

Cluster Creation on Websphere Application Server
Oracle FLEXCUBE Universal Banking
Release 14.0.0.0.0
[February] [2018]



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1. Purpose

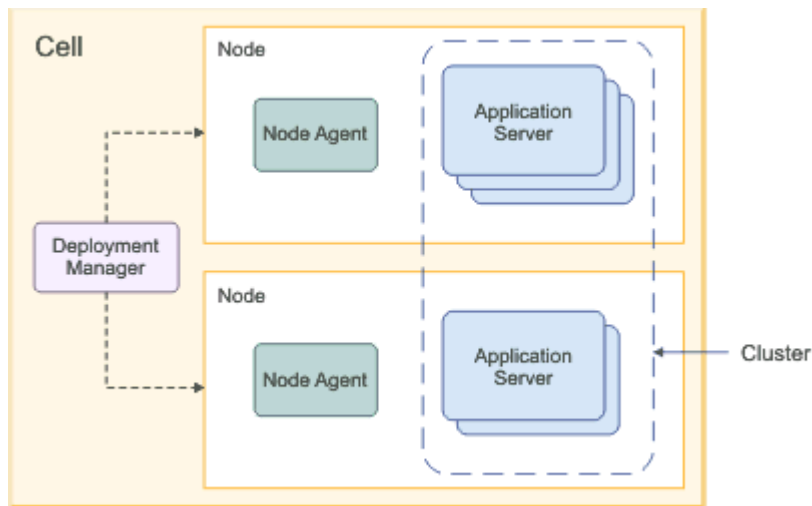
This document explains steps to create Cluster on Websphere Application Server 8.5 and also setup the proxy.

2. Introduction to Websphere

IBM websphere application server cluster deployment contains the below key elements

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

Profile



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

Prominent profile types are:

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

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

3. Pre-requisites:

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

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

The instructions for resource creation are available in document

<installer>\Docs\WEBSHERE\Resource_Creation_WAS.doc

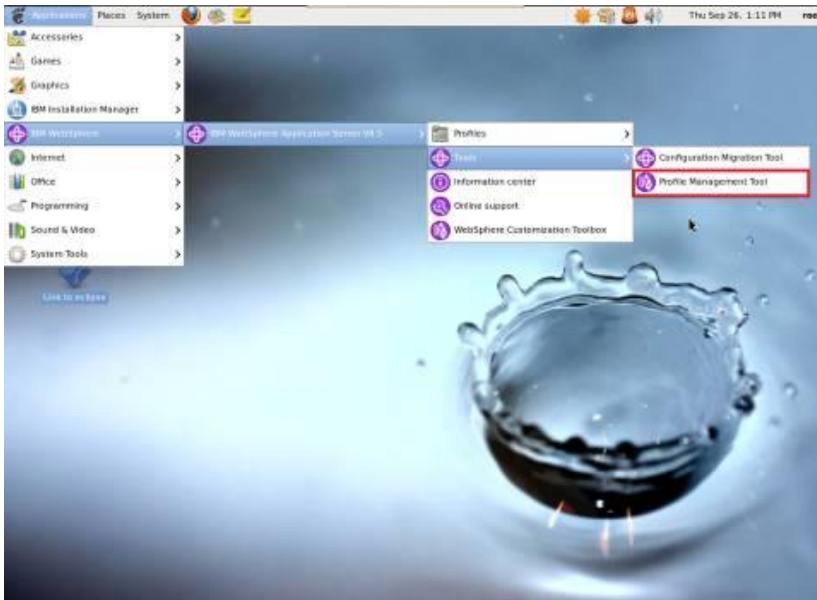
- For SSL configuration in Websphere, refer to the document SSL_Configuration_WAS.doc
- For application deployment, refer to document FCUBS_Application_WAS.doc
- For deployment of Gateway applications, refer to document GATEWAY_Applications_WAS.doc

4. Steps involved for Clustering

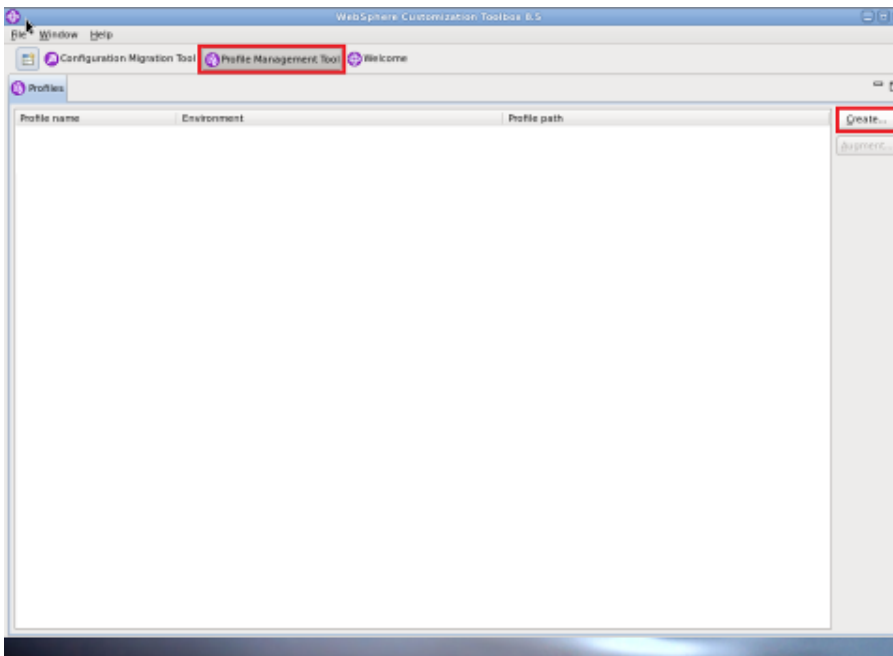
4.1 Create Profile

Go to Profile Management Tool

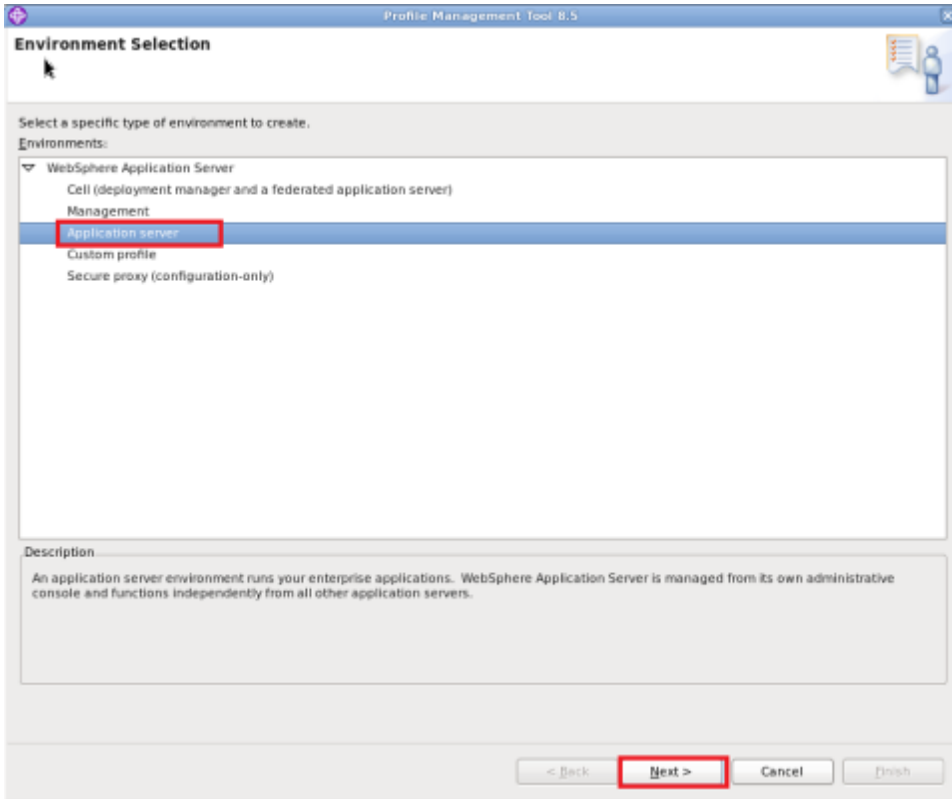
Navigation: IBM WebSphere > IBM WebSphere Application Server V8.5 > Tools > Profile Management Tool



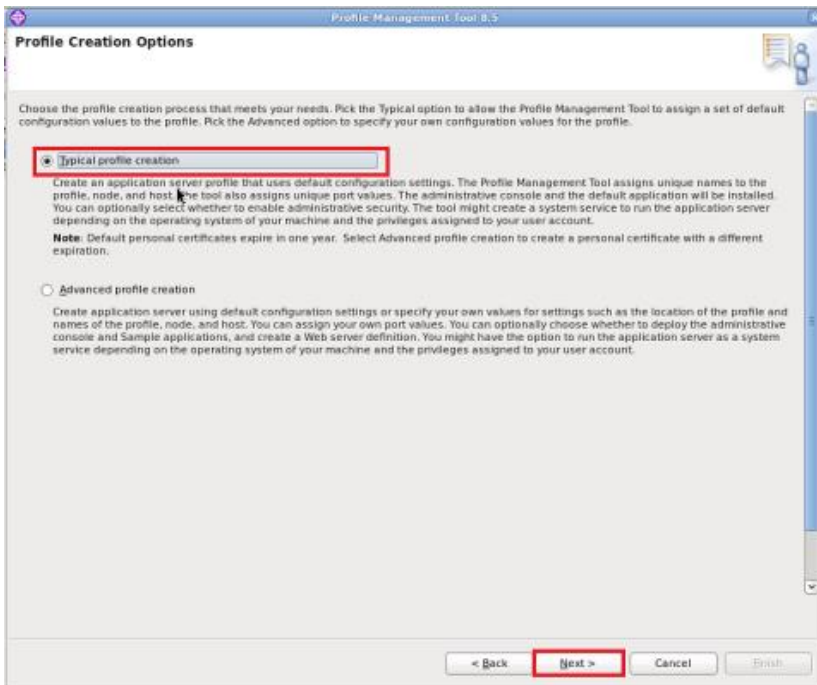
Navigation : Profile Management Tool > Create



