
Lab 2 Managing application updates with application editioning

In this lab you will experience how Intelligent Management application editions can benefit your organization. You will see how using application editions simplifies the process for putting a new edition of an application into production and, if necessary, reverting to a previous edition.

- You will be working with two editions of an application. For the purposes of the lab, one of the editions (edition 1.0) is considered the “production” edition. You will install this edition and test to make sure it is working properly.
- Again for the purposes of the lab, the second edition (edition 1.1) is considered to be an edition under consideration for moving into production. You will install this edition, place the edition in validation mode, test the edition then roll it out into production.
- Finally, you will revert the 1.1 edition in production back to edition 1.0. This is done to show that if an issue surfaces with an edition in production, it is a simple matter to revert to a previous edition.

In this lab you will be working with the application edition management capabilities in Intelligent Management (IM). You are provided two editions of an application, edition 1.0 and edition 1.1. These application editions will be installed to a dynamic cluster. You will use the Edition Control Center to perform a scenario that tests a new edition of an application, puts the new edition of the application into production, then reverts the application back to the original edition.

As mentioned above, the scenario is done using a dynamic cluster. The same scenario could be performed with an application installed to a WebSphere application server cluster (a “Static” cluster). Using a dynamic cluster, because of simplified management, will make the scenario a bit easier to perform.

You will be running this lab from the same VM used in exercise 1. So, the previous lab is a prerequisite for this lab.

The WebSphere environment consists of 1 deployment manager (DMGR), 1 on demand router (ODR) for Intelligent Management, and 2 custom node profiles that will host applications.

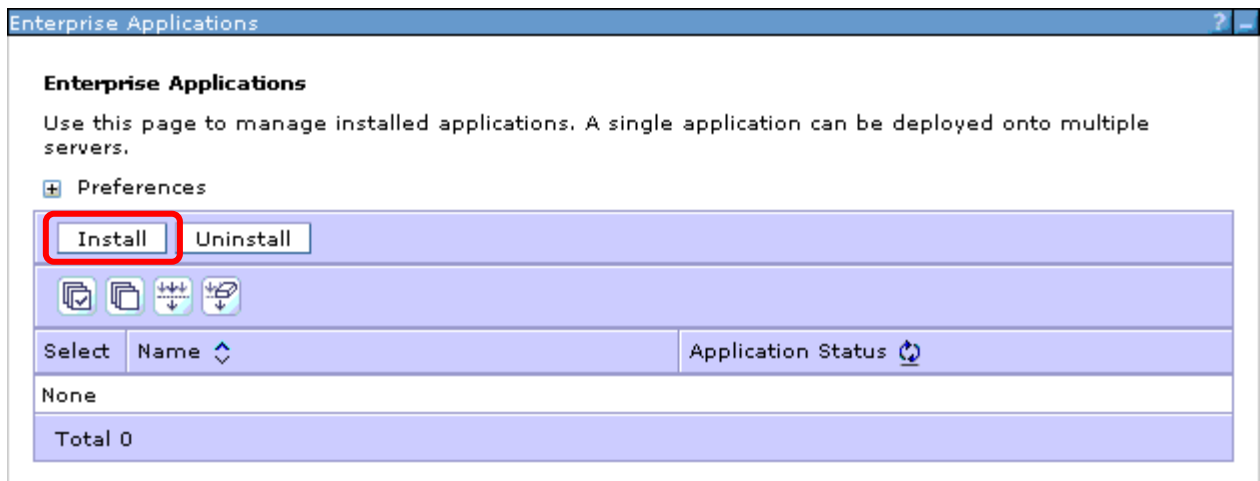
1.1 Install edition 1.0 of the application

In this section, you will install edition 1.0 of the application. However, before doing that, you will make a preferences change to you WebSphere Application administrative console environment.

1.1.1 Install Edition 1.0 of the application

The WebSphere environment you are using includes a predefined dynamic cluster. The dynamic cluster was part of the pattern you deployed in the previous lab. The dynamic cluster was defined to always have at least one cluster member started. So, verify that one member of the cluster is started.

- __1. Log in to the administrative console
 - __a. Open firefox and proceed to <https://labvm.ibm.com:9043/ibm/console>
 - __a. Login to the admin console with the credentials
User ID: **admin**
Password: **admin**
- __2. Install Edition 1.0 of the application.
 - __a. In the administrative console, navigate to the Enterprise Applications page under **Applications > Application Types > WebSphere enterprise applications**.
 - __b. On the **Enterprise Applications** page, click on the **Install** button.



- __c. On the **Path to the new application** page, ensure that the **Local file system** button is selected, then click on the **Browse...** button.
- __d. In the **File Upload** window, browse to folder **/home/wasadmin/workshop/labs/AppMgmt**.

- ___e. Select the file named **VersionApp_v10.ear** and select **Open**. This file is edition 1.0 of the application.
- ___f. Now back in the **Path to the new application** page, click on the **Next** button.
- ___g. On the **How do you want to install the application** page, ensure that **Fast Path** is selected, then click on the **Next** button.
- ___h. On the **Select installation options** page, enter **1.0** in the **Application edition** field and **Edition 1.0** in the **Edition description** field.

Step 1: Select installation options

[Step 2: Map modules to servers](#)

[Step 3: Map virtual hosts for Web modules](#)

[Step 4: Metadata for modules](#)

[Step 5: 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
- Application edition**
- Edition description**
- ☒ Create MBeans for resources
- ☐ Override class reloading settings for Web and EJB modules

- ___i. Scroll to the bottom of the page and click on the **Next** button.
- ___j. On the Map modules to servers page, verify that Module **VersionAppWeb** is mapped to server **WebSphere:cell=labvmCell01,cluster=DynamicCluster01**.
- ___k. Click on the **Next** button.

- ___l. On the **Map virtual hosts for Web modules** page, change the **Virtual host** associated with the **VersionAppWeb** to **proxy_host**.

