

Cluster Creation on Websphere Application Server  
Oracle FLEXCUBE Universal Banking  
Release 14.0.0.0.0  
[December] [2017]



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# 1. Purpose

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

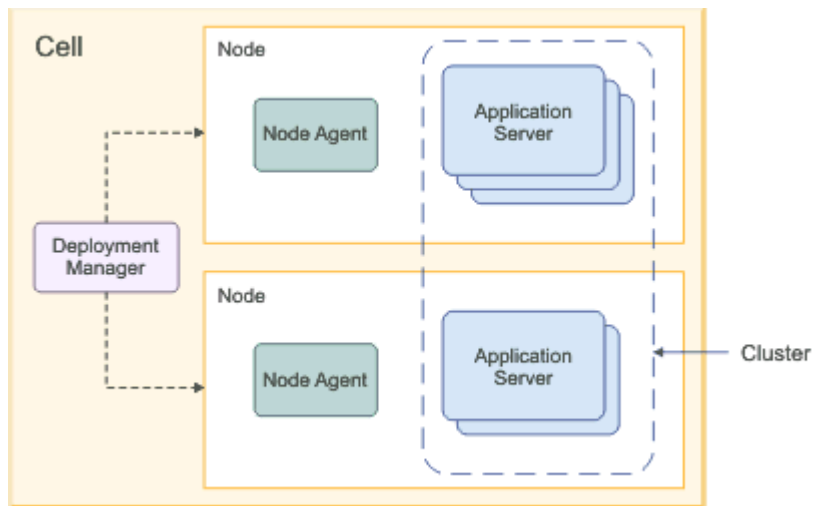
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## 2. Introduction to Websphere

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.

---

## 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

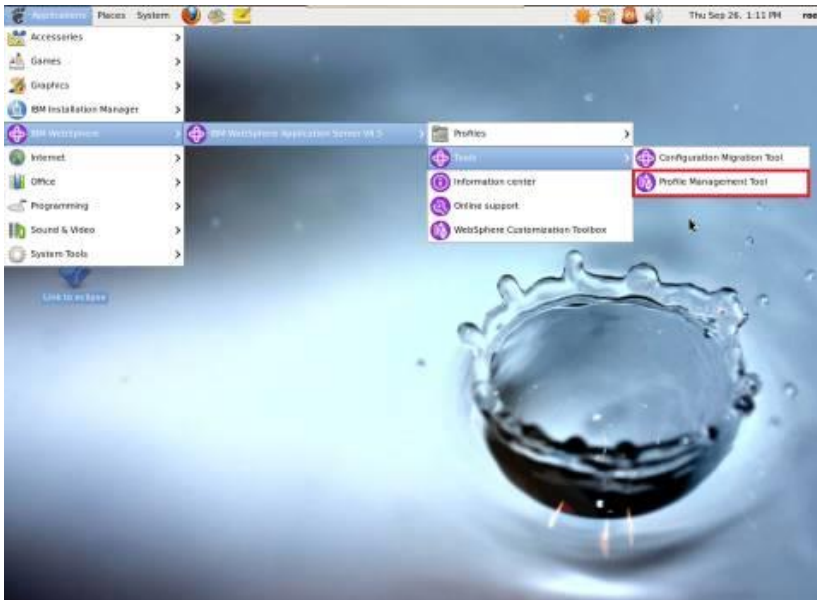
- For SSL configuration in Websphere, refer to the document SSL\_Configuration\_WAS.doc
- For application deployment, refer to document FCUBS\_Application\_WAS.doc
- For deployment of Gateway applications, refer to document GATEWAY\_Applications\_WAS.doc

## 4. Steps involved for Clustering

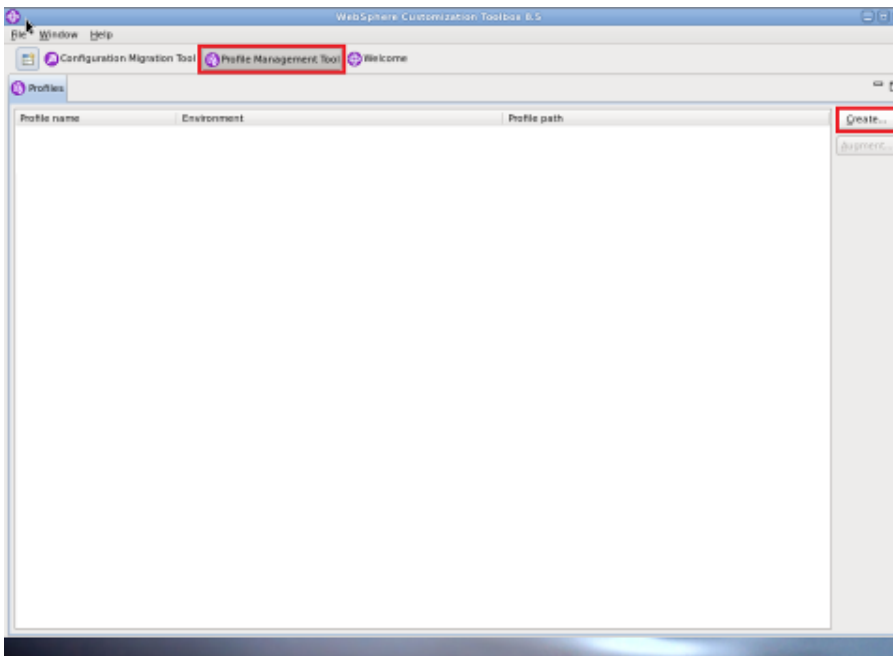
### 4.1 Create Profile

Go to Profile Management Tool

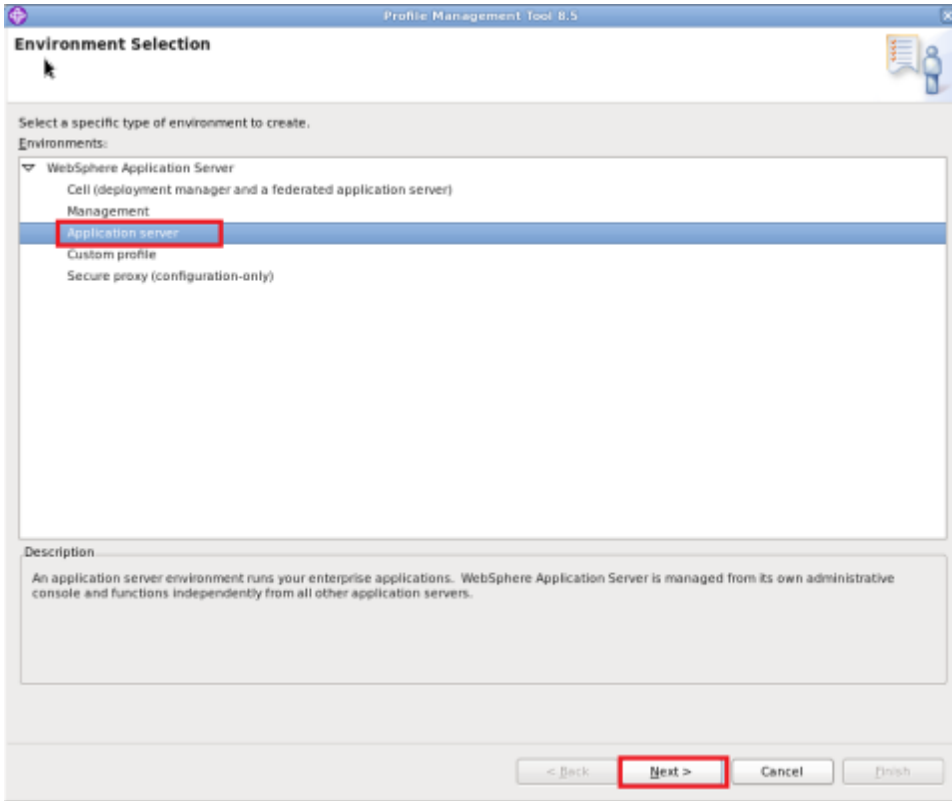
Navigation: IBM WebSphere > IBM WebSphere Application Server V8.5 > Tools > Profile Management Tool



