

Cluster Creation on Websphere Application Server  
Oracle FLEXCUBE Universal Banking  
Release 12.87.7.0.0  
[May] [2021]



---

# Table of Contents

<b>1. PURPOSE</b> .....	<b>1-1</b>
<b>2. INTRODUCTION TO WEBSPHERE</b> .....	<b>2-1</b>
<b>3. PRE-REQUISITES:</b> .....	<b>3-1</b>
<b>4. STEPS INVOLVED FOR CLUSTERING</b> .....	<b>4-1</b>
4.1 <b>CREATE PROFILE</b> .....	4-1
4.1.1 <i>Create Deployment Manager Profile</i> .....	4-5
4.2 <b>CREATE NODE</b> .....	4-13
4.2.1 <i>Start Node Agents</i> .....	4-16
4.3 <b>CREATE CLUSTER</b> .....	4-16
4.3.1 <i>Add Cluster Members</i> .....	4-18
4.3.2 <i>Start Cluster</i> .....	4-20
4.4 <b>CREATE PROXY SERVER</b> .....	4-21
4.4.1 <i>Start Proxy Server</i> .....	4-24
4.5 <b>CONFIGURE VIRTUAL HOST</b> .....	4-25
4.5.1 <i>Virtual Host Setup</i> .....	4-26
<b>5. CREATE RESOURCES IN CLUSTER SCOPE</b> .....	<b>5-1</b>
<b>6. DEPLOY APPLICATION TO CLUSTER</b> .....	<b>6-1</b>
6.1.1 <i>Test the application</i> .....	6-2

---

# 1. Purpose

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

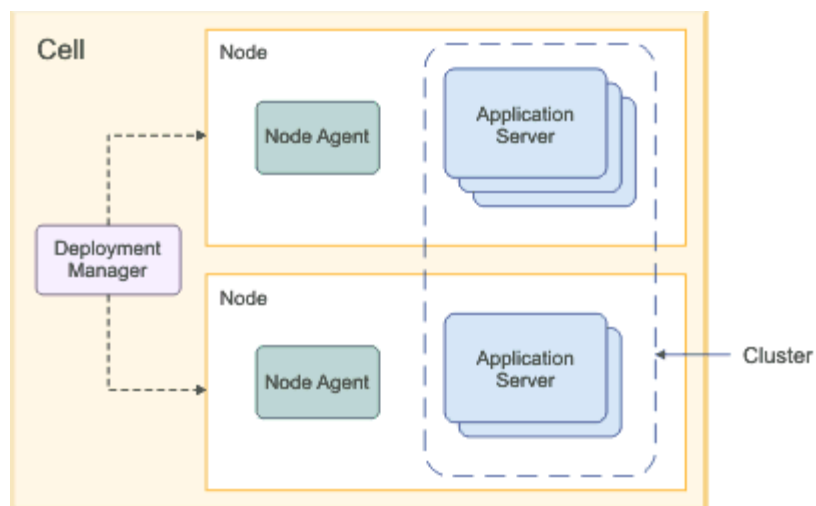
---

## 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

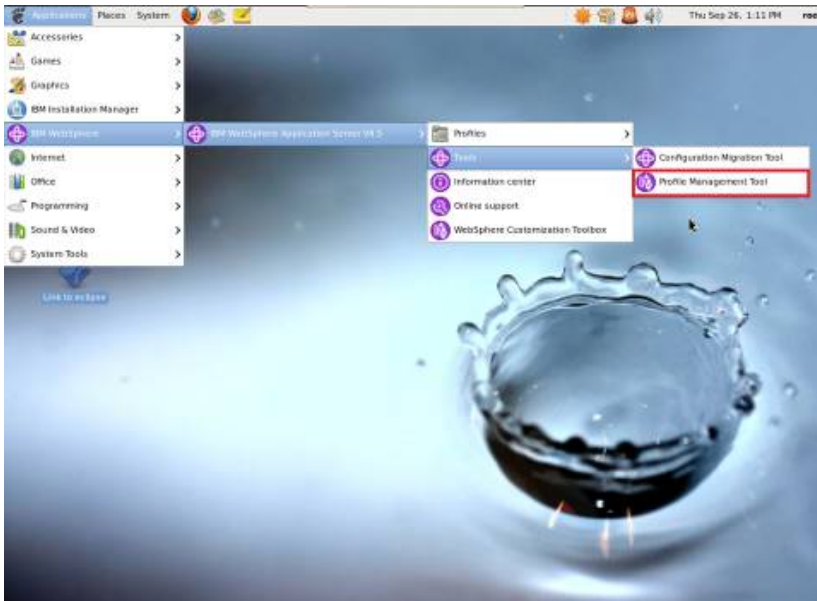
- For SSL configuration in Websphere, refer to the document SSL\_Configuration\_WAS.doc
- For application deployment, refer to document FCUBS\_Application\_WAS.doc
- For deployment of Gateway applications, refer to document GATEWAY\_Applications\_WAS.doc

## 4. Steps involved for Clustering

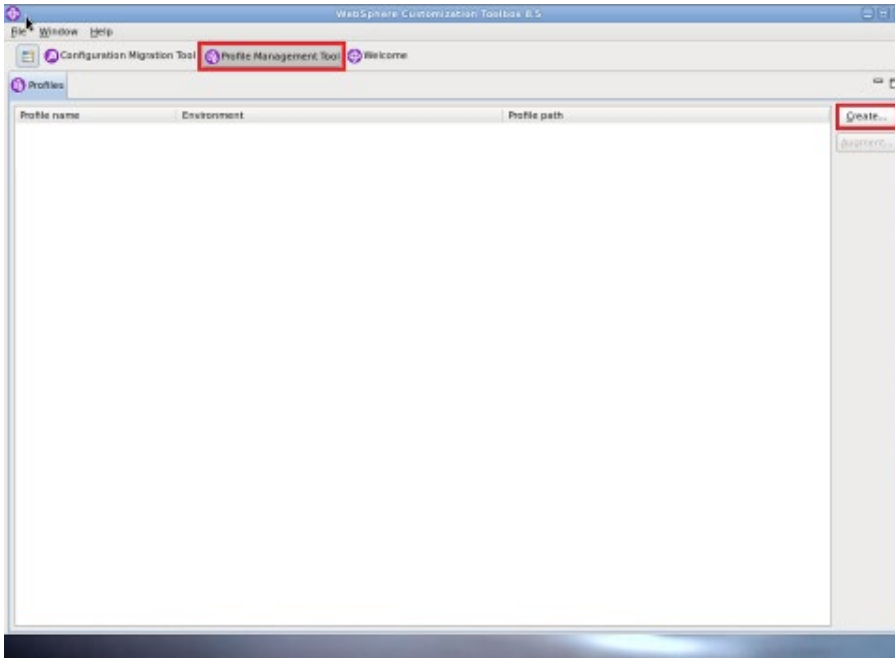
### 4.1 Create Profile

Go to Profile Management Tool

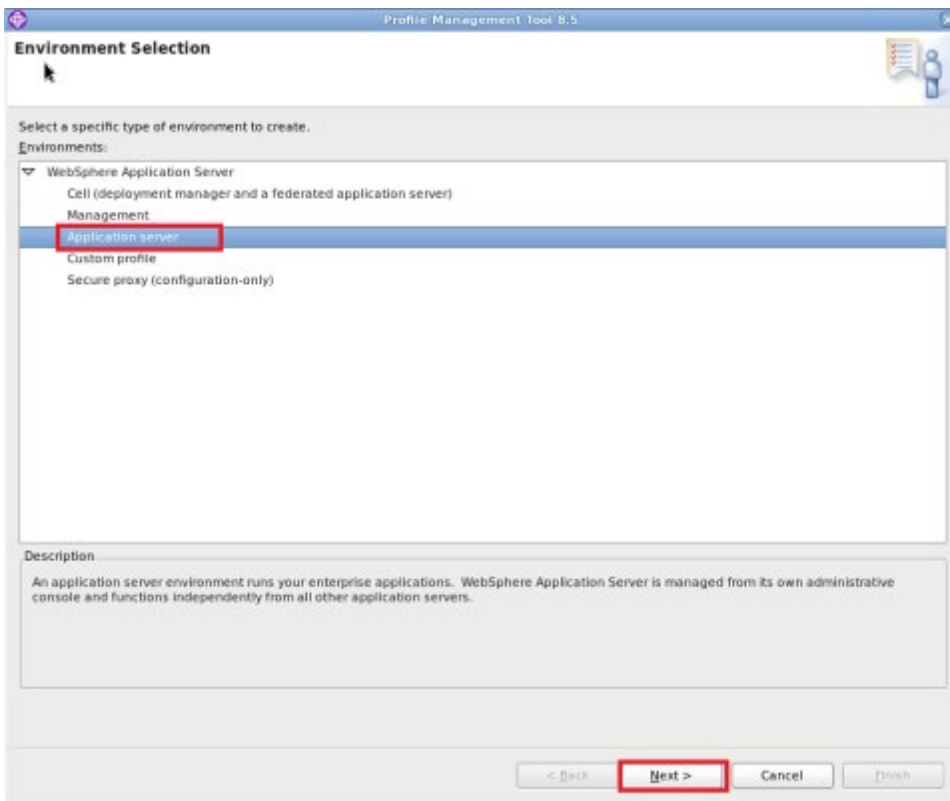
Navigation: IBM WebSphere > *IBM WebSphere Application Server V8.5* > *Tools* > *Profile Management Tool*



