

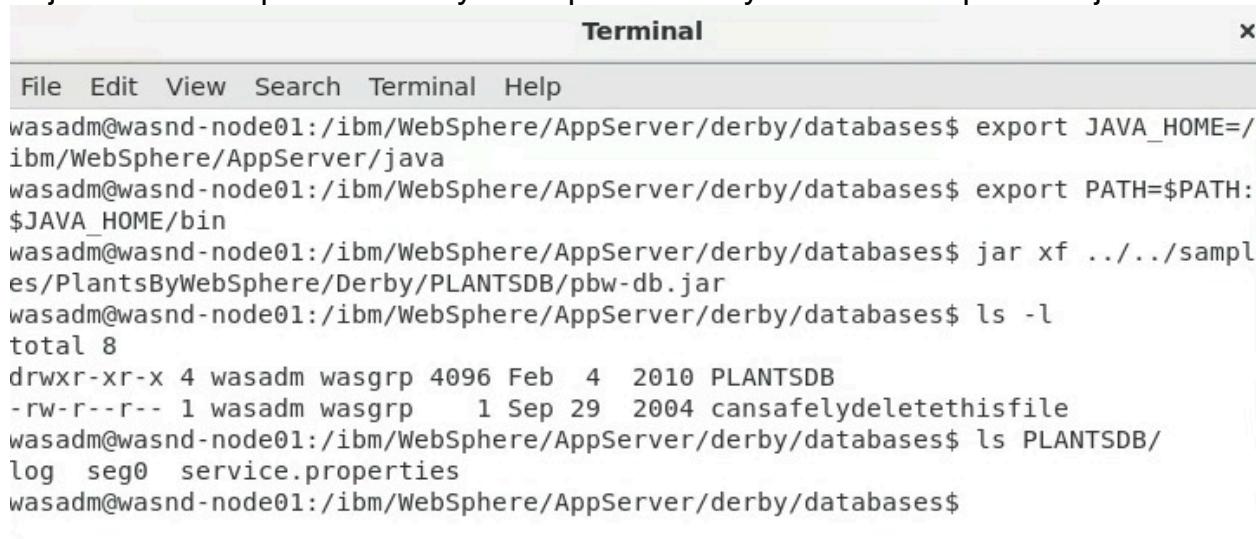
Exercise 6 – Installing an Application

At the end of this exercise, you should be able to:

- Use the administrative console to install an application
- Use a web browser to test the application
- Use the drag-and-drop function to deploy an application

The Plants By WebSphere sample uses a Derby database, which must be setup before running the application. The application assumes the Derby database will be installed in `install_root/Derby/databases`. Use the following commands to setup the Derby database before installing and running the Plants by WebSphere sample application:

```
cd install_root/Derby/databases
jar xf ../../samples/PlantsByWebSphere/Derby/PLANTSDB/pbw-db.jar
```



A terminal window titled "Terminal" showing command-line output. The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal content shows the user navigating to the Derby database directory and running commands to export Java environment variables and extract a JAR file. The user then lists the contents of the directory to verify the files are present.

```
Terminal
File Edit View Search Terminal Help
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$ export JAVA_HOME=/ibm/WebSphere/AppServer/java
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$ export PATH=$PATH:$JAVA_HOME/bin
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$ jar xf ../../samples/PlantsByWebSphere/Derby/PLANTSDB/pbw-db.jar
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$ ls -l
total 8
drwxr-xr-x 4 wasadm wasgrp 4096 Feb 4 2010 PLANTSDB
-rw-r--r-- 1 wasadm wasgrp 1 Sep 29 2004 cansafelydeletethisfile
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$ ls PLANTSDB/
log seg0 service.properties
wasadm@wasnd-node01:/ibm/WebSphere/AppServer/derby/databases$
```

Section 1: Start the server and the administrative console

Use the WebSphere Application Server administrative console to install the PlantsByWebSphere application. Since the administrative console is an application that is running on the server, the server must be running before the administrative console is started.

Terminal

```

File Edit View Search Terminal Help
wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ ./serverStatus.sh server1
ADMU0116I: Tool information is being logged in file
            /ibm/profiles/profile1/logs/server1/serverStatus.log
ADMU0128I: Starting tool with the profile1 profile
ADMU0500I: Retrieving server status for server1
ADMU0509I: The Application Server "server1" cannot be reached. It appears to be
            stopped.
wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ ./startServer.sh server1
ADMU0116I: Tool information is being logged in file
            /ibm/profiles/profile1/logs/server1/startServer.log
ADMU0128I: Starting tool with the profile1 profile
ADMU3100I: Reading configuration for server: server1
ADMU3200I: Server launched. Waiting for initialization status.
ADMU3000I: Server server1 open for e-business; process id is 9216
wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ █

```

Suite Name	Version
WebSphere Application Server	8.5.5.20

Section 2: Create J2C authentication aliases

Most system resources must be able to authenticate to a registry. Data sources must be able to authenticate to the database server. Here the database is set up to use the local OS user registry.

