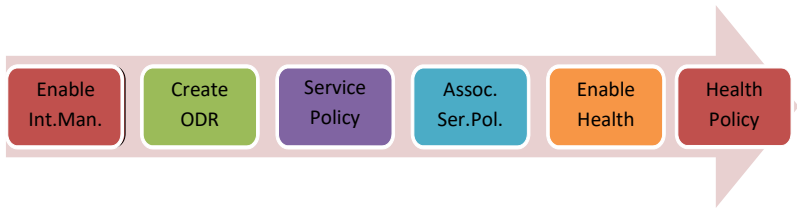
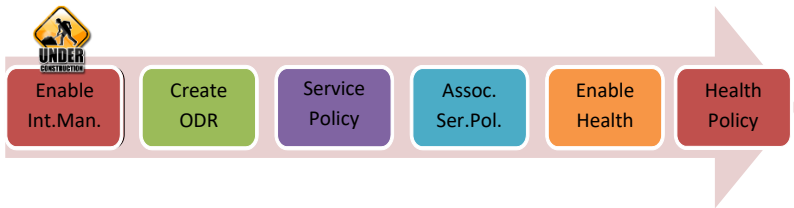


Lab Exercise 12: INTELLIGENT MANAGEMENT

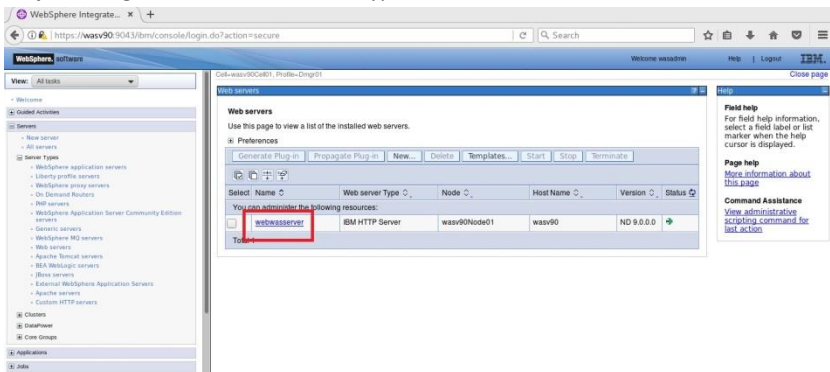


-
1. **Enable Intelligent Management**
 2. **Create an ODR Server**
 3. **Create a service policy**
 4. **Associate a service policy with an application**
 5. **Enable Health Management**
 6. **Create a health policy**

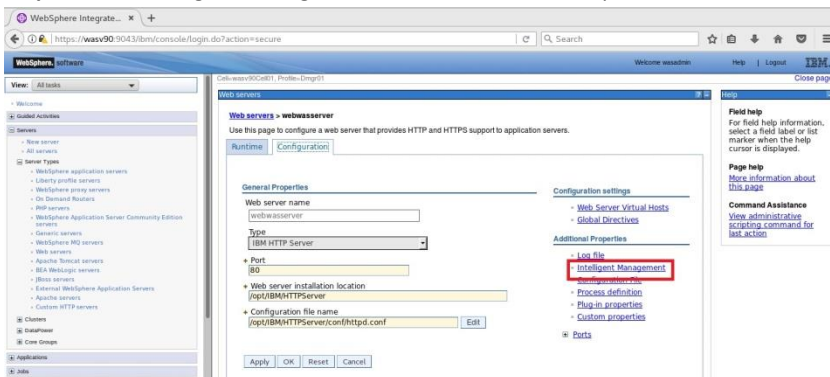


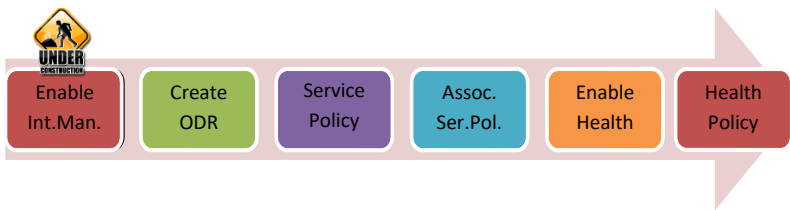
Task 1: Enable Intelligent Management

Step 1: Navigate to “Servers>Server Types>Web Servers” and click on server name.



Step 2: Click “Intelligent Management” under “Additional Properties”.





Step 3: Mark “Enable” and click “OK”.

WebSphere Integration console - Intelligent Management service configuration page. The 'Enable' checkbox is checked. The 'Cell identifier' is 'wasv90Cell01'. The 'Maximum retry interval' is '60' seconds and 'Maximum retries' is '1'. The 'Remote cells' section has buttons for 'Add', 'Delete', 'Edit', and 'Refresh'. The 'Delete certificates (Delete)' checkbox is unchecked. The 'User ID (Refresh)' and 'Password (Refresh)' fields are empty. The 'Apply', 'OK', 'Reset', and 'Cancel' buttons are at the bottom, with 'OK' highlighted by a red box.

Step 4: Click “Save” to write changes directly to the master configuration.

WebSphere Integration console - Messages dialog box. The dialog box contains the text: 'Changes have been made to your local configuration. You can: • Save directly to the master configuration. • Review changes before saving or discarding.' The 'Save' button is highlighted with a red box. Below the dialog box, the 'Web servers > webwsserver' configuration page is visible, showing the 'General Properties' section with 'Web server name' as 'webwsserver' and 'Type' as 'IBM HTTP Server'.



Enable
Int.Man.

Create
ODR

Service
Policy

Assoc.
Ser.Pol.

Enable
Health

Health
Policy

Step 5: Select the web server and click “Generate Plug-in”.

WebSphere Integration Developer console - Web servers page. The 'Generate Plug-in' button is highlighted in the top toolbar. The table below shows the list of web servers, with the 'webserver' row selected.

