Configuring Weblogic Server 12c Oracle FLEXCUBE Universal Banking Release 14.3.0.0.0 [May] [2020]



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1. Introduction

1.1 Purpose of this Document

The purpose of this document is to explain the steps required for Configuration and applying best practices in cluster mode for

- FCUBS 14.0
- Weblogic Version 12.2.1.4.0
- JDK 1.8.0_241

1.2 WebLogic Server Overview

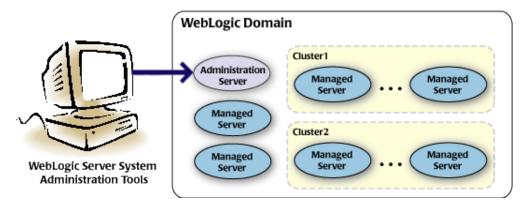
This section of the document provides brief explanation on the main components involved in WebLogic server

<u>Domain</u>

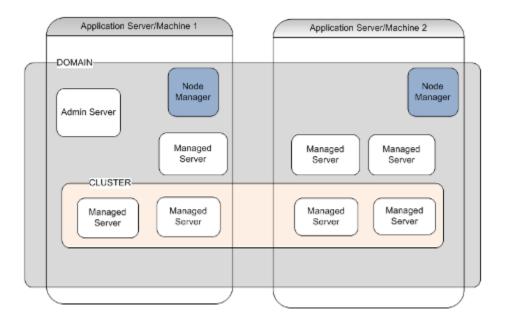
A domain is the basic administration unit for WebLogic Server instances. A domain consists of one or more WebLogic Server instances (and their associated resources) that is managed with a single Administration Server. Multiple domains can be defined based on different system administrators' responsibilities, application boundaries, or geographical locations of servers. Conversely, a single domain can be used to centralize all WebLogic Server administration activities.

Each WebLogic Server domain must have one server instance that acts as the Administration Server. Administration Server can be used via the Administration Console or using the command line for configuring all other server instances and resources in the domain.

WebLogic Domain Structure



Weblogic 12c Domain Overview



Administration Server

A domain includes one WebLogic Server instance that is configured as an Administration Server. All changes to configuration and deployment of applications are done through the Administration Server. The Administration Server provides a central point for managing the domain and providing access to the WebLogic Server administration tools.

These tools include the following:

- WebLogic Server Administration Console: Graphical user interface to the Administration Server.
- WebLogic Server Node Manager: A Java program that lets you start and stop server instances - both Administration Servers and Managed Servers - remotely, and to monitor and automatically restart them after an unexpected failure.

Admin server start mode needs to be configured as Production Mode.

Managed Server

In a domain, server instances other than the Administration Server are referred to as Managed Servers. Managed servers host the components and associated resources that constitute your applications—for example, JSPs and EJBs.

When a Managed Server starts up, it connects to the domain's Administration Server to obtain configuration and deployment settings. In a domain with only a single WebLogic Server instance, that single server works as both the administration server and managed server.

Node Manager

The Managed Servers in a production WebLogic Server environment are often distributed across multiple machines and geographic locations.

Node Manager is a Java utility that runs as separate process from WebLogic Server and allows you to perform common operations tasks for a Managed Server, regardless of its location with respect to its Administration Server. While use of Node Manager is optional, it provides valuable benefits if your WebLogic Server environment hosts applications with high availability requirements.

If you run Node Manager on a machine that hosts Managed Servers, you can start and stop the Managed Servers remotely using the Administration Console or from the command line. Node Manager can also automatically restart a Managed Server after an unexpected failure.

<u>Machine</u>

A machine in the Weblogic Serve context is the logical representation of the computer that hosts one or more Weblogic Server instances(servers). The Admin Server uses the machine definitions to start remote servers through the Node Managers that run on those servers. A machine could be a physical or virtual server that hosts an Admin or Managed Server that belongs to a domain.

Managed Server Cluster

Two or more Managed Servers can be configured as a WebLogic Server cluster to increase application scalability and availability. In a WebLogic Server cluster, most resources and services are deployed to each Managed Server (as opposed to a single Managed Server,) enabling failover and load balancing.

The servers within a cluster can either run on the same machine or reside in different machines. To the client, a cluster appears as a single WebLogic Server instance.

Dynamic Cluster

A dynamic cluster is any cluster that contains one or more dynamic servers. Each server in the cluster will be based upon a single shared server template. The server template allows you to configure each server the same and ensures that servers do not need to be manually configured before being added to the cluster. This allows you to easily scale up or down the number of servers in your cluster without the need for setting up each server manually. Changes made to the server template are rolled out to all servers that use that template.

You cannot configure dynamic servers individually; there are no server instance definitions in the config.xml file when using a dynamic cluster. Therefore, you cannot override the server template with server-specific attributes or target applications to an individual dynamic server instance.

When configuring your cluster you specify the maximum number of servers you expect to need at peak times. The specified number of server instances is then created, each based upon your server template. You can then start up however many you need and scale up or down over time according to your needs. If you need additional server instances on top of the number you originally specified, you can increase the maximum number of servers instances (dynamic) in the dynamic cluster configuration.

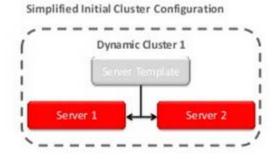
Server Templates

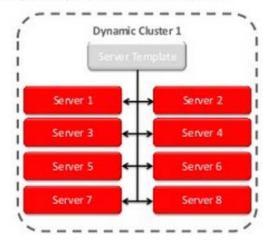
A single server template provides the basis for the creation of the dynamic servers. Using this single template provides the possibility of every member being created with exactly the same attributes. Where some of the server-specific attributes like Servername, listen-ports, machines, etc. can be calculated based upon tokens.

You can pre-create server templates and let Weblogic clone one when a Dynamic Cluster is created.

When none is available a server template is created with the Dynamic Cluster. The name and the listen ports are the only server template attributes that you provide during Dynamic Cluster creation.

Simplified Configuration with Scalability and Elasticity





Simplified Operations for Cluster Scale Out

1.3 **Pre-Requisites**

In this document, we are going to create a domain with two managed servers. The managed servers are going to be created on two different physical servers (nodes). Note that, this document has been prepared based on a test conducted in Linux servers.

This requires Weblogic Server of same version to be installed on both the machines and services

Environment

2 servers where linux is installed, 1 will be primary where admin console will be running along with managed servers and the other where only managed servers will be.

Softwares

- 1) Oracle Weblogic Server 12.2.1.4 installed on both the machines under same folder structure.
- 2) JDK 1.8 Latest available version installed on both the machines. In this document JDK1.8.0_241 version is used.

Clock Synchronization

The clocks of both the servers participating in the cluster must be synchronized to within one second difference to enable proper functioning of jobs otherwise it will lead to session timeouts.

Enable Graphical User Interface (GUI)

Establish a telnet or SSH connection to primary server. Start X-manager (or any similar tool) in windows desktop. Export DISPLAY environment variable to the machine IP where x-manager is running.

Syntax: export DISPLAY=<ip-address>:<port>

Test using xclock

2. Domain Configuration

2.1 **Domain Creation**

Weblogic domain creation and configuration will be done from primary server.

From primary server, launch the fusion Middleware configuration wizard using the command **config.sh** available under \$WLS_HOME/common/bin directory.

1) In the Welcome screen, select "Create a new domain" option. Enter the domain name and Click on **Next**.

Configuration Type	
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	What do you want to do? • Create a new <u>domain</u> Update an existing domain Domain Location: /scratch/app/w12c/user_projects/domains/FCUBSDomain Browse
Help	Create a new domain.

2) Select the required templates from **Available Templates** and click **Next**.

Templates	
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	 Create Domain Using Product Templates: Template Categories: All Templates Available Templates Basic WebLogic Server Domain - 12.1.3.0 [Mserver] *
	Create Domain Using Custom Template: Template location: /scratch/app/wl12c Browse
Help	< <u>B</u> ack <u>N</u> ext > <u>Finish</u> Cancel

- 3) Specify Administrator User Name and Password.
 - > The specified credentials are used to access Administration console.
 - You can use this screen to define the default WebLogic Administrator account for the domain. This account is used to boot and connect to the domain's Administration Server. Click Next.

Administrator Account	
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Name weblogic
Help	Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.

4) Select Server Startup as **Production Mode** and the available **JDKs**. Click **Next**.

Domain Mode and JDK	
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Administration Server Node Manager Configuration Summary Configuration Progress End Of Configuration	Domain Mode Development Utilize boot.properties for username and password, and poll for applications to deploy. Production Require the entry or a username and password, and do not poll for applications to deploy. JDK Oracle HotSpot 1.7.0_75 /usr/java/jdk1.7.0_75 Other JDK Location:
Help	< Back Next > Einish Cancel

5) Select the check box adjacent to Administration Server and Node Manager. Click Next.



6) Specify the Administration server Listen address and Listen port.

Administration Server		
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Administration Server Node Manager Configuration Summary Configuration Progress End Of Configuration	Server Name AdminServer Listen Address All Local Addresses Listen Port 7001 Enable SSL SSL Listen Port 7101 Port number must be between 1 and 65535, ar	PUSION MIDDLEWARE
<u>H</u> elp		<back next=""> Einish Cancel</back>

Note: The default Listen port is 7001 and SSL port is 7101. This could be changed to any other available port. Ensure to make a note, of this port since the same is required for launching the Admin console, post domain creation.

Note: Check for the port availability using the command - netstat -anp |grep <Port no>

The next screen navigates to NodeManager configuration.

7) Configure Node Manager

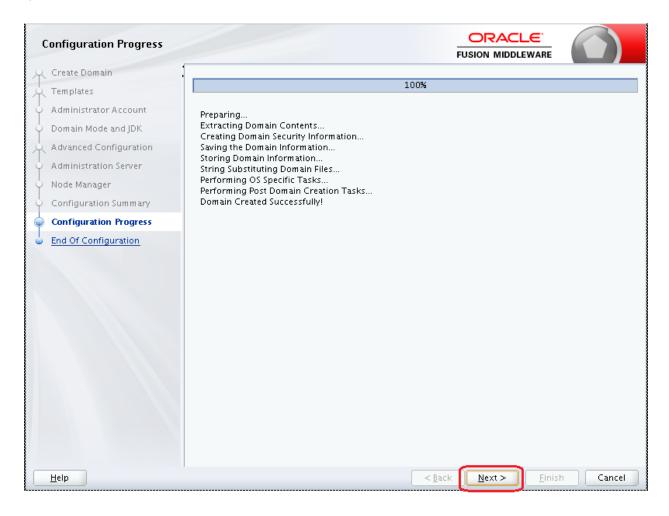
Select **Per Domain Default Location** option from **Node Manager Type.** And in the **Node Manager Credentials**, provide the username and password for the nodemanager. Click **Next**.