Section 3: Create a JDBC provider and data sources for the application

If any resources that the application uses are not defined in the EAR file, you must define them. You can use the administrative console to define the resources. In this section, you create the data sources that the PlantsByWebSphere application requires. These data sources define how the application accesses the PLANTS database. You also create the JDBC provider under which the data source exists.

Cell=wasnd-node01Node01Cell, Profile=profile1

Data sources

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=**wasnd-node01Node01Cell**, Node=**wasnd-node01Node01**

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=wasnd-node01Node01

Preferences

New... Delete Test connection Manage state...

Select Name JNDI name Scope Provider Description Category

None

Total 0

Cell=wasnd-node01Node01Cell, Profile=profile1

Create a data source

Create a data source

→ Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 3: Enter database specific properties for the data source

Step 4: Setup security aliases

Step 5: Summary

Enter basic data source information

Set the basic configuration values of a datasource for association with your JDBC provider. A datasource supplies the physical connections between the application server and the database.

Requirement: Use the Datasources (WebSphere(R) Application Server V4) console pages if your applications are based on the Enterprise JavaBeans(TM) (EJB) 1.0 specification or the Java(TM) Servlet 2.2 specification.

Scope

cells:wasnd-node01Node01Cell:nodes:wasnd-node01Node01

* Data source name

Plants

* JNDI name

jdbc/PlantsByWebSphereDataSource

Next Cancel

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

→ **Step 2.1: Create new JDBC provider**

Step 2.2: Enter database class path information

Step 3: Enter database specific properties for the data source

Step 4: Setup security aliases

Step 5: Summary

Create new JDBC provider

Set the basic configuration values of a JDBC provider, which encapsulates the specific vendor JDBC driver implementation classes that are required to access the database. The wizard fills in the name and the description fields, but you can type different values.

Scope

cells:wasnd-node01Node01Cell:nodes:wasnd-node01Node01

* **Database type**
Derby

* **Provider type**
Derby JDBC Provider

* **Implementation type**
XA data source

* **Name**
Derby JDBC Provider (XA)

Description
Derby embedded XA JDBC Provider. This provider is only configurable in version 6.0.2 and later nodes

[Previous](#) [Next](#) [Cancel](#)

Cell=wasnd-node01Node01Cell, Profile=profile1

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 2.1: Create new JDBC provider

Step 2.2: Enter database class path information

→ **Step 3: Enter database specific properties for the data source**

Step 4: Setup security aliases

Step 5: Summary

Enter database specific properties for the data source

Set these database-specific properties, which are required by the database vendor JDBC driver to support the connections that are managed through the datasource.

Name	Value
* Database name	e/AppServer/derby/databases/PLANTSDB

Use this data source in container managed persistence (CMP)

[Previous](#) [Next](#) [Cancel](#)

Create a data source

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 2.1: Create new JDBC provider

Step 2.2: Enter database class path information

Step 3: Enter database specific properties for the data source

→ **Step 4: Setup security aliases**

Step 5: Summary

Setup security aliases

Select the authentication values for this resource.

Authentication alias for XA recovery

Component-managed authentication alias

Mapping-configuration alias

Container-managed authentication alias

Note: You can create a new J2C authentication alias by accessing one of the following links. Clicking on a link will cancel the wizard and your current wizard selections will be lost.

[Global J2C authentication alias](#)
[Security domains](#)

The **Component-managed authentication alias** involves creating a mapping from an alias name to the user name and password. This alias name is then specified administratively on the connection factory or data source. As the alias can be resolved in the application server only, the alias restricts authenticated access to applications that are running in the application server.

The **Container-managed authentication alias** works in much the same way as the component-managed alias, but the connection factory or data source must be looked up by using a resource-reference that specifies a resource-auth of container. As a consequence, for an application to retrieve the authenticated resource, the administrator must explicitly bind the resource-reference to the resource on deployment of the application.