We'll explain why we are changing the virtual host later in the exercise

Step 1 Select installation options

Step 2 Map modules to servers

→ **Step 3: Map virtual hosts for Web modules**

✦ **Step 4** Metadata for modules

Step 5 Summary

Map virtual hosts for Web modules

Specify the virtual host for the Web modules that are contained in your application. You can install Web modules on the same virtual host or disperse them among several hosts.

☒ Apply Multiple Mappings

Select	Web module	Virtual host
<input type="checkbox"/>	VersionAppWeb	proxy_host default_host proxy_host

Previous Next Cancel

- ___m. Click on the **Next** button.
- ___n. On the **Metadata for modules** page, click on the **Next** button.
- ___o. On the **Summary** page, scroll to the bottom of the page and click on the **Finish** button.
- ___p. On the **Installing...** page, wait to see the message that **Application VersionApp-edition1.0 installed successfully**. Then click **Save**.

Application VersionApp-edition1.0 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.

- ___q. On the **Synchronize changes with Nodes** page, wait until you see the message **The configuration synchronization complete for cell** (you may need to scroll down the messages area), then click on the **OK** button.

- ___3. You will be starting and testing Edition 1.0 of the application later on in the exercise. For now, move on to the next section to install the next edition of the application.

1.2 Install edition 1.1 of the application

You will now install edition 1.1 of the application to the same cluster.

1.2.1 Install edition 1.1

You will install edition 1.1 in much the same manner as you did for edition 1.0.

- __1. In the administrative console, navigate to the **Enterprise Applications** page.
 - __a. From the left navigation pane, select **Applications > Application Types > WebSphere enterprise applications**.
- __2. From the Enterprise Applications page, install edition 1.1.
 - __a. On the **Enterprise Applications** page, click on the **Install** button.
 - __b. On the **Path to the new application** page, ensure that the **Local file system** button is selected, then click on the **Browse...** button.
 - __c. In the **File Upload** window, browse to folder **/home/wasadmin/workshop/labs/AppMgmt**.
 - __d. Select the file named **VersionApp_v11.ear** then click **Open**. This file is edition 1.1 of the application.
 - __e. Now back in the **Path to the new application** page, click on the **Next** button.
 - __f. On the **How do you want to install the application** page, ensure that **Fast Path** is selected, then click on the **Next** button.
 - __g. On the **Select installation options** page, enter **1.1** in the **Application edition** field and **Edition 1.1** in the **Edition description** field.

Step 1: Select installation options

Step 2 Map modules to servers

Step 3 Map virtual hosts for Web modules

Step 4 Metadata for modules

Step 5 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

Application edition

Edition description

- ___h. Scroll to the bottom of the page and click on the **Next** button.
- ___i. On the Map modules to servers page, verify that Module VersionAppWeb is mapped to server **WebSphere:cell=labvmCell01,cluster=DynamicCluster01**.
- ___j. Click on the **Next** button.
- ___k. On the **Map virtual hosts for Web modules** page, change the **Virtual host** associated with the **VersionAppWeb** Web module is **proxy_host**.
- ___l. Click on the **Next** button.
- ___m. On the **Metadata for modules** page, click on the **Next** button.
- ___n. On the **Summary** page, scroll to the bottom of the page and click on the **Finish** button.
- ___o. On the **Installing...** page, wait to see the message that your application installed successfully, then click **Save**.





Application VersionApp-edition1.1 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.

- ___p. On the **Synchronize changes with Nodes** page, wait until you see the message **The configuration synchronization complete for cell** (you may need to scroll down the messages area), then click on the **OK** button.
- ___q. Back on the **Enterprise Applications** page, now you have two editioned applications installed:

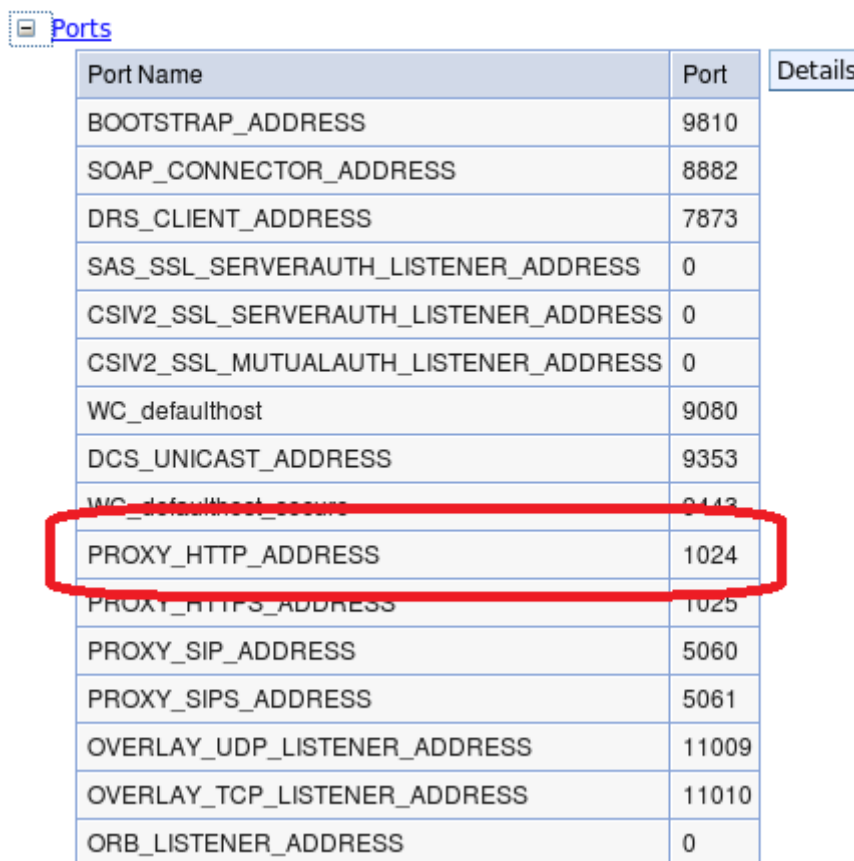
<div>Start</div> <div>Stop</div> <div>Install</div> <div>Uninstall</div> <div>Update</div> <div>Rollout Update</div> <div>Remove File</div> <div>Export</div> <div>Export DDL</div> <div>Export File</div>		
<div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div>		
Select	Name 	Application Status 
You can administer the following resources:		
<input type="checkbox"/>	VersionApp-edition1.0	
<input type="checkbox"/>	VersionApp-edition1.1	
Total 2		