Navigation : *Profile Management Tool* > *Create*

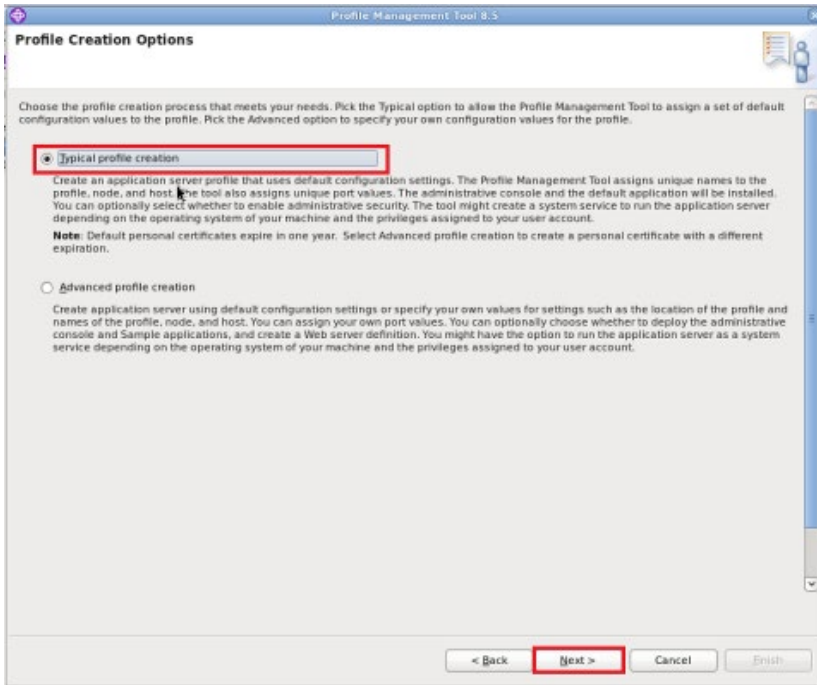


**Navigation :** *Application Server > Next*

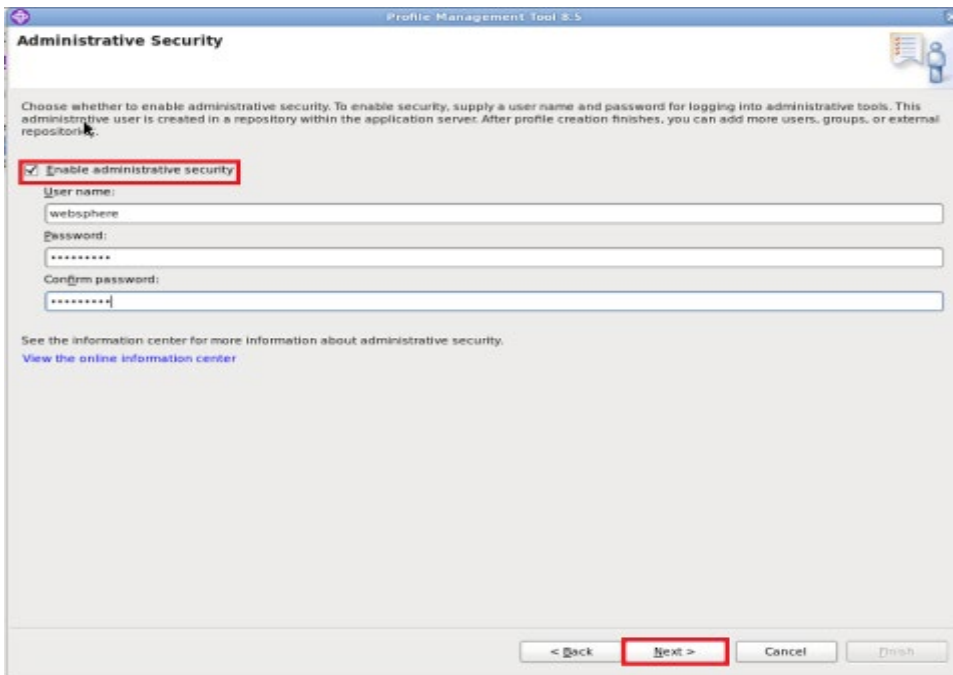


**Navigation :** *Typical profile creation > Next*

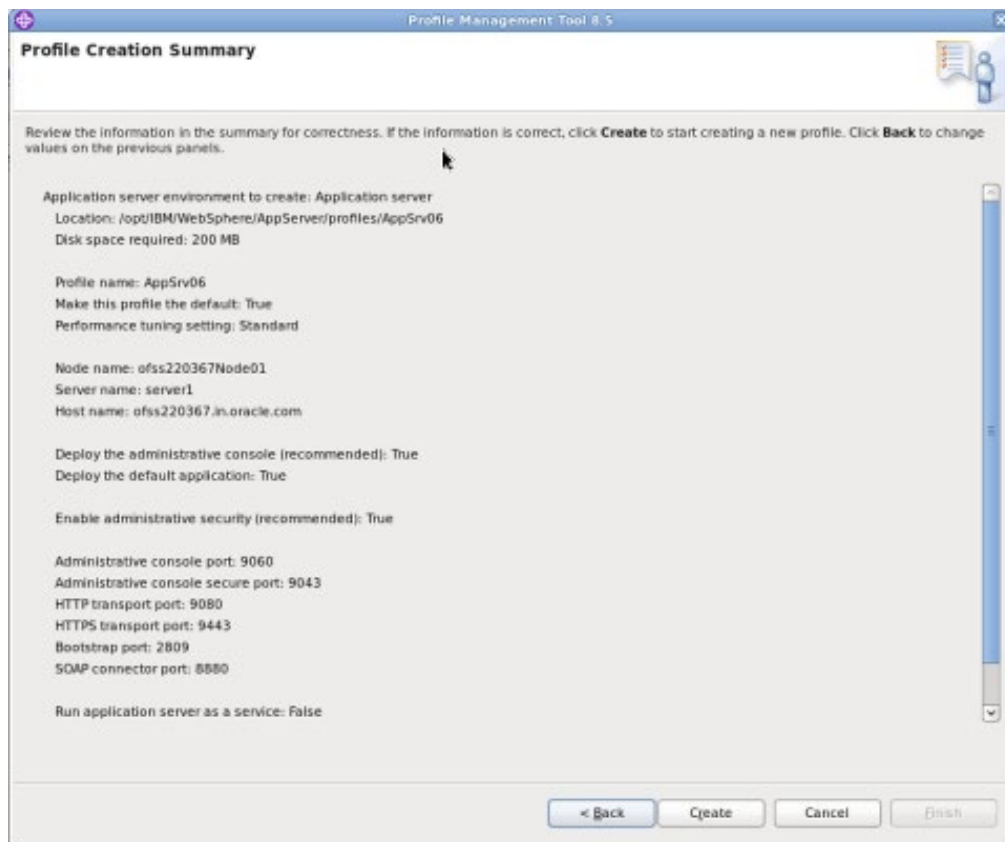




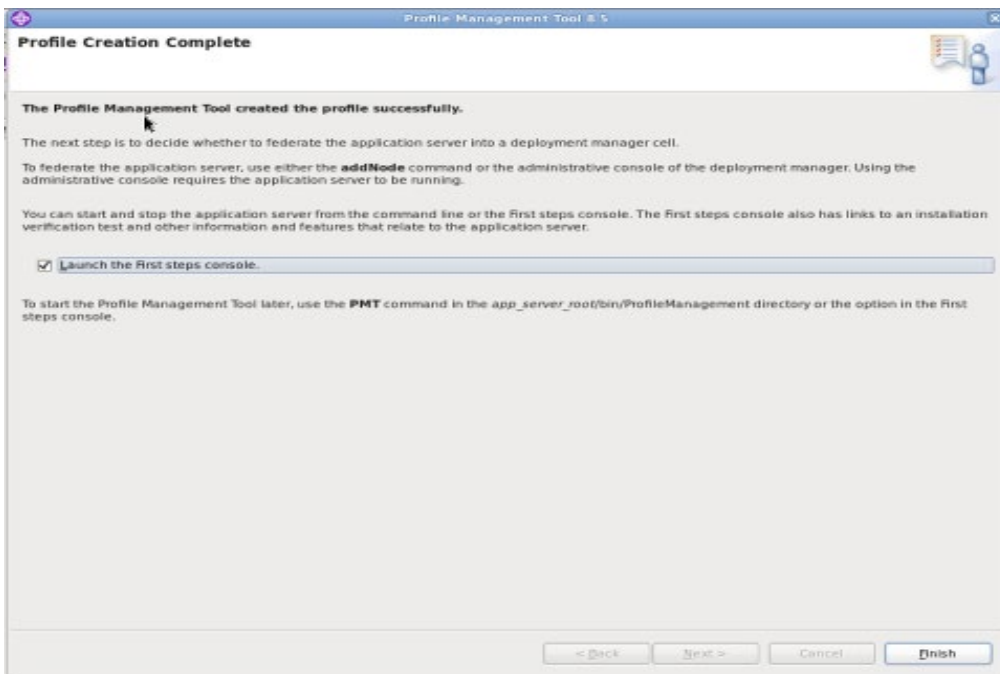
**Navigation:** *Enable administrative security > Next*



