

uCosminexus Application Server

## First Step Guide

3020-3-Y00-10(E)

## ■ Relevant program products

See the manual *uCosminexus Application Server Overview*.

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## ■ Microsoft product screen shots

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## ■ Microsoft product name abbreviations

This manual uses the following abbreviations for Microsoft product names:

Abbreviation			Full name or meaning
Internet Explorer			Microsoft(R) Internet Explorer(R)
			Windows(R) Internet Explorer(R)
Windows	Windows Server 2008	Windows Server 2008 x86	Microsoft(R) Windows Server(R) 2008 Standard 32-bit
			Microsoft(R) Windows Server(R) 2008 Enterprise 32-bit
		Windows Server 2008 x64	Microsoft(R) Windows Server(R) 2008 Standard
			Microsoft(R) Windows Server(R) 2008 Enterprise
		Windows Server 2008 R2	Microsoft(R) Windows Server(R) 2008 R2 Standard
			Microsoft(R) Windows Server(R) 2008 R2 Enterprise
			Microsoft(R) Windows Server(R) 2008 R2 Datacenter
	Windows Server 2012	Windows Server 2012 Standard	Microsoft(R) Windows Server(R) 2012 Standard
		Windows Server 2012 Datacenter	Microsoft(R) Windows Server(R) 2012 Datacenter
	Windows XP		

Abbreviation		Full name or meaning		
Windows	Windows Vista	Windows Vista Business	Microsoft(R) Windows Vista(R) Business (32-bit)	
		Windows Vista Enterprise	Microsoft(R) Windows Vista(R) Enterprise (32-bit)	
		Windows Vista Ultimate	Microsoft(R) Windows Vista(R) Ultimate (32-bit)	
	Windows 7	Windows 7 x86		Microsoft(R) Windows(R) 7 Professional (32-bit)
				Microsoft(R) Windows(R) 7 Enterprise (32-bit)
				Microsoft(R) Windows(R) 7 Ultimate (32-bit)
		Windows 7 x64		Microsoft(R) Windows(R) 7 Professional (64-bit)
				Microsoft(R) Windows(R) 7 Enterprise (64-bit)
				Microsoft(R) Windows(R) 7 Ultimate (64-bit)
	Windows 8	Windows 8 x86		Windows(R) 8 Pro (32-bit)
				Windows(R) 8 Enterprise (32-bit)
		Windows 8 x64		Windows(R) 8 Pro (64-bit)
			Windows(R) 8 Enterprise (64-bit)	

Note that Windows 32 bit and Windows 64 bit are sometimes respectively referred to as Windows x86 and Windows x64.

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## Summary of amendments

The following table lists changes in the manual 3020-3-Y00-10(E) for uCosminexus Application Server 09-50, uCosminexus Application Server(64) 09-50, uCosminexus Client 09-50, uCosminexus Developer 09-50, uCosminexus Service Architect 09-50, uCosminexus Service Platform 09-50, uCosminexus Service Platform(64) 09-50 and product changes related to the manual:

Added or changed contents	Change location
A procedure is added for using the Eclipse setup functionality to configure the Eclipse environment.	2.5
The description of notes has been moved from Release Notes.	1.2

In addition to the above changes, minor editorial corrections have been made.

# Preface

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For details on the prerequisites before reading this manual, see the manual *uCosminexus Application Server Overview*.

## ■ Non-supported functionality

Some functionality described in this manual is not supported. Non-supported functionality includes:

- Audit log functionality
- Compatibility functionality
- Cosminexus Component Transaction Monitor
- Cosminexus DABroker Library
- Cosminexus Reliable Messaging
- Cosminexus TPBroker and VisiBroker
- Cosminexus Web Service - Security
- Cosminexus XML Security - Core functionality
- JP1 linkage functionality
- Management portal functionality
- Migration functionality
- SOAP applications complying with specifications other than JAX-WS 2.1
- uCosminexus OpenTP1 linkage functionality
- Virtualized system functionality
- XML Processor high-speed parse support functionality

## ■ Non-supported compatibility functionality

"Compatibility functionality" in the above list refers to the following functionality:

- Basic mode
- Check of JSP source compliance (cjsp2java) with JSP1.1 and JSP1.2 specifications
- Database connection using Cosminexus DABroker Library
- EJB client application log subdirectory exclusive mode
- J2EE application test functionality
- Memory session failover functionality
- Servlet engine mode
- Simple Web server functionality
- Switching multiple existing execution environments
- Using EJB 2.1 and Servlet 2.4 annotation



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# *1*

## About This Manual

This chapter describes the experience that you can gain from reading this manual and how to read this manual.

## 1.1 Contents that can be studied in this manual

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The purpose of this manual is to guide you through procedures from the setting up of the Application Server environment to the execution of a sample, while actually operating a machine.

You cannot set up the environment that you will be using in actual business (environment for actual operations), with this manual. To set up an environment for actual operations, you must first study the functionality and the system configuration you want to use.

For details on setting up the environment for actual operations, see the following manuals:

**To set up the development environment for actual operations**

*uCosminexus Application Server Application Development Guide*

**To set up the execution environment for actual operations**

*uCosminexus Application Server System Setup and Operation Guide*

This section describes the contents that you can study in this manual.

### 1.1.1 Setting up the development environment and executing a sample (Chapter 2)

In the development environment, Eclipse is used to develop J2EE applications.

This manual describes procedures from the creation of the environment in which Eclipse can be used until the operations of Eclipse during debugging. If you proceed with the operations according to the given procedure, you can experience how to create a development environment and how to use the sample project (Bank) to perform the Eclipse debug operations. You can use the sample project (Bank) for transferring the funds of a user, having a user ID entered through a Web browser, from a current account to a savings account.

**! Important note**

The environment set up by using this manual will be an environment with the default values specified. To customize the environment, see the *uCosminexus Application Server Application Development Guide*, and then set up the development environment.

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## 1.2 Points to note related to the descriptions in this manual

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Note the following points when you read this manual:

### Starting from the command prompt

In this manual, you use the command prompt to execute commands when you use Windows.

To operate the command prompt, from the Windows **Start** menu, go to **All Programs**, choose **Accessories**, and then **Command Prompt**.

This manual mainly describes *Windows 7* as the OS used. In the case of using any other version of Windows, replace and read the operations in accordance with the OS you use.

### Supporting Eclipse

Chapter 2 of this manual describes the procedure for using the functionality provided by Developer to build the Eclipse environment. Only the Eclipse plug-in functionality provided by Developer is supported. The user must check how to use Eclipse and troubleshoot the errors displayed by Eclipse, and take appropriate actions.