Node Manager					
🕂 <u>Create Domain</u>					
Templates					
ddministrator Account					
Domain Mode and JDK					
Advanced Configuration	Node Manager Type				
Administration Server	Pr <u>D</u> omain Default I	Location			
🧅 Node Manager	○ Per Domain <u>C</u> ustom	Location			
Configuration Summary	Node Manager Home	e: pp/w12c/user_projects/domains/FCUBSDomain/nodemanager Browse			
Configuration Progress	🗌 🖳 <u>M</u> anual Node Manag	jer Setup			
ပ် End Of Configuration	Node Manager Credenti	als			
	Username:	weblogic			
	Password:	••••••			
	Confirm Password:	••••••			
	Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.				
<u>H</u> elp		< <u>Back</u> <u>N</u> ext> <u>Einish</u> Cancel			

8) Verify the details and click **Create**. The domain creation process is initiated and the progress of completion is indicated.

Configuration Summary				
Create Domain Templates Administrator Account Domain Mode and JDK Advanced Configuration Administration Server Node Manager Configuration Summary Configuration Progress End Of Configuration	View: Deployment FCUBSDomain (/scratch/app/wl12c/user_projects Server AdminServer	Name Description Author Location	Oracle Corpora	VebLogic Server do n
	Select Create to accept the above options and start cre above configuration before starting Domain Creation, the left pane, or by using the Back button.			

9) Click Next.



10) The **Configuration Success** message will be displayed as follows:

Configuration Success		
A Create Domain		
A Templates	Oracle Weblogic Server Configuration Succeeded	
Administrator Account	New Domain FCUBSDomain Creation Successful	
Oomain Mode and JDK	Domain Location	
Advanced Configuration	/scratch/app/w12c/user_projects/domains/FCUBSDomain	
↓ ♀ Administration Server	Admin Server URL	
↓ ♀ Node Manager	http://ofss222565:7001/console	
↓ ♀ Configuration Summary		
↓ ♀ Configuration Progress		
Configuration Success		
Help	< <u>B</u> ack <u>N</u> ext > <u>Einish</u>	Cancel

The Admin Server console URL is as indicated below:

http://<IP address>:<admin console port>/console

- <IP address >: Host on which domain was created.
- <admin console port> : Port specified in Administration Server configuration page.

In this case the Admin Console URL is: <u>https://<server1hostname>:7101/console</u>

2.2 Pack and Unpack Domain

The domain structure is expected to be copied to the second server during domain creation. To copy the same, you can use pack and unpack utility provided under \$WLSHOME/common/bin.

<u>Pack</u>

Pack domain in primary server:

./pack.sh -managed=true -domain=/scratch/app/wl12c/user_projects/domains/FCUBSDomain - template=/tmp/FCUBSDomain.jar -template_name="FCUBSDomain"

<u>Unpack</u>

Unpack FTP FCBUSDomain.jar in binary mode to secondary server under /tmp area and unpack the domain using unpack utility provided under \$WLSHOME/common/bin

./unpack.sh -domain=/scratch/app/wl12c/user_projects/domains/FCUBSDomain - template=/tmp/FCUBSDomain.jar

2.3 Start Admin server

Admin server is started on the primary server. Login to primary server and navigate to folder \$DOMAIN_HOME/bin and execute startWeblogic.sh.

2.4 Start Node Manager

Node Manager needs to be started on both the servers. Before starting the node mananger update ListenAddress to the Hostname/IP Address of the machine in nodemanager.properties located in folder \$DOMAIN_HOME/nodemanager

To start the node manager login to the servers and navigate to folder \$DOMAIN_HOME/bin and execute **NodeManager.sh**

3. Cluster Configuration

Dynamic Cluster configuration involves below steps

- 1) Machine Configuration
- 2) Dynamic Cluster Creation: In a normal WebLogic Cluster you define Managed Server and add them to Cluster. In Dynamic Cluster, you select number of Servers you want in Cluster and Server Template you wish to assign to Servers in this WebLogic Dynamic Cluster.
- Server template modification: Servers (or Managed Server) that are part of WebLogic Dynamic Cluster will have properties taken from Server Template.
 Modify server template for best practices parameters for Dynamic Servers (part of Dynamic Cluster), you modify Server Template that is applicable to Dynamic Cluster. These settings are applicable to all the managed servers.
- 4) Activate Changes which would automatically create the managed servers(as mentioned in the number of servers required parameter).

Calculate Number of Servers Required:

For every 50 logged in FLEXCUBE users require one managed server of size 8GB. i.e. for 300 logged in FLEXCUBE users, it is recommended to have 6 managed servers. Based on the logged in users that needs to be supported decide on the number of the managed servers required. This parameter is required later in the dynamic cluster creation.

3.1 Machines Configuration

 Login into Admin Console and Navigate to FCUBSDomain → Environment → Machine and Click New

	dministration Console 12c	<u>Q</u>
Change Center	🔒 Home Log Out Preferences 🔤 Record Help	Welcome, weblogic Connected to: FCUBSDomain
View changes and restarts	Home >Summary of Machines	
Click the Lock & Edit button to modify, add or delete items in this domain.	Summary of Machines	
Lock & Edit Release Configuration	A machine is the logical representation of the computer that hosts one or more WebLogic Server instances (servers). I server in a cluster to which certain tasks, such as HTTP session replication, are delegated. The Administration Server u servers.	WebLogic Server uses configured machine names to determine the optimum ses the machine definition in conjunction with Node Manager to start remote
Domain Structure	This page displays key information about each machine that has been configured in the current WebLogic Server doma	ain.
FCUBSDomain FCUSSDomain Forwares	Customize this table Machines Click the Lock & Edit button in the Change Center to activate all the buttons on this page. New Cione Delete Name	Showing 0 to 0 of 0 Previous Next
B-Services		Type
Security Realms	New Cione Delete	Showing 0 to 0 of 0 Previous Next
How do I		
 Create and configure machines Assign server instances to machines Clone machines 		

2) Enter the machine name and click Next

ORACLE WebLogic Server -	dministration Console 12c	<u>e</u>
Change Center	🙆 Home-Log Out. Preferences 🖾 Record: Help	Welcome, weblogic Cannected to: PCUBSDomail
View changes and restarts	Home -Summary of Machines	
No pending changes exist. Click the Palease Configuration button to allow others to edit the domain. Look & EM Release Configuration	Create a New Machine Back (Finite) Cancel Machine Identity The following properties will be used to identify your new Machine.	
Donaia Structure	* Industries required fields	
FCUESDensies	What would you like to name your new Machine? * Manne: Specify the type of machine operating cystem. Machine OS: Dither Back Date: Trinitio Cancel	
How do I		

3) Enter the Listen Address and Listen Port(this is the port mentioned in nodemanager.properties file) and click **Finish**

CIRCICLE Mebrogic server	Administration Console 120				
Change Center	Home Lag Out Preferences 660 P	tecoré Help	9		Welcome, weblogic Connected to: FCUBSDomain
West changes and restarts	Hone >Summary of Machines				
No pending changes exist. Click the Release Configuration button to allow others to edit the demain.	Greate a New Machine				
Luck & Eok	Node Hanager Properties				
Release Configuration	The following properties will be used	to cool once the limits the	aser on this mathine:		
Domain Structure	What type of Node Hanager is naming			ate with it?	
PCUBSDomain B Streinorment Servers	Type:	[\$\$L •]			
E-Clusters Coherence Clusters Wachines	For a Java based node manager, what		de lignager configured to listen et?		
Virtual Hests Mark Narugers Startup and Shutdown Classes	Listes Port:	S556			
-Deployments 18 Services		3200			
Security Realins	For a script based node transport	tional proporties may be a	stighted.		
B-Discoperability B-Discoperation	Node: Hanager Home:				
How do L	Shell Command:				
Create and configure mechanes	100000000000000000000000000000000000000				
 Assign server instances to machines 	Debug Enabled				
Delete nadvines	Back Nor Faish Carsel				
System Status					
Health of Running Servers					

4) Machine is created

ORACLE WebLogic Server /	Administration Console 12c		Ų.
Change Center	A Hame Lag Out Preferences 🔤 Immed Help	<u>A</u>	Welcome, weblogic Gamedial to FCUBSDoma
View changes and restarts Click the Lock & Edit button to modify, add or delete items in this domain.	Hors -Sammary of Hackines Hessages # All changes have been attivited. No restarts are recessar	•	
Lock & Edit	Summary of Hachines		
Densin Structure PUBSOrnain Exercenter Serves Cohemics Clubers Cohemics Clubers Cohemics Clubers Valual Holts Work Neagers Structure and Studioun Closes Deployments Serves Serves Serves Serves CluberseveNity CluberseveNity	A machine is the logical representation of the comparter that server in a cluster to which certain tasks, such as HTTP sesso arrvers. This page displays key information about each machine that is Costomize this table Hachines Click the Look & Poly button in the Change Center to activat None Come Doole None Come Doole	en replication, are delegated. The Administration Server v has been configured in the current WebLagic Server dom	Showing 1 to 1 of 1 Previous Real
How do I 🛛 🗍	[Kimu] [Chine] [Dubrie]		Shawing 1 to 1 of 1 Previous Rest
Assign server instances to machines Orene machines Delete machines	<u>.</u>		

5) Similarly create a new machine entry for the other server

Change Center	A Home Log Out: Preferences Log Record Help	Q. Welco	me, weblogic Connected to: PCUBSDoma
View changes and restarts	Pore stammary of Plachines		
Click the Lock & Edit betten to modify, add or delete items in this domain.	Messages ## All changes have been activated. No restarts are recessary.		
Lock & Edit	Summary of Machines		
Release Configuration			
Domain Structure		nere WebLogic Server Instances (pervent), WebLogic Server uses configured mach are delegated. The Administration Server uses the machine definition in conjunc	
OUESDonain B-Environment Servers B-Chatem	 servers. This page displays key information about each machine that has been control 	pared in the current WebLagic Server domain.	
- Coherence Clusters - Machinese - Machinese	© Customize this table		
	Machines		
Work Monagers Starbup and Shutdown Classes	Click the Lock & Edit better in the Change Center to activate all the butt	ns on this page.	
Wark Managers	Click the Lock & Edit better in the Change Center to activate all the butt	ns on this page.	Showing 1 to 2 of 2 Previous Next
Work Nonogers Startup and Statdown Classes —Deployments Bi-Services —Security Realizes Bi-Stervices Bi-Stervices		ns on this page.	Showing 1 to 2 of 2 Previous West
Wark Honogers Stratop and Statistive Classes Opposed 9 Services Security Realms 19 Decoder Realms 19 Decoder Statisty 19 Decoder Statisty	None ~		Showing 1 to 2 of 2 Previous Next
- Wark Planagers - Startup and Shatdown Classes - Deployments 9 - Services - Security Realins # Stervershildly # Discovershildly # Discovershildly	Name -	Туре	Showing 1 to 2 of 2 Previous Next
- Wark Horapers - Tantap and Statiativen Classes - Deployments B- Services Security Realine # Security Realine # Security Realine R Characetter	Name (Clone) [Daske]	Type Vachise	Showing 1 to 2 of 2 Previous Meet Showing 1 to 2 of 2 Previous Next

Verifying machine status

Before starting the managed servers, ensure that the Node manager Status of all the machines are "Reachable".

