IBM WEBSPHERE 6.0.1 SKILLS TRANSFER – LAB EXERCISE

Application Update

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NOTE: Education materials and other documentation as applicable including programming manuals, operating guides, physical planning manuals and installation manuals related to the IBM Products may be early versions subject to change.

What this exercise is about

WebSphere Application Server v6.0.1 provides various features which can be used to manage your J2EE 1.4 applications. This exercise will have you update a J2EE 1.4 application using various methods.

Lab Requirements

List of system and software required for the student to complete the lab.

- WebSphere Application Server v6.0.1 should be installed. Read the SystemSetup_ReadMe file included with the lab sample code for system setup information.
- Installation of lab sample code into directories
 - Windows workstation: C:\Labfiles60

- z/OS server system: /etc/Labfiles60
- Experience with previous versions of WebSphere Application Server and the J2EE programming model is also helpful.

What you should be able to do

At the end of this lab you should be able to:

- Update your application in WebSphere Application Server v6.0.1.
- Initiate a partial application update within WebSphere Application Server v6.0.1.

Introduction

The J2EE 1.4 application which you will be updating is a simple banking application named WebSphereBank. It is composed of EJB, Web, and Application Client modules. In the EJB module there is a session bean and an entity bean.

In this lab, you will be updating the WebSphereBank application running on the WebSphere Application Server v6.0.1. The process you will use to update the application will depend on whether you are performing a full application update, or a partial application update.

Exercise Instructions

Some instructions in this lab may be Windows operating-system specific. If you plan on running the lab on an operating-system other than Windows, you will need to execute the appropriate commands, and use appropriate files(.sh vs..bat) for your operating system. The directory locations are specified in the lab instructions using symbolic references, as follows:

Location Reference	Windows example	z/OS example
<was_home></was_home>	C:\WebSphere\AppServer\	/etc/c6cellB/AppServer
<host_name></host_name>	localhost	mvs22x.rtp.raleigh.ibm.com
<server_name></server_name>	Server1	C6Server01
<host_lab_files></host_lab_files>		/etc/LabFiles60
<local_lab_files></local_lab_files>	C:\LabFiles60	

** NOTE ** Solution instructions are normally provided at the end. The solution is not provided in this case because you need to do the exercises in order to understand Java tools and there is no final solution to import. To go through the lab, start at Part One assuming you have met the requirements in the section "User Requirements" stated above.

Part 1: Preparing the Environment on Host System

- ____1. You will prepare the lab setup script.
 - ___a. Telnet to your host system:

telnet MVS22x.RTP.RALEIGH.IBM.COM 1023

cd /etc/LabFiles60/common

b. Within <HOST_LAB_FILES>/common directory, edit labSetup.sh file to ensure that the variables are correct for WAS_HOME, WAS_USER_SCRIPT, and LAB_FILES. Save the above changes and close the file. If you are running this lab on the class systems, all the information should be correct. So if you don't feel comfortable using vi editor, you can skip this step.

vi labSetup.sh

"j" scrolls down.

":q" quits and ":wq" writes and quits

2. Issue the following commands to ensure the scripts have "execute" rights:

chmod +x labSetup.sh

- _____ 3. Ensure the server is started
 - ____a. At the command prompt, navigate to <WAS_HOME>/profiles/default/bin

cd /etc/c6cellB/AppServer/profiles/default/bin

____b. Check to see if the server is running

./serverStatus.sh <SERVER_NAME>

____ c. If the server status does not indicate STARTED, then start the server:

./startServer.sh <SERVER_NAME>

Part 2: Creating the BANKDB Cloudscape database

This step demonstrates the creation of the Cloudscape BANKDB database, which you will need for the WebSphereBank application. You will use commands to create the database and tables. The database will be created in the <LAB_FILES>/CloudscapeDB directory.