Select	Name	Web server Type	Node	Host Name	Version	Status
<input checked="" type="checkbox"/>	webserver	IBM HTTP Server	wasv90Node01	wasv90	ND 9.0.0.0	
Total 1						

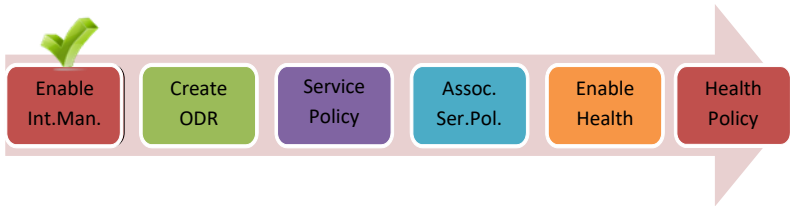
Step 6: When new configuration is generated click on “Propagate Plug-in”.

WebSphere Integration Developer console - Web servers page. The 'Propagate Plug-in' button is highlighted in the top toolbar. A message box is displayed, indicating that the plug-in generation is complete for the 'webserver'.

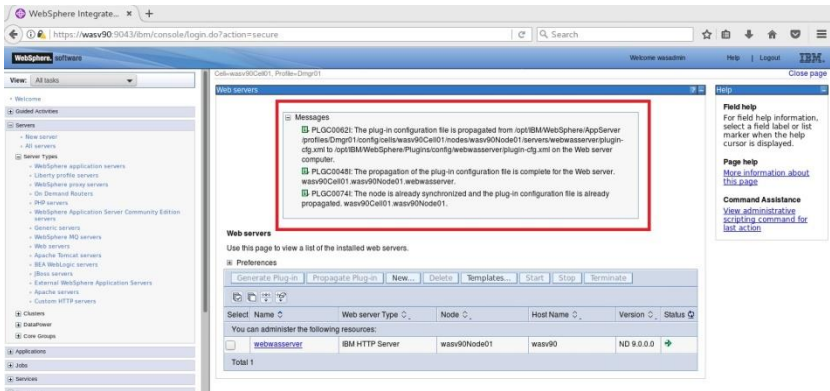
Messages

- PLC0C0051: Plug-in configuration file - `tpstIBMWebSphereAppServer/profiles/Dmgr01/tpstng/soils/wasv90Cell01/nodes/wasv90Node01/servers/webserver/plugin-cfg.xml`
- PLC0C0052: Plug-in configuration file generation is complete for the Web server: `wasv90Cell01.wasv90Node01.webserver`.

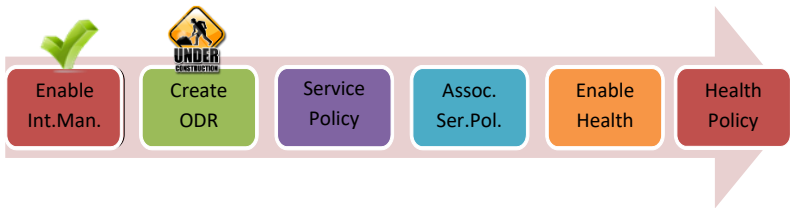
Select	Name	Web server Type	Node	Host Name	Version	Status
<input checked="" type="checkbox"/>	webserver	IBM HTTP Server	wasv90Node01	wasv90	ND 9.0.0.0	
Total 1						



Step 7: You should see similar success message as following image.

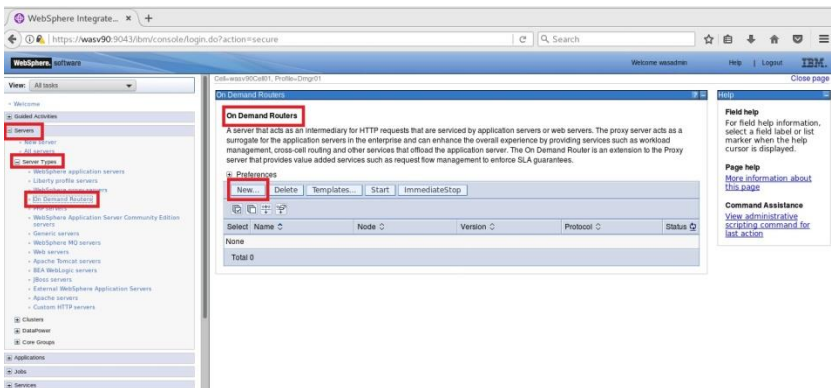


Task 1 is complete!

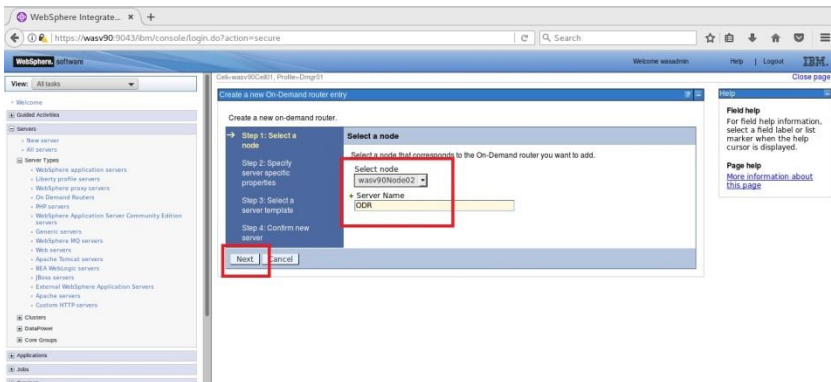


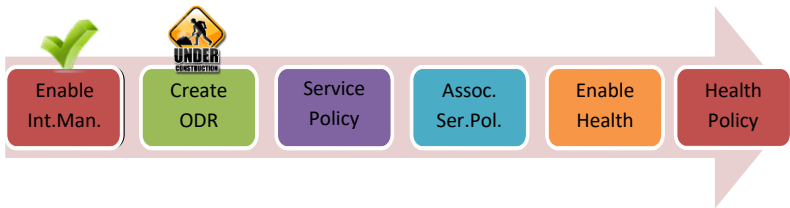
Task 2: Create an ODR Server

Step 1: Navigate to “Servers>Server Types>On Demand Routers” and click “New”.