Navigation : Application Server > Next



Navigation : Typical profile creation > Next



Navigation: *Enable administrative security > Next*

Administrative Security

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

Enable administrative security

User name: websphere

Password: *****

Confirm password: *****

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

< Back **Next >** Cancel Finish

Navigation : *Create Summary*

Profile Creation Summary

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

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

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

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

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

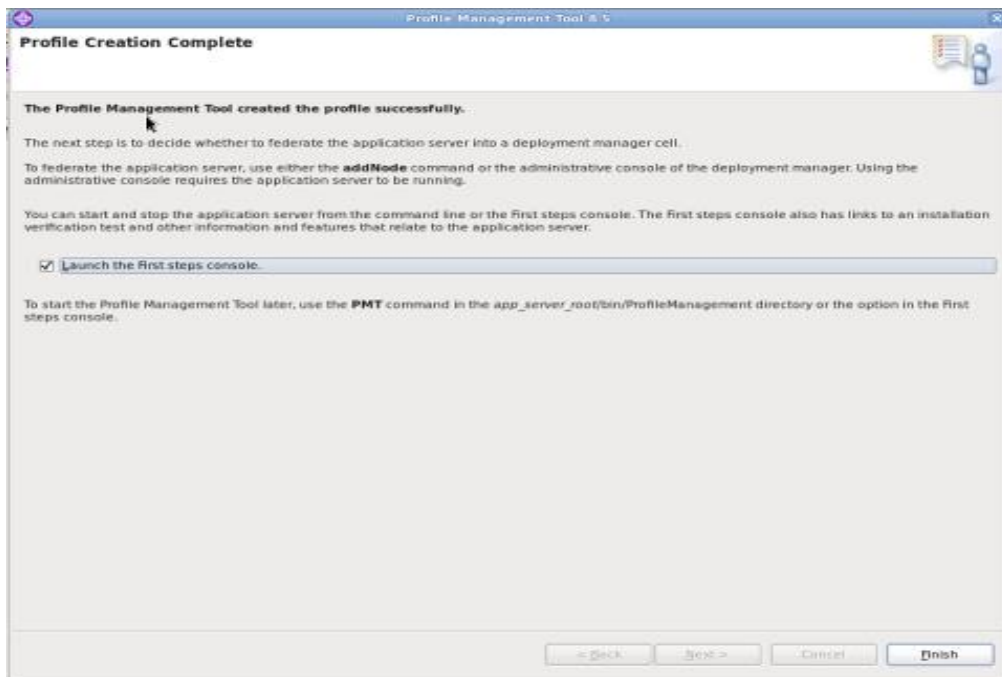
Enable administrative security (recommended): True

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

Run application server as a service: False

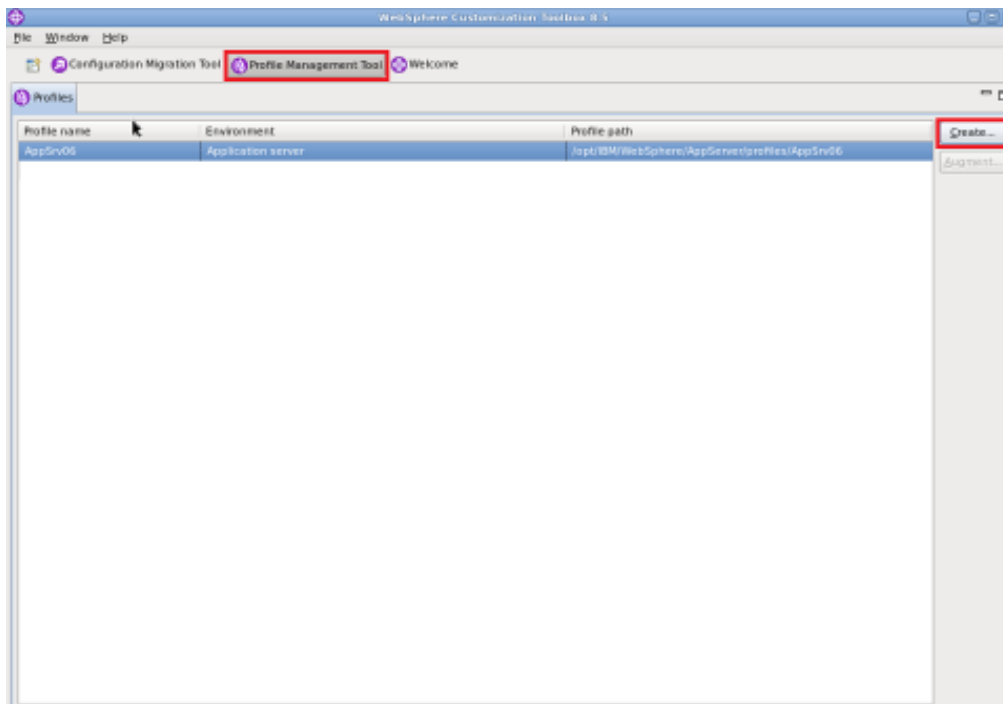
< Back **Create** Cancel Finish

Navigation : *Finish*

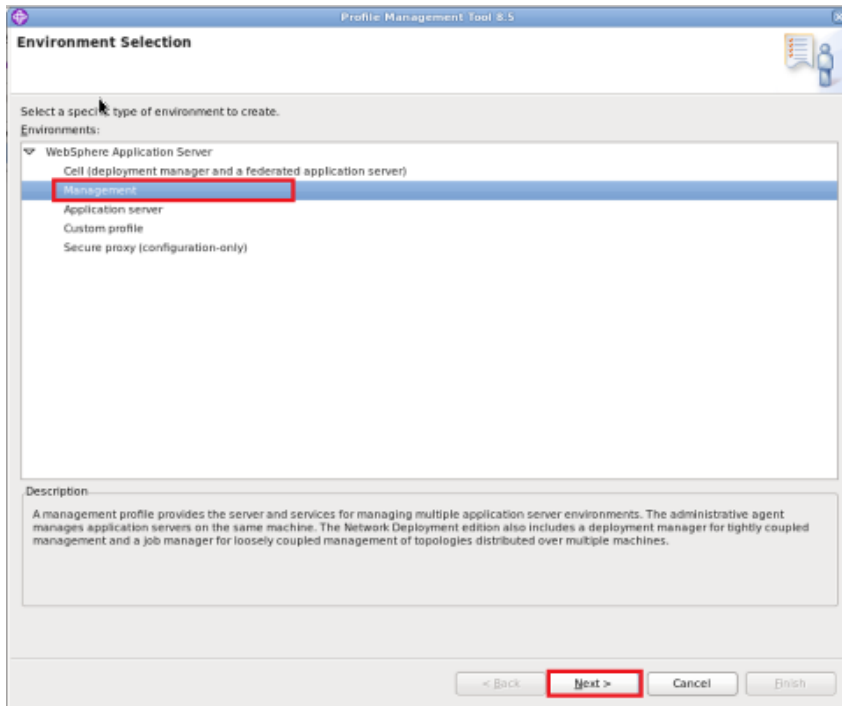


4.1.1 Create Deployment Manager Profile

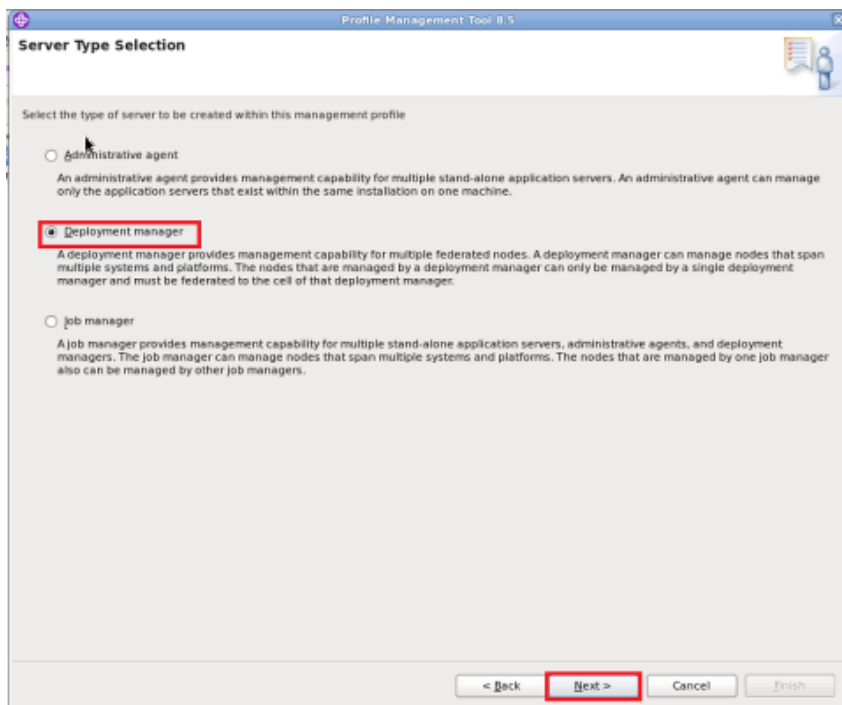
Navigation : *Profile Management Tool > Create*



