
5. In the confirmation dialog box, tap **OK**.

## 4.3.2 Recognition mode settings

Select the recognition mode to use to achieve AR (for overlay applications developed by a system developer, check with the developer directly).

1. In the list of smart device applications, under **InterstageAR**, tap the **Authoring** or **Dev** icon to start the client authoring tool.
2. In the status bar, tap the menu icon, and then select **Settings**.
3. Select **Recognition mode**.
4. Select the recognition mode to be used.
  - AR marker  
Identifies the target using an AR marker.
  - Location Data  
Identifies the target using Location Data.
  - Barcode  
Identifies the target using a barcode.

## Note

- It is not possible to have all modes set to OFF - at least one mode must be set to ON to use AR.
- If using Location Data as the recognition mode, access to location services must be enabled in the settings on your smart device.
- If using Location Data as the recognition mode, the rear camera is the default one used for tilt information. If using the front camera or a USB camera, the tilt information may be different, so overlays may not be positioned as expected.
- The recognition mode cannot be changed while the camera is running.

## 4.3.3 Camera settings

The following settings can be changed.

## Retrieve logs

Retrieves logs using the native application

## Camera settings

Configures the camera to use with the native application (for information on how to configure settings for overlay applications developed by a system developer, check with the system developer directly).

- Select camera

Follow the procedure below to select a smart device camera:

- Select **Select camera**, and from the list of camera names recognized by your device, select the camera to be used.
- Ensure that the selected camera name and preview are displayed correctly.

- Camera display for AR marker recognition

Select either **Prioritize object tracking** or **Prioritize camera display** to determine behavior when recognizing AR markers.



- The application will select the first camera recognized by the device.
- **Select camera** cannot be selected during authoring or while the camera is being used by the overlay application.
- Front camera images are not displayed as mirror images.

## Application data

Deletes the local data and web cache stored in the native application (for overlay applications developed by a system developer, check with the system developer directly).

- Delete local data  
Deletes local data stored in your smart device. Tap **OK**.
- Delete web cache  
Deletes the web cache stored in your smart device. Tap **OK**.

## 4.3.4 Certificate settings

---

Follow the procedure below to install a certificate on the client:

1. Click **Start**, in the search box type "certmgr.msc", and then press Enter.
2. Click **Trusted Root Certification Authorities > Certificates**, then right-click **Certificates** and click **All Tasks > Import**.
3. Follow the steps in the wizard.
4. After completing the steps in the wizard, the imported certificate will be displayed in **Trusted Root Certification Authorities**.

# **Part 3 Setup removal**

---

---

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# Chapter 5 Setup removal

This chapter explains how to remove the setup of Interstage AR Processing Server from a server.

## 5.1 Setup removal (Windows)

1. Log in as administrator to the server you want to remove Interstage AR Processing Server setup from.
2. Remove the setup.

```
installDir\bin\setup\arsv_unsetup.bat
```

3. Setup removal will begin.

```
Interstage AR Processing Server UNSETUP START.
```

4. Ensure that setup removal is complete.

```
Interstage AR Processing Server UNSETUP END.
```



### Note

- Starting the command prompt  
The command prompt must be started by a user with administrator privileges. To do that, from the context menu, select **Run as administrator**.
- Ensure that the directories below have been deleted (if they still remain after reexecuting setup, delete them before performing setup operations).
  - *installDir\fje6\_domainsroot*

## 5.2 Setup removal (Linux)

1. Log in as a superuser (root) to the server you want to remove Interstage AR Processing Server setup from.
2. Remove the setup.

```
/opt/FJSVar/bin/setup/arsv_unsetup.sh
```

3. Setup removal will begin.

```
Interstage AR Processing Server UNSETUP START.
```

4. Ensure that setup removal is complete.

```
Interstage AR Processing Server UNSETUP END.
```



### Note

- Ensure that the directories below have been deleted (if they still remain after reexecuting setup, delete them before performing setup operations).
  - */var/opt/FJSVar/fje6\_domainsroot*

## **Chapter 6 Setup removal for smart devices**

There is no required procedure for removing the setup from smart devices.

