

Cluster Creation on Websphere Application Server
Oracle FLEXCUBE Universal Banking
Release 14.1.0.0.0
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1. Purpose

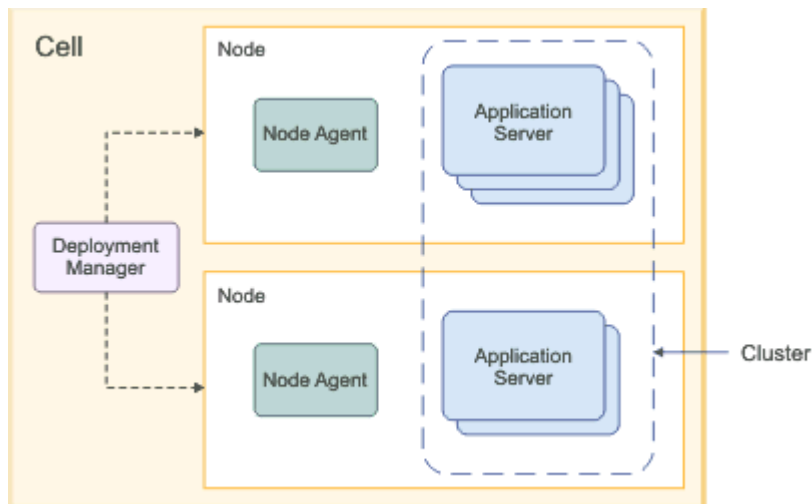
This document explains steps to create Cluster on Websphere Application Server 8.5 and also setup the proxy.

2. Introduction to Websphere

IBM websphere application server cluster deployment contains the below key elements

- Cell
- Nodes
 - Deployment Manager Node- “DMGR”
 - Node- “NodeXX”
 - Node Agent- “NAXX”
- Profiles
- Cluster
- Cluster Members
- Data Sources

Profile



- Cell: A cell is a grouping of nodes into a single administrative domain. In a Network Deployment environment, a cell can consist of multiple nodes (and node groups), which are all administered from a single point, the deployment manager.
- Node: A node is an administrative grouping of application servers for configuration and operational management within one operating system instance
- Node Agent: In distributed server configurations, each node has a node agent that works with the deployment manager to manage administration processes. A node agent is created automatically when you add (federate) a stand-alone node to a cell.
- Cluster: A cluster is a logical collection of application server processes that provides workload balancing and high availability. Application servers that belong to a cluster are members of that cluster and must all have identical application components deployed on them.
- A profile is a Websphere runtime environment formed by collection of User data and Product files. Product Files are shared application binaries for Websphere. User data is set of user customizations for a specific runtime environment.

Prominent profile types are:

- Stand-alone Application Server: An application server environment runs Enterprise Application. Application server is managed from its own administrative console and functions independently from other application server.
- Deployment Manager: A Deployment Manager manages operations for a logical group or cell of other servers. It is the central administration point of a cell that consists of multiple nodes and node groups in a distributed server configuration. The deployment manager uses the node agent to manage the application servers within one node. A deployment manager provides management capability for multiple federated nodes and can manage nodes that span multiple systems and platforms. A node can only be managed by a single deployment manager and must be federated to the cell of that deployment manager.

Note ** Deployment Manager is part of Network Deployment Edition of Websphere.

3. Pre-requisites:

Before proceeding with the cluster setup ensure that the below resources are created

- JDBC Provider
- Datasource
- Queue Connection Factory
- JMS Queue

The instructions for resource creation are available in document

<installer>\Docs\WEBSHERE\Resource_Creation_WAS.doc

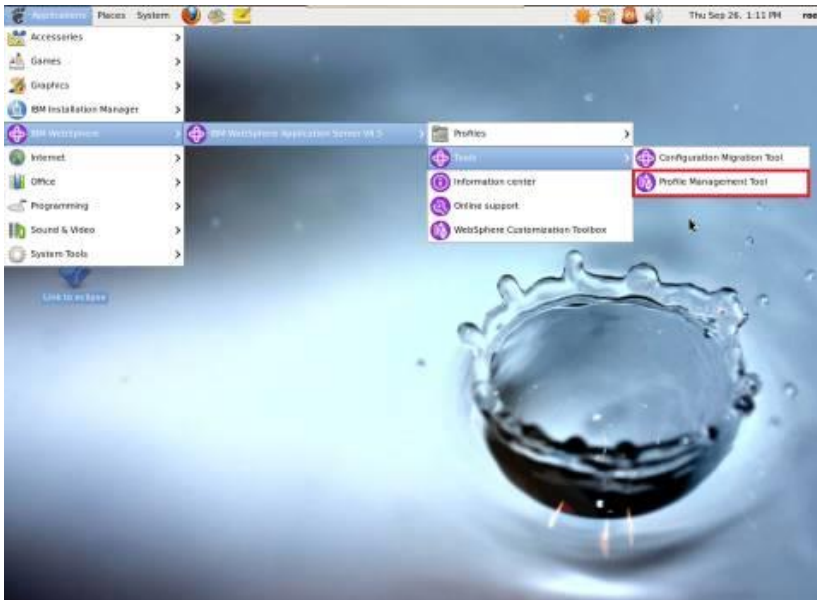
- For SSL configuration in Websphere, refer to the document SSL_Configuration_WAS.doc
- For application deployment, refer to document FCUBS_Application_WAS.doc
- For deployment of Gateway applications, refer to document GATEWAY_Applications_WAS.doc

4. Steps involved for Clustering

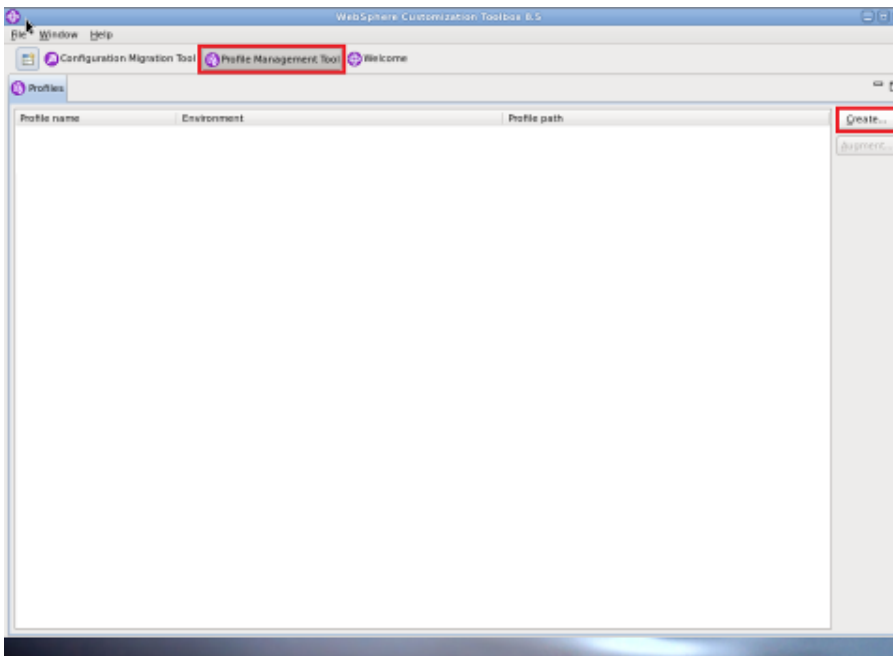
4.1 Create Profile

Go to Profile Management Tool

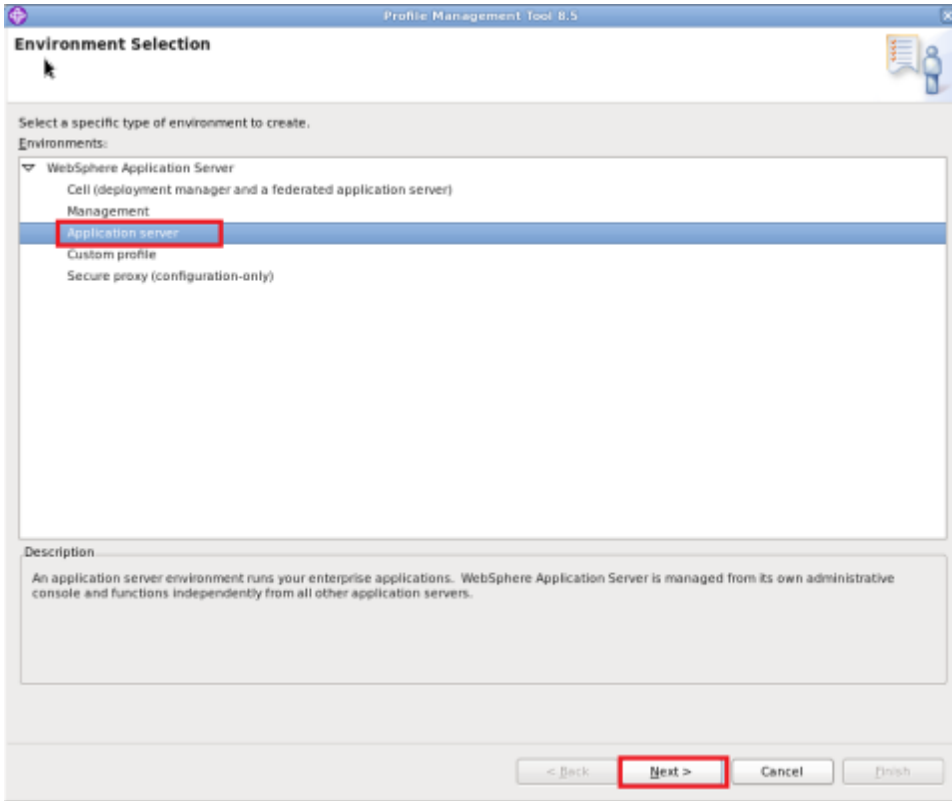
Navigation: IBM WebSphere > IBM WebSphere Application Server V8.5 > Tools > Profile Management Tool



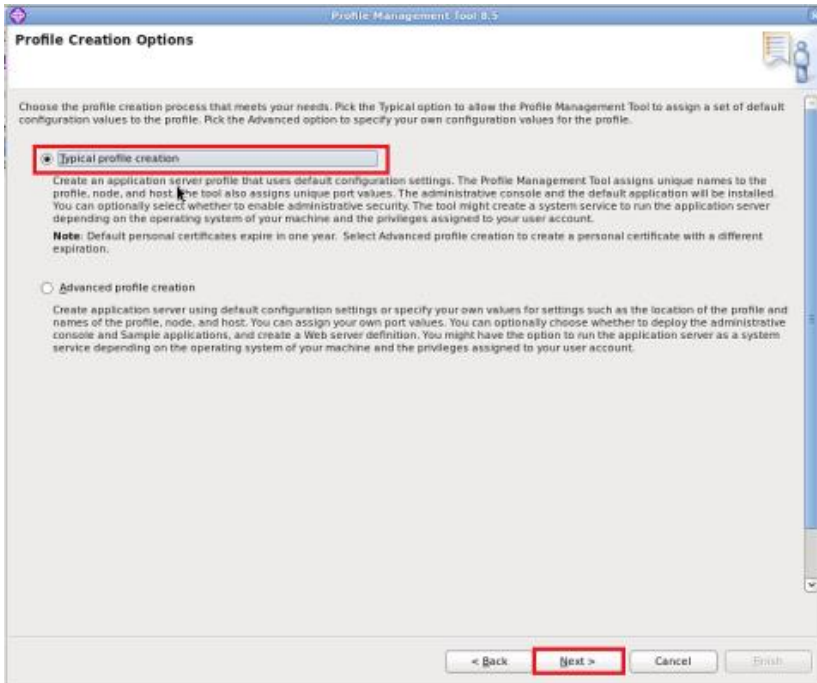
Navigation : Profile Management Tool > Create



Navigation : Application Server > Next



Navigation : Typical profile creation > Next



Navigation: *Enable administrative security > Next*

Administrative Security

Choose whether to enable administrative security. To enable security, supply a user name and password for logging into administrative tools. This administrative user is created in a repository within the application server. After profile creation finishes, you can add more users, groups, or external repositories.