### Using the language pack

Chapter 2 of this manual uses an Eclipse menu notation applying the BABEL Japanese Language Pack 2012/7/21, provided by Eclipse Babel Project. The notations might differ depending on the language pack version you will be using.

### Installation directory

The installation directory of Application Server is as follows:

- In Windows

The default installation directory of Application Server and Developer is *System-drive*: \Program Files \Hitachi\Cosminexus. In a WOW64 (Windows On Windows 64) environment, the default installation directory is *System-drive*: \Program Files (x86) \Hitachi\Cosminexus. When installing in another directory, replace *Application-Server-installation-directory* or *Developer-installation-directory* wherever mentioned in this manual with the directory you use, according to the environment.

Note that you can also specify %COSMINEXUS\_HOME% for *Application-Server-installation-directory*.

%COSMINEXUS\_HOME% is the environment variable that the product installer sets.

- In UNIX

The installation directory of Application Server is /opt/Cosminexus/.

### Notations of menu names for Windows

The following OSs are the pre-requisites for the notations of menu names for Windows, mentioned in this manual:

In the case of a machine used for configuring an execution environment

Windows Server 2008

In the case of a machine used for configuring a development environment

Windows 7 or Windows XP

If you use Windows 8 or Windows Server 2012, the **Start** menu is not displayed. Therefore, select the menu from the **Start** window that can be displayed from the bottom left side of the window.



# 2

## Creating a Development Environment and Executing a Sample Project

This chapter describes the procedure for creating the development environment and the debug environment, and then executing the Developer-provided sample project (Bank).

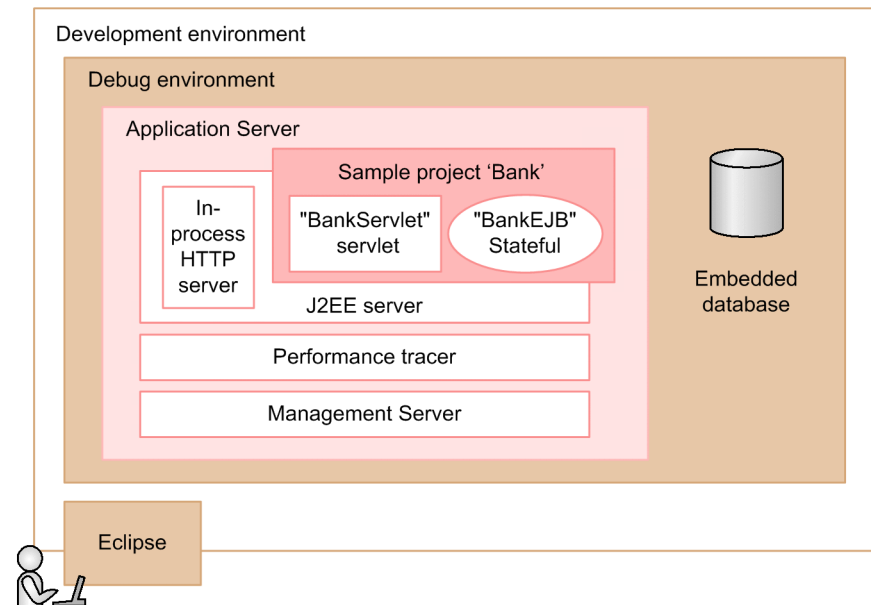
## 2.1 Flow of executing the sample project in the development environment

This chapter describes the procedure for using the Development Environment Instant Setup function provided by Developer to configure the debug environment and then execute the sample project (Bank).

You can use the Development Environment Instance Setup functionality provided by Developer to easily set up the environment for executing sample programs.

The following figure shows the development environment that is created in this chapter, and the sample project (Bank).

Figure 2-1: System and the sample program (Bank) to be set up using the Development Environment Instant Setup functionality



By using the sample project (Bank), you can gain the experience of a tutorial about the debug operations of the Eclipse-provided development support functionality, and the creation and connection of the embedded database. Therefore, you can better understand the procedure for using databases through Eclipse to develop J2EE applications.

The following figure shows the procedure for creating the environment and executing the sample project (Bank).

Figure 2-2: Flow of operations from the creation of the environment to the execution of the sample project (Bank)

1. <i>Setting up the environment variables and installing Developer</i>	2.2
2. <i>Creating the debug environment</i>	2.3
3. <i>Preparing Eclipse</i>	2.4
4. <i>Setting up Eclipse</i>	2.5
5. <i>Checking the JDK used with Eclipse</i>	2.6
6. <i>Starting the database</i>	2.7
7. <i>Executing the sample project (Bank)</i>	2.8

### Overview of each operation

1. **Setting up environment variables and installing Developer**  
This section describes the procedure for setting up the required environment variables and installing Developer. For details, see [2.2 \*Setting up environment variables and installing Developer\*](#).
2. **Creating the debug environment**  
This section describes the procedure for creating the debug environment using the Development Environment Instant Setup functionality. For details, see [2.3 \*Creating the debug environment\*](#).
3. **Preparing Eclipse**  
This section describes the preparations for installing Eclipse to be used with the development environment. For details, see [2.4 \*Preparing Eclipse\*](#).
4. **Setting up Eclipse**  
This section describes the procedure for setting up an Eclipse environment. For details, see [2.5 \*Setting up Eclipse\*](#).
5. **Checking the JDK used with Eclipse**  
This section describes the procedure for confirming that the JDK used with Eclipse is specified. For details, see [2.6 \*Checking the JDK used with Eclipse\*](#).
6. **Starting the database**  
This section describes the procedure for starting the embedded database set up with the Development Environment Instant Setup functionality.  
Note that the embedded database starts automatically after the debug environment is set up with the Development Environment Instant Setup functionality, so this operation is not required. For details, see [2.7 \*Starting the database\*](#).
7. **Executing the sample project (Bank)**  
This section describes the procedure for executing the sample project (Bank) using the created environment. For details, see [2.8 \*Executing the sample project \(Bank\)\*](#).

Hereafter, the operations required to execute the sample project (Bank) are described according to the above procedure.

## 2.2 Setting up environment variables and installing Developer

This section describes how to set up the environment variables required for using Developer, and how to install Developer.

### 2.2.1 Setting up environment variables

First, you set up the environment variables required for using Developer.

#### ! Important note

The following procedure is for Windows XP: When using an OS other than Windows XP, follow the respective procedures to set up the environment variables for each OS.