1. Generate the Cloudscape BANKDB database and tables.

____a. In a command window, navigate to

/etc/c6cellB/AppServer/cloudscape/bin/embedded

____b. Issue the Cloudscape ij command to start the Cloudscape utility

./ij.sh

____c. Issue the following commands, replacing <LAB_FILES> with your lab file path:

mkdir /tmp/LabFiles60/CloudscapeDB

connect 'jdbc:db2j:/tmp/LabFiles60/CloudscapeDB/BANKDB;create=true';

Note: this command may run for 10 to 30 seconds; when the command completes, you will see the "ij>" prompt with no messages

1) run 'tmp/LabFiles60/common/Bank.ddl';

	🔤 Command Prompt
	ij> run 'C:/Labfiles60/CloudscapeDB/Bank.ddl'; ij> Generated by Relational Schema Center on Thu Nov 18 14:43:42 CST 2004 fo Cloudscape V5.0
	CREATE TABLE ACCOUNT (ACCOUNTNUMBER INTEGER NOT NULL, ACCOUNTTYPE INTEGER NOT NULL, BALANCE REAL NOT NULL, ACCOUNTSCUSTOMERINVERSE_CUSTOMERNUMBER BIGINT NULL); Ø rows inserted/updated/deleted
	ij> ALTER TABLE ACCOUNT ADD CONSTRAINT PK_ACCOUNT PRIMARY KEY (ACCOUNTNUMBER); 0 rows inserted/updated/deleted ij> CREATE TABLE CUSTOMER (CUSTOMERNUMBER BIGINT NOT NULL, LASTNAME UARCHAR(250) NULL, FIRSTNAME UARCHAR(250) NULL, TAXID UARCHAR(250) NULL);
	ij> ALTER TABLE CUSTOMER ADD CONSTRAINT PK_CUSTOMER PRIMARY KEY (CUSTOMERNUMBER); Ø rows inserted/updated/deleted ij> disconnect all; exit; ij> C:\Program Files\IBM\WebSphere\AppServer\cloudscape\bin\embedded>_
Ĩ	

2) disconnect all; exit;

3) Go to the <LAB_FILES> directory and issue 'chmod -R 777 CloudscapeDB'

The BANKDB database and tables have been created.

Part 3: Installing the WebSphereBank Application

You will install the WebSphereBank ear file that is provided in the WebSphereBank lab file using the WebSphere Application Server Admin Console.

- 1. Start the Administrative Console.
 - ____a. Open a Web Browser and navigate to the following URL:

http://<HOST_NAME>:9080/ibm/console

____b. When prompted for a User ID, enter **wsdemo** to log in.

Welcome, please enter your information.
User ID: wsdemo
Log in
The User ID does not require a password, and does not need to be a User ID of a user in the local user registry. It is only used to track user-specific changes to configuration data. Security is NOT enabled

- 2. Expand **Applications** and click **Install New Application** under Applications on the navigation panel.
 - 3. For path specify <LOCAL_LAB_FILES>\ApplUpdate\WebSphereBank.ear.

Welcome	Enterprise Applications
/ Servers	
· Applications	Preparing for the application installation
 Enterprise Applications Install New Application 	Specify the EAR, WAR or JAR module to upload and install.
r Resources	 Path to the new application. O Local file system
· Security	Specify path
r Environment	
 System administration 	V Remote the system

- _____4. Click Next.
 - _ 5. On the next screen, ensure that "Generate Default Bindings" is unchecked, since all the bindings are configured in the deployment descriptors.

Preparing for the application installation
Choose to generate default bindings and mappings.
Generate Default Bindings
Prefixes:

- _____6. Click Next.
- _____7. If you see an Application Security Warnings screen, click **Continue**.
- 8. In "Step 1: Select installation options" :
 - ____a. Ensure that **Deploy Enterprise Beans** is unchecked (we deployed the Enterprise Beans in IRAD)
 - ____b. Ensure the application name is **WebSphereBank.**

Error! Objects cannot be created from editing field codes.

- ___ c. Click Next.
- 9. In "Step 2: Map modules to servers", accept the default mapping by clicking Next.
- 10. In "Step 3: Select currrent backend ID.":
 - ____a. Verify that Cloudscape_V51_1 is selected.