Step 2: Select the node you want to install ODR and type a name then click “Next”.





Step 3: Just select “HTTP” as supported protocol and click “Next”.

WebSphere Integration Developer

Create a new On-Demand router entry

Step 2: Specify server specific properties

Specify server specific properties

Supported protocols

☒ HTTP

☐ SIP

☒ Generate unique ports

Previous Next Cancel

Step 4: Click “Next” to continue.

WebSphere Integration Developer

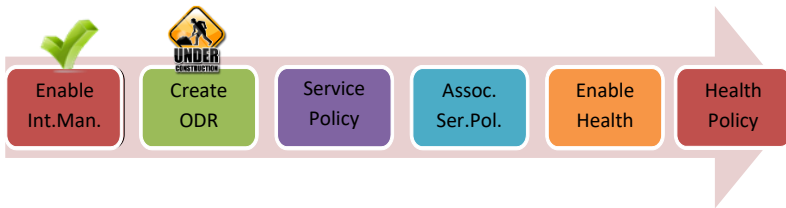
Create a new On-Demand router entry

Step 3: Select a server template

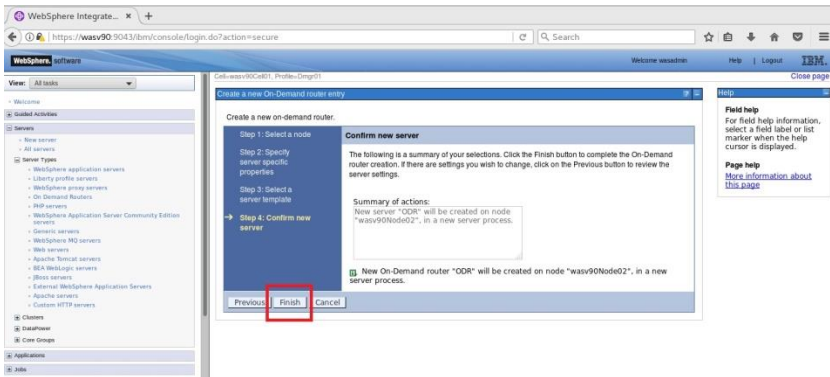
Select the template that best specifies the attributes of the server you wish to create.

Select	Name	Type	Describe the purpose of this template
<input checked="" type="radio"/>	odr	System	WebSphere default on demand router template

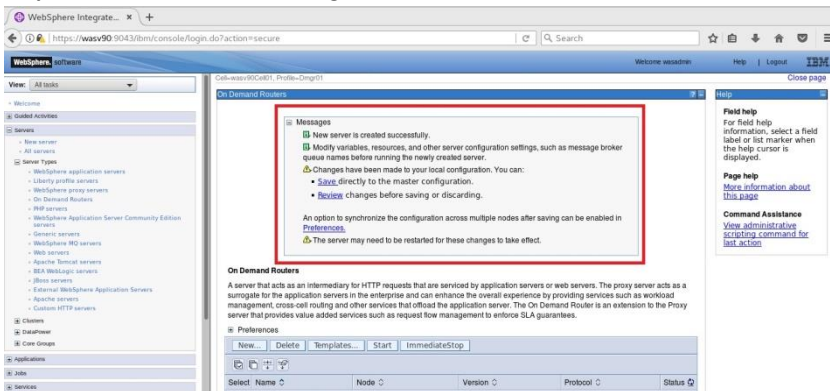
Previous Next Cancel

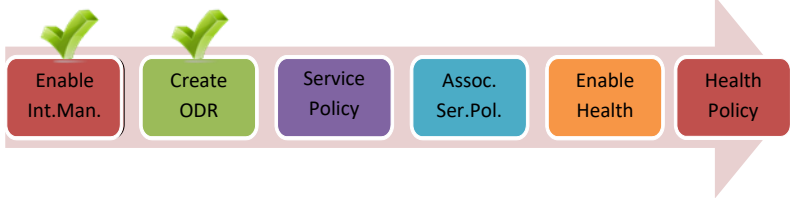


Step 5: Review the summary of the actions and click “Finish”.



Step 6: Click “Save” to write changes to the master file.





Step 7: Select newly created ODR and click “Start”.

On Demand Routers

A server that acts as an intermediary for HTTP requests that are serviced by application servers or web servers. The proxy server acts as a surrogate for the application servers in the enterprise and can enhance the overall experience by providing services such as workload management, cross-cell routing and other services that offload the application server. The On Demand Router is an extension to the Proxy server that provides value added services such as request flow management to enforce SLA guarantees.

Preferences

New Delete Templates **Start** ImmediateStop

You can administer the following resources:

Select	Name	Node	Version	Protocol	Status
<input checked="" type="checkbox"/>	ODR	wasv9Node02	ND 9.0.0.0	HTTP	
Total 1					

You should see ODR started with success message.

Messages

Server wasv9Node02 ODR started successfully. The collection may need to be refreshed to show the current server status. [View JVM logs](#) for further details.

On Demand Routers

A server that acts as an intermediary for HTTP requests that are serviced by application servers or web servers. The proxy server acts as a surrogate for the application servers in the enterprise and can enhance the overall experience by providing services such as workload management, cross-cell routing and other services that offload the application server. The On Demand Router is an extension to the Proxy server that provides value added services such as request flow management to enforce SLA guarantees.