#### Operation procedure

To set up the environment variables required for using Developer:

1. From the Windows menu bar, select **Control Panel**, and then **System**.  
The System Properties dialog box appears.
2. Under the **Advanced** tab, click the **Environment Variables** button.  
The Environment Variables dialog box appears.
3. If the variable `TZ` exists within the **System variables** frame, select the variable `TZ`, and then click the **Edit** button.  
If the variable `TZ` does not exist, click the **New** button.  
A dialog box for editing or adding the system environment variables appears.

4. Set up the following value:

Variable name	Variable value
<code>TZ</code>	<code>JST-9</code>

When using in Japan, specify `JST-9` in the time zone (`TZ`).

- When the environment variable `TZ` already exists and `JST-9` has not been set up, select the specified variable name, and click the **Edit** button. A dialog box appears. Add or change the values of the environment variables in the displayed dialog box.
  - When the environment variable `TZ` does not exist, click the **New** button. A dialog box appears. Add environment variables and values in the displayed dialog box.
5. Click the **OK** button.  
The dialog box for editing or adding the system environment variables closes.
  6. If the **System environment variables** box has a variable `Path`, select the variable `Path`, and click the **Edit** button. If the variable `Path` does not exist, click the **New** button.  
A dialog box for editing or adding the system environment variables appears.
  7. Specify the following values.

When editing the variable `Path`, add the following value at the beginning. Replace the *Developer-installation-directory* with the actual directory to be used.

Variable name	Variable value
<code>Path</code>	<i>Developer-installation-directory</i> \jdk\bin

- When the environment variable `Path` already exists, select the variable name to be specified, and click the **Edit** button. A dialog box appears. In the displayed dialog box, add the value of the environment variable at the beginning. Replace the *Developer-installation-directory* with the actual directory to be used.
- When the environment variable `Path` does not exist, click the **New** button. A dialog box appears. Add environment variables and values in the displayed dialog box.



8. Click the **OK** button.  
The dialog box for editing or adding the system environment variables closes.
9. In the Environment Variables dialog box, click the **OK** button.  
The Environment Variables dialog box closes.
10. In the System Properties dialog box, click the **OK** button.  
The System Properties dialog box closes, and the setup of environment variables completes.

At this stage, the setup of environment variables required for using Developer is completed.

## 2.2.2 Installing Developer

Install Developer according to the following procedure:

### ! Important note

Before installing the Developer, close all Windows applications.

### Operation procedure

To install Developer:

1. Set up the installation CD-ROM in the CD-ROM drive.  
A message "The selected software will be installed." appears in the Hitachi Integrated Installer dialog box.  
If the Hitachi Integrated Installer dialog box does not appear, use **Explorer** and double-click `HCD_INST.EXE` in the CD-ROM directory.
2. Select uCosminexus Developer and then click the **Install** button.  
A warning message "Installation will start now. Do you wish to continue?" appears in the Confirm Starting of Installer - Hitachi Integrated Installer dialog box.
3. Click the **OK** button.  
The Welcome to the uCosminexus Developer Setup Program page appears.
4. Click the **Next** button.  
The Choose Destination Location page appears.
5. As and when required, select the installation destination directory, and then click the **Next** button.

### Tip

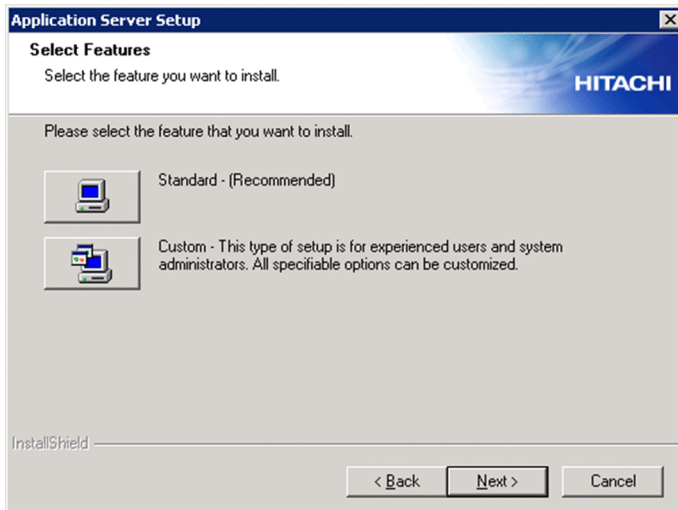
To execute the procedure from 2.3 onward, the installation destination directory to be selected here must meet the following condition:

- Length of the path *Installation-directory-of-Developer*\ADP\DB must be within 80 bytes.

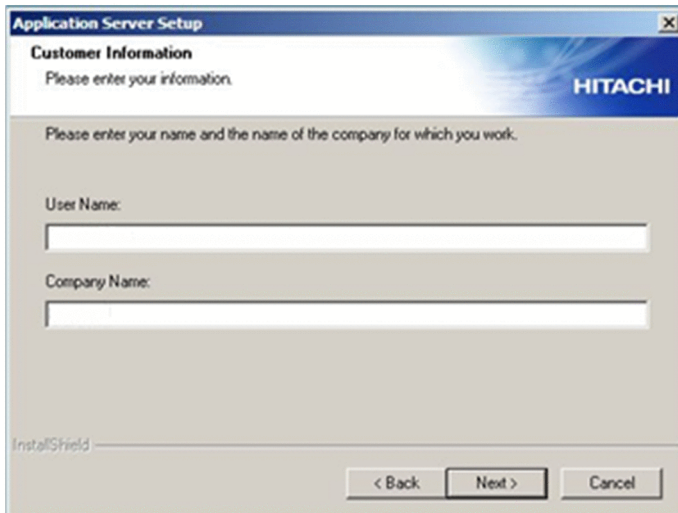
When you install Developer, the ADP and DB directories are created automatically. Therefore, specify the installation destination directory so that the path will be within 73 bytes.

The Select Features page appears.

## 2. Creating a Development Environment and Executing a Sample Project



6. Click the button on the left of **Standard - (Recommended)**.  
The Customer Information page appears.



7. Enter the correct name in **User Name** and **Company Name**, and then click the **Next** button.  
The Select Program Folder page appears.
8. As and when required, change the program folder name, and then click the **Next** button.  
The Start the installation page appears.
9. Check the set up details, and if no problem exists, click the **Next** button.  
The installation starts. Once the installation is completed, the Completing the Setup dialog box appears. The installation might take a few minutes to complete.
10. Click the **Finish** button.  
A window to confirm whether to reboot the OS appears.
11. Click the **Yes** button.  
The OS will reboot, and the installation of Developer will complete.