# **Part 4 Uninstallation**

---

---

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# Chapter 7 Uninstallation from a server

This chapter explains how to uninstall Interstage AR Processing Server from a server.

Ensure that the setup is removed before uninstallation, otherwise uninstallation may fail, or unnecessary resources may remain.



Refer to the information below if uninstallation is accidentally performed before removing the setup.

- [7.1.3 Installation resources deletion](#)
- [7.2.1 Uninstallation procedure](#)

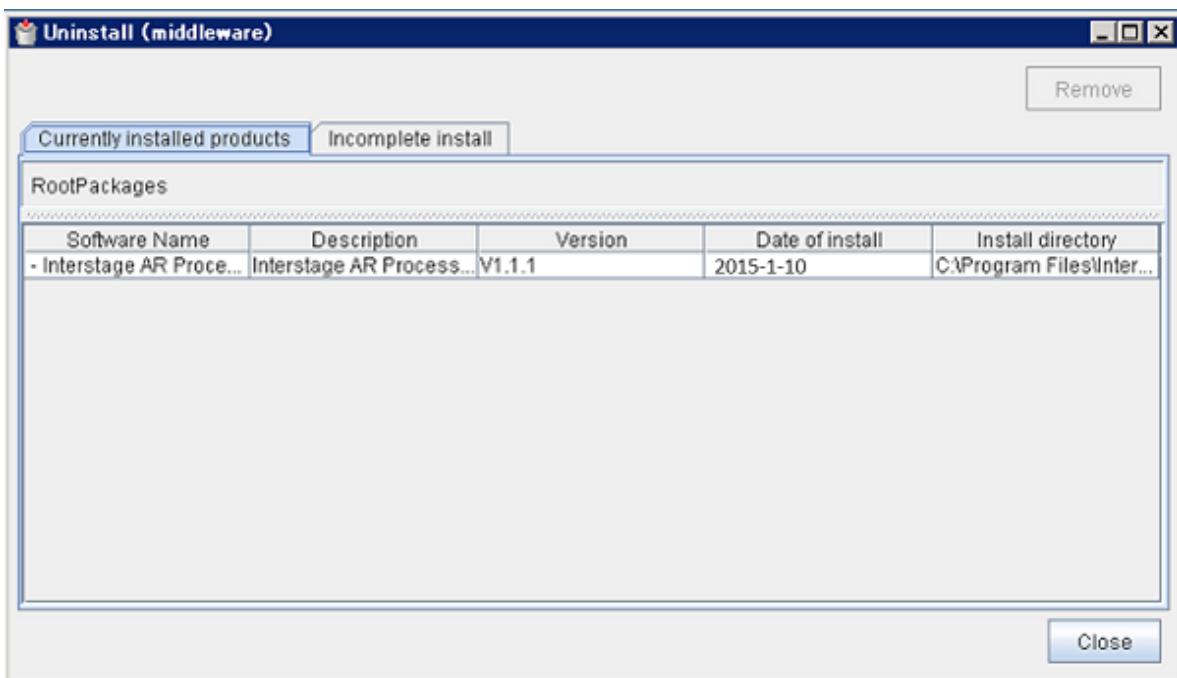
Uninstalling Interstage AR Processing Server also uninstalls other packages installed with it, unless they are used by other products.