Enable administrative security

User name: websphere

Password: *****

Confirm password: *****

See the information center for more information about administrative security.
[View the online information center](#)

< Back **Next >** Cancel Finish

Navigation : *Create Summary*

Profile Creation Summary

Review the information in the summary for correctness. If the information is correct, click **Create** to start creating a new profile. Click **Back** to change values on the previous panels.

Application server environment to create: Application server
Location: /opt/IBM/WebSphere/AppServer/profiles/AppSrv06
Disk space required: 200 MB

Profile name: AppSrv06
Make this profile the default: True
Performance tuning setting: Standard

Node name: ofss220367Node01
Server name: server1
Host name: ofss220367.in.oracle.com

Deploy the administrative console (recommended): True
Deploy the default application: True

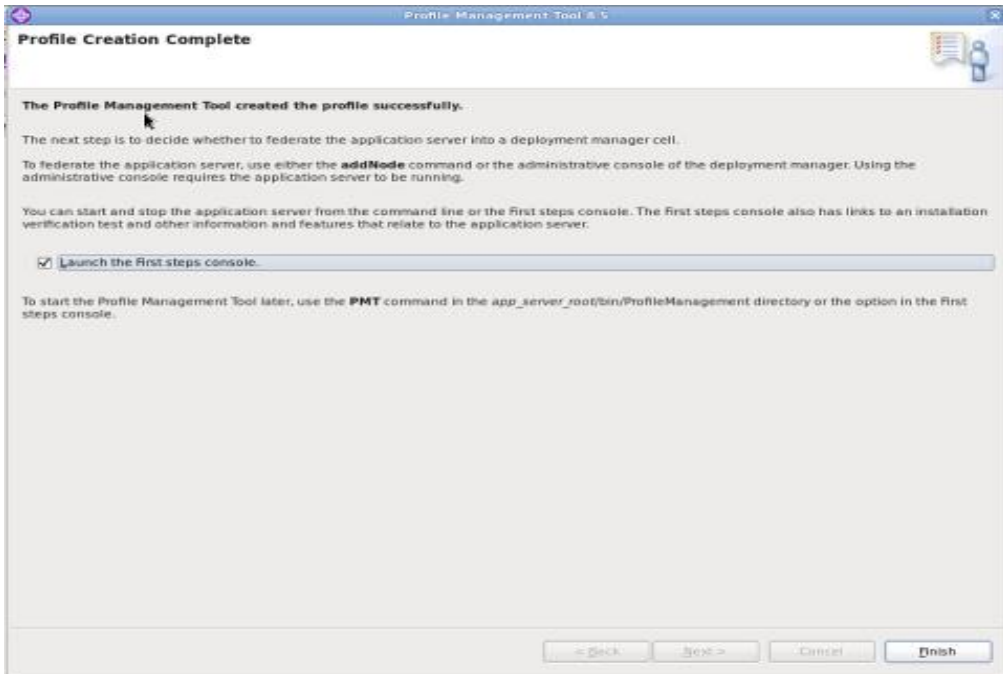
Enable administrative security (recommended): True

Administrative console port: 9060
Administrative console secure port: 9043
HTTP transport port: 9080
HTTPS transport port: 9443
Bootstrap port: 2809
SOAP connector port: 8880

Run application server as a service: False

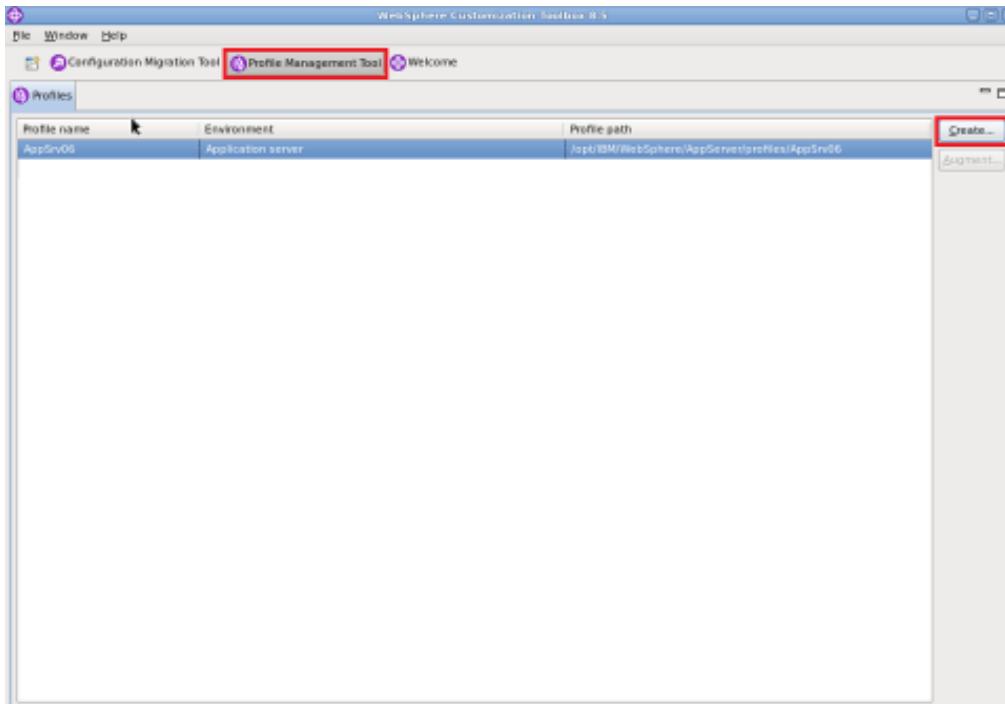
< Back **Create** Cancel Finish

Navigation : *Finish*

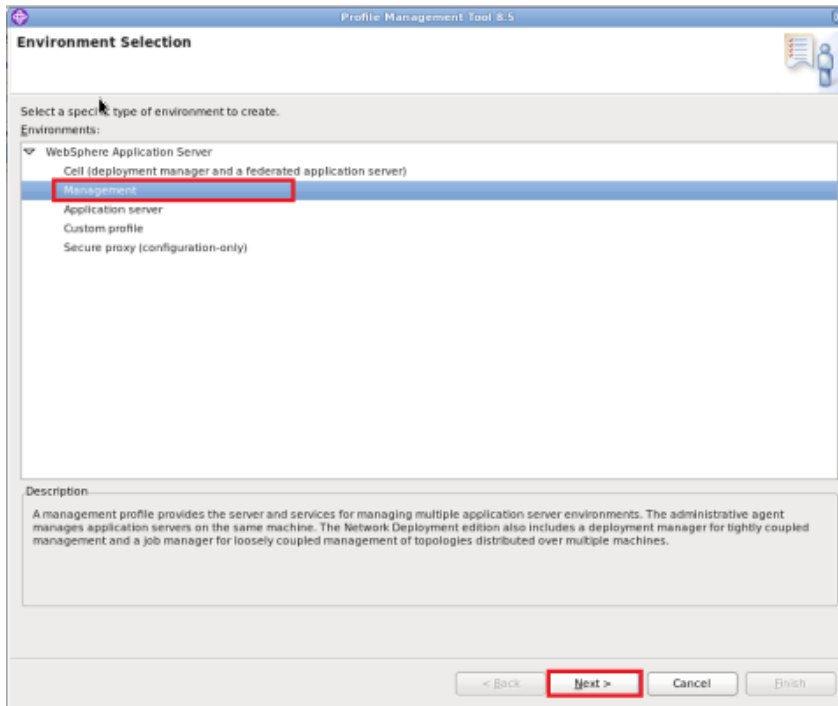


4.1.1 Create Deployment Manager Profile

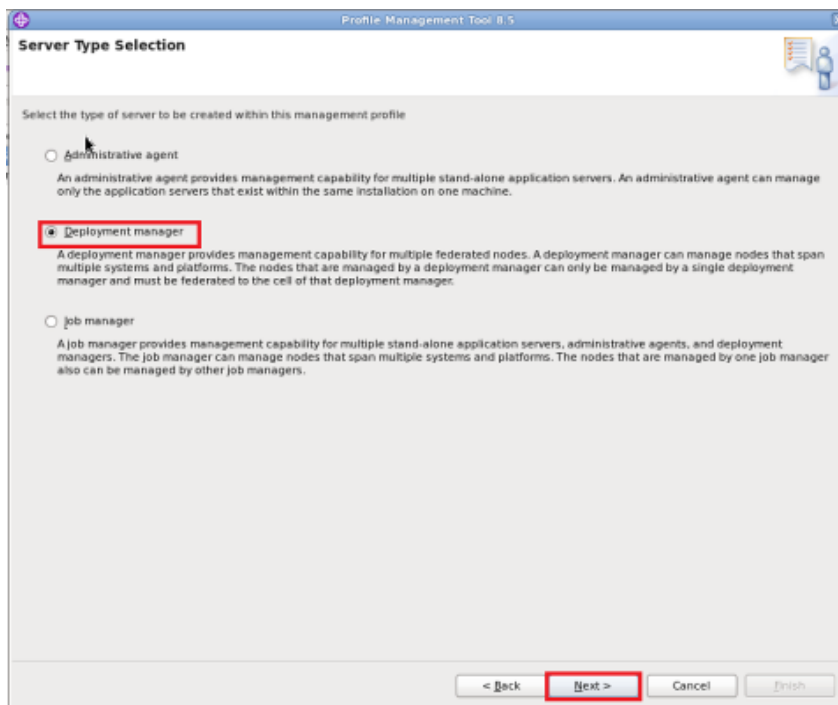
Navigation : *Profile Management Tool > Create*