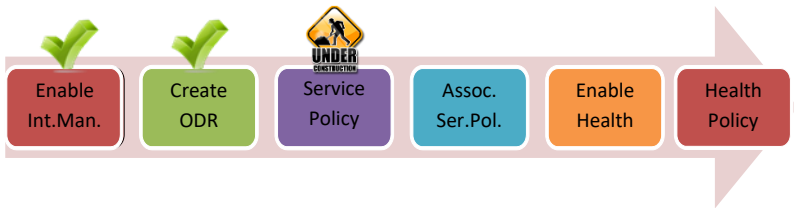
Preferences

New Delete Templates Start ImmediateStop

You can administer the following resources:

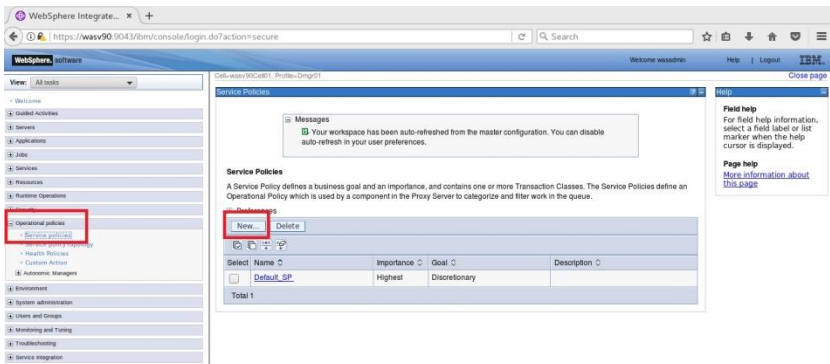
Select	Name	Node	Version	Protocol	Status
<input type="checkbox"/>	ODR	wasv9Node02	ND 9.0.0.0	HTTP	
Total 1					

Task 2 is complete!

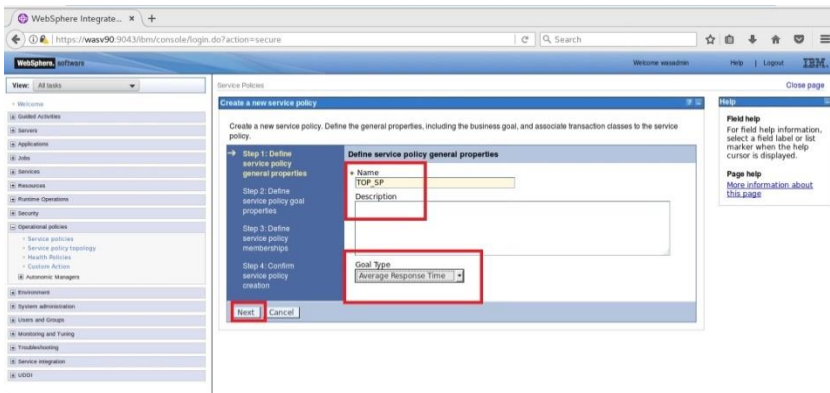


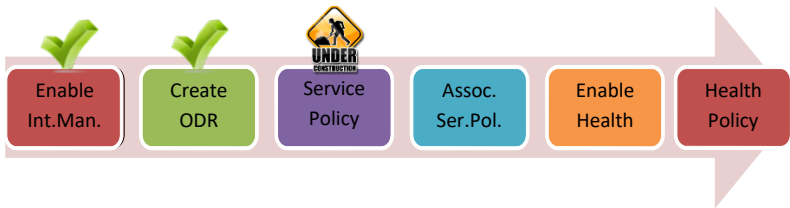
Task 3: Create a Service Policy

Step 1: Navigate to “Operational policies>Service policies” and click “New”.



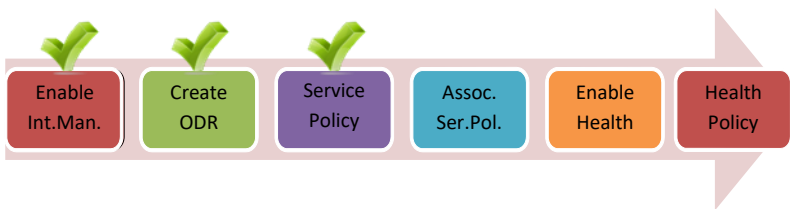
Step 2: Type a name for the policy (TOP_SP) and select “Average Response Time” then click “Next”.



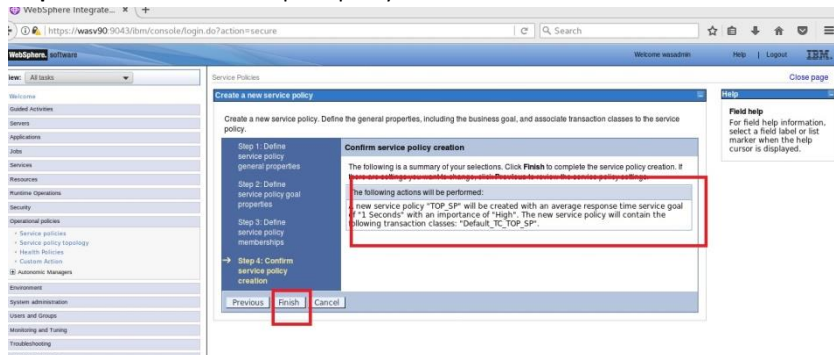


Step 3: Enter “Goal Value” as 1, select “Importance” “High” and click “Next”.

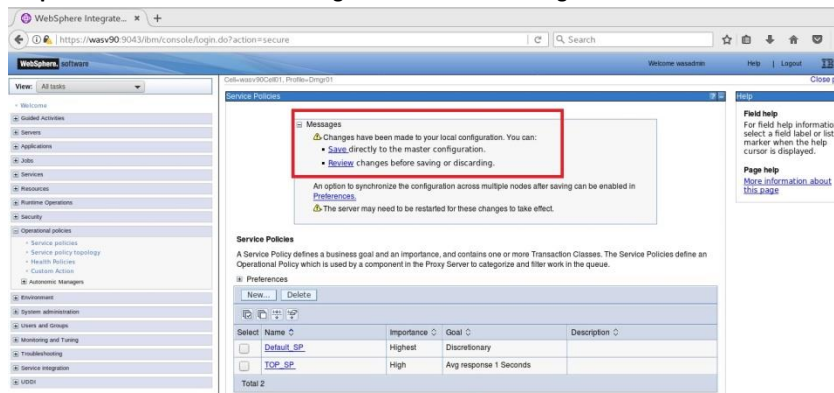
Step 4: Click “Next”.