## 7.1 Uninstallation (Windows)

### 7.1.1 Uninstallation procedure

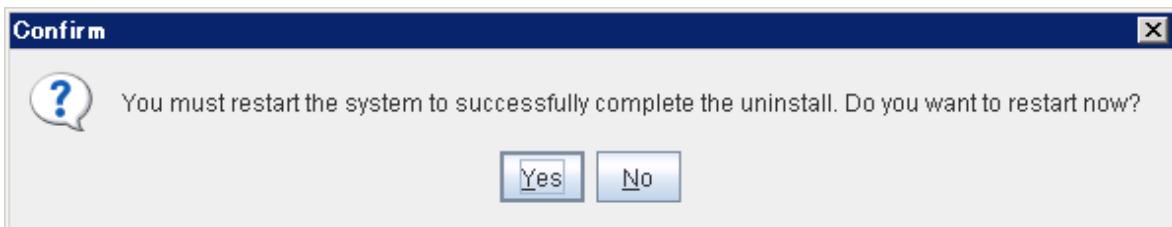
Uninstallation should be performed by a computer administrator, or by a member of the Administrators group.

1. Log in as administrator to the server from which Interstage AR Processing Server will be uninstalled.
2. Select **Uninstall (middleware)**.
  - Windows Server 2008  
Select **Start**, **All Programs**, **Fujitsu**, and then **Uninstall (middleware)**.
  - Windows Server 2012  
Right-click the **Start** window and select **All Apps**, **Fujitsu**, and then **Uninstall (middleware)**.
  - Windows Server 2012 R2  
Left-click the arrow in the bottom left of the **Start** window. From the list of applications, select **Fujitsu** and then **Uninstall (middleware)**.
3. Select **Interstage AR Processing Server** and then click **Remove**.



4. Click **Uninstall** to proceed, or **Cancel** to quit.

- On the confirmation screen, tap **Yes**. Once the uninstallation is complete, click **Exit**.
- To restore the computer to a normal state following completion of the uninstallation, it must be restarted - click **Yes** to restart automatically, or **No** to restart later (in this case, close the uninstallation window and end **Uninstall (middleware)** before restarting).



### Note

If uninstallation is forcibly quit before completion, it may not be possible to complete it later. If this occurs, refer to the *Messages* and contact Fujitsu technical support.

## 7.1.2 Tasks required after uninstallation

- User resources will remain in the installation directory - if they are not necessary after reinstallation, delete the directory.
- Delete the contents of the user directories below - if they are suffixed with a string such as ".DD.000", they still must be deleted.  
C:\Users\arsvdm\pg
- This product uses Microsoft Visual C++ 2010 Redistributable Package (x86) and Microsoft Visual C++ 2008 Redistributable Package (x64) - delete the redistributable packages if necessary (this can be done using the **Add or Remove Programs** feature in Windows).

## 7.1.3 Installation resources deletion

This section describes how to proceed if reinstallation or uninstallation cannot be performed normally, due to issues that may have occurred during the initial installation or uninstallation. These emergency tasks should not be performed at any other time.

The previous environment can be restored by following the procedure below (that is, to delete resources and information relating to this product from the current environment). However, if mixed related products have already been installed on the same system, these will need to be uninstalled before the tasks below can be performed.

Note that some of the registry keys, directories and environment variables listed in these procedures may not exist, depending on which features have been installed. If this is the case, ignore and proceed with the tasks.

### Note

If an issue occurs in which Interstage AR Processing server remains, it will not be possible to resolve the issue using the measures outlined in this chapter. If this happens, contact Fujitsu technical support.

### 7.1.3.1 Related product uninstallation

If related products (such as individual software) for this product are already installed, they should be uninstalled.

### 7.1.3.2 Interstage AR Processing Server resources deletion

Follow the procedure below to delete the installation environment for various components of this product.

- Delete the product registry keys. Open the Registry Editor (regedit.exe in the Windows directory) and delete everything under the relevant key from the following keys.
  - Under HKEY\_LOCAL\_MACHINE\SOFTWARE\Fujitsu:  
ISAR