In the console, navigate through Domain structure \rightarrow Machines \rightarrow machine1 \rightarrow Monitoring \rightarrow Node Manager Status. Status should be **Reachable.**

ORACLE WebLogic Server A	dministration Console 12c		Q.
Change Center	👔 Home Log Out Preferences 🖾 Record Help	1 a	Welcome, weblogic Convected to: FCUB5Domain
Wew changes and restarts	Home >Summary of Hischines >Hachines >Summary of	d Rachines - Rachine2 - Summary of Rachines - Plact	lineL Summary of Hachines SHachined Summary of Hachines SHachines
Click the Lock & Edit button to modify, add or	Settings for Machinet		
delete items in this domain. Lock & Edit	Configuration Honitoring Notes		
Relians Cariguration	Node Manager Status Node Manager Lag		
Domain Structure	This wave allows one to one concert status infer	mation for the Node Manager instance configured	I for this machine
POUBSDomain -		and the track range instance configure	
Environment Servers	Status:	Reachable	Carrent status of this Node Planager. Hore Info
B Clusters - Sener Templates - Hightable Targets - Coherence Clusters	Version:	12.13	Version string returned from the Node Manager. Here \mbox{Infa}_m
- Nachines - Virtual Hests - Walk Maragers - Starbup and Shutdown Classes			

3.2 **Dynamic Cluster Creation**

1) Login into Admin Console and Navigate to FCUBSDomain → Environment → Clusters → New → select **Dynamic Cluster**

ORACLE WebLogic Server	Administration Console 12c						<u>e</u>
Change Center	🙆 Harre Log Out, Preferences 🚾 Res	cord Help	9			Welcome, weblogic Connected	to: FCUBSDoes
View changes and restarts No pending changes axist. Click the Release Configuration button to allow others to edit the domain.	Rome -Hochinol - Summary of Hachines - Hessages Operation cancelled.	HachineL > Summary of Hachines	-Packinić -Summery of	Servert >Savmary of Hachitet >	Hachimal - Summary of S	evert >Summary of Chattere	
Lock & Edit	Summary of Clusters						
Release Configuration	This page summarizes the clusters that A duster defines groups of WebLapic S © Castomize this table Clusters (Filtered - Hore Columns I Data:	enver servers that work togethe					
Coherence Clusters	and a local frame			()	1	Shewing 8 to 0 of 0 1	Previous Next
	Chatter Dester Address	Obster Hessaging Mode	Migration Basis	Default Load Algorithm	Replication Type	Cluster Broadcast Channel	Servers
Work Planagers			There an	e na items to display			
Startup and Shubdown Clauses Deployments Services Security Reality	[New w] [Dire] [Dilite]					Shewing 0 to 0 of 0 4	Previous Next
How do 1	2						
Configure dasters							

2) Enter the **Cluster Name** and Click on **Next**

	ninistration Console 12c		Q
Change Center	🏠 Home Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic Connected to: FCUBSDomain
View changes and restarts	Home >Machine2 >Summary of Machines >Machine1 >Summary	of Machines >Machine2 >Summary of Servers >Summary of Mac	chines >Machine2 >Summary of Servers >Summary of Clusters
No pending changes exist. Click the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Back Next Finish Cancel Specify Cluster Identity and Properties The following properties will be used to identify your new of the set to identify your new of t	lynamic cluster and specify how cluster members should co	immunicate with each other to coordinate work.
Domain Structure	* Indicates required fields		
FCUBSDomain FCUSSDomain FCUSSDomain FCUsters Custers Custers FCUsters FCUsters FCUsters FCUsters FCUsters FCU		ons to subscribe to a given IP address and port number and	embers, Clusters can use either unicast or multicast messaging. Multicast is a listen for messages, but requires hardware configuration and support. Unicast
How do I	Multicast Address:	239.192.0.0	
Create dynamic clusters Configure clusters Configure server migration in a cluster Configure cross-cluster replication Create server templates	Multicast Port: Back Finish	7001	

3) Enter the **number of dynamic servers** you want to configure, enter the **server name prefix** and click on **Next**

	Iministration Console 12c	<u> </u>
Change Center	🏦 Home Log Out Preferences 🔤 Record Help	Welcome, weblogic Connected to: FCUBSDomain
View changes and restarts	Home >Machine2 >Summary of Machines >Machine1 >Summary of Machines >Machine2 >Summary of Servers >Summary of Machi	ines >Machine2 >Summary of Servers >Summary of Clusters
No pending changes exist. Click the Release Configuration button to allow others to edit	Create a New Dynamic Cluster	
the domain.	Back Next Finish Cancel	
Lock & Edit Release Configuration	Specify Dynamic Server Properties	
	The following properties will be used to specify the size and characteristics of your new dynamic cluster.	
Domain Structure	How many dynamic servers will you need at peak load?	
FCUBSDomain A B FCUBSDomain A	Number of Dynamic Servers:	
Clusters Server Templates	What naming convention would you like to use for new dynamic servers in this cluster?	
	Server Name Prefix:	
Virtual Hosts Work Managers	Server templates are used to configure the characteristics that are common to all dynamic servers in this cluster. Server new server template will be created to support this new cluster.	templates are unique to a cluster and cannot be shared across clusters, so a
Startup and Shutdown Classes	Back Next Finish Cancel	
Services		
How do I		

4) Select Machines that participate in domain, in this case all machines will be part of the domain, select **Use any machine configured in this domain** and click on **Next**

ORACLE WebLogic Server			Q
Change Center	🔒 Home Log Out Preferences 🔤 Record Help	9	Welcome, weblogic Connected to: PCUBSDomail
View changes and restarts	Hore sNachinal -Survey of Nachines -Nachinet -Sur	mary of Plathous (Plathous) -Summary of Servers (Summary o	d Hachines (Hachine) - Servicey of Services (See every of Clasters
to pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Create a New Dynamic Cluster		
Loch & Edit	and the second s		
Release Configuration	Specify Machine Bindings Associating dynamic servers with machines is essenti	al if you intend to use Node Manager and the Administration	n Censole (or WLST) to start server instances.
Domein Structure	How do you want to distribute dynamic servers across	nuclines?	
POUBSDomain			
H Severations	• Use any machine configured in this domain		
B-Clusters Server Templates	Use a single machine for all dynamic servers		
	Selected Machine:	Machine1 •	
Virtual Hests Viote Managers	🕀 Use a subset of machines in this domain		
-Startup and Shatdown Classes Deployments	Plachine Name Haltin Expression:		
BI-Services Security Realins	Back Next Filith Cancel		
How do I			
Create dynamic dusters			

5) Select the **listen port for the first server** in the dynamic cluster and then the **SSL listener port** for the first server in the dynamic cluster. The subsequent servers will be assigned with an incremental port number. Click **Next**

Change Center	🙆 Home Log Out Preferences 🔤 Record Help	9	Welcome, weblogic Connected to: FCUBSDomain
View changes and restarts	None Mathews -Summery of National Mathews Mathews -Summery of Platfor	es «Plachma) «Sormary of Servers »Sormary of Haching	n -Hechinal -Summary of Servers -Summary of Clusters
No pending changes exist, Click the Release Configuration button to allow others to edit the domain.	Create a New Dynamic Cluster		
Lock & Edil Release Configuration	Specify Listen Port Bindings Select how these dynamic serven should be bound to listen ports.		
Donals Structure	Listen ports for dynamic servers can be specified in a server template	e or can be dynamically generated to be unique.	
E-Entrastant I-Servers El-Clusters I-Server Templates	 Assign each dynamic server unique listen ports Liaten Port for Pirut Server: 	7002	
	SSL Listen Part for First Server:	7102	
- Varbal Hosts - Work Managers - Startup and Shutdown Classes	C Assign each dynamic server fixed listen ports		
- Deployments B- Services	Listen Port:	7100	
Senativ Realms	SSL Listen Port:	8100	
How do L.,	Back Next Prink Cancel		
Create dynamic clusters Configure disters	Transi Cara Cara Cara Cara Cara Cara Cara Car		

6) Summary of new Dynamic Cluster configuration is presented. Click Finish to create

ORACLE WebLogic Server A	dministration Console 12c		
Change Center	🏟 Home Lop Out: Preferences 🖂 Record Help	9	Welcome, weblagic Connected to: PCUBSDomain
View changes and restarts	Porte >Machine2 >Summary of Nachtres >Rachtre1, >Summary of Pla	abines >Plachine2 >Summery of Servers >Summery of Plachine	is >Nethinal >Summing of Servers >Summary of Clusters
No pending charges exist. Cluk the Release Configuration button to allow others to adit the domain. Lock & Edd Release Configuration	Create a New Dynamic Cluster Back Herd Family Back Herd Gancel Review Your Dynamic Cluster configuration Task are elected to conde a new dynamic cluster with the feller.	wing configuration.	
Domain Structure	Configuration details for new dynamic cluster:		
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How do I	Listen Port:	7002	
Create dynamic clusters Configure clusters Configure server migration in a duster Configure server tegritation Create server templates	SSL Listen Port: Back Herd Frisk Cancel	7182	

7) The **Summary of Clusters** screens should show the recently created Dynamic Cluster.