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

Step 2.1: Create new JDBC provider

Step 2.2: Enter database class path information

Step 3: Enter database specific properties for the data source

Step 4: Setup security aliases

→ Step 5: Summary

Summary

Summary of actions:

Options	Values
Scope	cells:wasnd-node01Node01Cell:nodes:wasnd-node01Node01
Data source name	Plants
JNDI name	jdbc/PlantsByWebSphereDataSource
JDBC provider name	Derby JDBC Provider (XA)
Description	Derby embedded XA JDBC Provider. This provider is only configurable in version 6.0.2 and later nodes
Class path	\${DERBY_JDBC_DRIVER_PATH}/derby.jar
\${DERBY_JDBC_DRIVER_PATH}	\${WAS_INSTALL_ROOT}/derby/lib
Implementation class name	org.apache.derby.jdbc.EmbeddedXADataSource
Database name	/ibm/WebSphere/AppServer/derby/databases/PLANTSDB
Use this data source in container managed persistence (CMP)	true
Authentication alias for XA recovery	(none)
Component-managed authentication alias	(none)
Mapping-configuration alias	(none)
Container-managed authentication alias	(none)

Previous | Finish | Cancel

Cell=wasnd-node01Node01Cell, Profile=profile1

Data sources

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=**wasnd-node01Node01Cell**, Node=**wasnd-node01Node01**

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=wasnd-node01Node01

Preferences

New... | Delete | Test connection | Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
<input type="checkbox"/>	Plants	jdbc/PlantsByWebSphereDataSource	Node=wasnd-node01Node01	Derby JDBC Provider (XA)	New JDBC Datasource. This Datasource type is only configurable in version 6.0.2 and later nodes	

Total 1

Data sources

Messages
The test connection operation for data source Plants on server server1 at node wasnd-node01Node01 was successful.

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=wasnd-node01Node01Cell, Node=wasnd-node01Node01

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=wasnd-node01Node01

Preferences

New...	Delete	Test connection	Manage state...			
Select	Name	JNDI name	Scope	Provider	Description	Category
You can administer the following resources:						
<input type="checkbox"/>	Plants	jdbc/PlantsByWebSphereDataSource	Node=wasnd-node01Node01	Derby JDBC Provider (XA)	New JDBC Datasource. This Datasource type is only	

Section 4: Install the *PlantsByWebSphere* enterprise application

The EAR file that you are installing can be on either the client computer or the server computer. The client computer runs the browser, and the server computer is the computer to which the client is connected. If you specify an EAR file on the client computer, select **Local file system**. Then, the administrative console uploads the EAR file to the computer on which the console is running and proceeds with application installation.

If you are using a browser on a remote location, select **Remote file system** and browse through the file system where the application server is running.

The **Fast Path** method limits the number of options that are shown, which simplifies the installation process. The **Detailed** method shows all the installation options, including the options with default values assigned.

If an EAR file is enhanced, the **Process embedded configuration** check box is selected by default. To ignore the application-scoped resources, the **Process embedded configuration** option must not be selected.

If this enhanced EAR file is installed with the **Process embedded configuration** checked, then various properties are set at the application scope level. Caution must be used when working with application scoped resources because they are not as clearly visible as resources set at higher level scopes.

- Application scoped resources are tied to a specific application. Enhanced EAR files include application resources.
- Settings that are made at the application scope level take precedence over the same settings that are set at a higher level scope, such as the cell or node levels.
- Application scoped resources are not available from scope selection menus. It is problematic if an administrator is trying to troubleshoot a problem and is not aware that an application is enhanced. A setting at the application scope can cause a problem with the application. The administrator might review all the settings at the various scopes and never look at the application scope settings.

The image consists of two screenshots of the WebSphere Application Server administration console. Both screenshots show the 'Enterprise Applications' page.

Top Screenshot: The title bar says 'WebSphere, software' and 'Welcome wasadmin'. The URL is 'https://localhost:9043/ibm/console/login.do?action=secure'. The left sidebar shows 'View: All tasks' and a tree structure with 'Welcome', 'Guided Activities', 'Servers', 'Applications' (selected), 'Services', 'Resources', 'Security', 'Environment', 'System administration', and 'Users and Groups'. The main content area is titled 'Enterprise Applications' with the sub-section 'Enterprise Applications'. It says 'Use this page to manage installed applications. A single application can be deployed onto multiple servers.' Below this is a table with columns 'Select', 'Name', 'Application Status', and 'Liberty Report'. The table contains three rows: 'DefaultApplication' (Status: Green), 'ivtApp' (Status: Green), and 'query' (Status: Green). A footer at the bottom of the table says 'Total 3'.

Bottom Screenshot: The title bar says 'WebSphere, software' and 'Welcome wasadmin'. The URL is 'https://localhost:9043/ibm/console/login.do?action=secure'. The left sidebar is identical to the top screenshot. The main content area is titled 'Preparing for the application installation'. It says 'Specify the EAR, WAR, JAR, or SAR module to upload and install.' Below this is a section titled 'Path to the new application' with two radio button options: 'Local file system' (selected) and 'Remote file system'. Under 'Local file system', there is a 'Full path' field containing 'Browse... pbw-ear.ear'. Under 'Remote file system', there is a 'Full path' field with a 'Browse...' button. At the bottom are 'Next' and 'Cancel' buttons.

https://localhost:9043/ibm/console/login.do?action=secure

WebSphere software

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- Services
- Resources

Enterprise Applications

Preparing for the application installation

How do you want to install the application?

