

# Oracle® Banking Microservices Architecture

## Configuration and Deployment Guide



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# Preface

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## Purpose

This guide is a supporting document for the installation of Oracle Banking Microservices Architecture applications. The user can find the reference in the respective installation guides.

## Before You Begin

Kindly refer to the **Getting Started User Guide** for information on common functionalities like login, navigation, and general settings before proceeding with this guide.

## Module Pre-requisite

Specify **User Id** and **Password**, and login to the **Home** screen.

## Audience

This guide is intended for WebLogic admin or ops-web team who are responsible for installing OFSS Banking Products.

## 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>.

## Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches, Security Alerts and Bulletins](#). All critical patches should be applied in a timely manner to make sure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

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Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## Related Resources

For more information on any related features, refer to the following documents

- Product Installation Guide

## Acronyms and Abbreviations

The list of the acronyms and abbreviations used in this guide are as follows:

**Table 1 Acronyms and Abbreviations**

Abbreviation	Description
LDAP	Lightweight Directory Access Protocol

## Module Post-requisite

After finishing all the requirements, log out from the **Home** screen.

# 1

## Placeholder Update for Oracle Banking Microservices Architecture Services

This topic provides the information about the various methods to perform the placeholder update for Oracle Banking Microservices Architecture services.

- [Method 1 – Via setUserOverrides.sh file](#)  
This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services through setUserOverrides.sh file.
- [Method 2 – Via Passing the -D params in the Server Start Argument](#)  
This topic provides the systematic instructions to run the Oracle Banking Microservices Architecture services by passing the -D params in the Server start argument.
- [Method 3 – Using env files and setUserOverrides.sh file](#)  
This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services by using env files and setUserOverrides.sh file.
- [Method 4 – Workflow Configuration](#)  
This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services through workflow configuration.

### 1.1 Method 1 – Via setUserOverrides.sh file

This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services through setUserOverrides.sh file.

1. Create a file named **setUserOverrides.sh** inside the WebLogic bin location.
2. The following formats of the **setUserOverrides.sh** file and the list of parameters that need to be passed to run Oracle Banking Microservices Architecture Services properly.

#### Note

Below is the list of **-D params** (ENV variables) that must be set for all individual services. Set a single **-Dparam** as follows:

```
JAVA_OPTIONS="${JAVA_OPTIONS} -DParam =<ParamValue>" export  
JAVA_OPTIONS
```

#### //Common Properties

```
-Dplato.services.config.port= <CONFIG_SERVICE_PORT>  
  
-Dplato.services.config.uri= http://  
<CONFIG_SERVICE_HOSTNAME>:<CONFIG_SERVICE_PORT>  
  
-Deureka.client.serviceUrl.defaultZone= http://  
<DISCOVERY_SERVICE_HOST>:<DISCOVERY_SERVICE_PORT>/plato-discovery-  
service/eureka  
  
-Dplato.services.entityservices.port= <PLATO_ORCH_SERVICE_PORT>
```

```
-Dplato.service.logging.path= <LOGGING_PATH>
-Dspring.cloud.loadbalancer.ribbon.enabled=false
-Dspring.main.allow-bean-definition-overriding=true
-Dspring.main.allow-circular-references=true
```

**//Flyway Common Placeholders**

```
-Dflyway.domain.placeholders.eureka.host= <DISCOVERY_SERVICE_HOST>
-Dflyway.domain.placeholders.eureka.port= <DISCOVERY_SERVICE_PORT>
-Dflyway.domain.placeholders.plato-api-gateway.server.port= <API_GATEWAY_PORT>
-Dflyway.domain.placeholders.zipkin.host= <ZIPKIN_HOSTNAME>
-Dflyway.domain.placeholders.zipkin.port= <ZIPKIN_PORT>
```

**//SMS - Needed for other services also**

```
-Dflyway.domain.placeholders.sms.username= <SMS_SCHEMA_USERNAME>
-Dflyway.domain.placeholders.sms.password= <SMS_SCHEMA_PASSWORD>
-Dflyway.domain.placeholders.sms.jdbcUrl= <SMS_SCHEMA_URL>
-Dflyway.domain.placeholders.sms.schemas= <SMS_SCHEMA_NAME>
```