At this stage, Developer is installed.

## 2.3 Creating the debug environment

Use the Development Environment Instant Setup functionality to create the debug environment.

### ! Important note

The user must have administrator privileges (administrator privileges mode, if the OS is Windows 7, Windows 8, or Windows Vista), for executing the Development Environment Instant Setup functionality.

### Operation procedure

1. From the Start menu, select **All Programs, Cosminexus, First Setup**, and then **Setup Debugging Environment**. The Select the Type of Setup page of the Setup - Development Environment Instant Setup dialog box appears.

2. Select **Standard**, and then click the **Next** button.

The Setup Embedded Database User page appears.

#### Tip

If you cannot select **Standard**, this might be due to the following factors:

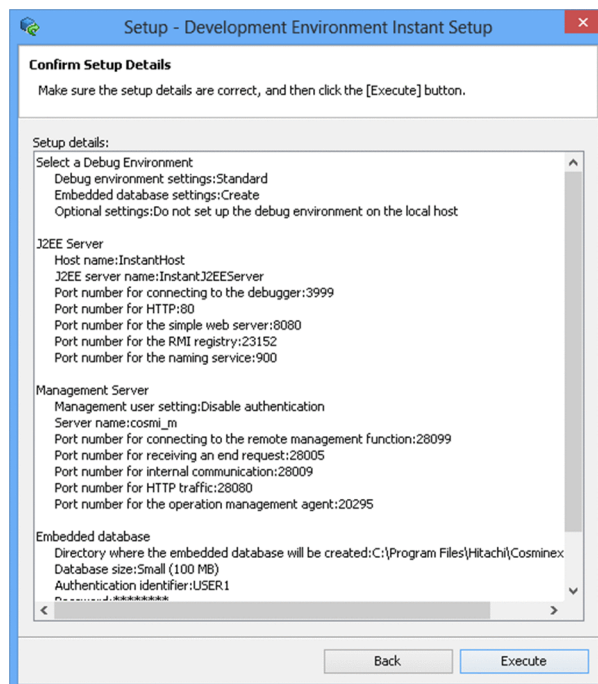
- The required file or directory does not exist or the length of the path is exceeding the required limit.
- The port number specified in the Development Environment Instant Setup functionality is a duplication of the port number being used in the system.

If a port number is duplicated, select **Custom**, and then choose a port number that is not duplicated.

For details, see 2.3.3 *Setting contents of the environment to be setup* and 2.3.4 *Standard setup of the debug environment* in the *uCosminexus Application Server Application Development Guide*.

3. Click the **Next** button.

The Confirm Setup Details page will appear.



The settings will be displayed in the **Setup details** area. For details about the settings of the environment created with Standard Setup, see 2.3.3 *Settings for the environment to be set up* in the *uCosminexus Application Server Application Development Guide*.

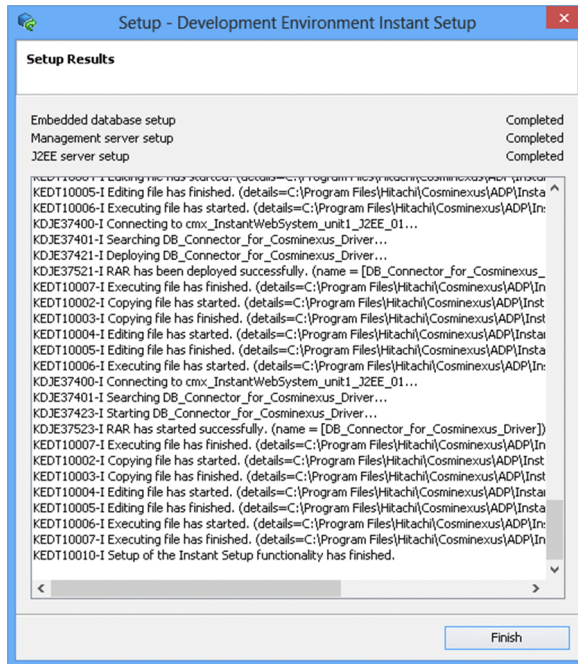
The password of the embedded database is displayed with eight asterisks (\*), irrespective of the specified values.

4. Click the **Execute** button.

The Progress Status page appears, and the setup executes. The setup might take a few minutes to complete.

## 2. Creating a Development Environment and Executing a Sample Project

When the setup is completed, the Setup Results page appears.



5. Click the **Finish** button.

The Setup - Development Environment Instant Setup dialog box closes.

At this stage, the creation of the debug environment is complete.

## 2.4 Preparing Eclipse

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You prepare the environment for using Eclipse. Use the following procedure to prepare an archive file for Eclipse:

### Operation procedure

1. Acquire the archive file of Eclipse.

Acquire the following archive file of Eclipse from the attached article supplied with Developer or the download site of Eclipse.org:

In the case of Windows x86 (including the WOW64 environment)

`eclipse-jee-juno-SR1-win32.zip`

In the case of Windows x64

`eclipse-jee-juno-SR1-win32-x86_64.zip`

2. Save the acquired archive file of Eclipse in the following directory:

*Developer-installation-directory*\ADP\Archives

With this, the preparation for installing Eclipse is complete.

## 2.5 Setting up Eclipse

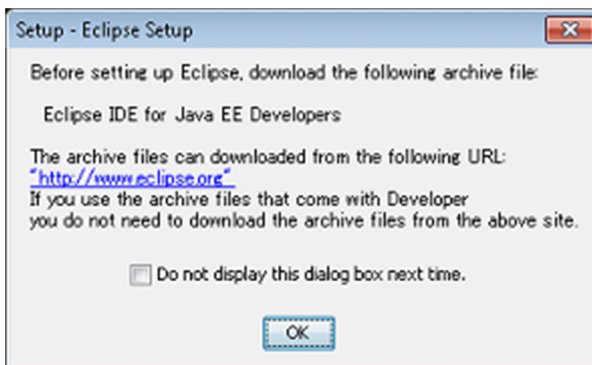
You use the Eclipse setup functionality to set up the Eclipse environment.