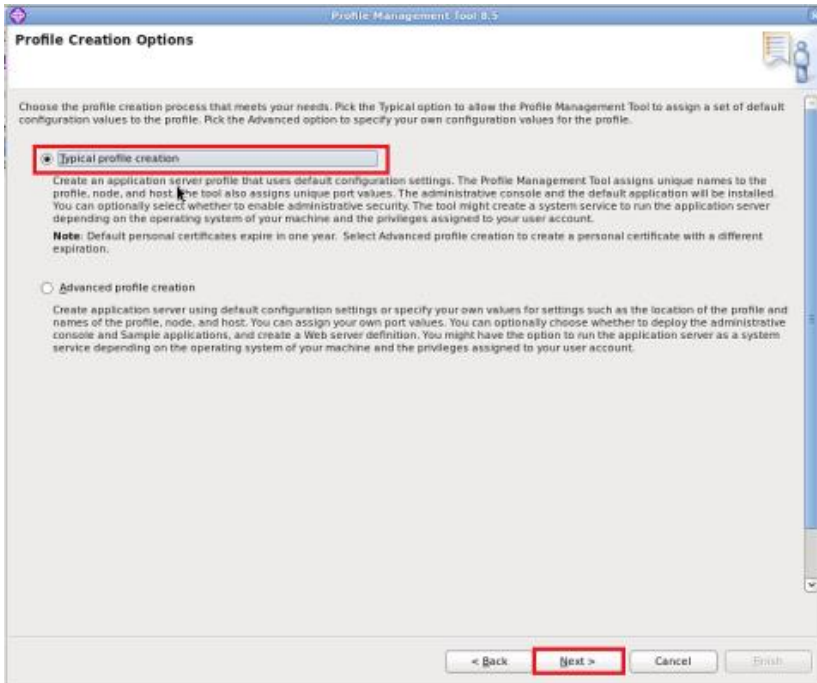
Navigation : Profile Management Tool > Create



**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

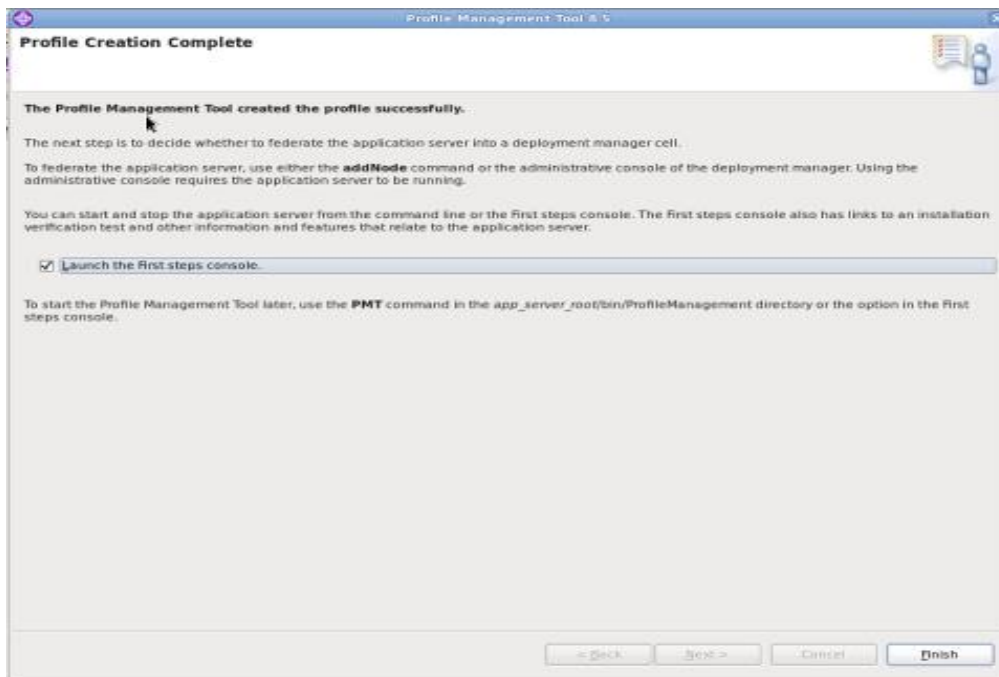
Enable administrative security (recommended): True

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

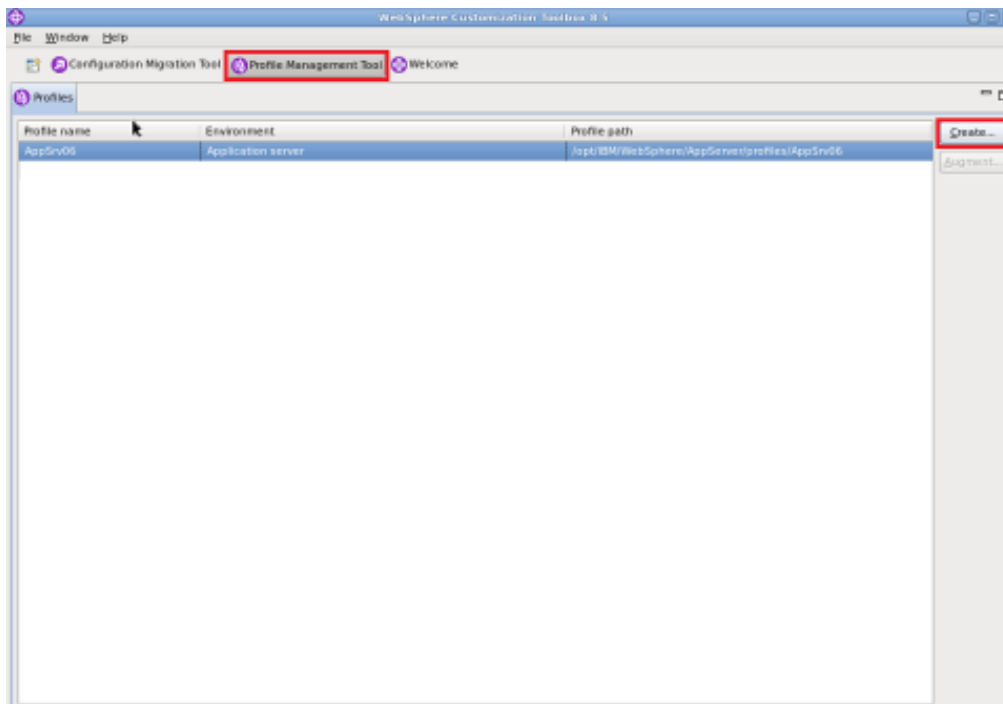
< Back **Create** Cancel Finish

Navigation : *Finish*

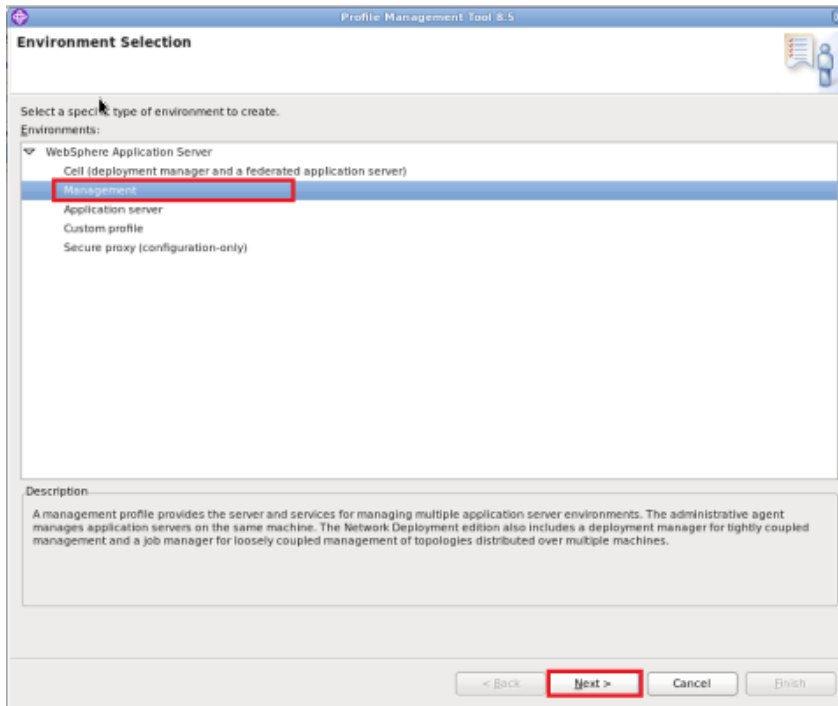


#### 4.1.1 Create Deployment Manager Profile

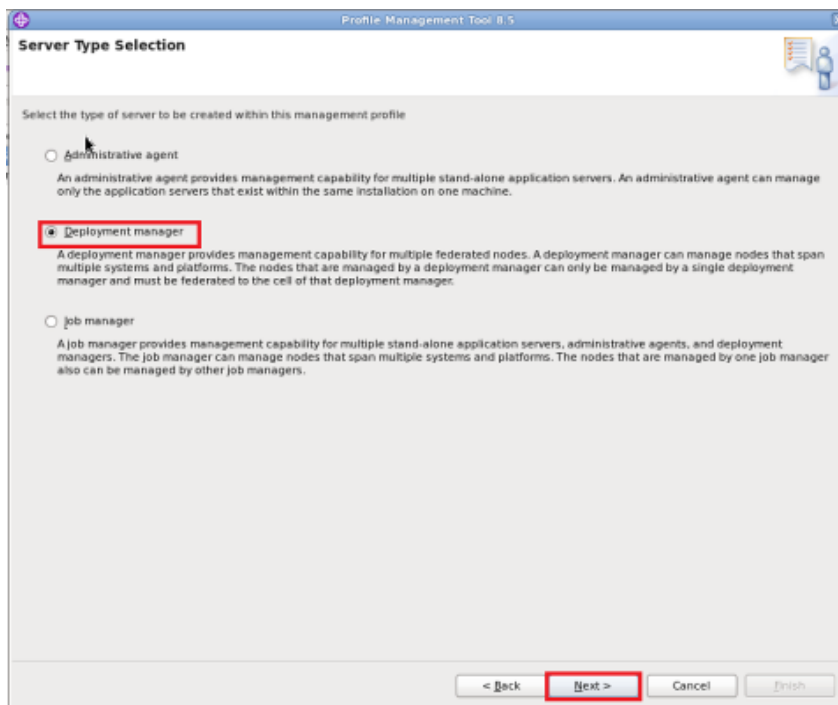
Navigation : *Profile Management Tool > Create*