**//Plato Config Service - Needed for other services also**

```
-Dflyway.domain.placeholders.plato-config.username= <PLATO_DB_USERNAME>
-Dflyway.domain.placeholders.plato-config.password= <PLATO_DB_PASSWORD>
-Dflyway.domain.placeholders.plato-config.jdbcUrl= <PLATO_DB_URL>
-Dflyway.domain.placeholders.driver.className= oracle.jdbc.driver.OracleDriver
-Dflyway.domain.placeholders.plato-config.schemas= <PLATO_DB_SCHEMA_NAME>
-Dflyway.domain.placeholders.plato-api-gateway.loadCacheOnStartUp = true
```

**//Plato Api Gateway - Needed for other services also**

```
-Dflyway.domain.placeholders.api-gateway.username= <SECURITY_DB_USERNAME>
-Dflyway.domain.placeholders.api-gateway.password= <SECURITY_DB_PASSWORD>
-Dflyway.domain.placeholders.api-gateway.jdbcUrl= <SECURITY_DB_URL>
-Dflyway.domain.placeholders.api-gateway.schemas= <SECURITY_SCHEMA_NAME>
-Dflyway.domain.placeholders.apigateway.host=
<APIGATEWAY_ROUTER_HOSTNAME>
-Dflyway.domain.placeholders.apigateway.port= <APIGATEWAY_ROUTER_PORT>
-Dflyway.domain.placeholders.USER.STORE= <USER.STORE>
-Dflyway.domain.placeholders.LDAP.CORS.allowed.origin= <LDAP_CORS>
-Dflyway.domain.placeholders.LDAP.credential.SALT= <LDAP_CREDENTIALS_SALT>
-Dflyway.domain.placeholders.JWT.EXPIRY.seconds= <JWT_EXPIRY_SECONDS>
-Dflyway.domain.placeholders.LDAP.url = <LDAP_SERVER_URL >
-Dflyway.domain.placeholders.LDAP.userId = <LDAP_SERVER_USER>
-Dflyway.domain.placeholders.LDAP.server.base = <LDAP_SERVER_BASE>
-Dflyway.domain.placeholders.LDAP.server.credential = <LDAP_CREDENTIALS>
```



```
-Dflyway.domain.placeHolders.LDAP.usersearch.base = <LDAP_USER_BASE>
-Dflyway.domain.placeHolders.LDAP.user.prefix = <LDAP_USER_PREFIX>
-Dflyway.domain.placeHolders.LDAP.provider = <LDAP_PROVIDER>
-Dflyway.domain.placeHolders.TOKEN.autoregenerate =
<TOKEN_AUTOREGENERATION>
-Dflyway.domain.placeHolders.SSO.enabled = <SSO_ENABLED>
-Dflyway.domain.placeHolders.TOKEN.regeneration.enabled =
<TOKEN_ALWAYSNEW_GENERATION >
-Dplato-api-gateway.enableAudit=true
-Dflyway.domain.placeHolders.saml.userId.field = <SAML_USERID_FIELD>
```

#### **//Plato Discovery Service**

```
-Dflyway.domain.placeHolders.plato-discovery-
service.server.port=<DISCOVERY_SERVICE_PORT>
```

#### **//Plato UI-Config Services**

```
-Dflyway.domain.placeHolders.plato-ui-config-
services.server.port=<UICONFIG_SERVICE_PORT>
-Dflyway.domain.placeHolders.plato-ui-
config.username=<UICONFIG_SCHEMA_USERNAME>
-Dflyway.domain.placeHolders.plato-ui-
config.password=<UICONFIG_SCHEMA_PASSWORD>
-Dflyway.domain.placeHolders.plato-ui-config.jdbcUrl=<UICONFIG_SCHEMA_URL>
-Dflyway.domain.placeHolders.plato-ui-config.schemas=<UICONFIG_SCHEMA_NAME>
```

#### **//Plato Apigateway Router Service**

```
-Dflyway.domain.placeHolders.plato-apigateway-router.server.port=
<APIGATEWAY_ROUTER_PORT>
-Dflyway.domain.placeHolders.plato-apigateway
router.router.protocol=<ROUTER_PROTOCOL>
-Dflyway.domain.placeHolders.plato-apigateway-
router.router.meadmin.port=<ROUTER_PORT>
```