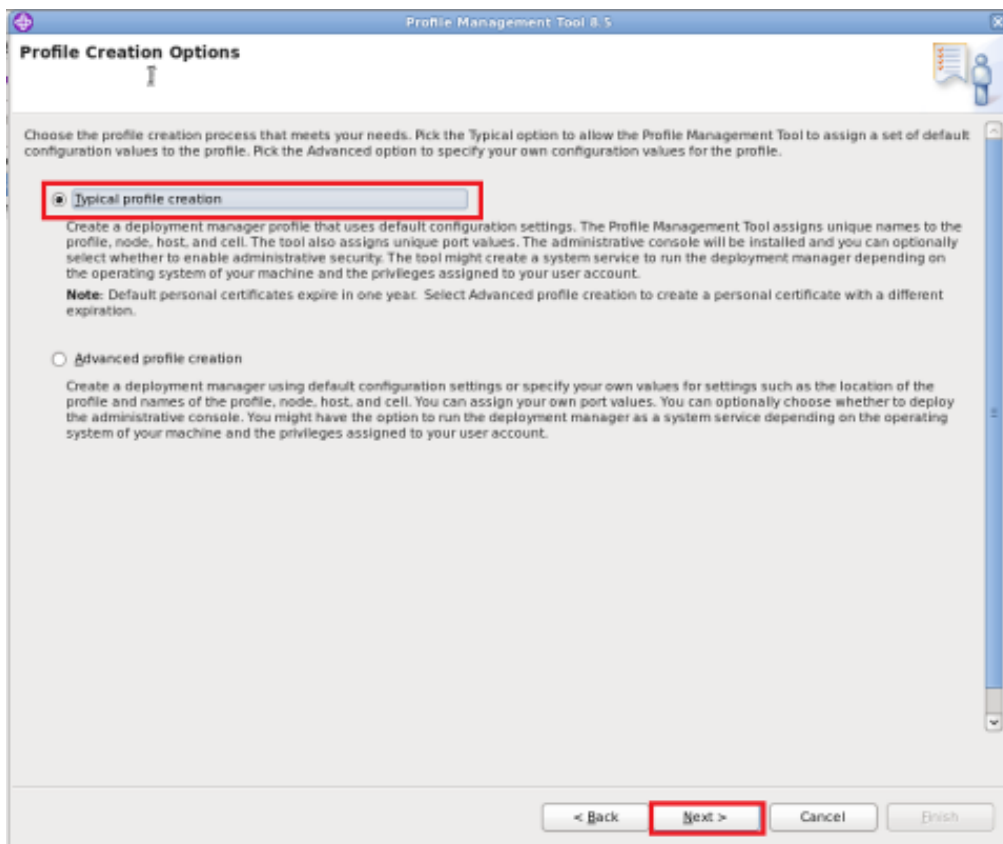
Navigation : *Management >Next*



Navigation : *Deployment Manager > Next*



Navigation : *Typical profile creation > Next*



Navigation : *Enable administrative security* > Next

Profile Management Tool 8.5

Administrative Security

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

Enable administrative security

User name:
admin

Password:

Confirm password:

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

< Back **Next >** Cancel Finish

Navigation : Create

Profile Management Tool 8.5

Profile Creation Summary

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

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

Profile name: Dmgr04
Make this profile the default: False

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

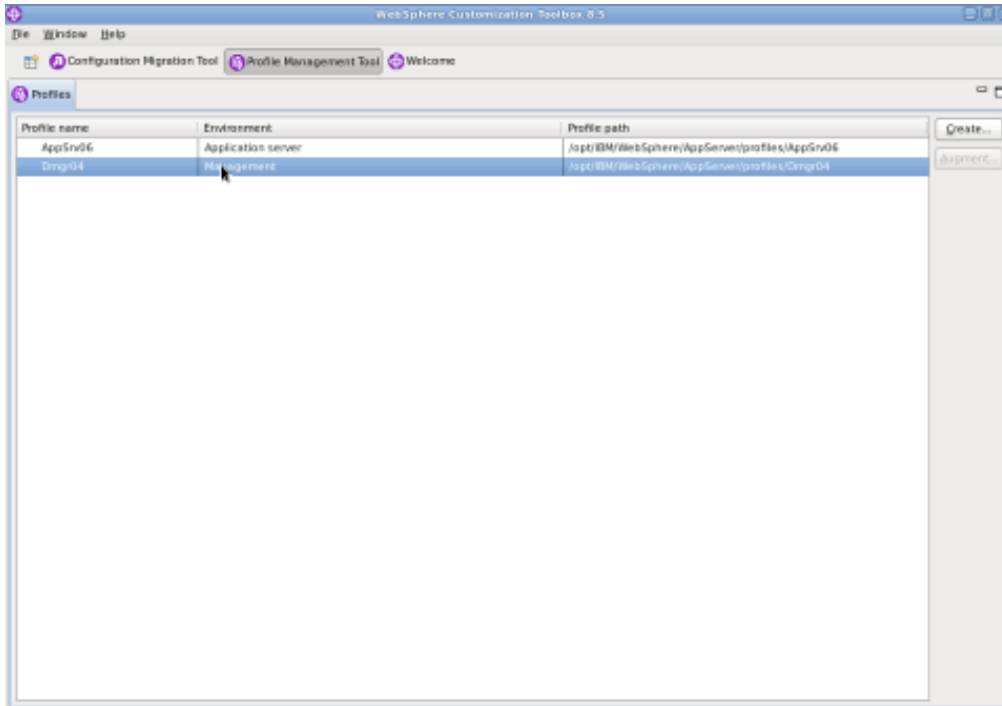
Deploy the administrative console (recommended): True

Enable administrative security (recommended): True

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

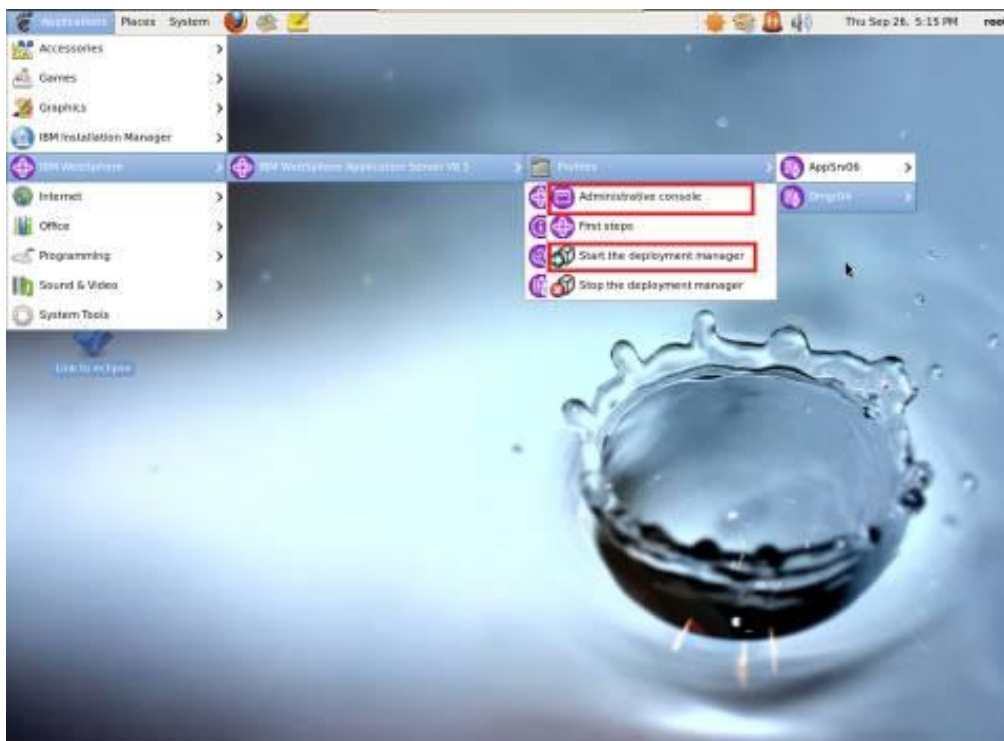
Run deployment manager as a service: False

