Oracle FLEXCUBE Direct Banking

Clustering on Weblogic 11g

Release 12.0.3.0.0

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Clustering On Weblogic 11g
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1. Preface

1.1. Intended Audience

This document is primarily targeted at

- Oracle FLEXCUBE Direct Banking Development Teams
- Oracle FLEXCUBE Direct Banking Implementation Teams
- Oracle FLEXCUBE Direct Banking Implementation Partners

1.2. Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

1.3. Access to OFSS Support

https://support.us.oracle.com

1.4. Structure

This document consists of the following chapter

Chapter 4, "Introduction to Weblogic Cluster"

This chapter discusses the clustered architecture overview of Weblogic 11g.

Chapter 5, "Creating Weblogic Cluster"

This chapter discusses the steps to create Weblogic Cluster.

Chapter 6, "Creating Managed Servers on Remote Machines"

This chapter discusses the ways with which managed servers can be created on remote machines.

Chapter 7, "Adding Servers to Weblogic Cluster"

This chapter briefs that after creating the managed servers how to add them to already created Weblogic Cluster.

Chapter 8, "Deploying FCDB on Weblogic Cluster"

This chapter discusses the way to deploy FCDB on Weblogic Cluster.

1.5. Related Information Sources

For more information on Oracle FLEXCUBE Direct Banking Release 12.0.3.0.0, refer to the following documents:

- Oracle FLEXCUBE Direct Banking Licensing Guide

2.Abbreviations

FCDB	Oracle FLEXCUBE Direct Banking
HTTP	Hyper Text Transfer Protocol
J2EE	Java 2 Enterprise Edition
WL	Weblogic 11g

3.Overview

This document discusses following topics

- Creating and managing Weblogic 11g Cluster.
- Deploying FCDB Application on Weblogic 11g Cluster.

3.1.Pre-requisites

1. Oracle FLEXCUBE Direct Banking application is successfully installed using Oracle FCDB Installer.

4.Introduction to Weblogic Cluster

Some salient features of the Weblogic 11g Cluster are mentioned below.

1) In a cluster, server instances can lie on different machines.
2) All server instances will belong to the same domain.
3) All the server instances are controlled using a single Admin server.
4) That Admin server could be the Admin server on any of the machines or it could be and Admin server on a totally different machine.
5) The Node Manager is a service provided by Weblogic that runs on every machine and is generally used to manage managed server instances on that machine.
6) We have to ensure that the Admin Server communicates with the Node Manager on each machine so that we can start/shut down the server instances in the cluster using a single Admin server.
7) The version of Weblogic used on all the machines must be the same.

The following diagram shows you how a managed server on a remote machine can be managed from Admin Server on another machine. (*Figure 4.1*)