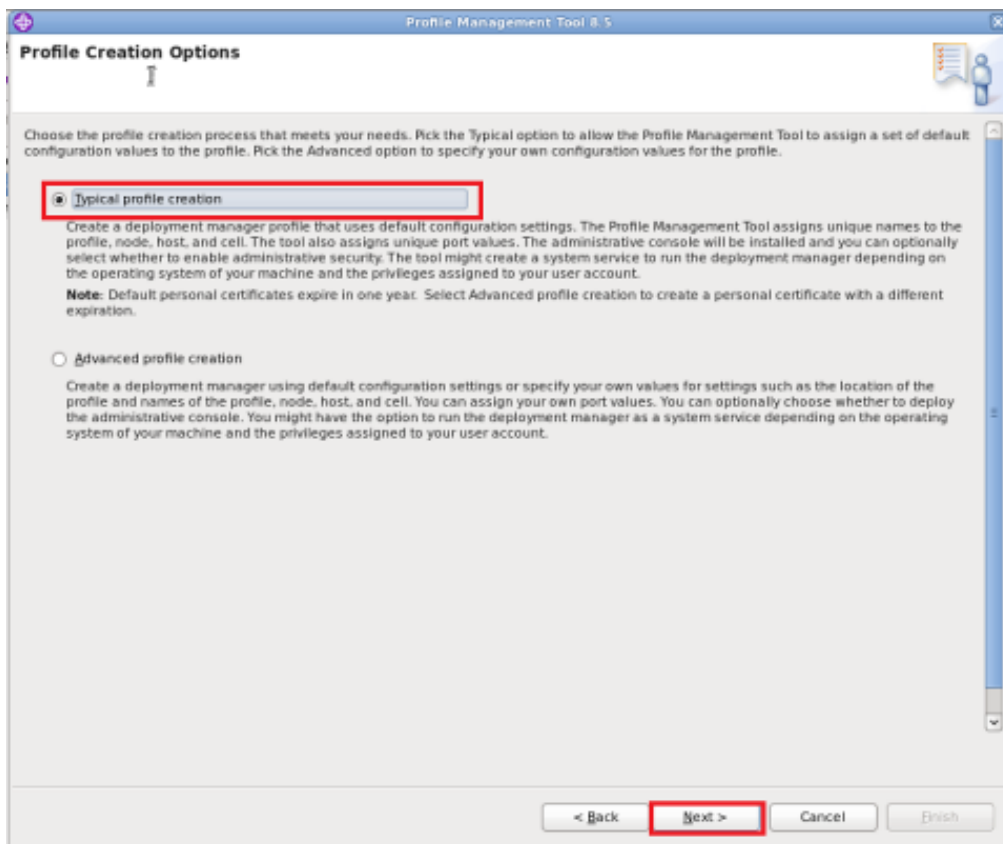
Navigation : *Management >Next*



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

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

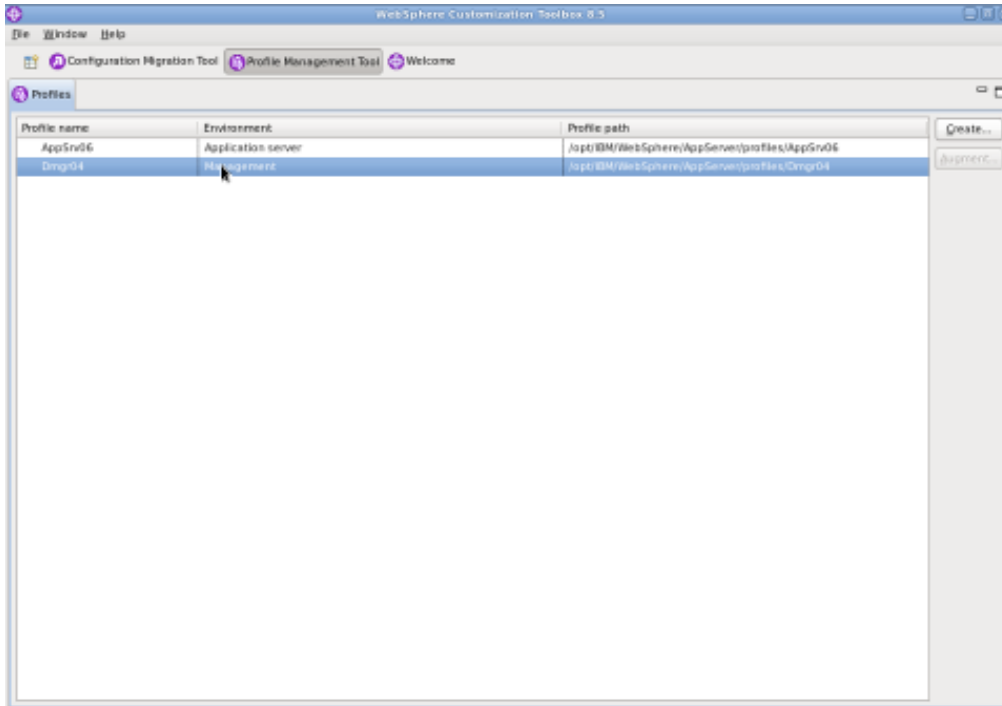
Deploy the administrative console (recommended): True

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

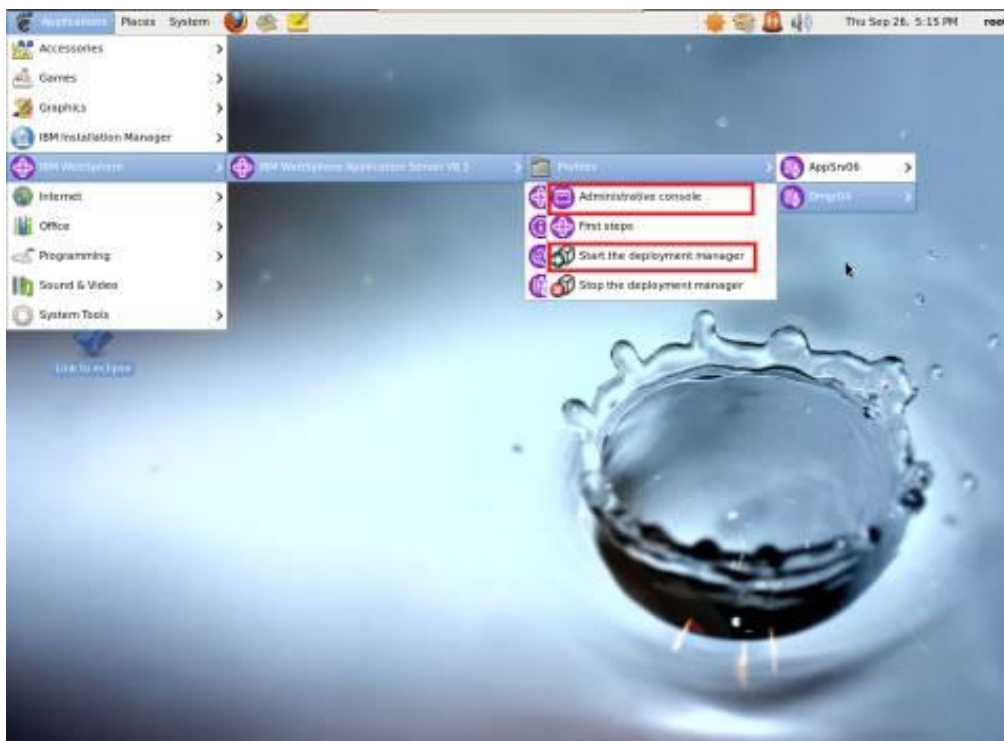
Run deployment manager as a service: False