- Under HKEY\_LOCAL\_MACHINE\SOFTWARE\Fujitsu\Install:  
ISAR
2. Delete the environment variable.  
Follow the procedure below to edit or delete the environment variable ISAR\_HOME defined in this product:
    - In the **Control Panel**, select **Systems**, and then **Advanced system settings** - the **System Properties** window will be displayed. Click the **Advanced** tab, and then click **Environment variables**. In the **System variables** list, select the relevant environment variable, and then click **Edit** or **Delete**.
  3. On **Administrative Tools**, select **Services**, and then stop the service below:
    - Interstage AR Processing Server DB Service
    - FUJITSU PCMI (isje6-STFISAR\_HFJJE6)
  4. Start the command prompt, and deleter the service below:
 

```
sc delete "FUJITSU PCMI(isje6-STFISAR_HFJJE6)"
```
  5. Open the Registry Editor and delete everything under the relevant key from the following registry keys.
    - Under HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services:  
Interstage AR Processing Server DB Service
    - Under HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\EventLog\Application:  
F3FMisje6-STFISAR\_HFJJE6  
F3FMpcmi-STFISAR\_HFJJE6
  6. Delete the directory below:
 

```
installDir\fjje6_domainsroot
```
  7. Delete permissions for the user:
    1. In the **Control Panel**, select **Administrative Tools**, and then **Local Security Policy**.
    2. In **Security Settings**, select **Local Policies**, and then **User Rights Assignment**.
    3. In the **Log on as a service** list, select **arsvdmpg**, click **Remove** and then click **OK**.
    4. In the right pane, under Policy heading, double-click **Deny logon through Remote Desktop Services**.
    5. In the **Deny logon through Remote Desktop Services**, select **arsvdmpg** and **arsvgfad**, click **Remove**, and then **OK**.
  8. Delete users. If user arsvdmpg remains, then delete it.
    - Windows Server 2008 R2  
Select **Start**, **Administrative Tools**, and then **Computer Management**. In System Tools, select **Local Users and Groups**, and then **Users**. In the right pane, under **Name** heading, right-click the user, and then **Delete**.
    - Windows Server 2012 and Windows Server 2012 R2  
On **Server Manager**, select **Tools**, and then **Computer Management**. In the Systems Tools, select **Local Users and Groups**, and then **Users**. In the right pane, under **Name** heading, right-click the user, and then select **Delete**.
  9. Restart the computer.
  10. Delete the contents of the user directories below - if they are suffixed with a string such as ".DD.000", they still must be deleted.  
C:\Users\arsvdmpg
  11. Delete the Start menu icons and groups.
    - Windows Server 2008 R2
      1. Delete the Start menu icons and groups. Click **Start**, **All Programs**, and then point to **Interstage AR Processing Server** and delete it.
      2. Select **Start**, **All Programs**, **FJQSS (Information Collection Tool)**, and then point to **Information collection (Interstage AR Processing Server V1.0.0)** and delete it.
    - Windows Server 2012 and Windows Server 2012 R2

Delete the following directory from %ProgramData%\Microsoft\Windows\Start Menu\Programs: Interstage AR Processing Server

```
Interstage AR Processing Server
```

12. Delete the following file from the FJQSS installation directory:

```
C:\Program Files (x86)\Fujitsu\FJQSS\product\cnf_ISAR.txt
```

13. Uninstall Interstage AR Processing Server.

14. Delete the contents of the Interstage AR Processing Server installation directory.



## 7.2 Uninstallation (Linux)

### 7.2.1 Uninstallation procedure

1. Log in as a superuser (root) to the server from which Interstage AR Processing Server will be uninstalled.
2. Execute the uninstallation command.

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

3. Enter the number of the product to be uninstalled.

For example, in the screen below, enter "1" (Interstage AR Processing Server Standard Edition V1.1.1). To uninstall multiple products, enter the number of each product separating by comma.

```
Loading Uninstaller...

Currently installed products
1. Interstage AR Processing Server Standard Edition V1.1.1

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

4. The uninstallation confirmation screen will be displayed - enter "y" to proceed or "q" to quit. To return to the previous screen, enter "b".