**Navigation :** *Create Summary*

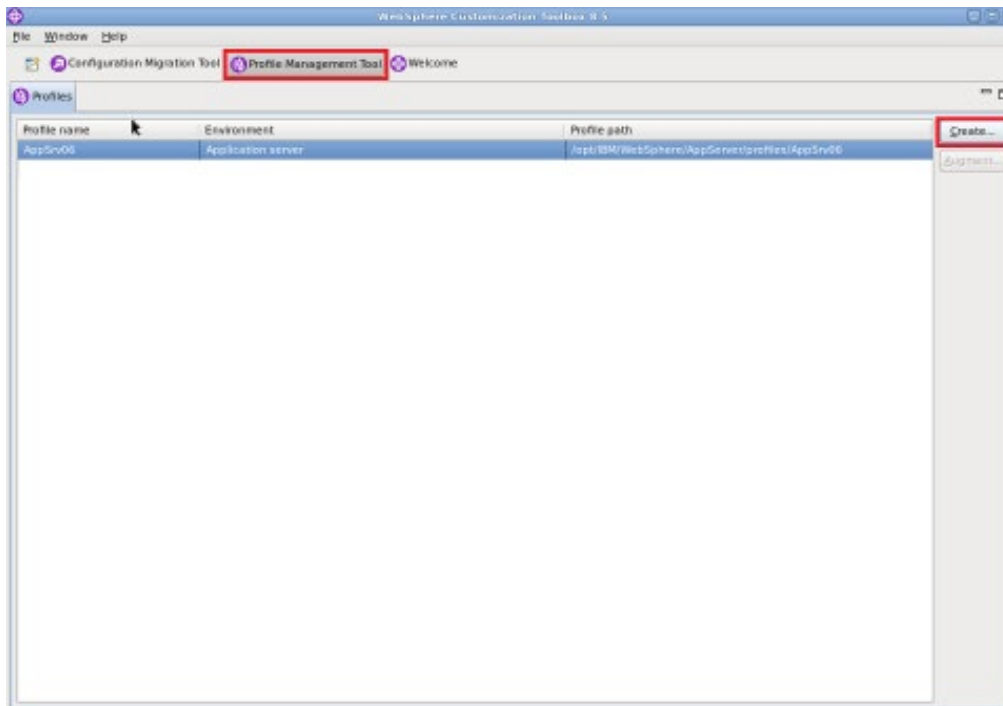


Navigation : *Finish*

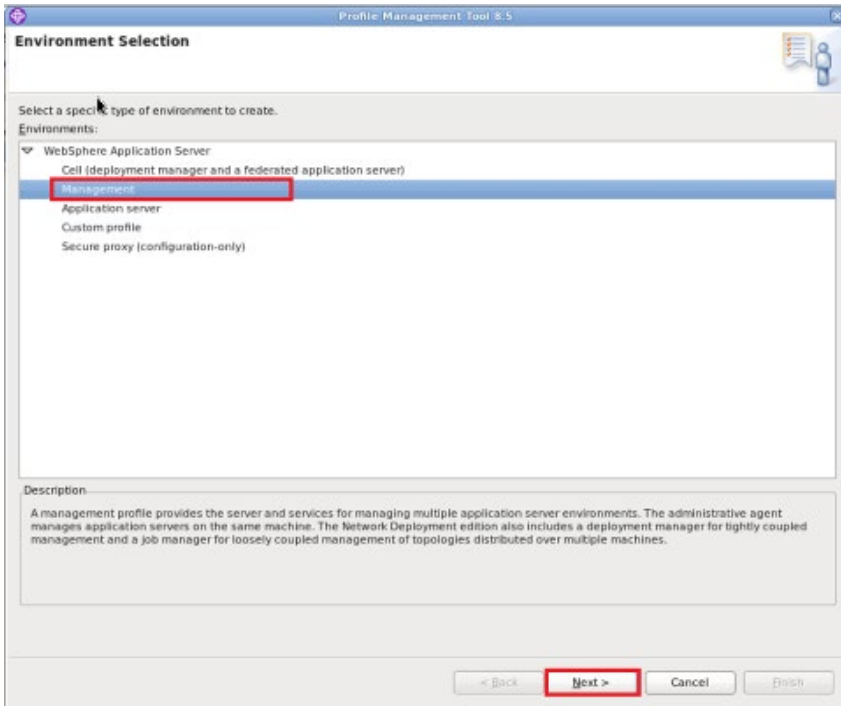


## 4.1.1 Create Deployment Manager Profile

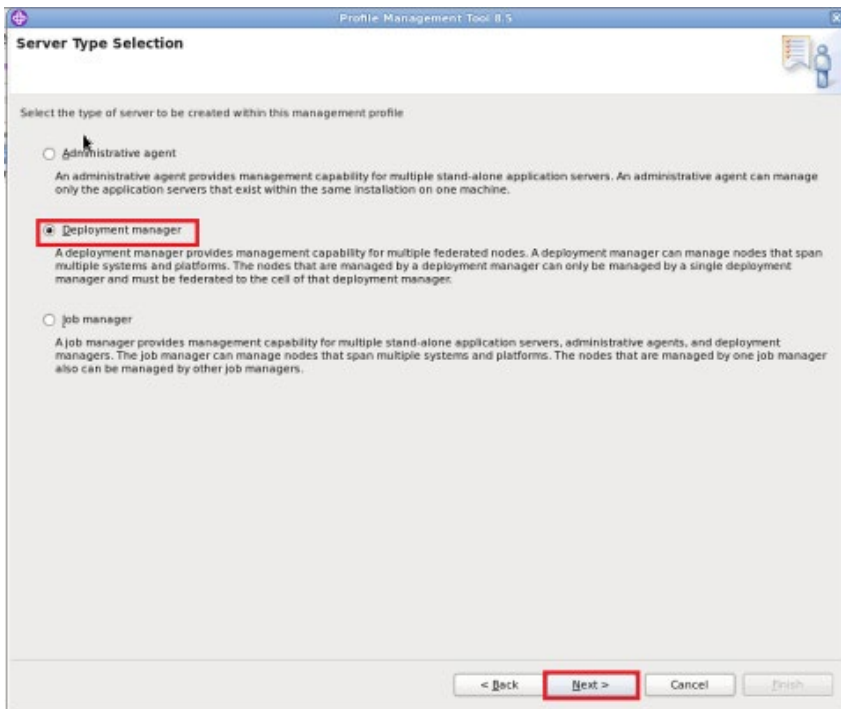
Navigation : *Profile Management Tool > Create*



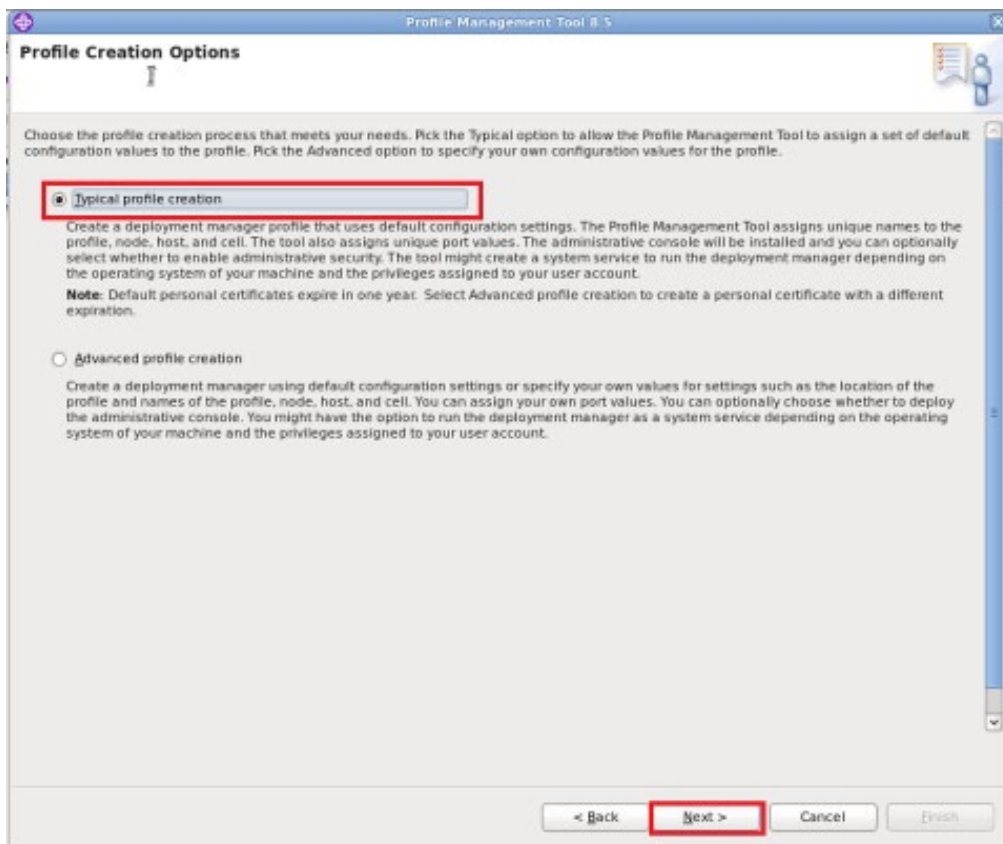
Navigation : *Management >Next*



**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

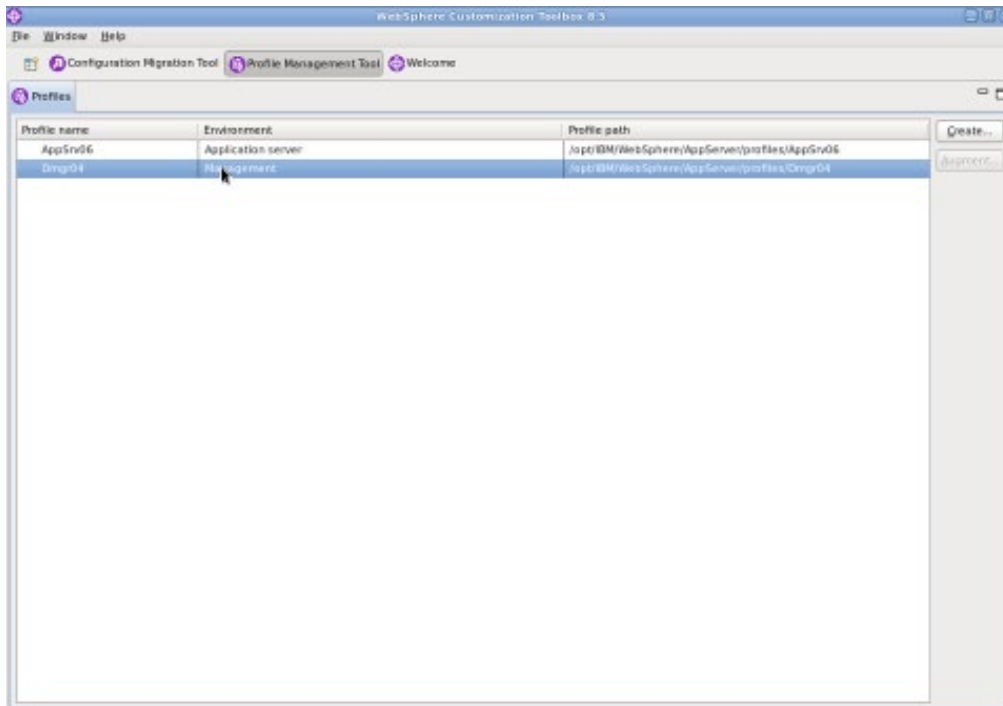
Deploy the administrative console (recommended): True