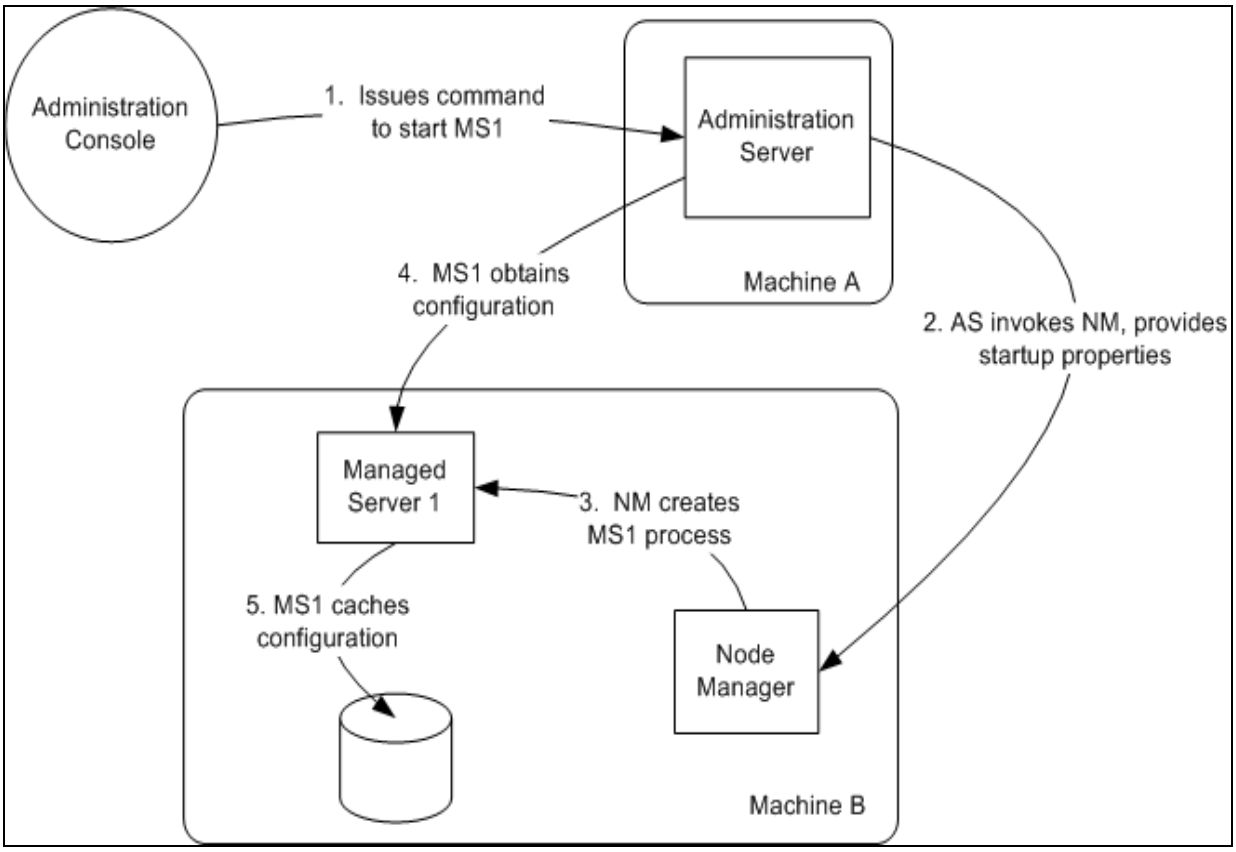

Figure 4.1

5.Creating Weblogic Cluster

1) In the BEA Weblogic Server Administration Console, click on Environment > Clusters

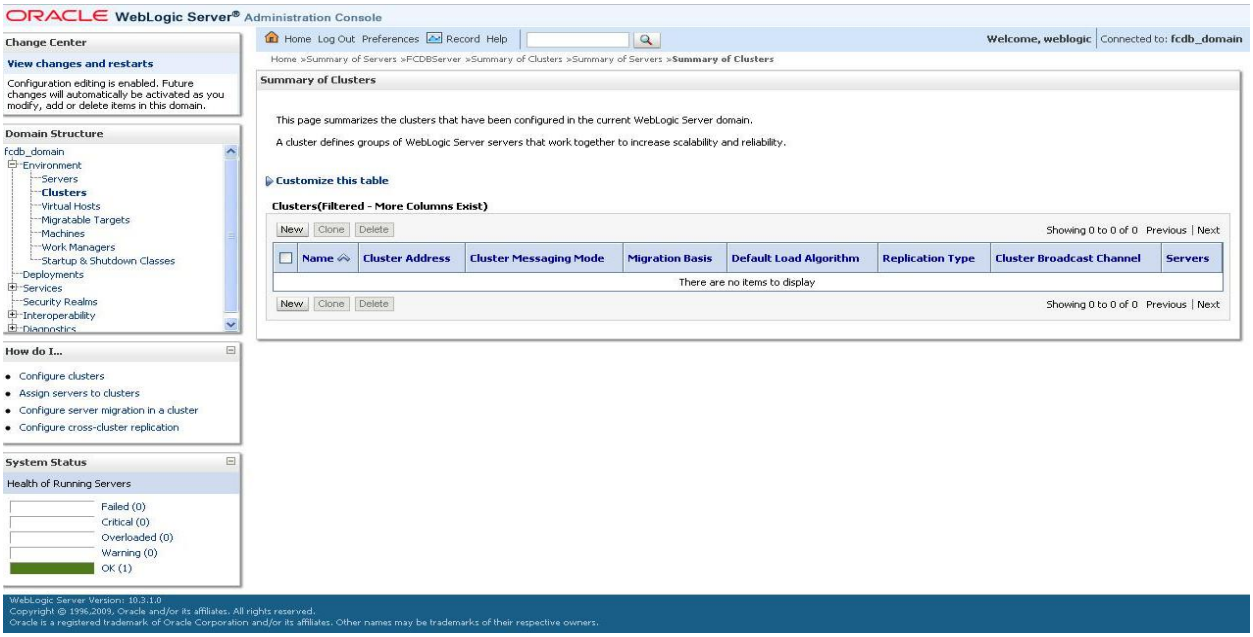

Figure 5.1

2) Click on “New”
3) Enter the Name as “FCDB_Cluster_1” (*Figure 4.2*)

