

Cluster Creation on Websphere Application Server  
Oracle FLEXCUBE Universal Banking  
Release 14.2.0.0.0  
[ December] [2018]



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# 1. Purpose

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

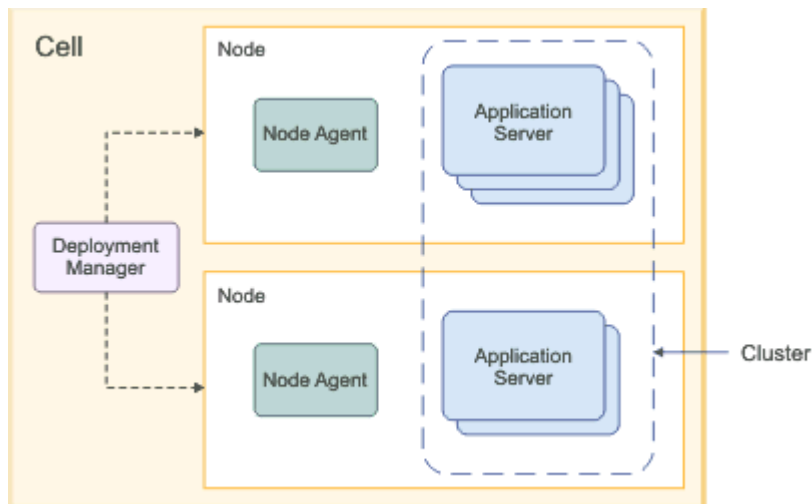
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## 2. Introduction to Websphere

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.

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## 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

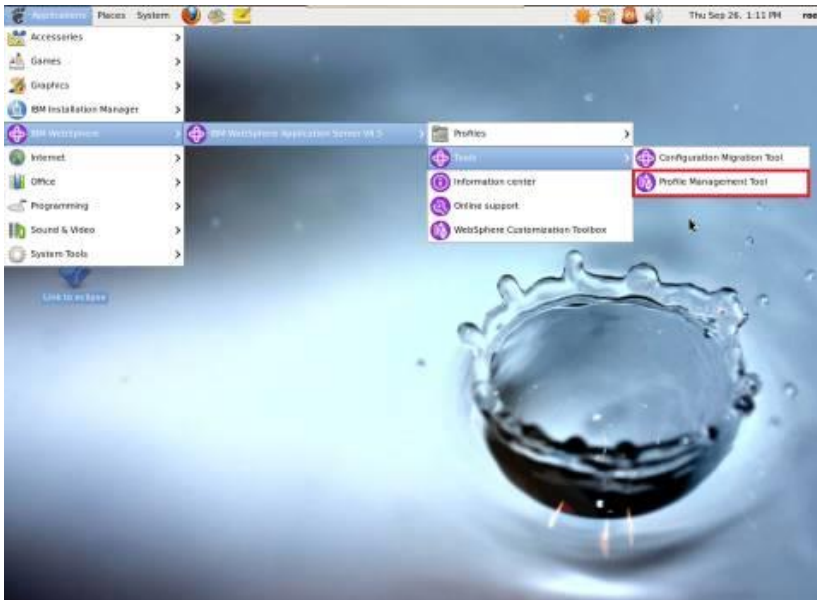
- For SSL configuration in Websphere, refer to the document SSL\_Configuration\_WAS.doc
- For application deployment, refer to document FCUBS\_Application\_WAS.doc
- For deployment of Gateway applications, refer to document GATEWAY\_Applications\_WAS.doc

## 4. Steps involved for Clustering

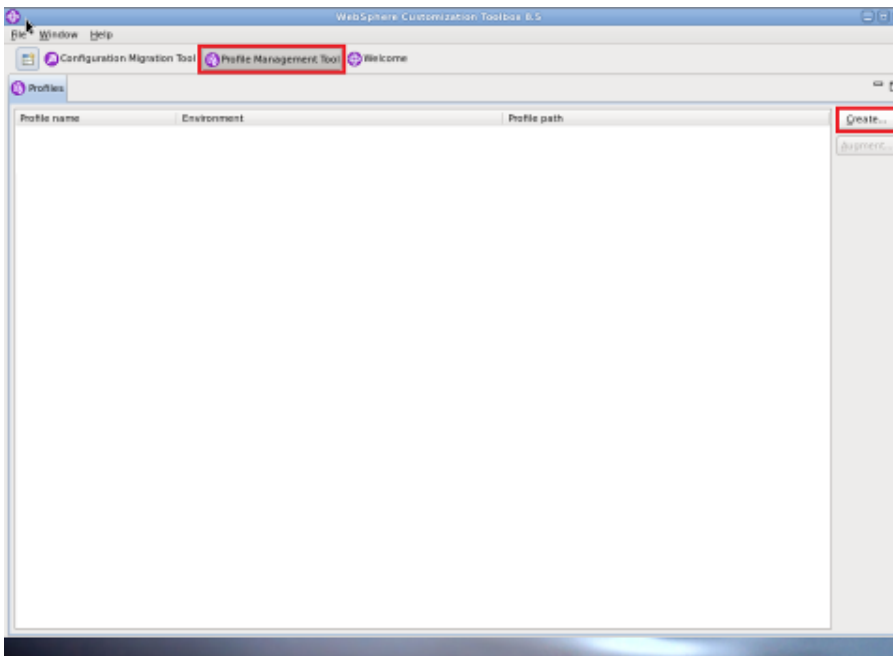
### 4.1 Create Profile

Go to Profile Management Tool

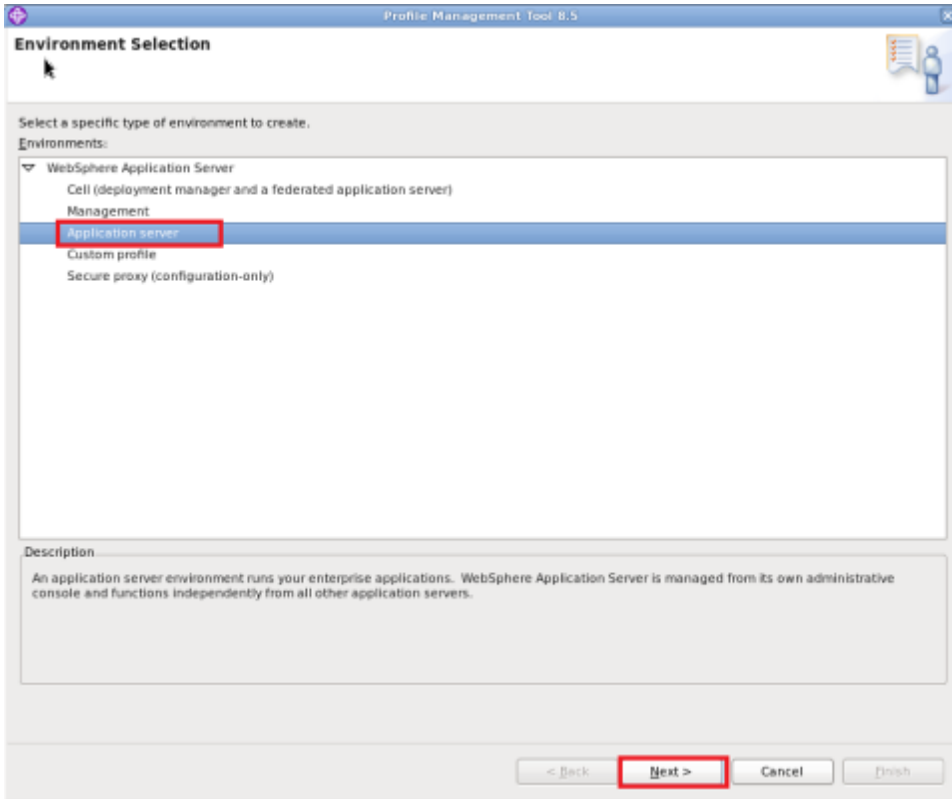
Navigation: IBM WebSphere > IBM WebSphere Application Server V8.5 > Tools > Profile Management Tool



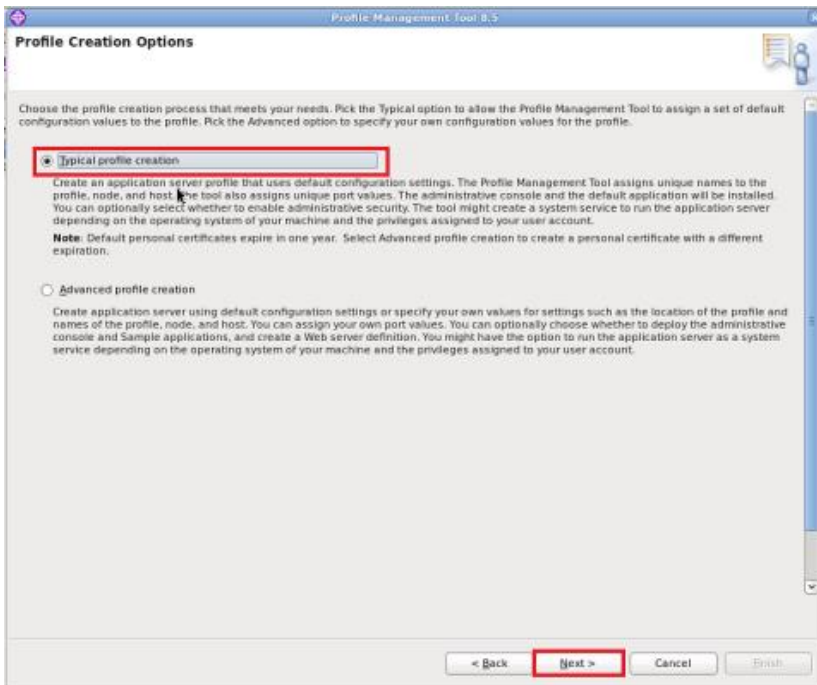
Navigation : Profile Management Tool > Create



**Navigation : Application Server > Next**



**Navigation : Typical profile creation > Next**





**Navigation:** *Enable administrative security > Next*

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**

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 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: 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