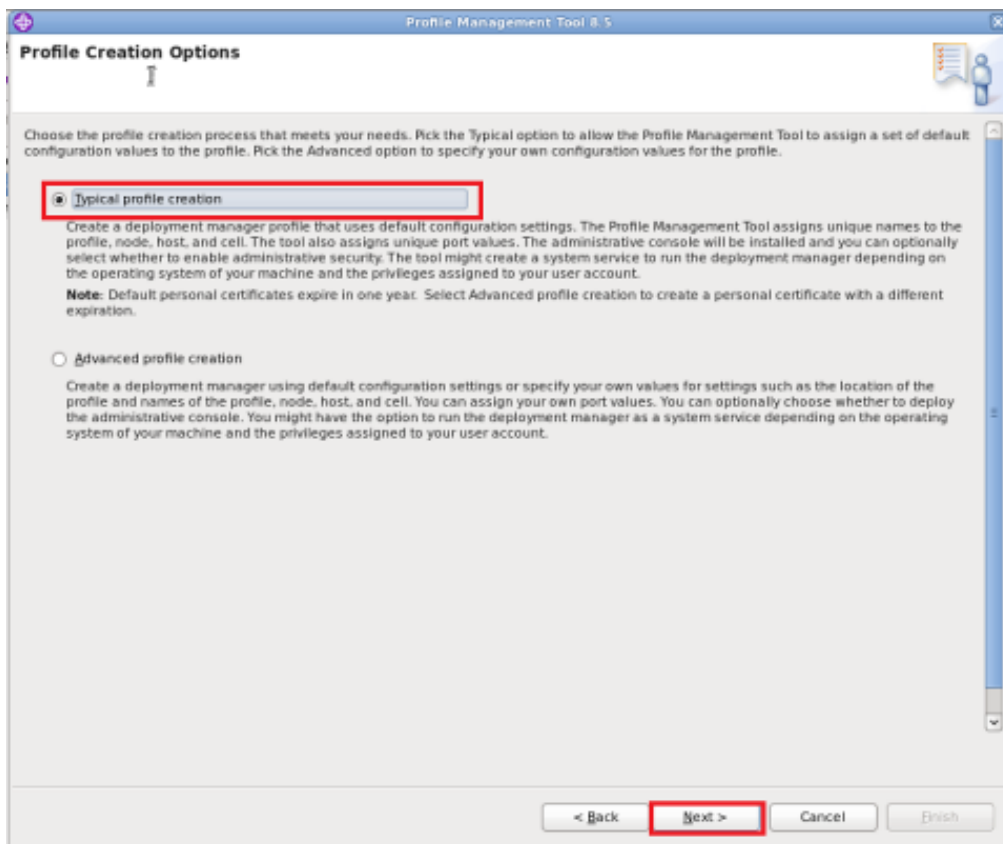
Navigation : *Management >Next*



Navigation : *Deployment Manager > Next*



Navigation : *Typical profile creation > Next*



Navigation : *Enable administrative security* > Next

Profile Management Tool 8.5

Administrative Security

Choose whether to enable administrative security. To enable security, supply a user name and password for logging into administrative tools. This administrative user is created in a repository within the application server. After profile creation finishes, you can add more users, groups, or external repositories.

Enable administrative security

Enable administrative user

Enable administrative groups

User name:
admin

Password:

Confirm password:

See the information center for more information about administrative security.
[View the online information center](#)

< Back Next > Cancel Finish

Navigation : Create

Profile Management Tool 8.5

Profile Creation Summary

Review the information in the summary for correctness. If the information is correct, click **Create** to start creating a new profile. Click **Back** to change values on the previous panels.

Application server environment to create: Management
Server type: Deployment manager
Location: /opt/IBM/WebSphere/AppServer/profiles/Dmgr04
Disk space required: 30 MB

Profile name: Dmgr04
Make this profile the default: False

Cell name: ofss220367Cell01
Node name: ofss220367CellManager01
Host name: ofss220367.in.oracle.com

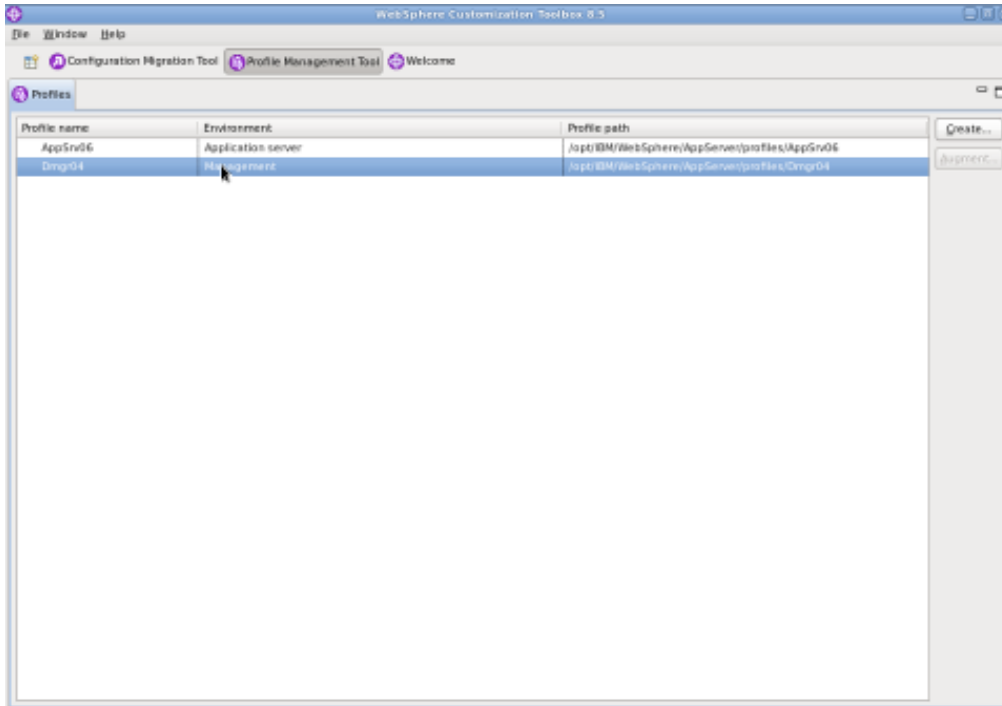
Deploy the administrative console (recommended): True

Enable administrative security (recommended): True

Administrative console port: 9061
Administrative console secure port: 9044
Deployment manager bootstrap port: 9809
Deployment manager SOAP connector port: 8879

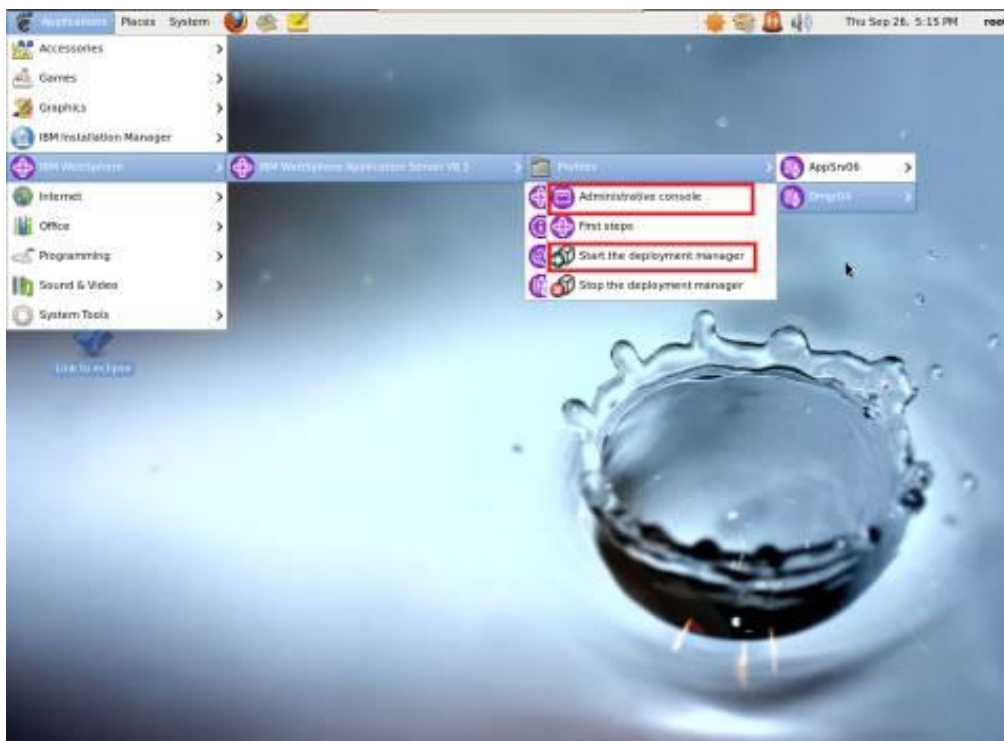
Run deployment manager as a service: False

< Back Create Cancel Finish



Start Deployment Manager & Open Administrative Console

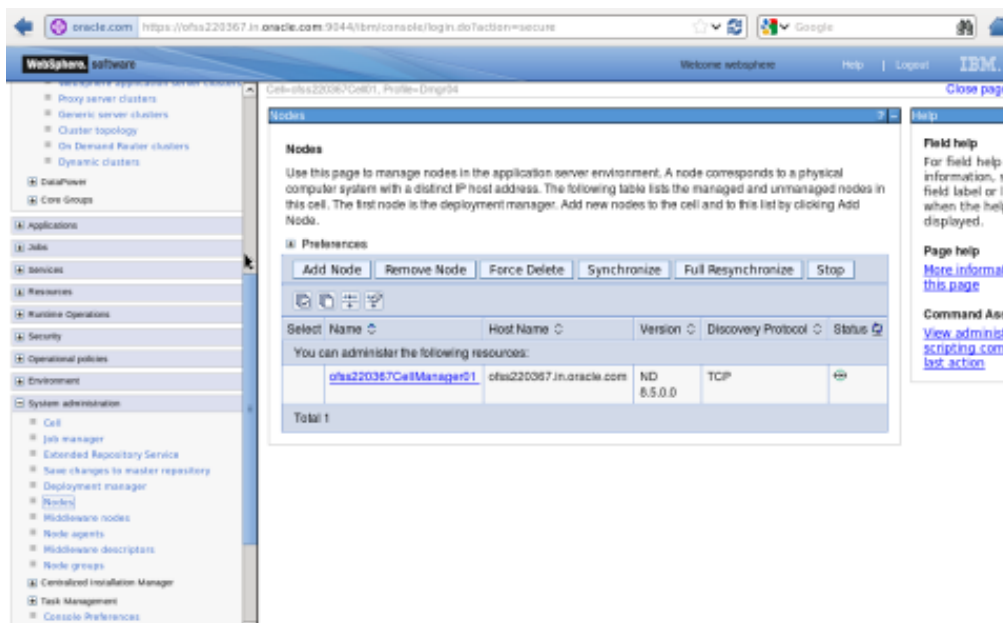
Navigation : IBM WebSphere > IBM WebSphere Application Server V8.5 > Profiles > Dmgr[i]>Start the deployment *manager* > *Administrative console*