Install New Application

Specify options for installing enterprise applications and modules.

<u>Step 1</u>	Select currrent bac	kend ID.	
installation	Specify the selection	for the BackendID	
options	EJB module	URI	CurrentBackendId
<u>Step 2</u> Map modules to	WebSphereBankEJB	WebSphereBankEJB.jar,META- INF/ejb-jar.xml	CLOUDSCAPE_V51_1

This was done in IRAD when we ran the EJBDeploy on the beans. We only have one choice here because we only deployed the beans to the Cloudscape backend. If we had deployed to a variety of backends, there would be more choices here. The Deploy process is specific to a container, and if Container Managed Persistence is used, it is necessary to specify the database as well.

- ___b. Click Next
- 11. In "Step 4: Provide JNDI Names for Beans" click Next to accept the default values for JNDI Names
- 12. In "Step 5: Provide default data source mapping for modules containing 2.x entity Beans":
 - ____a. Note that JNDI name jdbc/Bank is the one used while configuring your Data Source.
 - ___b. Click Next

- _____ 13. If you see any Warnings, click **Continue**.
- 14. In "Step6: Map datasources for all 2.0 CMP beans":
 - ____a. Enter eis/jdbc/Bank_CMP in the JNDI Name field for both EJBs, as follows:

	G			
Select	EJB	EJB Module	URI	JNDI Name
	Account	BankCMRQLEJB	Bank CMR QLEJB, jar, META- INF/ejb-jar, xml	eis/jdbc/Bank_CMP
	Customer	BankCMRQLEJB	BankCMRQLEJB.jar,META- INF/ejb-jar.xml	eis/jdbc/Bank_CMP

This JNDI name can be just selected rather than typing as above if you had created a datasource before the installation of the application, and if you click the checkbox *Use this data source for container managed persistence (CMP)* when you create the data source, another reference is created with the name of *eis/jndi_name_of_datasource_CMP*. For example, if a data source has a JNDI name of *jdbc/myDatasource*, the CMP JNDI name is *eis/jdbc/myDatasource_CMP*. This name is used internally by CMP and is provided simply for informational purposes.

____b. Click Next to proceed.

- _____ 15. If you see any Warnings, click **Continue**.
- _____16. Click on **Step 10** to skip over the remaining steps.

_____ 17. In "Step 10: Summary":

____a. Review the values in the screen capture

Summary	
Summary of installation options	
Options	Values
Use Binary Configuration	No
Create MBeans for resources	Yes
Cell/Node/Server	Click here
Reload interval in seconds	
Enable class reloading	No
Process embedded configuration	Yes
Application name	WebSphereBank
Validate Input off/warn/fail	warn
Directory to install application	Yes
Distribute application	Yes
Deploy Web services	No
Pre-compile JSP	No
Deploy enterprise beans	No

____b. Click Finish

Note: the step numbers are context sensitive. Which panels are displayed depends on the contents of the EAR file. Other applications may have different step numbers. The steps that were skipped over here were panels where the defaults are taken.

The installation process will take a minute or two. An instance of the workbench is started and the Ejbdeploy process runs, preparing a copy of the EAR file to be installed. Wait for the message that says the application installed successfully

_ 18. After messages indicate installation was successful, you need to **Save to Master Configuration**.



____a. Click Save to Master Configuration.

Ε

___ b. Click Save.

nterprise Applications ? -
Enterprise Applications > Save
Save your workspace changes to the master configuration
Click Save to update the master repository with your changes. Click Discard to discard your changes and begin work again using the master repository configuration. Click Cancel to continue working with your changes.
Total changed documents: 24
Save Discard Cancel

Part 4: Configure a JDBC Driver and a Data Source

You will define and configure the JDBC Driver and Data Source so the WebSphereBank application can access the Cloudscape BANKDB database.

- 1. Data sources and other resources are organized under the Resources heading. Expand **Resources** and click **JDBC Providers** to configure the data source which the WebSphereBank application will use to store data.
- 2. The existing JDBC Providers that are configured at the Node level will be displayed. In order to configure a new provider scoped to the Application Server, select **Server: <SERVER NAME>**.