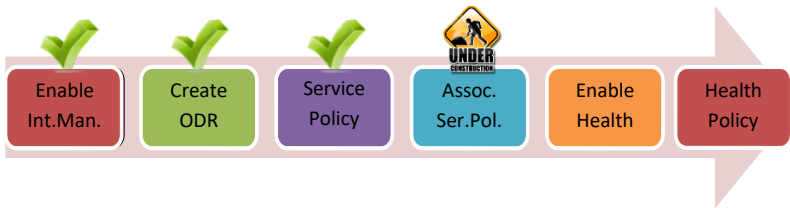
Step 5: Click “Finish” to complete policy creation.



Step 6: Click “Save” to write changes to the master configuration.



Task 3 is complete!



Task 4: Associate a Service Policy with an Application

Step 1: Navigate to “Applications>Application Types>WebSphere enterprise applications” and click on the application name. (DayTrader2-EE6)

WebSphere Integrate... x +

https://wasv90:9043/ibm/console/login.do?action=secure

WebSphere, software

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications**
 - All applications
 - New Application
 - Install New Middleware Application
 - Application Types**
 - WebSphere enterprise applications**
 - Assets
 - Edition Control Center
 - Global deployment settings

Cell=wasv90Cell01, Profile=Dmgr01

Enterprise Applications

Use this page to manage installed applications. A single application can be...

Preferences

Start Stop Install Uninstall Update Rollout Update

Select Name

You can administer the following resources:

<input checked="" type="checkbox"/>	DayTrader EE6
<input type="checkbox"/>	DefaultApplication

Step 2: Navigate to “Service Policies” tab.

WebSphere Integrate... x +

https://wasv90:9043/ibm/console/login.do?action=secure

WebSphere, software

View: All tasks

- Welcome
- Guided Activities
- Servers
- Applications
 - All applications
 - New Application
 - Install New Middleware Application
 - Application Types
 - WebSphere enterprise applications
 - Assets
 - Edition Control Center
 - Global deployment settings
- Jobs
- Services
 - Resources
 - Runtime Operations
 - Security
 - Operational policies
 - Environment
 - System administration
 - Users and Groups
 - Monitoring and Tuning

Cell=wasv90Cell01, Profile=Dmgr01

Enterprise Applications > DayTrader EE6

Use this page to configure an enterprise application. Click the links to access pages for further configuring the application or its modules.

Configuration Runtime **Service Policies** Routing Policies Reports Operations

General Properties

Name: DayTrader EE6

Application reference validation: Issue warnings

Detail Properties

- Target specific application status
- Startup behavior
- Application binaries
- Class loading and update detection
- Request dispatcher properties
- JSP provider
- Custom properties
- View Deployment Descriptor

Modules

- Manage Modules
- Metadata for modules
- Display module build logs

Web Module Properties

- Session management
- Context Root For Web Modules
- JSP and JSP options
- Virtual hosts

Enterprise Java Bean Properties

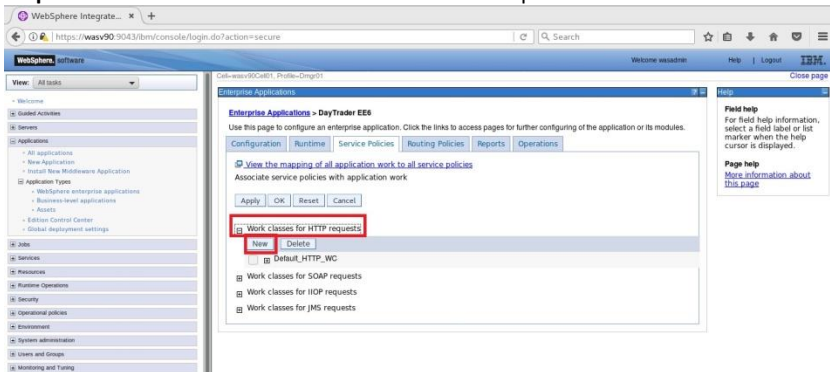
- Default messaging provider references
- Stateful session bean failover settings
- Application profiles

Field help: For field help information, select a field label or list marker when the help cursor is displayed.

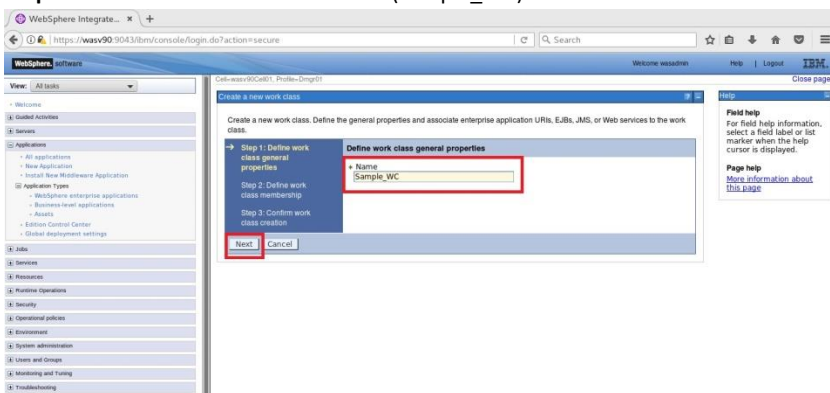
Page help: None information about this page



Step 3: Click “New” under “Work classes for HTTP requests”.

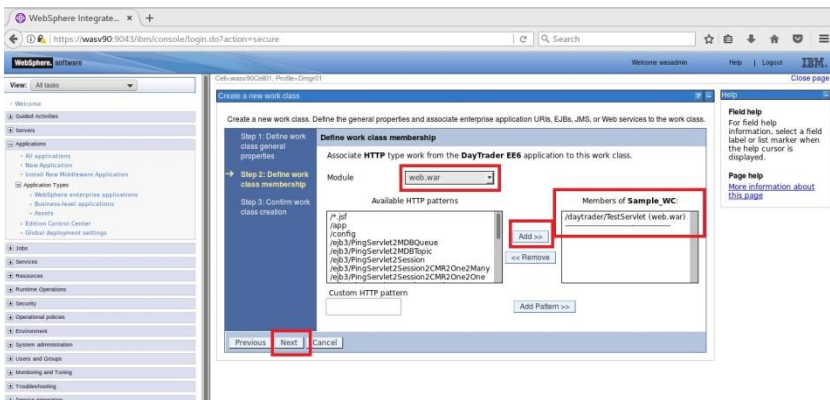


Step 4: Enter a name for the work class (Sample_WC) and click “Next”.