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

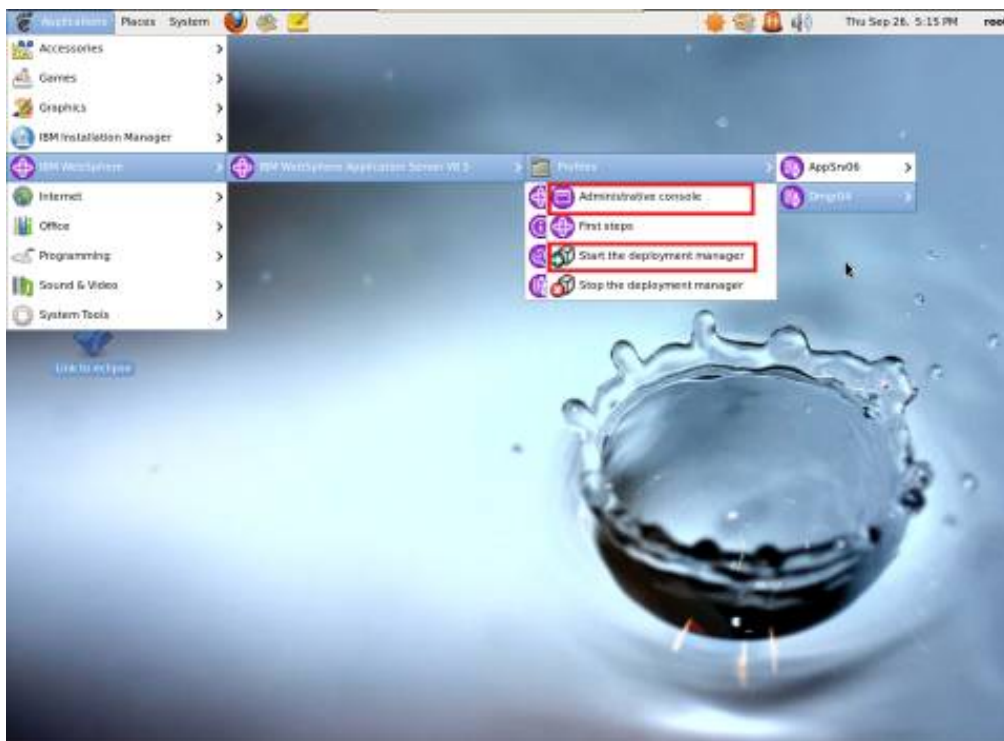
< Back Create Cancel Finish



Start Deployment Manager & Open Administrative Console

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

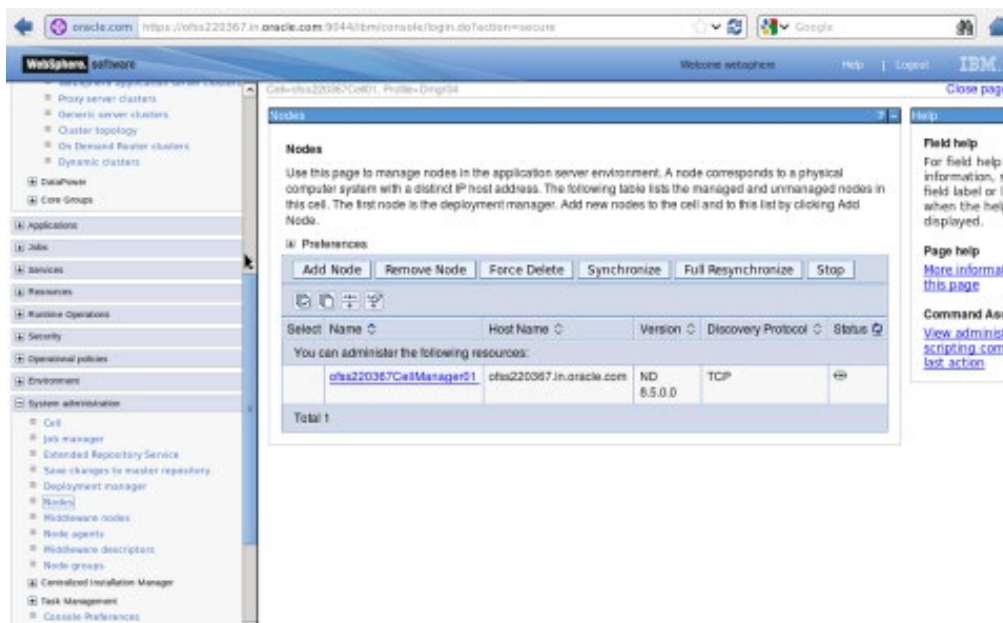




## Log into Deployment Manger Console

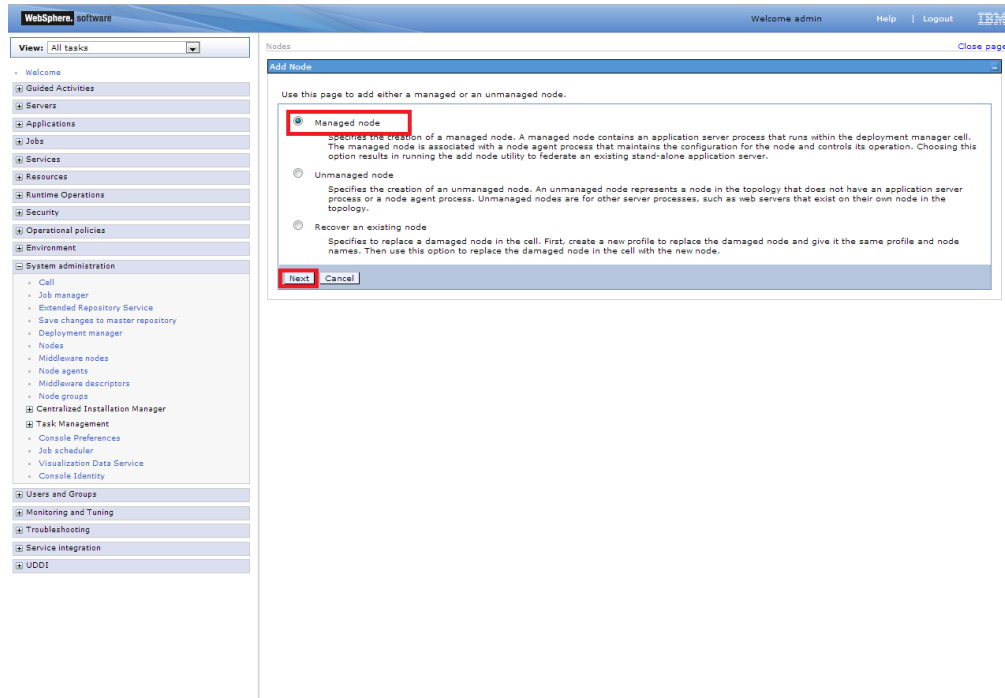


## Navigation : System administration > Nodes > Add Node



## 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

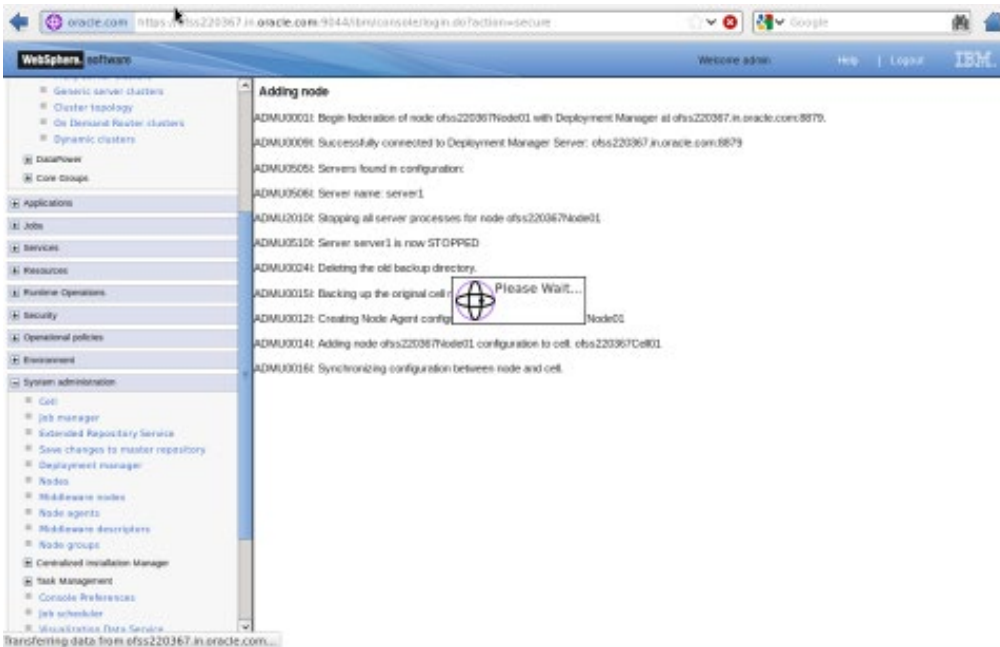
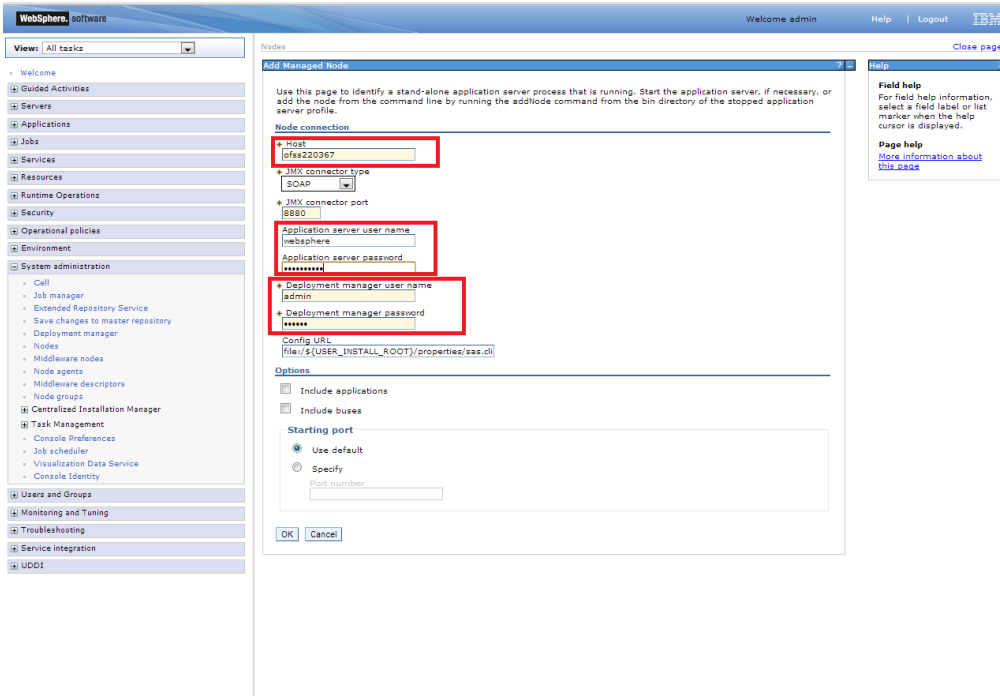
JMX Connector Port : SOAP\_CONNECTOR\_ADDRESS of Application Server

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



**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="#">otss220367CellManager01</a>	otss220367.in.oracle.com	ND 8.5.0.0	TCP	↕
<input type="checkbox"/>	<a href="#">otss220367Node01</a>	otss220367.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="#">otss225367CellManager01</a>	otss220367.in.oracle.com	ND 8.5.0.0	TCP	↕
<input type="checkbox"/>	<a href="#">otss225367Node01</a>	otss220367.in.oracle.com	ND 8.5.0.0	TCP	↕
<input type="checkbox"/>	<a href="#">otss22555Node01</a>	otss22555.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*