< 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*

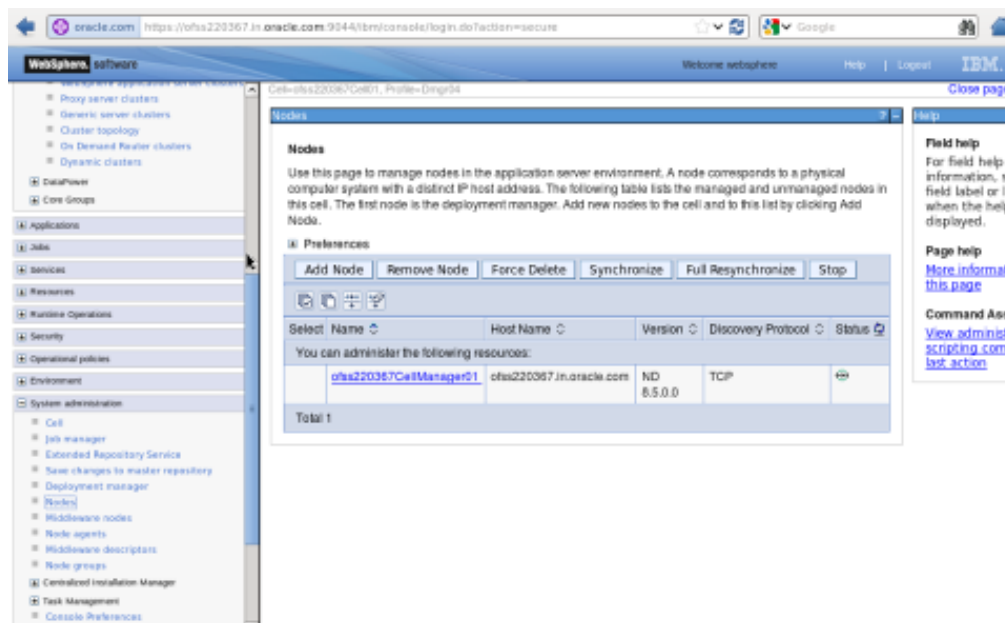




## Log into Deployment Manger Console

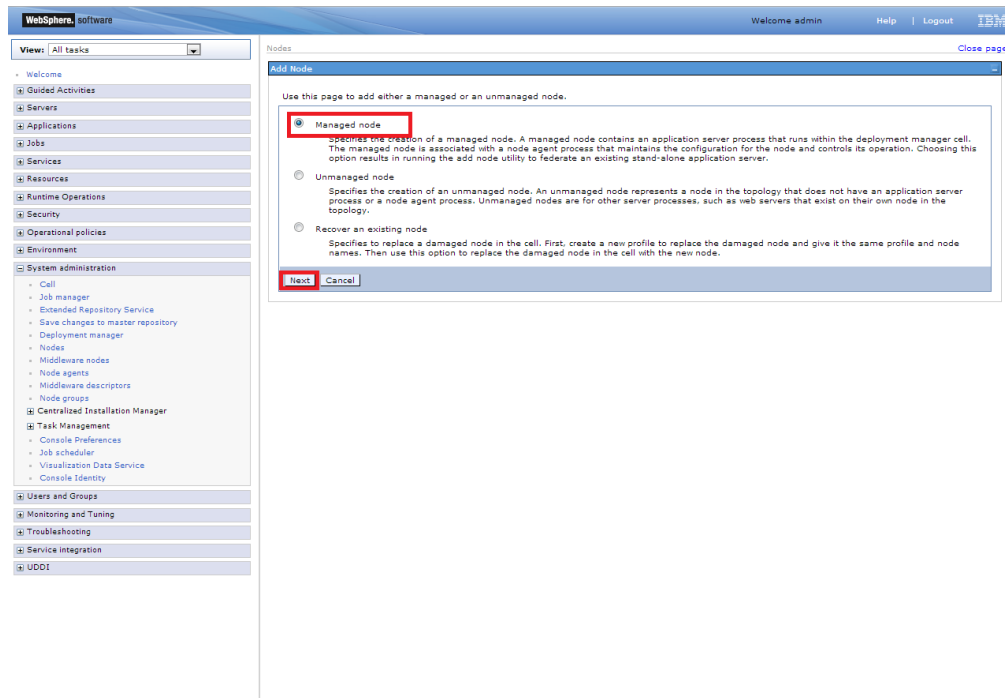


## Navigation : System administration > Nodes > Add Node



## 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

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  
webshpere

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: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

ADMU0012: Creating Node Agent config

ADMU0014: Adding node ofss220367Node01 configuration to cell: ofss220367Cell01

ADMU0016: Synchronizing configuration between node and cell.

Please Wait...

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"/>	<a href="#">otfs220367CellManager01</a>	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	<a href="#">otfs220367Node01</a>	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<b>Total 2</b>					

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"/>	<a href="#">otfs220367CellManager01</a>	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	<a href="#">otfs220367Node01</a>	otfs220367.in.oracle.com	ND 8.5.0.0	TCP	⊕
<input type="checkbox"/>	<a href="#">otfs220555Node01</a>	otfs220555.in.oracle.com	ND 8.5.0.0	TCP	⊕
<b>Total 3</b>					

## 4.2.1 Start Node Agents

Navigation : *System administration> Node agents>Restart*

## 4.3 Create Cluster

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

Navigation : *Uncheck [Prefer Local] > Next*

WebSphere<sup>®</sup> software

Welcome admin Help | Logout

CallInfas220367 Call03, ProblemMgr04

View: All tasks

Close page

• 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

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

**WebSphere** software

Welcome admin | Help | Logout | IBM

Cell=ofas220367Cell01, Profile=Dmgr04

Views: All tasks

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

- Cell
- 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

**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 | IBM

Cell=ofas220367Cell01, Profile=Dmgr04

Views: All tasks

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
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- Deployment manager
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- 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

**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, and Applications. 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 visible. Below this, there 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'. The total number of members is shown as 2. A 'Field help' box on the right explains how to use field help 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 how to use field help information. At the bottom, there are 'Previous', 'Finish', and 'Cancel' buttons.



## 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 Ripplestart ImmediateStop

Select	Name	Status
<input checked="" type="checkbox"/>	CLUSTER_1	X

You can administer the following resources:

Total 1

**Field help**  
For field help information, select field label or list item when the help icon is displayed.

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

**Command Assistant**  
[View administrative scripting command 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.

**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
<input type="checkbox"/>	CLUSTER_1	→

You can administer the following resources:

Total 1

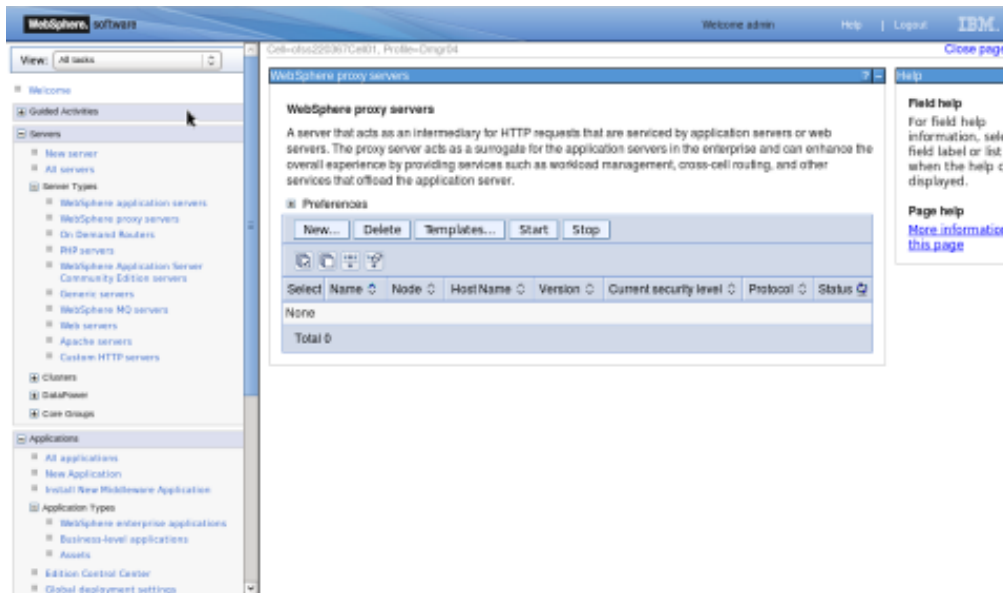
**Field help**  
For field help information, select field label or list item when the help icon is displayed.