Log into Deployment Manger Console

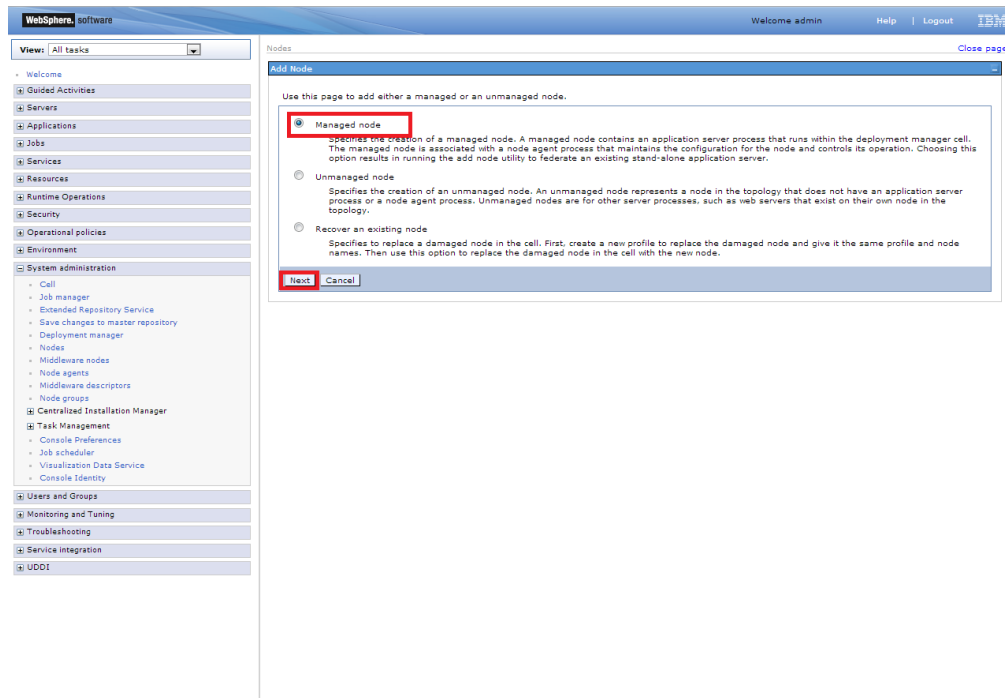


Navigation : System administration > Nodes > Add Node



4.2 Create Node

Navigation : *System administration > Nodes > Add Node*



Provide the following field information and Click 'OK'

Host : Host Machine with running Application Server

JMX Connector type : SOAP

JMX Connector Port : SOAP_CONNECTOR_ADDRESS of Application Server

Application server user name : Application server user id

Application server password : Application server password

Deployment manager user name : Deployment manager user id

Deployment manager password : Deployment manager password

WebSphere software Welcome admin Help | Logout IBM

Nodes Close page

Add Managed Node

Use this page to identify a stand-alone application server process that is running. Start the application server, if necessary, or add the node from the command line by running the addnode command from the bin directory of the stopped application server profile.

Node connection

* Host
ofss220367

* JMX connector type
SOAP

* JMX connector port
8880

* Application server user name
websphere

* Application server password

* Deployment manager user name
admin

* Deployment manager password

Config URL
file:\${USER_INSTALL_ROOT}/properties/sas.dll

Options

Include applications

Include buses

Starting port

Use default

Specify
port number

OK 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](#)

WebSphere software Welcome admin Help | Logout IBM

Adding node

ADMU0001: Begin federation of node ofss220367Node01 with Deployment Manager at ofss220367.in.oracle.com:8879.

ADMU0006: Successfully connected to Deployment Manager Server: ofss220367.in.oracle.com:8879

ADMU0008: Servers found in configuration:

ADMU0009: Server name: server1

ADMU0010: Stopping all server processes for node ofss220367Node01

ADMU0010: Server server1 is now STOPPED

ADMU0024: Deleting the old backup directory.

ADMU0015: Backing up the original cell. Node01

ADMU0012: Creating Node Agent config.

ADMU0014: Adding node ofss220367Node01 configuration to cell: ofss220367Cell01

ADMU0016: Synchronizing configuration between node and cell.

Transferring data from ofss220367.in.oracle.com...

Nodes

Use this page to manage nodes in the application server environment. A node corresponds to a physical computer system with a distinct IP host address. The following table lists the managed and unmanaged nodes in this cell. The first node is the deployment manager. Add new nodes to the cell and to this list by clicking Add Node.

Preferences

Add Node Remove Node Force Delete Synchronize Full Resynchronize Stop

Select	Name	Host Name	Version	Discovery Protocol	Status
<input type="checkbox"/>	otfs220367CellManager01	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	otfs220367Node01	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
Total 2					

Create necessary number of nodes following same instructions above:

Messages

Your workspace has been auto-refreshed from the master configuration. You can disable auto-refresh in your user preferences.

Nodes

Use this page to manage nodes in the application server environment. A node corresponds to a physical computer system with a distinct IP host address. The following table lists the managed and unmanaged nodes in this cell. The first node is the deployment manager. Add new nodes to the cell and to this list by clicking Add Node.

Preferences

Add Node Remove Node Force Delete Synchronize Full Resynchronize Stop

Select	Name	Host Name	Version	Discovery Protocol	Status
<input type="checkbox"/>	otfs225367CellManager01	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	otfs225367Node01	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	otfs22555Node01	otfs22555.in.oracle.com	ND 8.5.0.0	TCP	⊕
Total 3					

4.2.1 Start Node Agents

Navigation : *System administration> Node agents>Restart*

Node agents

Use this page to manage node agents and application servers on the node that a node agent manages. The node agent process serves as an intermediary between the application servers on the node and the deployment manager. The node agent process runs on every node and is specialized to perform node-specific administration functions, such as server process monitoring, configuration synchronization, file transfer, and request routing.

Preferences

Stop Restart Restart all Servers on Node

Select	Name	Node	Host Name	Version	Status
<input type="checkbox"/>	nodeagent	ots222555Node01	ots222555.jn.oracle.com	ND 8.5.0.0	Running
<input type="checkbox"/>	nodeagent	ots220367Node01	ots220367.jn.oracle.com	ND 8.5.0.0	Running

Total 2

4.3 Create Cluster

Navigation: *Servers>Clusters> WebSphere application server clusters > New*

WebSphere application server clusters

Use this page to change the configuration settings for a cluster. A server cluster consists of a group of application servers. If one of the member servers fails, requests will be routed to other members of the cluster. 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.

Preferences

New... Delete Start Stop Ripplstart ImmediateStop

Select	Name	Status
	None	

Total 0

Navigation : *Uncheck [Prefer Local] > Next*

WebSphere software | Welcome admin | Help | Logout | Close page

View: All tasks

- Welcome
- Guided Activities
- Servers
 - New server
 - All servers
- Server Types
- Clusters
 - WebSphere application server clusters
 - Proxy server clusters
 - Generic server clusters
 - Cluster topology
 - On Demand Router clusters
 - Dynamic clusters
- DataPower
- Core Groups
- Applications
- Jobs
- Services
- Resources
- Runtime Operations
- Security
- Operational policies
- Environment
- System administration
 - Call
 - Job manager
 - Extended Repository Service
 - Save changes to master repository
 - Deployment manager
 - Nodes
 - Middleware nodes
 - Node agents
 - Middleware descriptors
 - Node groups
 - Centralized Installation Manager
 - Task Management
 - Console Preferences
 - Job scheduler
 - Visualization Data Service
 - Console Identity
- Users and Groups
- Monitoring and Tuning
- Troubleshooting

Callmofes220267 Call03, ProblemMgr04

Create a new cluster

Enter basic cluster information

Cluster name: [CLUSTER_1]

Prefer local: Specifies whether enterprise bean requests will be routed to the node on which the client resides when possible.

Configure HTTP session memory-to-memory replication

Next Cancel

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

Page help: [View information about this page](#)

4.3.1 Add Cluster Members

WebSphere software

Welcome admin | Help | Logout

Cell=ofas220367Cell01, Profile=Dmgr04

Create a new cluster

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

Step 4: Summary

Create first cluster member

The first cluster member determines the server settings for the cluster members. A server configuration template is created from the first member and stored as part of the cluster data. Additional cluster members are copied from this template.

Member name: MS_1

Select node: ofas220367Node01 (ND 8.5.0.0)

Weight: 2 (0..100)

Generate unique HTTP ports

Select how the server resources are promoted in the cluster: Cluster

Select basis for first cluster member:

- Create the member using an application server template.
 - default
- Create the member using an existing application server as a template.
 - ofas220367Cell01/ofas220367Node01 (ND 8.5.0.0)/MS_1
- Create the member by converting an existing application server.
 - ofas220367Cell01/ofas220367Node01 (ND 8.5.0.0)/MS_3
- None. Create an empty cluster.

Previous 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

Add required number of cluster members

Navigation : Add Member > Next

WebSphere software

Welcome admin | Help | Logout

Cell=ofas220367Cell01, Profile=Dmgr04

Create a new cluster

Step 1: Enter basic cluster information

Step 2: Create first cluster member

Step 3: Create additional cluster members

Step 4: Summary

Create additional cluster members

Enter information about this new cluster member, and click Add Member to add this cluster member to the member list. A server configuration template is created from the first member, and stored as part of the cluster data. Additional cluster members are copied from this template.

Member name: MS_2

Select node: ofas220367Node01 (ND 8.5.0.0)

Weight: 2 (0..100)

Generate unique HTTP ports

Add Member

Use the Edit function to modify the properties of a cluster member in this list. Use the Delete function to remove a cluster member from this list. You are not allowed to edit or remove the first cluster member.

Edit Delete

Select	Member name	Nodes	Version	Weight
<input type="checkbox"/>	MS_1	ofas220367Node01	ND 8.5.0.0	2
Total				1

Previous 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

Navigation : Next

The screenshot shows the 'Create a new cluster' wizard in the Oracle WebSphere Administration Console. The left sidebar contains a navigation tree with categories like Servers, Clusters, DataPower, Core Groups, Applications, Jobs, Services, Resources, Runtime Operations, Security, Operational policies, Environment, and System administration. The main content area is titled 'Create a new cluster' and shows the progress through four steps: Step 1: Enter basic cluster information, Step 2: Create first cluster member, Step 3: Create additional cluster members (current step), and Step 4: Summary. The 'Create additional cluster members' section includes a text field for 'Member name', a 'Select node' dropdown menu (currently showing 'otss222555Node01(ND 8.5.0.0)'), a 'Weight' input field (set to 2), and a checked checkbox for 'Generate unique HTTP ports'. An 'Add Member' button is present. Below this is a table with columns 'Select', 'Member name', 'Nodes', 'Version', and 'Weight'. The table contains two rows: one for 'MS_1' with node 'otss220367Node01' and version 'ND 8.5.0.0', and another for 'MS_2' with node 'otss222555Node01' and version 'ND 8.5.0.0'. A 'Total 2' is shown at the bottom of the table. A 'Field help' box on the right explains that for field help information, a field label or list marker should be selected. A 'Page help' box also provides a link for more information. At the bottom, there are 'Previous', 'Next', and 'Cancel' buttons.

Navigation : Finish

The screenshot shows the 'Create a new cluster' wizard in the Oracle WebSphere Administration Console, now at Step 4: Summary. The left sidebar is the same as in the previous screenshot. The main content area shows the 'Summary' section, which provides a 'Summary of actions:' table. The table has two columns: 'Options' and 'Values'. The options and their values are: Cluster Name (CLUSTER_1), Core Group (DefaultCoreGroup), Node group (DefaultNodeGroup), Prefer local (false), Configure HTTP session memory-to-memory replication (false), Server name (MS_1), Node (otss220367Node01(ND 8.5.0.0)), Weight (2), Clone Template (default), Clone Basis (Create the member using an application server template.), Select how the server resources are promoted in the cluster (cluster), Generate unique HTTP ports (true), Server name (MS_2), Node (otss220367Node01(ND 8.5.0.0)), Weight (2), Clone Template (Version 8.5 member template), and Generate unique HTTP ports (true). A 'Field help' box on the right explains that for field help information, a field label or list marker should be selected. A 'Page help' box also provides a link for more information. At the bottom, there are 'Previous', 'Finish', and 'Cancel' buttons.