1.3 Setting the virtual host port

We have installed WebSphere as non-root, and as such we don't have access to port 80 in the system. The ODR would typically accept requests on port 80, and redirect it to the appropriate application server. We need to determine which port the ODR is listening on, and then modify the proxy_virtual host to direct requests to that port.

___1. To determine which port the ODR is listening on navigate to **Servers → Server Types → On Demand Routers → ODR**

___2. On the configuration page, expand **Ports** under **Communications**



Port Name	Port	Details
BOOTSTRAP_ADDRESS	9810	
SOAP_CONNECTOR_ADDRESS	8882	
DRS_CLIENT_ADDRESS	7873	
SAS_SSL_SERVERAUTH_LISTENER_ADDRESS	0	
CSIV2_SSL_SERVERAUTH_LISTENER_ADDRESS	0	
CSIV2_SSL_MUTUALAUTH_LISTENER_ADDRESS	0	
WC_defaulthost	9080	
DCS_UNICAST_ADDRESS	9353	
WC_defaulthost_https	9443	
PROXY_HTTP_ADDRESS	1024	
PROXY_HTTPS_ADDRESS	1025	
PROXY_SIP_ADDRESS	5060	
PROXY_SIPS_ADDRESS	5061	
OVERLAY_UDP_LISTENER_ADDRESS	11009	
OVERLAY_TCP_LISTENER_ADDRESS	11010	
ORB_LISTENER_ADDRESS	0	

___3. Here we see that the **PROXY_HTTP_ADDRESS** is set to **1024**

Note: If we had done a root installation, and the PROXY_HTTP_ADDRESS was 80 then we would not have to change the virtual host ports below.

___4. Next we modify the virtual host. Navigate to **Environment → Virtual hosts** and select **proxy_host**

___5. Go to **Host Aliases** on the right hand side

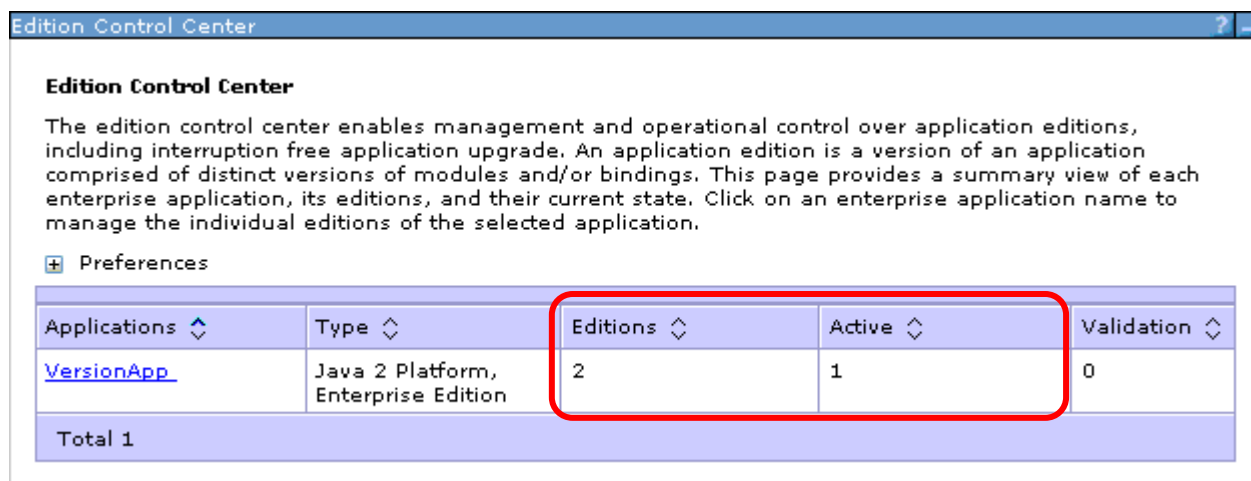
- __6. Select the * next to port **80**, and modify it to **1024**
- __7. **Save** your changes and allow of synchronization.

1.4 Start and test edition 1.0 of the application

1.4.1 Verify edition 1.0 is active and edition 1.1 is inactive

An application edition has a state of active, inactive or validate. You will now use the Edition Control Center to verify that edition 1.0 of the application you just installed is active and edition 1.1 is inactive.

- __1. Open the Edition Control Center by navigating to **Applications > Edition Control Center**.
- __2. Verify that you have two editions, with one edition being active.
 - __a. On the Edition Control Center page, verify that for application **VersionApp** there are 2 **Editions** and 1 is **Active**.



The screenshot shows the 'Edition Control Center' window. It contains a table with the following data:

Applications	Type	Editions	Active	Validation
VersionApp	Java 2 Platform, Enterprise Edition	2	1	0
Total 1				

A red rectangle highlights the 'Editions' and 'Active' columns for the 'VersionApp' row, showing values 2 and 1 respectively.

- __b. On the **Edition Control Center** page, select **VersionApp** in the **Applications** column.

- __c. Verify that **Edition 1.0** is in the **ACTIVE** state and **Edition 1.1** is in the **INACTIVE** state.