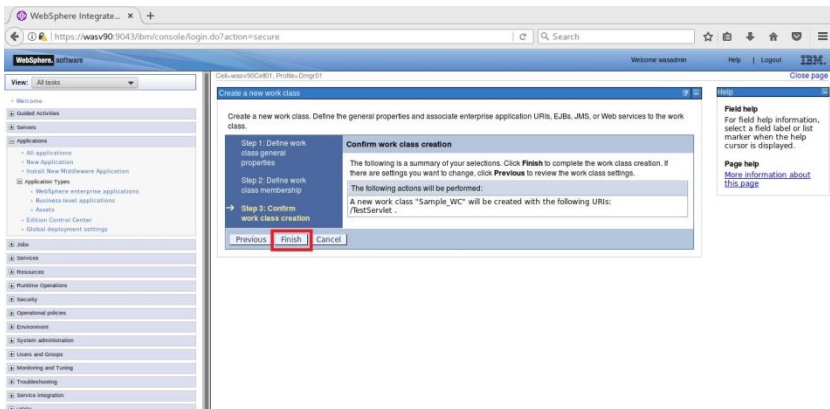




Step 5: Select the module (web.rar) from the list, add the “TestServlet” pattern as a member of “Sample_WC” and click “Next”.

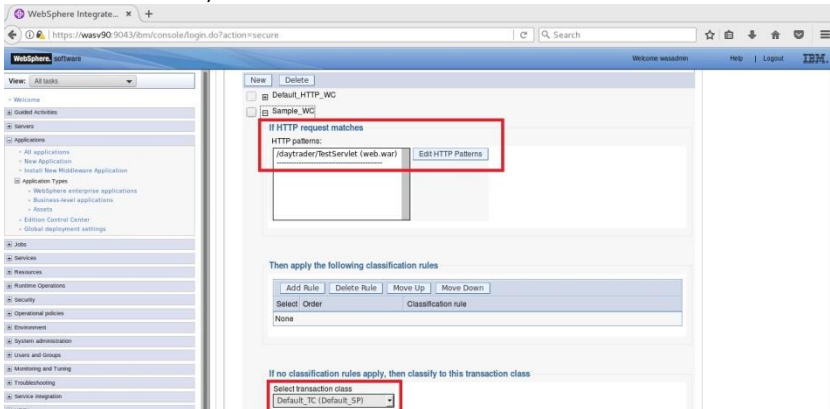


Step 6: Click “Finish”.

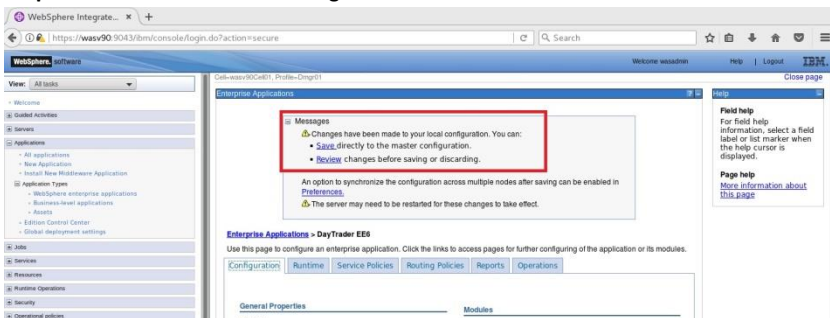


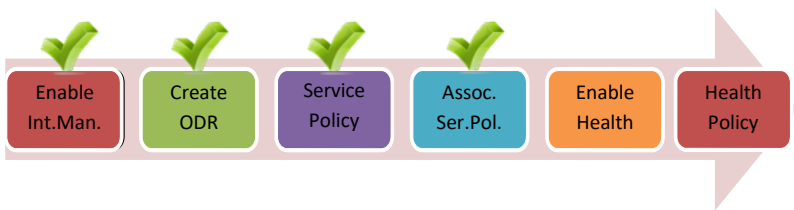


Step 7: Select “Default_TC_TOP_SP” (If no classification rules apply, then classify to this transaction class) and click “OK”.

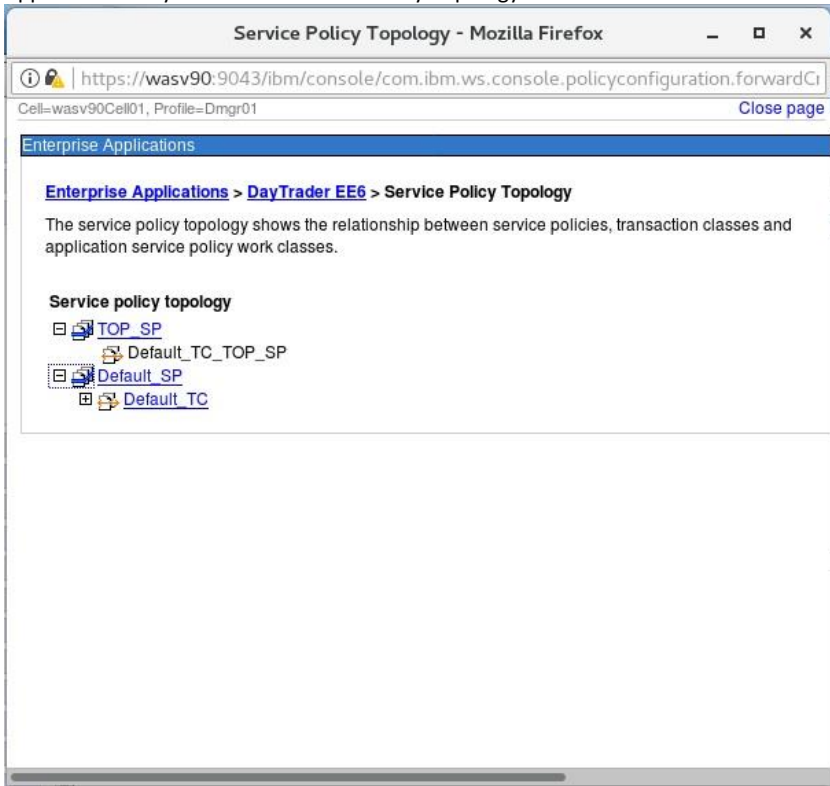


Step 8: Click “Save” to write changes to the master file.