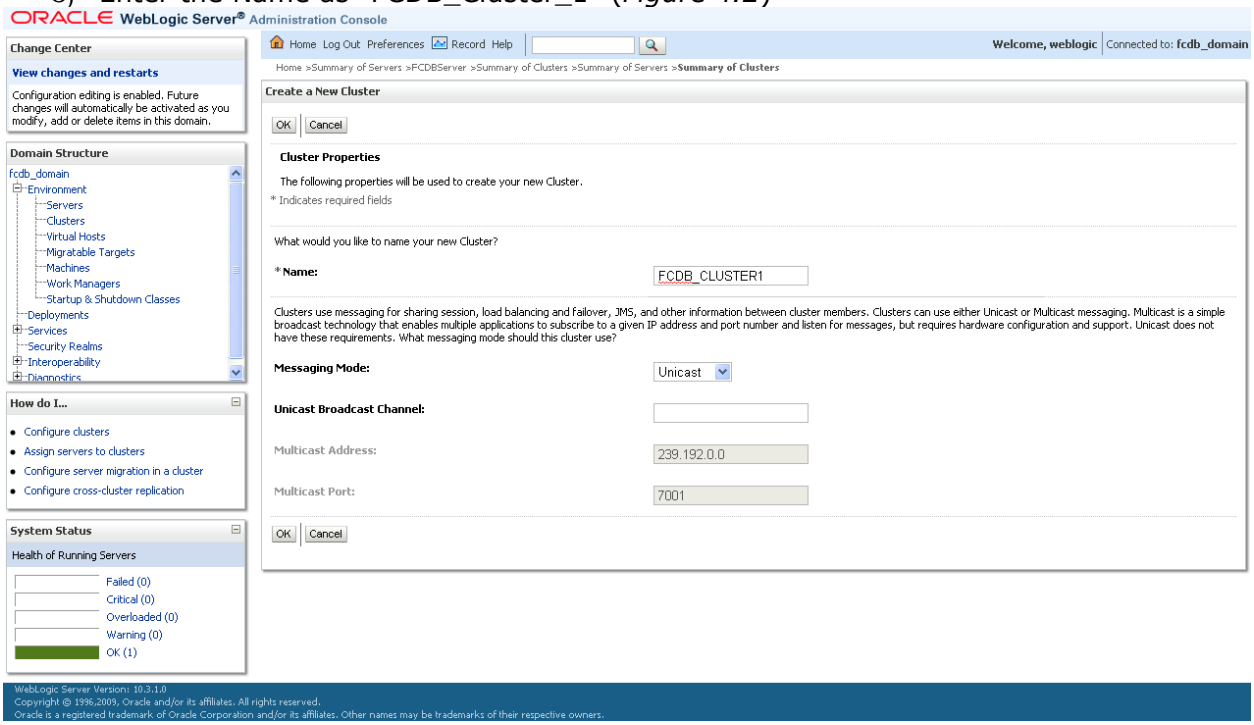

Figure 5.2

4) Click on “OK”

5) Click on “Activate Changes” button (*Figure 5.3*)