< Back Create Cancel Finish



Start Deployment Manager & Open Administrative Console

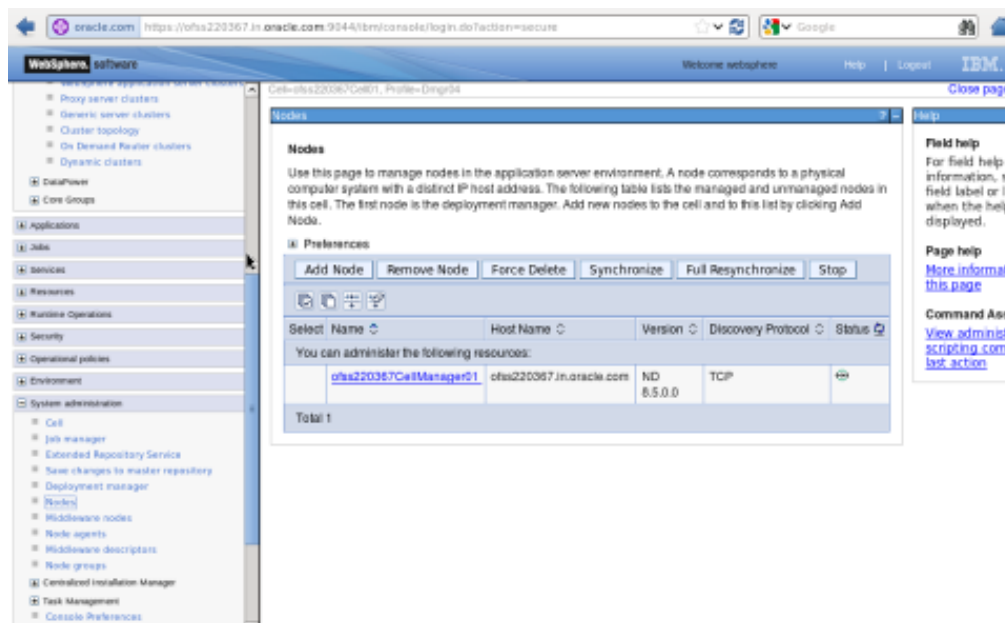
Navigation : IBM WebSphere > IBM WebSphere Application Server V8.5 > Profiles > Dmgr[i]>Start the deployment *manager* > *Administrative console*



Log into Deployment Manger Console

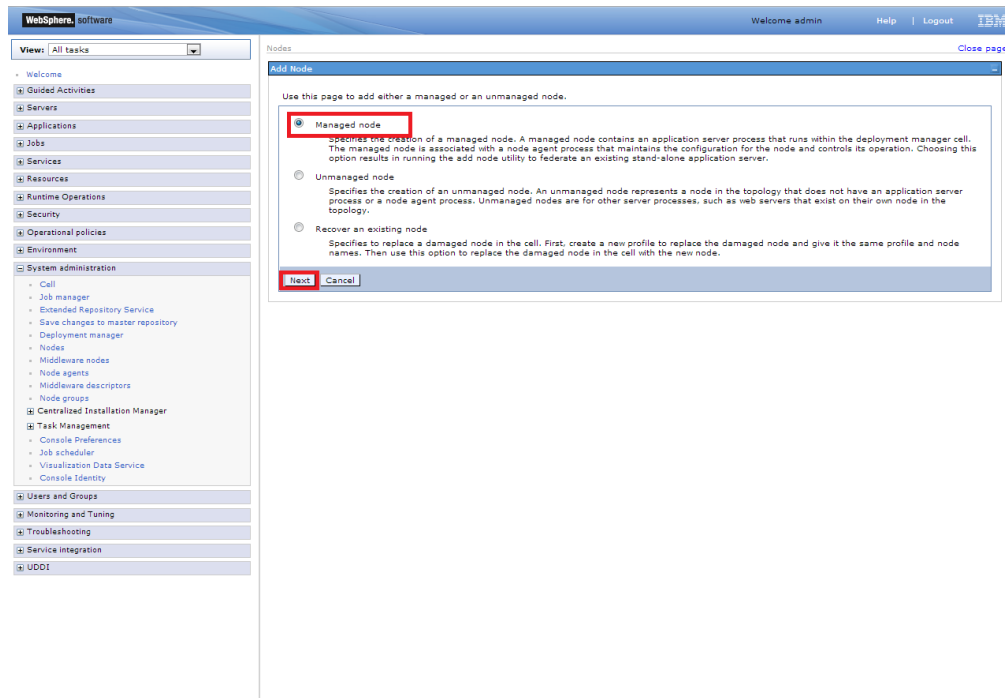


Navigation : System administration > Nodes > Add Node



4.2 Create Node

Navigation : *System administration > Nodes > Add Node*



Provide the following field information and Click 'OK'

Host : Host Machine with running Application Server

JMX Connector type : SOAP

JMX Connector Port : SOAP_CONNECTOR_ADDRESS of Application Server

Application server user name : Application server user id

Application server password : Application server password

Deployment manager user name : Deployment manager user id

Deployment manager password : Deployment manager password

WebSphere software Welcome admin Help | Logout IBM

Nodes Close page

Add Managed Node

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

Node connection

Host: ofss220367

JMX connector type: SOAP

JMX connector port: 8880

Application server user name: websphere

Application server password: *****

Deployment manager user name: admin

Deployment manager password: *****

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

Options

Include applications

Include buses

Starting port

Use default

Specify

Port number: _____

OK Cancel

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...

Nodes

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

Preferences

Add Node Remove Node Force Delete Synchronize Full Resynchronize Stop

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

Create necessary number of nodes following same instructions above:

Messages

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

Nodes

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

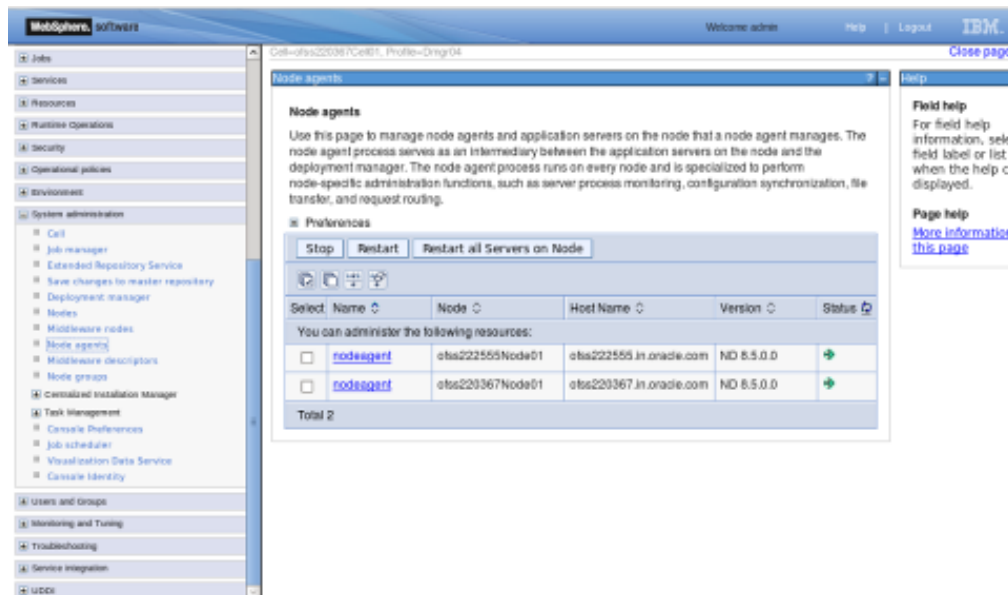
Preferences

Add Node Remove Node Force Delete Synchronize Full Resynchronize Stop

| Select | Name | Host Name | Version | Discovery Protocol | Status |
|--------------------------|---|--------------------------|------------|--------------------|--------|
| <input type="checkbox"/> | otfs220367CellManager01 | otfs220367.in.oracle.com | ND 8.5.0.0 | TCP | ⊕ |
| <input type="checkbox"/> | otfs220367Node01 | otfs220367.in.oracle.com | ND 8.5.0.0 | TCP | ⊕ |
| <input type="checkbox"/> | otfs220555Node01 | otfs220555.in.oracle.com | ND 8.5.0.0 | TCP | ⊕ |
| Total 3 | | | | | |

4.2.1 Start Node Agents

Navigation : *System administration> Node agents>Restart*



Node agents

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

Preferences

Stop Restart Restart all Servers on Node

Select: Name Node Host Name Version Status

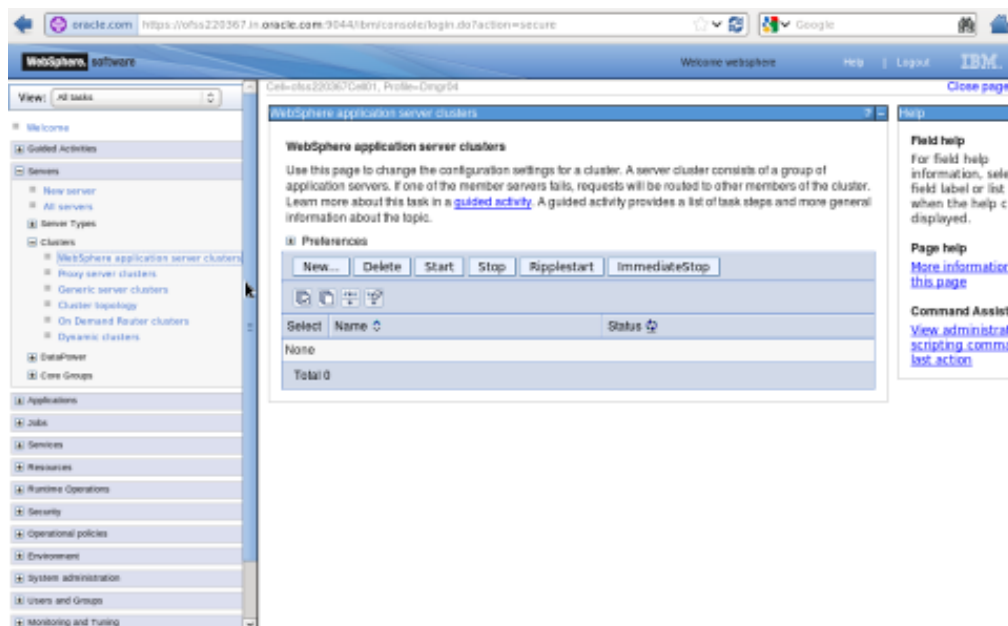
You can administer the following resources:

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

CallInfas220267 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

Enter basic cluster information

Cluster name
[CLUSTER_1]

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

Configure HTTP session memory-to-memory replication

Next Cancel

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

Page help
View information about this page

4.3.1 Add Cluster Members

WebSphere software

Welcome admin | Help | Logout

Cell=ofas220367Cell01, Profile=Dmgr04

Views: All tasks

Guided Activities

Servers

- New server
- All servers
- Server Types
 - 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

Cell=ofas220367Cell01, Profile=Dmgr04

Views: All tasks

Guided Activities

Servers

- New server
- All servers
- Server Types
 - WebSphere application server clusters
 - Proxy server clusters
 - Generic server clusters
 - Cluster topology
 - On Demand Router clusters
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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 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 Software console. The left sidebar contains a navigation tree with 'Clusters' expanded. The main window is titled 'Create a new cluster' and shows the following steps:

- Step 1: Enter basic cluster information
- Step 2: Create first cluster member
- Step 3: Create additional cluster members** (highlighted with a blue arrow)
- Step 4: Summary

The 'Create additional cluster members' section contains the following information:

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:

Weight: (0..100)

Generate unique HTTP ports

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.

| 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 | | | | |

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

The screenshot shows the 'Create a new cluster' wizard in the Oracle WebSphere Software console, now at Step 4: Summary. The left sidebar is the same as in the previous screenshot. The main window is titled 'Create a new cluster' and shows the following steps:

- Step 1: Enter basic cluster information
- Step 2: Create first cluster member
- Step 3: Create additional cluster members
- Step 4: Summary** (highlighted with a blue arrow)

The 'Summary' section contains the following information:

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 |

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 | X |

You can administer the following resources:

Total 1

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

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

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

WebSphere application server clusters

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

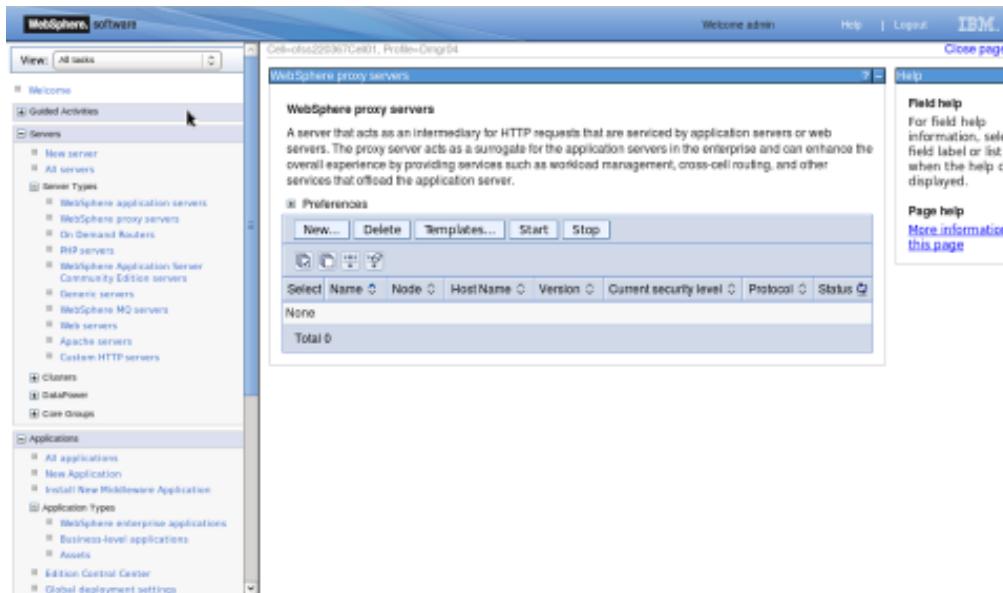
Field help
For field help information, select field label or list n when the help is displayed.

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

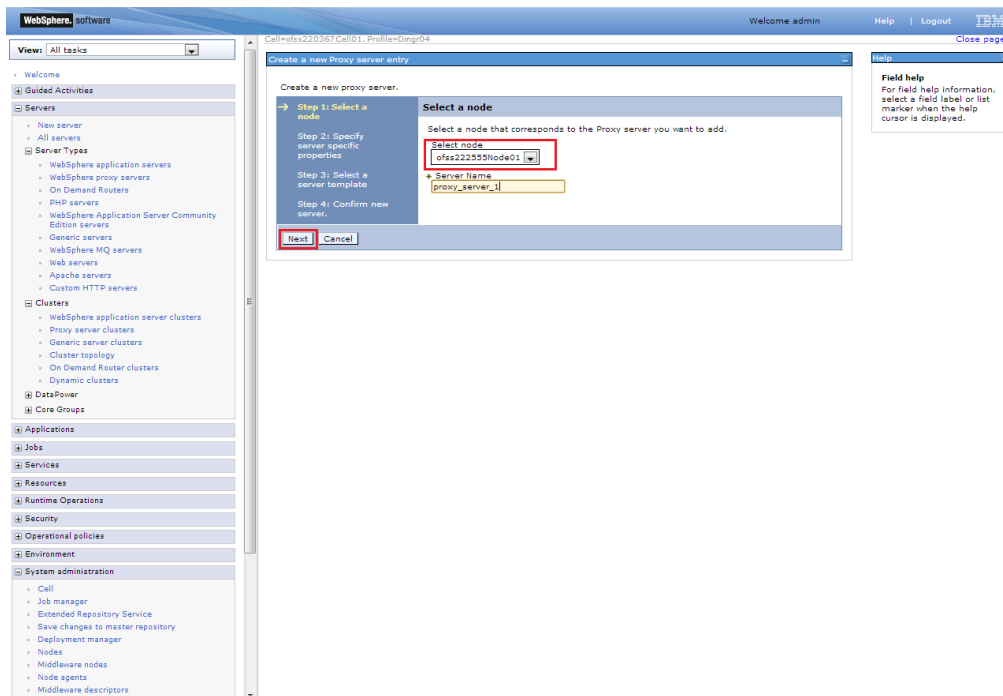
Command Assistant
[View administrative command list action](#)

4.4 Create Proxy Server

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



Navigation : [Select appropriate Node] > Next



WebSphere, software Welcome admin Help | Logout

Cell:fofs220367Call01, Profile:Dmgr04 Close page

Views: All tasks

- Welcome
- Guided Activities
- Servers
 - 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

Cell:fofs220367Call01, Profile:Dmgr04 Close page

Views: All tasks

- Welcome
- Guided Activities
- Servers
 - 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.

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

View: 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
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- Environment
- System administration
 - Cell
 - Job manager
 - Expanded 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.

Confirm new server.

The following is a summary of your selections. Click the Finish button to complete the Proxy server creation. If there are settings you wish to change, click on the Previous button to review the server settings.

Summary of actions:

- New server "proxy_server_1" will be created on node "ofsa22255Node01", in a new server process.
- New Proxy server "proxy_server_1" will be created on node "ofsa22255Node01", in a new server process.

Previous **Finish** 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

View: 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
 - DataPower
 - Core Groups
- Applications
- Jobs
- Services
- Resources
- Runtime Operations
- Security
- Operational policies
- Environment
- System administration
 - Cell
 - Job manager
 - Expanded Repository Service
 - Save changes to master repository
 - Deployment manager
 - Nodes
 - Middleware nodes
 - Node agents
 - Middleware descriptors

Messages

- New server is created successfully.
- Modify variables, resources, and other server configuration settings, such as message broker queue names before running the newly created server.
- Changes have been made to your local configuration. You can:
 - Save directly to the master configuration.
 - Review changes before saving or discarding.
- An option to synchronize the configuration across multiple nodes after saving can be enabled in [Preferences](#).
- The server may need to be restarted for these changes to take effect.

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

New... Delete Templates... Start Stop

| Select | Name | Nodes | Host Name | Version | Current security level | Protocol | Status |
|--------------------------|----------------|-----------------|--------------------------|------------|------------------------|-----------|--------|
| <input type="checkbox"/> | proxy_server_1 | ofsa22255Node01 | ofsa220367.in.oracle.com | ND 8.5.0.0 | Not applicable | HTTP, SIP | ✖ |
| Total 1 | | | | | | | |

4.4.1 Start Proxy Server

WebSphere proxy servers

A server that acts as an intermediary for HTTP requests that are serviced by application servers or web servers. The proxy server acts as a surrogate for the application servers in the enterprise and can enhance the overall experience by providing services such as workload management, cross-cell routing, and other services that offload the application server.