Change Center	Hume Lag Out Pre	eferences 🔛 Record	t Help	A		W	relcome, weblogic Connects	d to: FCUBSDoma
View changes and restarts Pending changes exist. They must be activated to take effect.	Hessages	raned FCUBD/GTer	hine) -Summery of Hachines -Hu oplate has been created. Use th				vert - Simmary of Chalters	
Undo All Changes	Summary of Clusters							
Consults Structure CUBICOursain CUBICOursain Cubicourset Servers	and a second second		ve been configured in the curre er servers that work together to					
Chaters Server Templates Hightable Targets Coherence Claters Machines	© Customize this tab Clusters (Filtered -	More Columns Exit	a)					
-Server Templates Higherabile Targets -Coherence Clusters -Nachines -Virtual Hoots		More Columns Exit	a)		ų —		Showing 1 to 1 of 1	Previous Next
Server Templates Higratable Targets Coherence Clusters Hachines	Clusters (Filtered -	More Columns Exit	t) Cluster Hessaging Hode	Migration Basis	Default Load Algorithms	Replication Type	Showing 1 to 1 of 1 Ouster Broadcast Channel	
Server Templates - High stable Targets - Caherooc Clusters - Muchaes - Victual Hoots - Work Nanapes - Statup and Shuthow Classes - Oppleyments	Clusters (Filtered -	More Colones Exit		Higration Basis Database	Default Load Algorithms Round Robin	Replication Type (None)	And the second second second	
Server Templates Hispatalie Targets Colemence Ousters Hachices Work Nanapro Starty and Shotdown Classes	Clusters (Filtered - (Hence: Clime: ()	More Column Ext Dente Chaster Address	Cluster Messaging Mode	100.000 100.000 V	States and the second	121/10/2010/06/06	And the second second second	el Servers

8) Upon Activate Changes would automatically create 4 managed servers.

Change Cester	Rome Lag Out	Preferences Int Anna	d Hele	A			Welcome, weblogic Con	rented to: FO/85Dome
View changes and restarts	Para PORTES	englate clummary of Dev	el Tangiates (RCUBIDHI)Tengiat	-Sammary of Class	hers :			
Click the Lack S Edit button to modify, add or delete items in this domain.	Summary of Cluster	ers						
Link & Edit	The page surrow	vites the clusters that h	ave been configured in the cur	nest WebLock Serve	r domain.			
Hadwase Configuration			ver servers that work together					
Domain Structure	1							
B Entormet	Alternation of the second	ed - More Columns Ex	int) pe Center Is activate all the lo	attors on this page.				
-Server Templates -HSprutable Targets	(hear) (then	Dunke					Shewing 1 to 1	of 1. Previous Next.
-Server Templates Hightable Targets Coherence Clusters Hactones		100000000000000000000000000000000000000	Chaster Plessaging Hode	Higration Basis	Default Load Algorithm	Replication Type	1	
-Server Templates 	(here) (Corr	Clenter Address	Chater Messaging Mode	Migration Basis Database	Default Load Algorithm	Replication Type (None)	1	

9) Navigate to FCUBSDomain → Environment → Servers tab and 4 new servers are created

Change Center	Plane Log Out Preferences In	Jacani Pelp	9			Welcome, wel	blogic Connected to: PCUESDoors
Wew changes and restarts	Here HOUEHSTanplate Summary	of Server Templates (PDURD)	toTemplate -Summary of Ox	data charactery of her	weny		
Click the Lock & Edit buttor to modify, add or delate deeps in this durate.	Summary of Servers						
Lock & EcH	Configuration Control						
Retrate Carrigatetter	A server is an instance of theb(up	c Server that runs in its ave	s Java Votual Machine (2V	H) and has its some cont	location.		
Donum Structure	This page summarizes each server	that has been configured in	the current WebLags: Ser	ver domain.			
POIESSimain ® Environment	÷ 0						
Server Templates Higherable Targets Coherence Clusters	Servers (Filtered - More Color	ers Exist) le Change Center to active	e of the bullture on this sec				
- Hachines - Victual Heats		a compression in second	a an tra sectors on the be	99			
-Virtual Hests Work Hanapers	(here) [Darm) (Debra]		e en our ressources por por	*			ning 1 to 5 of 5 Previous Ned
Virtual Hosts Work Hanagers Ratios and Shutslown Classes Deployments		Type	Chanter	Hacking	State	Sec	ning 1 to 5 of 5 Previous Ned Later Port
Virtual Hests Stock Hanagers Startug and Shutslown Classes	(here) [Dares] (Delete)				State PLMONG	1	
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-Virtuel Peists -Virtuel Tests -Virtuel Tests -Virtuel Statutes Causes -Deployments -Deployments -Service -Serv	Image: Clame: Desire: Image: Name: Image: Image: Image: Advection Image: Image: Image: Image: FCUBIPS1 Image:	Type Configured Dynamic	Charler FC/BSCutter	Hachine Hachine1	PUNKING SHETDOWN	Health 4 ² CK Tut reschable	Lates Port 7901 7902
Vidual Hests Bartig and Studient Classes Capitonents Formore	Care Cone Co	Type Configural Dynamic Dynamic	Chaiter POIBSOuter POIBSOuter	Hachine Hachine1 Hachine2	PUMONS SHUTDOWN SHUTDOWN	Health P CK Not reschalle Not reachalle	Listen Port 2001 2002 2004

3.3 Managed Server Template configuration

The server template created is modified to apply the below parameters

3.3.1 Logging

The process of log file writing in a Weblogic server can impact the performance. Hence, you need to keep the logging to minimum in a production environment.

Update below parameters by in Logging Screen

Minimum Severity to log	Warning
Log file Severity level	Warning
Standard Out Severity level	Critical
Domain broadcaster Severity level	Critical

1) Navigate to FCUBSDomain \rightarrow Environment \rightarrow Clusters

WebLogic Server Ad	iministration Console 120					Ξ
Change Center	🔒 Home Log Out Preferences 🔤 Record	Help		We	Icome, weblogic Conn	nected to: FCUBSDomain
View changes and restarts	Home >Machine2 >Summary of Servers >Summa Templates	ry of Machines >Machine2 >Summary of Serv	rs >Summary of Clusters >Summ	ary of Servers >Summary of Server Te	mplates >FCUBSMSTemplate	e >Summary of Server
Pending changes exist. They must be activated to take effect.	Summary of Server Templates					
Activate Changes Undo All Changes Domain Structure	This page summarizes each server template A server template contains common, non-de manage configuration for a group of server	- fault attributes that you can apply to a se	-	en inherit the template configuratio	n. Server templates enabl	ile you to easily
FCUBSDomain FCUBSDomain	Customize this table Server Templates New Clone Delete				Showing 1 to 1	of 1 Previous Next
Coherence Clusters Machines	□ Name ↔	Cluster	Machine	Listen Port	Listen Address	
Virtual Hosts	FCUBSMSTemplate	FCUBSCluster		7002		
	New Clone Delete				Showing 1 to 1	of 1 Previous Next
How do I						

2) Select FCUBSTemplate and naviage to Logging \rightarrow General

A Home Log Out Preference	es 🛃 Record Help	Q	Welcome, weblogic Connected to: FCUBSDoma
Home >PCUBSNSTemplate >Su	mmary of Server Templates >FCUBSMST		
Settings for FCUBSMSTemp	late		
Configuration Protocols	Logging Debug Notes		
General HTTP Data So	urce Diagnostic Images		
Save			
Use this page to define the	general logging settings for this serve	r.	
🕂 Log file name:	logs/FCUBSMSTemplat	e log	The name of the file that stores current log messages. Usually it is a computed value based on the name of the parent of this MBean. For example, for a server log, it isSERVER_NAME.log. More Info
- Rotation			
C Destabling Surger	100 million 10		August for a start of the second start of the second start of the start of the

— ♥ Advanced		
Automiced Automiced Automiced	MMM d, yyyy h:mm:ss a z	The date format pattern used for rendering dates in the log. The DateFormatPattern string conforms to the specification of thejava.text.SimpleDateFormat class. More Info
Minimum severity to log:	Warning 🔻	The minimum severity of log messages going to all log destinations. By default all messages are published. More Info
🖞 Logger severity propertie	:5:	The configuration of the different logger severities keyed by name. The values are one of the predefined Severity strings namely Emergency, Alert, Critical, Error, Warning, Notice, Info, Debug, Trace. More Info
Log file :		
Severity level:	Warning v	The minimum severity of log messages going to the server log file. By default all messages go to the log file. More Info
Filter:	None v	The filter configuration for the server log file. More Info
👸 Log File Buffer:	8	Gets the underlying log buffer size in kilobytes More Info
Standard out :		
Severity level:	Critical	The minimum severity of log messages going to the standard out. Messages with a lower severity than the specified value will not be published to standard out. More Info
Filter:	None •	The filter configuration for log events being sent to the standard out. More Info
Domain log broadcaster :		
Severity level:	Critical	The minimum severity of log messages going to the domain log from this server's log broadcaster. Messages with a lower severity than the specified value will not be published to the domain log. More Info
Filter:	None •	The filter configuration for log events being sent to the domain log. More Info
Buffer Size:	10	Broadcasts log messages to the domain log in batch mode. More Info
Stack Traces to stdout		Specifies whether to dump stack traces to the console when included in logged message. More Info
stdout Stack Trace Depth:	5	Determines the no of stacktrace frames to display on standard out. All frames are displayed in the log file. * -1 means all frames are displayed. More Info
街 stdout Format:	standard	The output format to use when logging to the console. More Info
Save		

3) Under Advanced Tab, update the below parameters and Click on Save

3.3.2 HTTP Logging

1) FCUBSDomain → Environment → Clusters → FCUBSTemplate → Logging → HTTP → Uncheck the Access Logs Flag

Home >FCU8SMSTemplate >Summary of	Server Terrolate >ECUIISMSTemplate	
	Sere respects of Constraining and	
ttings for FCUBSMSTemplate		
Configuration Protocols Logging	Debug Notes	
General HTTP Data Source D	Kagnostic Images	
Save		
		server saves HTTP requests in a separate log file; it does not store HTTP requests in the
		server saves HTTP requests in a separate log file; it does not store HTTP requests in the Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) More Info
server log file or the domain log file.		Indicates whether this server logs HTTP requests. (The remaining fields on
server log file or the domain log file. HTTP access log file enabled		Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) More Info
server log file or the domain log file.		Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) More Info