JDBC Providers	
JDBC Providers	
JDBC providers are used by the	e installed applications to access data from databases.
🖃 Scope: Cell= MyNode , Node:	=MyNode
○ Cell: MyNode → ○ Node: MyNode ◎ Server: server1 Apply	Use scope settings to limit the availability of resources to a particular cell, node, or server. When new items are created in this view, they will be created within the current scope.

3. Click Apply

Note: the JDBC Providers that are configured at the Server level were not displayed immediately when you clicked <SERVER_NAME>; they were only displayed when you clicked Apply.

Note: if the node is federated with a Deployment Manager, you will see a browse button and will need to browse to the node before selecting a server.

- 4. Click New. In the General properties screen, select:
 - ____a. Step1: Select the database type as **Cloudscape**.
 - ____b. Step 2: Select the provider type as **Cloudscape JDBC Provider**.
 - ____ c. Step 3: Select the implementation type as **XA data source**.

Step 1: Select the database type Cloudscape Step 2: Select the provider type Cloudscape	
Step 2: Select the provider type	
Olaudaaana JDDO Beeridaa	
Cloudscape JDBC Provider	
Step 3: Select the implementation type	
XA data source	

- _____ 5. Click Next.
- 6. In this screen change the provider name to WebSphereBank Cloudscape JDBC Provider (XA)

Gene	General Properties		
*	Scope		
	cells:MyNode:nodes:MyNode:servers:server1		
*	Name		
	WebSphereBank Cloudscape JDBC Provi		

7. Change the description to WebSphereBank Cloudscape JDBC Provider (XA)

Description			
WebSphereBank Cloudscape JDBC Provider (XA)			

- 8. Click **OK**. The list of JDBC Providers configured at the server scope will be displayed.
- _____9. Click <u>Save</u> in the banner at the top of the page.
- _____10. Click the Save button.
- 11. Click WebSphereBank Cloudscape JDBC Provider (XA)
- _____12. Click **Data Sources** under Additional Properties on the right side of the window.
- _____ 13. Click **New** to create a Data Source.
- **14.** The empty configuration properties for the data source will be displayed. Enter the following:
 - ___a. Name: BANKDS
 - ___b. JNDI name: jdbc/Bank
 - ____c. Make sure there is check next to "Use this Data Source in container managed persistence (CMP)"

Note: If this box is not checked, you will have problems at runtime because the corresponding connection factory will not be created.

____d. Description:

Data Source for the WebSphereBank entity beans

Name	
BANKDS	
JNDI name	
jdbc/Bank	
✓ Use this Data Source in container managed persist Description	ence (CMP)
Data Source for the WebSphereBank entity beans	

____ e. Near the bottom of the same screen under Cloudscape data source properties type the Database name as <HOST_LAB_FILES>/CloudscapeDB/BANKDB (Ex. /etc/LabFiles60/CloudscapeDB/BANKDB):

Cloudscape data source p	roperties		
* Database name			
les60\CloudscapeDB\BANKDB			
Apply OK Reset	Cancel		

- 15. Click **OK**; the data source BANKDS will appear within the list of data sources.
- _____16. Click <u>Save</u> in the banner at the top of the page.
- _____ 17. Click the **Save** button.
- _____ 18. Click BANKDS.
- _____ 19. On the right hand side click on **Custom properties.**
 - ____a. Click connectionAttributes.
 - ____b. Enter the value **upgrade=true.**

Note: The value "upgrade=true" will cause Cloudscape database version to be checked. If it is at an earlier version level, the database will be converted to the current level.

- ___c. Click OK.
- ____ 20. Your Data Source is completely defined. With WebSphere Application Server v6.0, configuration changes to your server, such as defining a JDBC Provider and Data Source, must be saved with a explicit call to the Save operation in the Administrative console.
- _____ 21. Click <u>Save</u> in the banner at the top of the page.
- ____ 22. Click the Save button.
- _____ 23. Log out of the Admin Console.