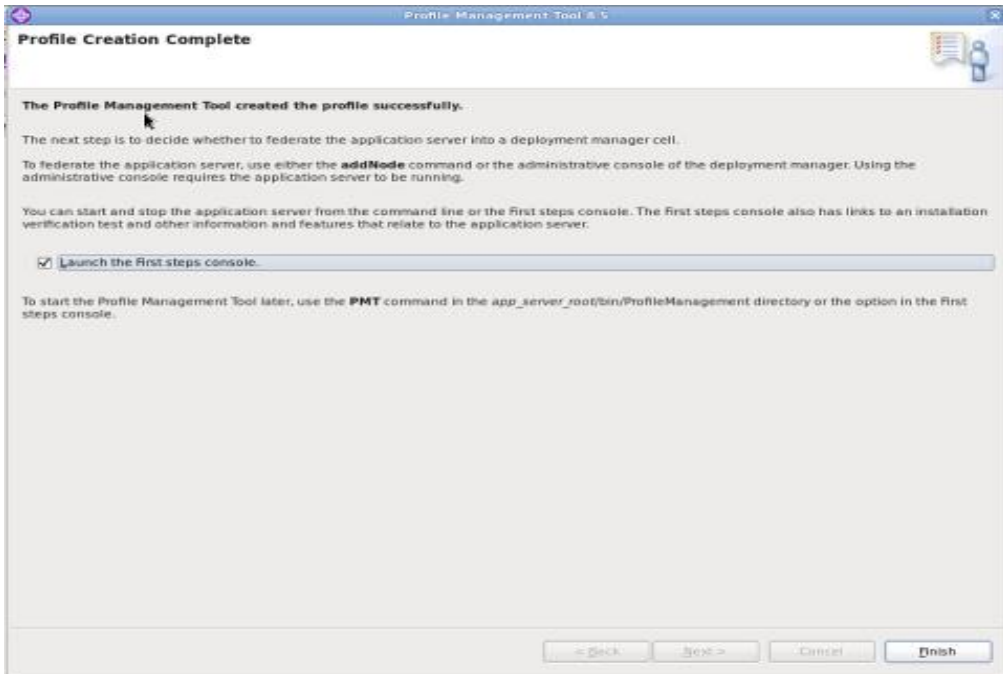
Enable administrative security (recommended): True

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

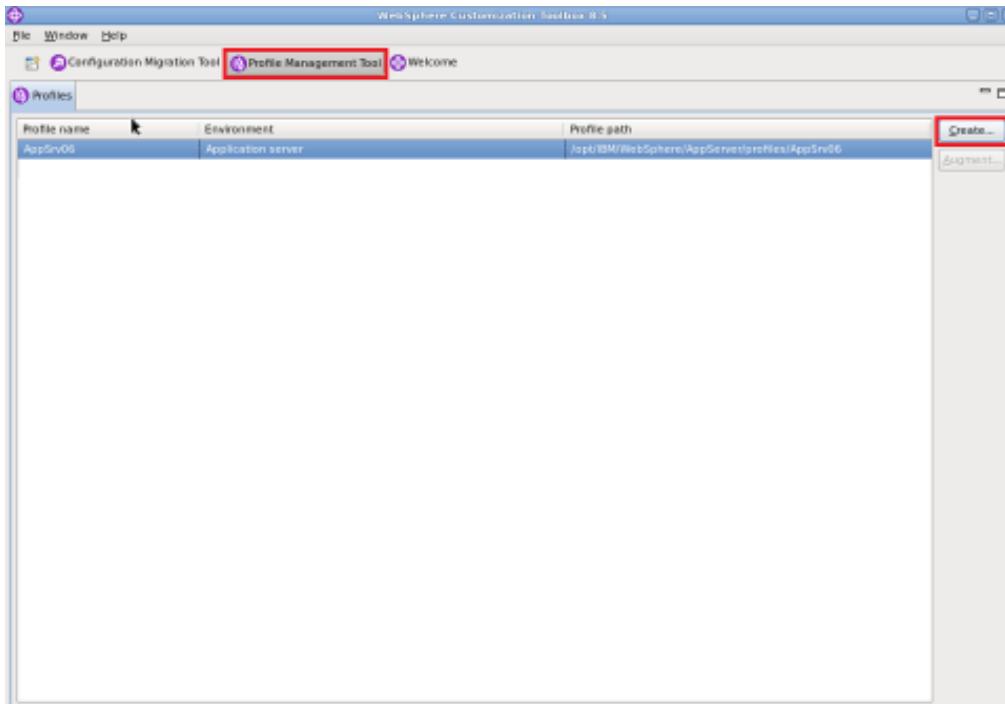
< Back **Create** Cancel Finish

Navigation : *Finish*

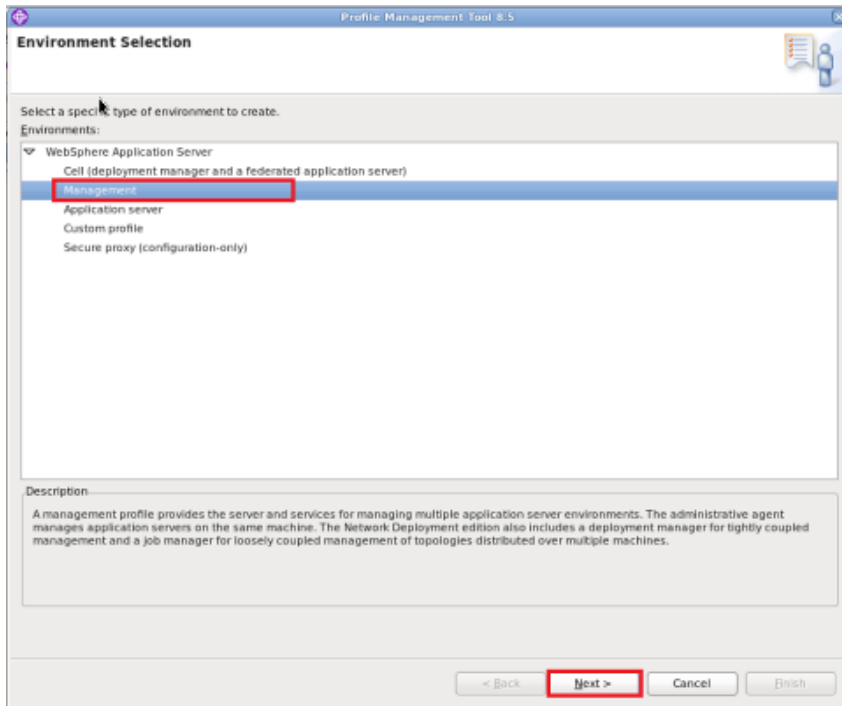


#### 4.1.1 Create Deployment Manager Profile

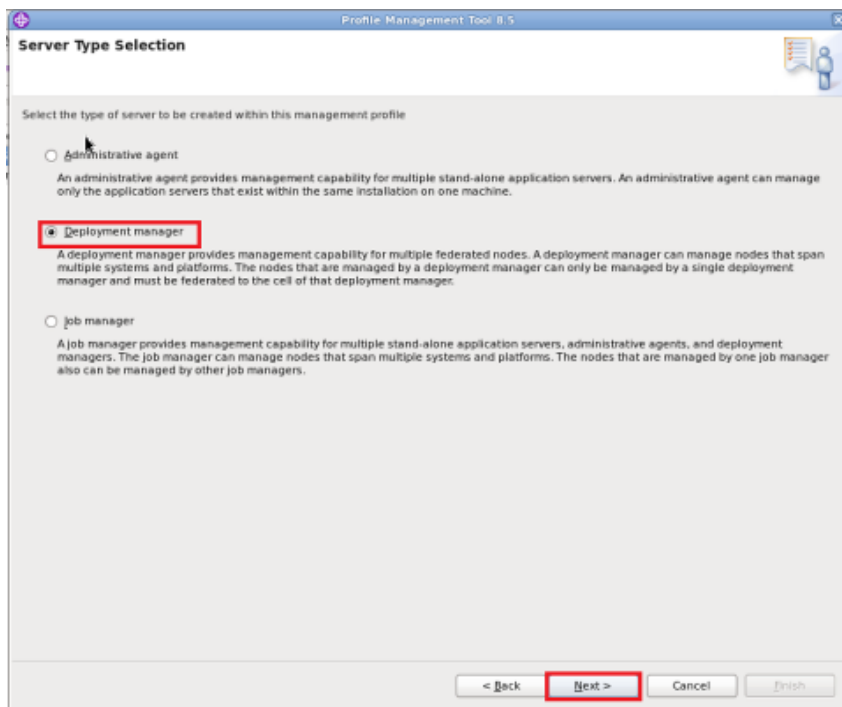
Navigation : *Profile Management Tool > Create*