3.3.3 Stuck Tread Max Time

1) FCUBSDomain → Environment → Clusters → FCUBSTemplate → Tuning, update the stuck thread max time to **18000** and Click on **Save**

to the second	rd Help	
Home >PCUBSMSTemplate >Summary of Serv	er Templates >FCUBSMSTemplate	
ttings for FCUBSMSTemplate		
Configuration Protocols Logging	Debug Notes	
General HTTP Data Source Diagr	nostic Images	
Save		
And a second sec		
10000		
Use this page to configure HTTP longing I	for the server. By default, HTTP looping is enabled and th	server saves HTTP requests in a separate log file: it does not store HTTP requests in the
Use this page to configure HTTP logging i server log file or the domain log file.	for the server. By default, HTTP logging is enabled and th	e server saves HTTP requests in a separate log file; it does not store HTTP requests in the
	for the server. By default, HTTP logging is enabled and th	e server saves HTTP requests in a separate log file; it does not store HTTP requests in the
	for the server. By default, HTTP logging is enabled and th	e server saves HTTP requests in a separate log file; it does not store HTTP requests in the Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) More Info
server log file or the domain log file.	for the server. By default, HTTP logging is enabled and th	Indicates whether this server logs HTTP requests. (The remaining fields on
server log file or the domain log file.		Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) Hore Info
server log file or the domain log file. HTTP access log file enabled		Indicates whether this server logs HTTP requests. (The remaining fields on this page are relevant only if you select this check box.) Hore Info

4. Tuning

4.1 **General Parameters**

PARAMETER	VALUE	Navigate To
JTA Time out seconds	18000	Login to Weblogic Server console.
		Click on the domain name (ex: FCUBSDomain) which is under 'Domain Structure'.
		Go to Configuration > JTA, parameter and values is found on the right side panel of console.
Session Timeout	900	Login to Weblogic Server console
		Click on Deployments which is under 'Domain Structure'.
		Click on the deployed FCJ application from right side panel.
		Click on FCJNeoWeb from 'Modules and components'
		Go to Configuration General, the parameter values can be found here.

4.2 JVM Tuning

This section of the document provides JVM optimization for Oracle FLEXCUBE Universal Banking Solution.

Basically the JAVA minimum and maximum heap size needs to be reset for 32 and 64 bit environments. Both the minimum and maximum heap size is set to 1.5GB and 4GB in case of 32 bit and 64 bit environments respectively.

How to find whether the JVM is 32bit or 64bit?

Go to \$JAVA_HOME/bin directory. Check java version using command ./java –d64 –version 64 bit JVM shows the version details where as 32bit throws an error.

How to modify the JVM heap parameters?

To change the JVM heap parameters create a file setUserOverrides.sh under domain FCUBSCL in both servers. This file should be created in ***\$WL_HOME/user_projects/domains/\$WLS_DOMAIN/bin**" in both the servers. Paste below contents of USER_MEM_ARGS variable accordingly to override the standard memory arguments passed to java for **SUN JDK**.

32 bit JDK

```
USER_MEM_ARGS="-
Dorg.apache.xml.dtm.DTMManager=org.apache.xml.dtm.ref.DTMManagerDefault
-
Dorg.apache.xerces.xni.parser.XMLParserConfiguration=org.apache.xerces.
parsers.XML11Configuration -Dweblogic.threadpool.MinPoolSize=100 -
Dweblogic.threadpool.MaxPoolSize=100 -Xms1536M -Xmx1536M -
XX:MaxPermSize=256m -server -XX:+UseParallelOldGC -
XX:ParallelGCThreads=4"
export USER_MEM_ARGS
```

64 bit JDK

```
USER_MEM_ARGS="-
Dorg.apache.xml.dtm.DTMManager=org.apache.xml.dtm.ref.DTMManagerDefault
-Dorg.a
pache.xerces.xni.parser.XMLParserConfiguration=org.apache.xerces.parser
s.XML11Configuration -Dweblogic.threadpool.MinPoolSize=100 -
Dweblogic.threadpool.MaxPoolSize=100 -Xms8g -Xmx8g -Xmn4g -server
-XX:+UseParallelOldGC -XX:ParallelGCThreads=4"
export USER_MEM_ARGS
```

Note: Take a backup of the files before modifying the same.

5. Start Managed Servers

Starting using scripts

Managed Servers can be started by executing startManagedWebLogic.sh script present in folder **\$DOMAIN_HOME/bin**

Usage: ./startManagedWebLogic.sh SERVER_NAME {ADMIN_URL}

Eg: ./startManagedWeblogic.sh FCUBSMS1 https://<hostname1>/console

Starting using console

Alternatively, login to admin console, navigate to FCUBSDoamin \rightarrow Environment \rightarrow Servers \rightarrow Control, select the managed servers to be started and click on **Start**

Change Center	R Hume Log Out Profesences 🐼 Record Help			Wekome, weblog	connected to: FCUBSDoese
Wew changes and restarts	Hare HOURSHSTemplate >Summary of Server Templ	lates >PCUESPISTemplate >Summary of	/ Cluber's -Summary of Services		
Click the Lock 5 Edit button to modify, add or	Summary of Servers				
delete items in this domain. Lock & Edit	Configuration Control				
Roleane Configuration	Use this page to change the state of the servers mode requires the domain-wide administration p		strol operations on Hanaged Serv	ers require starting the Node Planager. Starting Pla	naged Servers in Standby
CuttoDonan +	0				
B-Environment Servers B-Coutron Server Templates Hophreso Outron Hophreso	G © Contornize this table Servers (Filtered - Hore Columns Exist) Stat. Besone: Suspend v. Shuttom -	c) (Restart 556.)		Starting	1 to S of S Previous Next
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- Servers - Servers Templates - Highwalable Targets - Highwalable Targets - Katheres - Wintal Hosts - Total Texagers - Startup and Shotkown Classes - Sealownests	Contonice this table Servers (Filtered - Hore Columns Exact) Statt Resum Saspend - Shuttown - Server -	Lange Contract		Status of Last Action) to Sof S. Previous Next
- Servers - Servers Templates - Highwalable Targets - Highwalable Targets - Katheres - Wintal Hosts - Total Texagers - Startup and Shotkown Classes - Sealownests	Contomize this table Servers (Hitered - Hore Columns Exact) Stati, Resuma (Saspend v) (Shattown v Server R Local Server R Loc	Machine	RUNING	Status of Last Action	1 to S of S Previous Rest
Servers General Gen	Contornize this table Servers (Piltered - Hore Columns Exist) Stat. Resume: Suspend v: Shallows v Server iv Antificial Advancement(adma) Result: Ad	Machine Hachine	RUNNIGNG SHUTDOWN	Status of Last Action None None	11sSofS Previous Rest

Upon successful startup, the status of Managed servers is changed to "RUNNING".

Change Center	Plane Log Out Preferences	And Record Help	9			Welcome, we	blogic Connected to: FCU85Dom
View changes and restarts	Mane >PGJ85PGTamplete>Sume	wy if Servir Templetes -POURSHSTa	replate inducements of Chatters int	Sammary of Servers			
Click the Lock & Edit button to modify, add or	Summary of Servers						
delete items in this domain. Lock & Edit	Configuration Control						
Reisase Configuration	A server is an instance of Yest	Logic Server that runs in its own Jav	a Virtual Nachine (JVPI) and	has its own configuration			
Domain Structure	This page summarizes each se	rver that has been configured in the	current WebLagic Server dur	nain.			
FCU8SDomain -							
9 Environment	(2) Lest Refreshed: Jun 3	1, 2015 2:57:19 PM					
B Clusters	© Customize this table						
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Outers Server Templates Harver Templates Harvers Coherence Clusters Harvine Wirkel Hods Wirk Honogers Startug and Stuttoren Cleases Deployments	Servers (Filtered - Hore C Click the Lock & Edit button	Charles and the second s	the buttors on this page.	Hachine	State	54 Health	owing 1 to 5 of 5 Previous liest Listen Port
Orubers Senaer Templates Senaer Templates Nogentable Targets Coherence Clasters Nortaal Hoots Writaal Hoots Writaal Hoots Starting and Shuttown Classes	Servers (Hitered - Hore C Click the Lock & Edif batton [New] [Class] [Dahib]	in the Change Center to activate all	1.005	Pachae	State RUNDIG	100000	T STATES
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Outers Outers Outers Outersex Templates Othereck Clusters Outersex Clusters Outersex	Servers (filtered - Hore C Click the Earch & Edit button New Clear Death Name Administerver(admin) PCUBSH55	in the Change Center to activate all Type Configured Dynamic	Chaster FCUBSChaster	Nachine1	RUMENG	Health If OK If OK	Linten Port 7983 7083

6. Data Source creation and JDBC Configuration

Following are the JNDI names of those data sources used by FLEXCUBE application.

- jdbc/fcjdevDS This datasource is used by FLEXCUBE online screen excluding branch screens.
- jdbc/fcjdevDSBranch This datasource is used by Branch screens.
- jdbc/fcjSchedulerDS This datasource is used by Quartz scheduler.