- ____a. Click the **Logout** link in the header.
- _____ 24. Stop and restart the server from you telnet session.
 - ____a. Stop the server
 - ./stopServer.sh <SERVER_NAME>
 - ____b. Start the server

./startServer.sh <SERVER_NAME>

Note: There are two reasons for stopping and restarting the application server at this point. The first is that changes to Data Sources are picked up at startup. The second is that there is a naming issue in the Beta with EJBs not being removed from the namespace when the application stops. If the Samples had been installed, installing and starting WebSphereBank at this point would result

- __ 25. Test the application.
 - ____a. Open a browser.
 - ___b. Enter the URL http://<hostname>:9080/WebSphereBankWeb/.
 - ____ c. Click on Create Customer.
 - ____d. Enter Customer Number, Name and Tax ID. Click Create.

	Messages
Customer Number:	10
First Name:	John
Last Name:	Doe
TAX ID:	012-34-5678

Create Customer

26. You will see details for customer created. Click **Create Account**.

Customer Details

New Customer has been successfully created

Customer Number:	10
First Name:	JOHN
Last Name:	DOE
TAX ID:	012-34-5678
Create Account	

____27. Enter **101** for the Account Number, **Checking** for account type and **600** for the starting balance. Click **Create**.

	Messages
Customer Number:	10
Account Number:	101
Account Type:	O Savings 👁 Checking
Starting Balance:	\$ 600
Create	Reset

Create a new Account

- 28. Create a second account.
 - ____a. Enter **102** for the Account Number, **Savings** for account type and **400** for the starting balance. Click **Create**.

If the accounts are created without generating errors, then the Data Source is working otherwise make sure the **databasename** is correct in datasource properties and make sure to test the datasource.

____ 29. Test transferring funds.

___a. Click Transfer Funds.

____b. For the From Account enter 101, for the To Account enter 102, and for the amount enter 10.

From Account:	101
To Account:	102
Amount:	\$ 10
Transfer	Reset

- ___c. Click Transfer.
- ____d. You will notice that the messages reflect the transfer amount.

Part 5: Full Application Update

1. In the Administrative console, under **Applications > Enterprise Applications**, select the **WebSphereBank** application and click on **Update**.

Welcome	Start	Stop Install Uninstall (Update) Rollout I	Update Remove File	
🗄 Servers				
Applications				
Enterprise	Select	Name 🛟	Status ሷ	
Applications Install New		DefaultApplication	€	
Application		SamplesGallery	⇒	
🗄 Resources		SchedulerCalendars	€)	
🗄 Security	-		2	
🗄 Environment		WebSphereBank	⇒	
		<u>filetransfer</u>	\$	

- 2. In update window, select **Full application**.
- 3. For path specify <LOCAL_LAB_FILES>\ApplUpdate\WebSphereBank2.ear.

Application undate options	
• Full application	
Select this option to replace the enterprise archive (*.ear) file for an installed application. The uploaded enterprise archive replaces the existing installed application.	
Upload the replacement application.	
C Local file system	
Specify path	
C:\LabFiles60\ApplUpda <mark> Browse</mark>	
O Remote file system	
Specify path	

- _____4. Click Next.
- _____ 5. On the next panel, click **Next**.
- 6. Click Step 3 Select current backend ID.
- _____7. Verify CLOUDSCAPE_V51_1 is selected for Database type and click Next.

Select currrent backend ID.			
	Specify the selection	for the BackendID	
	EJB module	URI	CurrentBackendId
	WebSphereBankEJB	WebSphereBankEJB.jar,META- INF/ejb-jar.xml	CLOUDSCAPE V51 1

- 8. Click Step 10 Summary, then click Finish.
- 9. After messages indicate installation was successful, you need to Save to Master Configuration.

ADMA5013I: Application WebSphereBank installed successfully.

Application WebSphereBank installed successfully.

To start the application, first save changes to the master configuration.