### ! Important note

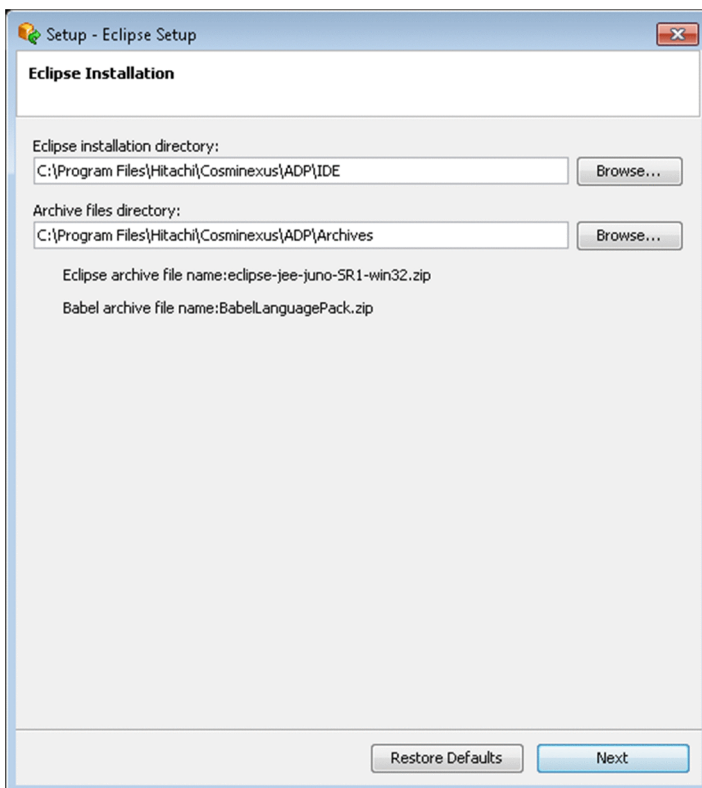
The user must have administrator privileges (administrator privileges mode, if the OS is Windows 7, Windows 8, or Windows Vista), for executing the Eclipse setup functionality.

### Operation procedure

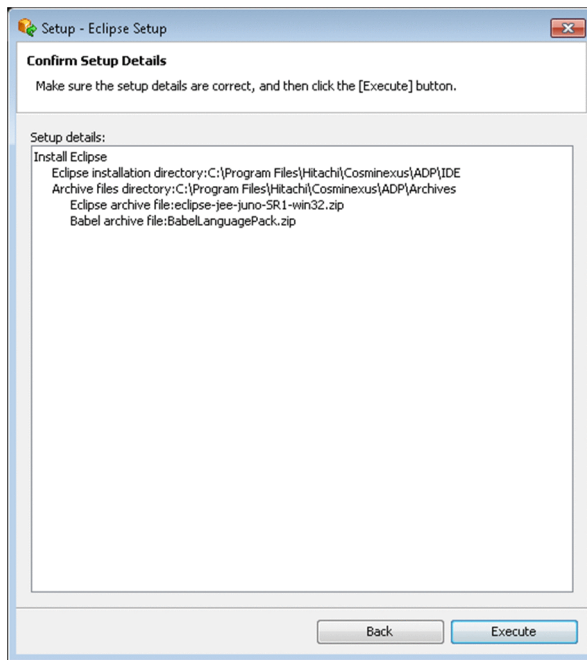
1. From the Start menu of Windows, select **All Programs, Cosminexus, First Setup**, and then **Setup Eclipse**. A dialog box appears for confirming the preparation of the archive file of Eclipse.



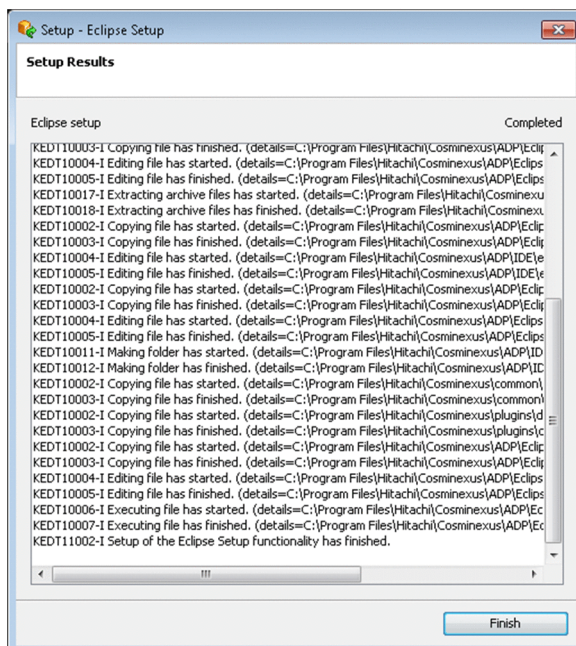
2. In the confirmation dialog box, click the **OK** button. The Eclipse installation page appears.



3. In the Eclipse installation page, specify the installation and archive directories of Eclipse, and then click the **Next** button. The Confirm Setup Details page appears.



4. Check the contents of the Confirm Setup Details page, and click the **Execute** button. The Progress Status page appears, and the setup executes. When the setup is completed, the Setup Results page appears. The Eclipse setup might take a few minutes to complete.



5. On the setup completion page, click the **Finish** button. The Setup - Eclipse setup dialog box closes, and the setup of Eclipse finishes. A short cut of Eclipse is created on the Desktop.

With this, the Eclipse environment setup is completed.

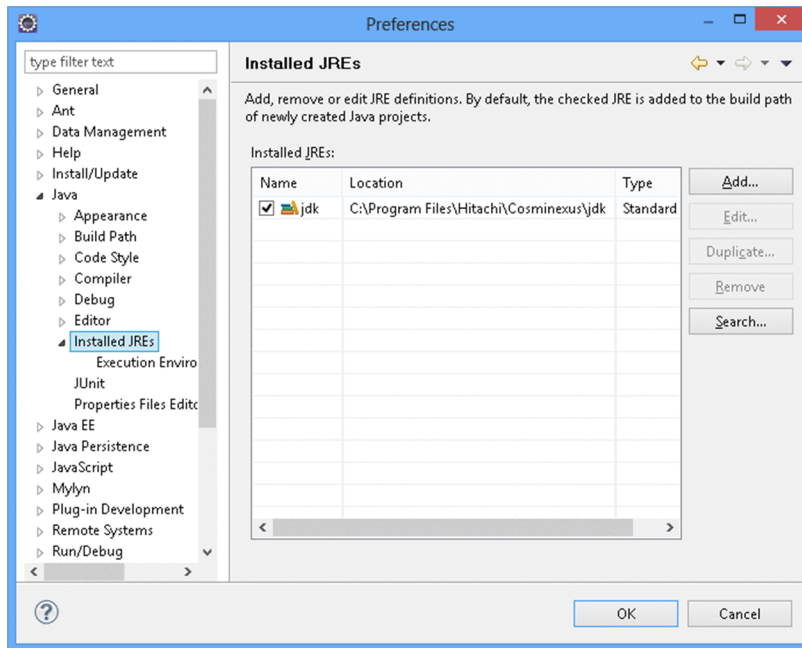
## 2.6 Checking the JDK used with Eclipse

Check that the JDK provided with the Developer is set up as the JDK to be used with Eclipse.