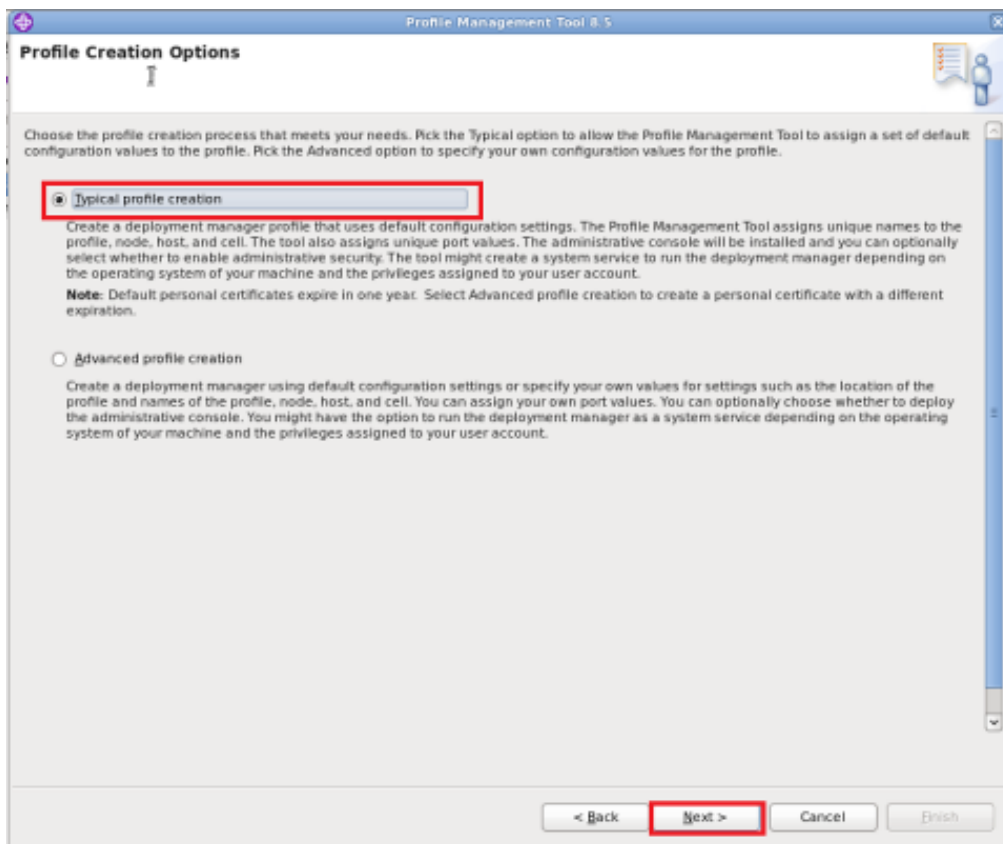
Navigation : *Management >Next*



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

User name:  
admin

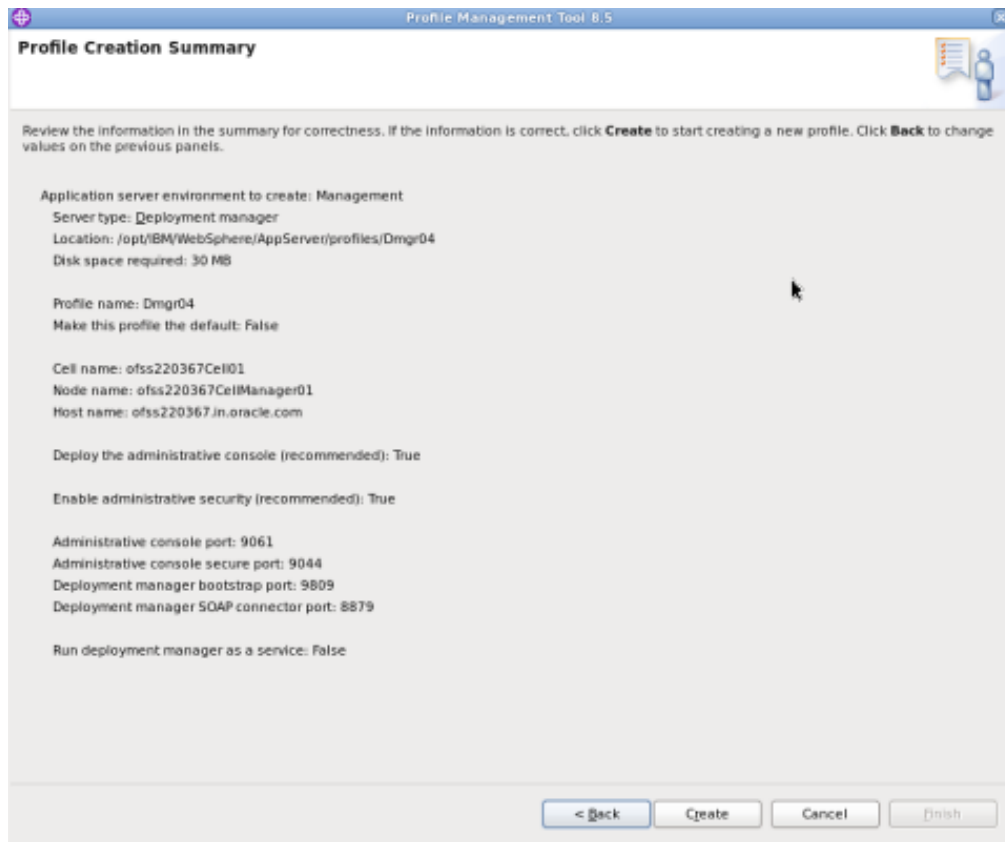
Password:  
\*\*\*\*\*

Confirm password:  
\*\*\*\*\*

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

< Back   **Next >**   Cancel   Finish

## Navigation : Create



The screenshot shows a window titled "Profile Management Tool 8.5" with a sub-header "Profile Creation Summary". The window contains a summary of profile creation settings. At the bottom, there are four buttons: "< Back", "Create", "Cancel", and "Finish".

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

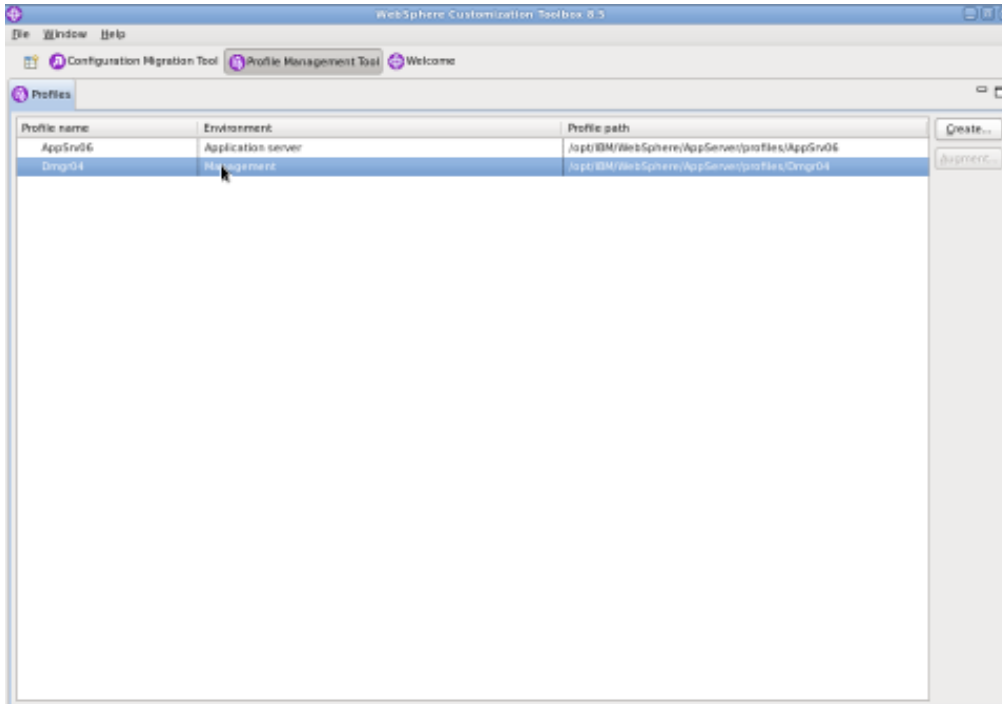
Deploy the administrative console (recommended): True

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

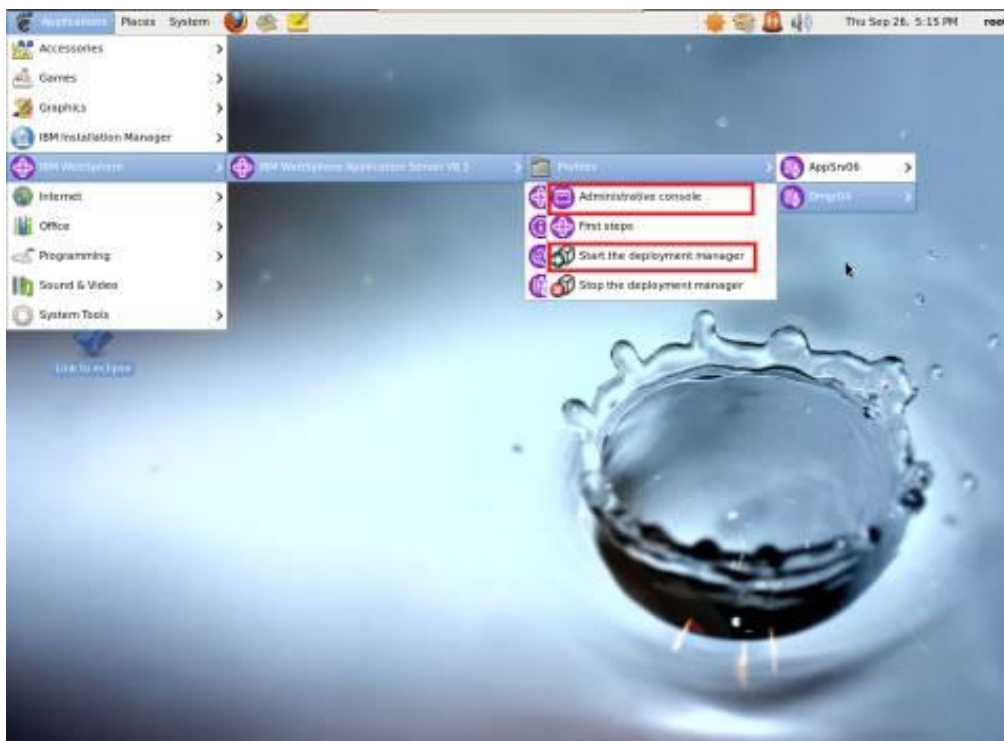
Run deployment manager as a service: False