Preferences

How... Delete Templates... Start Stop

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

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 | ND | Not applicable | HTTP, SIP | Start |

Total 1

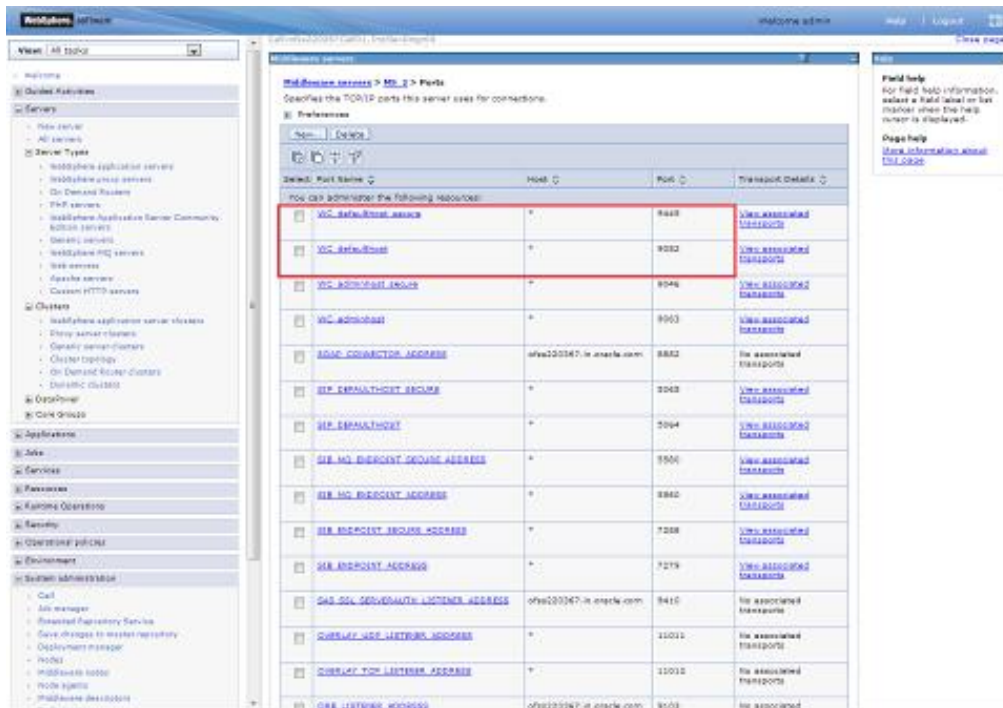
4.5 Configure Virtual Host

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 'MiddleTierServer1'. 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 'Refresh' button. A table lists the virtual hosts and their associated ports. Two rows are highlighted with a red box: 'WC_defaulthost_secure' on port 9444 and 'WC_defaulthost' on port 9081. The table has columns for 'Name', 'Port', and 'Transport Details'. The 'Name' column contains the virtual host names, the 'Port' column contains the port numbers, and the 'Transport Details' column contains the status of the transport details.

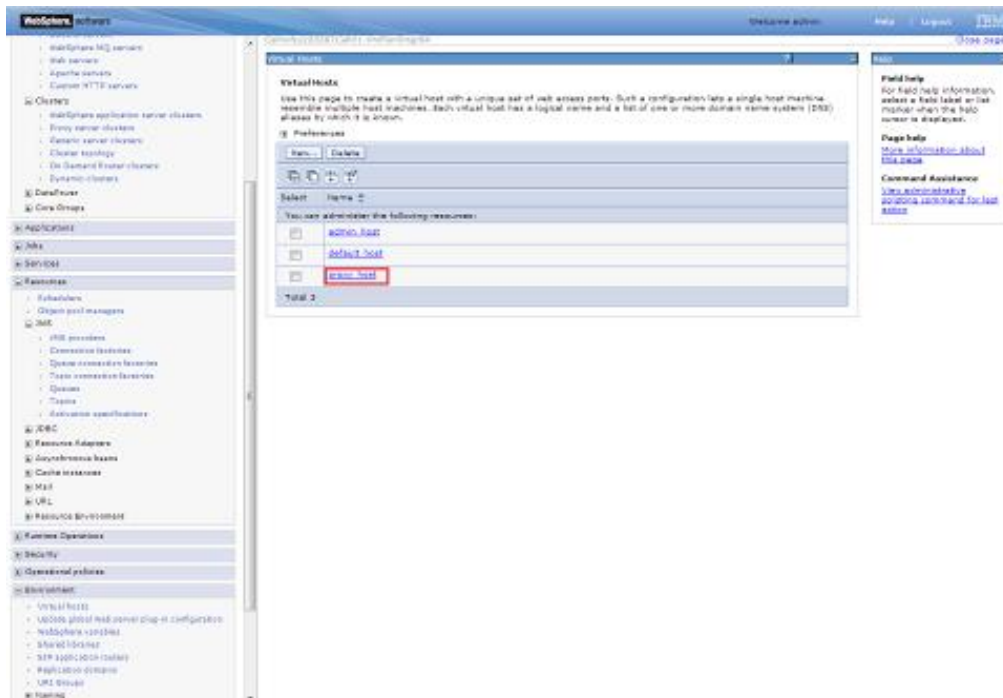
| Name | Port | Transport Details |
|--|-------|--------------------------|
| <input type="checkbox"/> WC_defaulthost_secure | 9444 | No associated transports |
| <input type="checkbox"/> WC_defaulthost | 9081 | No associated transports |
| <input type="checkbox"/> WC_defaulthost_secure | 9043 | No associated transports |
| <input type="checkbox"/> WC_ADMINCON | 9042 | No associated transports |
| <input type="checkbox"/> SOAP_CONNECTOR_ADDRESS | 8881 | No associated transports |
| <input type="checkbox"/> J2EE_DEFAULTHOST_SECURE | 3063 | No associated transports |
| <input type="checkbox"/> J2EE_DEFAULTHOST | 9042 | No associated transports |
| <input type="checkbox"/> J2EE_HTTP_ENDPOINT_SECURE_ADDRESS | 8579 | No associated transports |
| <input type="checkbox"/> J2EE_HTTP_ENDPOINT_ADDRESS | 8339 | No associated transports |
| <input type="checkbox"/> J2EE_ENDPOINT_SECURE_ADDRESS | 7287 | No associated transports |
| <input type="checkbox"/> J2EE_ENDPOINT_ADDRESS | 7075 | No associated transports |
| <input type="checkbox"/> J2EE_JSP_SERVLETCH_LISTENER_ADDRESS | 8407 | No associated transports |
| <input type="checkbox"/> QWSOAP_VQPC_LISTENER_ADDRESS | 11009 | No associated transports |
| <input type="checkbox"/> QWSOAP_TCP_LISTENER_ADDRESS | 11810 | No associated transports |
| <input type="checkbox"/> J2EE_LISTENER_ADDRESS | 9102 | No associated transports |

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

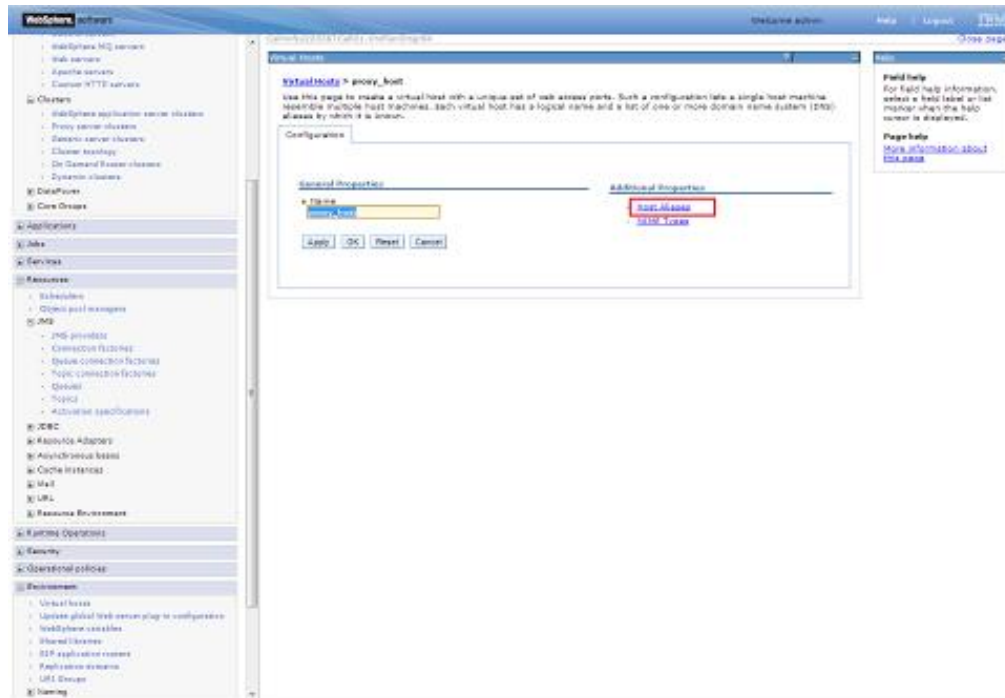


4.5.1 Virtual Host Setup

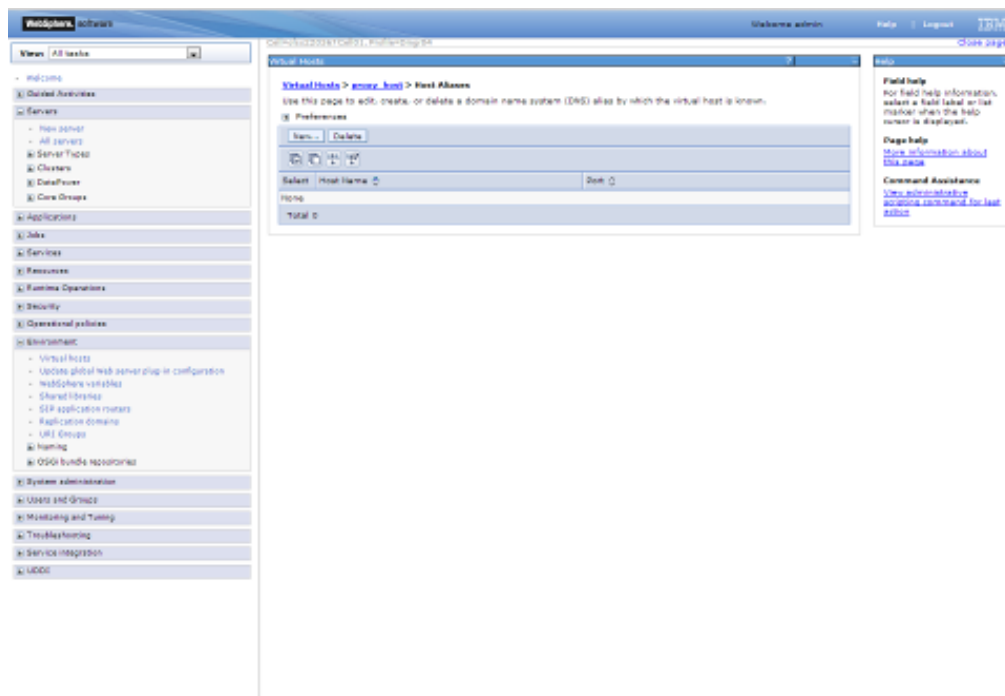
Navigation : *Environment*>*Virtual hosts*>*proxy_host*