Note:

- jdbc/fcjdevDS should be NonXA.
- jdbc/fcjdevDSBranch and jdbc/fcjSchedulerDS should be XA

6.1 Data source creation: non XA

 Navigate to FCUBSDomain → Services → Data Sources → select New > Generic data source

CIRACLE WebLogic Server A	dministration Console 12c			<u>_</u>
Change Center	Home Lag Out Preferences 🔤 P	econt Help	a	Welcome, weblogic Connected to: FC08SDomain
Wew changes and restarts	Home >FCUBSMSTemplate >Summary of S	Server Templates >FCUIDSHSTemplate	-Summary of Clutters -Summary of Servers -Seamer	ary of JDBC Data Sources
No pending changes exist. Click the Release	Summary of JDBC Data Sources			
Configuration batton to allow others to edit the domain.	Configuration Honitoring			
Look & Edit Release Configuration Domain Structure Processors	A IDBC data source is an object bours borrow a database connection from a This page summarizes the IDBC data	data seurce.	names and the	ctions. Applications can look up a data scoree on the JMDI tree and then
Virtual PiertsVirtual PiertsStrutup and Statifiever Classes	Customize this table Data Sources (Filtered - Hore Col Diverse)	lumus Exist)		Shewing 0 to 0 of 0 Previous 1 Next
B-Necosing Data Sources	Generic Data Source	1.00		Seawing a to all a Previous (Hold
Persistent Stores	GridUnk Data Source	Type	JNDI Name	Targets
- Foreign JNDI Providers	Hulti Cata Source		There are no iterns to display	
- 134L Registries - 134L Britty Caches JCOM	Cherrory Consults			Showing 0 to 0 of 0 Previous Next

2) Enter the Name and JNDI Name and Click on Next

ORACLE WebLogic Server	Administration Console 120		Ö
Change Center	🔞 Hame Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic Currected to: FOUBSDomail
View changes and restarts	Horse - RCURSHSTemplate - Summary of Server Templates - ROURSH	ESTemplate >Summary of Clusters >Summary of Servers >S	ammany of JDBC Data Sources
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Create a New JDBC Data Source		
Release Configuration	3DBC Data Source Properties		
	The following properties will be used to identify your new 308	C data source.	
Donaio Structure	* Indicates required fields		
FCUBSOnnain FCUBSOnnain FCUBSOnnain FServers Forument FServers Forument FCUBSON FUBCINES FUB	What would you like to name your new XOEC data source? deal * Name: What XNDE name would you like to assign to your new XDDC Data deal XNDI Name: jdbc/fcjdev/DS	a Scorra?	
Now do I			
Create IDBC generic data sources Create LLR-enabled IDBC data sources	What database type would you like to select? Database Type: Cracle	•	
System Status 3 Health of Ranning Servers	Tare Meet Finish Cancel		
Failed (0)			

3) Select the Driver as "Oracle's Driver(thin) for Instance connection: Versions: Any" and Click on Next

ORACLE WebLogic Server A	dministration Console 12c		U U
Chunge Center	🏟 Home Log Out Preferences 🚑 Record Help	9	Welcome, weblogic Connected to: PCUBSDomail
Wew changes and restarts	Hore >POJESHSTamplate >Summary of Server Tamplates >POJESH	PSTemplate >Summary of Clusters >Summary of Servers >8	Seemary of 2081; Date Seames
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Lock & Exit	- monto manuel lorances ferminant		
Release Configuration	JDBC Data Source Properties The following properties will be used to identify your new JDD	C data operca.	
Domain Structure			
POURSDoment − ⇒ Environment ⇒ Server Templates → Republies → Republies → Republies → Republies → Republies → Nachane → Washines → Washines → Washines	Dotabase Type: Oracle What database driver would you like to use to create database Dotabase Driver: Chacle's Driver (Thin) for ins Back (Hant) (Finith) (Cascel)	connections? Note: * indicates that the driver is explo stance connections; Versions Any	city supported by Oracle Weblagic Server.
- Startup and Shutdown Classes Deployments E-Services			•

4) Uncheck the "Supports Global Transactions" and click on Next

ORACLE WebLogic Server Ad	ministration Console 12c			ğ
Change Center	🙆 Home Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic	Connected to: FCUBSDomain
View changes and restarts	Home >FCUBSMSTemplate >Summary of Server Templates >FCUBSMSTemplate >Summary of Clusters >Summary of Servers >Summary of JDBC Data Sources			
No pending changes exist. Click the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Create a New JDBC Data Source Back Next Finish Cancel Transaction Options You have selected non-XA JDBC driver to create data	abase connection in your new data source.		
Domain Structure	Does this data source support global transactions? If	yes, please choose the transaction protocol for this data	source.	
FCUBSDomain	Supports Global Transactions			
ClustersServer TemplatesMigratable TargetsCoherence ClustersMines	Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the <i>Logging Last Resource</i> (LLR) transaction optimization. Recommended in place of Emulate Two-Phase Commit.			
	Select this option if you want to enable non-XA JDBC connections from the data source to emulate participation in global transactions using JTA. Select this option only if your application can tolerate heuristic conditions.			
Deployments	Emulate Two-Phase Commit			
E-Services	Select this option if you want to enable non-XA JDBC other resources can participate in the global transact		al transactions using the one-phase commit transaction process	ing. With this option, no
How do I 🗉				
Create JDBC generic data sources	One-Phase Commit			
Create LLR-enabled JDBC data sources	Back Next Finish Cancel			
System Status				

5) Enter the Database Name, Host Name, Port, User Name, Password, Confirm Password and Click on **Next**

Change Center	😭 Home Log Out Preferences 🐼 Record Help	9	Welcome, weblogic Connected to: PCUBSDomain
View changes and restarts	Home >PCLRSMSTamplate >Summary of Server Templates >PCLRSMST	explain -Summery of Cleaners -Summery of Servers -Sur	nesary of 30BC Data Sources
No pending changes exist, CEd/the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Create a New 3DBC Data Source Bash Next Friend Cancel Connection Properties Define Concection Properties		
Domain Structure	What is the name of the database you would like to connect to?	(
Contract Servers	Database Name:		
E-Clusters Server Templates Highstable Targets Calements Clusters	What is the name or IP address of the database server? Host Name:		I
Hadvines Virtual Hosts Work Planagers	What is the port on the database server used to connect to the dat	abase?	
	Port:	1521	
B: Hestation	What database account user same do you want to use to create do	tabase connections?	
How do I E	Database User Name:		I
Create 100C generic data sources Create LLR-enabled JDBC data sources	What is the database account password to use to create database	connections?	
System Status	Password:		1
Health of Running Servers	Confirm Password:		
Failed (0) Critical (0)	Additional Connection Properties:	<u> </u>	_
Overlanded (0) Warning (0) OK (S)	eracle.jdbc.DRCPConnectionClass:		

6) Replace the JDBC URL in the below format and click on Next

Default URL: jdbc:oracle:thin:@<IP_Adress>:<Port>:<INSTANCE_NAME>.

Change the default URL to:

jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOS T=xxxxxx.com)(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=fcubs)))

Where,

Scan IP = xxxxxx.com

Service Name = fcubs

Port = 1521

Make sure that in URL, we make the necessary changes.

Then Click on Test Configuration. The connection test should be successful.

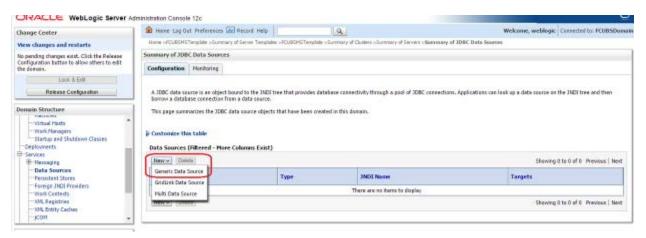
ORACLE WebLogic Server A	dministration Console 12c		0
Change Center	🕼 Home Log Out Preferences 🔛 Record H	eb 🤬	Welcome, weblogic Connected to: FOUBSDomail
View changes and restarts	Home SFCURSPISTemplate SSummary of Server Te	ergilates >FCLRSPISTeergilate >Summary of Chatters >Summary of Servers >Sum	nary of 3DBC Data Sources
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Create a New JDBC Data Source	(Cancel	
Lock & Edit			
Relazive Coefiguration	Test Database Connection Test the database availability and the connect	tice properties you provided.	
Domain Structure	What is the full eachage more of TAT departed	lass used to create database corrections in the correction pool?	
FOUESDonnein + E-Environment - Servers	(Note that this growr class must be in the class		
B-Clusters Server Templates Higratable Targets	Driver Class Name:	oracle jdbc. OracleDriver	
Coherence Clusters Pachines	What is the URL of the database to connect to?	The format of the URL varies by 3DBC driver.	
Virtual Hosts Work Managers	URL:	idb: oracle.odj @(DESCRIP)	
Startup and Statizove Classes	What database account user name do you want	t to use to cleate database connections?	
El-Services El-Fernaning	Database User Name:	FCUBS121DB	
How do L.	what is the database account password to use	to create database connections?	
Create JDBC generic data seorces Create LDP-enabled JDBC data seorces	Note: for secure passwerd management, enter	the password in the Password field instead of the Properties (field below)	
System Status 🖂	Password:		
Health of Running Servers	Confirm Password:	In the second seco	
Partied (0) Critical (0) Overloaded (0) Warning (0) OK (5)	What are the properties to pass to the 308C dri Expected user= <u>EQ.8512105E8</u>		

7) Select Target as FCUBSCluster and click on Finish

ORACLE WebLogic Server A	dministration Console 12c	Q
Change Center	😰 Haine Lag Out. Preferences 🔤 Record Help	Welcome, weblogic Corrected to: FOUBSDomail
View changes and restarts	Rores >FCU05PISTemplate >Summary of Server Templates >FCU15MSTemplate >Summary of Outlets >Summary of Se	ervers >Summary of JDBC Data Sources
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Create a New JDBC Data Source	
Robuse Configuration	Select Targets You can select one or more targets to deploy your new JDBC data source. If you don't select a target, the da later time.	its course will be created but not deployed. You will need to deploy the data course at a
PCUBSDemain + E-Contractment - -Server Templates - -Rightsbile Targets - -Coheneric Clubters - -Rightsbile Targets - -Vartual Hosts - Work Hanages - -Sarring and Studdown Closes - -Deployments - E-Sarring - + + + + + + + + + + + + + + + + + +	Servers AdvateServer Chosters For BSClaster Back Hard Frank Cancel	

6.2 XA Datasource

 Navigate to FCUBSDomain → Services → Data Sources → select New > Generic data source



2) Enter the Name and JNDI Name and Click on Next

ORACLE WebLogic Server 4	Iministration Console 12c	0
Change Center	Have Lap Out Preferences Record Help	Welcome, weblogic Corrected to FOJBSDomai
View changes and restarts	Hane >FCU8SHSTemplate >Summary of Server Template >FCU8SHSTemplate >Summary of Clustere >Summ	wy of Servers >Summary of JODC Duta Sources
Fending changes exist. They must be activated to take effect.	Greate a New JDBC Data Source	
Activate Changes	Each Next Finish Cancel	
Undo All Changes	3DBC Data Source Properties	
Domain Structure FCU85Demain FCU85Demain Forener Foren	The following properties will be used to identify your new JDBC data source. * Indicates required fields What would you kike to name your new JDBC data cource? a@ * Name: FCUBSBranchDS What JHCE name would you like to assign to your new JDBC Data Source?	
− Virtual Hosts − Vieta Hosts − Vieta Hanagen − Santa and Shubbovn Classes − Deployments ⊕ Services ⊕ Hercanint +	jdbc/fcjdev05Branch	
How do 1		
Create IDBC generic data sources Create LLR-enabled JDBC data sources	What database type vocid you like to select? Database Type: Oracle •	
System Status 🛛 🖂 Health of Razeling Servers	Bart Mont Print Cancel	
Failed (0)		

3) Select the Driver as "Oracle's Driver(thin XA) for Instance connection: Versions: Any" and Click on Next

ORACLE WebLogic Server Ad				0
Change Center	1 Home Log Out Preferences	Ad Record: Help	9	Welcome, weblogic Connected to: FCUBSDoma
Wew changes and restarts	Hone >FCUESMSTemplete >Summ	wry of Server Templates >FCU2SH	STemplete >Summary of Clusters >Summary of	Servers >Semimary of JDBC Data Sources
Pending changes exist. They must be activated to take effect.	Create a New 308C Data Sour	ce .		
Activate Charges	Back Next Pinnit Ca	ncel		
Undo All Changes	108C Data Source Property	es.		
Domain Structure	The following properties will be	e used to identify your new JDBC	data seurce.	
FCUBSDomain FCUBSDomain Forwars Custors Custors Custors FormeTamplates Formetamplates	Database Driver:	like to use to create database of	ornections? hote: " indicates that the dis instance connections: Versions Arr	er is explicitly supported by Orade WebLogic Server.