< 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*

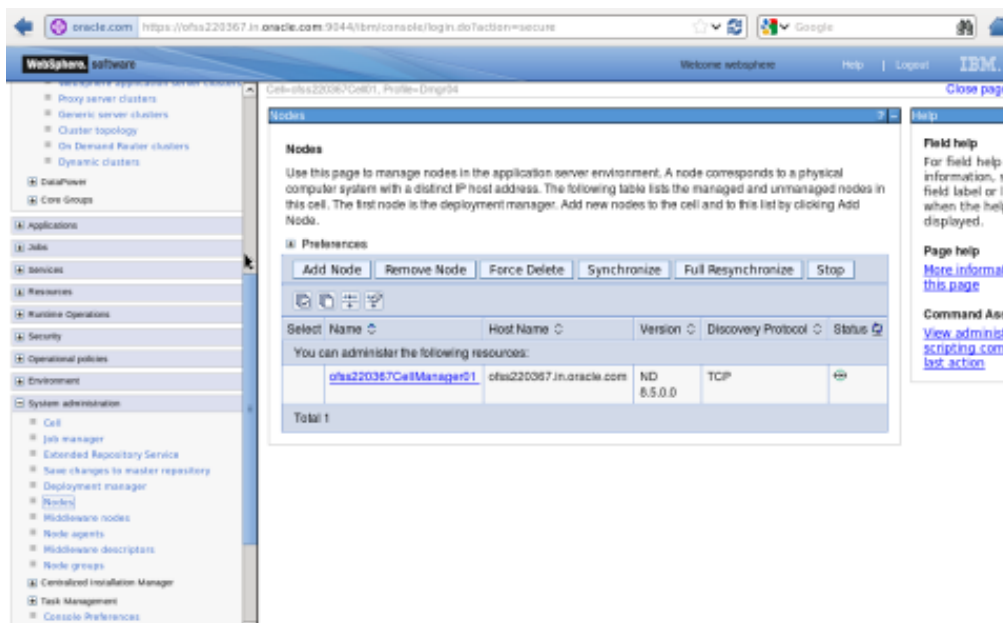




## Log into Deployment Manger Console

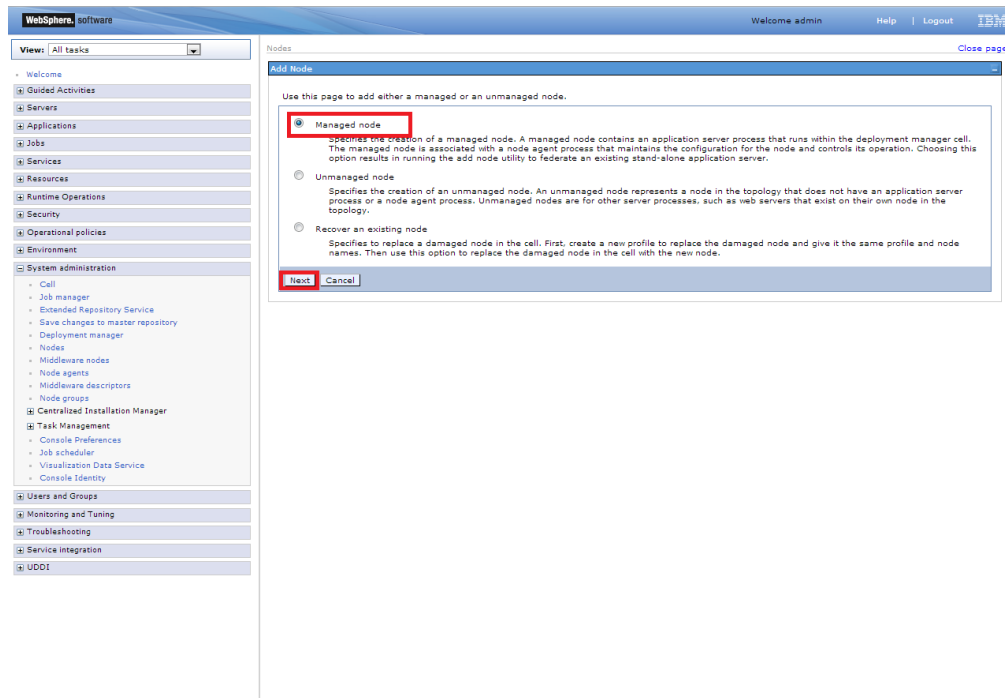


## Navigation : System administration > Nodes > Add Node



## 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

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  
webshere

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

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:8870.

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.

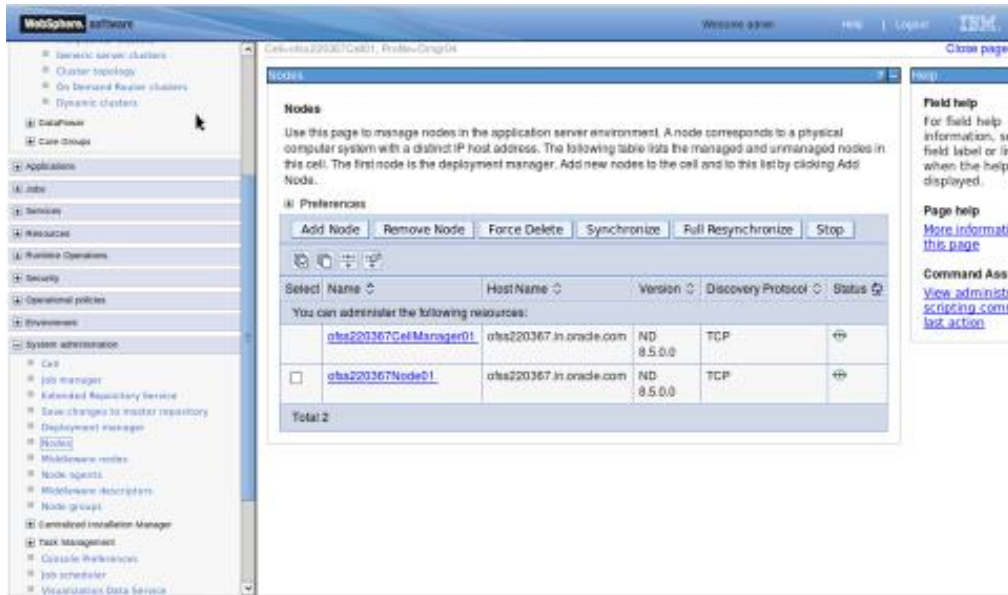
ADMU0015: Backing up the original cell. Please Wait...

ADMU0012: Creating Node Agent config. Node01

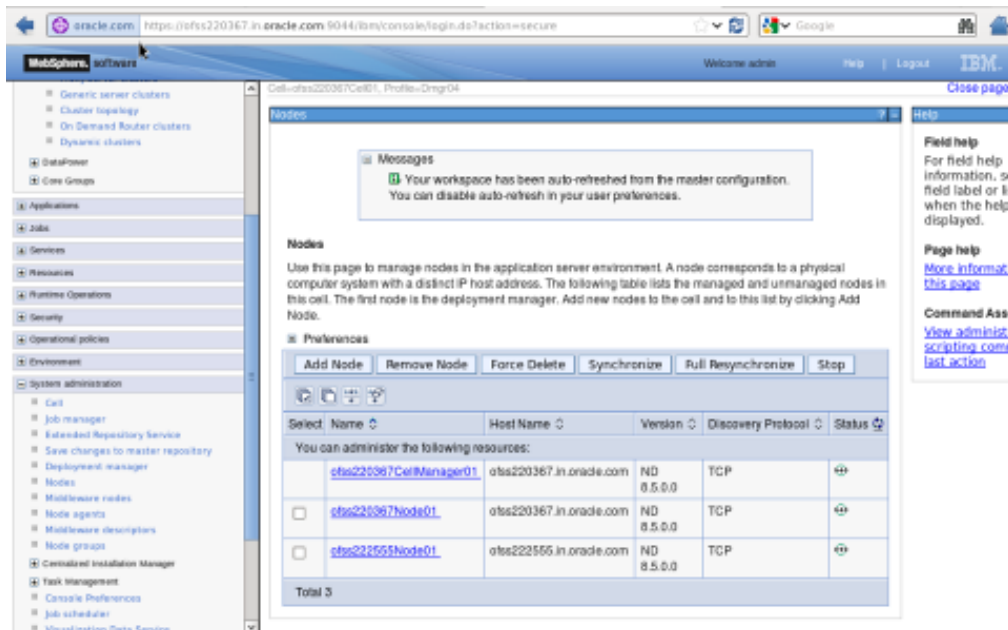
ADMU0014: Adding node ofss220367Node01 configuration to cell: ofss220367Cell01

ADMU0016: Synchronizing configuration between node and cell.

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

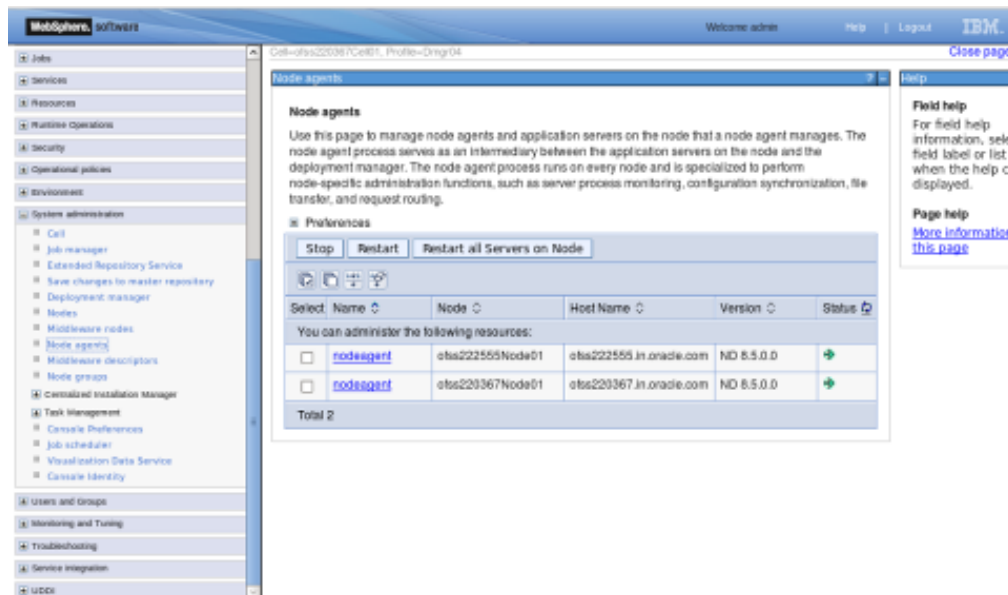


Create necessary number of nodes following same instructions above:



## 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**

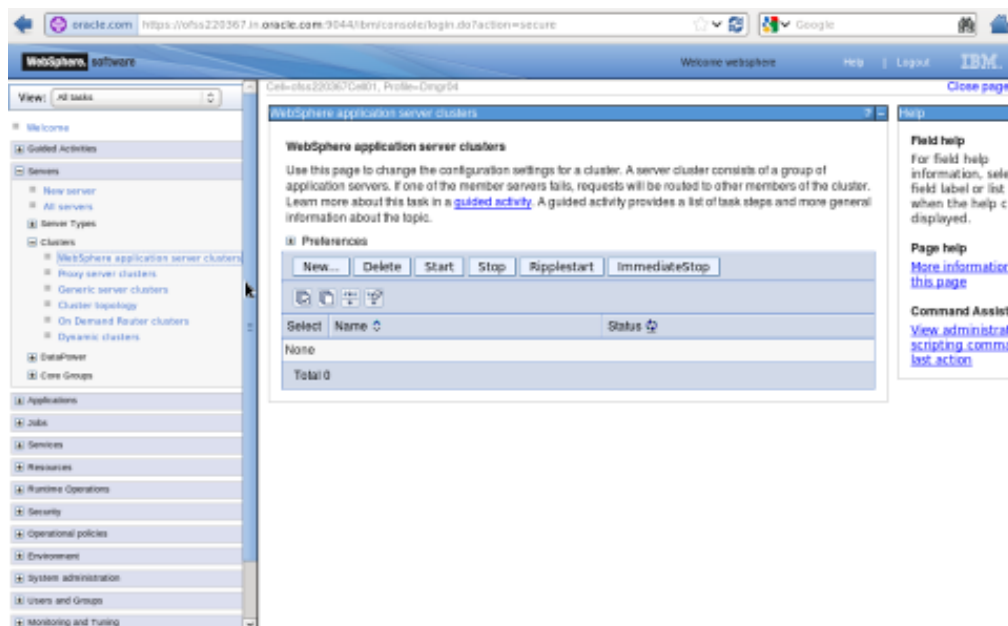
Stop Restart Restart all Servers on Node

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

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 Ripplestart 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

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

Next Cancel

Enter basic cluster information

Cluster name  
[CLUSTER\_1]

