

# **intra-mart WebPlatform**

## **Ver. 7.1**

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**Setup Guide**

**Second Edition: Aug 31, 2009**



## << Revision History >>

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2009/05/01	<b>First edition</b>
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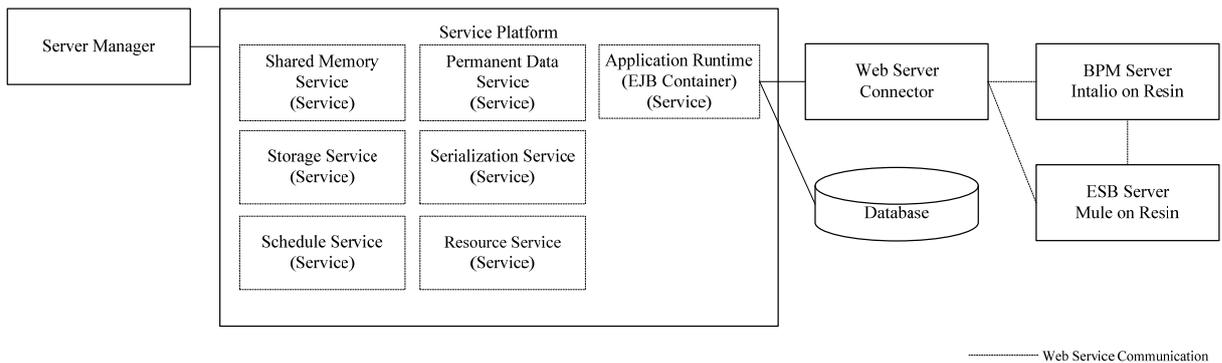
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# 1 System Configuration

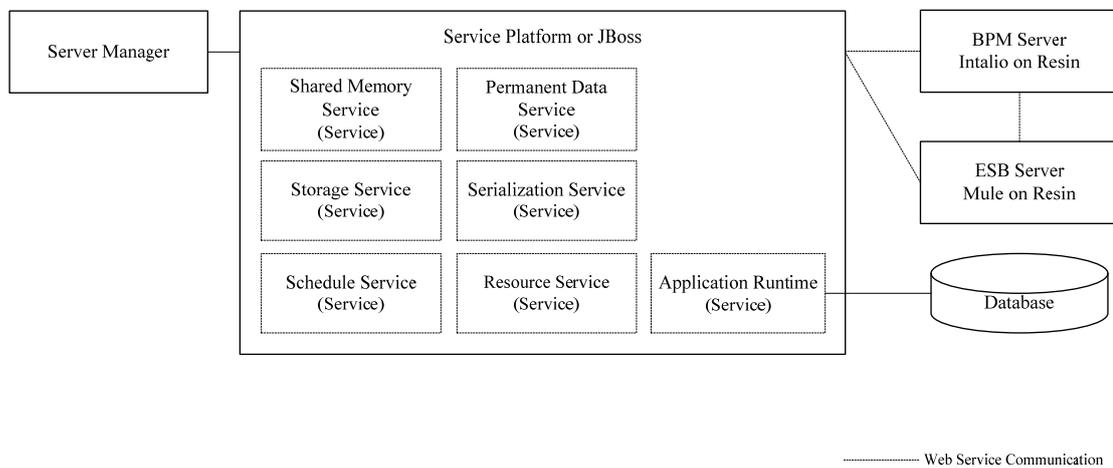
## 1.1 The intra-mart WebPlatform

### 1.1.1 The intra-mart WebPlatform (Resin)



The intra-mart WebPlatform (Resin) Ver. 7.1 is made up of four servers (Server Manager, Server Platform, BPM Server, ESB Server) and one Web Server Connector.

### 1.1.2 The intra-mart WebPlatform (JBoss)



The intra-mart Web Platform (JBoss) Ver. 7.1 is made up of four servers (Server Manager, Server Platform, BPM Server, and ESB Server).

## 1.2 The intra-mart DebugServer

The debug server is a debugging server used by the intra-mart eBuilder.

For details on how to install the debug server, refer to the intra-mart eBuilder installation guide.

## 1.3 About Each of the Modules

### ■ Server Manager

This provides overall management of the operational state of the Service Platform and the set of services on that platform.

This information is sent to the intra-mart Administrator, which is a client administration tool, thus enabling remote monitoring. License information is also managed by Server Manager.

### ■ Service Platform (Runs Each of the Services)

This is the platform that runs the following set of services. In other words, this corresponds to the server process.

### ■ Services (Runs on the Java VM)

#### ◆ Application Runtime

This is the engine that runs the application programs.

\* When installing a distributed configuration, other services cannot be installed on a Service Platform that runs the Application Runtime. (Refer to [3.2.3 Operating Machine Configuration and Installation] for details.)

\* The batch program that performs timed running in the ScheduleService executes in this Application Runtime.

\* Generation of unique IDs is also performed in this Service Platform.

#### ◆ Shared Memory Service

This service manages the shared memory.

The information management provided by this service is session-less. Data cannot be lost due to timeouts, etc.

#### ◆ Permanent Data Service

This service stores and manages the data required for operating the server.

Because this service saves information in files, even if the service is stopped, the data that was saved the previous time the service was running can be restored.

#### ◆ Resource Service

This service manages all of the presentation pages and function container source that is required to run the intra-mart system, and distributes the necessary programs to the Application Runtime.

#### ◆ Storage Service

This service manages the shared files.

When operating in a distributed system that uses multiple Application Runtimes, this is used for consolidated management of files that you have uploaded and files that you want to share throughout the system.

#### ◆ Serialization Service

This is a collection of functions for the purpose of general system-wide usage.

This service performs application locking control.

◆ **Schedule Service**

This is a scheduling service for batch processing.

This service makes requests to the Application Runtime to run the corresponding batch program at the designated time. As a result, the batch programs are run by the Application Runtime.

■ **Web Server Connector**

This operates as a built-in module on the web server.

■ **The intra-mart Administrator (Runs on the Java VM)**

This runs on the client side, and manages each of the groups of services while communicating with the Server Manager.

This makes it possible to start, stop, or configure the Server Manager and Service Platform.

Furthermore, this allows management of operation remotely from a computer that is not running Server Manager or Service Platform.

■ **BPM Server (Intalio on Resin)**

This is the **BPEL runtime engine** that is equipped with the **BPM Designer** workflow design tool.

BPM Server can run workflow systems created using **BPM Designer** and can work in conjunction with the intra-mart document workflow.

■ **ESB Server (Mule on Resin)**

This supports various application servers, industrial standards, and protocols, and performs integration or interoperation of applications.

## 1.4 Glossary of Terms

intra-mart Web Platform Ver. 7.1	Abbreviated in this document to <b>IWP</b> . The directory where <b>IWP</b> is installed is abbreviated to <%in_path%>.
intra-mart Debug Server Ver. 7.1	Abbreviated in this document to <b>DS</b> . The directory where <b>DS</b> is installed is abbreviated to <%im_path%>.
intra-mart Server Manager	A server that manages the overall system. Abbreviated in this document to <b>imSM</b> .
intra-mart Service Platform	The actual server where the service runs. Abbreviated in this document to <b>imSP</b> .
Application Runtime	The runtime engine for the application. Abbreviated in this document to <b>AppRuntime</b> .
Shared-Memory Service	A service that manages shared memory. Abbreviated in this document to <b>SharedMemSrv</b> .
Permanent-Data Service	A service that manages permanent data. Abbreviated in this document to <b>PermDataSrv</b> .
Resource Service	A service that manages the program files for the script-based development model. Abbreviated in this document to <b>ResourceSrv</b> .
Storage Service	A service that manages files. Abbreviated in this document to <b>StorageSrv</b> .
Serialization Service	A service that provides exclusive control functionality. Abbreviated in this document to <b>SerializeSrv</b> .
Schedule Service	A service that controls timed execution of batches. Abbreviated in this document to <b>ScheduleSrv</b> .
Web Server Connector	A module for interoperating with web servers. Abbreviated in this document to <b>WSC</b> . The directory where <b>WSC</b> is installed is abbreviated to <%web_path%>.
intra-mart Administrator	A viewer for viewing the status of the entire system. Abbreviated in this document to <b>imAdmin</b> .
BPM Server (Intalio on Resin)	The BPEL runtime engine which is equipped with a workflow design tool. Abbreviated in this document to <b>BPMS</b> .
ESB Server (Mule on Resin)	Performs integration or interoperation of applications. Abbreviated in this document to <b>ESBS</b> .

## 1.5 Prerequisites

When using this product, the system requirements detailed in the release notes need to be satisfied.  
Refer to the release notes for details.

It is a prerequisite of **IWP** to operate in conjunction with a database.

This installation guide also provides an explanation along with the method for connecting to the database

## 2 Installation Procedure

Use the following installation procedure when running this product.

### 2.1 Create a Server Configuration Diagram

Before performing the installation, create a configuration diagram of the server you are operating.

Refer to [7 Appendix A: The intra-mart System Administration Sheet] (page 110) to create the server configuration diagram.

Refer to		Page
3.1.1	Server Configuration	8
3.2.3	Operating Machine Configuration and Installation	23-38

### 2.2 Install the Database

Install the database to use.

How to register tablespaces and users in Oracle 11g

Refer to		Page
10	Appendix D: How to Create Tablespaces and Users in Oracle 11g	115

### 2.3 Install the Driver for Connecting to the Database

Install the driver for connecting to the database.

Refer to		Page
3.1.2.1	Installing the Oracle JDBC Driver	8
3.1.2.2	Installing the Microsoft SQL Server JDBC Driver	8
3.1.2.3	Installing the DB2 JDBC Driver	9
3.1.2.4	Installing the PostgreSQL JDBC Driver	9

### 2.4 Install the Java Runtime

Install the Java runtime on all of the computers that will run the intra-mart.

Refer to		Page
3.1.3	Installing the Java Runtime	10

### 2.5 Install the Web Server

To use IWP (Resin), the web server is required to be installed.

Install the web server only on the computer that runs as a web server.

The web server does not need to be installed when using the intra-mart HttpServer that is included in the Application Runtime.

Refer to		Page
3.1.4	Installing the Web Server	11

## 2.6 Install JBoss

JBoss is required to be installed when using IWP (JBoss).

Refer to		Page
3.1.5	Installing JBoss	11

## 2.7 Install intra-mart Ver. 7.1

Install this product according to your server configuration.

Refer to		Page
3.2.1	Starting and Operating the Installer	12
3.2.3	Operating Machine Configuration and Installation	23

**If you are using IM-ContentsSearch, the Solr management function needs to be configured for use.**

**If the Solr management function has not been configured for use, perform [4.5.1.2 solrconfig.xml settings - Configuring the Solr Management Function for Use] in the [IM-ContentsSearch Setup Guide].**

## 2.8 Register the Web Server Connector

When using IWP (Resin), you need to register the Web Server Connector.

Register the Web Server Connector with the Web Server.

**When operating the Application Runtime as the intra-mart HttpServer, registration is not required.**

### ■ Web Server settings

Refer to		Page
3.3.1	For Apache 2	55
3.3.2	For IIS 6.0	61
3.3.3	For IIS 7.0	65
3.3.4	Configuring Round Robin	71

### ■ Other settings

Refer to		Page
3.3.5.1	Changing the Alias	72
3.3.5.2	Registering Web Application Software the User Have Made	76
3.3.5.3	Changing the URL of the Login Screen	77

## 2.9 Configure JBoss

JBoss is required to be configured when using IWP (JBoss).

Refer to		Page
3.4	Configuring JBoss	79

## 2.10 Configure the Database Connection

Using a database is a prerequisite for the intra-mart Ver. 7.1.

The intra-mart configures the settings for connecting to the database.

Refer to		Page
3.5.1	Preparation	84
3.5.2	Configuring http.xml	85
3.5.3	Configuring data-source.xml	87

## 2.11 Start intra-mart

### ■ How to start and stop the Server Manager or Service Platform

Refer to		Page
4.2.1	On Windows	91
4.2.2	On a UNIX-Based OS	95

## 3 Installation

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### 3.1 Preparation

#### 3.1.1 Server Configuration

##### 3.1.1.1 Server Configuration Diagram

It is recommended to create a server configuration diagram before beginning the installation.

Specifies the IP addresses of each machine, the port numbers of each Service Platform, and the names of each of the services running on the Service Platform on the server configuration diagram.

Creating a server configuration diagram make it easy to perform the installation.

Refer to [3.2.3 Operating Machine Configuration and Installation] for details on server configuration diagrams.

##### 3.1.2 Install the JDBC Driver

The JDBC driver needs to be installed when using a database with this product.

Add the JDBC driver that you installed to the class path of the Application Server running the Application Runtime.

**\* This needs to be installed on all of the computers on which the Application Server is installed.**

Refer to the release notes for various information about verifying operation.

##### 3.1.2.1 Installing the Oracle JDBC Driver

**The Oracle JDBC driver needs to be installed when using Oracle with this product.**

This is not necessary if it has already been installed.

The Oracle JDBC Driver is available at the Oracle Japan website.

It can be downloaded from <http://otn.oracle.co.jp/software/tech/java/jdbc/index.html>.

##### 3.1.2.2 Installing the Microsoft SQL Server JDBC Driver

**The Microsoft SQL Server JDBC driver needs to be installed when using Microsoft SQL Server with this product.**

This is not necessary if it has already been installed.

Microsoft SQL Server JDBC Driver 2.0 is available at the Microsoft website.

It can be downloaded from

<http://www.microsoft.com/downloads/details.aspx?FamilyID=99b21b65-e98f-4a61-b811-19912601fdc9&DisplayLang=ja>.

### 3.1.2.3 Installing the DB2 JDBC Driver

**The DB2 JDBC driver needs to be installed when using DB2 with this product.**

This is not necessary if it has already been installed.

Install the DB2 JDBC Driver Type 4 that is included with IBM DB2.

Refer to the DB2 guide for details.

### 3.1.2.4 Installing the PostgreSQL JDBC Driver

**The PostgreSQL JDBC driver needs to be installed when using PostgreSQL with this product.**

This is not necessary if it has already been installed.

The PostgreSQL JDBC Driver is available at the PostgreSQL JDBC website.

It can be downloaded from <http://jdbc.postgresql.org/download.html>.

### 3.1.3 Installing the Java Runtime

Install the Java runtime on all of the computers where server modules are installed.

This is not necessary if it has already been installed.

#### 3.1.3.1 Cautions Before Installation

##### 3.1.3.1.1 Using Oracle as the Database

When installing Oracle, the version of the Java runtime may change.

Always install the java runtime after installing Oracle.

##### 3.1.3.1.2 Installing the Solaris Version of the Java Runtime

When installing the Solaris version of the Java runtime, install the mandatory patches for the Solaris OS first.

The Java runtime might not operate properly if the appropriate Solaris patches have not been installed.

The J2SE cluster patch for Solaris OS can be downloaded from

<http://sunsolve.sun.com/show.do?target=patch-access>. Refer to the website where you downloaded the Java runtime for details.

#### 3.1.3.2 Installation Procedure

1. Download the Java runtime (Java SE Development Kit (JDK)). The installer for the Java runtime can be downloaded from the Sun Microsystems website.  
<http://java.sun.com/javase/ja/6/download.html>
2. Perform the installation using the installer you downloaded.  
Refer to the Sun Microsystems website for details on installation.  
<http://java.sun.com/javase/ja/6/webnotes/install/index.html>
3. Enter "**java -version**" on the command line and press the return key.
4. Version information is displayed on the command line, which shows that the installation was successful.

### 3.1.4 Installing the Web Server

The Web Server needs to be installed to use IWP.

This does not need to be installed if the intra-mart HttpServer that is built into the Application Runtime is used.

Install this only on the computer that will run as the Web Server.

- Apache 2.2.x
- IIS 6.0
- IIS 7.0

Install the web server by following the instructions given in the web server guide, etc.

### 3.1.5 Installing JBoss

The JBoss Application Server needs to be installed to use IWP (JBoss).

Install JBoss Application Server Ver. 4.2.3.

## 3.2 Installing intra-mart Ver. 7.1

### 3.2.1 Starting and Operating the Installer



Use the following procedure to launch and operate the installer.

#### ■ On Windows

1. Make sure that the `java.exe` command is in the command path.
2. Use Explorer to navigate to the directory of the CD-ROM for this product.
3. Navigate to the directory `iwp_afw_en¥install`.
4. Double-click on **setup.jar** to start the installer.  
It can also be started by double-clicking on **setup.bat**.
5. The installer screen is displayed.
6. Configure the settings on the screen, and then click the [Next] button. Continue with the configuration on the subsequent screens.
7. Finally, a list of settings is displayed. If these settings are correct, click the [OK] button. Otherwise, click the [Prev] button to go back and change the settings.
8. The installation begins.

#### ■ On a UNIX-Based OS

1. Make sure that the `java` command is in the command path.
2. Use the console screen to navigate to the directory of the CD-ROM for this product.
3. Change to the directory `iwp_afw/install`.
4. Enter **java -jar ./setup.jar -con** from the console to start the installer.  
It can also be started by executing **setup.sh**.
5. The installer runs in a dialog format.
6. Fill in the settings. Continue with the configuration on the subsequent screens.
7. Finally, a list of settings is displayed. If these settings are correct, enter [y]. Otherwise, enter [!] to go back and change the settings.
8. The installation begins.

## 3.2.2 Directory Structure of the Installation Directory

This section describes the directory structure of the installation directories.

### 3.2.2.1 Web Server Connector Directory Structure

<%web\_path%>

- alert/	Directory that contains alert pages
- applet/	Directory that contains applets
- axis2-web/	Directory that contains files for the web service
- bpms/	Directory that contains files for BPMS (Only the Enterprise for BPM version)
- bpw/	Directory that contains files for BPW (Only the Advanced version or Enterprise for BPM version)
- csjs/	Directory that contains client side JavaScript
- css/	Directory that contains cascading style sheets
- flash/	Directory that contains flash files
- format_creator	Directory that contains files for Format Creator (Only the Advanced version or Enterprise for BPM version)
- images/	Directory that contains image files
- img/	Directory that contains image files (for compatibility with older versions)
- maskat/	Directory that contains files for Maskat
- portal/	Directory that contains files for Portal
- round_robin/	Web Server Connector (built-in modules)
- skin/	Directory that contains files for color patterns
- solr/	Directory that contains files for IM-ContentsSearch
- table_maintenance/	Directory that contains files for table maintenance
- view_creator/	Directory that contains files for view_creator
- wsrp/	Directory that contains files for WSRP
- xsl/	Directory that contains XSL files
- yui/	Directory that contains The Yahoo! User Interface Library
- identification.properties	Version information file (Enables the user to check the patch number that is applied to WSC)

### 3.2.2.2 Server Manager Directory Structure

<%im_path%>	
- bin/	Directory that contains server module executable files
- manager.bat	Script file for starting the Server Manager (for Windows)
- manager.sh	Script file for starting the Server Manager (for UNIX)
- im_logger_manager.xml	Server Manager log setting file
- MgrService.exe	Service creation module file (for Windows)
- MgrService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the ServiceManager (for Windows)
- tools/	Directory that contains tools
- licedit.bat	Command file for registering licenses (for Windows)
- licedit.sh	Command file for registering licenses (for UNIX)
- conf/	Directory that contains the common initial setting file for server modules
- imart.xml	intra-mart basic setting file
- system.xml	intra-mart system setting file
- data-source.xml	Data source setting file
- access-security.xml	Access security setting file
- client_notice/	Directory for the client notification function
- design/	Directory that contains design-related setting files
- graph/	Directory for graph rendering modules
- i18n/	Directory that contains internationalization related setting files
- mail/	Directory that contains files that define the email send API
- message/	Directory that contains messages files
- licenses/	Directory that contains license information
- log/	intra-mart log output directory
- plugin/	Directory that contains plug-in information
- specification/	Directory that contains specification information

### 3.2.2.3 Application Runtime Directory Structure

<%im_path%>	
- bin/	Directory that contains server module executable files
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- im_portal_common/	Directory that contains the portal module library
- service/	Directory that contains the ServiceManager (for Windows)
- tools/	Directory that contains tools
- build	Directory that contains Ant build files
- for_jboss/	Directory that contains Ant build files (for JBoss)
- conf/	Directory that contains the common initial setting file for server modules
- http.xml	Resin basic setting file
- imart.xml	intra-mart basic setting file
- datastore/	Directory that contains the application common master setting files
- log/	Directory that contains log-related setting files
- portal/	Directory that contains portal-related setting files
- doc/	Directory that contains web content (for JavaEE-based development model programs)
- log/	intra-mart log output directory
- lib/	Directory that contains shared libraries for the intra-mart server modules

### 3.2.2.4 Shared Memory Service Directory Structure

<%im_path%>	
- bin/	Directory that contains server module executable files
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the ServiceManager (for Windows)
- log/	intra-mart log output directory
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file

### 3.2.2.5 Permanent Data Service Directory Structure

<%im_path%>	
- bin/	Directory that contains the common initial setting file for server modules
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the ServiceManager (for Windows)
- log/	intra-mart log output directory
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file

### 3.2.2.6 Storage Service Directory Structure

<%im_path%>	
- bin/	Directory that contains the common initial setting file for server modules
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the Service Manager (for Windows)
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file
- log/	intra-mart log output directory