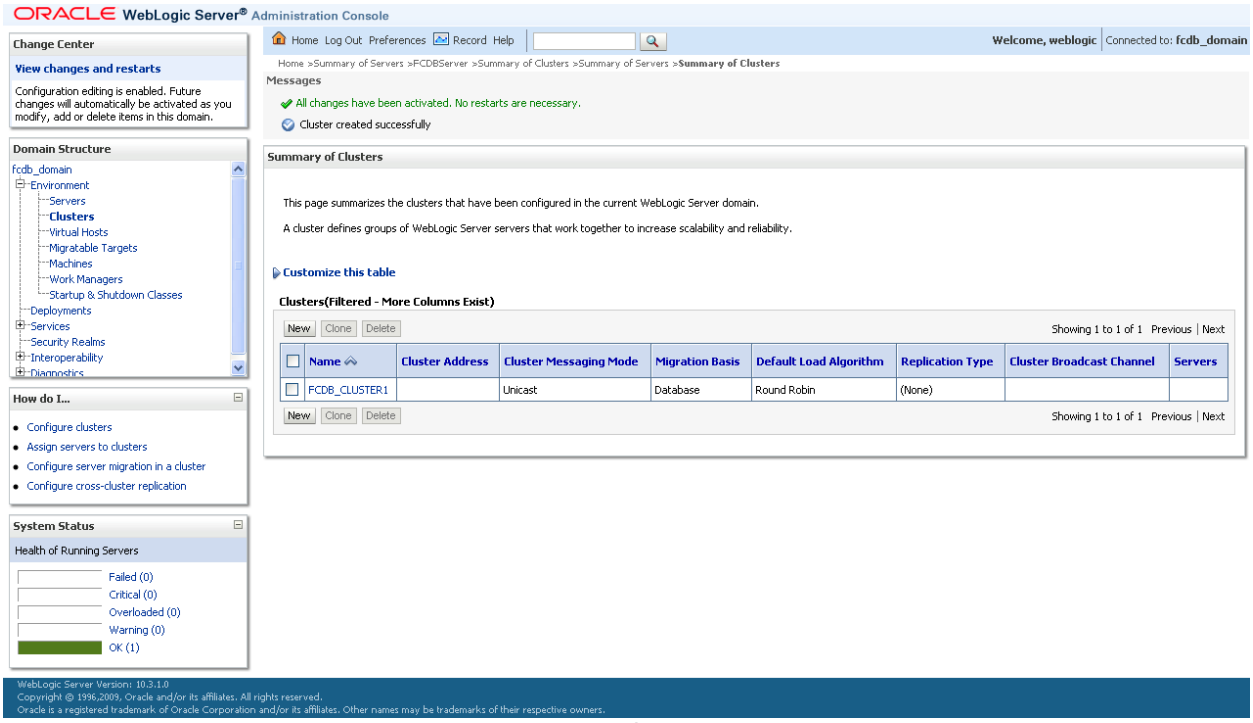

Figure 5.3

6.Creating Managed Servers on Remote Machines

There are 2 ways in which we can create and manage managed server instances on remote machines. Refer to Figure 5.1 above as an example to create and manage one managed server instance on a remote machine.

6.1.Using admin servers on Machine A and Machine B

1) Create Machine B using the Admin Console of Machine A. The “listen address” attribute will be the IP address/machine name of Machine B.

2) Create a server Managed Server 1 using the Admin Console of Machine A and associate it with Machine B.

3) Create Machine B using the Admin Console of Machine B. The “listen address” attribute will be the IP address/machine name of Machine B.

4) Create a server Managed Server 1 using the Admin Console of Machine B and associate it with Machine B.

5) Please note that the name and listen port of the managed servers created on both machines should be the same. The domain name used on both machines should also be the same.

The server “Managed Server 1” created using the Admin Console of Machine A is merely a link to the actual managed server instance that we created on Machine B by using Admin Console of Machine B.

If we need to control server instances on different machines using Admin Server of Machine A, then we need to create server instances on those machines using their respective admin servers and then create links to all those server instances on Machine A using the Admin Server of Machine A.

Now, Node Manager on Machine B will not allow the Admin Server on Machine A to start “Managed Server 1” unless the Admin Server of Machine A provides valid credentials. “Valid Credentials” here refer to the username/password of a user of “Managed Server 1” who has the privileges to start “Managed Server 1”.

To pass these credentials,
1) Click on “Managed Server 1” using Admin Console of Machine A.
2) Click on “Server Start”.
3) Specify Arguments

```
-Dweblogic.management.username=<user_name>
-Dweblogic.management.password=<password>
```

Now if you start “Managed Server 1” using the Admin Console of Machine A, it will start correctly. If you log into Admin Console of Machine B, you will see that the server instance has started correctly.