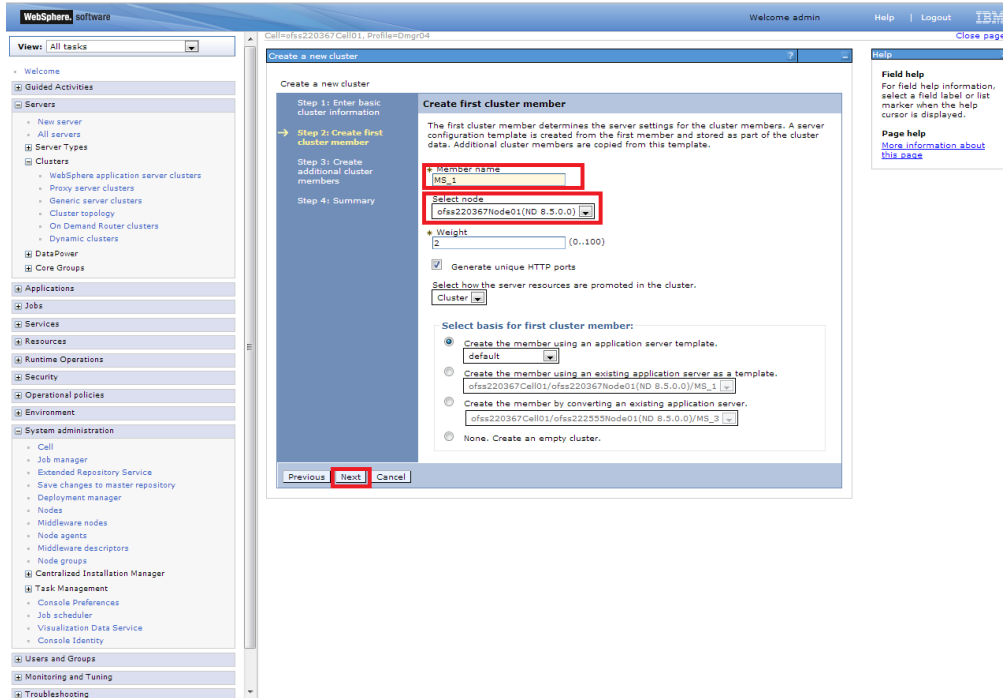
Prefer local. Specifies whether enterprise bean requests will be routed to the node on which the client resides when possible.

Configure HTTP session memory-to-memory replication

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

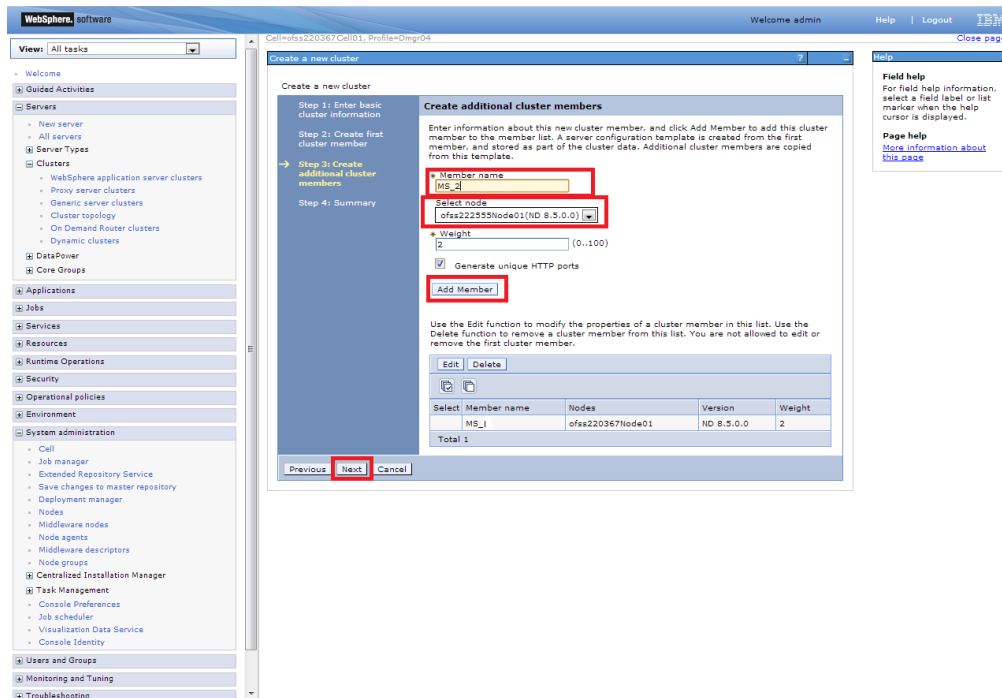
Page help  
View information about this page

## 4.3.1 Add Cluster Members



Add required number of cluster members

Navigation : Add Member > Next



## Navigation : Next

The screenshot shows the 'Create a new cluster' wizard in the WebSphere software interface. 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 input for 'Member name', a 'Select node' dropdown menu (currently showing 'ofss222555Node01(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 'ofss220367Node01' and version 'ND 8.5.0.0', and another for 'MS\_2' with node 'ofss222555Node01' and version 'ND 8.5.0.0'. A 'Total 2' is shown at the bottom of the table. There are 'Edit' and 'Delete' buttons above the table. At the bottom of the wizard are 'Previous', 'Next', and 'Cancel' buttons. On the right side, there is a 'Help' box with 'Field help' and 'Page help' sections, each with a 'More information about this page' link.

## Navigation : Finish

The screenshot shows the 'Create a new cluster' wizard in the WebSphere software interface, 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 includes 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 (ofss220367Node01(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 (ofss220367Node01(ND 8.5.0.0)), Weight (2), Clone Template (Version 8.5 member template), and Generate unique HTTP ports (true). At the bottom of the wizard are 'Previous', 'Finish', and 'Cancel' buttons. On the right side, there is a 'Help' box with 'Field help' and 'Page help' sections, each with a 'More information about this page' link.



## 4.3.2 Start Cluster

**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
<input checked="" type="checkbox"/>	CLUSTER_1	<span style="color: red;">✖</span>

You can administer the following resources:

Total 1

**Field help**  
For field help information, select field label or list n when the help cu displayed.

**Page help**  
[More information, this page](#)

**Command Assista**  
[View administrat](#)  
[scripting comman](#)  
[list action](#)

**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
<input type="checkbox"/>	CLUSTER_1	<span style="color: green;">➔</span>

You can administer the following resources:

Total 1

**Field help**  
For field help information, select field label or list n when the help cu displayed.

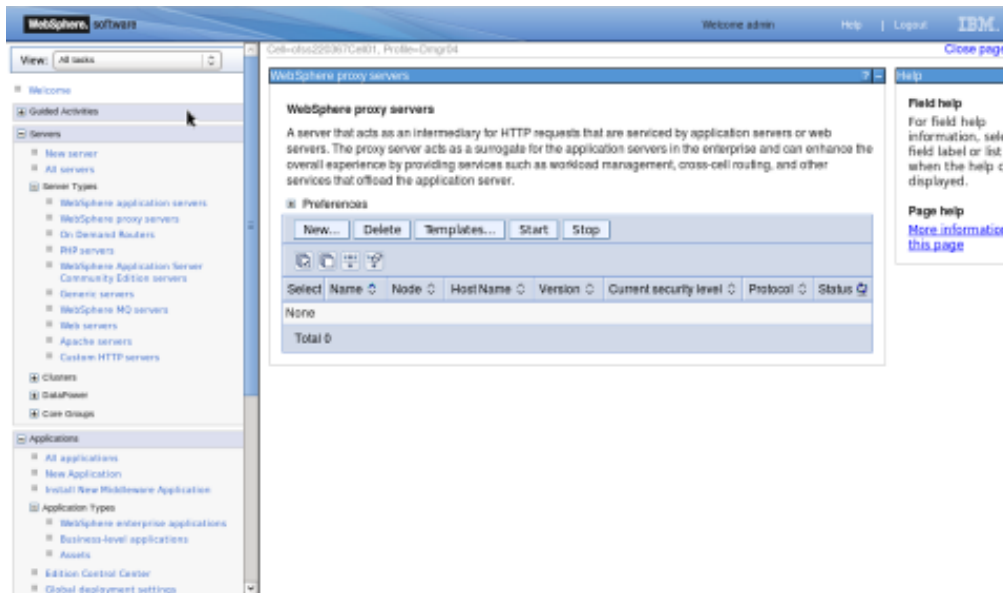
**Page help**  
[More information, this page](#)

**Command Assista**  
[View administrat](#)  
[scripting comman](#)  
[list action](#)

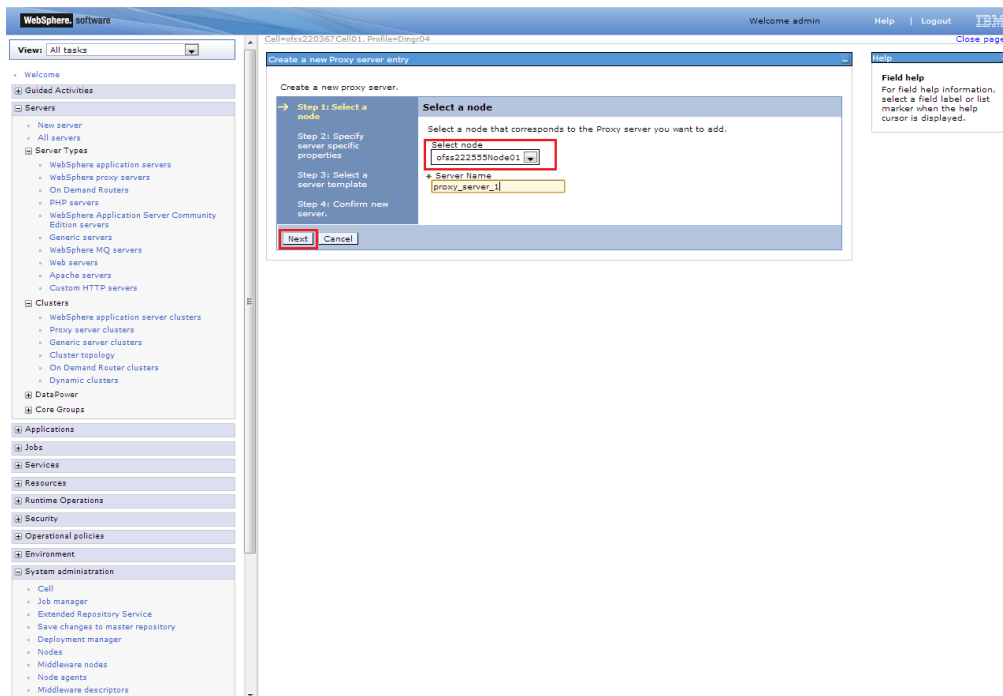
**Messages**  
The start operation on cluster CLUSTER\_1 has been initiated. It may take several minutes for each cluster member to finish starting.