**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.in.oracle.com	ND 6.5.0.0	➔
<input type="checkbox"/>	nodeagent	ots220367Node01	ots220367.in.oracle.com	ND 6.5.0.0	➔

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](#)

CallInfs220167Call01\_Profile0mgp04

Views: 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
  - 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

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  
[More information about this page](#)

## 4.3.1 Add Cluster Members

WebSphere software

Welcome admin Help | Logout IBM

View: All tasks

Cell=ofas220367Cell01, Profile=dmgr04

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

**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/ofas222555Node01 (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

View: All tasks

Cell=ofas220367Cell01, Profile=dmgr04

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

**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  
ofas222555Node01 (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

**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

Select node  
 otss222555Node01(ND 8.5.0.0)

+ Weight  
 (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	otss220367Node01	ND 8.5.0.0	2
<input type="checkbox"/>	MS_2	otss222555Node01	ND 8.5.0.0	2
Total 2				

**Previous** **Next** **Cancel**

**Help**  
**Field help**  
 For field help information, select a field label or list marker when the help cursor is displayed.  
**Page help**  
[More information about this page](#)

## Navigation : Finish

**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

**Summary**

Summary of actions:

Options	Values
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
Generate unique HTTP ports	true

**Previous** **Finish** **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](#)

## 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	✖
Total 1		

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

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

**Command Assistant**  
[View administrative 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	✔
Total 1		

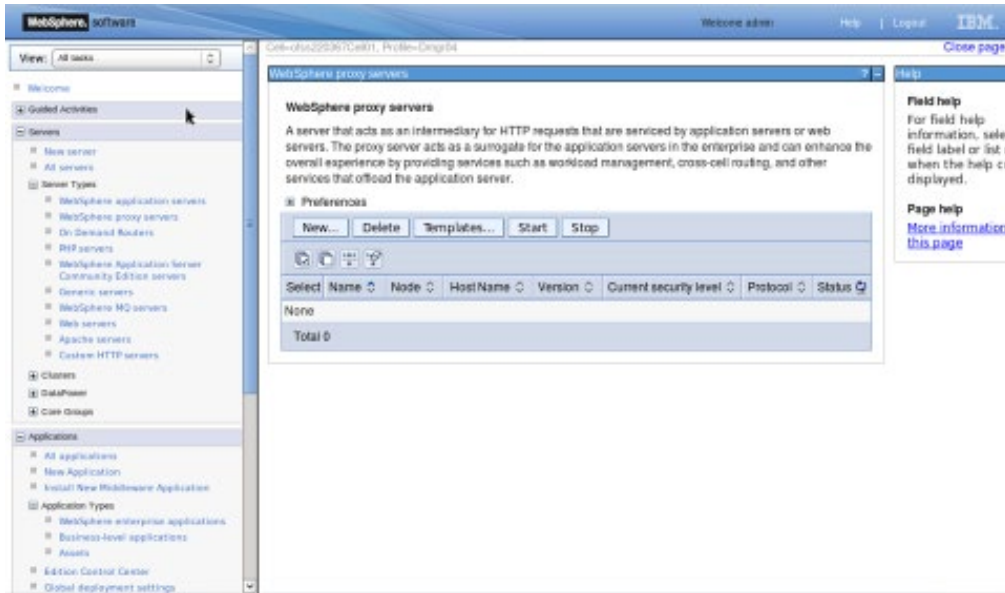
**Field help**  
For field help information, select field label or list item when the help is displayed.

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

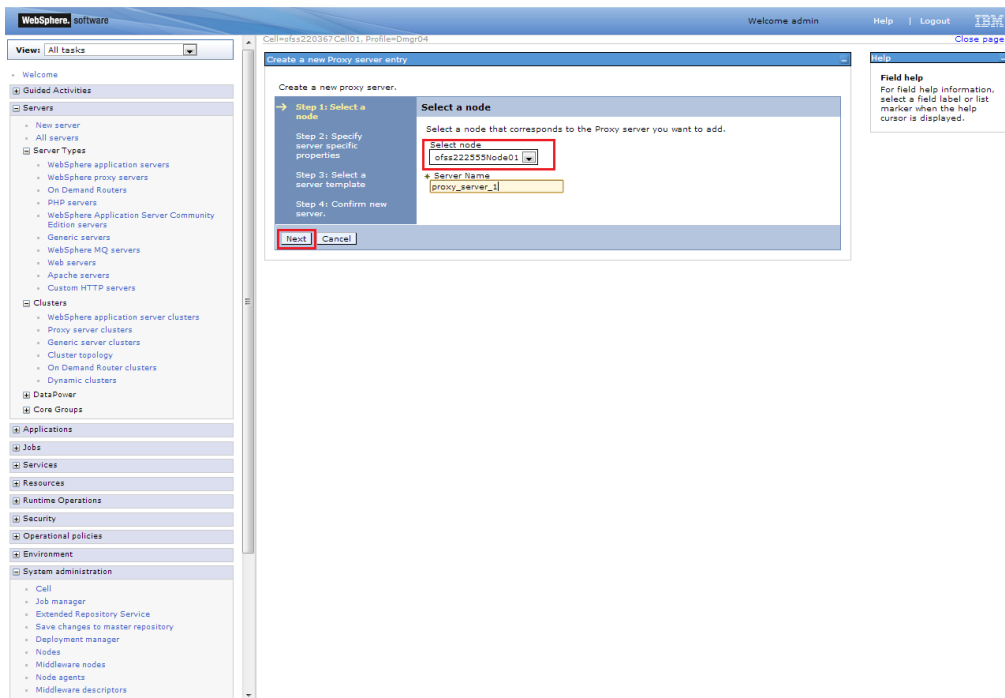
**Command Assistant**  
[View administrative command list action](#)

## 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: r01s220367/Cell01, 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: r01s220367/Cell01, 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.

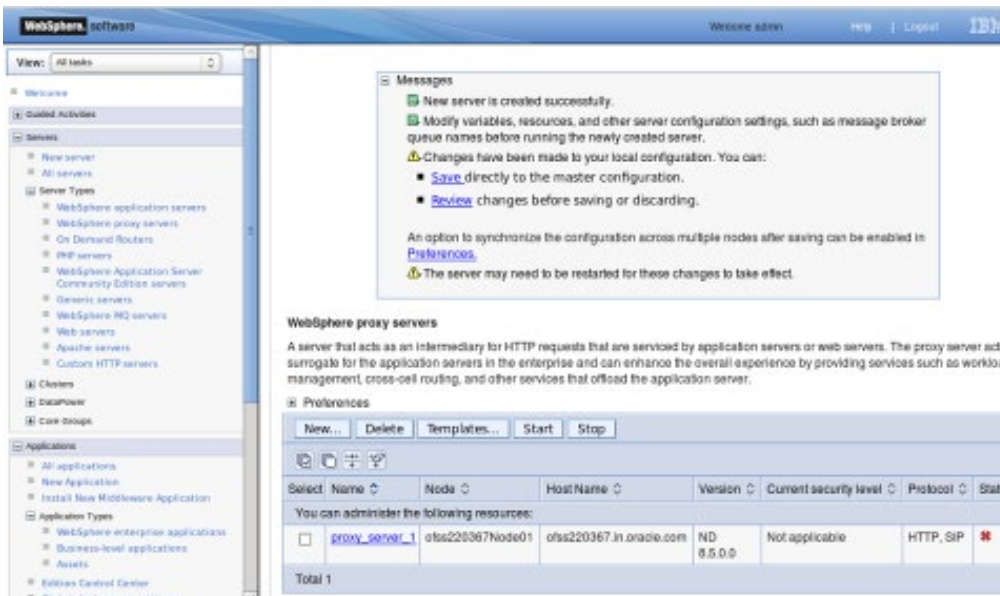
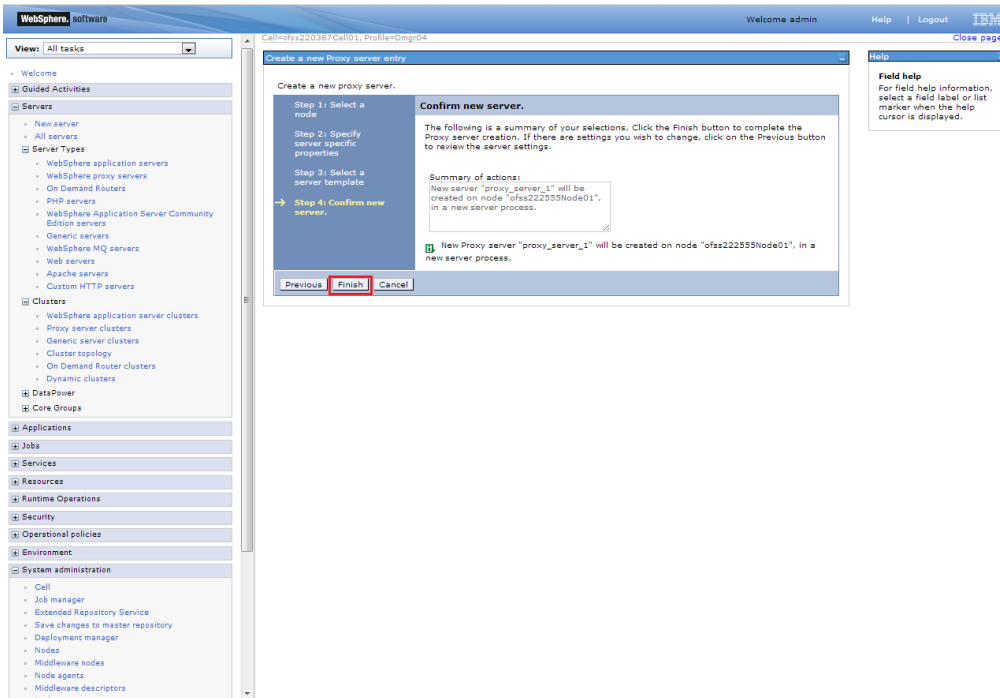
Select a server template