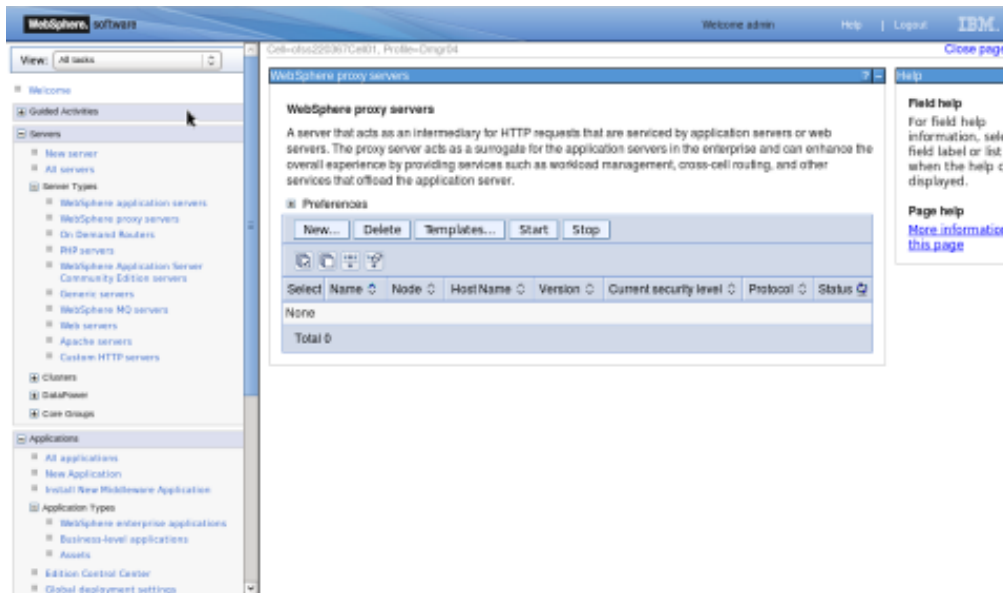
4.3.2 Start Cluster

The screenshot shows the IBM WebSphere software administration console. The left-hand navigation pane is expanded to 'Clusters' > 'WebSphere application server clusters'. The main content area displays the 'WebSphere application server clusters' page. At the top, there are buttons for 'New...', 'Delete', 'Start', 'Stop', 'Ripplstart', and 'ImmediateStop'. Below these is a table with columns for 'Select', 'Name', and 'Status'. One resource, 'CLUSTER_1', is selected with a checkmark in the 'Select' column, and its status is indicated by a red 'X' in the 'Status' column. The text below the table says 'Total 1'. On the right side, there is a 'Help' section with 'Field help', 'Page help', and 'Command Assistant' links.

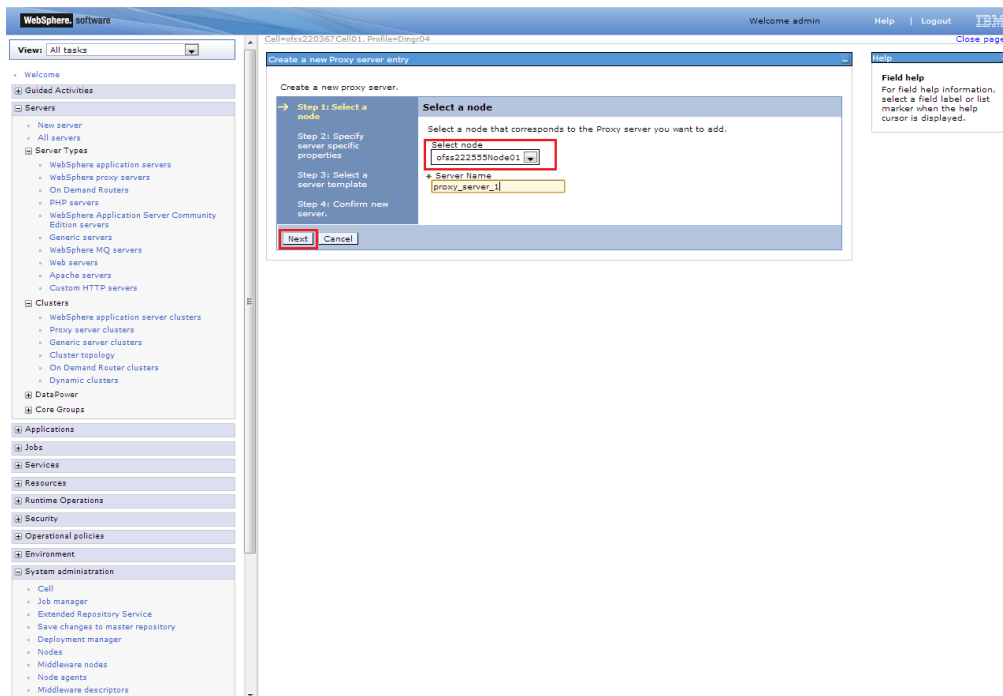
This screenshot shows the same WebSphere administration console as the previous one, but with a message box displayed. The message box contains the text: 'The start operation on cluster CLUSTER_1 has been initiated. It may take several minutes for each cluster member to finish starting.' The 'CLUSTER_1' resource in the table below now has a green arrow in the 'Status' column, indicating that the start operation is in progress. The rest of the interface, including the navigation pane and the 'WebSphere application server clusters' page title and buttons, remains the same.

4.4 Create Proxy Server

Navigation : Servers > Server Types > WebSphere proxy servers > New



Navigation : [Select appropriate Node] > Next



WebSphere, software | Welcome admin | Help | Logout | Close page

Cell:fofs220367Call01, Profile:Dmgr04

Views: All tasks

Guided Activities

- Servers
 - New server
 - All servers
 - Server Types
 - WebSphere application servers
 - WebSphere proxy servers
 - On Demand Routers
 - PHP servers
 - WebSphere Application Server Community Edition servers
 - Generic servers
 - WebSphere MQ servers
 - Web servers
 - Apache servers
 - Custom HTTP servers
 - Clusters
 - WebSphere application server clusters
 - Proxy server clusters
 - Generic server clusters
 - Cluster topology
 - On Demand Router clusters
 - Dynamic clusters
 - DataPower
 - Core Groups
- Applications
- Jobs
- Services
- Resources
- Runtime Operations
- Security
- Operational policies
- Environment
- System administration
 - Cell
 - Job manager
 - Extended Repository Service
 - Save changes to master repository
 - Deployment manager
 - Nodes
 - Middleware nodes
 - Node agents
 - Middleware descriptors

Create a new Proxy server entry

Step 1: Select a node

Step 2: Specify server specific properties

Step 3: Select a server template

Step 4: Confirm new server.

Specify server specific properties

Supported protocols

- HTTP
- SIP
- Generate unique ports

Previous Next Cancel

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

WebSphere, software | Welcome admin | Help | Logout | Close page

Cell:fofs220367Call01, Profile:Dmgr04

Views: All tasks

Guided Activities

- Servers
 - New server
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 - Middleware nodes
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Create a new Proxy server entry

Step 1: Select a node

Step 2: Specify server specific properties

Step 3: Select a server template

Step 4: Confirm new server.

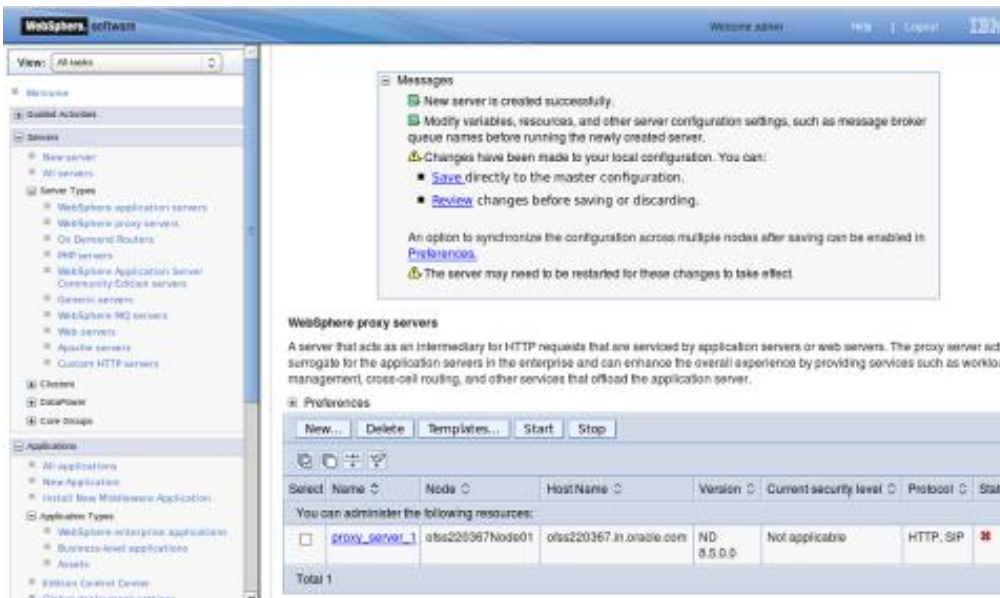
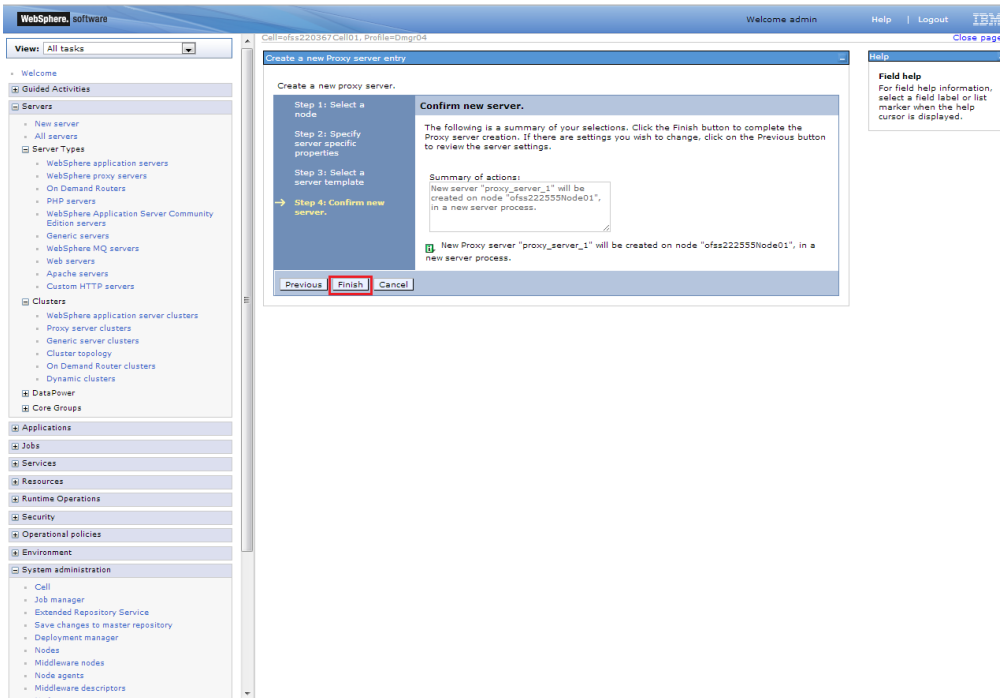
Select a server template

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"/>	proxy_server_foundation	System	The WebSphere Default Proxy Server Template

Previous Next Cancel

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



4.4.1 Start Proxy Server

WebSphere proxy servers

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.