```
Interstage AR Processing Server Standard Edition
Description: Interstage AR Processing Server
Version: V1.1.1
Company name: Fujitsu Limited.
Install directory: /opt/FJSVar
Date of install: 2015-1-10

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

5. Uninstallation will begin - upon successful completion, the following screen will be displayed.

```
Uninstallating...

Interstage AR Processing Server Standard Edition is being uninstalled now.
100% ######=#####

The following products have been uninstalled successfully:
Interstage AR Processing Server Standard Edition

You must restart the system to successfully complete the uninstall.
```

```
| Do you want to restart now?  
| [y,n]  
| =>
```

6. To restore the computer to a normal state after uninstallation, it must be restarted - enter "y" to restart automatically, or "n" to restart later.

## 7.2.2 Tasks required after uninstallation

1. User resources will remain in /var/opt/FJSVar (note also that if a user has added files or directories to /opt/FJSVar or to /etc/opt/FJSVar, then user resources will remain) - if they are not necessary after reinstallation, delete the directory.
2. Delete the contents of the user directories below.

```
/home/arsvdmpg
```

## 7.2.3 Installation resources deletion

This section describes how to proceed if reinstallation or uninstallation cannot be performed normally, due to issues that may have occurred during the initial installation or uninstallation. These emergency tasks should not be performed at any other time.

The previous environment can be restored by following the procedure below (that is, to delete resources and information relating to this product from the current environment). However, if mixed related products have already been installed on the same system, these will need to be uninstalled before the tasks below can be performed.



### Note

If an issue occurs in which Interstage AR Processing server remains, it will not be possible to resolve the issue using the measures outlined in this chapter. If this happens, contact Fujitsu technical support.

### 7.2.3.1 Related product uninstallation

If related products (such as individual software) for this product are already installed, they should be uninstalled.

### 7.2.3.2 Interstage AR Processing Server resources deletion

Follow the procedure below to delete the installation environment for various components of this product.

1. Stop the web container process.

1. Check which PID is using the web container port - if default values were used for installation, use the command below to check which PID is using the web container port. (If the port number was changed during setup, specify the new number in the grep command.)

#### RHEL 6:

```
netstat -nap | grep 91
```

#### RHEL 7:

```
ss -tapp | grep 91
```

2. If an applicable PID is returned, then kill it.

```
kill pid
```

2. Stop the database process.

1. List the processes, and check if there is a process with PPID (parent process ID) "1".

```
ps -ef | grep postgres
```

2. If a process matches the criteria above, then kill it (note that it will also kill children processes).

```
kill pid
```

3. Delete the database user.

```
userdel arsvdmpg
```

4. Delete the service.

**RHEL 6:**

```
/sbin/chkconfig --del FJSVardb  
rm -f /etc/rc.d/init.d/FJSVardb  
rm -f /etc/init.d/FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc0.d/K00FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc1.d/K00FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc2.d/S99FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc3.d/S99FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc4.d/S99FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc5.d/S99FJSVpcmiisje6-STFISAR_HFJJE6  
rm -f /etc/rc.d/rc6.d/K00FJSVpcmiisje6-STFISAR_HFJJE6
```

**RHEL 7:**

```
/usr/bin/systemctl stop FJSVardb.service  
/usr/bin/systemctl stop FJSVpcmiisje6-STFISAR_HFJJE6_start.service  
/usr/bin/systemctl stop FJSVpcmiisje6-STFISAR_HFJJE6_stop.service  
/usr/bin/systemctl disable FJSVardb.service  
/usr/bin/systemctl disable FJSVpcmiisje6-STFISAR_HFJJE6_start.service  
/usr/bin/systemctl disable FJSVpcmiisje6-STFISAR_HFJJE6_stop.service  
rm -f /usr/lib/systemd/system/FJSVardb.service  
rm -f /usr/lib/systemd/system/FJSVpcmiisje6-STFISAR_HFJJE6_start.service  
rm -f /usr/lib/systemd/system/FJSVpcmiisje6-STFISAR_HFJJE6_stop.service
```

5. Delete the service lock file.

```
rm -f /var/lock/subsys/FJSVardb  
rm -f /var/lock/subsys/FJSVpcmiisje6-STFISAR_HFJJE6
```

6. Delete the domain root directory.

```
rm -rf /var/opt/FJSVar/fjje6_domainsroot
```

7. Uninstall Interstage AR Processing Server.

Refer to [7.2.1 Uninstallation procedure](#) for details.