- storage/	Directory that contains Storage Service resources
- bpw/	Directory for BPW (Only the Advanced version or Enterprise for BPM version)
- database/	Directory that contains SQL, etc. for generating the indexes used by workflow systems
- excel_template/	Directory that contains the template files for process definition information
- mail_template/	Directory that contains the template files for email documents for workflow systems
- bpms/	Directory that contains SQL files for BPMS (Only the Enterprise for BPM version)
- client_notice/	Directory for the client notification function
- format_creator/	Directory for FormatCreator (Only the Advanced version or Enterprise for BPM version)
- portal/	Directory that contains portal-related files
- system/	System directory
- basic/	Directory that contains data for initializing the login groups
- master/config/	Directory for application common master batch import and export
- sample/	Directory that contains sample data
- template/	Directory that contains template files
- calendar/	Directory that contains template files for <IMART type="calendar">
- logo/	Directory that contains template files for the logo settings
- view_creator/	Directory for ViewCreator

### 3.2.2.7 Resource Service Directory Structure

<%im_path%>	
- bin/	Directory that contains the common initial setting file for server modules
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the ServiceManager (for Windows)
- tools/	Directory that contains tools
- js2class.bat	JavaScript compiler command file (for Windows)
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file
- log/	intra-mart log output directory

- pages/	Directory that contains script-based development model programs
- platform/src/	Directory that contains IWP script-based development model programs
- bpms/	Directory that contains pages for BPMS (Only the Enterprise for BPM version)
- bpw/	Directory that contains pages for BPW (Only the Advanced version or Enterprise for BPM version)
- client_notice/	Directory that contains pages for the client notification function
- event_navigator/	Directory that contains pages for the event navigator
- format_creator/	Directory that contains pages for FormatCreator (Only the Advanced version or Enterprise for BPM version)
- password_reminder/	Directory that contains pages for the password reminder
- solr/	Directory that contains pages for IM-ContentsSearch
- system/	Directory that contains pages for system settings
- template/	Directory that contains template pages
- tools/	Directory that contains tool pages
- setup.js	Script file for initially starting the system
- setup_bpms.js	Script file for initially starting BPMS
- source-config.xml	Source setting file
- product/src/	Directory that contains the script-based development model programs for intra-mart applications (Intranet Start Pack, etc.)
- src/	Directory that contains script-based development model programs created by developers
- init.js	Script file for initial startup

### 3.2.2.8 Serialization Service Directory Structure

<%im_path%>	
- bin/	Directory that contains the common initial setting file for server modules
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the Service Manager (for Windows)
- log/	intra-mart log output directory
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file

### 3.2.2.9 Schedule Service Directory Structure

<%im_path%>	
- bin/	Directory that contains the common initial setting file for server modules
- server.bat	Script file for starting the Service Platform (for Windows)
- server.sh	Script file for starting the Service Platform (for UNIX)
- SrvService.exe	Service creation module file (for Windows)
- SrvService.ini	Service creation initial setting file (for Windows)
- service/	Directory that contains the Service Manager (for Windows)
- log/	intra-mart log output directory
- conf/	Directory that contains the common initial setting file for server modules
- log/	Directory that contains log-related setting files
- imart.xml	intra-mart basic setting file

### 3.2.2.10 Samples

If [Install the samples] is selected in the installer, directories and files for the samples are installed in addition to the directory structures described above.

### 3.2.2.11 New Line Code Limitations

If the intra-mart is installed in Windows, the new line code for files with the following extensions is LF.

- .xml
- .license
- .dtd
- .wsdl

### 3.2.3 Operating Machine Configuration and Installation

This product is able to operate under a variety of different machine configurations.

The installation procedure is described by taking various different machine configurations as examples.

#### 3.2.3.1 Cautions

The following describes cautions regarding items that need to be input during installation.

(\*1) In items to enter the **Server Manager** or **Service Platform** address,

always enter the **IP address of the machine**.

If entering "localhost", the intra-mart will not operate.

(Example) **192.168.0.2**

(\*2) The **Service Platform ID** is an **ID for uniquely identifying** the intra-mart server.

**Always set this to an ID that is different from other Service Platforms.**

If specifying duplicate IDs, the intra-mart will not operate correctly.

These are also used for displaying the intra-mart Administrator.

The only characters that can be entered in strings are **half-width alphanumeric**, **underscores** (`_`),

**colons** (`:`), and **periods** (`.`).

In the machine configuration examples, "IP address:Port number" is specified as the Service Platform ID.

(Example) ·When the **IP address** where the Service Platform was installed is **192.168.0.2**.

·When the **port number** where the Service Platform was installed is **49150**.

The **Service Platform ID** is **192.168.0.2:49150**.

(\*3) In items to enter the address of the **HTTP server**,

enter the **IP address of the intra-mart HTTP server or another HTTP server such as Apache or IIS**.

(Example) **192.168.0.2**

(\*4) In items to enter the port number of the **HTTP server**,

enter the **port number** of the **intra-mart HTTP server** or other HTTP servers such as **Apache or IIS**.

Since **Oracle 11g** uses port number "**8080**" under the standard installation,

if the Application Runtime (including for Standalone configurations) is installed on the same computer, there may be a conflict in the network port settings and the server might not start.

During the installation, avoid setting **duplicate port numbers**.

(\*5) **When building a multiple language environment**, set the "**Character encoding of the server module**" and the "**Character encoding sent to web browsers**" to [UTF-8].

(\*6) In items where to enter the address and port number of the **BPSM HTTP server**,

enter the **IP address and the port number of the server** being used for **BPMS**.

Since **BPMS** uses port number "**8080**" under the standard installation,

if the Application Runtime (including for Standalone configurations) is installed on the same computer, there may be a conflict in the network port settings and the server might not start.

During the installation, avoid setting **duplicate port numbers**.

**(\*7) Cautions related to heap size**

In regards to the initial heap size and the maximum heap size, the values given in the guide are only **sample values**.

These values need to be changed to match the users' environment.

**Note that if the heap size is too small, OutOfMemory errors may occur.**

**(\*8) Server Manager uses port number "49152" by default.**

It is possible that this port number may already be used depending on the OS, such as

**Windows Vista**. In this event, specify a different port number during installation.

To change the port number of **Server Manager** after installation, edit

`<%im_path%>/conf/imart.xml`.

Example settings

```
<intra-mart>
  <administration>
    <host address="192.168. 0. 1"/>
    <network port="49152" timeout="30">
  ...
</intra-mart>
```

### 3.2.3.2 The intra-mart WebPlatform (Resin) Machine Configuration

The machine configurations described in this section are "examples" of installation that assume the following conditions.

- OS : Windows
- Character encoding of the server module : UTF-8
- Character encoding sent to web browsers : UTF-8
- Product type : IWP (Resin) - Standard

\* If installing **Advanced** or **Enterprise for BPM**, select [Advanced] or [Enterprise for BPM] in the type of product to install. Refer to [3.2.3.4 Installing Enterprise for BPM] for details on Enterprise for BPM.

\* **When building a multiple language environment**, set the "**Character encoding of the server module**" and the "**Character encoding sent to web browsers**" to [UTF-8].

\* When using the distributed machine configuration (Machine Configuration 3 and Machine Configuration 4 in the following examples), any other services cannot be installed on the Service Platform that is running the Application Runtime.

3.2.3.2.1 Machine Configuration 1

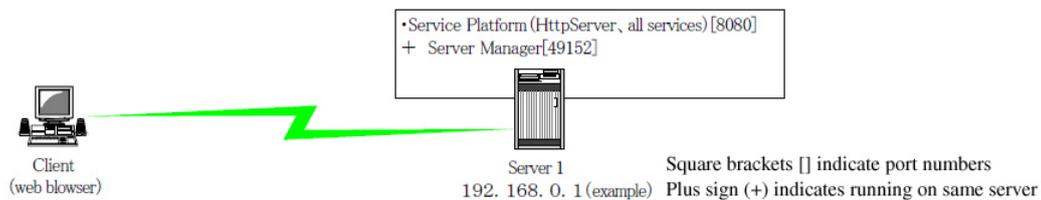
■ Running on a single server

Server Manager and Service Platform (all services) are running on the same server.

The system operates using the intra-mart HttpServer embedded within the Application Runtime.

Because the system is using the **intra-mart HttpServer**, the **Web Server Connector is not needed**.

All of the server modules are installed on the server.



3.2.3.2.1.1 Installation on Server 1

■ Install all of the server modules

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	1
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.1 (*1)
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.1:8080 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

If installing **Advanced** or **Enterprise for BPM**, select [2: Advanced] or [3: Enterprise for BPM] in the type of product to install. Refer to [3.2.3.4 Installing Enterprise for BPM] for details on Enterprise for BPM.

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

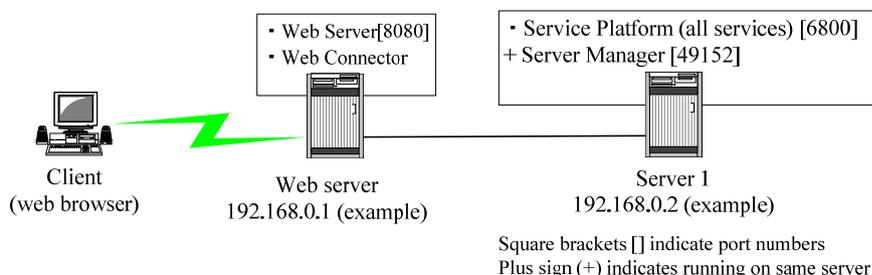
## 3.2.3.2.2 Machine Configuration 2

## ■ Running on two servers

Server Manager and Service Platform (all services) are running on the same server.

Web Server Connector is installed on the web server.

All of the server modules are installed on Server 1.



## 3.2.3.2.2.1 Installation on the Web Server

## ■ Install Web Server Connector

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	n
Install the Web Server Connector (y/n) ?	y
Install the IM-Administrator (y/n) ?	n
Enter the installation destination of the Web Server Connector	Enter the path as a full path This location is represented by %web_path%
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Install the samples (y/n) ?	n
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.2 Installation on Server 1

■ **Install all of the server modules**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.2 (*1)
Enter the port number for connecting to the Web Server Connector	6800
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.2:6800 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.3 Machine Configuration 3

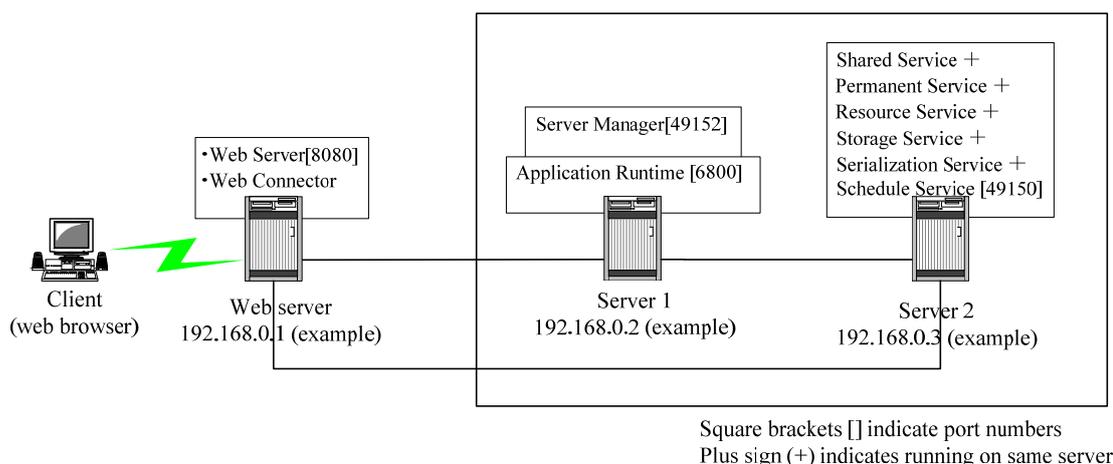
- Running on three servers

**Web Server Connector** is installed on the web server.

**Server Manager** and **Application Runtime** are installed on Server 1.

**The other services** are installed on Server 2.

\* Server 1 or Server 2 can also be used as a database server, depending on the access frequency and content of application software. Furthermore, the Application Runtime can also be installed as a web server (HTTP server).



## 3.2.3.2.3.1 Installation on the Web Server

- Install Web Server Connector

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	n
Install the Web Server Connector (y/n) ?	y
Install the IM-Administrator (y/n) ?	n
Enter the installation destination of the Web Server Connector	Enter the path as a full path This location is represented by %web_path%
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Install the samples (y/n) ?	n
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.3.2 Installation on Server 1

■ **Install the Server Manager and Application Runtime**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	1
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.2 (*1)
Enter the port number for connecting to the Web Server Connector	6800
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.2:6800 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.3.3 Installation on Server 2

■ **Install the other services (apart from Application Runtime)**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	y
Install the Permanent Data Service (y/n) ?	y
Install the Resource Service (y/n) ?	y
Install the Storage Service (y/n) ?	y
Install the Serialization Service (y/n) ?	y
Install the Schedule Service (y/n) ?	y
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.3 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.2 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.3:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

3.2.3.2.4 Machine Configuration 4

■ Running on six servers

**Web Server Connector** is installed on the web server.

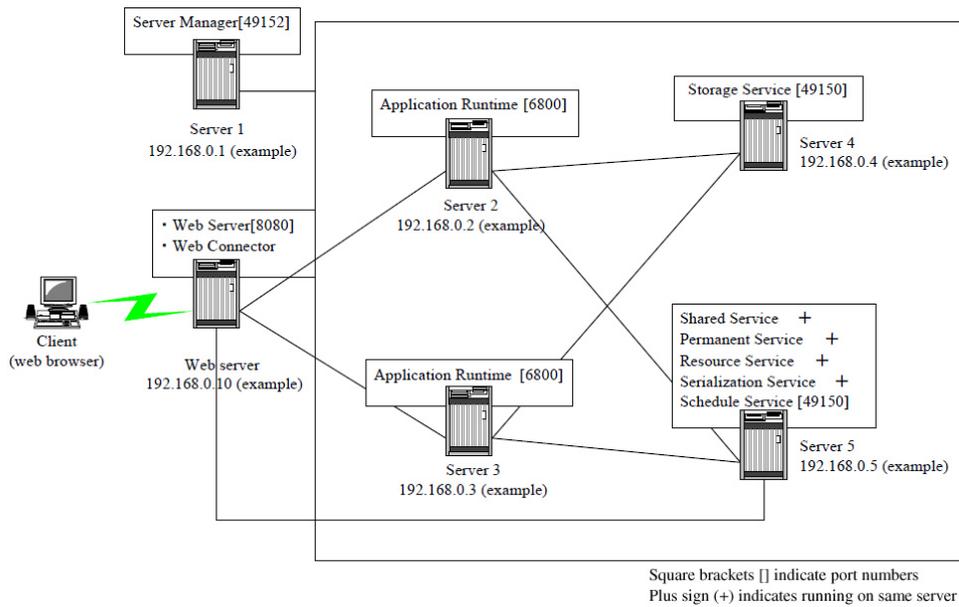
**Server Manager** is installed on Server 1.

**Application Runtime** is installed on Server 2.

**Application Runtime** is installed on Server 3.

**Storage Service** is installed on Server 4.

**The other services** are installed on Server 5.



## 3.2.3.2.4.1 Installation on the Web Server

■ **Install Web Server Connector**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	n
Install the Web Server Connector (y/n) ?	y
Install the IM-Administrator (y/n) ?	n
Enter the installation destination of the Web Server Connector	Enter the path as a full path This location is represented by %web_path%
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Install the samples (y/n) ?	n
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.4.2 Installation on Server 1

■ **Install Server Manager**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the port number for Server Manager to use	49152 (*8)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.4.3 Installation on Server 2

■ **Install Application Runtime**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.2 (*1)
Enter the port number for connecting to the Web Server Connector	6800
Enter the address of the HTTP server	192.168.0.10 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.2:6800 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.4.4 Installation on Server 3

■ **Install Application Runtime**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.3 (*1)
Enter the port number for connecting to the Web Server Connector	6800
Enter the address of the HTTP server	192.168.0.10 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.3:6800 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.4.5 Installation on Server 4

■ **Install Storage Service**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	n
Install the Permanent Data Service (y/n) ?	n
Install the Resource Service (y/n) ?	n
Install the Storage Service (y/n) ?	y
Install the Serialization Service (y/n) ?	n
Install the Schedule Service (y/n) ?	n
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.4 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.4:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.2.4.6 Installation on Server 5

■ **Install the other services (apart from Application Runtime and Storage Service)**

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	y
Install the Permanent Data Service (y/n) ?	y
Install the Resource Service (y/n) ?	y
Install the Storage Service (y/n) ?	n
Install the Serialization Service (y/n) ?	y
Install the Schedule Service (y/n) ?	y
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.5 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the HTTP server	192.168.0.10 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.5:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

### 3.2.3.3 The intra-mart WebPlatform (JBoss) Machine Configuration

The machine configurations described below are "examples" of installation that assume the following conditions.

- OS : Windows
- Character encoding of the server module : UTF-8
- Character encoding sent to web browsers : UTF-8
- Product type : IWP (JBoss) - Standard

\* When installing **Advanced** or **Enterprise for BPM**, select [**Advanced**] or [**Enterprise for BPM**] in the type of product to install. Refer to [3.2.3.4 Installing Enterprise for BPM] for details on Enterprise for BPM.

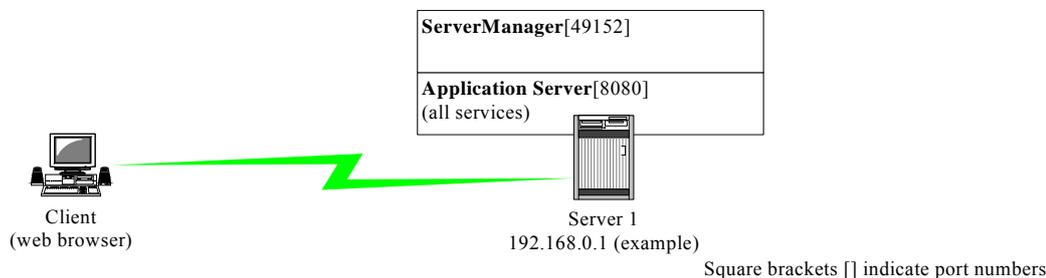
\* **When building a multiple language environment**, set the "**Character encoding of the server module**" and the "**Character encoding sent to web browsers**" to [**UTF-8**].

\* When using the distributed machine configuration (Machine Configuration 2 and Machine Configuration 3 in the following examples), any other services cannot be installed on the JBoss that is running the Application Runtime.

## 3.2.3.3.1 Machine Configuration 1

- Running on a single server

Application Server and all of the services are installed on the server.



## 3.2.3.3.1.1 Installation on Server 1

- Install all of the services

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	1
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.1 (*1)
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.1 (*2)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

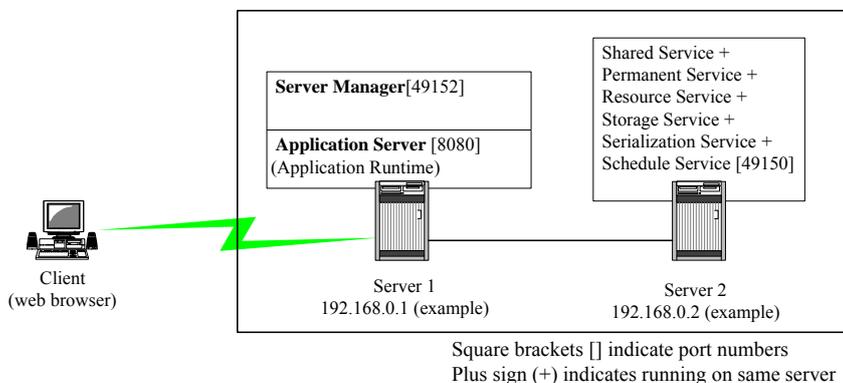
Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

3.2.3.3.2 Machine Configuration 2

- Running on two servers

Application Runtime and Server Manager are installed on Server 1.

The other services (apart from Application Runtime) are installed on Server 2.



3.2.3.3.2.1 Installation on Server 1

- Install the Server Manager and Application Runtime
  - Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
  - Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	1
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	1
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.1 (*1)
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.1 (*2)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.3.2.2 Installation on Server 2

- Install the other services (apart from Application Runtime)
  1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
  2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	y
Install the Permanent Data Service (y/n) ?	y
Install the Resource Service (y/n) ?	y
Install the Storage Service (y/n) ?	y
Install the Serialization Service (y/n) ?	y
Install the Schedule Service (y/n) ?	y
Select the character encoding of the server module (1: Windows-31J, 2: Shift JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.2 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.2:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

3.2.3.3.3 Machine Configuration 3

- Running on four servers

Server Manager is installed on Server 1.