Fast Path - Prompt only when additional information is required.

Detailed - Show all installation options and parameters.

Choose to generate default bindings and mappings

Previous Next Cancel

Cell=wasnd-node01Node01Cell, Profile=profile1

Install New Application

Specify options for installing enterprise applications and modules.

Step 1: Select installation options

Step 2 Map modules to servers

Step 3 Metadata for modules

Step 4 Summary

Select Installation options

Specify the various options that are available for your application.

Precompile JavaServer Pages files

Directory to install application

Distribute application

Use Binary Configuration

Deploy enterprise beans

Application name: pbw-ear

Create MBeans for resources

Override class reloading settings for Web and EJB modules

Reload interval in seconds

Deploy Web services

Validate Input off/warn/fail: warn

Process embedded configuration

https://localhost:9043/ibm/console/login.do?action=secure

WebSphere software

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - New Application
 - Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
 - Global deployment settings
- Services
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Monitoring and Tuning
- Troubleshooting
- Service integration
- UDDI

Cell=wasnd-node01Node01Cell, Profile=profile1

Welcome wasadmin

Install New Application

Specify options for installing enterprise applications and modules.

Step 1 Select installation options

Step 2 Map modules to servers

Navigation frame

modules to servers

Step 3 Metadata for modules

Step 4 Summary

Map modules to servers

Specify targets such as application servers or clusters of application servers where you want to install the modules that are contained in your application. Modules can be installed on the same application server or dispersed among several application servers. Also, specify the Web servers as targets that serve as routers for requests to this application. The plug-in configuration file (plugin-cfg.xml) for each Web server is generated, based on the applications that are routed through.

Clusters and servers:

WebSphere:cell=wasnd-node01Node01Cell,node=wasnd-node01Node01,server=server1
WebSphere:cell=wasnd-node01Node01Cell,node=wasnd-node01Node01,server=webserver1

Apply

Previous Next Cancel

Select	Module	URI	Server
<input type="checkbox"/>	PlantsByWebSphere	PlantsByWebSphere.war,WEB-INF/web.xml	WebSphere:cell=wasnd-node01Node01Cell,node=wasnd-node01Node01,server=server1

https://localhost:9043/ibm/console/login.do?action=secure

Welcome wasadmin

View: All tasks

Applications

- New Application
- Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
- Global deployment settings

Step 1 Select installation options

Step 2 Map modules to servers

Step 3: Metadata for modules

Step 4 Summary

Specify options for installing enterprise applications and modules.

Metadata for modules

The metadata-complete attribute defines whether the deployment descriptor for this module is complete. Set the metadata-complete attribute to "true" to merge and persist annotation-based metadata with existing XML-based deployment descriptor metadata to avoid scanning of annotation-based metadata each time the module is read. If the attribute remains "false", then the annotation-based metadata is scanned each time the module is read and can impact performance.

Module	URI	metadata-complete attribute
PlantsByWebSphere	PlantsByWebSphere.war,WEB-INF/ejb-jar.xml	<input type="checkbox"/>
PlantsByWebSphere	PlantsByWebSphere.war,WEB-INF/web.xml	<input type="checkbox"/>

Previous Next Cancel

https://localhost:9043/ibm/console/login.do?action=secure

Welcome wasadmin

View: All tasks

Applications

- New Application
- Application Types
 - WebSphere enterprise applications
 - Business-level applications
 - Assets
- Global deployment settings

Step 1 Select installation options

Step 2 Map modules to servers

Step 3 Metadata for modules

Step 4: Summary

Specify options for installing enterprise applications and modules.

Summary

Summary of installation options

Options	Values
Precompile JavaServer Pages files	No
Directory to install application	
Distribute application	Yes
Use Binary Configuration	No
Deploy enterprise beans	No
Application name	pbw-ear
Create MBeans for resources	Yes
Override class reloading settings for Web and EJB modules	No
Reload interval in seconds	
Deploy Web services	No
Validate Input off/warn/fail	warn
Process embedded configuration	No
File Permission	.*\dll=755#.*\so=755#.*\a=755#.*\sl=755
Application Build ID	Unknown
Allow dispatching includes to remote resources	No
Allow servicing includes from remote resources	No

← → ⌂ https://localhost:9043/ibm/console/login.do?action=secure

Welcome wasadmin Help

WebSphere software

View: All tasks

+ Welcome
+ Guided Activities
+ Servers
+ Applications
+ New Application
+ Application Types
+ WebSphere enterprise applications
+ Business-level applications
+ Assets
+ Global deployment settings
+ Services
+ Resources
+ Security
+ Environment
+ System administration
+ Users and Groups
+ Monitoring and Tuning
+ Troubleshooting
+ Service integration
+ UDDI