Preferences

How... Delete Templates... Start Stop

Select	Name	Node	Host Name	Version	Current security level	Protocol	Status
<input checked="" type="checkbox"/>	proxy_server_1	otss220367Node01	otss220367.in.oracle.com	8.5.0.0	Not applicable	HTTP, SIP	Start

You can administer the following resources:

Total 1

Messages

Server otss220367Node01/proxy_server_1 started successfully. The collection may need to be refreshed to show the current server status. [View JVM logs](#) for further details.

WebSphere proxy servers

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.

Preferences

How... Delete Templates... Start Stop

Select	Name	Node	Host Name	Version	Current security level	Protocol	Status
<input type="checkbox"/>	proxy_server_1	otss220367Node01	otss220367.in.oracle.com	8.5.0.0	Not applicable	HTTP, SIP	Start

You can administer the following resources:

Total 1

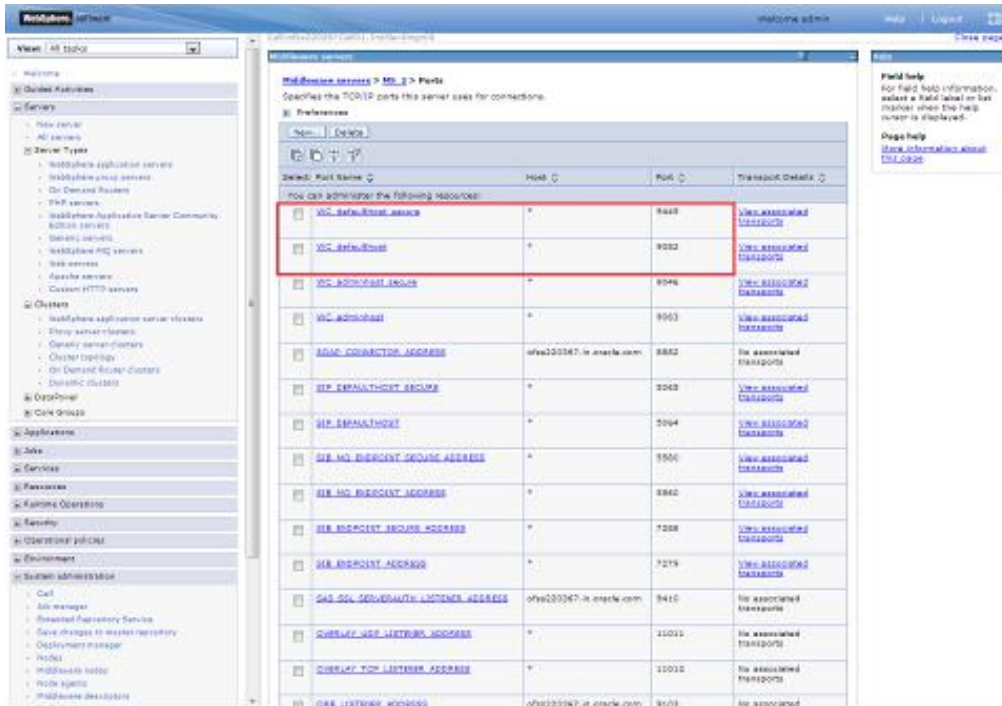
4.5 Configure Virtual Host

Make a note of “WC_defaulthost”/”WS_defaulthost_secure” port for server MS1 : 9081/9444

The screenshot shows the Oracle WebLogic Server Administration Console. The main window displays the configuration for 'MiddleWare services > MS_1 > Ports'. The page title is 'MiddleWare services > MS_1 > Ports' and it includes instructions: 'Specify the TCP/IP ports this server uses for connections.' and 'a: http://en10000'. There are 'New...' and 'Delete' buttons. Below this is a table of ports. Two rows are highlighted with a red border: 'WC_defaulthost_secure' with port 9444 and 'WC_defaulthost' with port 9081. The table also includes columns for 'Name', 'Port', 'Port', and 'Transport Details'. Other ports listed include 'WC_defaulthost_secure' (9043), 'WC_ADMIN_CONSOLE' (9042), 'SOAP_CONNECTOR_ADDRESS' (9081), 'J2EE_DEFAULTHOST_SECURE' (9081), 'J2EE_DEFAULTHOST' (9081), 'J2EE_HTTP_ENDPOINT_SECURE_ADDRESS' (9079), 'J2EE_HTTP_ENDPOINT_ADDRESS' (9089), 'J2EE_ENDPOINT_SECURE_ADDRESS' (9089), 'J2EE_ENDPOINT_ADDRESS' (9078), 'J2EE_JSP_SERVLETCH_LISTENER_ADDRESS' (9087), 'QUICKSTART_VQPC_LISTENER_ADDRESS' (11009), 'QUICKSTART_TCP_LISTENER_ADDRESS' (11810), and 'J2EE_LISTENER_ADDRESS' (9082).

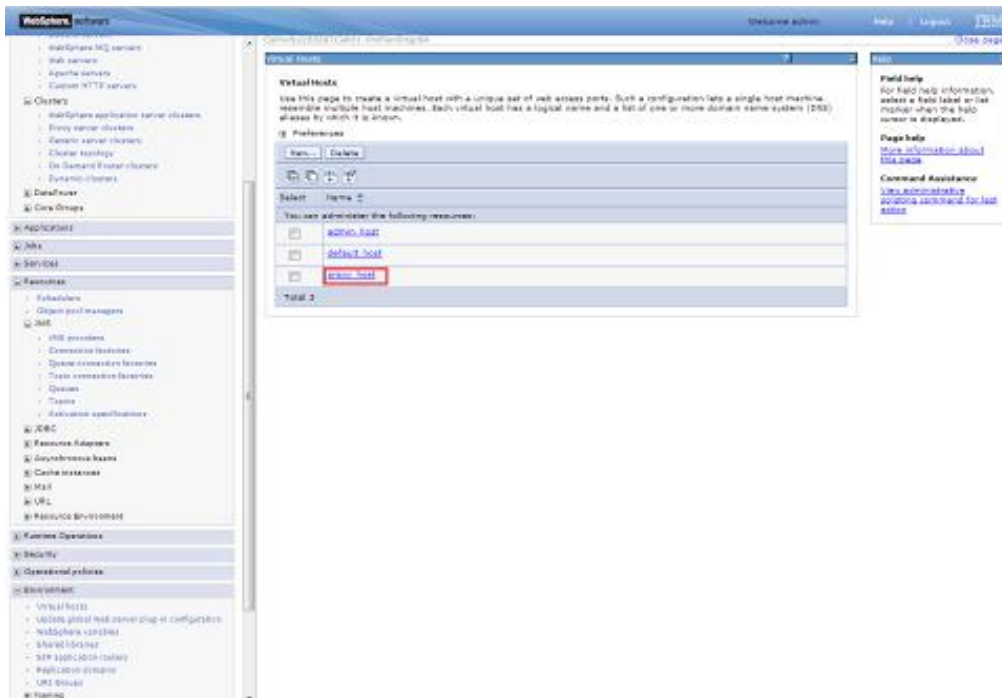
Name	Port	Port	Transport Details
<input type="checkbox"/> WC_defaulthost_secure	+	9444	No associated transports
<input type="checkbox"/> WC_defaulthost	+	9081	No associated transports
<input type="checkbox"/> WC_defaulthost_secure	+	9043	No associated transports
<input type="checkbox"/> WC_ADMIN_CONSOLE	+	9042	No associated transports
<input type="checkbox"/> SOAP_CONNECTOR_ADDRESS	http://en10000	9081	No associated transports
<input type="checkbox"/> J2EE_DEFAULTHOST_SECURE	+	9081	No associated transports
<input type="checkbox"/> J2EE_DEFAULTHOST	+	9081	No associated transports
<input type="checkbox"/> J2EE_HTTP_ENDPOINT_SECURE_ADDRESS	+	9079	No associated transports
<input type="checkbox"/> J2EE_HTTP_ENDPOINT_ADDRESS	+	9089	No associated transports
<input type="checkbox"/> J2EE_ENDPOINT_SECURE_ADDRESS	+	9089	No associated transports
<input type="checkbox"/> J2EE_ENDPOINT_ADDRESS	+	9078	No associated transports
<input type="checkbox"/> J2EE_JSP_SERVLETCH_LISTENER_ADDRESS	http://en10000	9087	No associated transports
<input type="checkbox"/> QUICKSTART_VQPC_LISTENER_ADDRESS	+	11009	No associated transports
<input type="checkbox"/> QUICKSTART_TCP_LISTENER_ADDRESS	+	11810	No associated transports
<input type="checkbox"/> J2EE_LISTENER_ADDRESS	http://en10000	9082	No associated