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

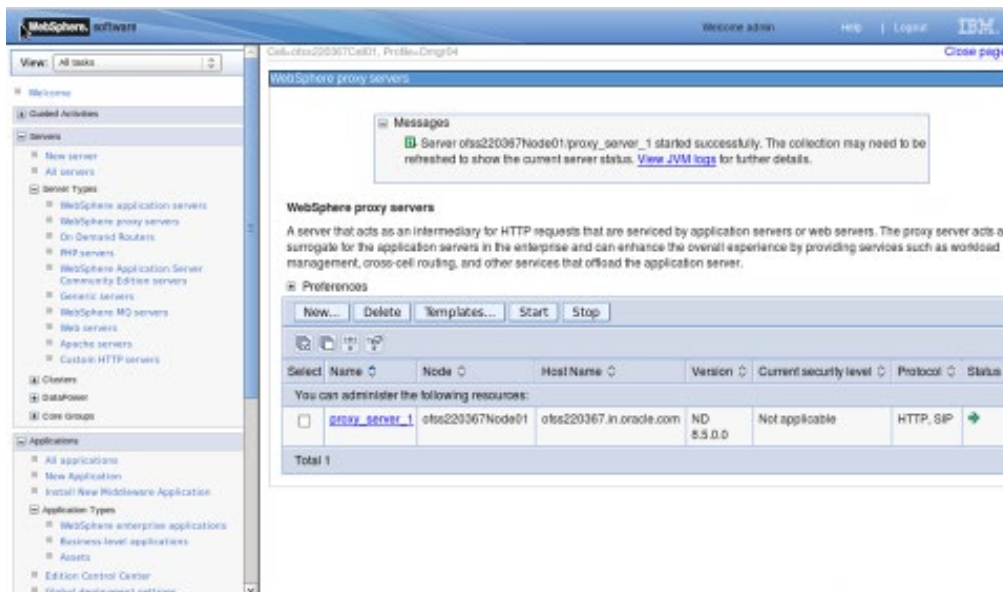
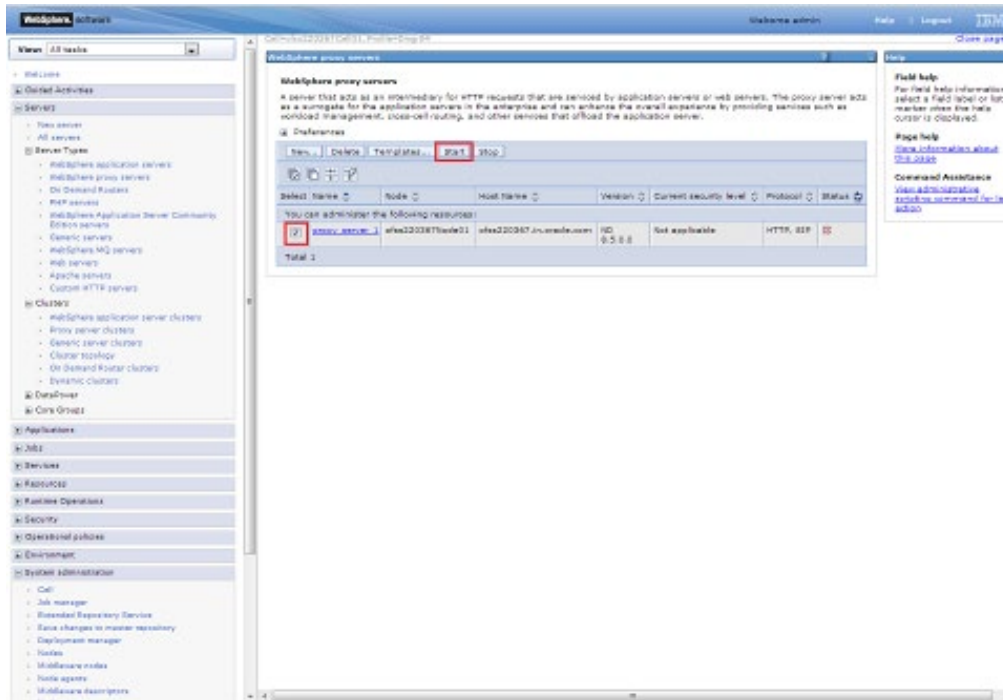
Select	Name	Type	Describe the purpose of this template
<input checked="" type="radio"/>	proxy_server_foundation	System	The WebSphere Default Proxy Server Template

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



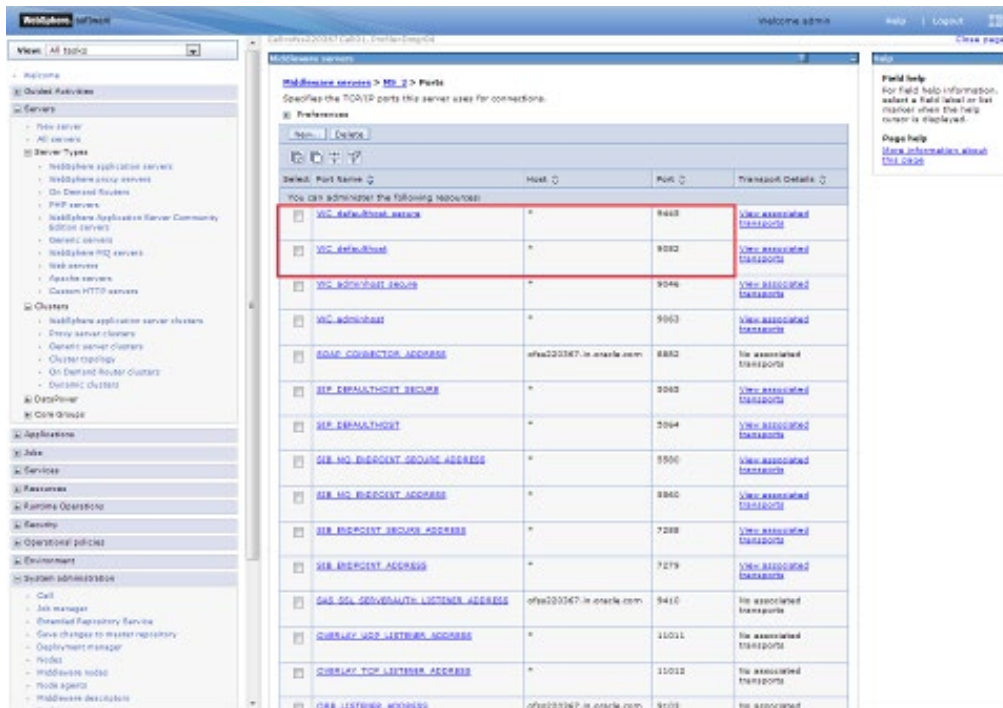


## 4.5 Configure Virtual Host

Make a note of “WC\_defaulthost”/”WS\_defaulthost\_secure” port for server MS1 : 9081/9444

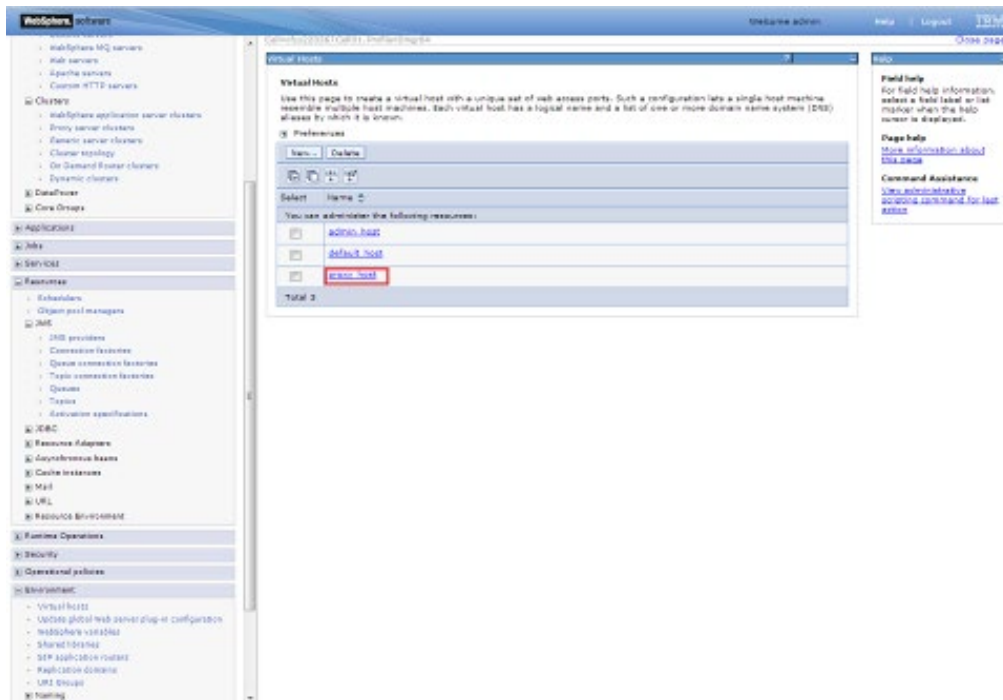
Select	Port Name	Host	Port	Transport Details
<input type="checkbox"/>	WC_defaulthost_secure	*	9444	Non-associated transports
<input type="checkbox"/>	WC_defaulthost	*	9081	Non-associated transports
<input type="checkbox"/>	WC_defaulthost_secure	*	9043	Non-associated transports
<input type="checkbox"/>	WC_DEFAULTHOST	*	9042	Non-associated transports
<input type="checkbox"/>	ADMIN_CONNECTOR_ADDRESS	afex220267.in.oracle.com	8881	No associated transports
<input type="checkbox"/>	WS_DEFAULTHOST_SECURE	*	9043	Non-associated transports
<input type="checkbox"/>	WS_DEFAULTHOST	*	9042	Non-associated transports
<input type="checkbox"/>	WS_HTTP_ENDPOINT_SECURE_ADDRESS	*	8879	Non-associated transports
<input type="checkbox"/>	WS_HTTP_ENDPOINT_ADDRESS	*	8889	Non-associated transports
<input type="checkbox"/>	WS_ENDPOINT_SECURE_ADDRESS	*	7287	Non-associated transports
<input type="checkbox"/>	WS_ENDPOINT_ADDRESS	*	7276	Non-associated transports
<input type="checkbox"/>	WS_WS_SECURITY_LISTENER_ADDRESS	afex220267.in.oracle.com	9457	No associated transports
<input type="checkbox"/>	OVERLAY_UDP_LISTENER_ADDRESS	*	11809	No associated transports
<input type="checkbox"/>	OVERLAY_TCP_LISTENER_ADDRESS	*	11810	No associated transports
<input type="checkbox"/>	WS_LISTENER_ADDRESS	afex220267.in.oracle.com	9152	No associated transports

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

The screenshot shows the WebSphere Administration Console interface. The left-hand navigation pane is expanded to 'Host Aliases' under the 'Virtual hosts' section. The main content area displays the configuration for the 'proxy\_host' virtual host. The 'Host Aliases' section is active, showing a table with one entry: 'Host Alias' with a value of 'http://www.ibm.com'. The 'Host Alias' field is highlighted with a red box. Below the table are 'Apply', 'OK', 'Reset', and 'Cancel' buttons. The right-hand pane contains 'Field help' and 'Page help' sections.