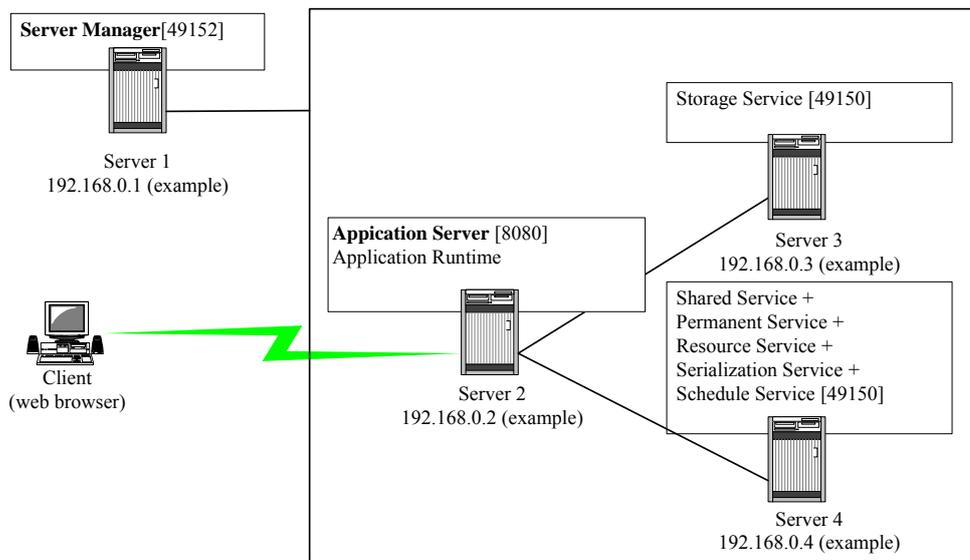
Application Runtime is installed on Server 2.

Storage Service is installed on Server 3.

The other services are installed on Server 4.

\* Storage Service can also be installed on Server 4 if the usage level is low.

\* Server 2 or Server 3 can also be used as a database server, depending on the access frequency and content of application software.



Square brackets [] indicate port numbers  
 Plus sign (+) indicates running on same server

## 3.2.3.3.1 Installation on Server 1

- Install Server Manager

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	2
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the port number for Server Manager to use	49152 (*8)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.3.2 Installation on Server 2

- Install Application Runtime
  1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
  2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	1
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.2 (*1)
Enter the address of the HTTP server	192.168.0.2 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.2 (*2)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.3.3 Installation on Server 3

- Install Storage Service

1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	n
Install the Permanent Data Service (y/n) ?	n
Install the Resource Service (y/n) ?	n
Install the Storage Service (y/n) ?	y
Install the Serialization Service (y/n) ?	n
Install the Schedule Service (y/n) ?	n
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.3 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.3:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

## 3.2.3.3.4 Installation on Server 4

- Install the other services (apart from Application Runtime and Storage Service)
  1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
  2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	2
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	1
Install the server module (y/n) ?	y
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	2
Select the modules to install. (1: Server Manager and Service Platform, 2: Server Manager only, 3: Service Platform only) ?	3
Select the type of Service Platform (1: Application Runtime, 2: Select other services) ?	2
Install the Shared Memory Service (y/n) ?	y
Install the Permanent Data Service (y/n) ?	y
Install the Resource Service (y/n) ?	y
Install the Storage Service (y/n) ?	n
Install the Serialization Service (y/n) ?	y
Install the Schedule Service (y/n) ?	y
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.4 (*1)
Enter the port number for the Service Platform to use	49150
Enter the address of the HTTP server	192.168.0.2 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the Server Manager	192.168.0.1 (*1)
Enter the port number of the Server Manager	49152 (*8)
Enter the Service Platform ID	192.168.0.4:49150 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

### 3.2.3.4 Installing Enterprise for BPM

If Enterprise for BPM is selected, the modules for the **web services**, etc. for **BPMS** are installed.

Take note of the following points when installing Enterprise for BPM.

**\* Cautions when installing Enterprise for BPM**

- BPMS needs to be installed separately.  
Refer to [BPM Server Setup Guide] for details.
- If you installed Enterprise for BPM, the BPMS HTTP server settings need to be configured. Because the HTTP server in BPMS exclusively uses port number "8080" by default, when operating on a single server, it needs to be configured so that it does not conflict with other network ports.

The procedure for installing Enterprise for BPM is described by using Machine Configuration 5 as an example.

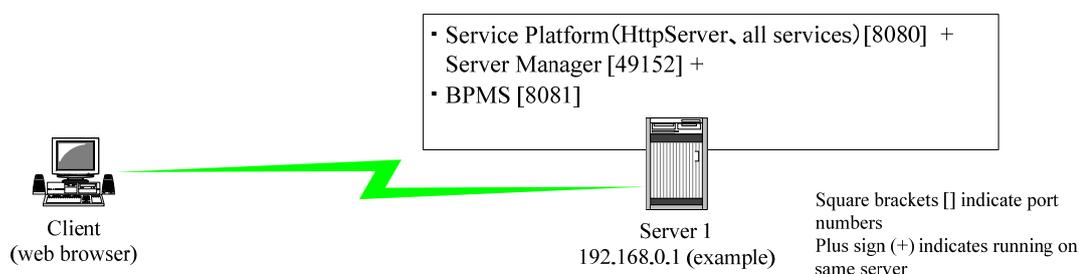
Use this procedure as a reference when setting up other machine configurations using Enterprise for BPM.

#### 3.2.3.4.1 Machine Configuration 5

- Running on a single server

Install Server Manager and Service Platform (all services) on the server.

Because these services are running on a single server in this example, and in order to prevent duplicate port numbers, the port number of the IWP HTTP server is set to "8080" and the port number of the BPMS HTTP server is set to "8081".



## Installation on Server 1

- Install all of the server modules
  1. Run the installer. Refer to [3.2.1 Starting and Operating the Installer] for details.
  2. Perform the installation in the following sequence. The following example is for the Standard product type on Windows.

Step	Input
Select the product (1: intra-mart WebPlatform (Resin), 2: intra-mart WebPlatform (JBoss), 3: intra-mart AppFramework, 4: intra-mart DebugServer) ?	1
Select the type of product (1: Standard, 2: Advanced, 3: Enterprise for BPM) ?	3
Install the server module (y/n) ?	y
Install the Web Server Connector (y/n) ?	n
Install the IM-Administrator (y/n) ?	y
Enter the JDK home directory	Enter the path as a full path
Enter the installation destination	Enter the path as a full path This location is represented by %im_path%
Select the server module configuration (1: Standalone environment configuration, 2: Distributed environment configuration) ?	1
Select the HTTP server configuration (1: Use the intra-mart HTTP server, 2: Use the Web Server Connector) ?	1
Select the character encoding of the server module (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Select the character encoding to send to web browsers (1: Windows-31J, 2: Shift_JIS, 3: EUC-JP, 4: UTF-8) ?	4 (*5)
Enter the address of this host	192.168.0.1 (*1)
Enter the address of the HTTP server	192.168.0.1 (*3)
Enter the port number of the HTTP server	8080 (*4)
Enter the address of the BPMS HTTP server	192.168.0.1 (*6)
Enter the port number of the BPMS HTTP server	8081 (*6)
Enter the port number for Server Manager to use	49152 (*8)
Enter the Service Platform ID	APP: 192.168.0.1:8080 (*2)
Initial heap size of Service Platform (-Xms) [MB] (Example: 64)	64 (*7)
Maximum heap size of Service Platform (-Xms) [MB] (Example: 128)	128 (*7)
Install the samples (y/n) ?	n
Folder to register in the Start menu	intra-mart Web Platform Ver. 7.1
Is this configuration correct (y/n) ?	y

Refer to [3.2.3.1 Cautions] for details on the (\*) notes.

### 3.2.3.5 Other Machine Configurations

This product is designed to work with the services which are arranged in various ways on each machine.

As long as the minimum required services exist, this product can operate no matter on which Service Platform each service exists.

#### ■ Numbers of each service that are required for operation

Web Server Connector × 0 to ∞

Server Manager × 1

Application Runtime × 1 to ∞

Shared Memory Service × 1 to 2

Permanent Data Service × 1 to 2

Resource Service × 1 to 2

Storage Service × 1 to 2

Serialization Service × 1 to 2

These services can be used to establish a standby system of **secondary services**.  
Refer to [3.2.3.5.3 Establishing a standby system for each service] for details.

Schedule Service × 0 to 2 (Installation is not required if the service is not used.)

#### ■ Minimum numbers of each service that are required for operation

Server Manager × 1

Application Runtime × 1

Shared Memory Service × 1

Permanent Data Service × 1

Resource Service × 1

Storage Service × 1

Serialization Service × 1

The machine configurations described above are only "**examples of machine configurations**" that can operate.

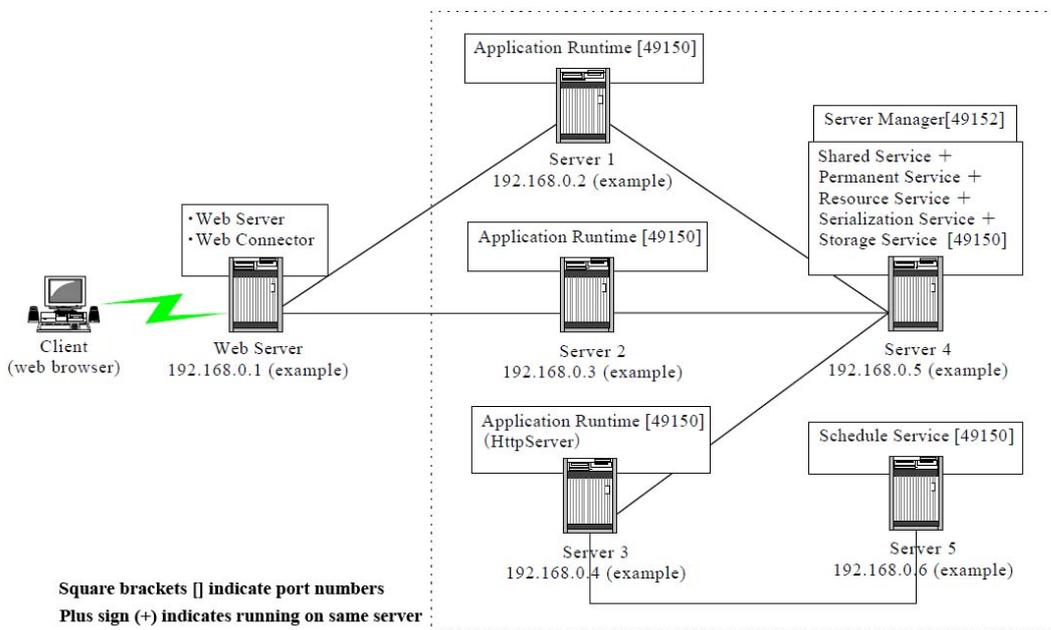
It is also possible to operate under machine configurations other than those described above.

It is recommended to create a machine configuration diagram prior to installation by referring to the machine configuration examples.

The key point to creating a machine configuration diagram is that it describes the IP address of each machine, the port number of each Service Platform that is operating, and each of the services operating on each Service Platform.

The installation will be able to proceed smoothly if the above information is clearly stated.

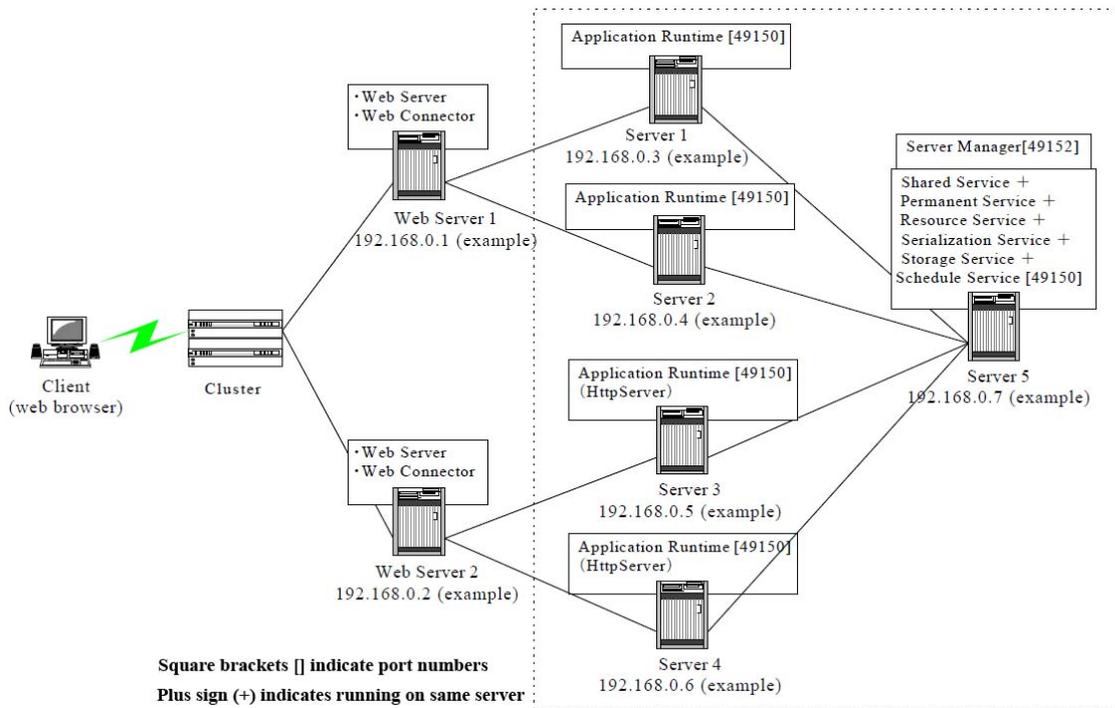
3.2.3.5.1 Configuration including a dedicated server for executing batch programs



\* Server 3 is exclusively for executing batch programs.

3.2.3.5.2 Configuration of distributed web servers using a commercial clustering product

In this case, the session failover method needs to be set to <Memory To RDB Method>.



### 3.2.3.5.3 Establishing a standby system for each service

**Secondary services** can be established for each service.

This makes it possible for the secondary service to take over the processing if the primary service goes down.

Although in the machine configuration examples described earlier, each service except for the Application Runtime was only installed on a single server, if a second instance of the same service is installed on other server, the information about itself will be notified to the Server Manager and automatically establish a secondary service.

In regards to the assignment of primary and secondary roles when two instances of the same service are installed, the service that starts first becomes the **primary** and the service that starts later becomes the **secondary**.

If a secondary service is setup for the Permanent Data Service, Resource Service, or Storage Service, the designated directory needs to be on a shared disk.

- How to share disks

The "Shared disk directory" in the following table are shared between each computer.

In Windows, sharing is done in network drives. In UNIX, it is done using NFS, Samba, or others.

If a system that employs **fault tolerant functionality** is built by running the same service on multiple machines simultaneously, all of the services of the same type need to be able to read from and write to the shared data.

Service	Shared disk directory	Setting in imart.xml
Permanent Data Service	<%im_path%>/treasure	intra-mart/platform/permanent/treasure-root
Resource Service	<%im_path%>/pages	intra-mart/platform/resource/jssp /source-path/••••/ directory
Storage Service	<%im_path%>/storage	intra-mart/platform/storage/file-root

If the shared disk directories are in different locations from where each of the services were installed, the pointers to the directories can be changed.

Edit the <%im\_path%>/conf/imart.xml setting file that is saved in the installation directory of each service.

Any arbitrary directory in the computer can be used as the directory for saving data by specifying the absolute path to the directory in the setting shown in [Setting in imart.xml] for each service in the above table.

For example, data can be shared with another computer by specifying a directory that is configured as a network drive.

\* Refer to [Service Platform Setting Guide] for details on each of the settings.

3.2.3.5.4 Session Failover

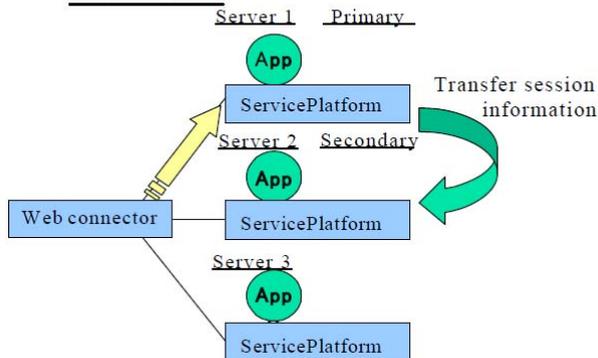
HttpSession (login session) can be set to failover when the user has multiple instances of Application Runtime.

\* Refer to [HTTP Session Fault Tolerance] in [Web Platform Setting Guide] for details.

There are two systems of session failover in IWP, as shown below.

■ Memory-to-Memory System

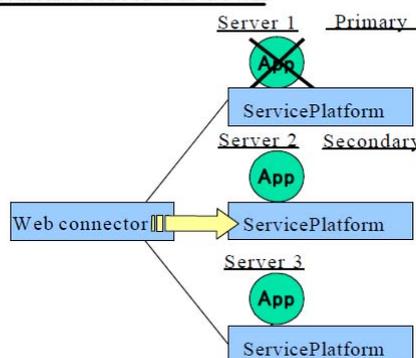
Normal time



The transfer of session information is performed between servers from the **primary** to the **secondary**.

On **Server 1**, Server 2 is secondary,  
on **Server 2**, Server 3 is secondary,  
and on **Server 3**, Server 1 is secondary.

When a server 1 is down

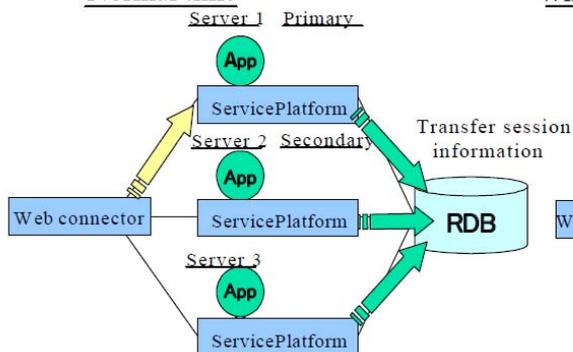


If Server 1 goes down, the destination for connections from the Web Connector is updated to Server 2, the session information is transferred to Server 2, and it can be accessed in the same way as Server 1.

Under these circumstances, if Server 2 also goes down at the same time, the session information is lost.

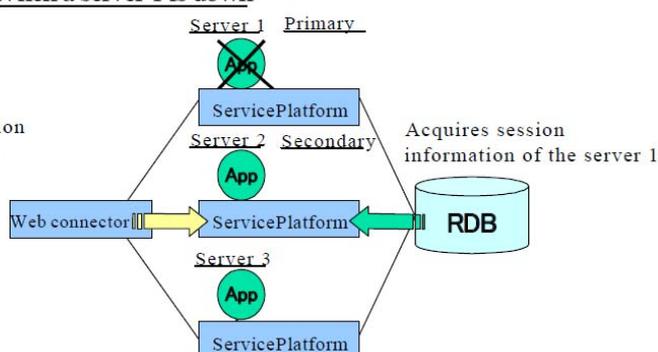
■ Memory-to-RDB System

Normal time



Session information is shared using a relational database (RDB).

When a server 1 is down



If Server 1 goes down, the destination for connections from the Web Connector is updated to Server 2, Server 2 retrieves the session information that was used by Server 1 from the RDB, and Server 2 can be accessed in the same way as Server 1.

The difference from the **Memory to Memory System** is that the session is shared even if Server 2 goes down in this case.

However, there is a slight degradation in terms of responsiveness due to the use of an RDB.

### 3.2.4 License Registration

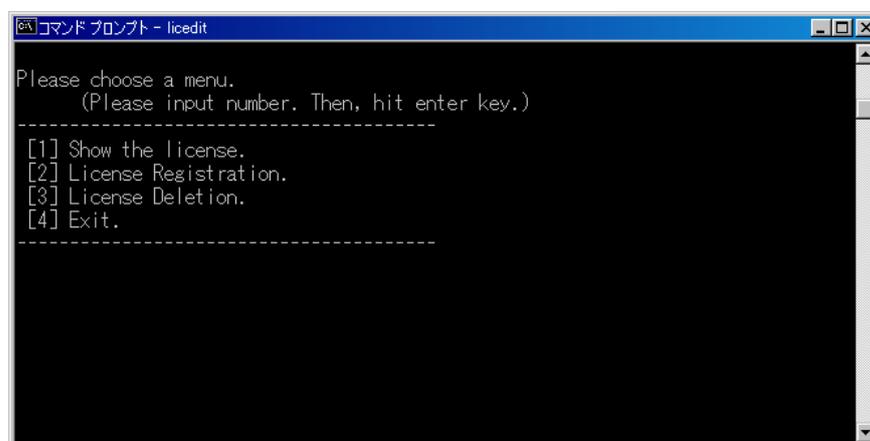
The following procedure is used to register licenses.

\* License registration is not required when using a trial version.

All of the servers need to be rebooted after registering the licenses.

The directory where Server Manager was installed is taken to be <%im\_path%>.

1. Go to the <%im\_path%>/bin/tools directory and run the following commands.  
(Stop the Server Manager at this time.)  
On Windows : **licedit.bat**  
On UNIX : **licedit.sh**
2. The license tool starts and a menu is displayed for registering licenses.



3. Enter [2] from the menu and register the license key.  
After registering a license correctly, the registered license is displayed.
4. Enter [1] from the menu to view the state of licenses.
5. Enter [3] from the menu to delete a license key.  
When the list of registered license keys is displayed, enter the number of the license key to delete.
6. Enter [4] from the menu to exit the license tool.
7. Reboot all of the servers.