ADMA5067I: Resource validation for application pbw-ear completed successfully.
ADMA5058I: Application and module versions are validated with versions of deployment targets.
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
ADMA5081I: The bootstrap address for client module is configured in the WebSphere Application Server repository.
ADMA5053I: The library references for the installed optional package are created.
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
ADMA5001I: The application binaries are saved in /ibm/profiles/profile1/vstemp/514564614/workspace/cells/wasnd-node01Node01Cell/applications/pbw-ear.ear/pbw-ear.ear
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
SECJ0400I: Successfully updated the application pbw-ear with the appContextIDForSecurity information.
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
ADMA5005I: The application pbw-ear is configured in the WebSphere Application Server repository.
ADMA513I: Activation plan created successfully.
ADMA5011I: The cleanup of the temp directory for application pbw-ear is complete.
ADMA5013I: Application pbw-ear installed successfully.
Application pbw-ear installed successfully.
To start the application, first save changes to the master configuration.
Changes have been made to your local configuration. You can:

- Save directly to the master configuration.
- Review changes before saving or discarding.

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

Manage Applications

Cell=wasnd-node01Node01Cell, Profile=profile1

Enterprise Applications

Messages

Application pbw-ear on server server1 and node wasnd-node01Node01 started successfully.
The collection may need to be refreshed to show the current status.

Enterprise Applications

Use this page to manage installed applications. A single application can be deployed onto multiple servers.

+ Preferences

Start Stop Install Uninstall Update Rollout Update Remove File Export Export DDL Export File Analyze

Select Name Application Status Liberty Report

You can administer the following resources:

<input type="checkbox"/>	DefaultApplication		
<input type="checkbox"/>	ivtApp		
<input type="checkbox"/>	pbw-ear		
<input type="checkbox"/>	query		

Total 4

Section 5: Test the enterprise application

Test the application by accessing it with the WebSphere Application Server HTTP transport.

Not Secure | 34.141.79.132/PlantsByWebSphere/promo.jsf

Your shopping cart is currently empty

PLANTS BY WEBSHPE

Flowers Fruits & Vegetables Trees Accessories

HOME : SHOPPING CART : LOGIN : HELP

Gardens of Summer

They all start with the right flowers...

and we've got them all



Tips
Preserve extra grass seed by keeping it dry. Tape boxes and bags closed, or seal them into plastic bags. Be sure to remove extra air from the bags. Store all seed in a cool, dry area such as a garage or basement.

Specials

	Bonsai Tree \$30.00 each		Red Delicious Strawberries \$3.50 (50 seeds)		Tulips \$17.00 (10 bulbs)

Powered by  WebSphere e-business software >

Flowers : Fruits & Vegetables : Trees : Accessories : Home : Shopping Cart : My Account : Login : Help

PLANTS BY WEBSHPE

Flowers Fruits & Vegetables Trees Accessories

Home

Login or Register

If you are a returning customer and previously set up an account, please enter your e-mail address and password below.

E-mail address:

Password:

If you are a *New* customer you can [register for your own account here](#).

Registration

Enter the information below to set up your account. This information will not be shared without your permission. With your permission we will only share your name and email address with our trusted business partners.

Required fields are denoted with a red asterisk (*).

Login Information

E-mail address *

Password *

Verify Password *

Contact Information

First Name *

Last Name *

Address Line 1 *

Address Line 2

City *

State *

ZIP Code *

Phone (daytime)*

[Register](#)

Registration

Enter the information below to set up your account. This information will not be shared without your permission. With your permission we will only share your name and email address with our trusted business partners.

Required fields are denoted with a red asterisk (*).

Login Information

E-mail address *	<input type="text" value="themulker@gmail.com"/>
Password *	<input type="password"/>
Verify Password *	<input type="password"/>

Contact Information

First Name	* Murat
Last Name	* Ülker
Address Line 1	* Çekmeköy
Address Line 2	Taşdelen
City	* Çekmeköy
State	* İstanbul
ZIP Code	* 34788
Phone (daytime) *	<input type="text" value="532-554-9947"/> register:phone: Phone number does not match xxx-xxx-xxxx.

[Register](#)

PLANTS BY WEBSPHERE



Home

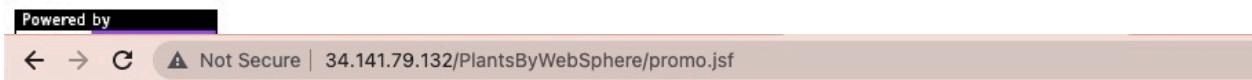
Login or Register

If you are a returning customer and previously set up an account, please enter your e-mail address and password below.