## Navigation : Environment>Virtual hosts>proxy\_host>Host Aliases > New

The screenshot shows the WebSphere Administration Console interface. The left-hand navigation pane is expanded to 'Host Aliases' under the 'Virtual hosts' section. The main content area displays the configuration for the 'proxy\_host' virtual host. The 'Host Aliases' section is active, showing a table with one entry: 'Host Alias' with a value of 'http://www.ibm.com'. The 'New' button is highlighted with a red box. Below the table are 'Apply', 'OK', 'Reset', and 'Cancel' buttons. The right-hand pane contains 'Field help' and 'Page help' sections.

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

The screenshot shows the Oracle WebLogic Server Administration Console. The left-hand navigation pane is expanded to 'Operational policies' > 'Virtual Hosts'. The main content area displays the 'Virtual Hosts' configuration page for a new alias. The breadcrumb trail is 'Virtual Hosts > proxy\_host > Host Aliases > New...'. Below the breadcrumb, there is a 'Configuration' section with a 'General Properties' sub-section. The 'Host Name' field contains '1' and the 'Port' field contains '9081'. At the bottom of the configuration area are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'. On the right side, there is a 'Field Help' section with a 'Page Help' link.

The screenshot shows the Oracle WebLogic Server Administration Console. The left-hand navigation pane is expanded to 'Operational policies' > 'Virtual Hosts'. The main content area displays the 'Virtual Hosts' configuration page for an existing alias. The breadcrumb trail is 'Virtual Hosts > proxy\_host > Host Aliases'. Below the breadcrumb, there is a 'References' section with a table listing existing aliases. The table has columns for 'Host Name' and 'Port'. The table contains one entry: '9081'. Below the table, there is a 'Total 1' summary. On the right side, there is a 'Field Help' section with a 'Page Help' link and a 'Command Assistance' link.

Host Name	Port
9081	9081

Similarly create proxy alias for all cluster related server default ports

Virtual Hosts > proxy\_host > Host Aliases

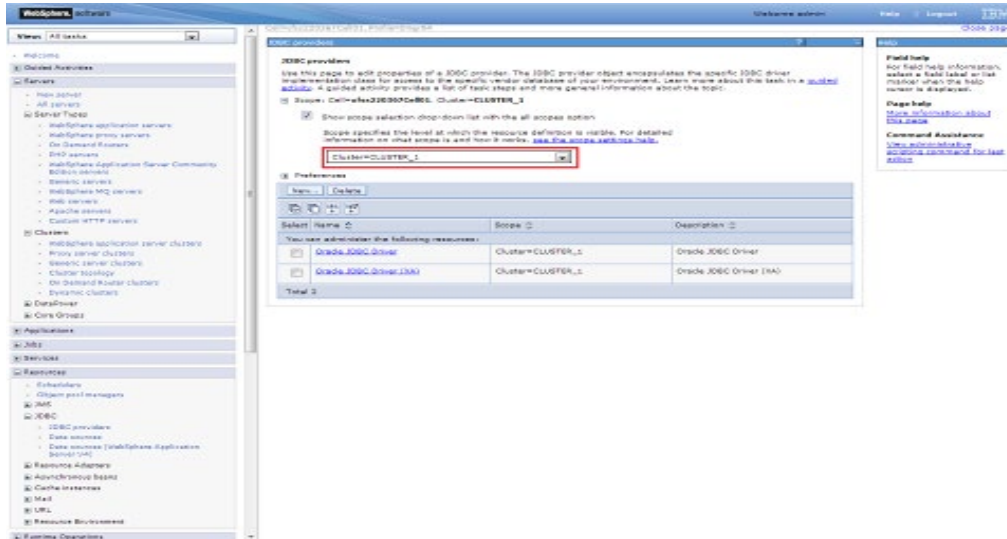
Use this page to edit, create, or delete a domain name system (DNS) alias by which the virtual host is known.

Preferences

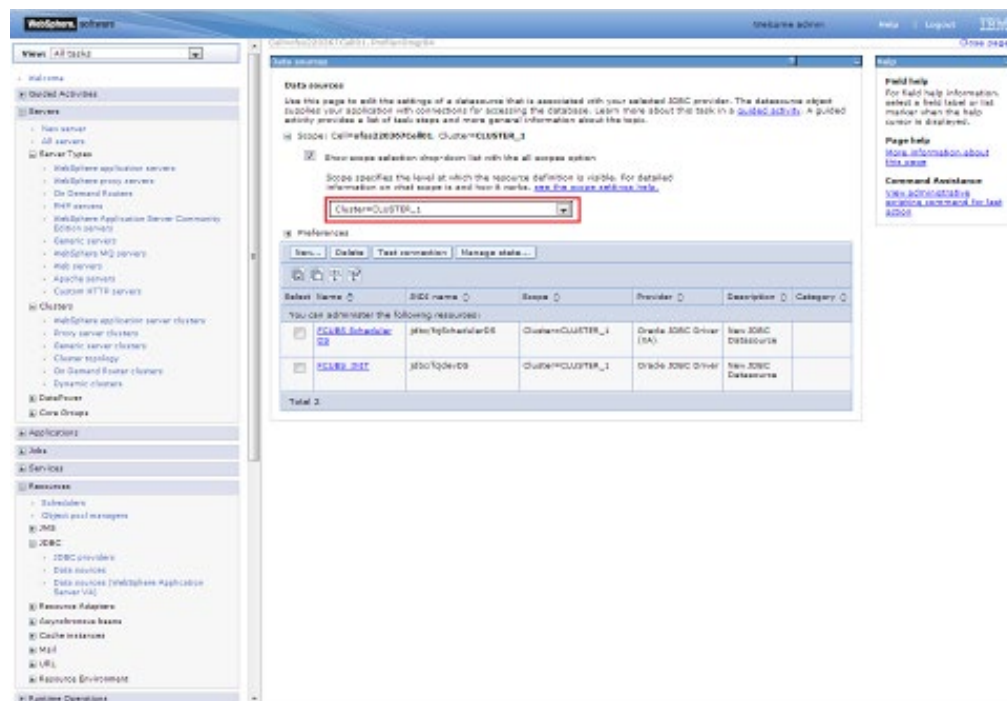
Select	Host Name	Port
<input type="checkbox"/>	8080	8080
<input type="checkbox"/>	8084	8084
<input type="checkbox"/>	8082	8082
<input type="checkbox"/>	8448	8448
Total 4		

# 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=es21009f0606, Cluster=CLUSTER\_1

Show scope selection dropdown 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

Selected	Name	JMS name	Provider	Description	Scope
<input type="checkbox"/>	EMMQCF	EMMQCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	FC_QCF	FC_QCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	HEBQCF	HEBQCF	WebSphere MQ messaging provider		Cluster=CLUSTER_1
<input type="checkbox"/>	WebSphereMQCF	WebSphereMQCF	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=es21009f0606, Cluster=CLUSTER\_1

Show scope selection dropdown 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](#).

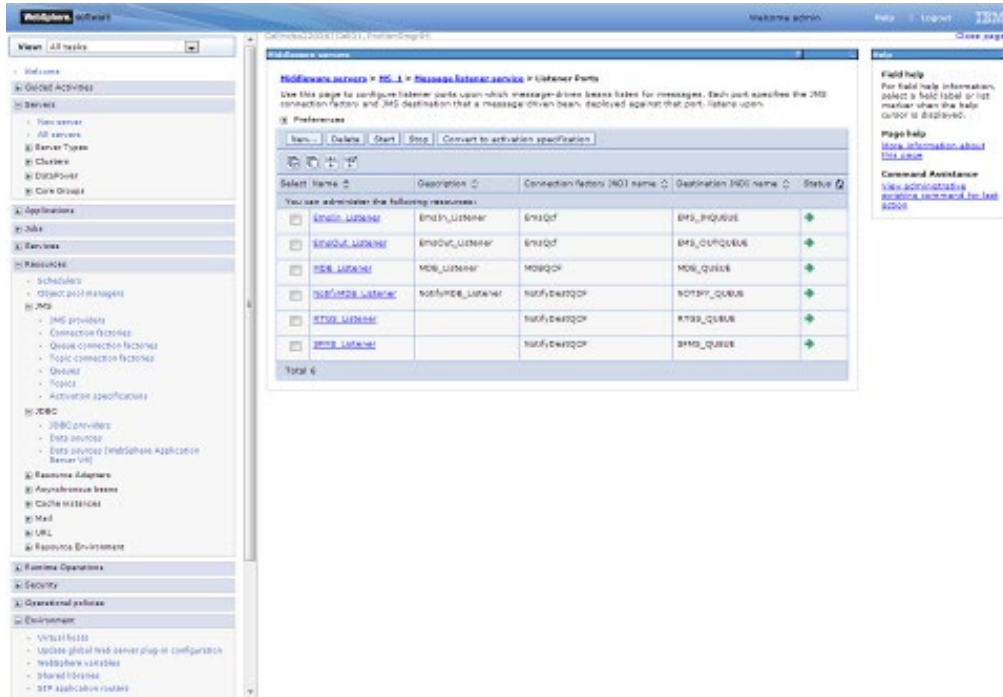
Cluster=CLUSTER\_1

Selected	JMS name	Provider	Description	Scope
<input type="checkbox"/>	EMR_INQUEUE	EMR_INQUEUE	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	EMR_OUTQUEUE	EMR_OUTQUEUE	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	EMR_QUEUE	EMR_QUEUE	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	EMR_QUEUE_FLQ	EMR_QUEUE_FLQ	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	EMR_QUEUE_ERRORCODE	EMR_QUEUE_ERRORCODE	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	NOTIFY_DEST_QUEUE	NOTIFY_DEST_QUEUE	WebSphere MQ messaging provider	Cluster=CLUSTER_1
<input type="checkbox"/>	NOTIFY_QUEUE	NOTIFY_QUEUE	WebSphere MQ messaging provider	NOTIFY_QUEUE
<input type="checkbox"/>	NOTIFY_QUEUE_FLQ	NOTIFY_QUEUE_FLQ	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*



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

Middleware Admin Console - Oracle WebLogic Server 12.1.3

Home Admin Help Logout

View: All nodes

Middleware Admin Console > MS\_2 > MessageListenerService > Listener Ports

Use this page to configure listener ports upon which message-driven beans listen for messages. Each port specifies the JMS connection factory and JMS destination that a message-driven bean, deployed against that port, listens upon.