Edition Control Center

[Edition Control Center](#) > Manage Editions

Manage editions of an application. The deployment targets for each edition were specified during the application install process. After install, an edition is initially in the inactive state. Inactive editions cannot be started. Activating an edition makes it eligible to be started. Validating an edition puts it into a special "validation mode" that configures the edition to run on a clone of its original deployment target. Validation mode requires assignment of a routing policy to the edition to control who may access it. Rolling out an edition performs an interruption-free upgrade of one edition to another on the same deployment target. Rolling out an edition that is in validation mode performs an interruption free upgrade of the edition on the deployment target from which the validation mode target was cloned. After the rollout, the clone is deleted. Deactivation makes an edition ineligible to be started. An edition must be stopped before deactivation.

Application=**VersionApp**



☒ Preferences

Activate Deactivate Validate Cancel Validation Rollout

Select	Editions	Description	Target	State
You can administer the following resources:				
<input type="checkbox"/>	1.0	Edition 1.0	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	ACTIVE
<input type="checkbox"/>	1.1	Edition 1.1	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	INACTIVE
Total 2				

1.4.2 Start edition 1.0

- __1. In the administrative console, navigate to **Applications > Application Types > WebSphere enterprise applications**.
- __2. Start edition 1.0 of the application.
- __a. Locate **VersionApp-edition1.0** in the list of applications.
- __b. Check the box in the **Select** column adjacent to application **VersionApp-edition1.0**.
- __c. Click on the **Start** button.
- __d. Wait for the **Application VersionApp-edition1.0 ...started successfully** message to appear at the top of the Enterprise Applications page.
- __e. Verify that the **Application Status** associated with **VersionApp-edition1.0** is either **Start** or **Partial Start** (that is, the icon in the **Application Status** column is either a solid green arrow or a non-solid green arrow). You may need to hover the cursor over the icon in order to see the current status. A **Partial Start** status is good enough for your test. All it means is that at least one, but not all of the dynamic cluster members are started.

Start Stop Install Uninstall Update Rollout Update Remove File Export Export DDL Export File	
Select	Application Status
You can administer the following resources:	
<input type="checkbox"/>	VersionApp-edition1.0 
<input type="checkbox"/>	VersionApp-edition1.1 
Total 2	

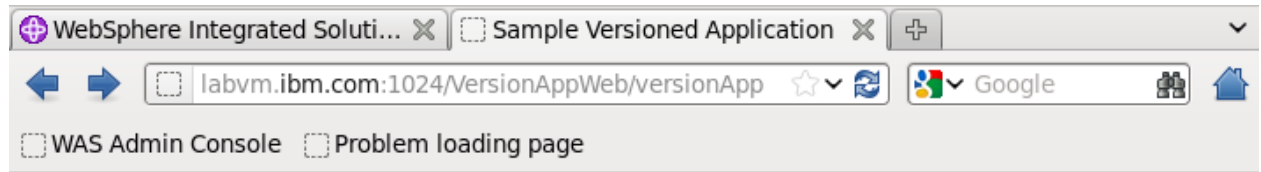
1.4.3 Test edition 1.0 of the application

- __1. Ensure that the ODR is started.
 - __a. In the administrative console, navigate to **Servers > Server Types > On Demand Routers**.
 - __b. Locate **odr** in the **Name** column and verify that there is a green arrow in the **Status** column.

New... Delete Templates... Start Stop					
Select	Name	Node	Version	Protocol	Status
You can administer the following resources:					
<input type="checkbox"/>	odr	ODRNode_3	ND 8.5.0.0	HTTP	
Total 1					

- __c. If the ODR is not started, follow the instructions in this sublist:
 - __i. Check the box in the **Select** column adjacent to **odr**.
 - __ii. Click on the **Start** button.
 - __iii. Wait for the message **Server .../odr started successfully** message.
- __2. Open a new tab in your browser by clicking the **Open new tab** icon (or press **Control+T** to open a new tab).
- __3. Send a browser request to edition 1.0 of the application.
 - __a. In your newly opened browser tab, enter <http://labvm.ibm.com:1024/VersionAppWeb/versionApp> as the URL.
 - __b. Press the **Enter** key.

- __c. Verify that the browser request returned the following... **You reached version 1.0 of the sample application!**



You reached version 1.0 of the sample application!

1.5 Place edition 1.1 of the application in validation mode

You will now take the first step to ensure that edition 1.1 is working properly before putting it into production. First, place the edition in validation mode.

You place an edition of an application in validation mode using the Edition Control Center, so open that page in the console.

- __1. In the administrative console, open the Edition Control Center by navigating to **Applications > Edition Control Center**.
- __2. Put Edition 1.1 of the application into Validate mode.
 - __a. In the Edition Control Center, locate **VersionApp** in the **Applications** column and select **VersionApp**.
 - __b. On the **Manage Editions** page, check the box in the **Select** column adjacent to **Edition 1.1**.
 - __c. Click on the **Validate** button.

The page will be blank for several seconds.

- __d. Wait for the **Validation completed for edition 1.1 of application VersionApp** message.

Validate Edition

WPVR0028I: Validation started for edition 1.1 of application VersionApp.

WPVR0038I: Validation: Cloned cluster DynamicCluster01 as DynamicCluster01-Validation.

WPVR0001I: Application VersionApp, Edition 1.1 - edition state set to ACTIVE.

WPVR0020I: Rollout: Synchronizing node CustomNode02.

WPVR0020I: Rollout: Synchronizing node CustomNode01.

WPVR0031I: Mapping module VersionAppWeb.war,WEB-INF/web.xml to new targets for VersionApp-edition1.1.



WPVR0020I: Rollout: Synchronizing node CustomNode01.

WPVR0020I: Rollout: Synchronizing node CustomNode02.

WPVR0030I: Validation completed for edition 1.1 of application VersionApp

- __3. Return to the Edition Control Center **Manage Editions** page and verify that edition 1.1 has a state of **VALIDATE**.
 - __a. Navigate to **Applications > Edition Control Center** and click on **VersionApp**.