Double-click the short cut of Eclipse on the Desktop to start Eclipse, and then proceed with the subsequent operations. Note that, here, the Setting Workspace and Directory window appears.

### Operation procedure

1. From the Eclipse menu bar, select **Window**, and then **Preferences**.  
The Preferences dialog box will appear.
2. In the left pane, select **Java**, and then **Installed JREs**.  
The Installed JREs page will appear in the right pane.



3. Check if the JDK displayed in the list is the JDK provided with Developer.  
Check if the following path is displayed in **Location**:  
*Developer-installation-directory\jdk*  
Take the following action when the path is displayed or when the path is not displayed:
  - When the path is displayed  
Check if the **Name** check box is selected or not. If the **Name** check box is not selected, select the checkbox.
  - When the path is not displayed  
Click the **Add** button, and set up the above path. After setting up the path, select the **Name** check box.
4. Click the **OK** button.  
The settings will be saved.

At this stage, the verification of settings of the JDK to be used with Eclipse is completed.



## 2.7 Starting the database

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In the sample project (`Bank`), use the embedded database set up with the Development Environment Instant Setup functionality. Note that immediately after using the Development Environment Instant Setup functionality to create the debug environment, the embedded database is automatically started, so the operation for starting the database is not required.

When the embedded database is stopped, execute the following operation to start the embedded database.

### Important note

For starting or stopping the embedded database, the user must have administrator privileges (administrator privileges mode, if the OS is Windows 7, Windows 8 or Windows Vista).

---

### Operation procedure

1. From the Start menu of Windows, select **All programs, Cosminexus**, and then **Start the database**.  
When the embedded database is started, a message, showing that the embedded database is started, is displayed in the Command Prompt.  
For stopping the embedded database, select **All programs, Cosminexus**, and then **Stop the database** from the Start menu of Windows.

## 2.8 Executing the sample project (Bank)

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Execute the sample project (Bank) in the created debug environment.

### 2.8.1 Starting Eclipse

When executing the sample project, to use Eclipse to create database tables, a user having administrator privileges (administrator privileges mode, if the OS is Windows 7, Windows 8, or Windows Vista) must start Eclipse. Note that a user not having the administrator privileges can also start Eclipse. If Eclipse is already started, you need not execute the following procedure.

#### Operation procedure

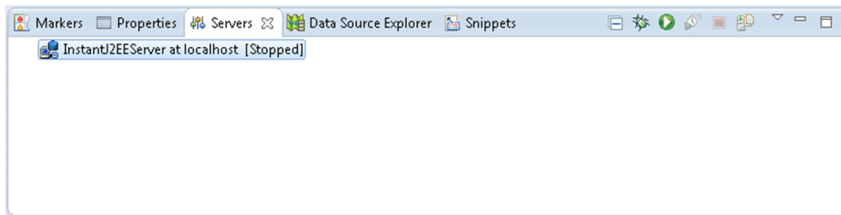
1. Eclipse starts when you double-click the short cut of Eclipse on the Desktop.

### 2.8.2 Creating server runtime

You create the server runtime for using a J2EE server with Eclipse.

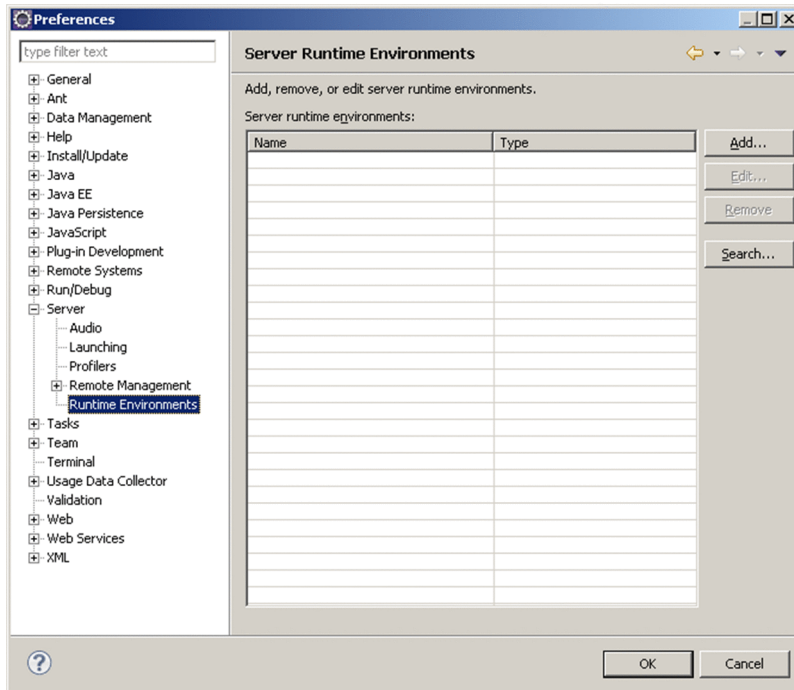
When Eclipse is started, and **InstantJ2EEServer at localhost** appears in the **Servers** view, this activity is not required.

Figure 2-3: Example of displaying InstantJ2EEServer at localhost in the Servers view

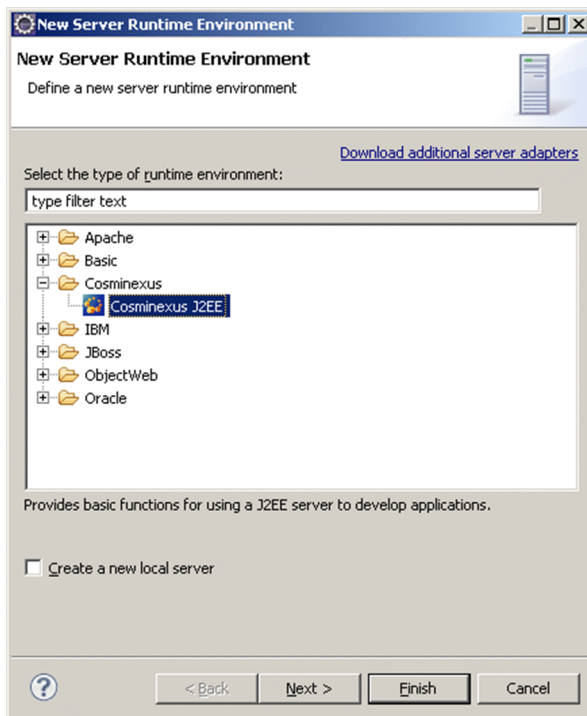


#### Operation procedure

1. From the Eclipse menu, select **Window**, and then **Preferences**.  
The Preferences dialog box appears.
2. In the Preferences dialog box, select **Server**, and then **Runtime Environments**.  
The Server Runtime Environments page appears.