This completes the procedure for registering licenses after installation.

## 3.2.5 Installer Silent Mode

The intra-mart installer is equipped with a "silent mode" that reproduces the sequence of an installation that has already been performed once. The procedure for installation using silent mode is shown below.

1. Write the installation setup procedure out to a file.
2. Refer to [3.2.5.1 Writing the Installation Setup Procedure to File] for details.
3. Install by reading the setting file.
4. Refer to [3.2.5.2 Installation by Reading From a Setting File] for details.

### 3.2.5.1 Writing the Installation Setup Procedure to File

The installation setup procedure that is being performed can be saved by specifying the **"-s SetupFileName"** option when starting the installer.

1. Make sure that the java command is in the command path.
2. Copy the file `iw_p_afw/install/setup.jar` from the CD-ROM of the product into any arbitrary directory.
3. In a console screen, change to the directory where you copied `setup.jar`.
4. Enter the following commands into the console.  

```
java -jar ./setup.jar -s SettingFileName
```
5. \* Specify the setting file name as the relative path from the directory that contains `setup.jar`.
6. The installer starts. The installation proceeds in a dialog format on the console.
7. Enter the values by following the directions of the installer.
8. Finally, a list of settings is displayed. If these settings are correct, enter `[y]`.
9. The installation begins.

The setup procedure for the installation performed above is output to a setting file.

### 3.2.5.2 Installation by Reading From a Setting File

An automatic installation that follows the installation procedure performed in [3.2.5.1 Writing the Installation Setup Procedure to File] can be started by specifying the **"-f SetupFileName"** option when the user starts the installer.

1. In a console screen, change to the directory where you copied `setup.jar`.
2. Enter the following commands into the console.  

```
java -jar ./setup.jar -f SettingFileName
```
3. \* Specify the setting file name as the relative path from the directory that contains `setup.jar`.

## 3.3 Configuring the Web Server

This section describes how to configure the web server so that it can be used with IWP.

These settings are always required if a round robin configuration is used.

Refer to [Web Platform Setting Guide] for details on the Web Server Connector and round robin.

In this section, the installation directory of the Web Server Connector is represented by `<%web_path%>`.

The installation directory of the Service Platform that is running the Application Runtime is represented by `<%im_path%>`.

- For UNIX-based OSs, grant the following permissions to the following files and directories.
  - ◆ Grant **write permission** to the `<%web_path%>/log` directory.
  - ◆ Grant **read permission** to the `<%web_path%>` directory.
  - ◆ Grant **write permission** to the directories where each of the server modules are installed.

### 3.3.1 For Apache 2

#### 3.3.1.1 Editing the Apache 2 Configuration File (httpd.conf)

The explanation given in this section uses "imart" as the alias name.

Add the following code to the end of httpd.conf.

```
Alias /imart "<%web_path%>"

<Directory "<%web_path%>">
  Order allow,deny
  Allow from all
</Directory>

LoadModule caucho_module Path to built-in module

ResinConfigServer IP Address of AppRuntime Port Number of AppRuntime
#<Location /caucho-status>
#  SetHandler caucho-status
#</Location>
```

There is a sample httpd.conf in the following directory.

OS	Sample of httpd.conf
Windows	<code>&lt;%web_path%&gt;/round_robin/win32/apache2.2/sample_httpd.conf</code>
UNIX	<code>&lt;%web_path%&gt;/round_robin/unix/apache2.x/sample_httpd.conf</code>

The built-in module for Windows is provided in the following directory.

`<%web_path%>/round_robin/win32/apache2.2/mod_caucho.dll`

On UNIX-based OSs, the built-in module needs to be compiled on your system.

Pre-compiled versions of the built-in module can be obtained from the following URL.

Be sure to confirm the operating environment before using these modules.

Note that these pre-compiled built-in modules are not supported in this product.

<http://www.intra-mart.jp/download/try/trylist2.html> (TRY version product download)

### 3.3.1.2 Compiling the Built-in Module (UNIX-Based OS)

The built-in module (`mod_caucho.so`) needs to be compiled on your system.

The items that are required for compilation are as follows.

#### ■ Commands

- ◆ `gcc`
- ◆ `make`
- ◆ `ld`

Check that the above commands are in the command path by using the `which` command, etc. If they are not, the system needs to be configured so that these commands can be used.

#### ■ Autotools

- ◆ `aclocal` (Note that `aclocal` is included in `automake`.)

The following tools are required in order to use `automake`.

- `make`
- `m4`
- `autoconf`

Refer to <http://www.gnu.org/software/automake/> for details on `automake`.

In addition, [DSO Support](#) is required in Apache 2.

If Apache 2 does not support DSO, recompile it for DSO support.

If "`mod_so.c`" is displayed when you run the following command, DSO support is enabled in Apache 2.

```
unix> /usr/local/apache/bin/httpd -l
Compiled-in modules:
...
mod_so.c
...
```

An example of how to recompile Apache 2 is shown below.

- The source files for Apache 2 can be downloaded from the Apache website (<http://httpd.apache.org/>) under the filename `httpd-2.2.x.tar.gz`.

The following shows an example of how to extract the source files.

```
tar zxvf httpd-2.2.x.tar.gz
```

When `httpd-2.0.XX-X.tar.gz` is extracted, the directory `http-2.0.XX` is created.

This directory contains the Apache 2 source.

Execute the following commands from the directory where the Apache 2 source is extracted.

```
unix> ./configure --prefix=<Directory to install Apache 2> --enable-so
unix> make
unix> make install
```

On Solaris, additional flags may be required when running `configure` on Apache 2. If a link error occurs when Resin loads, add the flag to enable DSO. Refer to the Apache 2 documentation for details. An example of running `configure` is shown below.

```
unix> ./configure --prefix=<Directory to install Apache 2> \  
--enable-rule=SHARED_CORE \  
--enable-rule=SHARED_CHAIN \  
--enable-so \  
--enable-module=most \  
--enable-shared=max  
unix> make  
unix> make install
```

A special flag needs to be specified when running configure if you are compiling Apache 2 as a 64-bit executable. An example of running configure is shown below.

```
unix> ./configure --prefix=<Directory to install Apache 2> --enable-so --with-expat=builtin  
unix> make  
unix> make install
```

The option "with-expat=builtin" specified above is from the example of "RedHat Enterprise Linux Advanced Platform 5 + Apache 2.2.8" described in the verified systems in the release notes.

**When recompiling Apache 2, specify the flags that match your system.**

**For Solaris 10**

In the case of Solaris 10, some preparation is required before compiling the built-in module. An example of this is described in this section. Modify this example to suit your OS environment.

4. Change macros  
Open <%web\_path%>/round\_robin/source/configure.ac in a text editor and change the following two macro declarations.

**AC\_PROG\_LD**

```
Before edit
dnl Checks for programs.
AC_PROG_CC
AC_PROG_LD
AC_PROG_EGREP
```

```
After edit
dnl Checks for programs.
AC_PROG_CC
#AC_PROG_LD
LD=/usr/ccs/bin/ld
AC_PROG_EGREP
```

**AC\_PROG\_LIBTOOL**

```
Before edit
AC_PROG_LIBTOOL
#
# libtool stuff
#
```

```
After edit
#AC_PROG_LIBTOOL
#
# libtool stuff
#
```

5. Edit libtool  
In Solaris 10, `/usr/sfw/lib/libstdc++.la` and `/usr/sfw/lib/64/libstdc++.la` are empty, and need to have the appropriate content added. This section gives an example of libtool. Modify this example to suit your OS environment.

Make libtool writable before editing it.

```
unix> chmod 755 /usr/sfw/lib/libstdc++.la
unix> chmod 755 /usr/sfw/lib/64/libstdc++.la
```

After making the files writable, write the following content in `usr/sfw/lib/libstdc++.la` and `/usr/sfw/lib/64/libstdc++.la` and save the files.

```
/usr/sfw/lib/libstdc++.la
# The name that we can dlopen(3).
dlname='libstdc++.so.6'

# Names of this library.
library_names='libstdc++.so.6.0.3 libstdc++.so.6 libstdc++.so'

# The name of the static archive.
old_library='libstdc++.a'

# Libraries that this one depends upon.
dependency_libs='-lc -lm -L/usr/sfw/lib -lgcc_s'

# Version information for libstdc++.
current=6
age=0
revision=3

# Is this an already installed library?
installed=yes

# Files to dlopen/dlpreopen
dlopen=""
dlpreopen=""

# Directory that this library needs to be installed in:
libdir='/usr/sfw/lib'
```

```
/usr/sfw/lib/64/libstdc++.la
# The name that we can dlopen(3).
dlname='libstdc++.so.6'

# Names of this library.
library_names='libstdc++.so.6.0.3 libstdc++.so.6 libstdc++.so'

# The name of the static archive.
old_library='libstdc++.a'

# Libraries that this one depends upon.
dependency_libs='-L/lib/64 -lc -lm -L/usr/sfw/lib/64 -lgcc_s'

# Version information for libstdc++.
current=6
age=0
revision=3

# Is this an already installed library?
installed=yes

# Files to dlopen/dlpreopen
dlopen=""
dlpreopen=""

# Directory that this library needs to be installed in:
libdir='/usr/sfw/lib/64'
```

After editing `usr/sfw/lib/libstdc++.la` and `/usr/sfw/lib/64/libstdc++.la`, set them back to unwritable.

```
unix> chmod 555 /usr/sfw/lib/libstdc++.la
unix> chmod 555 /usr/sfw/lib/64/libstdc++.la
```

This completes the preparation for Solaris 10.

**Procedure for compiling the built-in module**

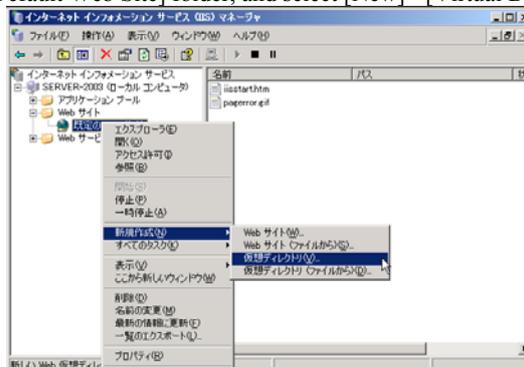
Run the following commands.

```
unix> cd <%web_path%>/round_robin/source  
unix> ./configure --with-apache=<Path to apache2>  
unix> make  
unix> make install
```

1. mod\_caucho.so is created in the Apache 2 module directory (typically the Apache 2 libexec or modules directory).
2. Copy the created mod\_caucho. into the following directory.  
    <%web\_path%>/round\_robin/unix/apache2.x

### 3.3.2 For IIS 6.0

1. Start the Internet Information Service (IIS) Manager.
2. Right-click the [Default Web Site] folder, and select [New] - [Virtual Directory].



3. Click the [Next] button.



4. Enter the virtual directory name and click the [Next] button.  
**In this description, the virtual directory name is "imart".**



5. Specify <%web\_path%> in the physical path and click the [Next] button.  
<%web\_path%> is the directory where Web Server Connector is installed.



- Select the check boxes for the required access privileges and click the [Next] button. **Always select** the following two check boxes.

■ Read

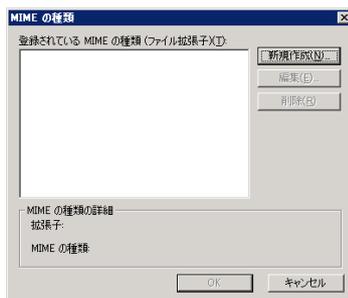
■ Execute (such as ISAPI application software or CGI)



\* To output logs, also select the [Write] check box.

\* Select other check boxes as required.

- Click the [Finish] button.
- Right-click the "imart" virtual directory that is created by the above procedure, and select [Properties].
- Select the [HTTP Headers] tab and click the [MIME types] button.
- Click the [New] button.



- Enter "**json**" as the [Extension] and enter "**application/json**" as the [MIME type], and then click the [OK] button.



- Verify that the settings are configured as follows, and click the [OK] button.

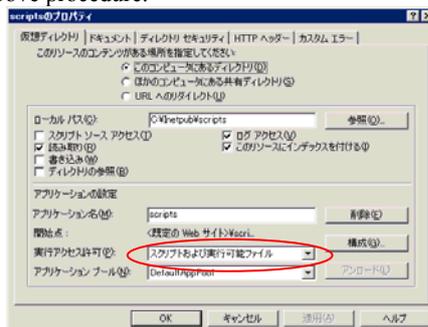


12. Create a "scripts" directory in the web content root (C:\inetpub by default).  
If the "scripts" directory already exists, it does not need to be created.
13. Copy the following files into the "scripts" directory that are created in the above procedure.  
In this example, the 32-bit version is used as an example.  
<%web\_path%>\round\_robin\win32\isapi\isapi\_srun.dll  
<%web\_path%>\round\_robin\win32\isapi\resin.ini

14. Modify resin.ini as follows.

```
ResinConfigServer IPAddressOfAppRuntime PortNumberOfAppRuntime
CauchoStatus no
IISPriority high
```

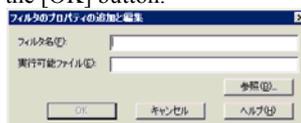
15. Create a "scripts" directory as a virtual directory of the [Default Web Site].  
Perform the same operations as in steps (2) to (7). If the "scripts" directory already exists, it does not need to be created.
16. Specify [Scripts and Executables] in the execute permissions of the "scripts" virtual directory that is created in the above procedure.



17. Right-click the [Default Web Site] folder, and select [Properties].
18. Select the [ISAPI Filters] tab, and click the [Add] button.



19. Enter "intra-mart" as the [Filter name], specify the isapi\_srun.dll that is copied in step 13 as the [Executable] and click the [OK] button.



- Verify that the settings are configured as follows.  
The "Status" of the ISAPI filter becomes [Loaded] when it is accessed from a web browser.  
The priority is also configured at this time.



20. Right-click the web service extensions, and select [Add a new Web service extension].
21. Enter "**intra-mart**" as the [Filter name], and specify the isapi\_srun.dll that is copied in step 13 as the [Required files]. Select the [Set extension status to Allowed] check box, and click the [OK] button.

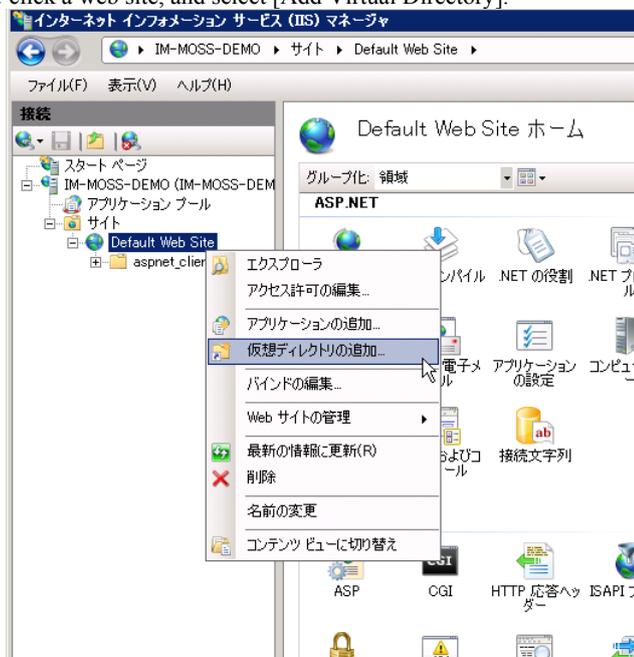


### 3.3.3 For IIS 7.0

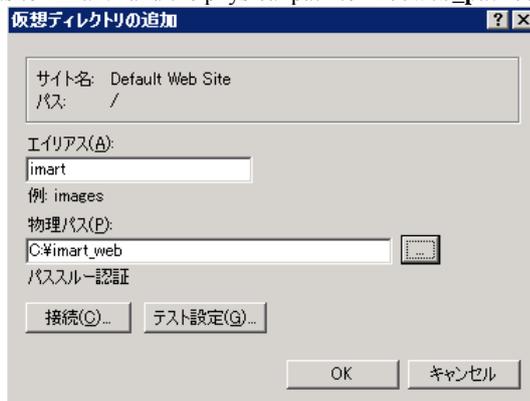
1. Start the Internet Information Service (IIS) Manager.
2. Stop IIS.
3. Create "<%web\_path%>/web.config".  
Copy "<%web\_path%>/round\_robin/winXX/isapi/iis7\_sample\_web.config" directly into the <%web\_path%> directory. Next, change the filename to "web.config".  
Replace the "XX" in "winXX" above as appropriate for the "Enable 32-bit Application Software" setting of the application software pool that is being used.
4. Modify <%web\_path%>/round\_robin/winXX/isapi/resin.ini as follows.

```
ResinConfigServer IPAddressOfAppRuntime PortNumberOfAppRuntime
CauchoStatus no
IISPriority high
```

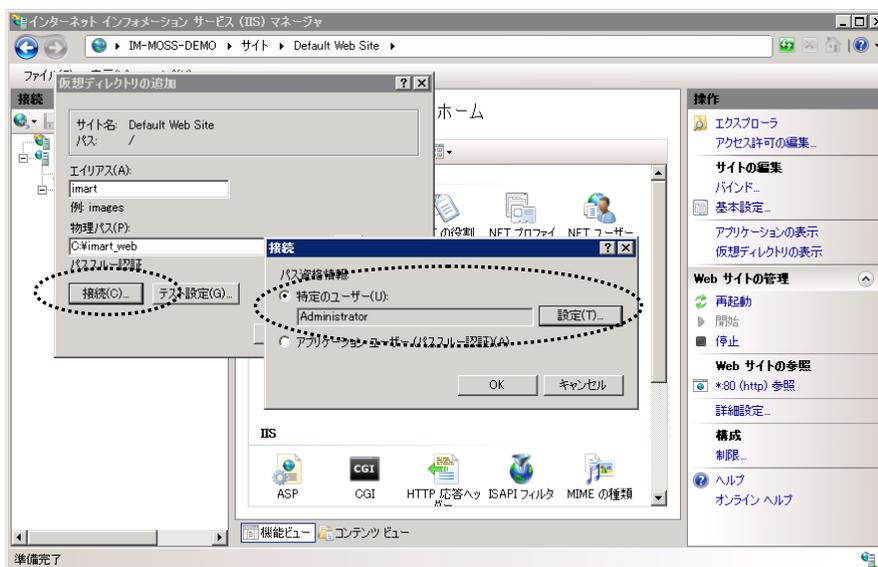
5. Add a virtual directory.  
Right-click a web site, and select [Add Virtual Directory].



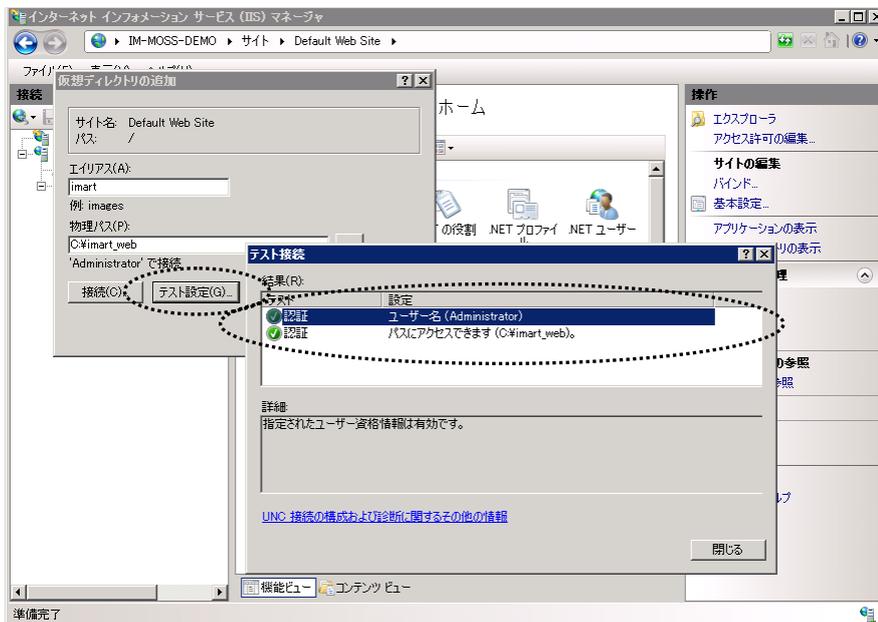
6. Set the alias to "imart" and the physical path to "<%web\_path%>".