- ___b. Look for **VALIDATE** in the **State** column for edition 1.1.

Activate Deactivate Validate Cancel Validation Rollout				
 				
Select	Editions ▾	Description	Target ▾	State ▾
You can administer the following resources:				
<input type="checkbox"/>	1.0	Edition 1.0	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	ACTIVE
<input type="checkbox"/>	1.1	Edition 1.1	WebSphere:cell=labvmCell01,cluster=DynamicCluster01-Validation	VALIDATE
Total 2				

- ___4. Verify that the application for Edition 1.1 is running.
- ___a. When you put Edition 1.1 in validation mode, that caused the enterprise application for Edition 1.1 to start in your cluster, so that you can access and validate it before rolling it out into production.
- ___b. To check this, go to **Applications > Application Types > WebSphere enterprise applications**.
- ___c. Verify that both **VersionApp-edition1.0** and **VersionApp-edition1.1** are in either the **Started** or **Partial Start** state, as shown. It might take a few minutes for the 1.1 edition of the application to start. If the application does not display in a green status for you, you can try manual synchronizing your environment (go to **System administration > Save changes to master repository**, verify that the **Synchronize changes with Nodes** box is selected, then click **Save**).

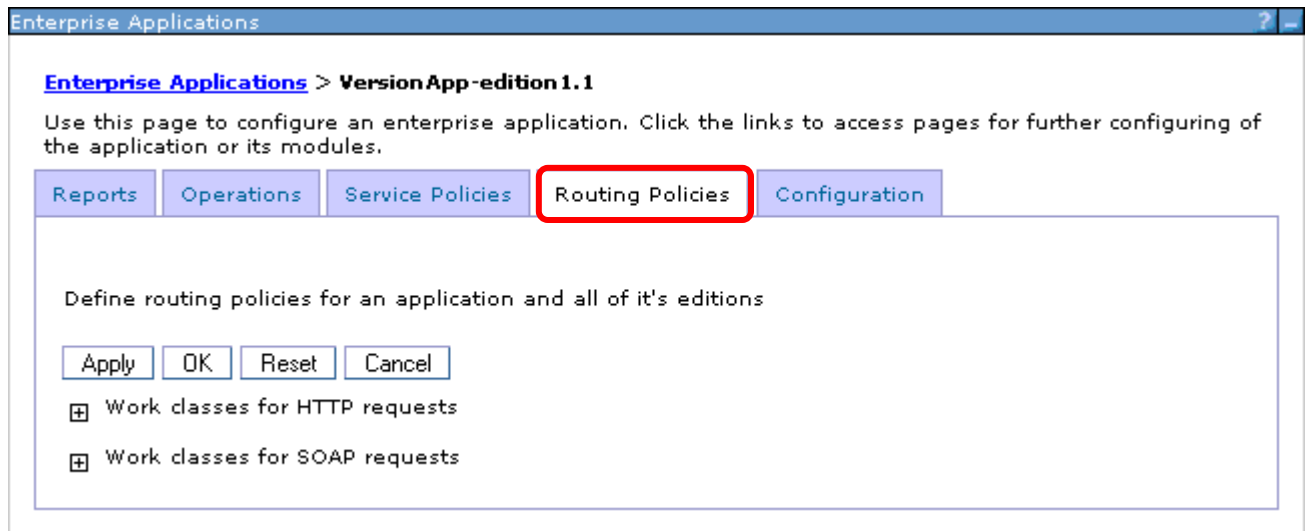
<div>StartStopInstallUninstallUpdateRollout UpdateRemove FileExportExport DDLExport File</div>									
<div><div><div></div><div></div><div></div><div></div></div></div>									
Select	Name	Application Status							
You can administer the following resources:									
<input type="checkbox"/>	VersionApp-edition1.0	<div></div>							
<input type="checkbox"/>	VersionApp-edition1.1	<div></div>							
Total 2									

1.6 Create a routing policy for edition 1.1

Since both editions of the application are now up and running at the same time, you will need to create a routing policy to selectively send traffic to edition 1.1.

1.6.1 Create a new work class

- __1. Open the Routing Policies page for edition 1.1
 - __a. Navigate to **Applications > Application Types > WebSphere enterprise applications**.
 - __b. On the Enterprise Applications page, click on **VersionApp-edition1.1**.
 - __c. On the **Enterprise Applications > VersionApp-edition1.1** page, click on the **Routing Policies** tab.

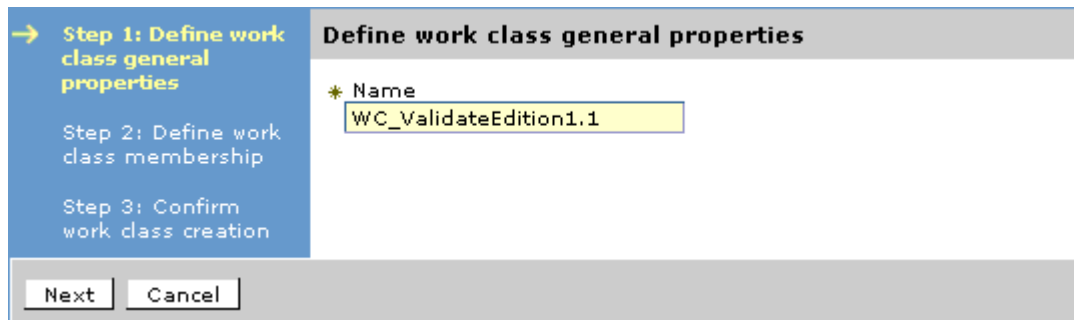


- __2. Create a new work class.

You will now create a work class for HTTP requests to edition 1.1 of the application. A work class is used to associate a routing rule to an application edition.

- __a. On the **Routing Policies** page, expand the **Work classes for HTTP requests** section.
- __b. Click on the **New** button.

- __c. Enter **WC_ValidateEdition1.1** in the **Name** field and click on the **Next** button.