6.2.Using admin servers on Admin Server on Machine A and WLST

We use Weblogic Scripting Tool (WLST) so as to register the Node Manager on Machine B with the Admin Server of Machine A so that we don't have to explicitly pass credentials in order to start "Managed Server 1".

1) Start the Command Prompt on Machine B.
2) Change directory using cd D:\bea\user_projects\domains\fcdb_domain\bin
3) Run the batch file "setDomainEnv". Running this batch file will set all the appropriate JARs that we will need ahead, in the class path.
4) Start the WLST using the command
5) java weblogic.WLST (Figure 5.2.1)

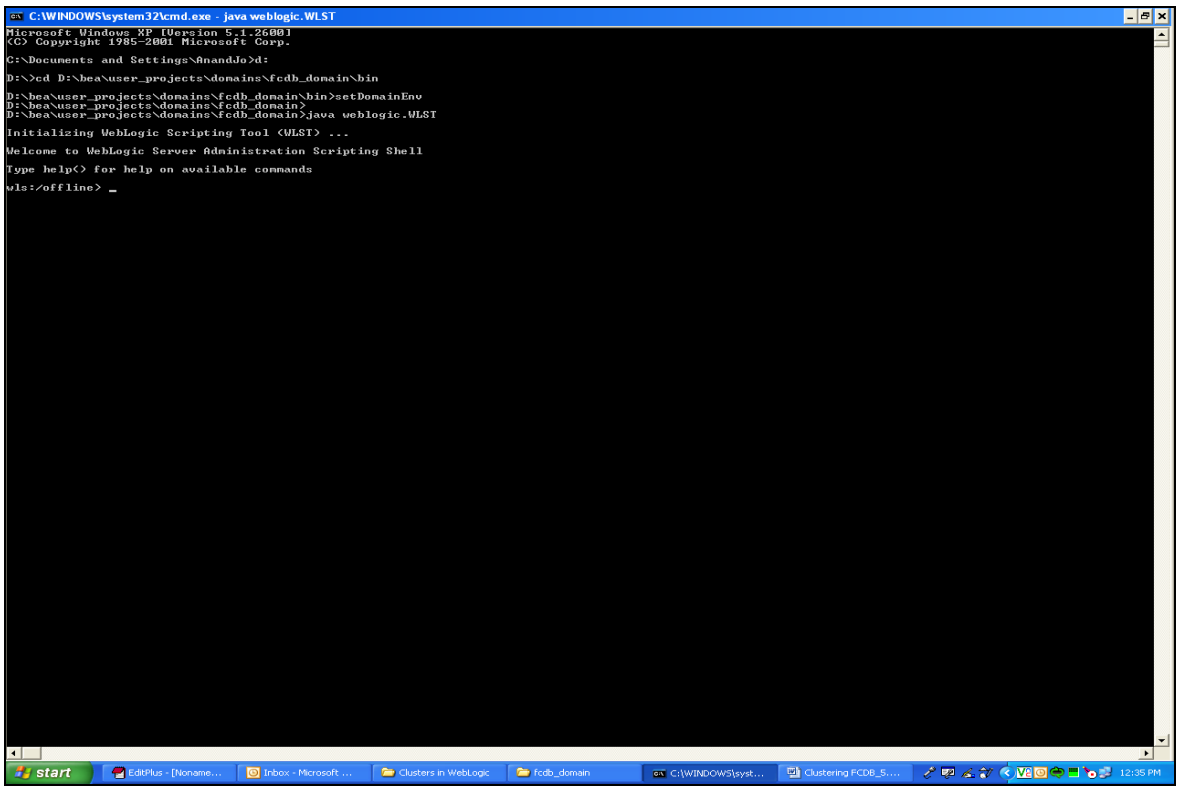

Figure 6.2.1

6) `wls:/offline> connect(userId,pwd,'AdminServerA:PortA')`
   Where '`AdminServerA`' is the name of Machine A and '`PortA`' is the port on which it listens.

7) `wls:/offline> nmEnroll('D:/bea/user_projects/domains/fcdb_domain')`
   where `'D:/bea/user_projects/domains/fcdb_domain'` is the path to the fcdb_domain on Machine B.
8) Create Machine B using the Admin Console of Machine A. The "listen address" attribute will be the IP address/machine name of Machine B.

9) Create a server Managed Server 1 using the Admin Console of Machine A and associate it with Machine B.