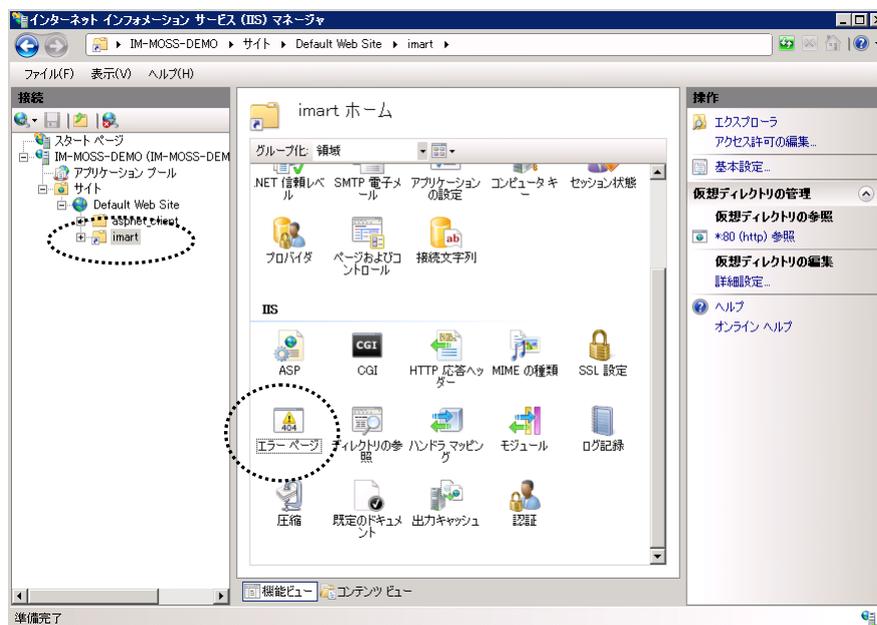
- Click the [Connect as] button and set [Specific user]. At this point, specify a user who can access <%web\_path%>.



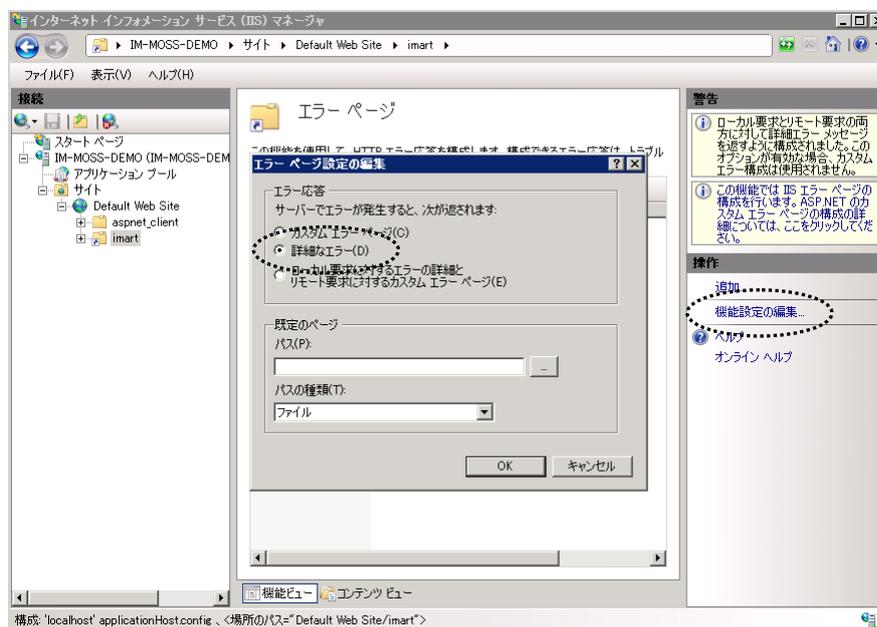
- Click the [Test Settings] button and verify that the connection is successful.



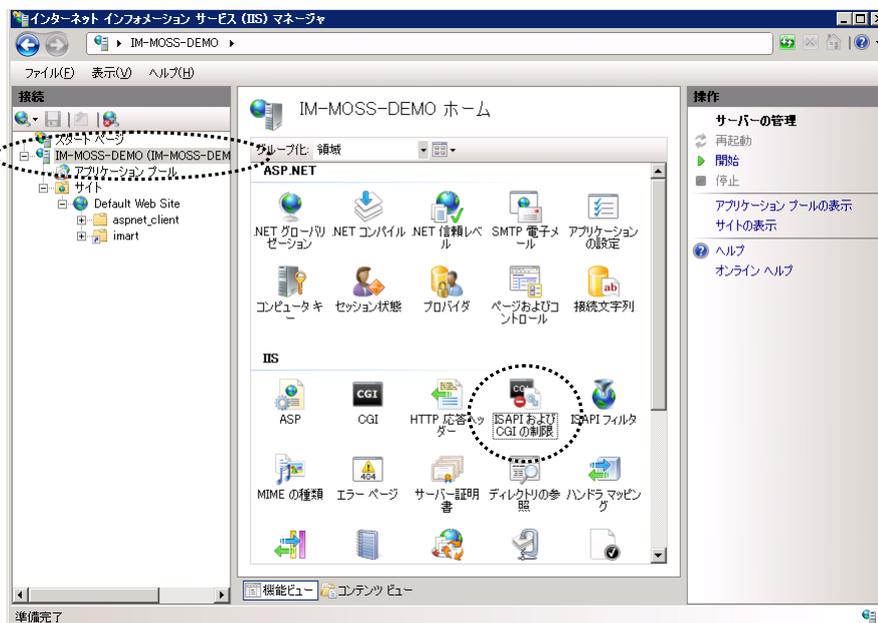
9. Select the "imart" virtual directory, and select [Error Pages] in the features view.



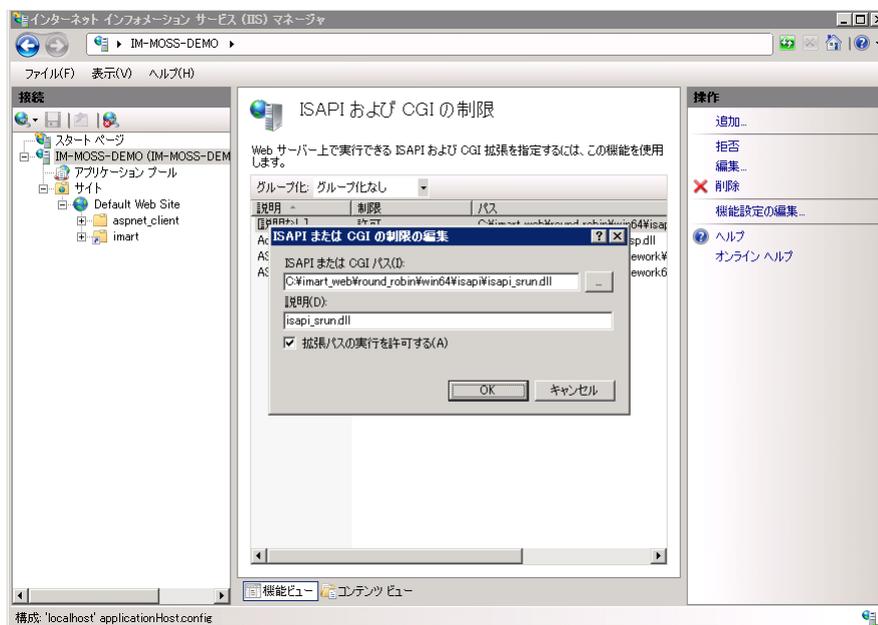
10. Select the [Edit Feature Settings] menu in the right-side pane. Select the [Detailed errors] check box in the [Edit Error Pages Settings] window, and click [OK].



- Select the computer name in the right-side pane, and select [ISAPI and CGI Restrictions] in the functions view.



- Select the [Add] menu in the right-side pane. In the [Edit ISAPI or CGI Restriction] window, enter "<%web\_path%>/round\_robin/winXX/isapi/isapi\_srun.dll" in the [ISAPI or CGI path] and "isapi\_srun.dll" in the [Description], and select the [Allow extension path to execute] check box.



- Start IIS.  
If the settings are not applied, repeat the above procedure again from the beginning.

### 3.3.3.1 Adding a Module Map

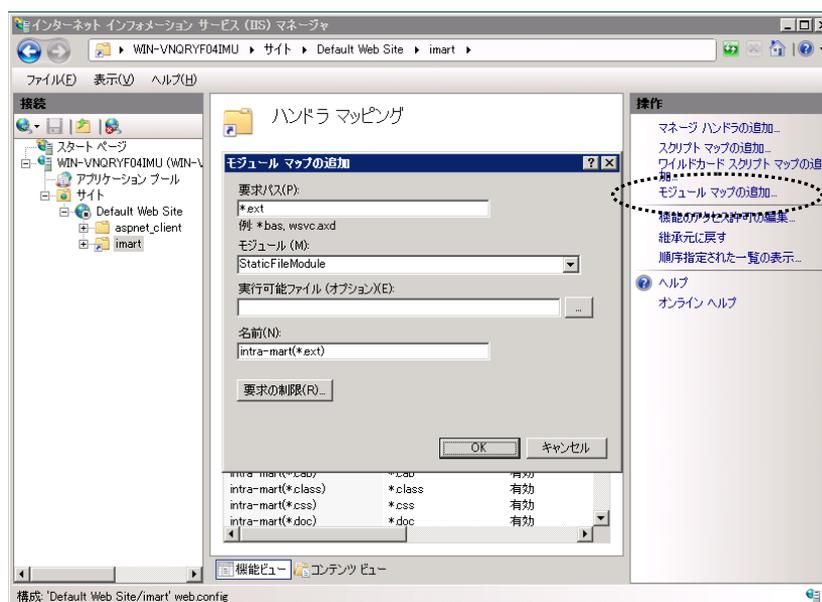
The file extension mapping of static content that is handled by IIS is specified in

"<%web\_path%>/round\_robin/winXX/isapi/iis7\_sample\_web.config". A setting is required to handle file extensions other than those specified here. The following shows an example of setting the ".ext" file extension.

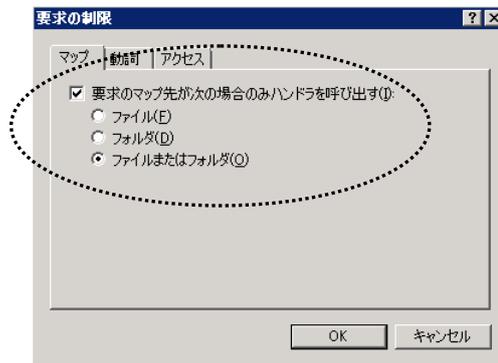
1. Select the "imart" virtual directory, and select [Handler Mappings] in the features view.



2. In the right-side pane, select the [Add Module Mapping] menu item. In the [Add Script Map] window, enter "\*.\*ext" in [Request Path], "StaticFileModule" in [Module], and "intra-mart (\*.ext)" in [Name]. [Executable] does not need to be configured.

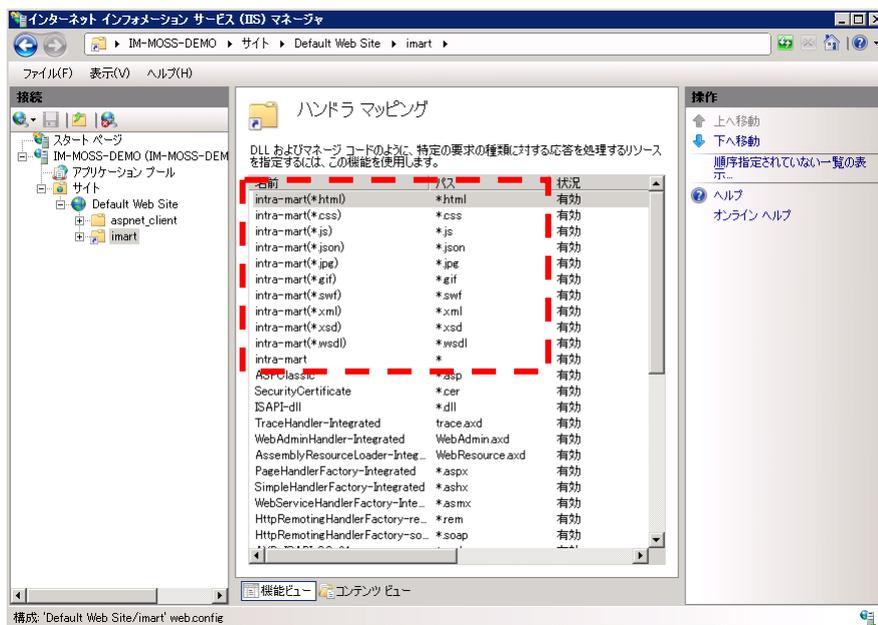


- Click the [Request Restrictions] button, select the [Invoke handler only if request is mapped to] check box in the [Map] tab, and select the [File or Folder] radio button. Then, click the [OK] button.



Click [View Ordered List] in the right-side pane of the [Handler Mappings] screen, and verify the order of the handler mappings.

Verify that the file extension mapping that you configured is set before the <%web\_path%/>round\_robin/winXX/isapi/isapi\_srun.dll mapping.



### 3.3.4 Configuring Round Robin

This section describes how to configure the settings for performing round robin in the following system environment.

\* Refer to [Round Robin] in [Web Platform Setting Guide] for details.

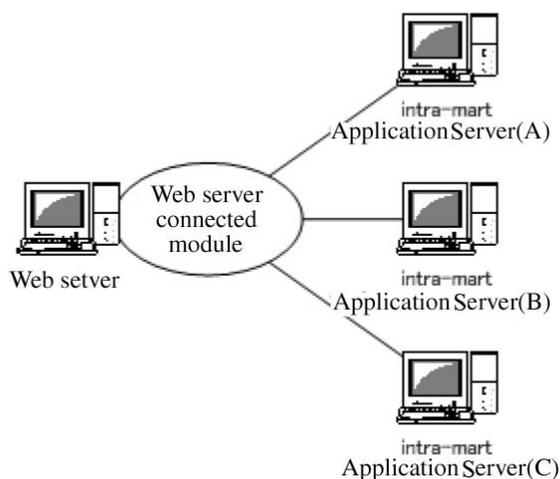


Figure 3-1

#### 3.3.4.1 Configuring http.xml

Add the <server> tag and the <cluster-port> tag to <%im\_path%/conf/http.xml.

```

<resin xmlns="http://caucho.com/ns/resin"
  xmlns:resin="http://caucho.com/ns/resin/core">
<cluster>
...
  <server id="ID of Server (A)" address="IP Address of Server (A)">
    <cluster-port port="Port Number for Connecting to WSC of Server (A)"/>
  </server>
  <server id="ID of Server (B)" address="IP Address of Server (B)">
    <cluster-port port="Port Number for Connecting to WSC of Server (B)"/>
  </server>
  <server id="ID of Server (C)" address="IP Address of Server (C)">
    <cluster-port port="Port Number for Connecting to WSC of Server (C)"/>
  </server>
...
</cluster>
</resin>

```

#### 3.3.4.2 Configuring httpd.conf (for Apache) and resin.ini (for IIS)

Set the value of ResinConfigServer in the httpd.conf that is configured in [3.3.1.1 Editing the Apache 2 Configuration File (httpd.conf)], or the resin.ini that is configured in [3.3.2 For IIS 6.0] or [3.3.3 For IIS 7.0] to the IP address and port number of any of the servers from among application servers (A), (B), and (C). The web server refers to the <server> tag settings in <%im\_path%/conf/http.xml for the server specified by the user and recognizes the application server.

## 3.3.5 Other Settings

### 3.3.5.1 Changing the Alias

This section describes how to change the alias from "imart" to "imv7".

1. Edit the http.xml files of all of the Service Platforms where the Application Runtime is installed. Refer to [3.3.5.1.1 Changing the Alias in http.xml] for details.  
If using round robin, change this to the same alias on all of the Service Platforms where the Application Runtime is installed.  
**If these are not changed to the same alias, round robin will not function correctly.**
2. Change the web server settings.  
Refer to [3.3.5.1.2 Changing the Web Server Alias] for details.
3. Edit the imart.xml file of the Service Platform where the Schedule Service is installed.  
Refer to [3.3.5.1.3 Changing the URL of the Application Runtime to Connect to When Executing the Schedule Service] for details.

If Enterprise for BPM is installed, the following steps are also required.

4. Edit bpms-config.xml of the Server Manager.  
Refer to [3.3.5.1.4 Changing the Alias of the BPMS setting file] for details.)
5. Edit `<%im_path%>/doc/imart/WEB-INF/services/DirectoryForEachWebService/META-INF/WebServiceName.wsdl`. Refer to [3.3.5.1.5 Changing the Alias in the WSDL File] for details.

After the initial data import, or if you change the alias without performing the initial data import, the following step is also required.

6. Edit the portal alias information.  
Refer to [3.3.5.1.6 Changing the Alias in the Portal Information] for details.

#### 3.3.5.1.1 Changing the Alias in http.xml

Edit the resin/host/web-app tag in http.xml.

1. Do not modify the id in `<web-app ..... id="">`.
2. Change the value of the id of the second `<web-app id="/imart">` to "imv7".  
Before change: `<web-app id="/imart" root-directory="{resin.home}/doc/imart" redeploy-mode="manual" >`  
After change: `<web-app id="/imv7" root-directory="{resin.home}/doc/imart" redeploy-mode="manual" >`

### 3.3.5.1.2 Changing the Web Server Alias

#### ■ For Apache 2.2

1. Edit the alias of "/imart" in httpd.conf.  
Refer to [3.3.1.1 Editing the Apache 2 Configuration File (httpd.conf)] for details.

Before change: Alias /imart "<%web\_path%>"

After change: Alias /imv7 "<%web\_path%>"

2. Reboot Apache 2.2.

#### ■ For IIS

1. Repeat the steps described in "3.3.2 For IIS 6.0" or "3.3.3 For IIS 7.0" using "imv7" as the virtual directory name.

### 3.3.5.1.3 Changing the URL of the Application Runtime to Connect to When Executing the Schedule Service

Edit the intra-mart/platform/service/scheduler/connection-url tag in conf/imart.xml in the installation directory of the Service Platform that is running the Schedule Service.

Before change: <connection-url>http://192.168.108.1:8080/imart/HTTPActionEventListener<connection-url>

After change: <connection-url>http://192.168.108.1:8080/imv7/HTTPActionEventListener<connection-url>

### 3.3.5.1.4 Changing the Alias of the BPMS setting file

The following procedure is only required when Enterprise for BPM is installed.

Edit the bpms-config/intramart-url tag in conf/bpmc-config.xml in the directory where the Server Manager is installed.

Before change: <intramart-url>http://192.168.108.1:8080/imart</intramart-url>

After change: <intramart-url>http://192.168.108.1:8080/imv7</intramart-url>

### 3.3.5.1.5 Changing the Alias in the WSDL File

The following procedure is only required when Enterprise for BPM is installed.

Edit <%im\_path%>/doc/imart/WEB-INF/services/DirectoryForEachWebService/META-INF/WebServiceName.wsdl. im\_workflow.wsdl is used as an example below.

#### **wSDL:service/wSDL:port/http:address tag**

Before change: <http:address  
location="http://192.168.108.1:8080/imart/services/im\_workflow.im\_workflowHttpEndpoint"/>  
After change: <http:address  
location="http://192.168.108.1:8080/imv7/services/im\_workflow.im\_workflowHttpEndpoint"/>

#### **wSDL:service/wSDL:port/soap:address tag**

Before change: <http:address  
location="http://192.168.108.1:8080/imart/services/im\_workflow.im\_workflowHttpSoap11Endpoint"/>  
After change: <http:address  
location="http://192.168.108.1:8080/imv7/services/im\_workflow.im\_workflowHttpSoap11Endpoint"/>

#### **wSDL:service/wSDL:port/soap12:address tag**

Before change: <http:address  
location="http://192.168.108.1:8080/imart/services/im\_workflow.im\_workflowHttpSoap12Endpoint"/>  
After change: <http:address  
location="http://192.168.108.1:8080/imv7/services/im\_workflow.im\_workflowHttpSoap12Endpoint"/>

### 3.3.5.1.6 Changing the Alias in the Portal Information

The following procedure is only required when changing the alias after the initial data import.

It is not required if the initial data import is executed after changing the alias.

The portal function information is managed by the XML file and database.

Strings "imart" in following XML files and table records all need to be changed to the new alias name.

#### **XML Files**

- <% root of the Storage Service %>/portal/data/portlet-app-registry.xml
- <% root of the Storage Service %>/portal/data/portlet-window-preference-registry.xml
- <% root of the Storage Service %>/portal/data/portlet-window-registry.xml

#### **Database Tables**

- b\_m\_portlet\_info

A script is provided for batch updating the above information.

This script uses [Apache Ant](#). [Apache Ant](#) (build tool) is installed during the installation of intra-mart.

If installing the intra-mart in a UNIX environment, grant execute permission to the ant command.

■ Command execution example

```
$ cd <%im_path%>/bin/tools/apache-ant/bin
$ chmod u+x ant
$ ./ant -version
```

Direct access is required to the files directly under the <% root of the Storage Service %>.

1. Set the alias names before and after the change, and the database connection information in the corresponding locations in the property file. Refer to \*.
  - ◆ Property file: <% root of the Storage Service %>/portal/tool/change\_context.properties
2. Execute the batch file that suits the environment.
  - ◆ Executable file (on Windows): <% root of the Storage Service %>/portal/tool/change\_context.bat
  - ◆ Executable file (on UNIX): <% root of the Storage Service %>/portal/tool/change\_context.sh
3. Verify the change.
 

Login as a system administrator, select [Manage Portlets], and verify that the changed alias is set to "context".