4) Click on Next

ORACLE WebLogic Server Ad	fministration Console 12c		$_{\odot}$
Change Center	A Home Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic Connected to: FOUBSDomail
View changes and restarts	Hore >POJ85HSTemplete >Summary of Server Templetei >POJ85HST	Templete >Summary of Olusters >Summary of Setver	a - Senviruary of 300C Data Sources
Pending changes exist. They must be activated to take effect.	Create a New JDBC Data Source		
Activate Changes	Back Next Print Cancel		
Under All Changes	Transaction Options		
Domain Structure	You have selected an XA 10BC driver to use to create database o transaction protocol. No other transaction configuration options.		rro will support global transactions and use the "Two-Phase Commit" global
PCUESDonain	Eack Best Trink		

5) From this step to target setting step follow as mentioned in non-xa

	Iministration Console 12c		
Change Center	Hare Lap Out Preferences Record Help	(a)	Welcome, weblogic Connected to: FCUBSDomain
View changes and restarts	Hone >POURSPISTemplete >Summary of Server Templetee >POURSPI	Mergilde >Summery of Chatere >Summery of Servers >Summary (of 10BC Data Sources
Pending changes exist. They must be activated to take effect.	Create a New JDBC Data Source		
Activate Changes	Back Next Finish Cancel		
Undo All Changes	Connection Properties		
Domain Structure	Define Connection Properties.		
FCUBSDamain +	What is the name of the database you would like to connect to?		ent
Environment Servers	Database Name:		
E-Chatters	What is the name or IP address of the database server?		
Migratable Targeta Coherence Clusters Hachines	Host Name:		
Virtual Hortz Work Hanagerz	What is the port on the database server used to connect to the d	latabase?	
L-Startup and Shutdown Classes	Port:	1621	
B-Services		1000	
R:Nessacion *	What database account user name do you want to use to create	database consections?	
How do I 🗄	Database User Name:		
Create 3DBC generic data sources Oreate 1LR-enabled 3DBC data sources	What is the database account password to use to create database	e connections?	
Sestem Status	Password:	1	
Health of Running Servers	Confirm Password:		
Failed (0) Critical (0)	Additional Connection Properties		
Overlanded (0)			
Warning (8)	oracle.jdbc.DRCPConnectionClass:		
GK (5)	Back Next [Firith] [Cancel]		
ORACLE WebLogic Server / Change Center	1 Harne Log Out Preferences 🔤 Record Help	9	Welcome, weblogic Connected for FOUBSDomai
New changes and restarts	Hane >ROUBSHSTemplate >Summary of Server Templates >ROUB	SHSTemplate - Summary of Clusters - Summary of Servers - Summ	rary of 308C Bata Sources
Pending changes exist. They must be activated to take effect.	Create a New JDBC Data Source		
Activate Changen	Test Configuration Back Next Finish Cancel		
Unde All Changes	Test Database Connection		
Domain Structure	Text the database availability and the connection properties	you provided.	
PCUBSDemain -	What is the fall package name of JDBC driver class used to cr	eate database connections in the connection pool?	
B-Environment	(Yuriz that this driver class rout be in the classesth of are	rver to which it is degloyed.)	
Er-Clusters			
Server Templates Pligratable Targets	Driver Class Name:	oracle jdbc xa client. OracleX	
	What is the URL of the database to connect to? The format of	the URL varies by 30BC driver.	
	URL:	jdbc.oracle.oci @(DESCRIP)	
Startup and Shubdown Classes			
B-Senioes	What database account user name do you want to use to are	te database connections?	
B-Netsodate 7	Database User Name:	FC12108	
How do I	What is the database account password to use to create data	base connections?	
Create 3DBC generic data sources Create LLR enabled 3DBC data sources	(Netz: for secara password management, entar the password		
	and the second s		
System Status	Password:		
Health of Running Servers	Confirm Password:		
Failed (0) Oritical (0)			
Overloaded (0)			
	What are the properties to pass to the 3DBC driver when created		
Warning (0) QK(5)	Properties: user=FCUES121User	1	

ORACLE WebLogic Server Ad	fministration Console 12c		<u> </u>
Change Center	😭 Home Log Out Preferences 🐼 Record Help	a	Welcome, weblogic Connected to: PCUBSDoma
Wew changes and restarts	Hone >PO285MSTemplate >Summary of Server Templates >P(285)	PDTemplate - Summary of Clusters - Summary of Server	-Sammary of 30BC Data Sources
Pending changes exist. They must be activated to take effect.	Create a New JDBC Data Source		
Activate Charges	(Back) [Tout] [Fresh] [Cancel		
Unde All Changes	Select Targets		
Domain Structure	You can select one or more targets to deploy your new JDBC of later time.	data source. If you don't select a target, the data to	once will be created but not deployed. You will need to deploy the data source at a
PCUBSDomain + Bitzwinnment	Servers		
Clusters Server Templates	AdminServer		
-Higratable Targets Coherence Clusters	Clusters		
	PCUISChater		
Startup and Shutdown Classes			
Deployments E-Services	Back Smill Fresh Cancel		

6) Upon Activate Changes would create the XA Datasource

Change Cester	A Home Log Out Preferences	and Help	9	Welcome, weblogic Connected to: FCUBSDomail
View changes and restarts	Home +POURSMSTamplate +Summary of Se	rier Tamplates (PCURSHSTemplate) 5		XIIC Data Sources (PCUE)25 (Seminary of JDBC Data Sources
Click the Lock & Edit button to modify, add or	Summary of JDBC Data Sources			
delete items in this domain. Lock & Exte	Configuration Hontoring			
Release Carliporation Dessaids Structure Policital Hotis Work Honogers Displayments Services Bin Heasigning Duta Searces Provider Zoures	A JOBC data source is an object bound borrow a database connection from a d This page summarizes the JOBC data so if Contomize this table Data Sources (Mitered - Hore Colo Clock the Lack & Edit button in the Cha (Here v) (Closetic	ats source. surce objects that have been created mass Exist)	In this domain.	n. Applications can look up a data source on the JHEE tree and then Shaming 3 to 2 of 2 Previous Next
-Foreign JNDE Providers Work Contexts		T.	1	accession in the second s
- 10%, Registries	Name -S	Type	JNDE Name	Targets
-XHL Extity Caches - (COH)	PCU85BranchD5	Generic	attic/KcjdexOSBranch	PCUBSCluster
For	FOURSDS	Genetic	3dbc/fc3dex05	FCUBSCluster
How do L_	Nature Contents			Showing 1 to 2 of 2 Previous Next

7) Similarly create all the other Datasource required for the FCUBS Application and Gateway Deployments