Navigation : Host Aliases



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



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

The screenshot shows the Oracle WebLogic Administration Console interface. The left-hand navigation pane is expanded to 'Virtual Hosts' under the 'Environment' section. The main content area displays the 'Virtual Hosts' configuration page for a new alias. The page title is 'Virtual Hosts > proxy_host > 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 'proxy_host' and 'Port' with the value '9081'. Below these fields are four buttons: 'Apply', 'OK', 'Reset', and 'Cancel'.

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

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

The 'Dependencies' section is expanded to show a table of aliases. The table has columns for 'Default', 'Host Name', and 'Port'. There is one entry in the table with 'Default' checked, 'Host Name' as 'proxy_host', and 'Port' as '9081'. Below the table, there is a summary: 'You can administer the following resources:' followed by a table with one 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.'

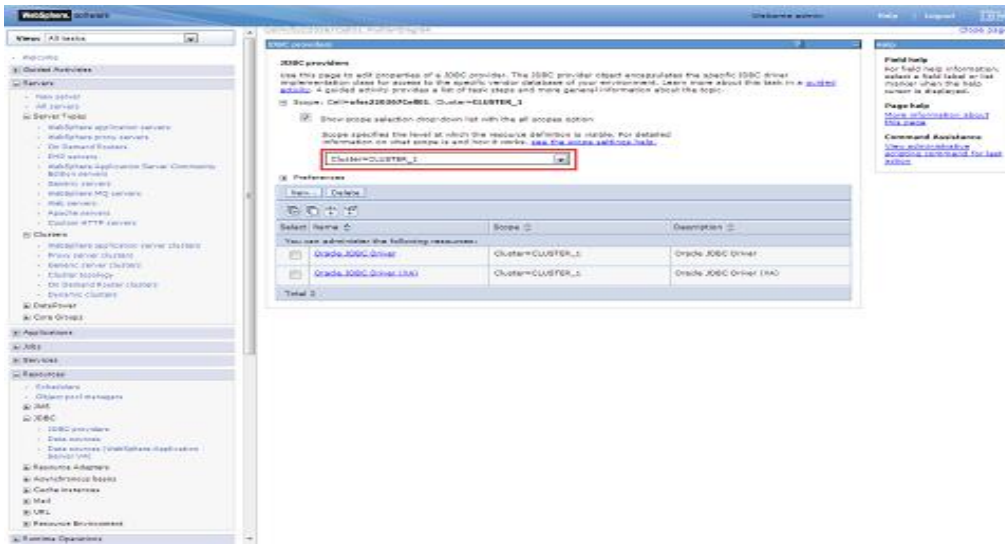
Similarly create proxy alias for all cluster related server default ports

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 table of host aliases with columns for 'Host Name' and 'Port'. The table lists four entries: 8080, 8444, 8082, and 8448, with a total of 4 items. A 'Help' sidebar is visible on the right.

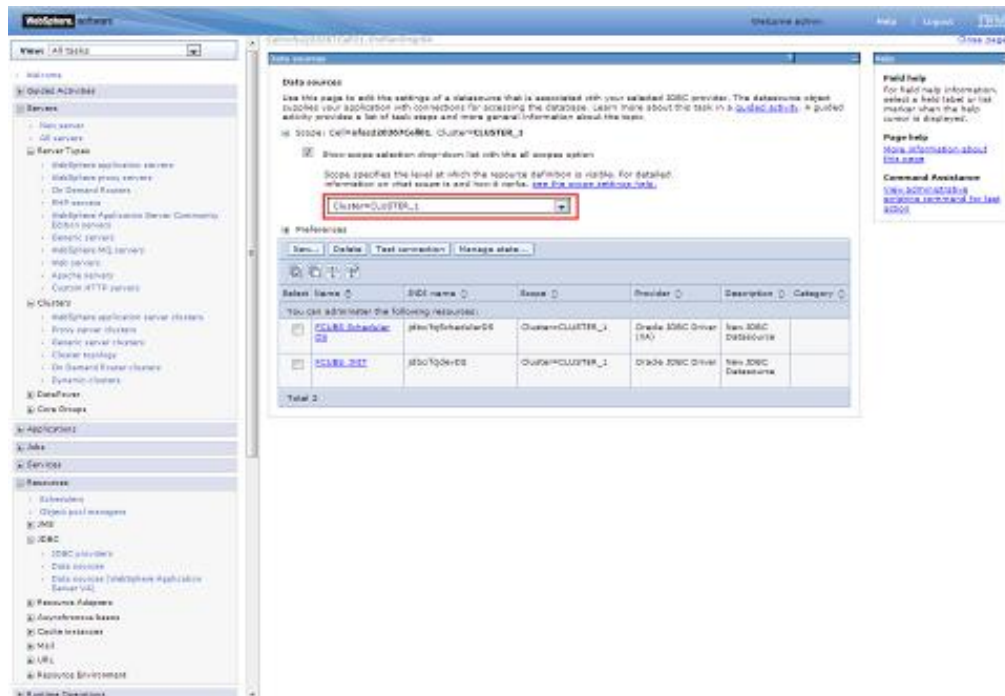
| Select | Host Name | Port |
|--------------------------|-----------|------|
| <input type="checkbox"/> | | 8080 |
| <input type="checkbox"/> | | 8444 |
| <input type="checkbox"/> | | 8082 |
| <input type="checkbox"/> | | 8448 |
| Total: 4 | | |

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=fes22830fca865, Cluster=CLUSTER_1`

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

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, see the [scope selection help](#).

Cluster=CLUSTER_1

References

| Select | Name | JMS name | Provider | Description | Scope |
|--------------------------|------------------------------|--------------|---------------------------------|-------------|-------------------|
| <input type="checkbox"/> | EmailCF | EmailCF | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | FC_QCF | FC_QCF | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | REBQCF | REBQCF | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | WebSphereQCF | 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=fes22830fca865, Cluster=CLUSTER_1`

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

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, see the [scope selection help](#).

Cluster=CLUSTER_1

References

| Select | Name | JMS name | Provider | Description | Scope |
|--------------------------|------------------------------------|--------------------|---------------------------------|--------------|-------------------|
| <input type="checkbox"/> | EHS_INQUEUE | EHS_INQUEUE | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | EHS_OUTQUEUE | EHS_OUTQUEUE | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | EHS_QUEUE | EHS_QUEUE | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | EHS_QUEUE_DLG | EHS_QUEUE_DLG | WebSphere MQ messaging provider | | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | EHS_QUEUE_RESPONSE | EHS_QUEUE_RESPONSE | 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 | Cluster=CLUSTER_1 |
| <input type="checkbox"/> | NOTIFY_QUEUE_DLG | 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 displays the Oracle WebLogic Administration Console interface. The left-hand navigation pane shows the tree structure: **Middleware servers > MS_1 > Message listener service > Listener Ports**. The main content area is titled "Middleware servers > MS_1 > Message listener service > Listener Ports" and includes a description: "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 declares against that port. Listener open." Below the description are buttons for "Name", "Delete", "Start", "Stop", and "Convert to activation specification". A table lists the configured listener ports:

| Select items | Description | Connection factory JNDI name | Destination JNDI name | Status |
|--------------------------|--------------------|------------------------------|-----------------------|-----------------|
| <input type="checkbox"/> | EMBED_LISTENER | EmbedListener | EMBED | EMBED_QUEUE |
| <input type="checkbox"/> | EMBED_OUT_LISTENER | EmbedOutListener | EMBED | EMBED_OUT_QUEUE |
| <input type="checkbox"/> | MDB_LISTENER | MDBListener | MDBQCF | MDB_QUEUE |
| <input type="checkbox"/> | NOTIFY_LISTENER | notifyListener | notifyMsgQCF | NOTIFY_QUEUE |
| <input type="checkbox"/> | KTMS_LISTENER | | notifyMsgQCF | KTMS_QUEUE |
| <input type="checkbox"/> | EMBED_LISTENER | notifyMsgQCF | | EMBED_QUEUE |