\* Example of changes to the property file

```
# Set the root path to the Storage Service.
storage.root =C:/imart/storage

# Specify the alias name before the change.
srch=imart

# Specify the alias name after the change.
repl=imv7

# Un-comment-out the corresponding database, and set the connection details.
jdbc.jar=C:/imart/lib/ojdbc5.jar
jdbc.driver=oracle.jdbc.OracleDriver
jdbc.url=jdbc:oracle:thin:@localhost:1521:orcl
jdbc.user=imart
jdbc.password=imart
```

### 3.3.5.2 Registering Web Application Software the User Have Made

This section describes how to locate web application software that contains the HelloServlet.class servlet in <%usr\_path%>.

The URL for calling HelloServlet.class is assumed be `"/usr/hello"`.

The URL for calling the servlet is `"http://Hostname[:Port]/usr/hello"`.

**(Caution) Application software that originally made by the user cannot use the custom intra-mart API.**

1. Copy HelloServlet.class to <%usr\_path%>/WEB-INF/classes.  
If the Servlet is packed in a jar file,  
copy it to <%usr\_path%>/WEB-INF/lib instead.
2. Create <%usr\_path%>/WEB-INF/web.xml and edit it as follows.

```
<web-app>
  <servlet>
    <servlet-name>hello-servlet</servlet-name>
    <servlet-class>HelloServlet</servlet-class>
    <load-on-startup/>
  </servlet>

  <servlet-mapping>
    <servlet-name>hello-servlet</servlet-name>
    <url-pattern>/hello</url-pattern>
  </servlet-mapping>
</web-app>
```

3. Map to the virtual directory. Add the following to the end of the resin/cluster/host/web-app tag in http.xml on the Service Platform where the Application Runtime is running.  
`<web-app id="/usr" root-directory="<%usr_path%>" />`  
By writing the web-app, servlets under the actual mapped WEB-INF/classes directory are recognized.

### 3.3.5.3 Changing the URL of the Login Screen

The login screen is displayed at the following URL by default. This section describes how to change this name.

Login type	URL
System administrator	<b>http://ServerName[:Port]/imart/system.admin</b>
Login group administrator	<b>http://ServerName[:Port]/imart/LoginGroupID.manager</b>
General user (computer)	<b>http://ServerName[:Port]/imart/LoginGroupID.portal</b>
General user (mobile)	<b>http://ServerName[:Port]/imart/LoginGroupID.mobile</b>

#### 3.3.5.3.1 System Administrator Login Screen

- Change `<%im_path%>/doc/imart/WEB-INF/web.xml`

In web.xml, change the following section:

```
<servlet-mapping>
  <servlet-name>SuperUserInitialServlet</servlet-name>
  <url-pattern>/system.admin</url-pattern>
</servlet-mapping>
```

into the following.

```
<servlet-mapping>
<servlet-name>SuperUserInitialServlet</servlet-name>
<url-pattern>/NameYouWantToChange</url-pattern>
</servlet-mapping>
```

#### 3.3.5.3.2 Group Administrator Login Screen

- Change `<%im_path%>/doc/imart/WEB-INF/web.xml`

In web.xml, change the following section:

```
<servlet-mapping>
  <servlet-name>GroupSuperUserInitialServlet</servlet-name>
  <url-pattern>/*.manager</url-pattern>
</servlet-mapping>
```

into the following.

```
<servlet-mapping>
<servlet-name>GroupSuperUserInitialServlet</servlet-name>
<url-pattern>/*.NameYouWantToChange</url-pattern>
</servlet-mapping>
```

### 3.3.5.3.3 General User (Computer) Login Screen

- Change <%im\_path%>/doc/imart/WEB-INF/web.xml

In web.xml, change the following section:

```
<servlet-mapping>  
  <servlet-name>UserInitialServlet</servlet-name>  
  <url-pattern>/*.portal</url-pattern>  
</servlet-mapping>
```

into the following.

```
<servlet-mapping>  
<servlet-name>UserInitialServlet</servlet-name>  
<url-pattern>/*.NameYouWantToChange</url-pattern>  
</servlet-mapping>
```

### 3.3.5.3.4 General User (Mobile) Login Screen

- Change <%im\_path%>/doc/imart/WEB-INF/web.xml

In web.xml, change the following section:

```
<servlet-mapping>  
  <servlet-name>UserInitialServletForMobile</servlet-name>  
  <url-pattern>/*.mobile</url-pattern>  
</servlet-mapping>
```

into the following.

```
<servlet-mapping>  
<servlet-name>UserInitialServletForMobile</servlet-name>  
<url-pattern>/*.NameYouWantToChange</url-pattern>  
</servlet-mapping>
```

## 3.4 Configuring JBoss

This section describes how to configure IWP (JBoss) so that it can be used with JBoss Application Server (hereinafter, JBoss).

In this section, the directory where JBoss is installed is represented by `<%JBoss_path%>`.

The directory where the Application Runtime is installed is represented by `<%im_path%>`.

The directory where Server Manager is installed is represented by `<%imSM_path%>`.

The following conditions need to be satisfied in order to run JBoss.

- ◆ The DataSource is registered in JBoss.
- ◆ The WAR file to deploy exists.
- ◆ `<%imSM_path%>/conf/data-source.xml` is configured.

WAR file deployment is performed in systems where these conditions are satisfied.

### 3.4.1 Example of JBoss Deployment

The descriptions given in this section take `"/imart"` as the context root.

`jboss-4.2.3.GA-jdk6` is taken as an example in the following descriptions.

The procedure for deploying JBoss is shown below.

1. Set the "JAVA\_HOME" Environment Variable
2. Delete JAXB and Web-Service Related Libraries Included with JBoss
3. Create the "imart" Directory
4. Integrate `im_portal_common`
5. Add the Start Parameters
6. Configure the Datasource Settings
7. Grant Execute Permission to the Ant Command
8. Create the WAR File
9. Copy Toplink Related jar Files
10. Deploy the WAR File

**\* If the contents are changed or the class is recompiled, the WAR file needs to be recreated and redeployed.**

**\* Steps 1, 2, 3, 4, 5, 6, 7, and 9 do not need to be performed every time.**

### 3.4.1.1 Set the "JAVA\_HOME" Environment Variable

Set the "JAVA\_HOME" environment variable.

### 3.4.1.2 Delete JAXB and Web-Service Related Libraries Included with JBoss

Delete the following files from the `<%JBoss_path%/lib/endorsed/` directory.

- jaxb-api.jar
- jboss-jaxrpc.jar
- jboss-jaxws.jar
- jboss-jaxws-ext.jar
- jboss-saaj.jar

### 3.4.1.3 Create the "imart" Directory

Copy the `<%JBoss_path%/server/default` directory, and create a directory named "imart" directly under `<%JBoss_path%/server/`.

### 3.4.1.4 Integrate im\_portal\_common

Integrate `im_portal_common`, and set the intra-mart portal to enabled.

Edit the setting file by using the following procedure.

1. Open the file `<%JBoss_path%/server/imart/conf/jboss-service.xml`.
2. Add the following code.

```
<classpath codebase="<%im_path%/bin/im_portal_common" archives="*" />
```

\* Caution

In Windows systems, an error may occur when the server starts if `file:/` is not added at the front of the codebase.

(Example)

```
<classpath codebase="file:/C:/imart/v7.1/iAF/imart/bin/im_portal_common" archives="*" />
```

### 3.4.1.5 Add the Start Parameters

On UNIX-based OSs, add the following to `<%JBoss_path%/bin/run.conf`.

```
JAVA_OPTS="$JAVA_OPTS -XX:PermSize=128M -XX:MaxPermSize=128M"
```

On Windows, add the following to `<%JBoss_path%/bin/run.bat`.

```
set JAVA_OPTS=%JAVA_OPTS% -XX:PermSize=128M -XX:MaxPermSize=128M
```

### 3.4.1.6 Configure the Datasource Settings

This section gives an example of the settings when PostgreSQL is used. Other databases can be configured in a similar way. The following procedure is used to configure the datasource.

1. Delete `hsqldb-ds.xml`  
Delete the datasource setting file that exists in JBoss by default.  
<%JBoss\_path%> /server/imart/deploy/hsqldb-ds.xml
2. Copy the datasource setting file for PostgreSQL  
Copy the file <%JBoss\_path%>/docs/examples/jca/postgres-ds.xml  
into <%JBoss\_path%>/server/imart/deploy/.
3. Edit `postgres-ds.xml`  
Modify <%JBoss\_path%>/server/imart/deploy/postgres-ds.xml as follows.

```
<datasources>
<local-tx-datasource>
.
.
.
<jndi-name><%DatasourceReferenceName%></jndi-name>
<connection-url>jdbc:postgresql://<%AddressOfPostgreSQL%>:<%PortNumber%>/<%DatabaseName%>
</connection-url>
<driver-class>org.postgresql.Driver</driver-class>
<user-name>DBConnectionUserName</user-name>
<password>DBConnectionUserPassword</password>
<metadata>
<type-mapping>PostgreSQL 8.3</type-mapping>
</metadata>
.
.
.
</local-tx-datasource>
</datasources>
```

4. Put the PostgreSQL JDBC driver in <%JBoss\_path%>/server/imart/lib.

### 3.4.1.7 Grant Execute Permission to the Ant Command

[Apache Ant](#) (build tool) is installed during the installation of intra-mart.

If installing the intra-mart in a UNIX environment, grant execute permission to the ant command.

■ Command execution example

```
$ cd <%im_path%/bin/tools/apache-ant/bin
$ chmod u+x ant
$ ./ant -version
```

### 3.4.1.8 Create the WAR File

Create the WAR file for IWP (JBoss).

This operation is always required if the user have modified the content or recompiled classes, etc.

1. In the console screen, change to the following directory.  
`<%im_path%/bin/tools/build/for_jboss/`
2. Run the following command.  
When this command is executed, a WAR file is created in `<%im_path%/imart.war`.  
Windows : `create_war_file_jboss.bat`  
UNIX : `create_war_file_jboss.sh`  
\* The runtime log is output to the `<%im_path%/bin/tools/build/log/` directory.

■ Command execution example

```
$ cd <%im_path%/bin/tools/build/for_jboss/
$ chmod u+x create_war_file_jboss.sh
$ ./create_war_file_jboss.sh
```

When the above command is executed, the Ant build file "bin/tools/build/for\_jboss/create\_war\_file\_jboss.xml" is executed.

The main processing performed by this Ant build file is as follows.

- Moves the Toplink related jar files.  
Moves the following files to the "`<%im_path%/bin/tools/build/log/`" directory.
  - `<%im_path%/doc/imart/WEB-INF/lib/toplink-essentials-agent.jar`
  - `<%im_path%/doc/imart/WEB-INF/lib/toplink-essentials.jar`
- Creates the imart.war file.

### 3.4.1.9 Copy Toplink Related jar Files

Copy the following two files that are moved in [3.4.1.8 Create the WAR File] to

`<%JBoss_path%/server/imart/lib`.

- `<%im_path%/bin/tools/build/log/toplink-essentials-agent.jar`
- `<%im_path%/bin/tools/build/log/toplink-essentials.jar`

### 3.4.1.10 Deploy the WAR File

1. Place the WAR file.  
Place the WAR file that is created in step [3.4.1.8 Create the WAR File] to directly under `<%JBoss_path%>/server/imart/deploy/`.
2. Edit data-source.xml.  
Edit `<% root of the Server Manager %>/conf/data-source.xml`.  
Refer to [3.5.3 Configuring data-source.xml] for details.
3. Start all of the IWP servers.  
**IMPORTANT Deployment will not succeed unless the Server Manager and Service Platform (only when using the distributed configuration) are running.** Refer to [4 Startup and Shutdown] for details on starting Server Manager and Service Platform.
4. Start JBoss.  
\* If it is already running, reboot it.

Change to the directory `<%JBoss_path%>/bin`, and run the following command to start JBoss.

```
run -c imart -b 0.0.0.0 ↵
```

[Example]

```
Windows    : run -c imart -b 0.0.0.0
UNIX       : run.sh -c imart -b 0.0.0.0
```

## 3.5 Configuring the Database Connection

The intra-mart connects to the database via JDBC.

Read the limitations described in the release notes included with the product for details on the various database settings and cautions about connecting to the database.

### 3.5.1 Preparation

Prepare an account on the database for this product to connect to.

Make sure that the sufficient size of tablespaces is available for this product to use for saving data.

**\* Cautions when using Oracle**

Verify that **CREATE VIEW privileges** have been granted.

In Oracle Database 11g Release 1, the CONNECT role is not preassigned CREATE VIEW privileges. Explicitly grant CREATE VIEW privileges.

Examples of how to register tablespace and users in Oracle 11g are described in [Appendix D: How to Create Tablespaces and Users in Oracle 11g (page 115)]. Please refer to this.

**\* Cautions when using PostgreSQL**

NTT DATA INTRAMART CORP. has tested the operation only of databases where the character encoding was set to "EUC\_JP".

**\* Cautions when using DB2**

When creating the database, [Default buffer pool and tablespace page size] needs to be set to "32k".

**\* Cautions when using Microsoft SQL Server**

It is recommended to create databases with the collation and the case sensitive settings.

When operating with the character encoding set to "UNICODE", change

enable in <% root of the Server Manager %>/plugin/jp.co.intra\_mart.foundation.system.ddl\_converter.standard.nvarchar\_7.1.0/plugin.xml to true.

- Example of change:

```

plugin/jp.co.intra_mart.foundation.system.ddl_converter.standard.nvarchar_7.1.0/plugin.xml
<plugin>
  <extension
    point="jp.co.intra_mart.foundation.system.ddlConverter" >
    <ddl-converter
      name="standard DDL Converter nvarchar"
      id="jp.co.intra_mart.foundation.system.ddlConverter.standard.nvarchar"
      version="7.1.0"
      rank="0"
      enable="true"> ← Change this to true
      <replace db-type="SQLServer" regexp="(W)varchar(W)" replacement="$1nvarchar$2"/>
    </ddl-converter>
  </extension>
</plugin>

```

### 3.5.2 Configuring http.xml

1. Copy the **JDBC driver file (jar or zip)** into the `<%im_path%>/lib` directory in the installation directory of the Service Platform that is running the Application Runtime.
2. Edit `<% root of the Application Runtime %>/conf/http.xml`.  
Set the `<database>` tag within the `resin/cluster` tag in `http.xml` to match the database that are being used. There is a sample of the setting from around the 140th line of `http.xml`.  
If using round robin, make the setting on all of the Service Platforms where the Application Runtime is installed.

#### ■ For Oracle

```
<database>
  <jndi-name><%DatasourceReferenceName%></jndi-name>
  <driver>
    <type>oracle.jdbc.pool.OracleConnectionPoolDataSource</type>
    <url>jdbc:oracle:thin:@<%OracleAddress%>:<%PortNumber%>:<%InstanceName%></url>
    <user>DBConnectionUserName</user>
    <password>DBConnectionUserPassword</password>
  </driver>
  <prepared-statement-cache-size>8</prepared-statement-cache-size>
  <max-connections>20</max-connections>
  <max-idle-time>30s</max-idle-time>
</database>
```

#### ■ For IBM DB2 (Type 4 JDBC Driver)

```
<database>
  <jndi-name><%DatasourceReferenceName%></jndi-name>
  <driver>
    <type>com.ibm.db2.jcc.DB2Driver</type>
    <url>jdbc:db2://<%DB2Address%>:<%PortNumber%>/<%DB2DatabaseName%></url>
    <user>DBConnectionUserName</user>
    <password>DBConnectionUserPassword</password>
  </driver>
  <prepared-statement-cache-size>8</prepared-statement-cache-size>
  <max-connections>20</max-connections>
  <max-idle-time>30s</max-idle-time>
</database>
```

#### ■ For Microsoft SQL Server

```
<database>
  <jndi-name><%DatasourceReferenceName%></jndi-name>
  <driver>
    <type>com.microsoft.sqlserver.jdbc.SQLServerDriver</type>
    <url>jdbc:sqlserver://<%SQLServerAddress%>:<%PortNumber%>;DatabaseName=<%DatabaseName%></url>
    <user>DBConnectionUserName</user>
    <password>DBConnectionUserPassword</password>
    <init-param>
      <param-name>SelectMethod</param-name>
      <param-value>cursor</param-value>
    </init-param>
  </driver>
  <prepared-statement-cache-size>8</prepared-statement-cache-size>
  <max-connections>20</max-connections>
  <max-idle-time>30s</max-idle-time>
</database>
```

**■ For PostgreSQL**

```
<database>
<jndi-name><%DatasourceReferenceName%></jndi-name>
<driver>
  <type>org.postgresql.Driver</type>
  <url>jdbc:postgresql://<%PostgreSQLAddress%>:<%PortNumber%>/<%DatabaseName%></url>
  <user>DBConnectionUserName</user>
  <password>DBConnectionUserPassword</password>
</driver>
<prepared-statement-cache-size>8</prepared-statement-cache-size>
<max-connections>20</max-connections>
<max-idle-time>30s</max-idle-time>
</database>
```

### 3.5.3 Configuring data-source.xml

Edit <% root of the Server Manager %>/conf/data-source.xml.

```
<?xml version="1.0" encoding="UTF-8"?>
<data-source>

  <system-data-source>
    <connect-id>default</connect-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </system-data-source>

  <group-data-source>
    <login-group-id>default</login-group-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </group-data-source>

</data-source>
```

#### (Example: Using Resin on IWP)

When the datasource reference name specified in [3.5.2 Configuring http.xml] is "jdbc/sample", this becomes  
 <resource-ref-name>java:comp/env/jdbc/sample</resource-ref-name>.

#### (Example: Using JBoss on IWP)

When the datasource reference name specified in [3.4.1.6 Configure the Datasource Settings] is "jdbc/sample", this becomes  
 <resource-ref-name>java:jdbc/sample</resource-ref-name>.

#### System database settings <system-data-source>

The user can configure multiple databases. These databases can be used by all login groups.

system-data-source	Configures the datasource settings of the system databases.
connect-id	Connection ID (must be unique among system-data-sources)
resource-ref-name	Configures the jndi name setting that represents the datasource.

#### Login group database settings <group-data-source>

The user can only configure a single database per login group. This is the default database for the login group.

group-data-source	Configures the datasource settings of the login group databases.
login-group-id	Login group ID
resource-ref-name	Configures the jndi name setting that represents the datasource.

\* If the database settings are changed, the Server Manager and Application Runtime need to be restarted.

## 3.6 Using Mobile Phones

Mobile access is disabled in the initial intra-mart installation. Therefore, when you access the URL "http://HostName:PortNumber/imart/(LoginGroupID).mobile", the screens for the default "pc" client type are displayed. To enable mobile access, enable the "mobile" client type in <% root of the Server Manager %>/conf/system.xml. An example of the change is shown below.

### ■ Before change

```
<?xml version="1.0" encoding="UTF-8"?>
<system>
  .
  .
  <client-config>
    <client-type>
      <client-type-name>pc</client-type-name>
      <attribute name="redirect" value="true"/>
      <attribute name="mobile" value="false"/>
      <attribute name="extension" value=".portal"/>
    </client-type>
<!--
    <client-type>
      <client-type-name>mobile</client-type-name>
      <attribute name="redirect" value="false"/>
      <attribute name="mobile" value="true"/>
      <attribute name="extension" value=".mobile"/>
    </client-type>
-->
    <default-client-type-name>pc</default-client-type-name>
  </client-config>
  .
  .
```

### ■ After change

```
<?xml version="1.0" encoding="UTF-8"?>
<system>
  .
  .
  <client-config>
    <client-type>
      <client-type-name>pc</client-type-name>
      <attribute name="redirect" value="true"/>
      <attribute name="mobile" value="false"/>
      <attribute name="extension" value=".portal"/>
    </client-type>

    <client-type>
      <client-type-name>mobile</client-type-name>
      <attribute name="redirect" value="false"/>
      <attribute name="mobile" value="true"/>
      <attribute name="extension" value=".mobile"/>
    </client-type>

    <default-client-type-name>pc</default-client-type-name>
  </client-config>
  .
  .
```

## 3.7 JavaMail and the JavaBeans Activation Framework (JAF)

The following libraries are required in order to use the mail sending API provided by the intra-mart.

- JavaMail 1.4.1
- JAF (JavaBeans Activation Framework) 1.1.1

When the intra-mart is installed, the above libraries are also installed. Using the intra-mart is taken as agreement to the licenses of the above libraries. If you do not agree with all of the terms, please delete all of the JAR files.

The latest modules can be downloaded from the following URL.

JavaMail	<a href="http://java.sun.com/products/javamail/index.jsp">http://java.sun.com/products/javamail/index.jsp</a>
JAF	<a href="http://java.sun.com/products/javabeans/jaf/downloads/index.html">http://java.sun.com/products/javabeans/jaf/downloads/index.html</a>

Copy the libraries after unpacking them into the following directory. If using round robin, copy these into all of the Service Platforms where the Application Runtime is installed.

<% root of the Application Runtime %>/doc/imart/WEB-INF/lib/

- activation.jar
- dsn.jar
- imap.jar
- mail.jar
- mailapi.jar
- pop3.jar
- smtp.jar

## 4 Startup and Shutdown

### 4.1 Startup and Shutdown Sequences

#### 4.1.1 For the intra-mart WebPlatform (Resin)

There are sequences for starting up and shutting down the servers.