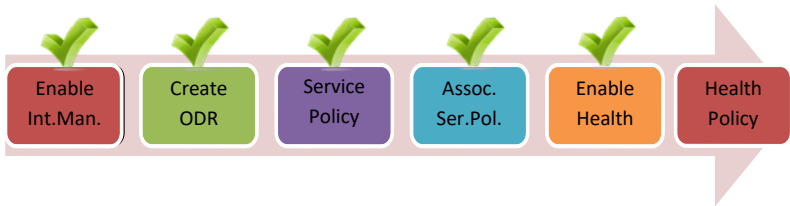




Step 9: You can view the service policy topology under “Enterprise Applications>DayTrader-EE6>Service Policy Topology”.

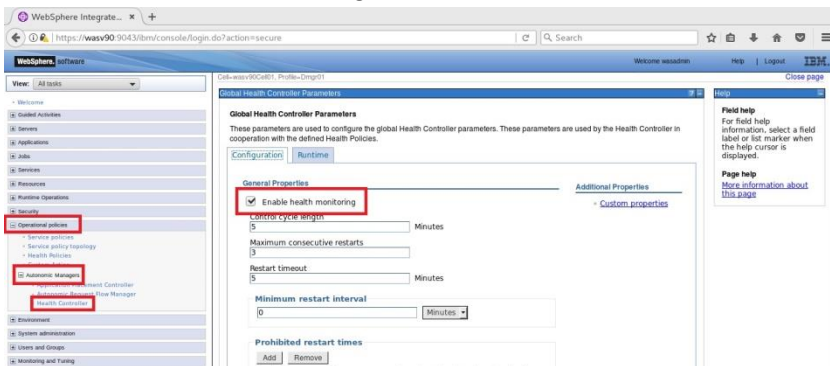


Task 4 is complete!

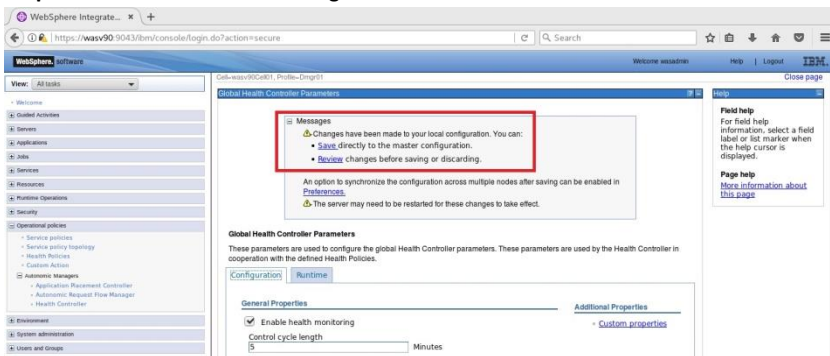


Task 5: Enable Health Management

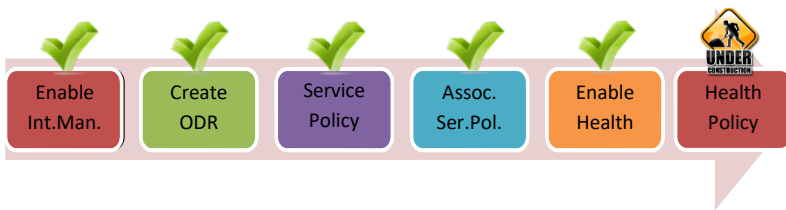
Step 1: Navigate to “Operational policies>Autonomic Managers>Health Controller” and select “Enable health monitoring” then click “OK”.



Step 2: Click “Save” to write changes to the master file.



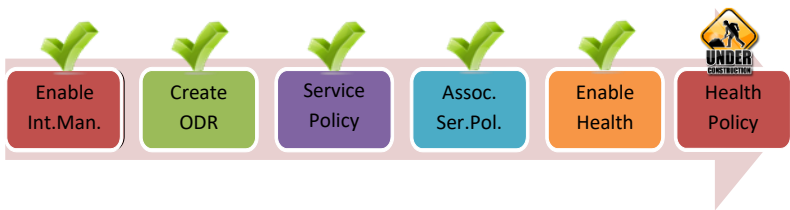
Task 5 is complete!



Task 6: Create a Health Policy

Step 1: Navigate to “Operational policies>Health Policies” and click “New”.

WebSphere Integration Developer console screenshot showing the 'Health Policies' page. The left sidebar shows the navigation tree with 'Operational policies' and 'Health Policies' highlighted. The main area shows the 'Health Policies' page with a 'New' button highlighted in red. The page title is 'Health Policies' and the description is 'A health policy defines runtime behaviors to monitor and take corrective actions when these behaviors are determined to be present.' The page also shows a table with columns 'Select', 'Name', 'Reaction mode', and 'Description', and a 'Total 0' count.



Step 2: Enter a name (Sample_HP) and select “Aged-based condition” under “Health condition>Predefined health condition”.

WebSphere Integration Developer

https://wasv90.9043.ibm/console/login.do?action=secure

View: All tasks

Health Policies

Create & new health policy

Create a new health policy. Define the general properties, including the health condition, and the servers, clusters, and dynamic clusters to be monitored.