→ **Step 1: Define work class general properties**

Step 2: Define work class membership

Step 3: Confirm work class creation

Define work class general properties

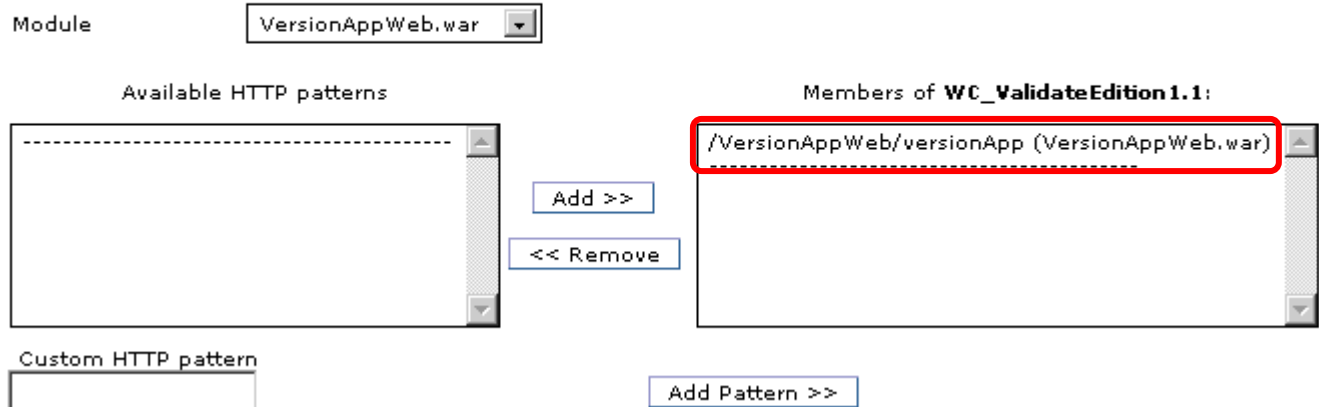
* Name
WC_ValidateEdition1.1

Next Cancel

- __d. On the **Define work class membership** page, expand the **---Select a Module---** dropdown and click on **VersionAppWeb.war**.
- __e. Under **Available HTTP patterns**, click on **/versionApp** and then click on the **Add** button.
- __f. Verify that **/VersionAppWeb/versionApp (VersionAppWeb.war)** now appears under **Members of WC_ValidateEdition1.1**.

Define work class membership

Associate **HTTP** type work from the **VersionApp-edition1.1** application to this work class.



Module VersionAppWeb.war

Available HTTP patterns

Members of **WC_ValidateEdition1.1**:

/VersionAppWeb/versionApp (VersionAppWeb.war)

Add >>

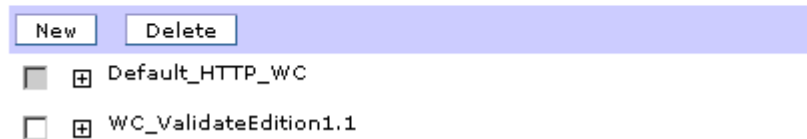
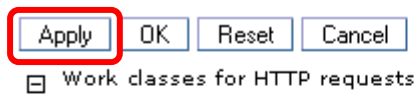
<< Remove

Custom HTTP pattern

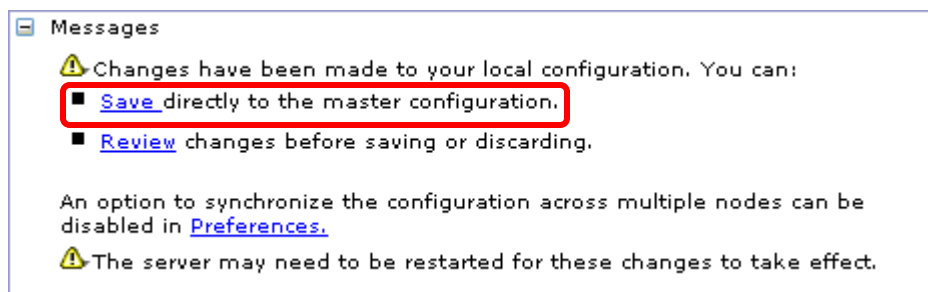
Add Pattern >>

- __g. Click on the **Next** button.
- __h. On the **Confirm work class creation** page, click on the **Finish** button.

- ___i. Back in the **Enterprise Applications > VersionApp-edition1.1** page, click on the **Apply** button.



- ___j. In the **Messages** area, click on **Save** to save your changes to the master configuration.



- ___k. On the Synchronize changes with Nodes page, wait until you see the message **The configuration synchronization complete for cell**, then click on the **OK** button.

1.6.2 Add a routing rule to the work class

- ___1. Return to the **Routing Policies** page for edition 1.1.
- ___a. On the **Enterprise Applications** page, click on **VersionApp-edition1.1**.
- ___b. On the **Enterprise Applications > VersionApp-edition1.1** page, click on the **Routing Policies** tab.
- ___2. Add the routing rule.
- ___a. On the **Routing Policies** page, if not already done, expand the **Work classes for HTTP requests** prompt.
- ___b. Expand the **WC_ValidateEdition1.1** work class you just created.


- ___c. Under the **Then apply the following routing** rules heading, click on the **Add Rule** button (you may need to scroll down to see the button).

Then apply the following routing rules

Add Rule Delete Rule Move Up Move Down		
Select	Order	Routing rule
		None

- ___d. Under the **Edit rule** heading, click on **Build subexpression**.