8. Restart the computer.

9. Delete the installation directory.

```
rm -rf /opt/FJSVar /etc/opt/FJSVar /var/opt/FJSVar /home/arsvdmpg
```

## 7.3 Notes on Uninstall (middleware)

The Uninstall (middleware) tool is a common tool for Fujitsu middleware products. It manages information about installed Fujitsu middleware products, and launches the product uninstaller.



- Use Uninstall (middleware) to uninstall Interstage AR Processing Server
- This tool manages information for other Fujitsu middleware products as well as for Interstage AR Processing Server. Do not uninstall this tool unless it is absolutely necessary

If this tool is uninstalled accidentally, use the following procedure to install it again.

- W**
1. Log in to the machine to be installed using a user name belonging to the Administrators group, or switch to an account with administrator privileges.
  2. Insert the product media in the drive.
  3. Execute the installation command.

```
\ISAR\CIR\cirinst.exe
```

- L**
1. Log in to the machine to be installed as a superuser, or switch to a user with administrator privileges.
  2. Insert the product media in the drive.
  3. Execute the installation command.

```
# dvdMountPoint/installer/CIR/cirinst.sh
```

- To uninstall this tool, follow the procedure below (if uninstallation fails, contact Fujitsu technical support).

1. Start Uninstall (middleware) and check whether there are any other Fujitsu middleware products left on the system.

Select Start, All Programs, Fujitsu, and then **Uninstall (middleware)**.

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

2. If no Fujitsu middleware products have been installed, execute the following uninstallation command.

```
C:\<Program Files (x86)>\Fujitsu\FujitsuF4CR\bin\cirremove.exe
```

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

3. The message below will be displayed - enter "y" to continue (uninstallation will finish in a few seconds).

```
This tool is shared by all Fujitsu middleware products.  
Delete? [y/n]:
```

# Chapter 8 Smart devices

To uninstall the native application or client authoring tools installed on a smart device, refer to the smart device manual and delete accordingly.

This section describes a typical uninstallation.

## 8.1 Deletion procedure (Android)

Follow the procedure below to uninstall from the application management screen:

1. Tap **Settings**.
2. Tap **Applications**.
3. On the **Applications** menu, tap **Manage applications**.
4. Select the relevant application from the listed applications.
5. On the application management screen, tap **Uninstall**.
6. On the confirmation screen, tap **OK**.



The display may differ depending on the smart device and version used.

## 8.2 Deletion procedure (iOS)

Follow the procedure below to uninstall from the Home screen:

1. On the Home screen, tap and hold the application icon - the icons will start wiggling.
2. Tap **X** in the top-left corner of the icon.
3. On the confirmation dialog box, tap **Delete**.

## 8.3 Deletion procedure (Windows)

Follow the procedure below to uninstall:

1. In the **Control Panel**, select **Uninstall a program**.
2. In the **Programs and Features** window, select the application and click **Uninstall**.
3. To delete the settings information or cache information used by the application, delete the directory below.  
% AppData%\Fujitsu\Interstage AR\*applicationName*

# **Part 5 Migration**

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# Chapter 9 Migration

This chapter explains how to migrate from Interstage AR Processing Server V1.0.0 to V1.1.1, and provides notes on migration.

## 9.1 Notes on migration

Note the following when migrating Interstage AR Processing Server:

### 9.1.1 Version compatibility between the server and smart devices

The table below lists the compatibility between different server and smart device versions of Interstage AR Processing Server.