The managed server is now created on Machine B. You can start it and shut it down from the Admin Console of Machine A. You don’t have to do anything using the Admin Console of Machine B.

7.Adding Servers to Weblogic Cluster

This chapter discusses about how to add the managed servers to a already created Weblogic Cluster from Admin console of Weblogic.

1) Click on the “Lock & Edit” button

2) Click on Environment > Clusters > FCDB_Cluster_1

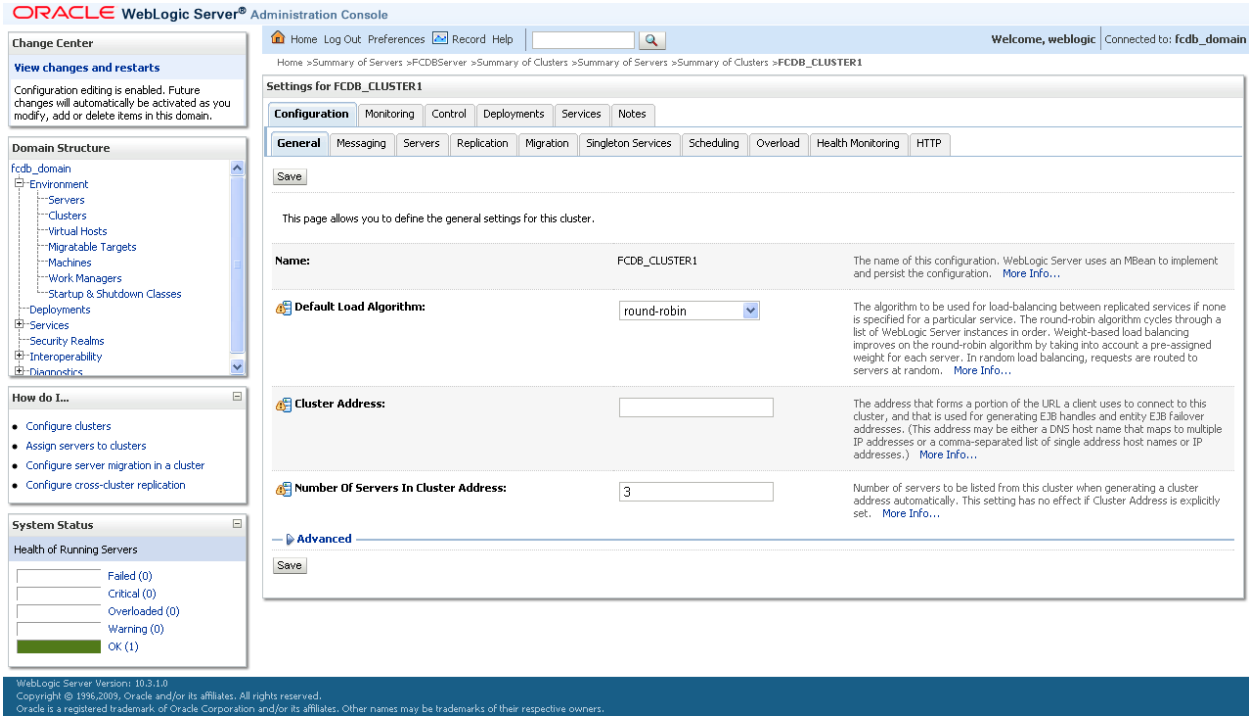

Figure 7.1

3) Click on “Servers” tab.