Then apply the following routing rules

Add Rule Delete Rule Move Up Move Down		
Select	Order	Routing rule
<input type="checkbox"/>	1	Edit rule [ <u>Build subexpression</u>] If <div style="border: 1px solid black; height: 40px; width: 100%;"></div> Then <div style="border: 1px solid black; padding: 2px;">Reject routing with return code</div> Enter in return code <div style="border: 1px solid black; padding: 2px;">404</div> <div>Validate Rule Cancel</div>

- ___e. In the **WorkClassRuleBuilderDetail** window, do the following:
- ___i. Click on the **Select** operand dropdown and select **Request query parameter name**.
 - ___ii. In the **Request query parameter name** field, enter **version**.
 - ___iii. Leave the **Operator** field set to **Equals (=)**, and in the **Value** field, enter **1.1**.

[Enterprise Applications](#) > [VersionApp-edition 1.1](#) > [queryparm](#)

Build a subexpression to copy and paste into the rule editor.

Select operand:

Request query parameter name

Request query parameter name

version

Operator

Equals (=)

Value

1.1

Build subexpression

- ___iv. Click on the **Build subexpression** button, and this subexpression will get generated automatically:


Generated subexpression

Subexpression

queryparm\$version = '1.1'

- ___v. Copy the expression **queryparm\$version = '1.1'** in the **Subexpression** field to the clipboard (highlight the expression, select the right mouse button, then choose Copy – **make sure you copy the text from the field in the browser and do not copy it directly from this document**).
- ___vi. Cancel out of the **WorkClassRuleBuilderDetail** window.
- ___f. Paste the generated subexpression into the **If** clause of the rule.
- ___g. Click on the **Then** clause dropdown and select **Permit routing to**.
- ___h. Click on the **Select edition name** dropdown and select **VersionApp-edition1.1**.

Then apply the following routing rules

Select	Order	Routing rule
<input type="checkbox"/>	1	<div><p>Edit rule</p><p>[ Build subexpression]</p><p>If</p><div>queryparm\$version = '1.1'</div><p>Then <div>Permit routing to</div></p><p>Select edition name <div>VersionApp-edition1.1</div></p><div><div>Validate Rule</div><div>Cancel</div></div></div>

- ___i. Validate the syntax of the rule.
- ___i. Click on the **Validate Rule** button.

- __ii. Ensure that the **Validation successful** message appears.

Then apply the following routing rules

Select	Order	Routing rule
<input type="checkbox"/>	1	<div><div>Messages</div><div> Validation successful. Select Apply or OK to save changes.</div></div> <div>If queryparm\$version = '1.1' Then Permit routing to VersionApp-edition1.1 [Edit rule]</div>

- __j. Save the routing rule
- __i. Scroll back up to the top of the page
- __ii. Click on the **OK** button
- __iii. Click on **Save** to save your changes
- __iv. On the **Synchronize changes with Nodes** page, wait until you see the message **The configuration synchronization complete for cell**, then click on the **OK** button.

1.7 Test routing to both editions

__1. Ensure that both editions of the application are started.

__a. Navigate to **Servers > Server Types > WebSphere application servers**.

When an edition of an application is placed in Validation mode, Intelligent Management automatically creates a new cluster to host the edition. The name given to the new cluster is the name of the cluster hosting the active edition of the application with the string **-Validation** embedded in the middle of the name.

__b. Ensure that there is a solid green arrow in the **Status** column for one of the Cluster members hosting the edition in validation mode.

New... Delete Templates... Start Stop Restart ImmediateStop Terminate						
Select	Name	Node	Host Name	Version	Cluster Name	Status
You can administer the following resources:						
<input type="checkbox"/>	HVDC_0-Validation CustomNode 5	CustomNode_5	demo77.demo.local	ND 8.5.0.0	HVDC_0-Validation	
<input type="checkbox"/>	HVDC_0-Validation CustomNode 5_1	CustomNode_5_1	demo76.demo.local	ND 8.5.0.0	HVDC_0-Validation	
<input type="checkbox"/>	HVDC_0 CustomNode 5	CustomNode_5	demo77.demo.local	ND 8.5.0.0	HVDC_0	
<input type="checkbox"/>	HVDC_0 CustomNode 5_1	CustomNode_5_1	demo76.demo.local	ND 8.5.0.0	HVDC_0	
Total 4						

__c. If not, follow the instructions in the sublist below.

__i. Check the box in the **Select** column adjacent to one of the Cluster members hosting the edition in Validation mode.

__ii. Click on the **Start** button.

__iii. Wait until you see a message indicating the **Cluster member has started successfully**.

__2. Return to the **Sample Versioned Application** tab in your Mozilla Firefox browser.

__3. Send a browser request to edition 1.0 of the application (this is the same request that you used to access Edition 1.0 of the application earlier in the exercise).

__a. Enter <http://labvm.ibm.com:1024/VersionAppWeb/versionApp>

__b. Press the **Enter** key.

- ___4. Verify edition 1.0 is working properly by making sure that the **version 1.0** message is displayed in the browser:
- ___5. Send a browser request to edition 1.1 of the application.
 - ___a. Enter <http://labvm.ibm.com:1024/VersionAppWeb/versionApp?version=1.1> Notice that this URL includes an extra version parameter at the end, to match the routing rule you created for your work class, to make to Edition 1.1 of your application.
 - ___b. Press the **Enter** key.
- ___6. Verify edition 1.1 is working properly by making sure that the **version 1.1** message is displayed in the browser:



1.8 Rollout edition 1.1 of the application to production



Now that edition 1.1 has been tested and you've verified that it is working properly, it can be placed into production.

1.8.1 Rollout edition 1.1

- __1. Open the **Edition Control Center** page in the administrative console by navigating to **Applications > Edition Control Center**. Notice that **VersionApp** lists one **Active** version (which corresponds to Edition 1.0) and one **Validate** version (which corresponds to Edition 1.1).

Applications ▾	Type ▾	Editions ▾	Active ▾	Validation ▾
VersionApp	Java 2 Platform, Enterprise Edition	2	1	1
Total 1				

- __2. Select **VersionApp** to open the **Manage Editions** page.
- __3. Initiate the rollout of edition 1.1.
- __a. Check the box in the **Select** column adjacent to edition **1.1**.
- __4. Click on the **Rollout** button.