3. Click the **Add** button.  
The New Server Runtime Environment dialog box appears.



4. On the New Server Runtime Environment page, first select **Cosminexus, Cosminexus J2EE**, and then click the **Finish** button.  
The server runtime for operating the J2EE server with Eclipse is created.
5. In the Settings dialog box, click the **OK** button.  
The settings are saved.

At this stage, the settings for using the J2EE server are specified.

### 2.8.3 Creating a J2EE server

You create a J2EE server to be operated with Eclipse.

When Eclipse is started, and **InstantJ2EEServer at localhost** appears in the **Server** view, this activity is not required.

#### Operation procedure

1. From the Eclipse menu, select **File**, **New**, and then **Other**.
2. In the New dialog box, select **Server** and **Server**, and then click the **Next** button.  
The Define New Server page of the **New Server** dialog box appears.
3. In the New Server dialog box, select **Cosminexus** and **J2EE server**, and then click the **Next** button.  
The J2EE Server page appears.
4. On the J2EE Server page, select `localhost` in **Connection Host** for **Remote Management Function**. If you are not logged in, click the **Login** button to log in.  
You are connected to the Management Server Remote Management Function, and the J2EE server, you want to connect to, appears in the list of servers.
5. On the J2EE Server page, select `InstantJ2EEServer` in the list of servers, and then click the **Finish** button.  
The J2EE server is created.

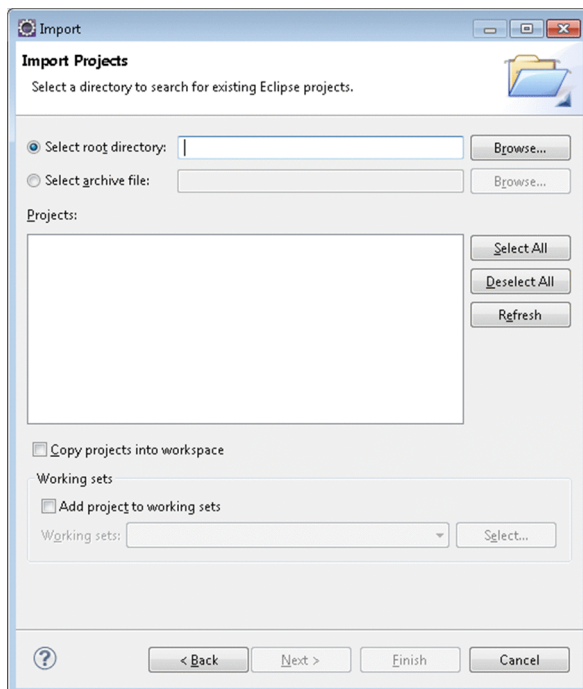
### 2.8.4 Importing the sample project (Bank)

Import the sample project (Bank) into the workspace of Eclipse.

#### Operation procedure

To import the sample project (Bank) into the workspace of Eclipse:

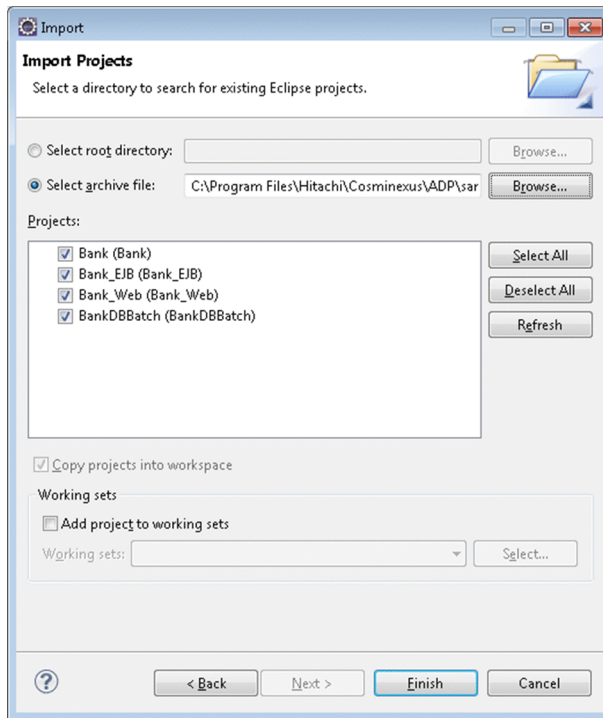
1. From the Eclipse menu bar, choose **File**, and then **Import**.  
The Import dialog box will appear.
2. In the Import dialog box, choose **General**, and then move the **Existing Projects into Workspace**. Click the **Next** button.  
The Import Projects page will appear.



3. Select the **Select archive file** radio button, and then click the **Browse** button.

The Select Archive Containing the Projects to Import dialog box appears.

4. Select *Developer-installation-directory*\ADP\samples\Bank.zip, and then click the **Open** button. In the **Projects** area of the Import projects page, a list of projects included in Bank.zip appears.



5. Check all items in the **Projects** area of the Import projects page, and then click the **Finish** button. The sample project (Bank) will be imported in the workspace of Eclipse.

#### ! Important note

If a build error occurs in the imported sample project (Bank), change the target runtime by using the **Property** of the project. The procedure for changing the target runtime is as follows:

1. In the **Project Explorer** view<sup>#</sup>, select the Bank project.
2. From the menu of Eclipse, select **Project**, and then **Property**.  
The Property: *Project-name* dialog box appears.
3. In the left side pane of the Property: *Project-name* dialog box, select **Target runtime**.  
The Target Runtime page appears.
4. Select the check box of the created target runtime, and click the **OK** button.  
The target runtime is changed.

#

Display the **Project Explorer** view, by selecting **Windows**, **Display** view, and then **Project Explorer**.

At this stage, the sample project (Bank) is imported.

## 2.8.5 Creating a table

Create the table to be used with the sample project (Bank).