Although the server operation will not be harmed if the startup sequence is not followed, network errors may occur when the Service Platform where Application Runtime is running starts up. The network errors are recorded in the error log.

- Server startup sequence (recommended)
  1. Server Manager
  2. Service Platform
  
- Server shutdown sequence (recommended)
  1. Service Platform
  2. Server Manager

#### 4.1.2 For the intra-mart WebPlatform (JBoss)

The server startup and shutdown sequences differ depending on the server configuration (standalone or network distributed).

Although the server operation will not be harmed if the startup sequence is not followed, network errors may occur when the JBoss Application Server where Application Runtime is running starts up. The network errors are recorded in the error log.

##### For the standalone configuration

- Server startup sequence (recommended)
  1. Server Manager
  2. JBoss Application Server (All Service Platforms)
  
- Server shutdown sequence (recommended)
  1. JBoss Application Server (All Service Platforms)
  2. Server Manager

##### For the network distributed configuration

- Server startup sequence (recommended)
  1. Server Manager
  2. Service Platform
  3. JBoss Application Server (Application Runtime)
  
- Server shutdown sequence (recommended)
  1. JBoss Application Server (Application Runtime)
  2. Service Platform
  3. Server Manager

## 4.2 How to Start and Stop the Server Manager and Service Platform

### 4.2.1 On Windows

#### 4.2.1.1 Start from the Start menu

When installed on Windows, a menu item is added for starting the server from the command prompt.

In [Start menu] - [Programs] - [intra-mart WebPlatform Ver7.1]:

**intra-mart Server Manager**

**intra-mart Service Platform**

Each of the server startup menu items are actually implemented by the following batch files.

Server Manager : % Path where Server Manager was installed %¥bin¥**manager.bat**

Service Platform : % Path where Service Platform was installed %¥bin¥**server.bat**

Usually, these .bat files do not need to be edited in this product. If you want to change the startup commands for each of the servers, edit the .bat files for each of the servers.

Server Manager has finished starting up if the message [**Server-Manager started offer of service**] is displayed in the command prompt.

Service Platform has finished starting up if the message [**Service-Platform started offer of service**] is displayed in the command prompt.

To abort the startup, press the [Ctrl+C] keys in the command prompt.

#### 4.2.1.2 Running as a Windows Service

Each of the servers (Server Manager and Service Platform) can be registered as service programs in Windows.

##### 4.2.1.2.1 Cautions

- When running as a Windows service, it may occur that the server stops when the user logs out after the service starts. To prevent this, configure each of the servers you are running as follows.  
Add the option **-Xrs** to the item  
**intra-mart/platform/java/server/command/option**  
in `<%im_path%/conf/imart.xml`.
- Immediately after performing the installation, first start each of the servers from the command prompt and check that they are operating correctly before registering them as a service. Refer to [4.2.1.2.3 Turning Servers into Services] for details.
- It is recommended to start servers from the command prompt while developing programs.  
This is useful for resolving problems because error messages and other information are output to the command prompt.

##### 4.2.1.2.2 Starting the intra-mart Service Manager

The **intra-mart ServiceManager** is used to register each of the servers as a Windows service program.

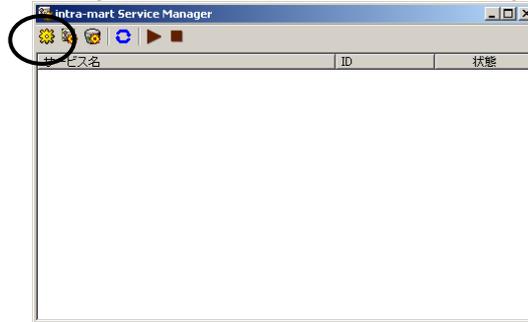
When the intra-mart is installed, on Windows, a menu item is added for starting up **the intra-mart ServiceManager**.  
Run the intra-mart Service Manager using the following startup menu items.

**intra-mart ServiceManager in [Start menu] - [Programs] - [intra-mart WebPlatform Ver7.1]**

## 4.2.1.2.3 Turning Servers into Services

After the intra-mart Service Manager is started, use the following procedure to turn the servers into services.

1. Press the  (register new service) button in Service Manager.



2. Enter the path where the server is installed in [intra-mart installation directory].  
It can be chosen from the directories by pressing the  button.  
The servers that can be turned into services are displayed.



3. Select the server to turn into a service, and press the [Register] button.



4. The [Service Title Confirmation] screen is displayed. Change the name of the service if necessary. Press the [OK] button to register the service.



5. Once the service registered screen is displayed, turning the server into a service is complete.



4.2.1.2.4 Service Startup setting file

The following setting files are provided for running the intra-mart as Windows services.

- Server Manager service startup setting file
  - ◆ <%im\_path%/bin/MgrService.ini
- Service Platform service startup setting file
  - ◆ <%im\_path%/bin/SrvService.ini

The settings in the service startup setting file are as follows.

Setting	Description
<b>jdk_home</b>	Home directory of the JDK
<b>class</b>	Startup class
<b>options</b>	Java startup options
<b>log</b>	Log output options

4.2.1.2.4.1.1 About the "jdk\_home" setting

The **jdk\_home** setting functions as follows.

- If the **jdk\_home** setting is configured in the service startup setting file, <%Directory specified in **jdk\_home**%>/bin/java.exe is used to start the Windows services.
- If the **jdk\_home** setting is left out of the service startup setting file, the "**JAVA\_HOME**" OS environment variable is treated as the JDK home directory.
- If the "**JAVA\_HOME**" OS environment variable is not set, the current JDK home directory is retrieved from the registry.

4.2.1.2.4.1.2 Log output method

The logs that are output when the intra-mart is running as a Windows service are output as follows.

4.2.1.2.4.1.2.1 Server Manager logs

Log file	Description
<%im_path%/log/MgrService/environment.log	Environment log at service startup
<%im_path%/log/MgrService/stderr.log	Logs the output from standard error during startup
<%im_path%/log/MgrService/stdout.log	Logs the output from standard output during startup (*1)

4.2.1.2.4.1.2.2 Service Platform logs

Log file	Description
<%im_path%/log/SrvService/environment.log	Environment log at service startup
<%im_path%/log/SrvService/stderr.log	Logs the output from standard error during startup
<%im_path%/log/SrvService/stdout.log	Logs the output from standard output during startup (*1)

(\*1) stdout.log is only output when the "log" setting in the service startup setting file is set to "true".

## 4.2.2 On a UNIX-Based OS

### 4.2.2.1 Start From the Shell

#### 4.2.2.1.1 Starting Up and Shutting Down Server Manager

Start a shell.

Go to the `<%im_path%/bin` directory and run the following command.

```
manager.sh ↵
```

Once the message **[Server-Manager started offer of service]** is displayed, the startup is complete.

\* This is only displayed when outputting the system log is enabled (disabled by default).

**(Caution) The startup command file (manager.sh) provided with the installation is a sample. The content needs to be changed to suit the system environment.**

To abort the startup, press the [Ctrl+C] keys in the shell.

#### 4.2.2.1.2 Starting Up and Shutting Down the Service Platform

Start a shell.

Go to the `<%im_path%/bin` directory and run the following command.

```
server.sh ↵
```

Once the message **[Service-Platform started offer of service]** is displayed, the startup is complete.

\* This is only displayed when outputting the system log is enabled (disabled by default).

**(Caution) The startup command file (server.sh) provided with the installation is a sample. The content needs to be changed to suit the system environment.**

To abort the startup, press the [Ctrl+C] keys in the shell.

## 4.2.2.2 Run in the Background

Each of the servers (Server Manager, Service Platform) can be run in the background.

### 4.2.2.2.1 Cautions

- Immediately after performing the installation, first start each of the servers from the shell and check that they are operating correctly before performing the following procedure to execute them in the background. Refer to [4.2.2.2.2 Server Manager Background Execution] and [4.2.2.2.3 Service Platform Background Execution] for details.
- It is recommended to start servers from the shell while developing programs. This is useful for resolving problems because error messages and other information are output to the shell.
- In the samples of each of the shell files, the examples of the startup commands for background execution are commented out (#). To perform background execution, change the content as necessary by referring to the comments sections (#).

### 4.2.2.2.2 Server Manager Background Execution

The <%im\_path%/bin directory contains the following files.

**manager.sh** (Sample shell file)

\* Since manager.sh is a sample of background execution, change the filename and content to suit your system environment before using it.

- **Startup Method (Example)**  
Startup : **manager.sh start**  
Shutdown : **manager.sh stop**

### 4.2.2.2.3 Service Platform Background Execution

The <%im\_path%/bin directory contains the following files.

**server.sh** (Sample shell file)

\* Since server.sh is a sample of background execution, change the filename and content to suit your system environment before using it.

- **Startup Method (Example)**  
Startup : **server.sh start**  
Shutdown : **server.sh stop**

## 4.3 Starting Up and Shutting Down JBoss

The JBoss Application Server needs to be started when using **IWP (JBoss)**.

The Application Runtime is started in the JBoss Application Server. When starting the Application Runtime, **the Server Manager and Service Platform (only when using the distributed configuration) needs to be started in advance.**

Change to the directory **<%JBoss\_path%>/bin**, and run the following command to start JBoss.

```
run -c imart -b 0.0.0.0 ↵
```

[Example]

Windows	:	run -c imart -b 0.0.0.0
UNIX	:	run.sh -c imart -b 0.0.0.0

Change to the directory **<%JBoss\_path%>/bin**, and run the following command to start JBoss.

```
shutdown -S imart 0.0.0.0 ↵
```

[Example]

Windows	:	shutdown -S imart 0.0.0.0
UNIX	:	shutdown.sh -S imart 0.0.0.0

Refer to the JBoss Application Server guide for details on how to start up and shut down the JBoss Application Server.

## 5 Rebuilding the intra-mart Environment

### 5.1 Changing the JDK

Update the path to the JDK as written in the following files.

#### 5.1.1 On Windows

Directory	File (Line Number)
<%im_path%>/bin	admin.bat(1)
	manager.bat(1)
	server.bat(2) *
	srvcom.bat(1)
	zippack.bat(1)
	zipmelt.bat(1)
<%im_path%>/bin/tools	licedit.bat(1)
	js2class.bat(1)
<%im_path%>/conf	imart.xml(214,221)

\* server.bat is only installed for IWP (Resin).

#### 5.1.2 On a UNIX-Based OS

Directory	File (Line Number)
<%im_path%>/bin	admin.sh(16)
	manager.sh(16)
	server.sh(16) *
	srvcom.sh(16)
	zippack.sh(16)
	zipmelt.sh(16)
<%im_path%>/bin/tools	licedit.sh(1)
<%im_path%>/conf	imart.xml(214,221)

\* server.sh is only installed for IWP (Resin).

## 5.1.3 Example Modifications

### 5.1.3.1 Example modification to the imart.xml file

■ Before change

```
<intra-mart>
<platform>
.
.
<java>
  <home>C:/jdk1.6.0_10</home>
  <server>
    .
    .
    <command>
      <exefile>C:/jdk1.6.0_10/bin/java</exefile>
      <option>-cp %SYSTEMCLASSPATH% -Xms%XMS% -Xmx%XXM% -Djava.awt.headless=true</option>
      <argument/>
    </command>
  </server>
.
.
</java>
.
.
```

■ After change

```
<intra-mart>
<platform>
.
.
<java>
  <home>C:/jdk1.6.0_12</home>
  <server>
    .
    .
    <command>
      <exefile>C:/jdk1.6.0_12/bin/java</exefile>
      <option>-cp %SYSTEMCLASSPATH% -Xms%XMS% -Xmx%XXM% -Djava.awt.headless=true</option>
      <argument/>
    </command>
  </server>
.
.
</java>
.
.
```

### 5.1.3.2 Example modification to the .bat file

■ Before change

```
"C:/jdk1.6.0_10/bin/java" -cp C:/imart/bin/imart.jar -Xms16m -Xmx128m jp.co.intra_mart.bin.server.  
ServerController %1 %2 %3 %4 %5 %6 %7 %8 %9
```

■ After change

```
"C:/jdk1.6.0_12/bin/java" -cp C:/imart/bin/imart.jar -Xms16m -Xmx128m jp.co.intra_mart.bin.server.  
ServerController %1 %2 %3 %4 %5 %6 %7 %8 %9
```

### 5.1.3.3 Example modification to the .sh file

■ Before change

```
## Please set the installation path of JDK.  
JAVA_HOME=C:/jdk1.6.0_10  
export JAVA_HOME
```

■ After change

```
## Please set the installation path of JDK.  
JAVA_HOME=C:/jdk1.6.0_12  
export JAVA_HOME
```

## 5.2 Changing the IP Address

The IP address can be changed after installing the intra-mart by editing the imart.xml and http.xml setting files. In order to change the IP address, **first check whether it is necessary to change the IP address settings in the OS or server.** Edit the intra-mart setting file after changing the IP address in the OS, etc.

### 5.2.1 Changing the IP Address of a Machine Where imSP is Installed

Open "<%im\_path%/conf/imart.xml" and "<%im\_path%/conf/http.xml" on the machine where the intra-mart product is installed, and then change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	9	intra-mart/platform/host/id intra-mart/platform/host/address
http.xml	67	resin/cluster/server/id resin/cluster/server/address

\* Refer to the separate [Web Platform Setting Guide] and [Service Platform Setting Guide] for details on each of the settings.

\* Although it is not mandatory to change "intra-mart/platform/host/id" in imart.xml or "resin/cluster/server/id" in http.xml, it is recommended to change them.

\* http.xml is not installed in IWP (JBoss).

\* When using Apache with WSC connection, the httpd.conf configured in [3.3 Configuring the Web Server – 3.3.1 For Apache 2] needs to be modified.

httpd.conf

```
...
ResinConfigServer IP Address of AppRuntime Port Number of AppRuntime
#<Location /caucho-status>
# SetHandler caucho-status
#</Location>
```

\* When using IIS with WSC connection, the resin.ini configured in [3.3 Configuring the Web Server – 3.3.2 For IIS 6.0] needs to be modified.

resin.ini

```
ResinConfigServer IP Address of AppRuntime Port Number of AppRuntime
CauchoStatus no
IISPriority high
```

### 5.2.2 Changing the IP Address of the HTTP Server

Open "<%im\_path%/conf/imart.xml" on the machine where the intra-mart product is installed, and change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	173	intra-mart/platform/service/scheduler/connection-url

\* Refer to the separate [Service Platform Setting Guide] for details on each of the settings.

\* The intra-mart/platform/service/scheduler/connection-url setting is only enabled when ScheduleSrv is installed. There is no need to change this setting if it is not installed.

\* The HTTP server includes the intra-mart HTTP server, web servers, etc.

### 5.2.3 Changing the IP Address of imSM

Open "<%im\_path%/conf/imart.xml" on all of the machines where the intra-mart product is installed, and change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	3	intra-mart/administration/host/address

\* Refer to the separate [Service Platform Setting Guide] for details on each of the settings.

## 5.3 Changing the Port Number

The port number can be changed after installing the intra-mart by editing the imart.xml and http.xml setting files. In order to change the port number, **first check whether it is necessary to change the port number settings in the OS or server.** Edit the intra-mart setting file after changing the port number in the OS, etc.

### 5.3.1 Changing the Port Number For Connecting to WSC

Open "<%im\_path%/conf/imart.xml" and "<%im\_path%/conf/http.xml" on the machine where the intra-mart product is installed, and change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	9	intra-mart/platform/host/id
	10	intra-mart/platform/network/port
http.xml	67	resin/cluster/server/id
	68	resin/cluster/server/cluster-port/port

- \* Refer to the separate [Web Platform Setting Guide] and [Service Platform Setting Guide] for details on each of the settings.
- \* Although it is not mandatory to change "intra-mart/platform/host/id" in imart.xml or "resin/cluster/server/id" in http.xml, it is recommended to change them.
- \* http.xml is not installed in IWP (JBoss).
- \* When using Apache with WSC connection, the httpd.conf configured in [3.3 Configuring the Web Server – 3.3.1 For Apache 2] needs to be modified.

httpd.conf

```
...
ResinConfigServer IPAddressOfAppRuntime PortNumberOfAppRuntime
#<Location /caucho-status>
# SetHandler caucho-status
#</Location>
```

- \* When using IIS with WSC connection, the resin.ini configured in [3.3 Configuring the Web Server – 3.3.2 For IIS 6.0] needs to be modified.

resin.ini

```
ResinConfigServer IPAddressOfAppRuntime PortNumberOfAppRuntime
CauchoStatus no
IISPriority high
```

### 5.3.2 Changing the Port Number of the HTTP Server

Open "<%im\_path%/conf/imart.xml" and "<%im\_path%/conf/http.xml" on the machine where the intra-mart product is installed, and change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	173	intra-mart/platform/service/scheduler/connection-url
http.xml	67	resin/cluster/server/id
	70	resin/cluster/server/http/port

\* Refer to the separate [Web Platform Setting Guide] and [Service Platform Setting Guide] for details on each of the settings.

\* The intra-mart/platform/service/scheduler/connection-url setting is only enabled when **ScheduleSrv** is installed. There is no need to change this setting if it is not installed.

\* Although it is not mandatory to change "intra-mart/platform/host/id" in imart.xml or "resin/cluster/server/id" in http.xml, it is recommended to change them.

### 5.3.3 Changing the Port Number of imSM

Open "<%im\_path%/conf/imart.xml" on all of the machines where the intra-mart product is installed, and change the locations corresponding to the following table.

File	Line Number	Tag Name
imart.xml	4	intra-mart/administration/network/port

\* Refer to the separate [Service Platform Setting Guide] for details on each of the settings.

## 5.4 Changing the Login Group Name

In the intra-mart initial installation state, the login group is set to operate as "default".

This section shows how to change the login group name from "default" to "nttd\_im".

### \* Cautions when changing the login group name

Note that the login group name cannot be changed while the system is operating.  
The descriptions in this section assume that the system has not yet started operating.

1. Edit <% root of the Server Manager %>/conf/data-source.xml.  
Change the content of the data-source/group-data-source/login-group-id tag.  
Also refer to [3.5.3 Configuring data-source.xml] at the same time.

#### ■ Before change

```
<?xml version="1.0" encoding="UTF-8"?>
<data-source>

  <system-data-source>
    <connect-id>default</connect-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </system-data-source>

  <group-data-source>
    <login-group-id>default</login-group-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </group-data-source>

</data-source>
```

#### ■ After change

```
<?xml version="1.0" encoding="UTF-8"?>
<data-source>

  <system-data-source>
    <connect-id>default</connect-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </system-data-source>

  <group-data-source>
    <login-group-id>nttd_im</login-group-id>
    <resource-ref-name>java:comp/env/<%DatasourceReferenceName%></resource-ref-name>
  </group-data-source>

</data-source>
```

2. Restart Server Manager and Application Runtime, and then login as a system administrator.

3. Select [Login group settings] from the menu, and create the login group under the ID "nttd\_im".



4. Select [License] from the menu, and perform the initial data import and sample data import on the login group that is created.



This completes the procedure of changing the login group name.

## 5.5 Migrating the System from a Test System

### 5.5.1 Exporting Migration Information as the Login Group Administrator of the Migration Source

Login as the login group administrator of the migration source login group, select [Access security information I/O] - [Export] from the menu, and export all of the information.



### 5.5.2 Exporting the Data Stored in the Database From the Migration Source Database

Export the data from the database that is designated for the migration source login group using the best method for that particular database software.

### 5.5.3 Importing the Data Stored in the Database into the Migration Destination Database

Import the data that is exported in [5.5.2 Exporting the Data Stored in the Database From the Migration Source Database] into the database designated for the migration destination login group by using the best method for that particular database software.

### 5.5.4 Installing the intra-mart in the Migration Destination System

Install the intra-mart in the migration destination system by referring to [3 Installation].

At this time, do not perform the following operations. After you have created the login group, stop your operation.

- Initial data import
- Sample data import

If intra-mart application software is being used, also install the application software.

### 5.5.5 Migrating Various Files and Directories

Migrate the following files and directories from the migration source system to the migration destination system.

- Place the files that are exported in [5.5.1 Exporting Migration Information as the Login Group Administrator of the Migration Source] to % Path to [Storage Service] %/storage.
  
- When creating application software, migrate the following files and directories.
  - The static content (image files, CSS files, and CSJS files) installed in the Web Server Connector
  - The HTML and JS files developed using the script-based development model  
(The files and directories under % Path to [Resource Service] %/pages/src)
  - The JSP, class, and jar files developed using the JavaEE-based development model  
Move the files and directories under % Path to [Application Runtime] %/doc/imart, and then create the war files and deploy them to the web application servers at the migration destination.
  - Message file (properties file)  
(Each of the files in % Path to [Service Manager] %/conf/message)
  
- If your system uses the Storage Service, such as PDF Designer, the intra-mart Intranet Start Pack, Quick Binder, EX Applications, etc., migrate all of the directories in % Path to [Storage Service] %/storage/.

### 5.5.6 Importing the Migration Information as the Group Administrator of the Migration Destination

Login as the login group administrator of the migration destination login group, select [Access security information I/O] - [Import] from the menu, and then import the export file that is migrated in [5.5.5 Migrating Various Files and Directories] and restart the intra-mart.