Preferences

Item... Delete Start Stop Convert to activation specification

Select	Name	Description	Connection factory JNDI name	Destination JNDI name	Status
<input type="checkbox"/>	EMO_IN_QUEUE		emoqcf	EMO_IN_QUEUE	➔
<input type="checkbox"/>	EMO_OUT_QUEUE	emoout_listener	emoqcf	EMO_OUT_QUEUE	➔
<input type="checkbox"/>	MSB_QUEUE		msbqcf	MSB_QUEUE	➔
<input type="checkbox"/>	NOTIFY_QUEUE		notifqcf	NOTIFY_QUEUE	➔
<input type="checkbox"/>	RTOS_QUEUE		rtosqcf	RTOS_QUEUE	➔
<input type="checkbox"/>	SMS_QUEUE		smqcf	SMS_QUEUE	➔

Total 6

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

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

Command Assistance  
Use [administration actions](#) associated by task ID.

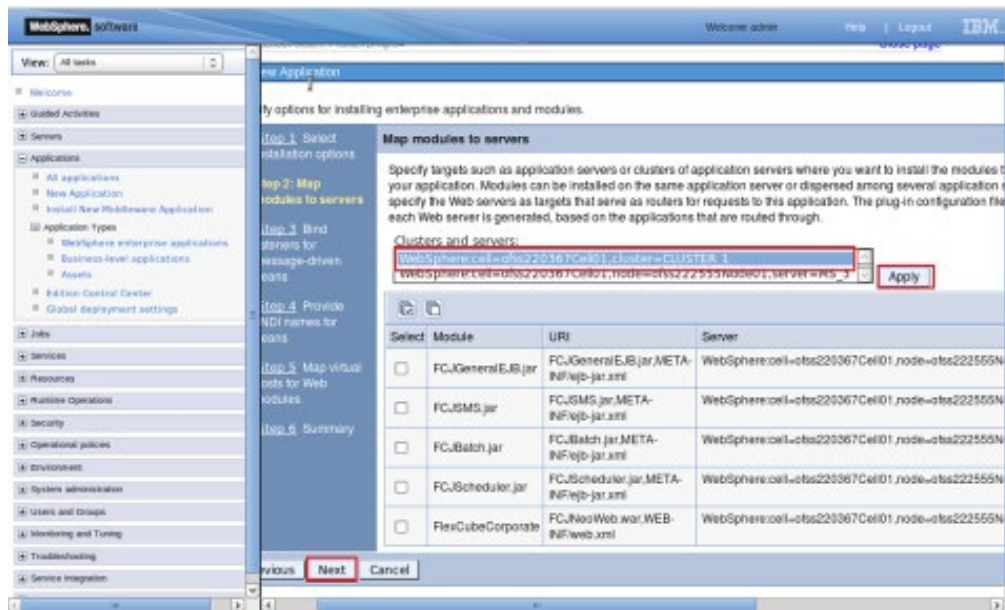
Navigation menu:

- Home
- Global Actions
- Services
  - Item server
  - All servers
  - Server Types
  - Clusters
  - Deployment
  - Core Objects
- Applications
- Jobs
- Services
- Resources
  - Schedulers
  - Queue pool managers
  - JMS
    - JMS providers
    - Connection factories
    - Queue connection factories
    - Topic connection factories
    - Queues
    - Topics
    - Activation specifications
  - JDBC
    - JDBC providers
    - Data sources
    - Data sources (WebSphere Application Server V8)
  - Resource Adapters
  - Asynchronous beans
  - Cache instances
  - Mail
  - URL
  - Resource Environment
- Runtime Operations
- Security
- Operational policies
- Environment
  - Virtual hosts
  - Update global web server plug-in configuration
  - WebSphere instances
  - Managed servers
  - STP Application routers

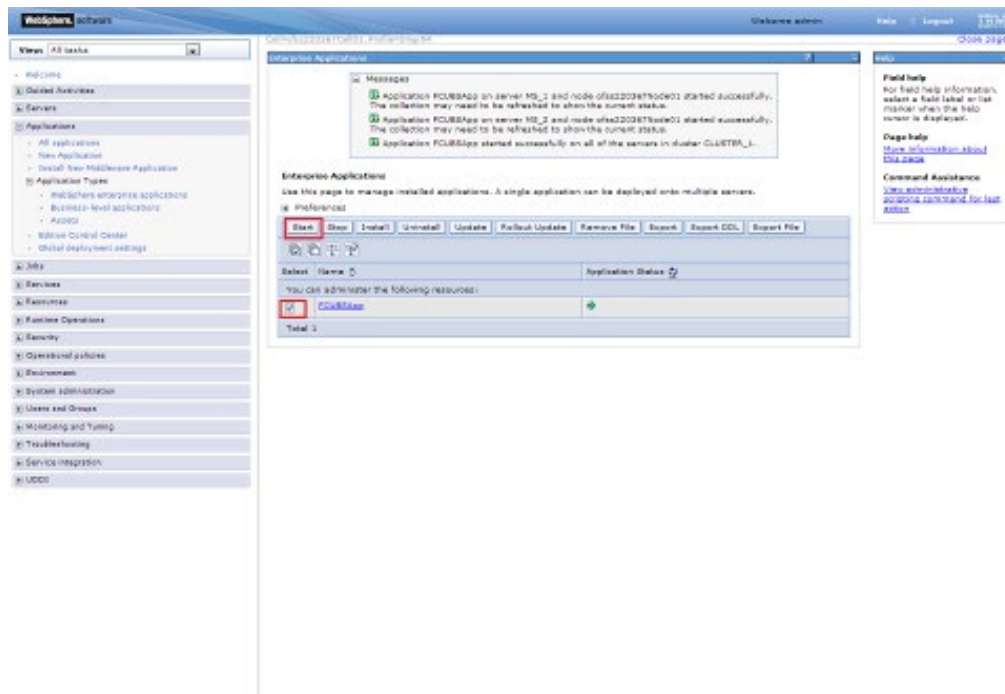


## 6. Deploy Application to Cluster

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.

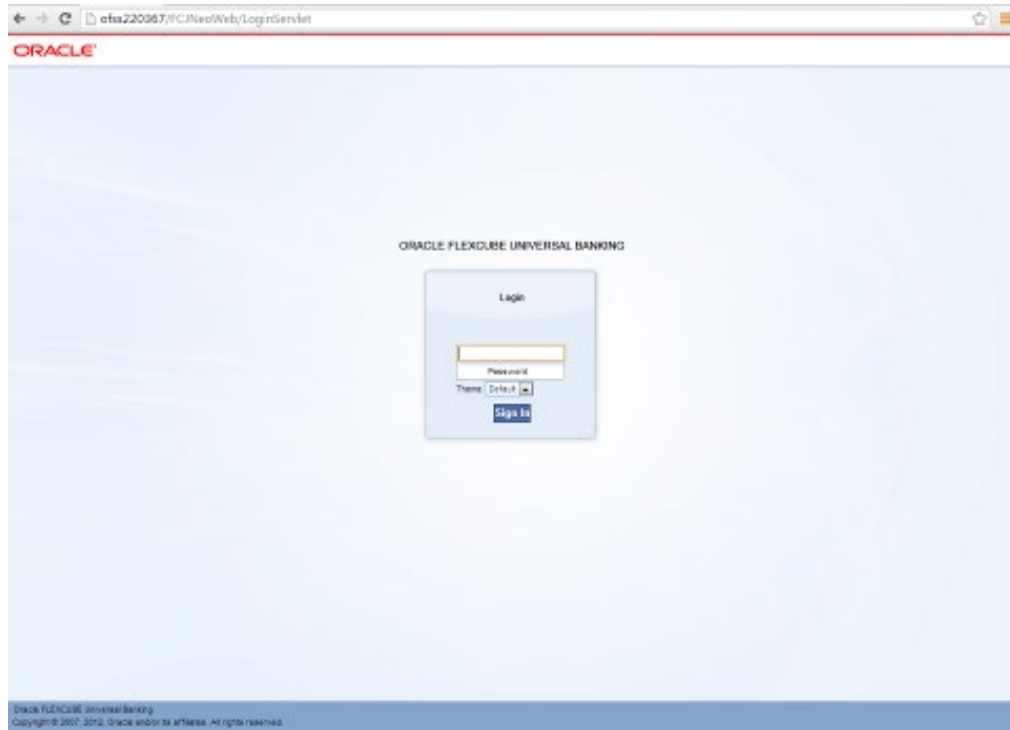
**Navigation :** `Servers > Server Types > WebSphere proxy servers > [proxy_server_1] > Ports`

The screenshot shows the WebSphere Admin Console interface. The left sidebar contains a navigation tree with categories like Servers, Clusters, Applications, and Services. The main content area displays the 'Ports' configuration for a specific proxy server. A table lists various ports with columns for Port Name, Host, Port, and Transport Details. Two rows are highlighted with a red border:

Port Name	Host	Port	Transport Details
<a href="#">PROXY_HTTPS_ADDRESS</a>	*	443	No associated transports
<a href="#">PROXY_HTTP_ADDRESS</a>	*	80	No associated transports
<a href="#">PROXY_SIP_ADDRESS</a>	*	5061	No associated transports
<a href="#">PROXY_SIP_ADDRESS</a>	*	5060	No associated transports
<a href="#">SAC SSL SERVERWATH_LISTENER_ADDRESS</a>	afba22867.in.oracle.com	0	No associated transports
<a href="#">SACF_CONNECTOR_ADDRESS</a>	afba22867.in.oracle.com	883	No associated transports

Launch Application:

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



ORACLE



Cluster Creation on Websphere  
[May] [2021]  
Version 12.87.7.0.0

Oracle Financial Services Software Limited  
Oracle Park  
Off Western Express Highway  
Goregaon (East)  
Mumbai, Maharashtra 400 063  
India

Worldwide Inquiries:  
Phone: +91 22 6718 3000  
Fax: +91 22 6718 3001  
<https://www.oracle.com/industries/financial-services/index.html>

Copyright © [2007], [2021], Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

**U.S. GOVERNMENT END USERS:** Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.