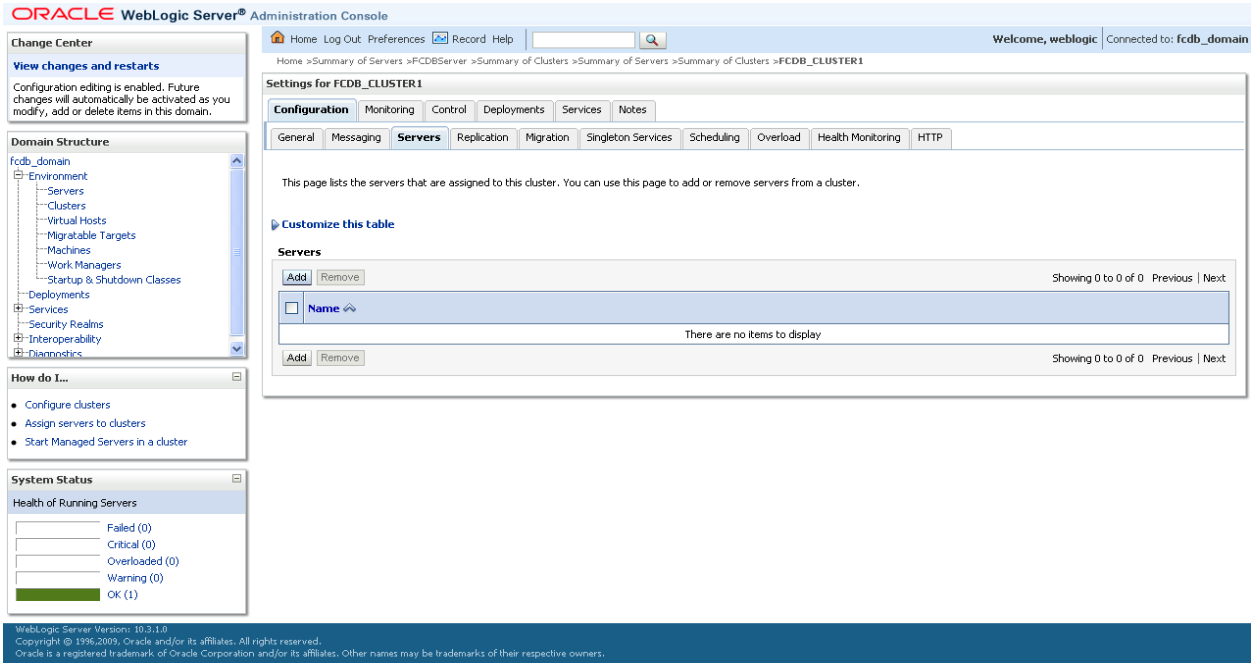

Figure7.2

4) Click on “Add”

5) Check the first option “Select an existing server, and add it as a member of this cluster”