Make a note of “WC_defaulthost”/”WS_defaulthost_secure” for MS2 : 9082/9445

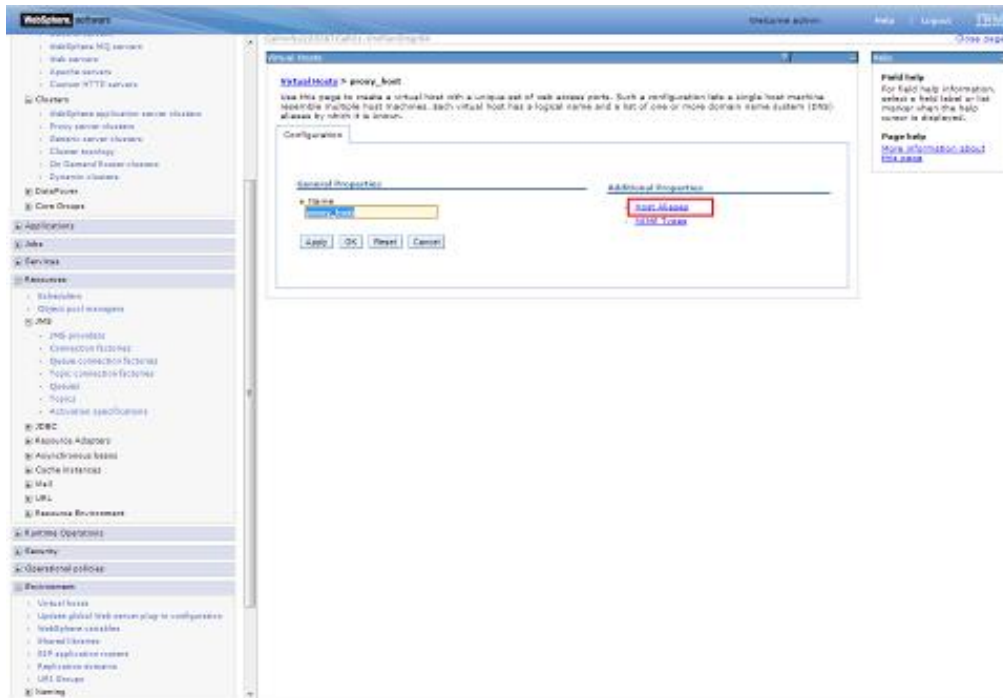


4.5.1 Virtual Host Setup

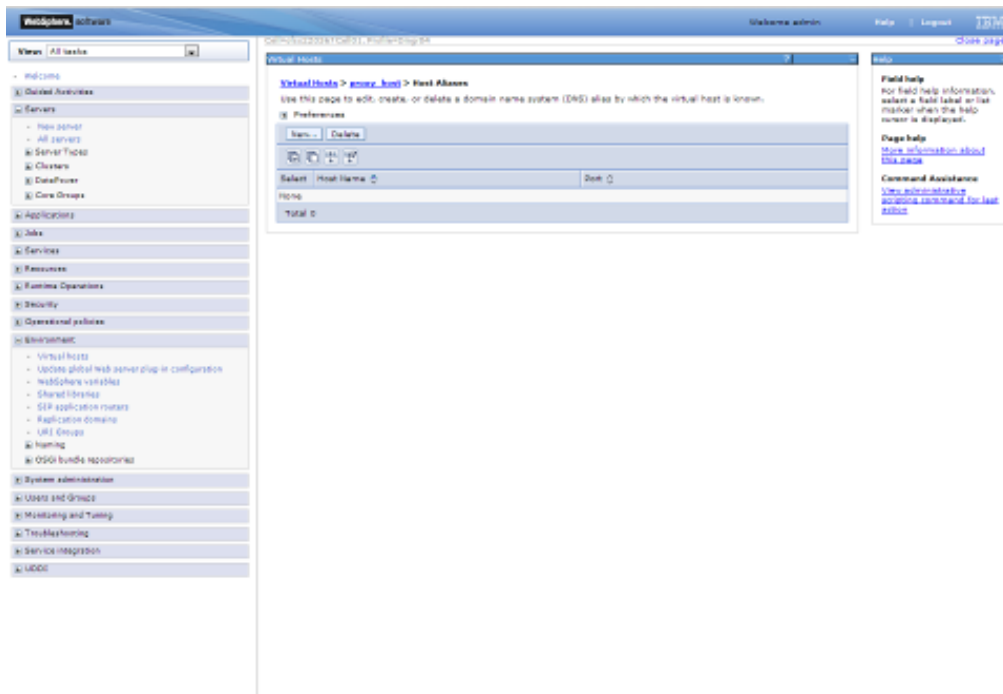
Navigation : *Environment>Virtual hosts>proxy_host*



Navigation : Host Aliases



Navigation : Environment>Virtual hosts>proxy_host>Host Aliases > New



Create New Alias for default port in managed server <<9081>>:

The screenshot shows the Oracle WebLogic Administration Console interface. The left-hand navigation pane is expanded to 'Virtual Hosts' under the 'Environment' section. The main content area displays the 'Virtual Hosts' configuration page for a new alias named 'myhost'. The page title is 'Virtual Hosts > myhost > Host Aliases > New...'. Below the title, there is a brief instruction: 'Use this page to edit or create a domain name system (DNS) alias by which the virtual host is known. An alias is the combination of DNS host name and a unique port number. A web client uses the alias to form the URL, request of a web application resource. Application resources include services, JSP files, or HTML pages. For example, the default host alias is the myhost.network.com:9080 portion of http://myhost.network.com:9080/services/ahosp or the myhost.network.com:9043 portion of a service https://myhost.network.com:9043/secure/ahosp URL.'

The 'Configuration' section is expanded to show 'General Properties'. There are two input fields: 'Host Name' with the value 'myhost' and 'Port' with the value '9081'. Below these fields are four buttons: 'Apply', 'OK', 'Reset', and 'Cancel'.

On the right side of the page, there are two help sections: 'Field help' and 'Page help'. The 'Field help' section states: 'For field help information, select a field label or list member when the help cursor is displayed.' The 'Page help' section states: 'For information about this page.'

The screenshot shows the Oracle WebLogic Administration Console interface. The left-hand navigation pane is expanded to 'Virtual Hosts' under the 'Environment' section. The main content area displays the 'Virtual Hosts' configuration page for a list of aliases. The page title is 'Virtual Hosts > myhost > Host Aliases'. Below the title, there is a brief instruction: 'Use this page to edit, create, or delete a domain name system (DNS) alias by which the virtual host is known.'

The 'Dependencies' section is expanded to show a table of aliases. The table has columns for 'Default', 'Host Name', and 'Port'. There is one entry in the table with 'Default' set to 'true', 'Host Name' set to 'myhost', and 'Port' set to '9081'. Below the table, there is a summary row: 'Total 1'.

On the right side of the page, there are two help sections: 'Field help' and 'Page help'. The 'Field help' section states: 'For field help information, select a field label or list member when the help cursor is displayed.' The 'Page help' section states: 'For information about this page.'

Below the 'Page help' section, there is a 'Command Assistance' section with the text: 'View administrative commands associated with this page.'

Similarly create proxy alias for all cluster related server default ports

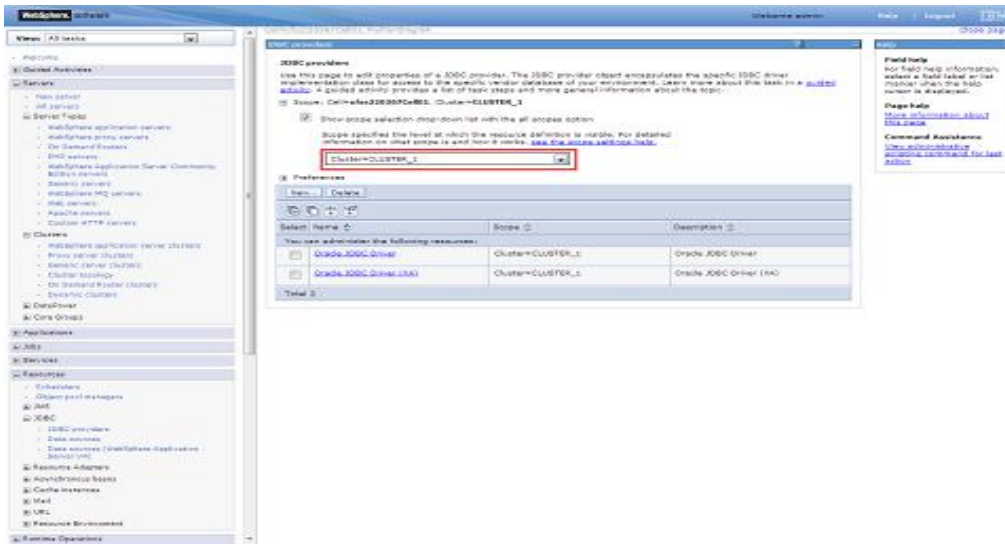
The screenshot shows the Oracle WebLogic Server Administration Console interface. The breadcrumb navigation is **Virtual hosts > proxy_host > Proxy Aliases**. The page title is **Virtual hosts > proxy_host > Proxy Aliases**. Below the title, there is a description: "Use this page to edit, create, or delete a domain name system (DNS) alias by which the virtual host is known." There is a **Dependencies** section with a plus icon. Below that is a table of resources:

Select	Host Name	Port
<input type="checkbox"/>		8081
<input type="checkbox"/>		8084
<input type="checkbox"/>		8082
<input type="checkbox"/>		8443
Total: 4		

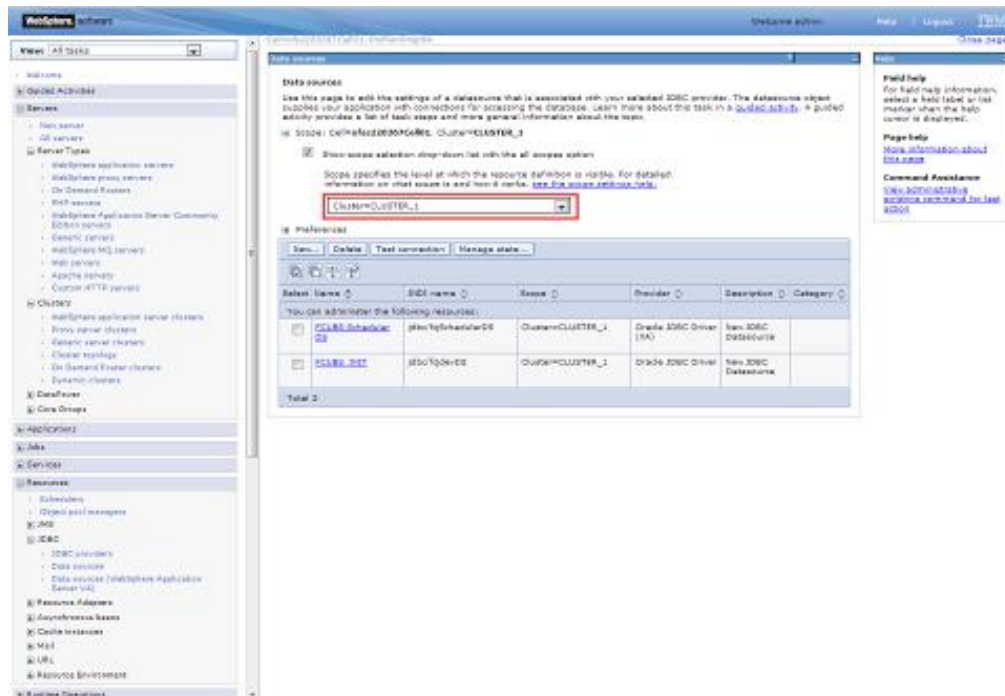
On the right side, there is a **Field help** section with the text: "For field help information, select a field label or list marker when the help cursor is displayed." Below that is a **Page help** section with the text: "More information about this page" and a **Command Assistance** section with the text: "View documentation for this page" and a link to "Oracle documentation for WebLogic".

5. Create Resources in Cluster Scope

JDBC Provider :



Datasource :



Queue Connection Factory

Queue connection factories

A queue connection factory is used to create connections to the associated JMS provider of the JMS queue destinations, for point-to-point messaging.

Scope: `Cell=fes2283097Cell0` Cluster=`CLUSTER_1`

Show scope selection drop-down list with the all scopes option

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 selection help](#).

Cluster=`CLUSTER_1`

References

Select	Name	JMS name	Provider	Description	Scope
<input type="checkbox"/>	EmailCF	EmailCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	FC_QCF	FC_QCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	HEBQCF	HEBQCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	WebSphereQCF	WebSphereQCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>

Total: 4

JMS Queue:

Queues

A JMS queue is used as a destination for point-to-point messaging.

Scope: `Cell=fes2283097Cell0` Cluster=`CLUSTER_1`

Show scope selection drop-down list with the all scopes option

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 selection help](#).