Change Center	Home Log Out	Preferences An Incom Help	9		Welcome, weblogic Cannected to: FC	UBSDomai	
View changes and restarts	Home >POURSHSTer	replate inSummary of Clusters inSummary	of Servers - Summary of 3D	ee BC Data Sources >FOUBSDS >Summary of XDBC Data	Sources >FCUESDomein >Sommary of JDBC Data		
A CONTRACTOR OF	the second se	Sources >F00005reach00 >Seemenary of 200C Data Seemen Messages					
Click the Lock & Edit buttoe to modify, add or felete items in this domain.	100000000000000000000000000000000000000						
Lock & Edit	Vill thanges have	e been activated. No restarts are ne	cestary.				
Remate Configuration	Summary of JDBC	Data Sources					
	Configuration	Honitori eg					
Iomain Structure							
Messaging Data Sources Tensitent Stores Foreign JMDI Provident Wink Contextual Sources State Sources State Sources State Sources	Instance and a state	Rered - More Columns Exist) fall button in the Change Center Is	activate all the buttons or	this page.	Shewing 1 to 6 of 6 Previo	a Next	
USEA Sciences Penijstert Stores "Tareign IAO Providen "Was Casteda - XOL Registries - XOL Bolty Caches - XCOH +	Data Sources (Fi Click the Lock & J	Rered - More Columns Exist) fall button in the Change Center Is	activate all the buttors or Type	Uvs page. JHDI Norve	Skewing 1 to 6 of 6 Previo Tangets	o Next	
Data Sciences Penijsteri Stores Tranigi IAO Providen Wild Casteda - XOL Registries - XOL Brity Caches - XOL WILL Compared and American - XOL Brity Caches - XOM +	Data Sources (F) Click the Lock & I [New] [Data	Rered - More Columns Exist) Sold button in the Change Center In				o Next	
Deta Sciences Penister Stores Penister Stores Providen Wind Centeda Create SDBC permit data sources	Data Sources (Fi Click the Lock & J (New -) [Dente Name ->	Rered - More Columns Exist) Sold button in the Change Center In	Туре	3MDI Name	Targets	n Next	
Data Sources Penigteri Stores Prange TADE Providen Mark Castada Mark C	Data Sources (A Click the Look & J (New	Rered - Hore Columns Exist) fold button in the Charge Center Is 05	Type Generic	JMDI Name JdbcRijder/DStrandh	Targets FCUBSChister	o Next	
Create JOBC Carduan Cardian Control Contr	Data Sources (F Click the Lock & J Here	Rered - Hore Columns Exist) fold button in the Change Center to 05	Type Generic Generic	JMDI Name Jds:/fijde/GBrand) Jds:/fijde/GB	Tangets FCUBSCluster FCUBSCluster	in Next	
Deta Sources Penigter Stores Penigt JNCI Providen "lister Castada Stores S	Data Sources (Pr Click the Lock & J New - Doube PCU65Beard PCU65Beard PCU65DS_A1	Rered - Hore Columns Exist) Edit button in the Change Center to 005	Type Generic Generic Generic	JMDJ Name Jdc/fcjde/OSBand) Jdc/fcjde/OSBand) Jdc/fcjde/OS_ASTRC	Tangets FOUESChater FOUESChater FOUESChater	n Hed	
Deta Sources Penijsteri Stores Penijsteri Stores Penijsteri Stores Mol Providen Molecularite Molecularite Molecularite Molecularite Molecularite Molecularite Create JOEC genetic data sources Create JOEC ondurik data sources Delate IDBC data sources	Data Sources (Pr Click the Lock & J New - Datase Russes - RCU85Brand PCU85D5 PCU85D5_00 PCU85D5_00	Rered - Hore Columns Exist) fold button in the Change Center In 105 snac k VerDS	Type Generic Generic Generic Generic	JMD3 Name Jdc/fcjde/d58/and) Jdc/fcjde/d5 Jdc/fcjde/d5_Jd2 Jdc/fcjde/d5_Jd2	Tangets FOURSChater FOURSChater FOURSChater FOURSChater FOURSChater	a Ned	
Data Sources Penister Sources Tarieg, INC Providen Million Contract Million C	Data Sources (F) Cirk the Lock & J New Classes PCU8505 A PCU8505 A PCU8505 A	Rered - Hore Columns Exist) fold button in the Change Center to 105 mac 4 ble06 DBLD	Type Generic Generic Generic Generic Generic	JNDO Nome Jdsc/Egdec058andh Mouftglae056 Jdsc/Egdec05_A5mc Jdsc/Egdec05_34 Mouftglae05_34	Targets FOURSChater FOURSChater FOURSChater FOURSChater FOURSChater		

6.3 JDBC Parameters Tuning

Below JDBC parameters needs to updated for all the Datasources	
--	--

	VALUE	Navigate To
PARAMETER		
Connection Reserve time out	30	Connection Pool->Advance
Test Frequency	60	Connection Pool->Advance
Inactive connection time out	30	Connection Pool->Advance
Initial Capacity	1	Connection Pool
Max capacity	Based on Site Requirement	Connection Pool
Capacity Increment	5	Connection Pool
Shrink Frequency	900	Connection Pool->Advance
Test Connection on Reserve	Checked	Connection Pool->Advance

7. JMS Resource Creation

JMS Resource Creation involves various steps

- Persistence Store Creation
- JMS Server Creation
- JMS Module Creation
- Resource Creation: Connection Factory and Queue's

Refer to the Configuring JMS on Weblogic Server for further details on JMS setup.

8. Oracle WebLogic Load Balancing

For Weblogic Load balancing, use

- 1) Oracle HTTP Server: Refer to Configuration for Oracle HTTP Server for setup.
- 2) Apache: Refer to Configuration for Apache for setup.

9. Frequently Asked Questions

9.1 Machine status is Unreachable.

If the machine status is unreachable, means that machine is not reachable and from console you cannot start/stop the managed servers.

In the console, navigate through Domain structure \rightarrow Machines \rightarrow machine1 \rightarrow Monitoring \rightarrow Node Manager Status will be **Unreachable**

To change the status, you need to start the nodemanager on that server. Refer to start nodemanager section on steps to start the nodemanager.

9.2 How to restart node manager?

- 1) Locate node manager pid using ps -ef|grep weblogic.nodemanager.javaHome
- 2) Change directory to \$DOMAIN_HOME/bin
- 3) Kill the unix process using kill -9 <pid>
- 4) Verify that the node manager is killed by *tail –f nohup.out*
- 5) Start node manager using nohup ./startNodeManager.sh &
- 6) Verify nodemanager is started using *tail –f nohup.out*

9.3 Scaling Up Dynamic Cluster

When the capacity is insufficient and you need to scale-up, you can add dynamic servers on demand. It requires only a few clicks.

1) Navigate to FCUBSDomain \rightarrow Environment \rightarrow Clusters

Change Center	Hume Lag Ou	t Preferences 🔛 Proj	and Help	9			Welcome, weblogic Cr	mented to: FO/85Domain
View changes and restarts	Hare HOUBURST	implate charming of the	ver Templetes >FCUBSHSTemplet	And a second second	ters .			
Click the Lock & Edit buttoe to modify, add or defete items in this domain.	Summary of Clus	ers						
Lack & Edit	The same lines	action the chickers that	have been configured in the cu	ment Wahi uni Gene	a deserve			
Release Configuration	19965-000		over servers that work togethe					
Domain Structure	1							
POUSDamain -	© Customize the	table						
S Environment Servers Clasters Higherbelle Targets	Clusters (Filter	ed - More Columns E Edit Dutton in the Cha	xest) nge Center to activate all the b	uttons on this page.			Shawing 1 to	1 of 1 Previous Next
Environment Servers Servers Comflexs Inspectode Targets Coherence Outern "Nocknes	Clusters (Filter Click the Lenck I	ed - More Columns E Edit Dutton in the Cha	nge Center to activate all the b		Default Land Algorithm	Replication Type		
Environment Servers Conterns Server Templates Serve	Clusters (Filter Click the Lock & [free:=] [Class	ed - Hore Columns E Edit Intton in the Cha Datate Chaster Address	nge Center to activate all the b		Default Land Algorithm	Replication Type (None)		

2) Click FCUBSCluster \rightarrow Configuration \rightarrow Servers tab

TEPLOSIC SEITER A	นาทการแสนงการ	viisuie	126											
Change Center	🔒 Home	Log Out	Preferences	🛛 🔁 Reco	rd Help		(2				Welc	ome, weblog	ic Connected to: FCUBSDomain
View changes and restarts	Home >Su Clusters >I	immary of FCUBSCI	f JDBC Data So uster	urces >Sum	mary of Clusters	>Summary of I	Machines :	MAC-1 >Sum	mary of Machine	s >Summary o	of Servers >Summary of	Server Te	mplates >Sumn	ary of Machines >Summary of
No pending changes exist. Click the Release Configuration button to allow others to edit	Settings fo	Settings for FCUBSCluster												
Lock & Edit	Configura	ation	Monitoring	Control	Deployments	Services	Notes							
Release Configuration	General	JTA	Messaging	Servers	Replication	Migration	Single	ton Services	Scheduling	Overload	Health Monitoring	HTTP	Coherence	
CUBSDomain Structure	Save This pag	je is used	l to configure	the servers	that are assig	ned to this cl	uster.							
Clusters Server Templates Migratable Targets Coherence Clusters Machines	Clusters Server T			lictly config		d dynamically created servers. The following settings are u FCUBSMSTemplate				S	e dynamic servers. d to configure the dynamic cify this cluster are valid			
Virtual Hosts Work Managers Startup and Shutdown Classes	Maximur	Maximum Number of Dynamic Servers:				4					Specifies the maximum number of dynamic servers in this cluster. Mor Info			vers in this cluster. More
Deployments Services	🏀 Server Name Prefix:				EC	FCUBSMS				S	Specifies the prefix to be used when naming new dynamic servers in this cluster. More Info			

3) Change the Maximum Number of Dynamic Servers to: 8 and Click Save

ORACLE WebLogic Server Administration Console 12c														
Change Center	🖆 Home Log Out Preferences 🖾 Record Help									Welcome, weblogic Connected to: FCUBSDomai				
View changes and restarts	Home >Summary of JDBC Data Sources >Summary of Clusters >Summary of Machines >MAC-1 >Summary of Machines >Summary of Servers >Summary of Server Templates >Summary of Machines >Summary of Clusters >FCUBSCluster													
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Settings for FCU	Settings for FCUBSCluster												
Lock & Edit	Configuration	Monitoring	Control	Deployments	Services	Notes								
Release Configuration	General JTA	Messaging	Servers	Replication	Migration	Singleton Services	Scheduling	Overload	Health Monitoring	HTTP	Coherence			
Domain Structure	Save													
FCUBSDomain		-		that are assign ured and dynami		ster. servers. The following	g settings are u	used to deter	mine the number and	characte	ristics for thes	e dynamic servers.		
Server Templates Migratable Targets Coherence Clusters Machines	Server Templa	te:		FCU	JBSMSTer	se	Specifies the server template that is to be used to configure the dynamic servers in this cluster. Only templates that specify this cluster are valid choices. More Info							
Virtual Hosts Work Managers Startup and Shutdown Classes	Maximum Nun	ber of Dynan	ic Servers	. 8		J			Specifies the maximum number of dynamic servers in this cluster. More Info					
EDeployments ⊡-Services ⊡-Messaning ▼	👘 Server Nar	🔁 Server Name Prefix:						Specifies the prefix to be used when naming new dynamic servers in this cluster. More Info						

Activate changes in the Change Center of the Weblogic Console. After activation 4 new Dynamic Servers are added to the Dynamic Cluster

Name 🔅	Туре	Machine	Listen Port
FCUBSMS1	Dynamic	MAC-1	7101
FCUBSM52	Dynamic	MAC-2	7102
FCUBSM53	Dynamic	MAC-1	7103
FCUBSM54	Dynamic	MAC-2	7104
FCUBSMS5	Dynamic	MAC-1	7105
FCUBSMS6	Dynamic	MAC-2	7106
FCUBSMS7	Dynamic	MAC-1	7107
FCUBSMS8	Dynamic	MAC-2	7108

5) Start the 4 new Dynamic Servers and you have doubled you capacity.

9.4 Session Timeout

Session timeouts occur intermittently during load condition. Verify the following

- 1. Clock Synchronization: Time across the nodes/machines is same.
- 2. Session Stickiness in load balancer: Persistence Type in load balancer should be set to SOURCE IP and should not be cookie.



FCUBS Weblogic 12c Middleware Practices [May] [2020] Version 14.3.0.0.0

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

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