E-mail address:

Password:

If you are a *New* customer you can [register for your own account here](#).



PLANTS BY WEBSPHERE



Home >

Help

Plants By WebSphere provides limited help support. See the sample docs directory for documentation on the design, building, and installation of the sample.

Debug mode has been tied to the JSF project stage declaration. Debug messages will be displayed when the web app's javax.faces.PROJECT_STAGE context param is set to either Development or UnitTest. A value of SystemTest or Production will turn off debug output. The current state of debugging is indicated in the check box below.

Debug messages enabled

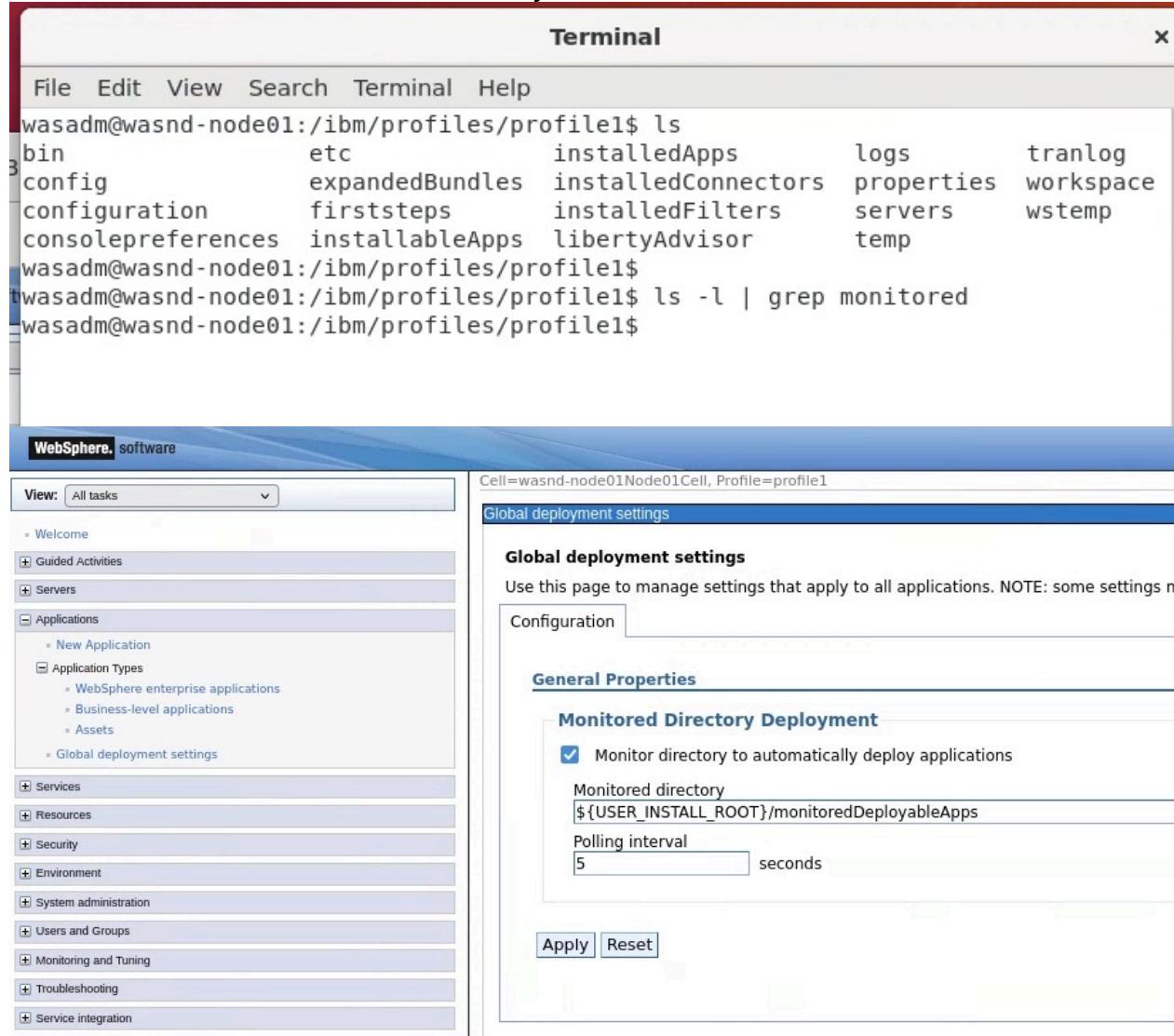
If the database becomes corrupted for some reason, the button below can be used to delete all data currently in the database and populate it with a fresh set of data. If this does not work, stop the server and repeat the prerequisite steps found in the docs directory to unzip the Derby database.



Section 6: Use a monitored directory to deploy an enterprise application

In this section, the new monitored directory feature is used to deploy an EAR file. This feature allows the deployment of an application by dragging, or copying, an EAR file into a monitored directory. The application is automatically installed and started.