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

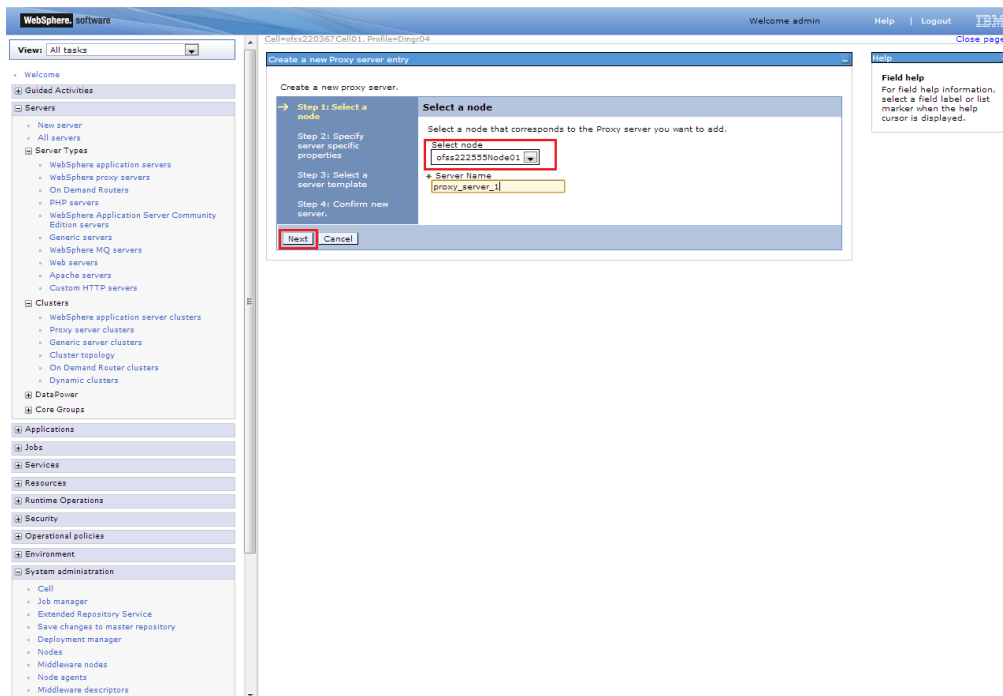
**Command Assistant**  
[View administrative scripting command list action](#)

## 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.

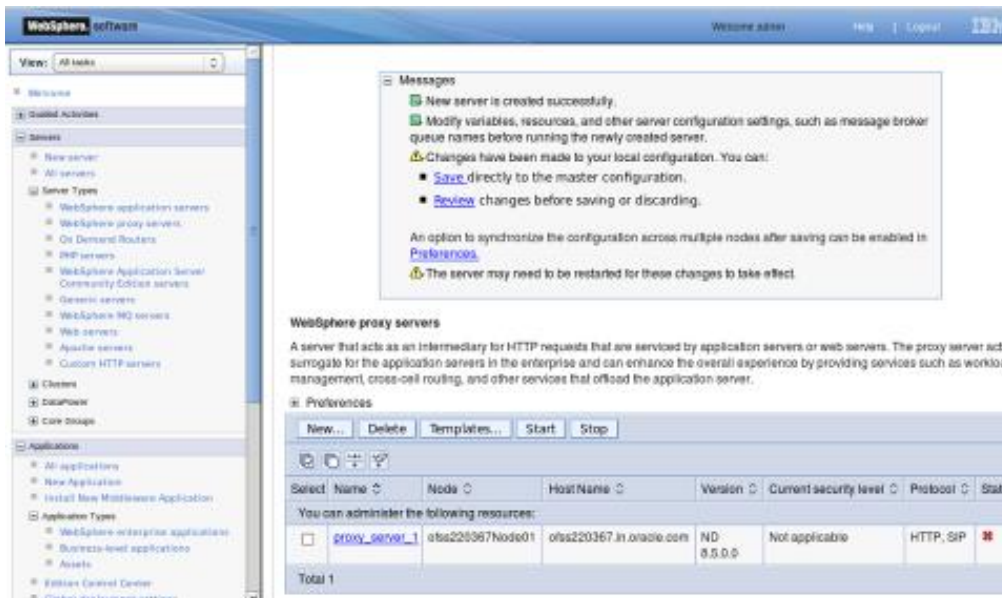
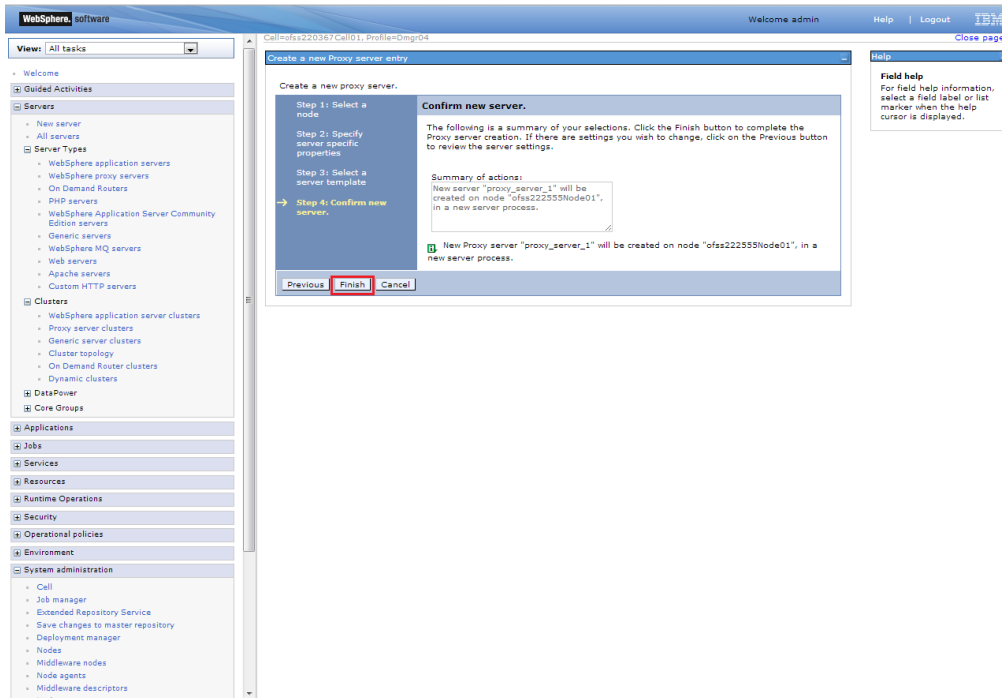
Select a server template

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	o1ss220367Node01	o1ss220367.in.oracle.com	8.5.0.0	Not applicable	HTTP, SIP	Start

You can administer the following resources:

Total 1

**Messages**

Server o1ss220367Node01: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	o1ss220367Node01	o1ss220367.in.oracle.com	ND	Not applicable	HTTP, SIP	Start

You can administer the following resources:

Total 1

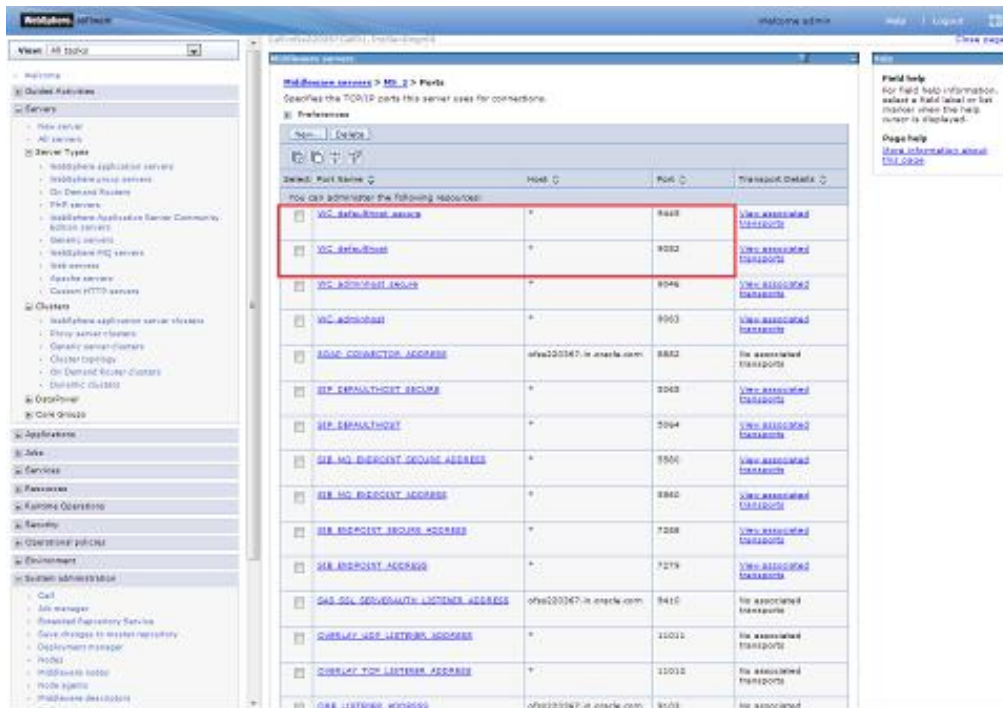
## 4.5 Configure Virtual Host

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 'Virtual Hosts' configuration for 'MiddleWareServer1 - MS\_1 - P Ports'. The page title is 'Specify the TCP/IP ports this server uses for connections.' and the URL is 'http://localhost:9080'. Below the title, there is a table of virtual hosts. Two rows are highlighted with a red box: 'WC\_defaulthost\_secure' with port 9444 and 'WC\_defaulthost' with port 9081. Other virtual hosts listed include 'WC\_defaulthost\_secure', 'WC\_defaulthost', 'WC\_DEFAULTHOST\_SECURE', 'WC\_DEFAULTHOST', 'SOA1\_CONNECTOR\_ADDRESS', 'SIS\_DEFAULTHOST\_SECURE', 'SIS\_DEFAULTHOST', 'SIS\_HQ\_ENDPOINT\_SECURE\_ADDRESS', 'SIS\_HQ\_ENDPOINT\_ADDRESS', 'SIS\_ENDPOINT\_SECURE\_ADDRESS', 'SIS\_ENDPOINT\_ADDRESS', 'SIS\_HQ\_ENDPOINT\_SECURE\_ADDRESS', 'QWS\_VA\_VA\_ENDPOINT\_ADDRESS', 'QWS\_VA\_VA\_ENDPOINT\_ADDRESS', and 'DBS\_ENDPOINT\_ADDRESS'.

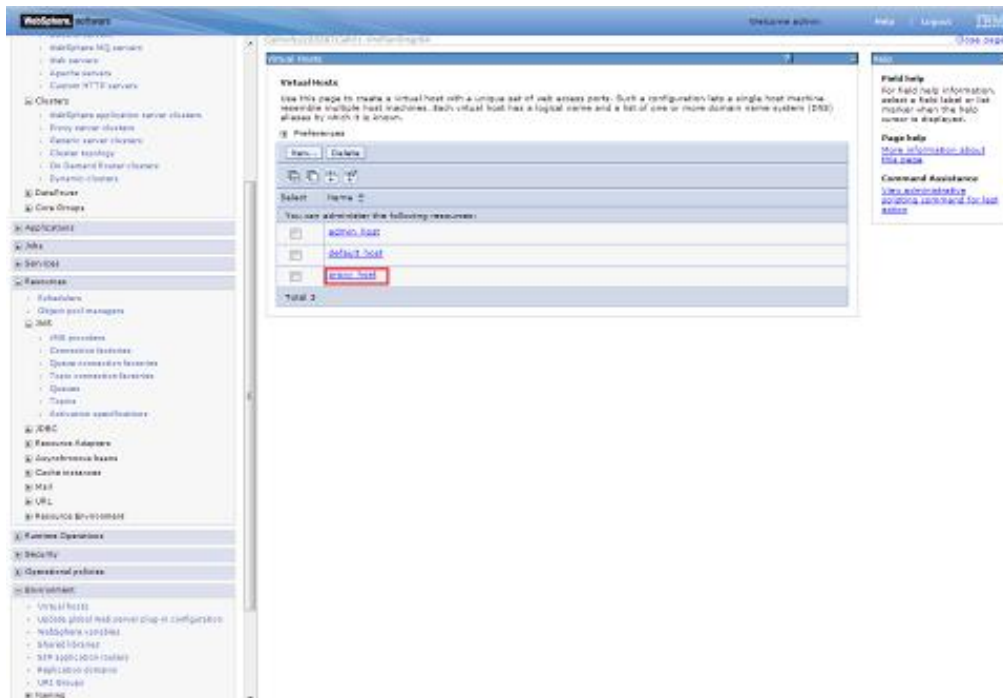
Name	Port	Port	Transport Details
<input type="checkbox"/> WC_defaulthost_secure	+	9444	No associated transports
<input type="checkbox"/> WC_defaulthost	+	9081	No associated transports
<input type="checkbox"/> WC_defaulthost_secure	+	9043	No associated transports
<input type="checkbox"/> WC_DEFAULTHOST	+	9042	No associated transports
<input type="checkbox"/> SOA1_CONNECTOR_ADDRESS	http://200.67.in.oracle.com	8881	No associated transports
<input type="checkbox"/> SIS_DEFAULTHOST_SECURE	+	9063	No associated transports
<input type="checkbox"/> SIS_DEFAULTHOST	+	9062	No associated transports
<input type="checkbox"/> SIS_HQ_ENDPOINT_SECURE_ADDRESS	+	9079	No associated transports
<input type="checkbox"/> SIS_HQ_ENDPOINT_ADDRESS	+	9089	No associated transports
<input type="checkbox"/> SIS_ENDPOINT_SECURE_ADDRESS	+	9087	No associated transports
<input type="checkbox"/> SIS_ENDPOINT_ADDRESS	+	9078	No associated transports
<input type="checkbox"/> SIS_HQ_ENDPOINT_SECURE_ADDRESS	http://200.67.in.oracle.com	9407	No associated transports
<input type="checkbox"/> QWS_VA_VA_ENDPOINT_ADDRESS	+	11009	No associated transports
<input type="checkbox"/> QWS_VA_VA_ENDPOINT_ADDRESS	+	11810	No associated transports
<input type="checkbox"/> DBS_ENDPOINT_ADDRESS	http://200.67.in.oracle.com	9102	No associated

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

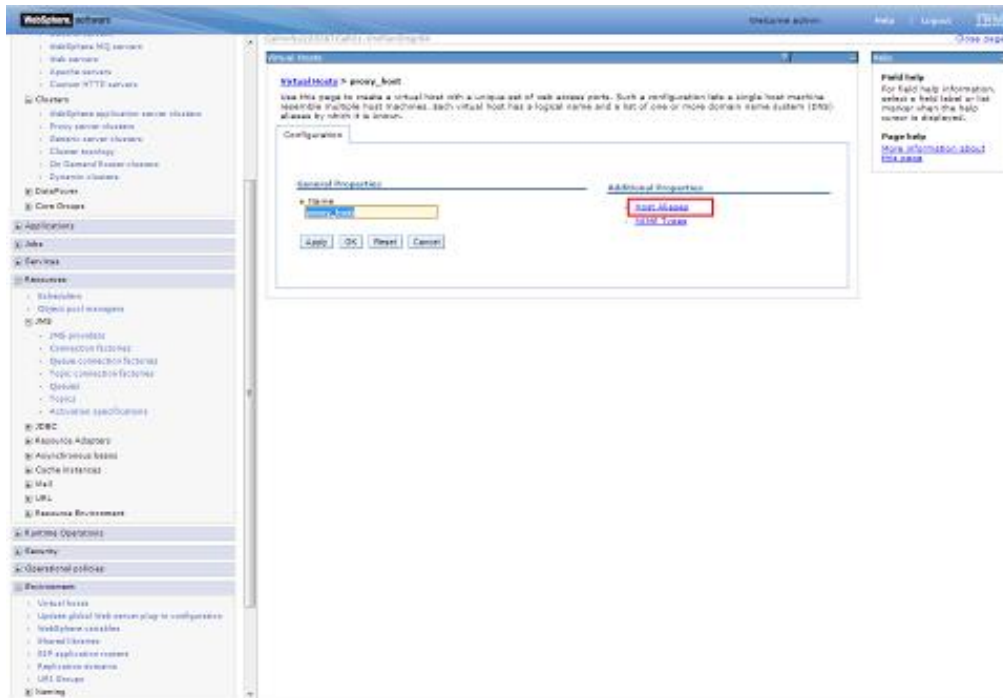


## 4.5.1 Virtual Host Setup

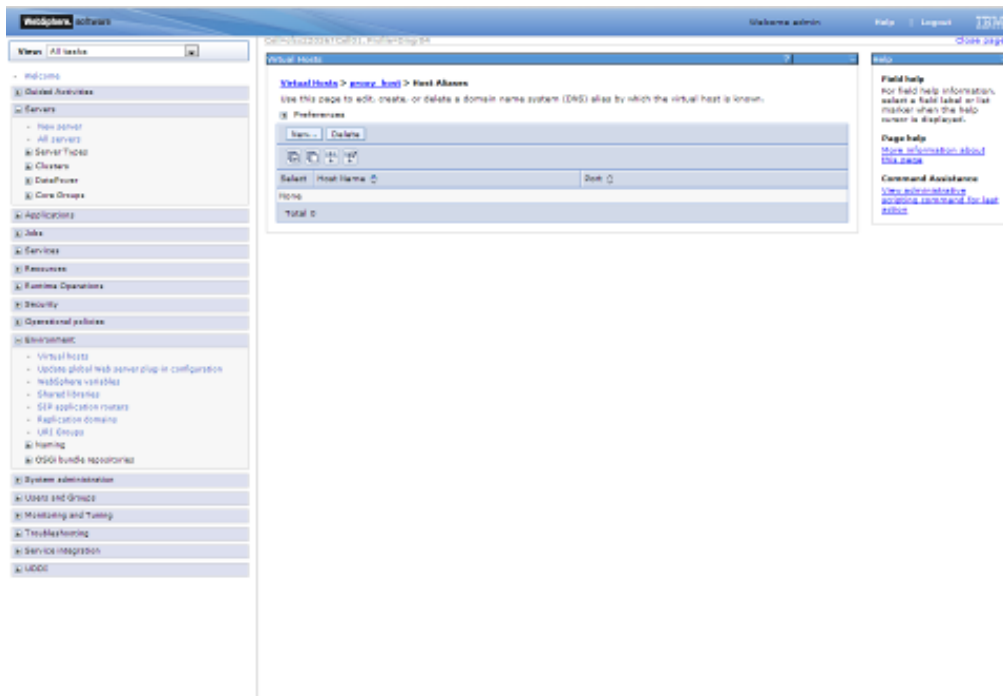
Navigation : *Environment*>*Virtual hosts*>*proxy\_host*