## 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
  - 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.

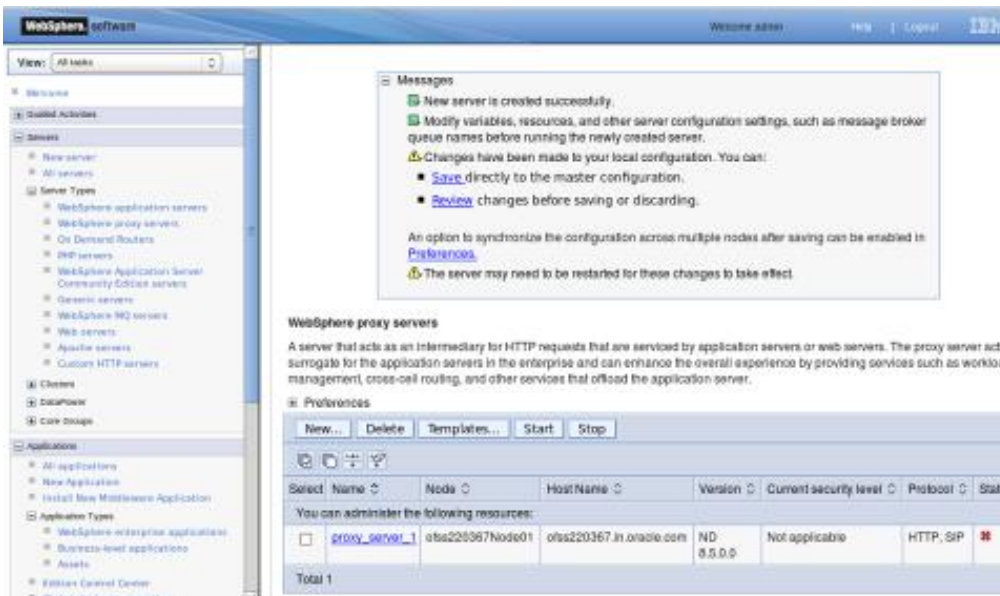
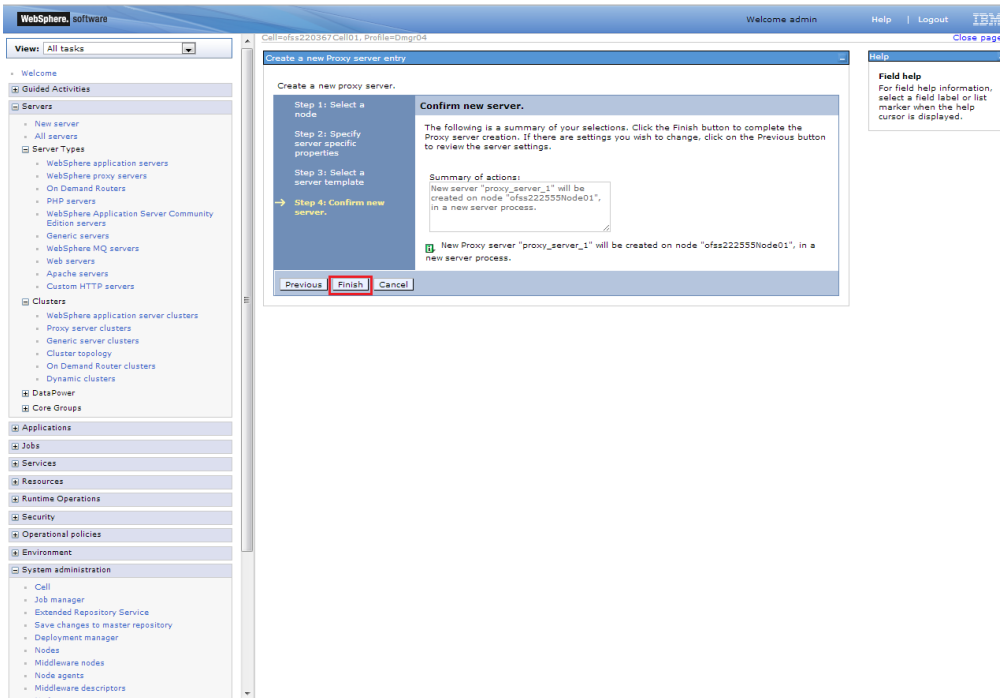
Select a server template

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	⊕

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	⊕

You can administer the following resources:

Total 1

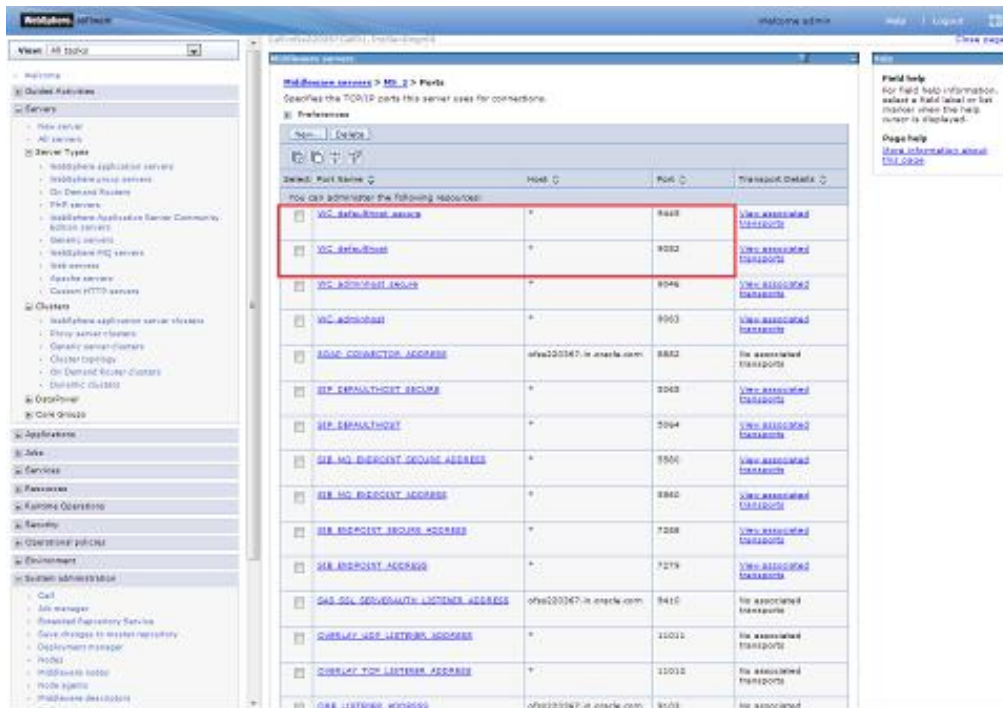
## 4.5 Configure Virtual Host

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 'Virtual Hosts' configuration for the 'MiddleTierServer1' domain. The page title is 'MiddleTierServer1 > Virtual Hosts'. Below the title, there is a section for 'Specify the TCP/IP ports this server uses for connections.' and a table listing the virtual hosts.

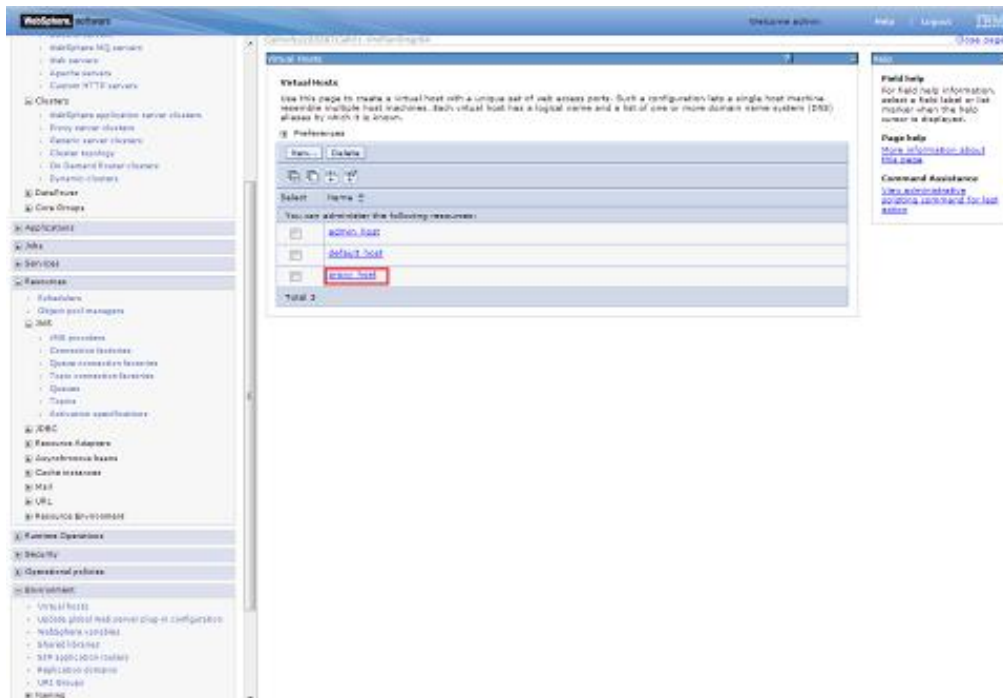
Name	Port	Port	Transport Details
<input type="checkbox"/> WC_defaulthost_secure	+	9444	No associated transports
<input type="checkbox"/> WC_defaulthost	+	9081	No associated transports
<input type="checkbox"/> WS_defaulthost_secure	+	9043	No associated transports
<input type="checkbox"/> WS_defaulthost	+	9042	No associated transports
<input type="checkbox"/> JMS_CONNECTOR_ADDRESS	rfx220067.in.oracle.com	8881	No associated transports
<input type="checkbox"/> J2EE_DEFAULTHOST_SECURE	+	3063	No associated transports
<input type="checkbox"/> J2EE_DEFAULTHOST	+	3062	No associated transports
<input type="checkbox"/> J2EE_HTTP_ENDPOINT_SECURE_ADDRESS	+	8279	No associated transports
<input type="checkbox"/> J2EE_HTTP_ENDPOINT_ADDRESS	+	8289	No associated transports
<input type="checkbox"/> J2EE_ENDPOINT_SECURE_ADDRESS	+	7287	No associated transports
<input type="checkbox"/> J2EE_ENDPOINT_ADDRESS	+	7278	No associated transports
<input type="checkbox"/> J2EE_J2EE_SECURITY_LISTENER_ADDRESS	rfx220067.in.oracle.com	9407	No associated transports
<input type="checkbox"/> QWS_VQPC_LISTENER_ADDRESS	+	11009	No associated transports
<input type="checkbox"/> QWS_VQPC_LISTENER_SECURE_ADDRESS	+	11810	No associated transports
<input type="checkbox"/> J2EE_LISTENER_ADDRESS	rfx220067.in.oracle.com	9102	No associated