Save to Master Configuration

To work with installed applications, click the "Manage Applications" button.

- ____a. Click Save to Master Configuration.
- ___ b. Click Save.

Enterprise Applications ? -
Enterprise Applications > Save
Save your workspace changes to the master configuration
Click Save to update the master repository with your changes. Click Discard to discard your changes and begin work again using the master repository configuration. Click Cancel to continue working with your changes.
Total changed documents: 24
Save Discard Cancel

_____ 10. Test the updated application.

____a. Open a Web Browser and navigate to the following URL:

http://<hostname>:9080/WebSphereBankWeb

____b. Click Get Balance.

____ c. For the Account Number enter **101**, note account balance ______.

___ d. Click Transfer Funds.

____e. For the From Account enter 101, for the To Account enter 102, and for the amount enter 10.

From Account:	101
To Account:	102
Amount:	\$ 10
Transfer	Reset

___f. Click Transfer.

____g. You will notice that the messages indicate an incorrect transfer amount. An extra \$10 was transferred. Also, "Massages" is spelled incorrectly. Let's fix the spelling.

Part 6: Partial Application Update Using ZIP File

1. In the Admin console, under **Applications > Enterprise Applications**, select the **WebSphereBank** application and click on **Update**.

 Welcome Servers 	Start	Stop Install Uninstall Update Rollout	Jpdate Remove File	
Applications				
 Enterprise Applications Install New Application 	Select	Name 🛟	Status ሷ	
		DefaultApplication	€	
		SamplesGallery	€	
🗄 Resources		SchedulerCalendars	€	
🗄 Security		WebSphereBank	4	
🗄 Environment			J.	
🗄 System administration		<u>filetransfer</u>	€)	

- 2. In update window, select **Partial application**.
- 3. For path specify <LOCAL_LAB_FILES>\ApplUpdate\WebSphereBank3.zip.
 - Partial application

Select a valid compressed file such as .zip, .ear, or other file below. This file is unzipped into the installed application directory. Files with the same name are replaced. Changes in binding information are be analyzed.

Upload t	he archive file with the new or replacement files.
⊙ _{Loca}	l file system
	Specify path C:\LabFiles60\ApplUpda Browse
O Rem	note file system
	Specify path

- _____4. Click Next.
- 5. On the next panel click **OK**.

Notice how much faster this update is versus the full application update you did earlier.

_ 6. After messages indicate update has ended, you need to **Save to Master Configuration**.

Update of WebSphereBank has ended.

Update of WebSphereBank has ended.

To start the application, first save changes to the master configuration.

Save to Master Configuration

- ____a. Click Save to Master Configuration.
- ___ b. Click Save.
- ____7. Test the updated application.
 - ____a. Back in the WebSphereBank window, refresh your screen.
 - ____b. You will notice that "Masseges" is now "Transaction Messages", and the WebSphere Bank gif has been changed to include shadows.



____ c. Let's change "Transaction Messages" back to "Messages".

Part 7: Single File Application Update

1. In the Admin console, under **Applications > Enterprise Applications**, select the **WebSphereBank** application and click on **Update**.

Welcome	Start	Stop Install Uninstall	Update Remove File	
🛨 Servers				
Applications				
Enterprise	Select	Name 🛟	Status ሷ	
Applications Install New		DefaultApplication	€	
Application		SamplesGallery	€)	
🗄 Resources		SchedulerCalendars	⇒	
🗄 Security	-	Web of Level and	A	
🗄 Environment		websphereBank	4	
🗄 System administration		<u>filetransfer</u>	€)	

- 2. In update window, select **Single file**. For **Relative path to file**, specify **WebSphereBankWeb.war/jsp/transferfunds.jsp.**
- 3. For path specify <LOCAL_LAB_FILES>\ApplUpdate\transferfunds4.jsp.
 - Single file

Select this option to update an existing file or to add a new file to the application. If the relative path to the file matches an existing path to a file in the installed application, the uploaded file replaces the existing file. If the relative path to the file does not exist in the installed application, the uploaded file is added to the application.