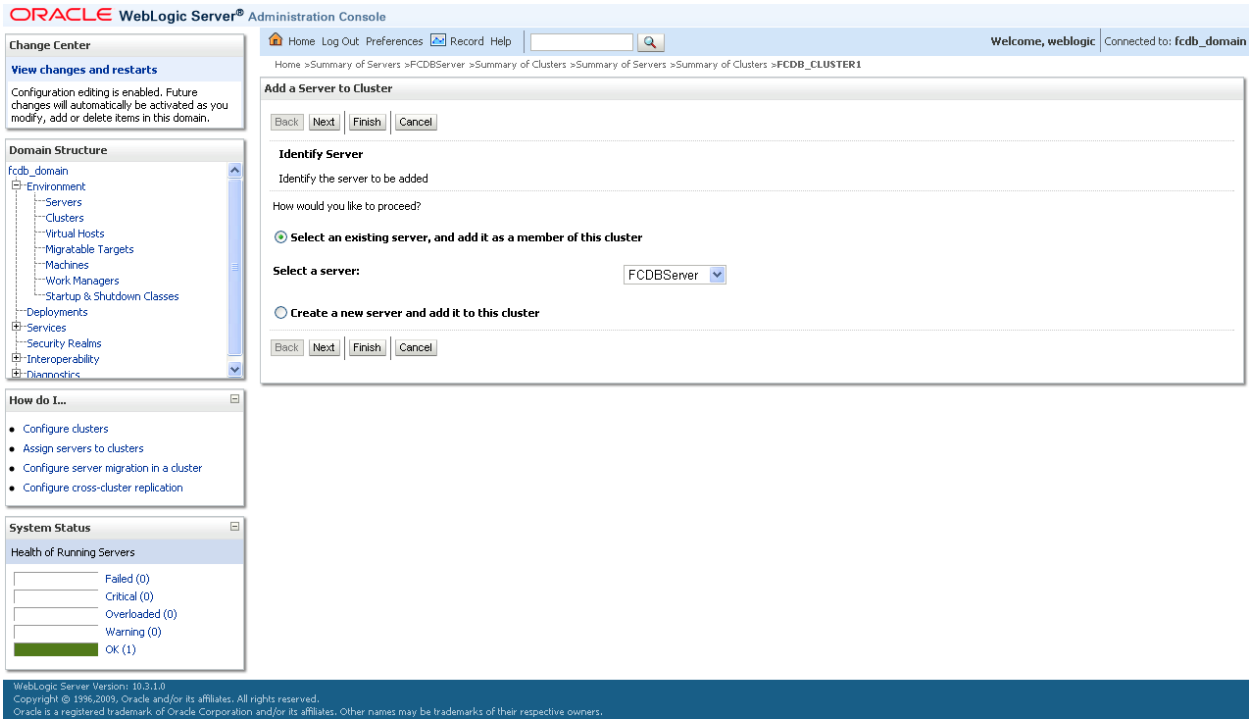

Figure 7.3

6) Select a server that must be added to the cluster.
7) Click on finish.
8) Add as many servers as you want to the cluster.
9) Click on “Activate Changes” button

8.Deploying FCDB on Weblogic Cluster

This chapter describes the steps on the deployment of FCDB on Weblogic Cluster which is already created.

1) During the installation process of an application, it prompts you to specify the server or cluster to which you wish to deploy the application.

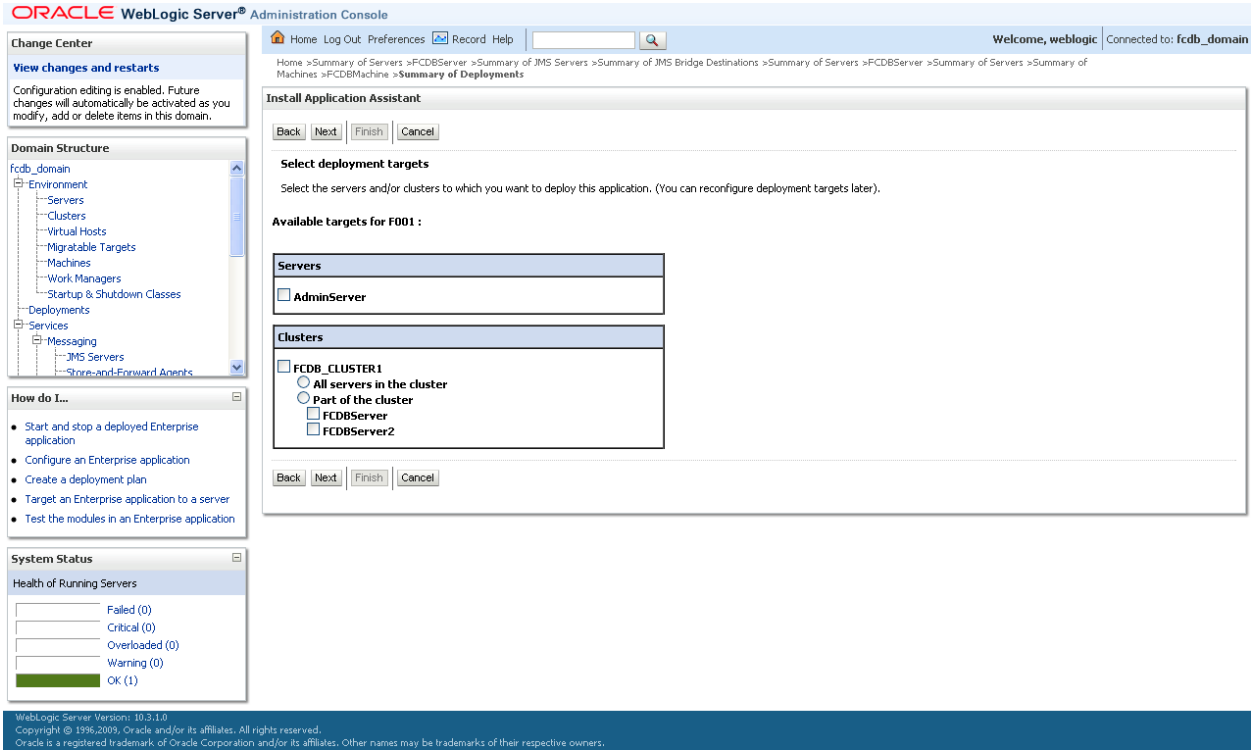

Figure 8.1

2) Instead of Managed Servers, you can select FCDB_Cluster_1.