#### **//Plato Feed Services**

```
-Dflyway.domain.placeHolders.plato-feed-
services.feed.upload.directory=<FEED_SERVICE_UPLOAD_PATH>
-Dflyway.domain.placeHolders.plato-feed-services.server.port=<FEED_SERVICE_PORT>
-Dflyway.domain.placeHolders.plato-feed-services.username=<FEED_DB_USERNAME>
-Dflyway.domain.placeHolders.plato-feed-services.password=<FEED_DB_PASSWORD>
-Dflyway.domain.placeHolders.plato-feed-services.jdbcUrl=<FEED_DB_URL>
-Dflyway.domain.placeHolders.plato-feed-services.schemas=<FEED_SCHEMA_NAME>
```

#### **//Plato Batch Server**

```
-Dflyway.domain.placeHolders.plato-batch-server.server.port=<BATCH_SERVER_PORT>
-Dflyway.domain.placeHolders.plato-batch-
server.plato.eventhub.kafka.brokers=<EVETNHUB_KAFKA_BROKERS>
```

```
-Dflyway.domain.placeholders.plato-batch-server.plato.eventhub.zk.nodes=<ZK_NODES>
-Dflyway.domain.placeholders.plato-batch-server.username=<BATCH_SCHEMA_USERNAME>
-Dflyway.domain.placeholders.plato-batch-server.password=<BATCH_SCHEMA_PASSWORD>
-Dflyway.domain.placeholders.plato-batch-server.jdbcUrl=<BATCH_SCHEMA_URL>
-Dflyway.domain.placeholders.plato-batch-server.schemas=<BATCH_SCHEMA_NAME>
```

### **// Plato-Alerts-Management-Services**

```
-Dflyway.domain.placeholders.plato-alerts-management-services.server.port=<ALERTS-MANAGEMENT-SERVER-PORT>
-Dflyway.domain.placeholders.plato-alerts-management-services.plato.eventhub.kafka.brokers=<EVENTHUB_KAFKA_BROKERS>
-Dflyway.domain.placeholders.plato-alerts-management-services.plato.eventhub.zk.nodes=<ZK_NODES>
-Dflyway.domain.placeholders.plato-alerts-management-services.username=<ALERTS_SCHEMA_USERNAME>
-Dflyway.domain.placeholders.plato-alerts-management-services.password=<ALERTS_SCHEMA_PASSWORD>
-Dflyway.domain.placeholders.plato-alerts-management-services.jdbcUrl=<ALERTS_SCHEMA_URL>
-Dflyway.domain.placeholders.plato-alerts-management-services.schemas=<ALERTS_SCHEMA_NAME>
```

### **//Plato Orch Service**

```
-Dflyway.domain.placeholders.plato-orch-service.server.port=<ORCH_SERVICE_PORT>
-Dflyway.domain.placeholders.plato-orchestrator.hostname=<CONDUCTOR-EUREKA-HOSTNAME >
```

### **//Plato Transport Service**

```
Dflyway.domain.placeholders.transport.config.db.jndi=${PLATOTRANSPORT_JNDI}
Dflyway.domain.placeholders.transport.config.schemas=${PLATOTRANSPORT_SCHEMA}
Dflyway.domain.placeholders.plato-transport-services.coherence.enabled=false
```

### **//Conductor**

```
-Dplato.orchestrator.enableSLA = true (if required)
-Dplato.orchestrator.enableDynamicAllocation = true (if required)
-Dplato.orchestrator.enableSubWfDynamicAllocation = true (if required)
-Dplato.cmc.default.user = <Value> (Required if you are using above as true)
-Dplato.cmc.default.brn = <Value> (Required if you are using above as true)
-Dsms.uri = https://SMS-CORE-SERVICES/sms-core-service/ (Required only if we want to make it http as we have given default protocol as https)
-Dplato.transport.protocol = http (Set it explicitly if you have http env setup)
```

### **//Plato Regional Configurator Service**

```
-Dflyway.domain.placeholders.plato-regional-configurator-
services.server.port=<REGIONAL_CONFIGURATOR_SERVICE_PORT>
-Dflyway.domain.placeholders.plato-regional-configurator-services.locations =
- "db/migration/domain/obrc" (By default)
- "db/migration/domain/obrc, db/migration/domain<YOUR DOMAINS>"
-Dflyway.domain.placeholders.plato-regional-configurator-services.schemas = "OBRC"
-Dflyway.domain.placeholders.plato-regional-configurator-services.db.jndi = "jdbc/OBRC"
-Dflyway.domain.placeholders.plato-regional-configurator-
services.username=<OBRC_SCHEMA_USERNAME>
-Dflyway.domain.placeholders.plato-regional-configurator-
services.password=<OBRC_SCHEMA_PASSWORD>
```