Step 1: Define health policy general properties

Step 2: Define health policy health condition properties

Step 3: Specify members to be monitored

Step 4: Confirm health policy creation

Define health policy general properties

Name: Sample_HP

Description:

Health condition

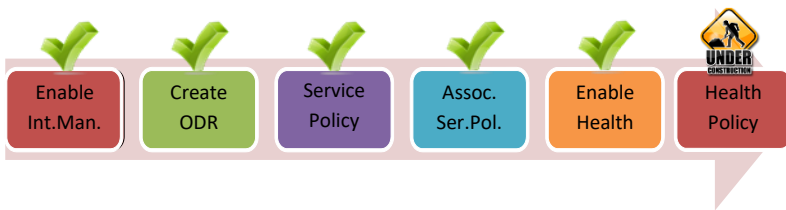
Predefined health condition: Aged-based condition

Custom health condition:

Next Cancel

Field help: For field help information, select a field label or list marker when the help cursor is displayed.

Page help: More information about this page



Step 3: Enter “7” for “Maximum age (days)” and select “Supervise” as “Reaction mode” then click “Next”.

WebSphere Integration console

Create a new health policy. Define the general properties, including the health condition, and the servers, clusters, and dynamic clusters to be monitored.

Step 1: Define health policy general properties

Step 2: Define health policy health condition properties

Step 3: Specify members to be monitored

Step 4: Confirm health policy creation

Define health policy health condition properties

The age-based condition will detect once a server that is a member of the policy reaches a configured age threshold.

Health condition properties

Maximum age: 7 Days

Health management monitor reaction

Reaction mode: Supervise

Take the following actions when the health condition breaches

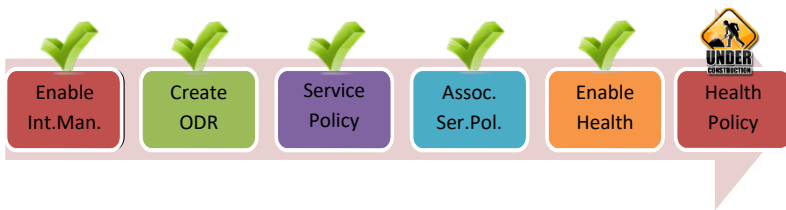
Select	Step	Action	Target server	Target node
<input type="checkbox"/>	1	Restart server	Sick server	Node hosting sick server

Previous Next Cancel

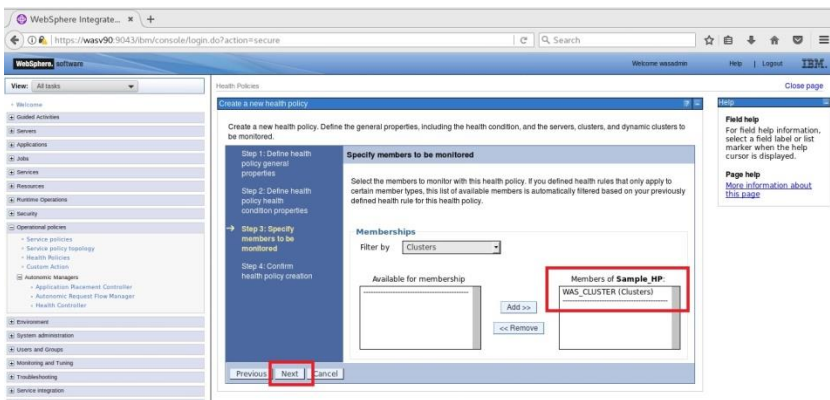
Help

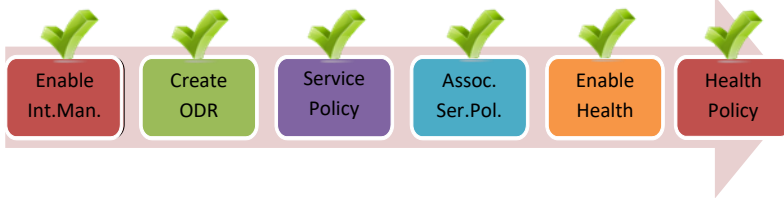
Field help
For field help information, select a field label or list marker when the help cursor is displayed.

Page help
[More information about this page](#)



Step 4: Select “Clusters” from “Filter by” and add “WAS_Cluster” as a member to “Sample_HP”.





Step 5: Click “Finish” to complete”.

Create a new health policy

Create a new health policy. Define the general properties, including the health condition, and the servers, clusters, and dynamic clusters to be monitored.

Confirm health policy creation

The following is a summary of your selections. Click Finish to complete the health policy creation. If there are settings you want to change, click Previous to review the health policy settings.

Options	Values
Name	Sample_HP
Description	
Health condition	Age-based condition
Maximum age	7 Days
Reaction mode	Supervise
Actions	Restart server
Members	WAS_CLUSTER (Client)

Previous **Finish** Cancel

Step 6: Click “Save” to write changes directly to the master configuration file.

Messages

Changes have been made to your local configuration. You can:

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

An option to synchronize the configuration across multiple nodes after saving can be enabled in [Preferences](#).

The server may need to be restarted for these changes to take effect.

Health Policies

A health policy defines runtime behaviors to monitor and take corrective actions when these behaviors are determined to be present.

Preferences

Select	Name	Reaction mode	Description
<input type="checkbox"/>	Sample_HP	Supervise	

Total 1

Task 6 is complete!

SUMMARY

Intelligent management is the integration of WebSphere Virtual Enterprise into WebSphere Application Server Network Deployment version 8.5 that provides capabilities autonomic components responding dynamically to the real time conditions of WebSphere environment. ODR is an intelligent proxy that performs request prioritization, flow control, and dynamic workload management. Service policies define the performance goals where health policies specify application server's status and actions where health management monitors and takes appropriate actions that are defined in health policies.

REFERENCES

- http://publib.boulder.ibm.com/infocenter/tivihelp/v63r1/index.jsp?topic=%2Fcom.ibm.itcamfapps_ad.doc_72%2Fplanning_an_installation%2Fwebsphere_virtual_enterprise.html
- <http://www-01.ibm.com/software/websphere/subscriptionandsupport/compare-was-versions.html>
- <https://www.ibm.com/developerworks/community/wikis/home?lang=en#!/wiki/WebSphere+Virtual+Enterprise/page/Best+practices+for+managing+the+on+demand+router>

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