The monitored directory feature is not enabled by default. The first step is to use the administrative console to enable the feature. This step creates the directory structure that the monitored directory feature uses.



The screenshot shows the WebSphere administrative console interface. On the left, a navigation sidebar lists various categories like Applications, Services, and Monitoring. The main content area is titled 'Global deployment settings' and contains a 'Monitored Directory Deployment' section. It includes a checked checkbox for 'Monitor directory to automatically deploy applications', a text input for 'Monitored directory' containing the value '\${USER_INSTALL_ROOT}/monitoredDeployableApps', and a text input for 'Polling interval' set to '5 seconds'. At the bottom of this section are 'Apply' and 'Reset' buttons. Above the console, a terminal window is open, showing the command line interface with the following output:

```
Terminal
File Edit View Search Terminal Help
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls
bin          etc      installedApps    logs      tranlog
config       expandedBundles  installedConnectors  properties  workspace
configuration  firststeps  installedFilters   servers   wstemp
consolepreferences  installableApps  libertyAdvisor  temp
wasadm@wasnd-node01:/ibm/profiles/profile1$
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls -l | grep monitored
wasadm@wasnd-node01:/ibm/profiles/profile1$
```

Terminal

```
File Edit View Search Terminal Help
[3/3/22 17:58:15:583 UTC] 00000001 CSIServerRI A JSAS0008I: Server request interceptor registered.
[3/3/22 17:58:15:599 UTC] 00000001 SecurityCompo A JSAS0009I: IOR interceptor registered.
[3/3/22 17:58:18:243 UTC] 00000001 CoordinatorIm I HMGR0206I: The Coordinator is an Active Coordinator for core group DefaultCoreGroup. The active coordinator set is [wasnd-node01Node01Cell\wasnd-node01Node01\server1].
[3/3/22 17:58:18:268 UTC] 00000001 DCSPluginSing I HMGR0005I: The Single Server DCS Core Stack transport has been started for core group DefaultCoreGroup.
[3/3/22 17:58:18:283 UTC] 00000001 CoordinatorCo I HMGR0011I: The High Availability Manager is configured to be the bulletin board provider.
[3/3/22 17:58:18:309 UTC] 00000001 DragDropDeplo I CWLDD0103I: Monitored directory application deployment service has been configured to be off.
[3/3/22 17:58:18:451 UTC] 00000001 NameServerImp A NMSV0018I: Name server avai
```

Terminal

```
File Edit View Search Terminal Help
wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ ./stopServer.sh server1 -username wasadmin -password web1sphere
ADMU0116I: Tool information is being logged in file
            /ibm/profiles/profile1/logs/server1/stopServer.log
ADMU0128I: Starting tool with the profile1 profile
ADMU3100I: Reading configuration for server: server1
ADMU3201I: Server stop request issued. Waiting for stop status.
ADMU4000I: Server server1 stop completed.

wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ ./startServer.sh server1
ADMU0116I: Tool information is being logged in file
            /ibm/profiles/profile1/logs/server1/startServer.log
ADMU0128I: Starting tool with the profile1 profile
ADMU3100I: Reading configuration for server: server1
ADMU3200I: Server launched. Waiting for initialization status.
ADMU3000I: Server server1 open for e-business; process id is 10310
wasadm@wasnd-node01:/ibm/profiles/profile1/bin$ █
```

Terminal

File Edit View Search Terminal Help

```
[3/3/22 18:38:24:659 UTC] 00000001 CoordinatorIm I HMGR0206I: The Coordinator is an Active Coordinator for core group DefaultCoreGroup. The active coordinator set is [wasnd-node01Node01Cell\wasnd-node01Node01\server1].  
[3/3/22 18:38:24:666 UTC] 00000001 DCSPluginSing I HMGR0005I: The Single Server DCS Core Stack transport has been started for core group DefaultCoreGroup.  
[3/3/22 18:38:24:671 UTC] 00000001 CoordinatorCo I HMGR0011I: The High Availability Manager is configured to be the bulletin board provider.  
[3/3/22 18:38:24:676 UTC] 00000001 DragDropDeplo I CWLDD0001I: Starting monitored directory application deployment service...  
[3/3/22 18:38:24:684 UTC] 00000001 DragDropDeplo I CWLDD0002I: Monitored directory application deployment service is started and monitoring file changes in directory: /ibm/profiles/profile1/monitoredDeployableApps.
```