**Table 9.1 Compatibility between server and smart device versions**

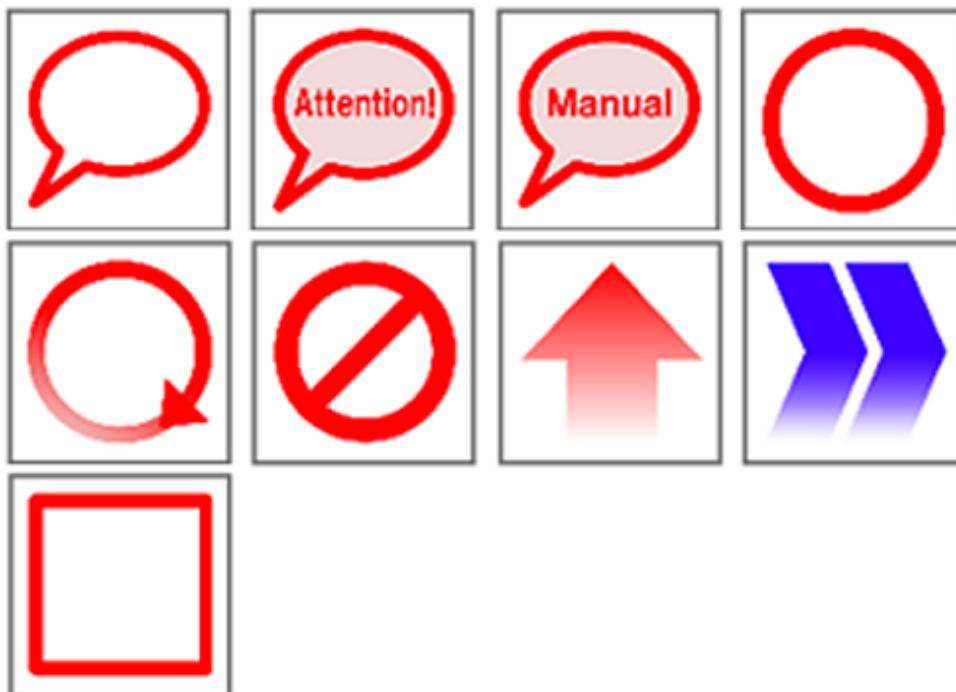
Server	Smart device	
	V1.0.0	V1.1.1
V1.0.0	Y	N
V1.1.1	Partial	Y

- If the server uses V1.0.0 and the smart device uses V1.0.0  
Compatible.
- If the server uses V1.0.0 and the smart device uses V1.1.1  
Not compatible. The server must be upgraded to the same version as the smart device.
- If the server uses V1.1.1 and the smart device uses V1.0.0  
Partially compatible - this combination is compatible if using content created using the smart device version. To use GPS, barcode or beacon recognition mode, the smart device must be upgraded to V1.1.1.
- If the server uses V1.1.1 and the smart device uses V1.1.1  
Compatible

## 9.1.2 Shapes

### New shapes

The following shapes were added in V1.1.1 of Interstage AR Processing Server:



## 9.2 Migration procedure

---

When migrating Interstage AR Processing Server, first migrate the server, and then the smart devices. Refer to the relevant manual for details on the procedure.

### 9.2.1 Server

---

This section describes how to migrate Interstage AR Processing Server according to the server configuration.



#### Note

---

The server configuration in V1.1.1 has been changed as explained below. Note the port numbers and other settings when setting up the server (refer to [Chapter 3 Server](#) for details on the setup procedure).

- The web container feature has been grouped into the following four categories:
    - domain
    - REST API
    - Data management console
  - The following port numbers in V1.0.0 were changed:
    - HTTP listener port
    - JMX connector listener port for operation management
    - HTTPS listener port
    - Connection port for the message broker
    - IIOP (ORB) listener port
    - IIOP/SSL listener port for mutual authentication
    - IIOP/SSL listener port
- 

#### Model A or B

1. Back up resources using the backup command.
2. Remove setup of the existing Interstage AR Processing Server.
3. Uninstall Interstage AR Processing Server.
4. Install Interstage AR Processing Server v1.1.1.
5. Set up Interstage AR Processing Server v1.1.1.
6. Restore the resources from the backup you created.