Make a note of “WC\_defaulthost”/“WS\_defaulthost\_secure” for MS2 : 9082/9445

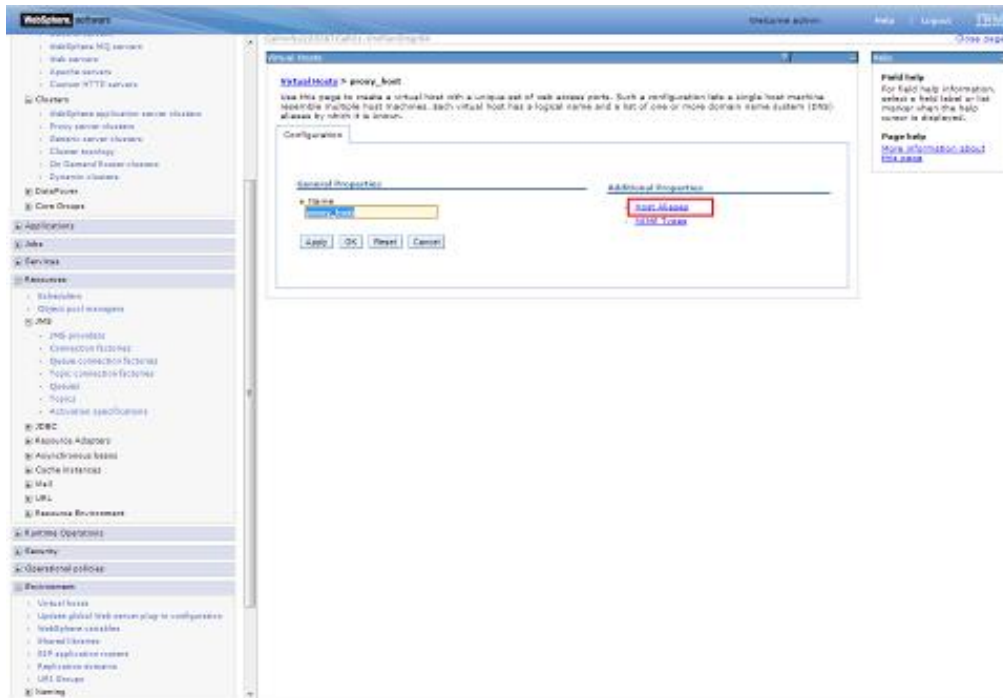


## 4.5.1 Virtual Host Setup

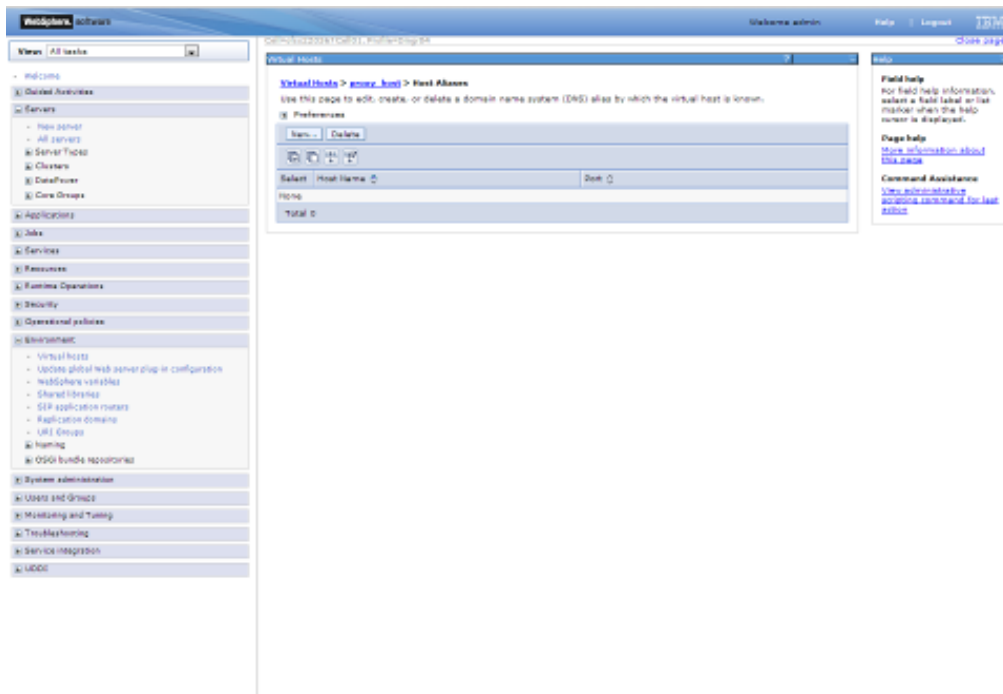
Navigation : *Environment*>*Virtual hosts*>*proxy\_host*



## 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 'Servers' 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 'Servers' section. The main content area displays the 'Virtual Hosts' configuration page for an existing alias named 'myhost'. 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 dependencies. The table has two columns: 'Default' and 'Port'. The first row shows 'myhost' in the 'Default' column and '9081' in the 'Port' column. 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.'

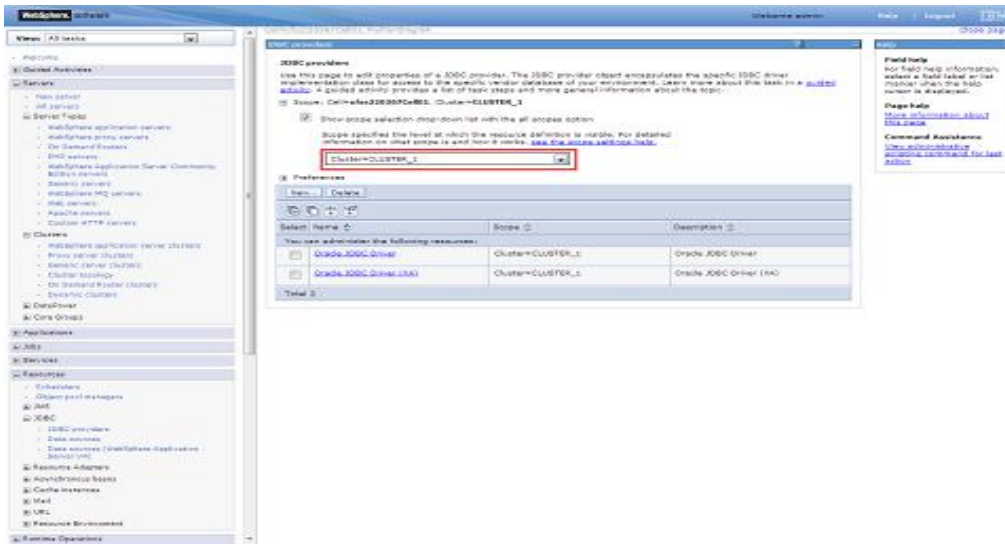
Similarly create proxy alias for all cluster related server default ports

The screenshot shows the Oracle VM VirtualBox web interface. The left sidebar contains a navigation menu with categories like Servers, Applications, and System administration. The main content area is titled 'Virtual hosts > proxy\_host > Host Aliases'. It includes a 'Preferences' section and a table of host aliases. The table has columns for 'Host Name' and 'Port'. Below the table, it shows a 'Total: 4'.

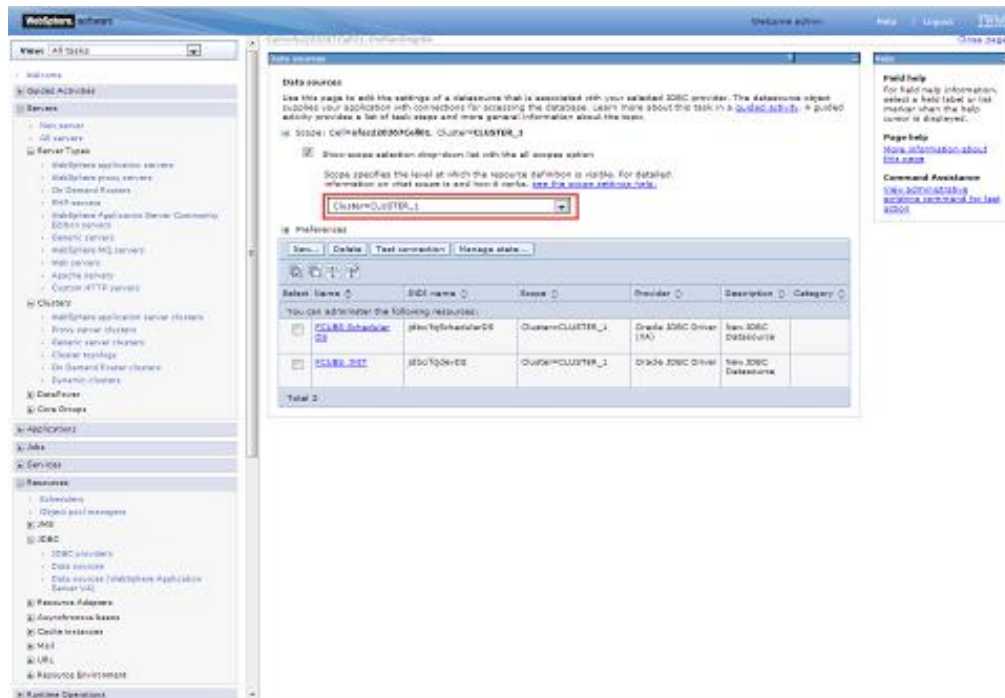
Select	Host Name	Port
<input type="checkbox"/>		8080
<input type="checkbox"/>		8444
<input type="checkbox"/>		8082
<input type="checkbox"/>		8448
		Total: 4

# 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=fes22830fcells`, 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 definition help](#).

Cluster=`CLUSTER_1`

**References**

Select	Name	JMS name	Provider	Description	Scope
<input type="checkbox"/>	<a href="#">EmailCF</a>	EmailCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">PC_QCF</a>	PC_QCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">REBQCF</a>	REBQCF	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">WebSphereQCF</a>	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=fes22830fcells`, 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 definition help](#).

Cluster=`CLUSTER_1`

**References**

Select	Name	JMS name	Provider	Description	Scope
<input type="checkbox"/>	<a href="#">EHS_QUEUE</a>	EHS_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">EHS_OUT_QUEUE</a>	EHS_OUT_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">EBS_QUEUE</a>	EBS_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">EBS_QUEUE_DLG</a>	EBS_QUEUE_DLG	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">EBS_QUEUE_RESPONSE</a>	EBS_QUEUE_RESPONSE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">NOTIFY_DEST_QUEUE</a>	NOTIFY_DEST_QUEUE	WebSphere MQ messaging provider		Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">NOTIFY_QUEUE</a>	NOTIFY_QUEUE	WebSphere MQ messaging provider	NOTIFY_QUEUE	Cluster= <code>CLUSTER_1</code>
<input type="checkbox"/>	<a href="#">NOTIFY_QUEUE_DLG</a>	NOTIFY_QUEUE_DLG	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 shows the Oracle WebLogic Administration Console interface. The left-hand navigation pane is expanded to 'Middleware servers > MS\_1 > Message listener service > Listener Ports'. The main content area displays the configuration for the 'Listener Ports' service. At the top, there are buttons for 'Name', 'Delete', 'Start', 'Stop', and 'Convert to activation specification'. Below this is a table listing the configured listener ports. The table has columns for 'Name', 'Description', 'Connection factory JNDI name', 'Destination JNDI name', and 'Status'. The table contains five entries, all with a green status icon. A 'Total 5' summary is shown at the bottom of the table. On the right side, there is a 'Field help' section and a 'Command Assistance' link.