Relative path to file. phereBankWeb.war\jsp\transferfunds.jsp Path to the existing file, or to the desired path for the new file. Upload the new or replacement files. © Local file system Specify path C:\LabFiles60\ApplUpdar Browse... © Remote file system Specify path

- 4. Click Next.
- ____ 5. On the next panel, click **OK**.

____ 6. After messages indicate update has ended, you need to **Save to Master Configuration**.

Update of WebSphereBank has ended.

To start the application, first save changes to the master configuration.

Save to Master Configuration

- ____a. Click Save to Master Configuration.
- ___b. Click Save.
- 7. Test the updated application.
 - ____a. Back in the WebSphereBank window, refresh your screen or click **Transfer Funds** again.
 - ____b. Notice that "Transaction Messages" is back to "Messages".
- 8. We still need to fix the transfer problem. Let's do that next.

Part 8: Single Module Application Update

9. In the Admin console, under **Applications > Enterprise Applications**, select the **WebSphereBank** application and click on **Update**.

Welcome	Star	: Stop Install Uninstall Undate Rollout	Update Remove File	
🗄 Servers				
Applications				
Enterprise	Select	Name 🛟	Status ሷ	
Applications Install New		DefaultApplication	\$	
Application		SamplesGallery	€	
🗄 Resources		SchedulerCalendars	€	
± Security	-			
E Environment		WebSphereBank_	€	
System administration		filetransfer_	€)	

- 10. In update window, Select Single module. For Relative path to file, specify WebSphereBankWeb.war.
- 11. For path specify <LOCAL_LAB_FILES>\ApplUpdate\WebSphereBankWeb5.war.
- 12. For Context root specify WebSphereBankWeb.
 - Single module

Select this option to update an existing module or to add a new module to the application. If the relative path to the module matches an existing path to a module in the installed application, the uploaded module replaces the existing module. If the relative path to the module does not exist in the installed application, the uploaded module module application, the uploaded module is added to the application.

I	Relative path to module.
	WebSphereBankWeb.war

Path to the existing module, or to the desired path for the new module.

	Spacify path			
	CulliphEiloce(0) Applu	Browse		
	C:\Labries60\Applot		l	
/ Re	mote file system			
	Specify path			
	obecut becu			

WebSphereBankWeb Used only for standalone Web modules (.war files)

____ 13. Click Next.

- _____14. On the next panel, click **Next**.
- _____ 15. On the next panel, click **Continue**.
- _____ 16. On the next panel, click **Step 5 Summary**, then click **Finish**.
- _____ 17. After messages indicate update has ended, you need to **Save to Master Configuration**.

Update of WebSphereBank has ended.

Update of WebSphereBank has ended.

To start the application, first save changes to the master configuration.

Save to Master Configuration

- ____a. Click Save to Master Configuration.
- ___ b. Click Save.
- _____18. Test the updated application.
 - ____a. Return to the WebSphereBank Transfer Funds window.
 - ____b. For the From Account enter 101, for the To Account enter 102, and for the amount enter 10.
 - ___ c. Click Transfer.
 - ____d. Notice the correct amount is transferred. The application update is complete.

Part 9: Cleanup

In this section you will uninstall the WebSphereBank application.

1. In the Admininstrative console, under **Applications > Enterprise Applications**, select the **WebSphereBank** application and click on **Uninstall**.

Start	Stop Install Uninstall Update Rollout U	Jpdate
D	6 # \$	
Select	Name 🛟	Status ሷ
	DefaultApplication	€
	IBMUTC	€
	<u>PlantsByWebSphere</u>	€
	SamplesGallery	€)
	WebSphereBank_	€
	ivtApp_	♦

- _____2. Click OK.
- _____3. Click <u>Save</u> in the banner at the top of the page.
- _____4. Click the Save button.
- _____ 5. You can now close your browser.

What you did in this exercise

In this exercise, you updated a J2EE 1.4 application using both partial(.war, .zip and single file) and full(.ear file) update methods.