Activate Deactivate Validate Cancel Validation Rollout				
 				
Select	Editions ▾	Description	Target ▾	State ▾
You can administer the following resources:				
<input type="checkbox"/>	1.0	Edition 1.0	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	ACTIVE
<input checked="" type="checkbox"/>	1.1	Edition 1.1	WebSphere:cell=labvmCell01,cluster=DynamicCluster01-Validation	VALIDATE
Total 2				

__a. On the **Edition Rollout Configuration** page, validate the following configurations:

__i. **Rollout Strategy** is set to **Grouped**.

__ii. **Group size** is set to **1**.

__iii. **Reset Strategy** is set to **Soft reset**.

__iv. **Drainage Interval** is set to **30 seconds**.

__b. On the **Edition Rollout Configuration** page, click on the **OK** button.

The page will go blank for several seconds. Wait until you see the **Rollout for edition 1.1 of application VersionApp completed successfully** message at the bottom of the Rollout Edition page.

vPVR0012I: Rollout for edition 1.1 of application VersionApp completed successfully.

- __5. Review the steps taken to put edition 1.1 into production.
 - __a. While still on the **Rollout Edition** page, take a look at the messages logged during the rollout. Essentially, the rollout process involved stopping and deleting the cluster created for Validation mode, uninstalling edition 1.0 of the application, installing edition 1.1 of the application to the original cluster and starting edition 1.1.

1.8.2 Test that routing to edition 1.1 is correct

- __1. Return to the **Sample Versioned Application** tab in your Mozilla Firefox browser.
- __2. Send a browser request to the production edition of the application
 - __a. Enter http://<ODR_IP>/VersionAppWeb/versionApp as the URL where <ODR_IP> is the IP address for your ODR. Notice that you are no longer using the extra version parameter to point to Version 1.1 of the application – this is because Version 1.1 is rolled out and will be automatically served for you!
 - __b. Press the **Enter** key.
- __3. Verify the production edition is working properly by checking that the message displayed in the browser is the Version 1.1 message.
 - __a. Verify that the browser request returned the following... **You reached version 1.1 of the sample application!**





1.9 Revert production to edition 1.0 of the application

Suppose edition 1.1, now that it's in production, is failing for some scenario. You can easily revert back to edition 1.0. You know edition 1.0 works properly, so there is no need to put it in validation mode for testing. You can just rollout edition 1.0.

1.9.1 Revert to edition 1.0 using rollout

- __1. Open the **Manage Editions** page.
 - __a. Navigate to **Applications > Edition Control Center**.
 - __b. Click on **VersionApp**. Notice that Edition 1.0 is displayed as **INACTIVE** and that Edition 1.1 is displayed as **ACTIVE**.

Activate Deactivate Validate Cancel Validation Rollout				
 				
Select	Editions ▾	Description	Target ▾	State ▾
You can administer the following resources:				
<input type="checkbox"/>	1.0	Edition 1.0	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	INACTIVE
<input type="checkbox"/>	1.1	Edition 1.1	WebSphere:cell=labvmCell01,cluster=DynamicCluster01	ACTIVE
Total 2				

- __2. Initiate the rollout of edition 1.0 to put it back in production.
 - __a. Check the box in the **Select** column adjacent to edition **1.0**.
 - __b. Click on the **Rollout** button.
 - __c. On the **Edition Rollout Configuration** page, validate the following configurations:
 - __i. **Rollout Strategy** is set to **Grouped**.
 - __ii. **Group size** is set to **1**.
 - __iii. **Reset Strategy** is set to **Soft reset**.
 - __iv. **Drainage Interval** is set to **30 seconds**.
 - __d. On the **Edition Rollout Configuration** page, click on the **OK** button.

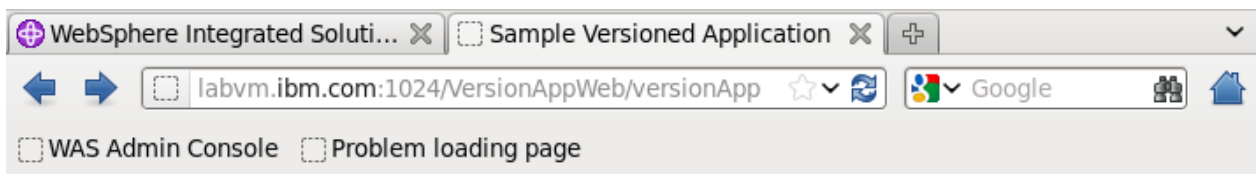
The page will go blank for several seconds. Wait until you see the **Rollout for edition 1.0 of application VersionApp completed successfully** message at the bottom of the Rollout Edition page.

WPVR0012: Rollout for edition 1.0 of application VersionApp completed successfully.

- ___3. Review the steps taken to put edition 1.0 back into production.
 - ___a. While still on the **Rollout Edition** page, scroll through and take a look at the messages logged during the rollout.

1.9.2 Test that routing to edition 1.0 is correct

- ___1. Return to the **Sample Versioned Application** tab in your Mozilla Firefox browser.
- ___2. Send a browser request to the production edition of the application.
 - ___a. Enter <http://labvm.ibm.com:1024/VersionAppWeb/versionApp> This should take you to Edition 1.0, the current active edition.
 - ___b. Press the **Enter** key.
- ___3. Verify the production edition is working properly by making sure that the version 1.0 message is displayed in browser:



You reached version 1.0 of the sample application!

- ___4. At this stage, you have finished using your sample edition applications. You have learned how to install multiple application editions, validate a new edition, roll it out to production, and then switch back to the original application edition.

1.10 Summary

In this lab you have experienced managing two editions of an application. You installed both editions into a production environment and started both at the same time. Using validation mode and a routing policy, you were able to selectively route traffic to one of the editions. After the edition was validated, you rolled it out into production. You also saw how easy it is to revert back to a previous edition.