Name	Description	Connection factory JNDI name	Destination JNDI name	Status
EMail_LISTENER	Email Listener	EMailCF	EMail_QUEUE	➔
EMailOUT_LISTENER	EmailOut Listener	EMailCF	EMail_OUT_QUEUE	➔
MDB_LISTENER	MDB Listener	MDBCF	MDB_QUEUE	➔
NOTIFY_LISTENER	notify Listener	notifyCF	NOTIFY_QUEUE	➔
KTMS_LISTENER		KTMSCF	KTMS_QUEUE	➔

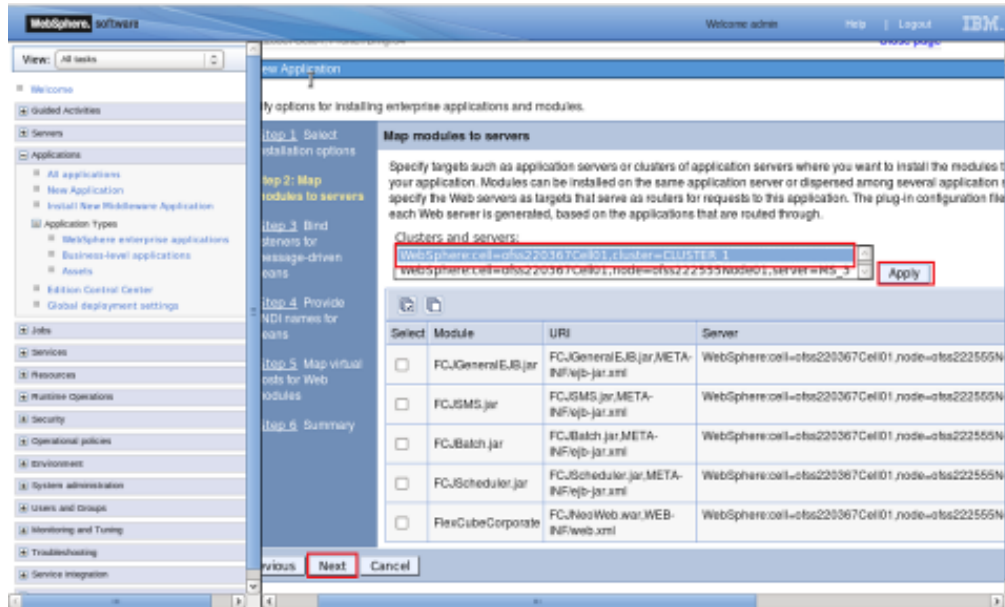
**Navigation :** *Middleware servers > MS\_2 > Message listener service > Listener Ports*

The screenshot shows the Oracle WebLogic Administration Console interface for a second server, MS\_2. The navigation path is the same as in the previous screenshot: 'Middleware servers > MS\_2 > Message listener service > Listener Ports'. The main content area displays the configuration for the 'Listener Ports' service. The interface is identical to the MS\_1 screenshot, showing a table with five listener ports: 'EMail\_LISTENER', 'EMailOUT\_LISTENER', 'MDB\_LISTENER', 'NOTIFY\_LISTENER', and 'KTMS\_LISTENER'. All ports are in a 'running' state, indicated by green status icons. The 'Total 5' summary is also present at the bottom of the table.

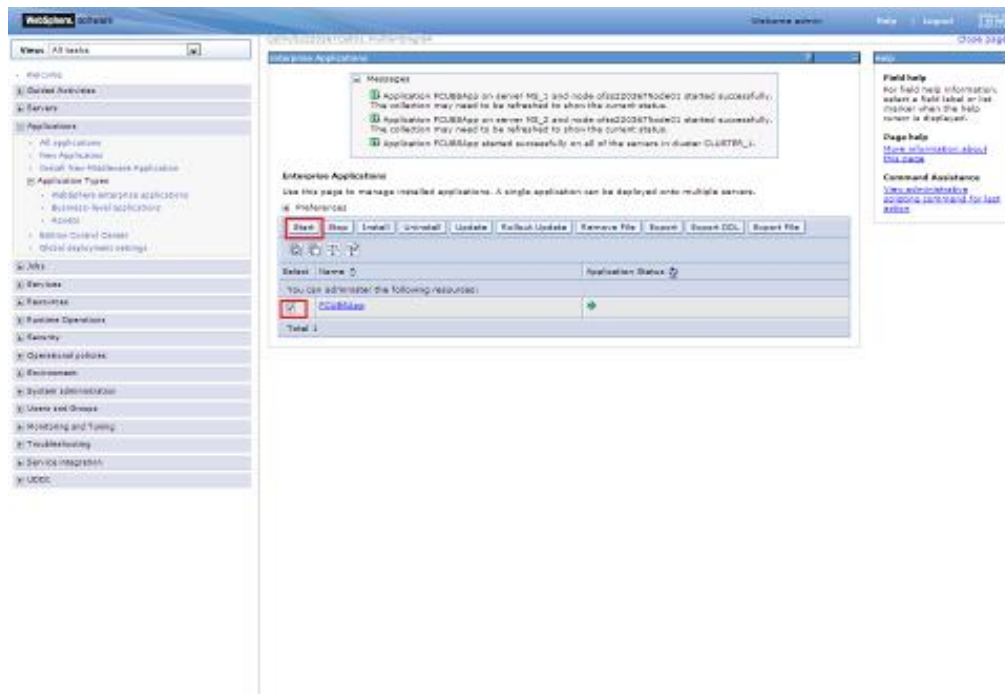
Name	Description	Connection factory JNDI name	Destination JNDI name	Status
EMail_LISTENER	Email Listener	EMailCF	EMail_QUEUE	➔
EMailOUT_LISTENER	EmailOut Listener	EMailCF	EMail_OUT_QUEUE	➔
MDB_LISTENER	MDB Listener	MDBCF	MDB_QUEUE	➔
NOTIFY_LISTENER	notify Listener	notifyCF	NOTIFY_QUEUE	➔
KTMS_LISTENER		KTMSCF	KTMS_QUEUE	➔

## 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.

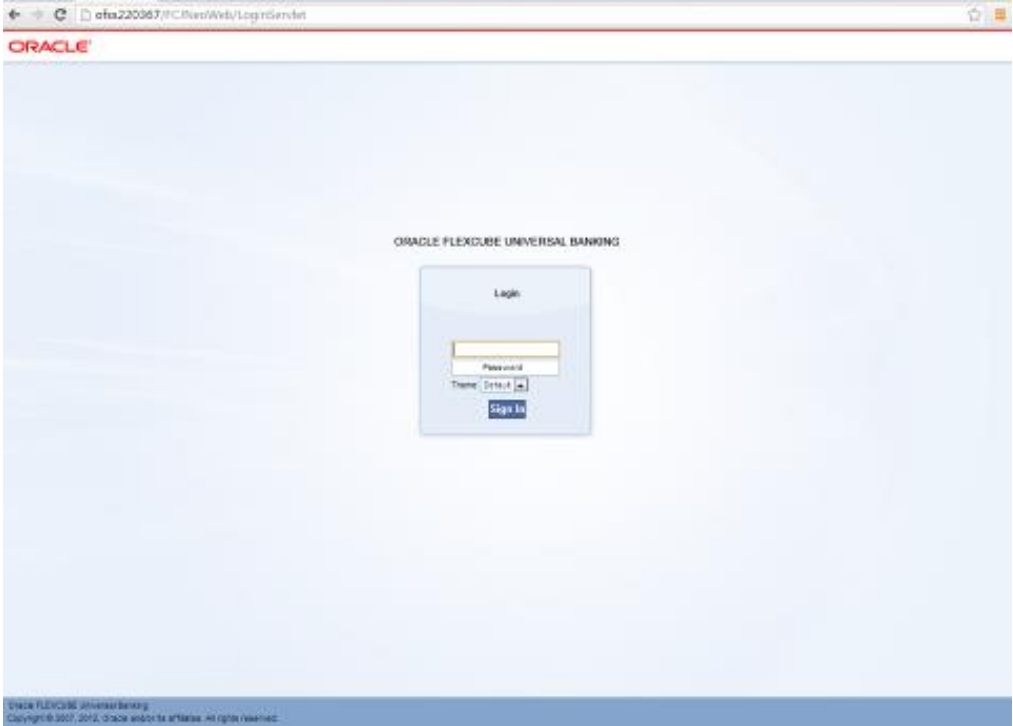
**Navigation :** *Servers > Server Types > WebSphere proxy servers > [proxy\_server\_1] > Ports*

The screenshot shows the WebSphere Admin Console interface. The left sidebar contains a navigation tree with categories like Servers, Clusters, Applications, and Site. The main content area displays the 'Ports' configuration for a specific proxy server. A table lists various ports and their associated transport details. Two rows, 'PROXY\_HTTPS\_ADDRESS' and 'PROXY\_HTTP\_ADDRESS', are highlighted with a red rectangular box.

Select	Port Name	Host	Port	Transport Details
<input type="checkbox"/>	BOOTSTRAP_ADDRESS	afw222267.in.oracle.com	8813	No associated transports
<input type="checkbox"/>	CERT_26_MITM_AUTH_LISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	CERT_26_SECUREAUTH_LISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	ICE_ADAPTER_ADDRESS	*	9387	No associated transports
<input type="checkbox"/>	ICE_CLIENT_ADDRESS	*	7874	No associated transports
<input type="checkbox"/>	IPC_CONNECTOR_ADDRESS	tcpPort	9626	No associated transports
<input type="checkbox"/>	ORCLISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	ORCLISTENER_TLS_ADDRESS	*	10014	No associated transports
<input type="checkbox"/>	ORCLISTENER_TLS_ADDRESS	*	10013	No associated transports
<input type="checkbox"/>	PROXY_HTTPS_ADDRESS	*	443	No associated transports
<input type="checkbox"/>	PROXY_HTTP_ADDRESS	*	80	No associated transports
<input type="checkbox"/>	PROXY_IPC_ADDRESS	*	3061	No associated transports
<input type="checkbox"/>	PROXY_IPC_ADDRESS	*	5690	No associated transports
<input type="checkbox"/>	SEC_26_SECUREAUTH_LISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	SOA1_CONNECTOR_ADDRESS	afw222267.in.oracle.com	8883	No associated transports

Launch Application:

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







Cluster Creation on Websphere  
[December] [2018]  
Version 14.2.0.0.0

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