## 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 'Operational policies' section. The main content area displays the 'Virtual Hosts' configuration page for a new alias. The page title is 'Virtual Hosts > proxy\_host > Host Aliases > New...'. Below the title, there is a brief description: '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/external/ahosp URL.' Below this is a 'Configuration' section with a 'General Properties' sub-section. It contains two input fields: 'Host Name' with the value 'proxy\_host' and 'Port' with the value '9081'. At the bottom of the configuration area are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'. On the right side of the console, there are 'Field help' and 'Page help' sections with links to 'More 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 'Operational policies' section. The main content area displays the 'Virtual Hosts' configuration page for a list of aliases. The page title is 'Virtual Hosts > proxy\_host > Host Aliases'. Below the title, there is a brief description: 'Use this page to edit, create, or delete a domain name system (DNS) alias by which the virtual host is known.' Below this is a 'Dependencies' section with 'Items' and 'Delete' buttons. Below that is a table with columns 'Default', 'Host Name', and 'Port'. The table contains one entry: 'proxy\_host' with '9081'. Below the table, there is a section 'You can administer the following resources:' with a table containing one entry: 'proxy\_host' with '9081'. At the bottom of the table, it says 'Total 1'. On the right side of the console, there are 'Field help', 'Page help', and 'Command Assistance' sections with links to 'More information about this page'.

Similarly create proxy alias for all cluster related server default ports

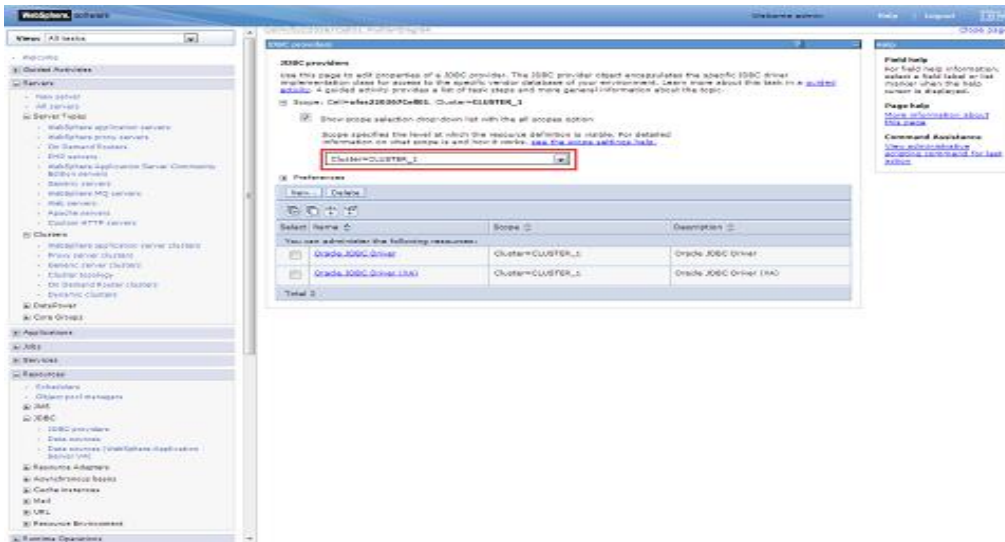
The screenshot shows the Oracle VM VirtualBox Admin console interface. The main content area displays the configuration for a virtual host named 'proxy\_host'. The page title is 'Virtual hosts > proxy\_host > Proxy Aliases'. Below the title, there is a brief instruction: 'Use this page to edit, create, or delete a domain name system (DNS) alias by which the virtual host is known.' There are buttons for 'New...', 'Delete', and 'Refresh'. A table lists the configured proxy aliases:

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

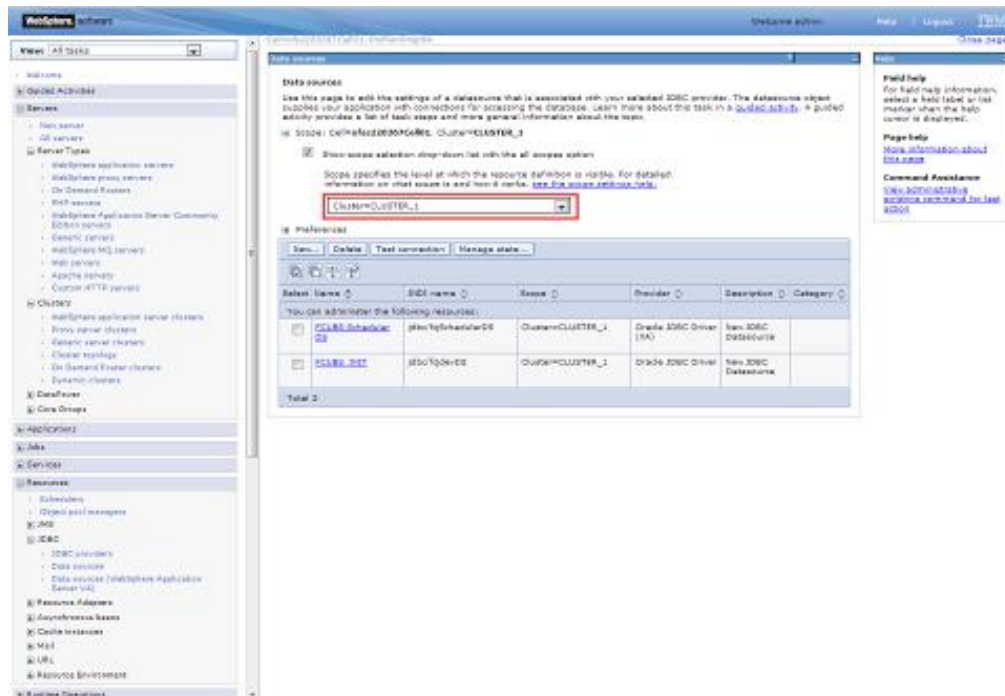
On the right side of the page, there is a 'Field help' section with the text: 'For field help information, select a field label or list marker when the help cursor is displayed.' Below that is a 'Page help' section with the text: 'More information about this page.' At the bottom of the right sidebar is a 'Command Assistance' section with the text: 'View documentation for this page.' The left sidebar contains a navigation menu with categories like 'Servers', 'Applications', 'Resources', 'System Administration', 'Users and Groups', 'Monitoring and Tuning', 'Troubleshooting', 'Service Integration', and 'UCDD'.

# 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=fes22830fcb85, 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"/>	<a href="#">EmailCF</a>	EmailCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">FC_QCF</a>	FC_QCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">REBQCF</a>	REBQCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">WebSphereQCF</a>	WebSphereQCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1

Total: 4

## JMS Queue:

**Queues**

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

Scope: `Cell=fes22830fcb85, 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"/>	<a href="#">EHS_INQUEUE</a>	EHS_INQUEUE	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">EHS_OUTQUEUE</a>	EHS_OUTQUEUE	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">EHS_QUEUE</a>	EHS_QUEUE	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">EHS_QUEUE_DLG</a>	EHS_QUEUE_DLG	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">EHS_QUEUE_RESPONSE</a>	EHS_QUEUE_RESPONSE	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">NOTIFY_DEST_QUEUE</a>	NOTIFY_DEST_QUEUE	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">NOTIFY_QUEUE</a>	NOTIFY_QUEUE	WebSphere MQ messaging provider	NOTIFY_QUEUE	Cluster=CLUSTER_1
<input type="checkbox"/>	<a href="#">NOTIFY_QUEUE_DLG</a>	NOTIFY_QUEUE_DLG	WebSphere MQ messaging provider		Cluster=CLUSTER_1

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 Server Administration Console. 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 this 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 'Select Items', 'Description', 'Connection factory JNDI name', 'Destination JNDI name', and 'Status'. The table contains five rows of listener configurations, 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.