Cluster=`CLUSTER_1`

References

Select	Name	JMS name	Provider	Description	Scope
<input type="checkbox"/>	EHS_INQUEUE	EHS_INQUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	EHS_OUTQUEUE	EHS_OUTQUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	EHS_QUEUE	EHS_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	EHS_QUEUE_DLO	EHS_QUEUE_DLO	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	EHS_QUEUE_RESPONSE	EHS_QUEUE_RESPONSE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	NOTIFY_DEST_QUEUE	NOTIFY_DEST_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	NOTIFY_QUEUE	NOTIFY_QUEUE	WebSphere MQ messaging provider	NOTIFY_QUEUE	Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	NOTIFY_QUEUE_DLO	NOTIFY_QUEUE_DLO	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>

Total: 8

Create Message Listeners for individual Servers in Cluster

Navigation : *Middleware servers > MS_1 > Message listener service > Listener Ports*

The screenshot displays the Oracle WebLogic Administrator interface. The left-hand navigation pane shows a tree structure with 'Middleware servers' expanded to 'MS_1', then 'Message listener service', and finally 'Listener Ports'. The main content area shows the configuration page for 'Listener Ports' under 'MS_1'. It includes a table with the following data:

Select	Name	Description	Connection factory JNDI name	Destination JNDI name	Status
<input type="checkbox"/>	EMail_LISTENER	EmailListener	EMailCF	EMail_QUEUE	+
<input type="checkbox"/>	EMailOUT_LISTENER	EmailOutListener	EMailCF	EMail_OUT_QUEUE	+
<input type="checkbox"/>	MDB_LISTENER	MDBListener	MDBCF	MDB_QUEUE	+
<input type="checkbox"/>	NOTIFY_LISTENER	notifyListener	notifyDestCF	NOTIFY_QUEUE	+
<input type="checkbox"/>	KTMS_LISTENER		notifyDestCF	KTMS_QUEUE	+
<input type="checkbox"/>	EMMS_LISTENER		notifyDestCF	EMMS_QUEUE	+

The table also shows a 'Total 6' at the bottom. The interface includes various control buttons like 'Name', 'Delete', 'Start', 'Stop', and 'Convert to activation specification'.

Navigation : *Middleware servers > MS_2 > Message listener service > Listener Ports*

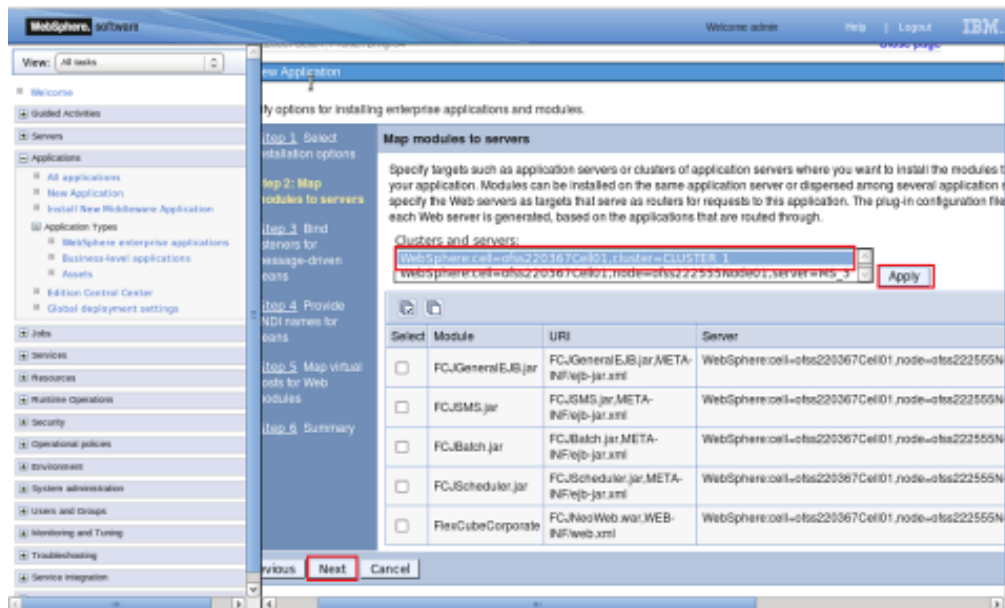
The screenshot displays the Oracle WebLogic Administrator interface for a second server, 'MS_2'. The navigation path is identical to the first screenshot: 'Middleware servers > MS_2 > Message listener service > Listener Ports'. The main content area shows the configuration page for 'Listener Ports' under 'MS_2'. It includes a table with the following data:

Select	Name	Description	Connection factory JNDI name	Destination JNDI name	Status
<input type="checkbox"/>	EMail_LISTENER		EMailCF	EMail_QUEUE	+
<input type="checkbox"/>	EMailOUT_LISTENER	EmailOutListener	EMailCF	EMail_OUT_QUEUE	+
<input type="checkbox"/>	MDB_LISTENER		MDBCF	MDB_QUEUE	+
<input type="checkbox"/>	NOTIFY_LISTENER		notifyDestCF	NOTIFY_QUEUE	+
<input type="checkbox"/>	KTMS_LISTENER		notifyDestCF	KTMS_QUEUE	+
<input type="checkbox"/>	EMMS_LISTENER		notifyDestCF	EMMS_QUEUE	+

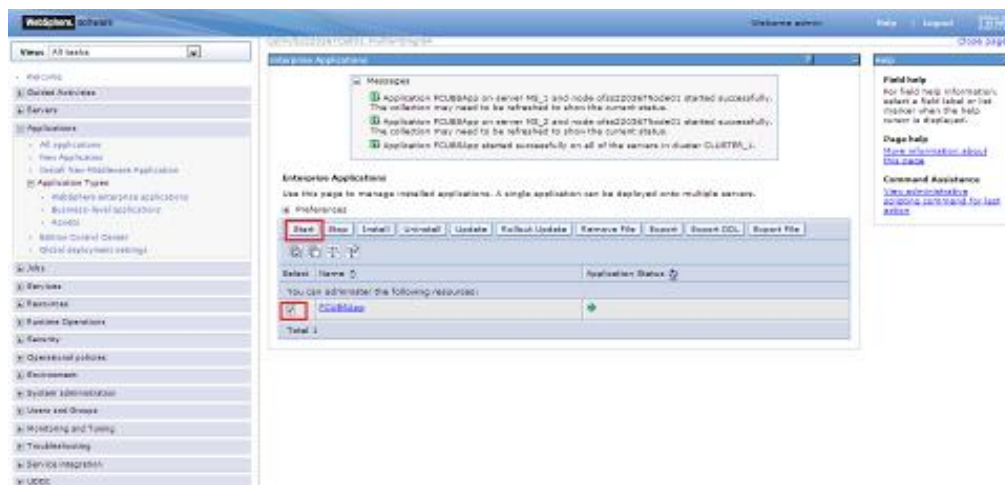
The table also shows a 'Total 6' at the bottom. The interface includes various control buttons like 'Name', 'Delete', 'Start', 'Stop', and 'Convert to activation specification'.

6. Deploy Application to Cluster

While deploying ensure the application is installed to Cluster



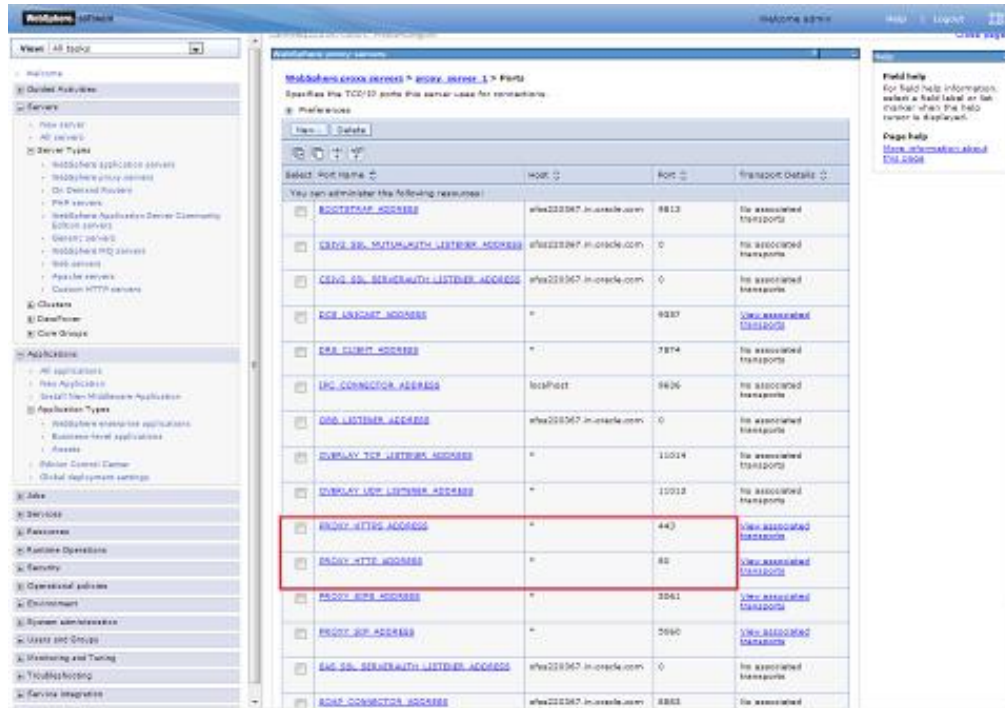
Start FCUBS application



6.1.1 Test the application

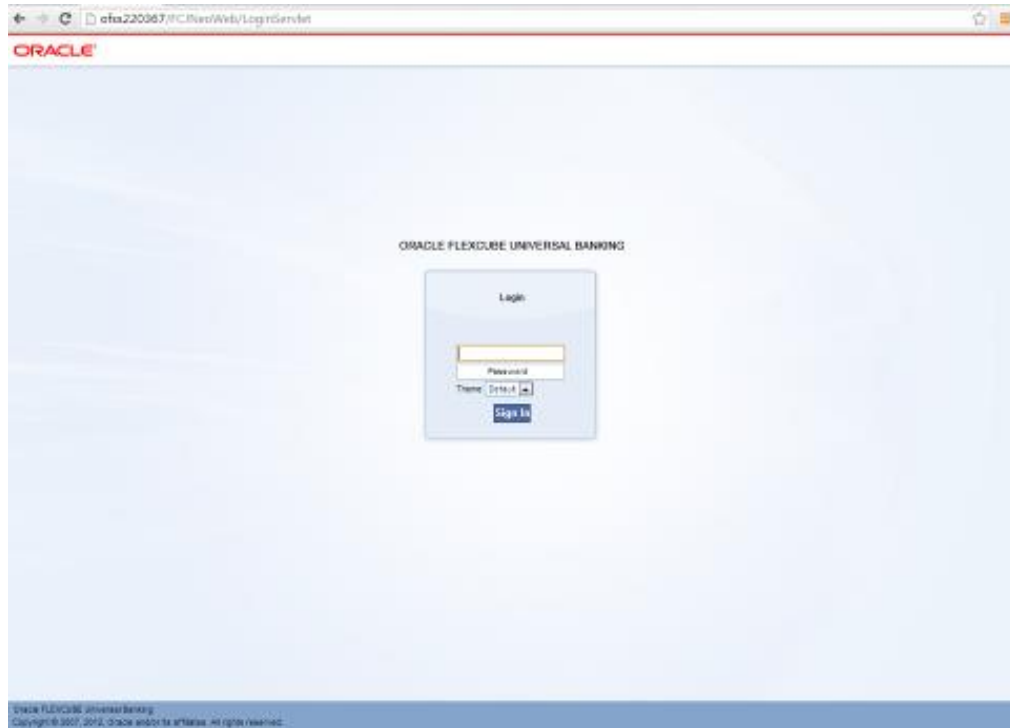
Make a note of the ports `PROXY_HTTPS_ADDRESS/PROXY_HTTP_ADDRESS` to access the application.

Navigation : `Servers > Server Types > WebSphere proxy servers > [proxy_server_1] > Ports`



Launch Application:

URL : `http://<host>:<PROXY_HTTP_ADDRESS>/FCJNeoWeb`
`https://<host>:<PROXY_HTTPS_ADDRESS>/FCJNeoWeb`





Cluster Creation on Websphere
[May] [2018]
Version 14.1.0.0.0

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