#### Model C or D

1. Undeploy the following web applications provided by Interstage AR Processing Server from the AP server:
  - arsvdmc
  - arsvdm
  - arsvfdm
2. Delete the following libraries used by Interstage AR Processing Server from the web container library directory:
  - arsvadmui.jar
  - arsvcmm.jar
  - arsvdm.jar
  - arsvfdm.jar
  - arsvnativelibloader.jar

3. Remove setup of the existing Interstage AR Processing Server.
4. Uninstall the existing Interstage AR Processing Server from the AP server.
5. Install Interstage AR Processing Server V1.1.1 to the AP server.
6. Set up Interstage AR Processing Server V1.1.1.
7. Copy the following libraries used by Interstage AR Processing Server V1.1.1 to the web container library directory:
  - arsvadmui.jar
  - arsvcmn.jar
  - arsvdm.jar
  - arsvfdm.jar
  - arsvnativelibloader.jar

The library provided by Interstage AR Processing Server is installed in the directory below.

**W** *installDir\lib*

**L** /opt/FJSVar/lib

8. Modify the settings of the configuration file used by Interstage AR Processing Server V1.1.1 (*arsvfdmwebapi.properties*) to suit the environment.
9. Move all configuration files used by Interstage AR Processing Server V1.1.1 to the web container library directory.

- Copy source directory:

**W** *installDir\conf*

**L** /opt/FJSVar/conf

- Files to be moved:

- arsvadmui.properties
- arsvdmc.properties
- arsvfdm\_mimetype.properties
- arsvfdmwebapi.properties
- arsvlogging.properties

- Copy destination directory:

**W** *webContainerDir\lib\classes*

**L** *webContainerDir/lib/classes*

10. Deploy the following war files, which are provided by Interstage AR Processing Server V1.1.1, to the AP server(s):

- *installDir\webapps\arsvdmc.war*
- *installDir\webapps\arsvdm.war*
- *installDir\webapps\arsvfdm.war*

- /opt/FJSVar/webapps/arsvdmc.war
- /opt/FJSVar/webapps/arsvdm.war
- /opt/FJSVar/webapps/arsvfdm.war

## 9.2.2 Smart devices

This section explains how to migrate the Interstage AR Processing Server application installed on a smart device.



## Note

The application must be uninstalled before performing a version upgrade. An overwrite installation of applications that use Interstage AR Processing Server with the client authoring tool, can only be performed in the cases below:

- Android version
  - If both the old and new versions are signed on the same certificate.
- iOS version
  - If performed from an integrated development environment, such as Xcode (regardless of the version).
  - If using an ipa installer such as iTunes and the new version of the ipa file to be installed is newer than the installed ipa file.  
Note that Japanese and English editions of an AR client application with the same version number are treated as the same version.

### 9.2.2.1 Migration procedure (Android)

Follow the procedure below to migrate:

1. On the smart device, tap **Settings**, and the tap **Applications** - in the **App info** screen, confirm the name and version of the Interstage AR Processing Server application.
2. If an AR overlay definition has not yet been uploaded to the server yet, then upload one.
3. If required, back up the information below:
  - Account information for AR servers
  - Log files
4. Uninstall the V1.0.0 application.
5. Install the V1.1.1 application.
6. Set up the installed application.

### 9.2.2.2 Migration procedure (iOS)

Follow the procedure below to migrate:

1. In iTunes, in the **Apps** window, right-click **Interstage AR Processing Server**, and then select **Properties** - the version of the application will be displayed on the right side of the window.
2. If an AR overlay definition has not yet been uploaded to the server yet, then upload one.
3. If required, back up the information below:
  - Account information for AR servers
4. Uninstall the V1.0.0 application.
5. Install the V1.1.1 application.
6. Set up the installed application.
7. Log file