Select Items	Description	Connection factory JNDI name	Destination JNDI name	Status
<input type="checkbox"/>	EMailListener	EMailCF	EMail_QUEUE	🟢
<input type="checkbox"/>	EMailOutListener	EMailOutCF	EMail_OUT_QUEUE	🟢
<input type="checkbox"/>	MDBListener	MDBCF	MDB_QUEUE	🟢
<input type="checkbox"/>	NOTIFYListener	NOTIFYCF	NOTIFY_QUEUE	🟢
<input type="checkbox"/>	KTMSListener	KTMSCF	KTMS_QUEUE	🟢

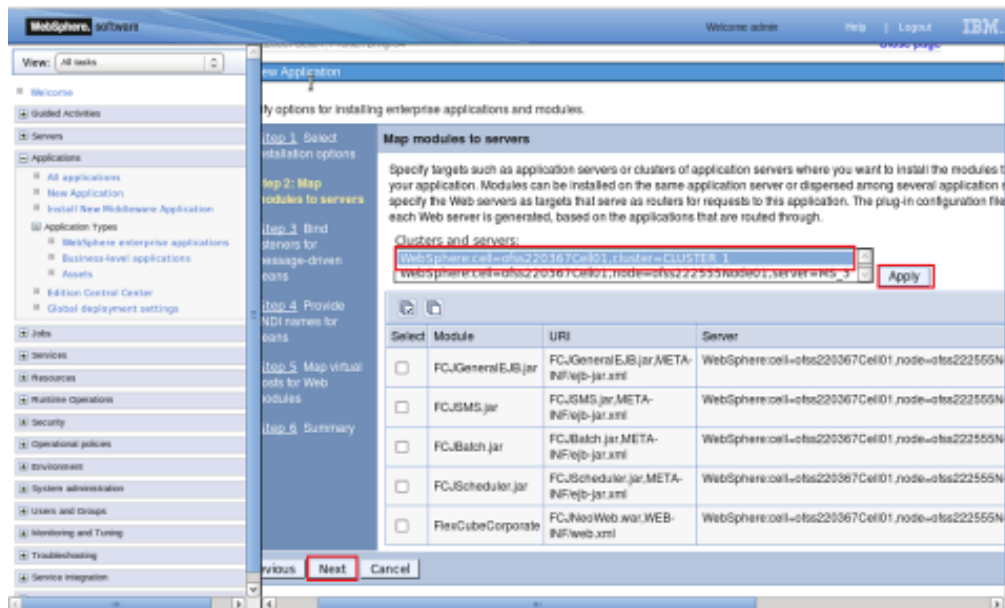
**Navigation :** *Middleware servers > MS\_2 > Message listener service > Listener Ports*

The screenshot shows the Oracle WebLogic Server Administration Console. The left-hand navigation pane is expanded to 'Middleware servers > MS\_2 > Message listener service > Listener Ports'. The main content area displays the configuration for this 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 'Select Items', 'Description', 'Connection factory JNDI name', 'Destination JNDI name', and 'Status'. The table contains five rows of listener configurations, 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.

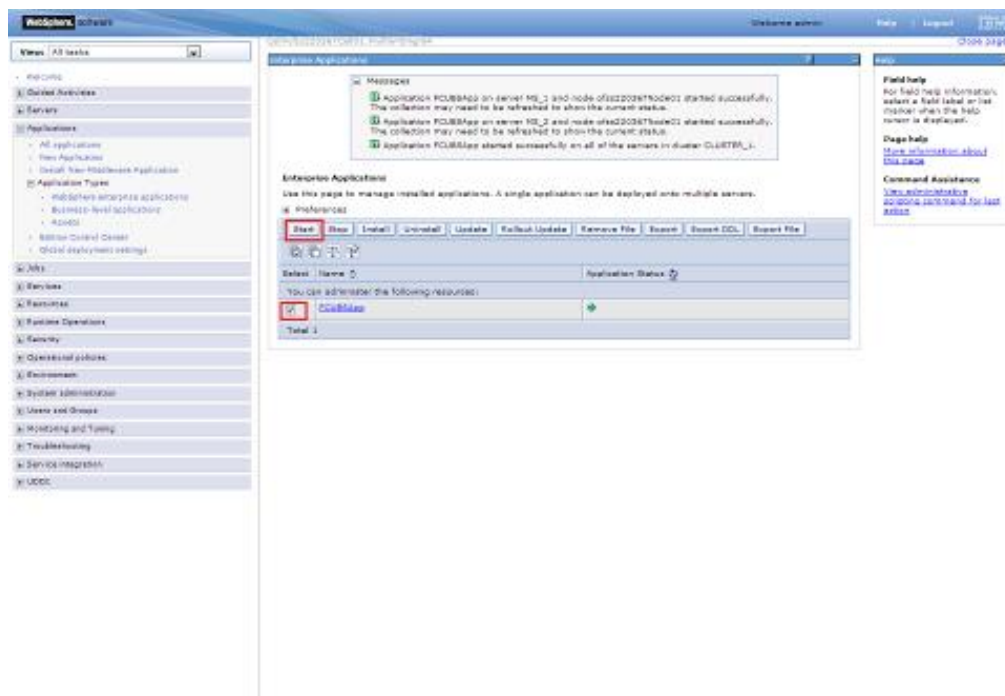
Select Items	Description	Connection factory JNDI name	Destination JNDI name	Status
<input type="checkbox"/>	EMailListener	EMailCF	EMail_QUEUE	🟢
<input type="checkbox"/>	EMailOutListener	EMailOutCF	EMail_OUT_QUEUE	🟢
<input type="checkbox"/>	MDBListener	MDBCF	MDB_QUEUE	🟢
<input type="checkbox"/>	NOTIFYListener	NOTIFYCF	NOTIFY_QUEUE	🟢
<input type="checkbox"/>	KTMSListener	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

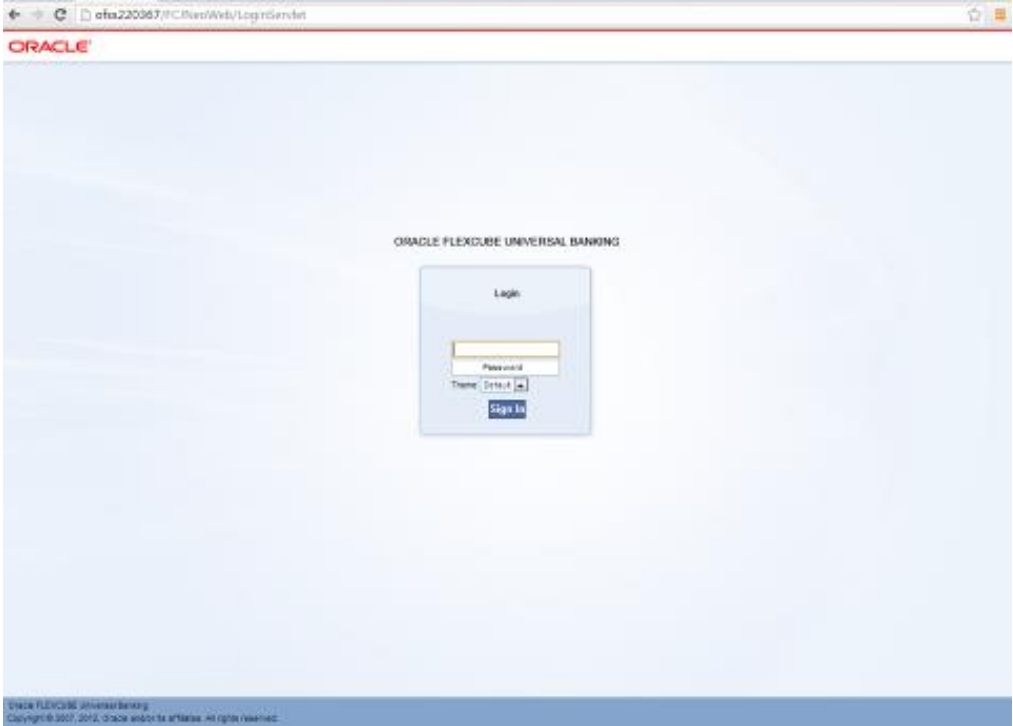
Make a note of the ports `PROXY_HTTPS_ADDRESS/PROXY_HTTP_ADDRESS` to access the application.

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

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_SUNMATH_LISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	CERT_26_SECURELISTENER_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_HTTPS_ADDRESS	*	10014	No associated transports
<input type="checkbox"/>	ORCLISTENER_HTTP_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_SECURELISTENER_ADDRESS	afw222267.in.oracle.com	0	No associated transports
<input type="checkbox"/>	SOCKET_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] [2017]  
Version 14.0.0.0

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