#### ! Important note

Before creating a table, confirm the existence of the following conditions:

- **The embedded database is running**  
For details about how to start the embedded database, see 2.7 *Starting the database*.

## 2. Creating a Development Environment and Executing a Sample Project

- **The J2EE server has stopped**

Make sure that the status of **InstantJ2EEServer at localhost** is **Stopped** in the **Servers** view.

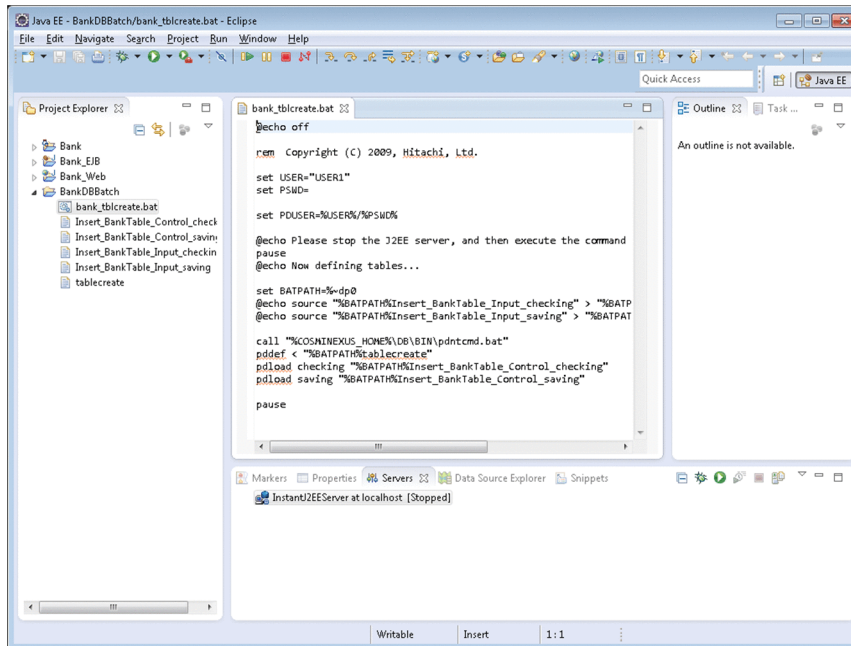
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### Operation procedure

To create the table to be used with the sample project (Bank):

1. In the **Project Explorer** view, select **BankDBBatch**, and then **bank\_tblcreate.bat**. Next, right click to select **Open with**, and then **Text Editor**.

The `bank_tblcreate.bat` file is opened in the Text Editor of Eclipse.



2. Confirm that the user ID specified in the fifth row and the password specified in the sixth row of the `bank_tblcreate.bat` file are as follows:

---

```
set USER="USER1"
set PSWD=
```

---

After confirmation, close the Text Editor of Eclipse.

3. In the **Project Explorer** view, select **BankDBBatch**, and then **bank\_tblcreate.bat**. Next, choose **Open with**, **Default Editor** by right click.

The Command Prompt will start, and the contents of the `bank_tblcreate.bat` file will execute. When the table for the sample project (Bank) is created, a message indicating that the table has been created successfully will be displayed in the Command Prompt.

Reference note

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When you successfully create a table, the return code 0 is displayed.

---

At this stage, the table to be used with the sample project (Bank) is created.

## 2.8.6 Debugging the sample project (Bank)

Deploy the sample project (Bank) that was imported in *2.8.4 Importing the sample project (Bank)* on to a J2EE server, and then check whether the project runs properly.

### (1) Deploying the sample project (Bank)

To deploy the sample project (Bank).

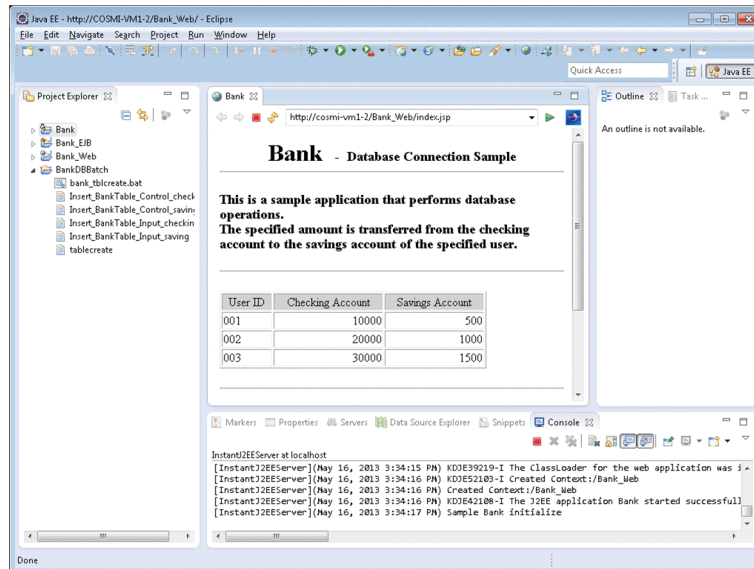
### Operation procedure

1. In the **Project Explorer** view, select **Bank**, right click to select **Debug As**, and then **Debug on Server**.  
The Debug on Server dialog box appears.

2. In the Debug on Server dialog box, select **localhost** and **InstantJ2EEServer at localhost** in the list of servers, and then click the **Finish** button.

The J2EE server (*InstantJ2EEServer*) starts, the sample project (*Bank*) is published, and a Web browser is accessed at the same time, and the sample application (*Bank*) window appears in the Web browser.

Note that at this time, the J2EE server (*InstantJ2EEServer*) starts in the debug mode.



### (2) Operating the sample project (Bank)

The sample project (*Bank*) is a program for transferring the funds of the specified user from the Checking Account to the Savings Account.

If you perform the following operations, the specified funds will be remitted from the Checking Account to the Savings Account of the specified user:

#### Operation procedure

1. In the displayed window, enter the User ID of the user who sends the remittance, and also enter the Transaction amount.

Enter the following values in this window:

User ID: 001

Transaction amount: 500

2. Click the **Transfer** button.

In the displayed table of this window, confirm that the Checking Account balance of the User ID "001" is reduced to "9500" and that the Savings Account balance is increased to "1000".

The funds are managed in the database. The Checking Account table and Savings Account table are updated during the fund transfer. You can verify the updated amount that is applied in the table displayed in the same window.

With this, the operations of the sample project (*Bank*) described in Chapter 2 are completed.





# Appendix

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## A. Glossary

### **Terminology used in this manual**

See the *uCosminexus Application Server and BPM/ESB Platform Terminology Guide*.