Total 6

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

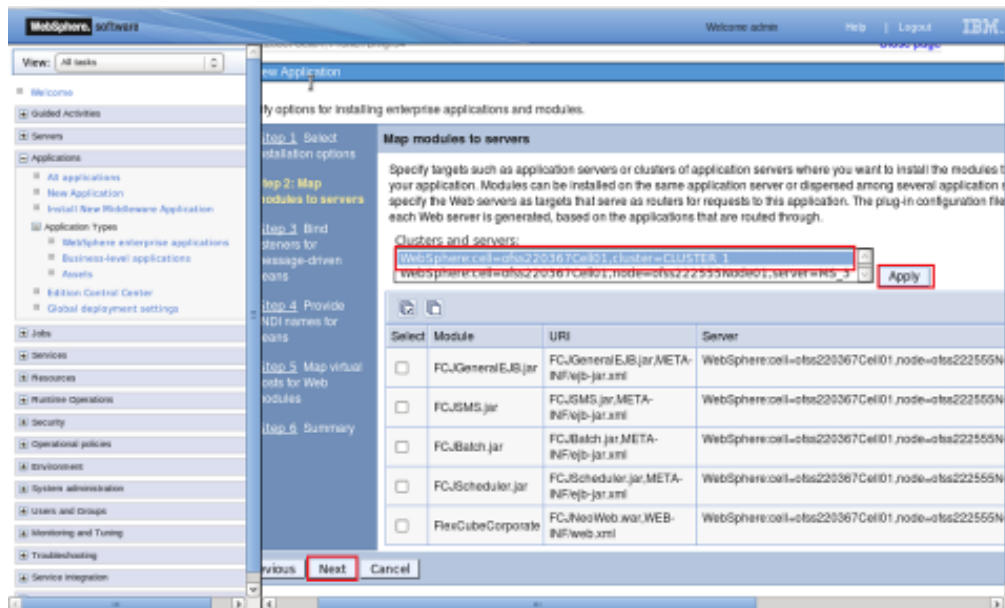
The screenshot displays the Oracle WebLogic Administration Console interface for MS_2. The left-hand navigation pane shows the tree structure: **Middleware servers > MS_2 > Message listener service > Listener Ports**. The main content area is titled "Middleware servers > MS_2 > Message listener service > Listener Ports" and includes a description: "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 declares against that port. Listener open." Below the description are buttons for "Name", "Delete", "Start", "Stop", and "Convert to activation specification". A table lists the configured listener ports:

| Select items | Description | Connection factory JNDI name | Destination JNDI name | Status |
|--------------------------|--------------------|------------------------------|-----------------------|-----------------|
| <input type="checkbox"/> | EMBED_LISTENER | EmbedListener | EMBED | EMBED_QUEUE |
| <input type="checkbox"/> | EMBED_OUT_LISTENER | EmbedOutListener | EMBED | EMBED_OUT_QUEUE |
| <input type="checkbox"/> | MDB_LISTENER | MDBListener | MDBQCF | MDB_QUEUE |
| <input type="checkbox"/> | NOTIFY_LISTENER | notifyListener | notifyMsgQCF | NOTIFY_QUEUE |
| <input type="checkbox"/> | KTMS_LISTENER | | notifyMsgQCF | KTMS_QUEUE |
| <input type="checkbox"/> | EMBED_LISTENER | notifyMsgQCF | | EMBED_QUEUE |

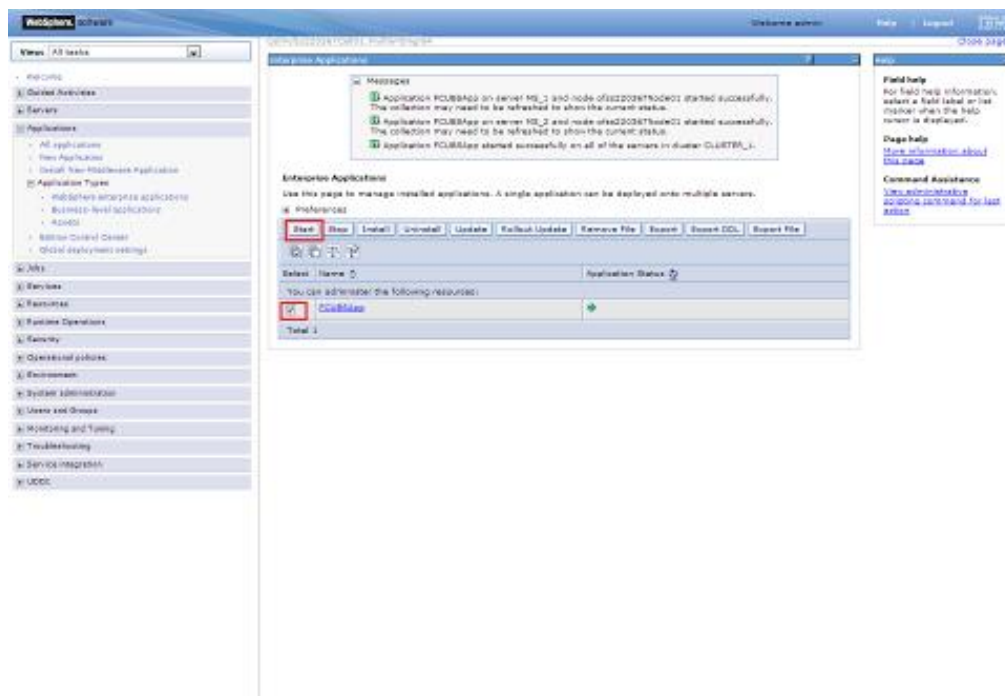
Total 6

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.

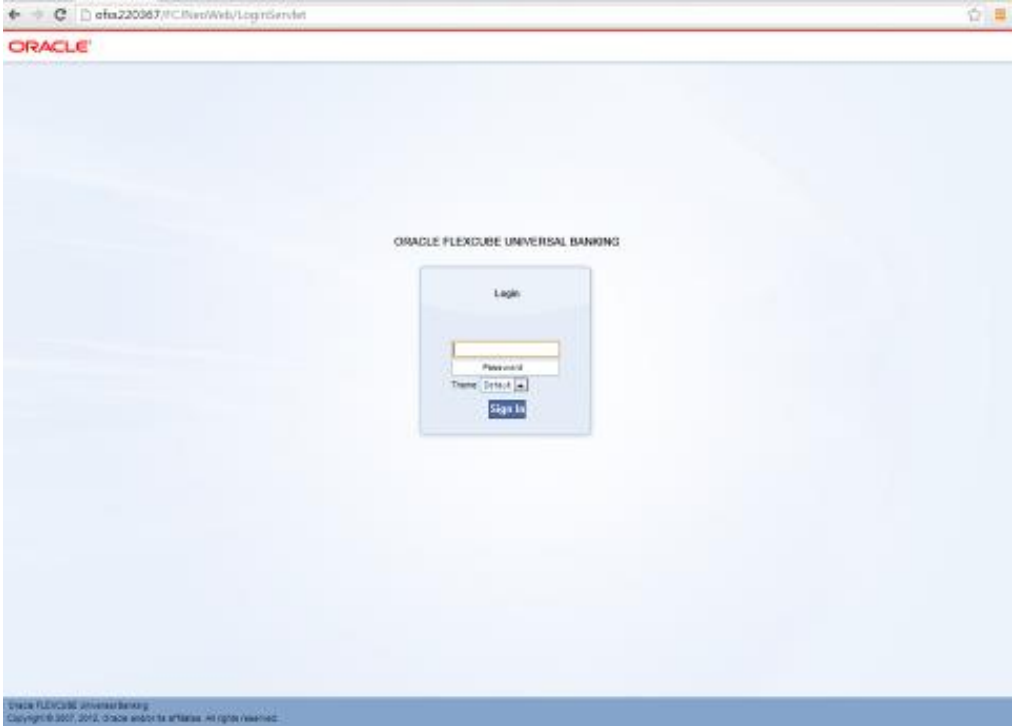
Navigation : `Servers > Server Types > WebSphere proxy servers > [proxy_server_1] > Ports`

The screenshot shows the WebSphere Administration 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.

| Name | Host | Port | Transport Details |
|--------------------------------------|-------------------------|-------|--------------------------|
| BOOTSTRAP_ADDRESS | afw222267.in.oracle.com | 8813 | No associated transports |
| CEWS_SSL_MUTUALAUTH_LISTENER_ADDRESS | afw222267.in.oracle.com | 0 | No associated transports |
| CEWS_SSL_STANDARD_LISTENER_ADDRESS | afw222267.in.oracle.com | 0 | No associated transports |
| COE_LISTENER_ADDRESS | * | 9037 | No associated transports |
| COE_LISTENR_ADDRESS | * | 7874 | No associated transports |
| IPC_CONNECTOR_ADDRESS | tcpPort | 9626 | No associated transports |
| DRG_LISTENER_ADDRESS | afw222267.in.oracle.com | 0 | No associated transports |
| DUPLEX_TSP_LISTENER_ADDRESS | * | 10014 | No associated transports |
| DUPLEX_VIP_LISTENER_ADDRESS | * | 10013 | No associated transports |
| PROXY_HTTPS_ADDRESS | * | 443 | No associated transports |
| PROXY_HTTP_ADDRESS | * | 80 | No associated transports |
| PROXY_IPS_ADDRESS | * | 3061 | No associated transports |
| PROXY_IPS_ADDRESS | * | 5090 | No associated transports |
| SEC_SSL_MUTUALAUTH_LISTENER_ADDRESS | afw222267.in.oracle.com | 0 | No associated transports |
| SEC_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
[February] [2018]
Version 14.0.0.0

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