Terminal

File Edit View Search Terminal Help

```
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls  
bin expandedBundles installedFilters servers  
config firststeps libertyAdvisor temp  
configuration installableApps logs tranlog  
consolepreferences installedApps monitoredDeployableApps workspace  
etc installedConnectors properties wstemp  
wasadm@wasnd-node01:/ibm/profiles/profile1$  
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls monitoredDeployableApps/  
deploymentProperties servers  
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls monitoredDeployableApps/servers/  
server1  
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls monitoredDeployableApps/servers/s  
erver1/  
wasadm@wasnd-node01:/ibm/profiles/profile1$ ls monitoredDeployableApps/deploymen  
tProperties/  
wasadm@wasnd-node01:/ibm/profiles/profile1$
```

Terminal

File Edit View Search Terminal Help

```
wasadm@wasnd-node01:/ibm/profiles/profile1$ cp /ibm/WebSphere/AppServer/installa  
bleApps/CacheMonitor.ear /ibm/profiles/profile1/monitoredDeployableApps/servers/  
server1/  
wasadm@wasnd-node01:/ibm/profiles/profile1$
```

Terminal

File Edit View Search Terminal Help

```
[3/3/22 18:41:41:942 UTC] 0000003a CompositionUn A WSVR0191I: Composition unit WebSphere:cuname=Dynamic Cache Monitor in BLA WebSphere:blaname=Dynamic Cache Monitor started.
[3/3/22 18:41:41:954 UTC] 0000003a AppManagement I CWLDD0021I: Event id 168084 1184-1. Application Dynamic Cache Monitor is started on: WebSphere:cell=wasnd-node01Node01Cell,node=wasnd-node01Node01,server=server1,status=success.
[3/3/22 18:41:41:961 UTC] 0000003a WatchService I CWLDD0008I: Event id 168084 1184-1. End of processing.
[3/3/22 18:41:43:142 UTC] 00000088 FileRepository A ADMR0016I: User defaultWIMF Cell=wasnd-node01Node01Cell, Profile=profile1
```

Enterprise Applications

Enterprise Applications
Use this page to manage installed applications. A single application can be deployed onto multiple servers.

Preferences

Start Stop Install Uninstall Update Rollout Update Remove File Export Export DDL Export File Analyze

Select Name Application Status Liberty Report

You can administer the following resources:

	Name	Application Status	Liberty Report
<input type="checkbox"/>	DefaultApplication	⊕	∅
<input type="checkbox"/>	Dynamic Cache Monitor	⊕	∅
<input type="checkbox"/>	ivtApp	⊕	∅
<input type="checkbox"/>	pbw-ear	⊕	∅
<input type="checkbox"/>	query	⊕	∅

Total 5

Terminal

File Edit View Search Terminal Help

```
wasadm@wasnd-node01:/ibm/profiles/profile1/monitoredDeployableApps$ ls deploymentProperties servers
wasadm@wasnd-node01:/ibm/profiles/profile1/monitoredDeployableApps$ cd servers/server1/
wasadm@wasnd-node01:/ibm/profiles/profile1/monitoredDeployableApps/servers/server1$ ls
CacheMonitor.ear
wasadm@wasnd-node01:/ibm/profiles/profile1/monitoredDeployableApps/servers/server1$ rm -f CacheMonitor.ear
wasadm@wasnd-node01:/ibm/profiles/profile1/monitoredDeployableApps/servers/server1$
```

Terminal

File Edit View Search Terminal Help

```
[3/3/22 18:43:49:489 UTC] 0000003a FileRepository A ADMR0017I: User defaultWIMF
ileBasedRealm/server:wasnd-node01Node01Cell_wasnd-node01Node01_server1 deleted d
ocument cells/wasnd-node01Node01Cell/applications/Dynamic Cache Monitor.ear/Dyna
mic Cache Monitor.ear.
[3/3/22 18:43:49:559 UTC] 0000003a AppManagement I CWLDD0018I: Event id 168084
1184-2. Application Dynamic Cache Monitor is uninstalled successfully.
[3/3/22 18:43:49:567 UTC] 0000003a WatchService I CWLDD0008I: Event id 168084
1184-2. End of processing.
[3/3/22 18:43:50:173 UTC] 00000000 FileRepository A ADMR0016T: User defaultWIMF
Cell=wasnd-node01Node01Cell,Profile=profile1
```

Enterprise Applications

Use this page to manage installed applications. A single application can be deployed onto multiple servers.

Preferences

[Start](#) [Stop](#) [Install](#) [Uninstall](#) [Update](#) [Rollout Update](#) [Remove File](#) [Export](#) [Export DDL](#) [Export File](#) [Analyze](#) ▾

Select	Name	Application Status	Liberty Report
You can administer the following resources:			
<input type="checkbox"/>	DefaultApplication		Ø
<input type="checkbox"/>	ivtApp		Ø
<input type="checkbox"/>	pbw-ear		Ø
<input type="checkbox"/>	query		Ø
Total 4			