This completes the procedure for migrating the system from a test system, etc.

---

## 6 Uninstalling

---

### 6.1 Running From the Command Prompt

If the system is running, stop it by using the [Ctrl+C] keys.

Delete the Web Server Connector connection information from the web server.

Delete <%web\_path%> and <%im\_path%> directories that are installed.

### 6.2 Running as a Service

If the system is running, stop it from the intra-mart Service Manager.

Delete each of the servers from the services by using the intra-mart Service Manager.

Delete the Web Server Connector connection information from the web server.

Delete <%web\_path%> and <%im\_path%> directories that are installed.

### 6.3 On Windows

Delete the intra-mart start menu that is registered in the Windows start menu.

Delete the following directory.

C:\Documents and Settings\<% User ID at installation %>\Start Menu\Programs\intra-mart WebPlatform Ver7.1

\* The above descriptions show the directory when IWP is installed using the default values.

\* If the name registered in the start menu when IWP was installed has been changed, the location of the directory will also be different.

## 7 Appendix A: The intra-mart System Administration Sheet

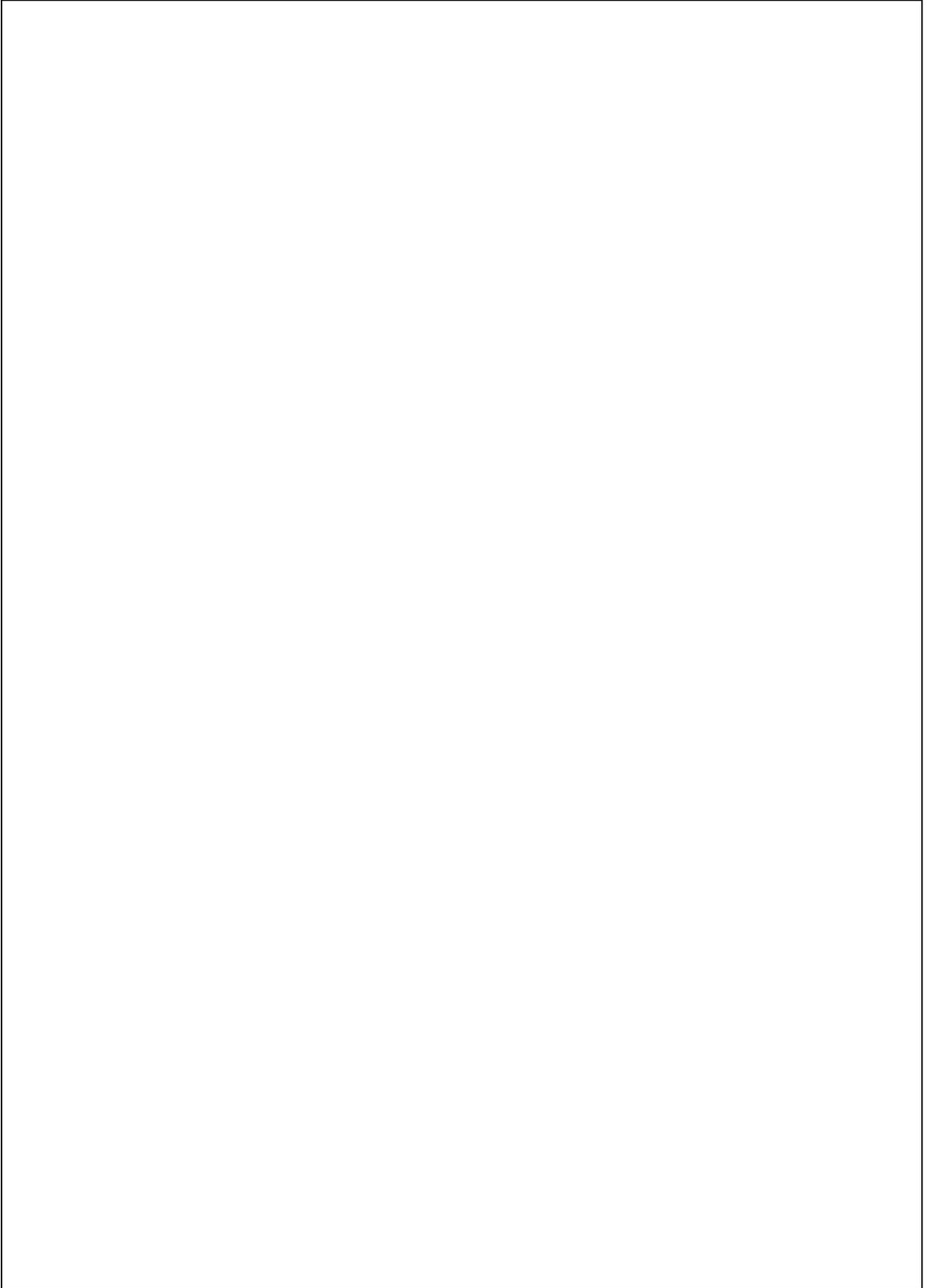
The intra-mart system administration sheet

\* Please circle the corresponding items in the columns that have already been filled in.

Web server (IWP only)	Web server	Apache, IIS
	Version	
	Host name (FQDN)	
Application Server	Application Server	Resin, JBoss, WebSphere, WebLogic
	Version	
	Host name (FQDN)	
Java VM (JDK)	Version	
Database	Types	ORACLE, MS-SQL Server, IBM DB2, PostgreSQL
	Database version	
	Network database name	
	Maximum number of connections	
	Connection format	Native (JDBC THIN connection)
	Connection driver version for the above	
SMTP server	Host name (FQDN)	
intra-mart	System administrator user ID/password	system / *****
	Login group ID	
	Login group administrator user ID/password	
	intra-mart application software name	
	intra-mart version	
WWW server Machine specs	CPU class and quantity	
	Memory	
	Hard disk	
intra-mart server Machine specs (Do not fill in if the machine is the same as the WWW server)	CPU class and quantity	
	Memory	
	Hard disk	
DB server Machine specs (Do not fill in if the machine is the same as the WWW server)	CPU class and quantity	
	Memory	
	Hard disk	
Client PC	Model	
	Web browser	Firefox, Internet Explorer
	Web browser version	

- \* For the version, write down up to the most minor version number.
- \* For passwords, either do not write it down and take care not to forget it, or if you do write it down, strictly manage this sheet.
- \* Write down a configuration diagram of the servers you are running.
- \* Write down where the Web Server Connector (for IWP (Resin) only), and each of the intra-mart server modules (Application Runtime, etc.) are installed.
- \* If it is not inconvenient, write down the IP addresses of each server and the communication port numbers used by each server module.

System configuration diagram



## 8 Appendix B: Troubleshooting the Installation

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The troubleshooting information for installation is described in the [intra-mart WebPlatform/AppFramework Ver 7.1 Error Guide].

Refer to this guide in conjunction with the following cautions.

### 8.1 Cautions

If the operation of the screens is unstable, clear the browser cache and configure it to compare to the server documents each time, and then restart the browser.

If the login screen or other screens do not display correctly after installation for reasons other than those described above, check the following points because it is possible that they were not set correctly during installation.

- Startup information is output to the file % Path to [Application Runtime] %/log/platform/system.log during startup. →Has an error message, etc. related to the root cause been output?
- Is the installation directory a duplicate of each service installation directory?
- It takes time to start Application Runtime.  
→Verify the startup state of the server using the IM-Administrator tool.
- Has the Server Manager been installed and started in addition to each service?
- Is a third-party product already using (listening on) the IP address and port number?
- Are there conflicting settings in the various IP address and port number settings?

If the problem is not resolved even after checking the above, it is possible that the basic installation and settings are inappropriate. Since this product of the version that is described in this guide is extremely delicate, it can be faster to resolve problems by performing a re-installation. Please consider this option.

# 9 Appendix C: Tips For Starting Operation and Operation (In Order to Achieve Stable Operation)

## 9.1 After Starting Operation

- Always reserve a period for verifying the operating state after beginning operation.  
This period is required in order to get a grasp of the "access patterns", "usage status", "operation status (system environment)" that can only be obtained after operation has actually started.
  - ◆ Examples of the information that is acquired
    - Number of accesses (average, peak, etc.), CPU utilization ratios, throughput \*1
    - Internal processing statistics (how long each process takes, etc.) \*2
    - Java VM memory usage (memory utilization and FullGC occurrence rate internally within the Java VM over time) \*3
  
- Re-configure and re-build the system environment based on the information that is obtained during the period for verifying the operating state after beginning operation.  
Change the environment settings of the "OS", "Java VM", etc. and change the programs based on the information acquired.
  - ◆ Examples of environment settings
    - Investigating expanding the hardware due to CPU utilization and throughput.
    - Investigating changing the programs to increase the efficiency of frequently used processing.
    - If the memory utilization or FullGC occurrence rate (occurrence interval) is high, investigate reducing the memory usage by changing programs, etc. and reducing the occurrence rate of FullGC using the Java VM parameter settings (-Xms, -Xmx, etc.)\*4. Investigate also increasing the amount of memory if the physical memory capacity is low.

## 9.2 Operation

- Always allocate periods for periodically verifying the operating state.  
These periods are required in order to periodically get a grasp of the "access patterns", "usage status", "operation status (system environment)".
  - ◆ Examples of the information that is acquired
    - The same as when starting operation as described above.
  
- Re-configure and re-build the system environment based on the information that is obtained during the periods for periodically verifying the operating state.  
Change the environment settings of the "OS", "Java VM", etc. and change the programs based on the information acquired.
  - ◆ Examples of environment settings
    - The same as when starting operation as described above.

## 9.3 Backups

The following items are backed up in the intra-mart regular backup.

- ◆ Each of the files under the **/storage** directory of the Storage Service (mandatory)
- ◆ Each of the files under the **/treasure** directory of the Permanent Data Service (mandatory)
- ◆ Content of the database used by the intra-mart (mandatory)
- ◆ All of the log files under the **<%im\_path%/log** directory of each service (optional)

For files and directories other than those listed above, back them up separately when needed such as after the initial installation, adding application software, or changing settings.

The system administrator's account information and menu information, or license information for the user accounts of each login group are managed by the Permanent Data Service (each file under the treasure directory). Because these are the most important information, ensure that a backup can be taken. In addition, take a backup of the data in the database that is configured in the group datasource in order to be synchronized with the data in the application common master stored in the database. This should be done by using the most appropriate method for the particular database software when backing up the files of the Permanent Data Service (all of the files under the treasure directory).

The Permanent Data Service (all of the files under the treasure directory) are backed up into a zip file in **<%im\_path%/treasure/history** by the periodic backup function (configured in **intra-mart/platform/service/permanent/history** of **imart.xml**). However, it is necessary to periodically perform a backup to external media in preparation for data loss such as due to disk hardware failure.

## 9.4 Remarks

\*1 The number of accesses (average, peak) are collected from the access log, CPU utilization is acquired by the top command or performance monitor, etc., and the throughput is acquired by measuring the actual accesses

\*2 Statistics on processing content are collected from access logs, program logs, etc.

\*3 The Java VM memory usage state (memory utilization within the Java VM over time) is acquired from the intra-mart Administrator memory log, and the occurrence rate of FullGC is acquired from the intra-mart Administrator memory log (the number of times usable memory suddenly increases) and Java VM parameter **-verbose:gc**, etc.

\*4 Because FullGC stops all processing other than GC processing for a fixed period of time (from several seconds to 20 to 30 seconds), reduce the number of times that a FullGC is performed down to around once per day. Furthermore, the effect of a FullGC during operation can be extremely reduced by adjusting the FullGC to be performed during the night. (Consider also rebooting overnight.)

Details on other Java VM parameters can be acquired from the Sun Java website "**<http://java.sun.com>**".

# 10 Appendix D: How to Create Tablespaces and Users in Oracle 11g

It is a prerequisite of intra-mart to operate in conjunction with a DBMS. ,When using Oracle as the DBMS, it is required at least to assign the intra-mart dedicated users and privileges.

The following describes how to create tablespaces and users, and assign privileges in Oracle 11g.

\* Use the following procedure only for the purpose of trials and development. When used for general operations, estimate the size of tablespaces and database before configure the tablespace.

## 10.1 Creating Tablespaces

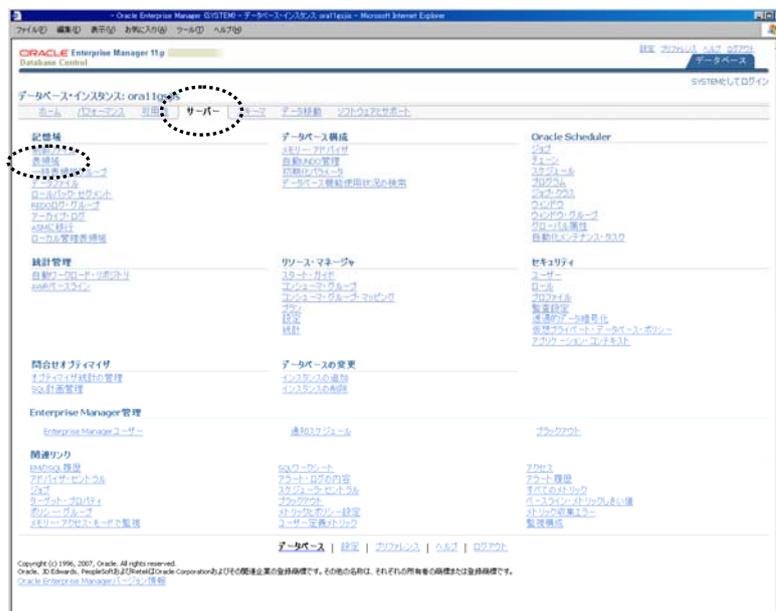
The following procedure is for creating tablespaces for storing data that is created by each user.

1. Display the Oracle 11g Enterprise Manager login screen, and connect to the DB using administrator privileges.

Example of the connection URL "https://localhost:1158/em"



2. Click on the [Tablespace] link in the [Server] tab.



- Click the [Create] button.



- Enter the tablespace name in [Name] and click the [Add] button.



5. Set the file directory, sizes, etc. and click [Proceed].



6. Click the [OK] button.



The procedure has completely successfully if "The object was created successfully" is displayed. Refer to the [Creating, Editing, and Deleting Tablespaces] topic in the Oracle Enterprise Manager Online Help for details.

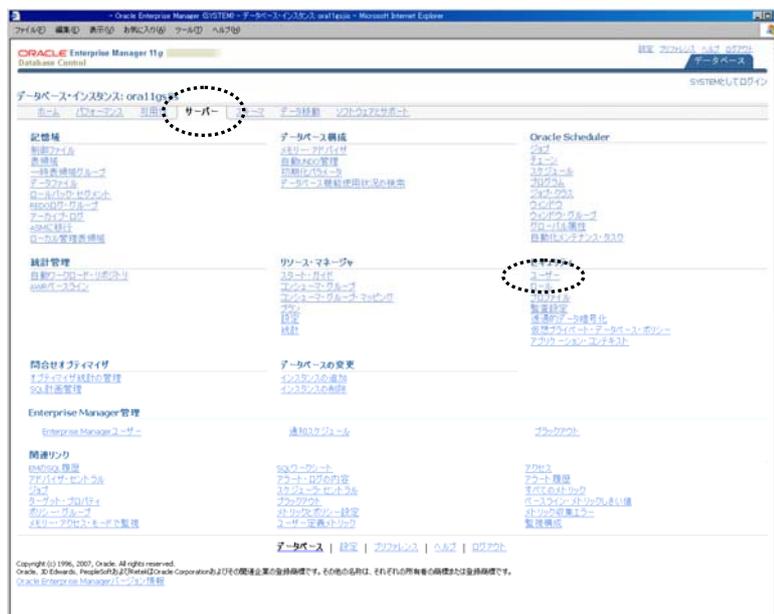
## 10.2 Creating Users

The following procedure creates the Oracle user for use by the intra-mart.

1. Display the Oracle 11g Enterprise Manager login screen, and connect to the DB using administrator privileges. Example of the connection URL "https://localhost:1158/em"



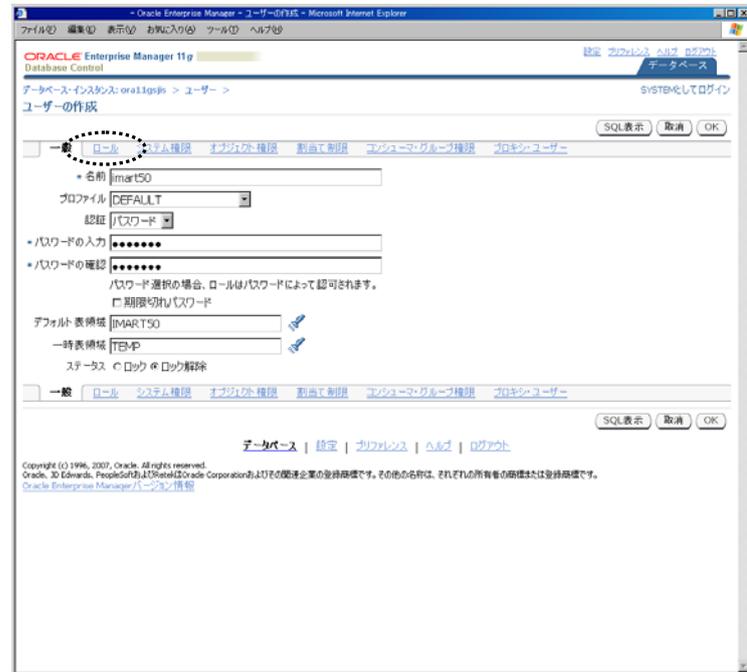
2. Click on the [User] link in the [Server] tab.



3. Click the [Create] button.



4. Set the name, password, tablespace, etc. and select the [Roles] tab.



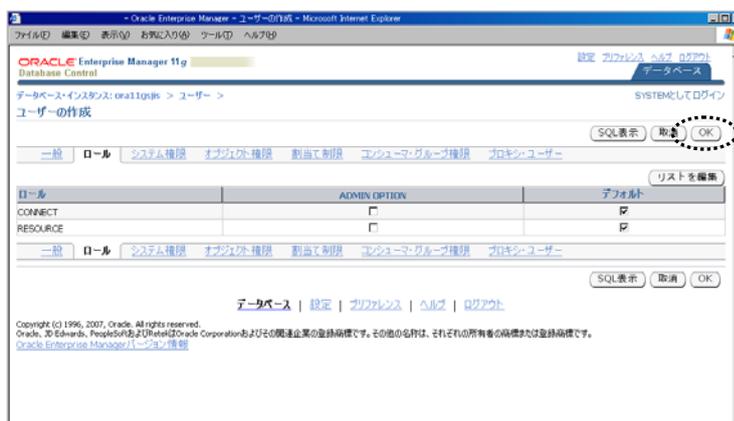
- Click the [Edit List] button.



- Assign the CONNECT role and RESOURCE role and then click the [OK] button.



- Click the [OK] button.



The procedure has completely successfully if "The object was created successfully" is displayed. Refer to the [Creating, Editing, and Deleting Database Users] topic in the Oracle Enterprise Manager Online Help for details.

## 10.2.1 Assigning CREATE VIEW Privilege

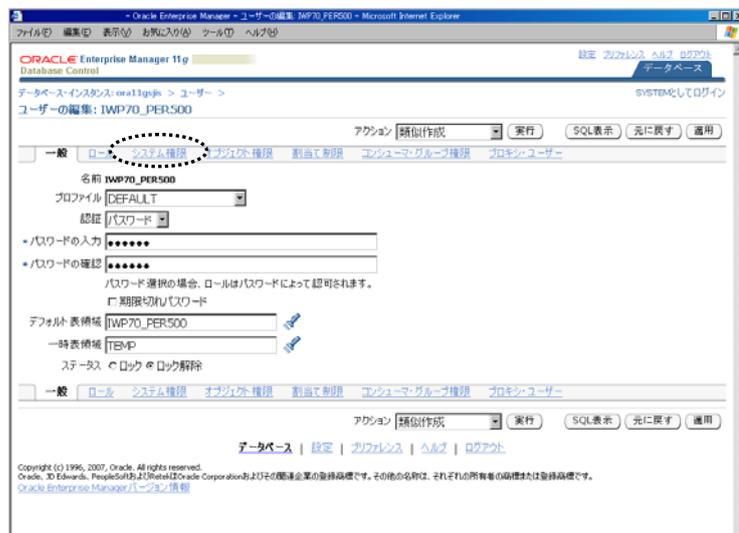
The CREATE VIEW privilege is required in order to use the intra-mart.

This privilege is not preassigned to the CONNECT role in Oracle Database 11g Release 1. Therefore, it is required to explicitly grant the CREATE VIEW privilege.

1. Specify the user to grant the CREATE VIEW privilege to, and click the [Edit] button.



2. Select the [System Privileges] tab.



3. Click the [Edit List] button.



- Grant the CREATE VIEW privilege and click the [OK] button.



- Click the [Apply] button.



The procedure has completely successfully if "User XXXX was changed successfully" is displayed.



**intra-mart WebPlatform Ver. 7.1  
Setup Guide**

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