### //Common core NLP services

```
-Dflyway.domain.placeholders.cmc-nlp-annotator-
services.server.port=<CMC_NLP_ANNOTATOR_SERVICES_PORT>
-Dflyway.domain.placeholders.cmc-nlp-dashboard-widget-
services.server.port=<CMC_NLP_DASHBOARD_SERVICES_PORT>
-Dflyway.domain.placeholders.cmc-nlp-model-mngmnt-
services.server.port=<CMC_NLP_MODEL_MANGEMENT_PORT>
-Dflyway.domain.placeholders.cmc-nlp-online-processing-
services.server.port=<CMC_NLP_ONLINE_PROCESSING_PORT>
-Dflyway.domain.placeholders.cmc-nlp-tag-maint-
services.server.port=<CMC_NLP_TAG_MAINTENANCE_PORT>
-Dflyway.domain.placeholders.cmc-nlp-text-extraction-
services.server.port=<CMC_NLP_TEXT_EXTRACTION_PORT>
-Dflyway.domain.placeholders.cmc-nlp-txn-log-
services.server.port=<CMC_NLP_TXN_LOG_SERVICES_PORT>
-Dflyway.domain.placeholders.cmc-nlp-util-
services.server.port=<CMC_NLP_UTIL_SERVICES_PORT>
```

### // Common core NLP Poller service

```
-Dflyway.domain.placeholders.cmc-fc-ai-ml-services.server.port=<Server_Port>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-services.server.postingPath=<Posting_Path>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-services.server.pollingPath=<Polling_Path>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-services.server.pollingEmail=<Polling_Email>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-
services.server.emailServerHost=<Email_Server_Host>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-
services.server.emailServerPort=<Email_Server_PORT>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-
services.server.pollingFrequency=<Polling_Frequency>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-
services.server.pollerInitialDelay=<Poller_Initial_Delay>
-Dflyway.domain.placeholders.cmc-fc-ai-ml-
services.server.emailPassword=<Poller_Email_Password>
```

**// Common Core Interest Rate Service**

```
-Dflyway.domain.placeHolders.cmc-interest-rate-services.server.port=<8020>  
-Dflyway.domain.placeHolders.cmc-interest-rate-services.schemas=<CMNCORE>  
-Dflyway.domain.placeHolders.cmc-interest-rate-services.coherence.enabled=<false>
```

**//config.properties**

```
db=oracle  
workflow.namespace.prefix=conductor  
workflow.namespace.queue.prefix=conductor_queues  
queues.dynomite.threads=10  
workflow.elasticsearch.instanceType=EXTERNAL  
workflow.elasticsearch.index.name=conductor  
loadSample=false  
conductor.entity.list=DEFAULTENTITY~jdbc/PLATO-O  
flyway.enabled=false  
eureka.registration.enabled=true  
eureka.preferSameZone=true  
eureka.instance.hostname=plato-o  
eureka.instance.prefer-ip-address=true  
eureka.instance.status-page-url-path=/plato-orch/actuator/info  
eureka.instance.health-check-url-path=/plato-orch/api/health  
eureka.shouldUseDns=false  
eureka.serviceUrl.default=http://plato-discovery-service-0.plato-discovery-service-headless.SUBNAMESPACE.svc.occloud:8080/plato-discovery-service/eureka,http://plato-discovery-service-1.plato-discovery-service-headless.SUBNAMESPACE.svc.occloud:8080/plato-discovery-service/eureka,http://plato-discovery-service-2.plato-discovery-service-headless.SUBNAMESPACE.svc.occloud:8080/plato-discovery-service/eureka  
eureka.client.healthcheck.enabled=true  
eureka.lease.duration=90  
#to be reviewed if its modified or not  
eureka.registerWithEureka=true  
#to be reviewed if its modified or not  
eureka.fetchRegistry=true  
eureka.name=plato-o  
eureka.vipAddress=plato-o  
eureka.port=8080  
eureka.decoderName=JacksonJson  
isSSLEnabled=false  
multi.entity.enabled=false
```

```
decider.sweep.disable=false
#to be reviewed if its modified or not
workflow.system.task.worker.queue.size=500
conductor.app.systemTaskWorkerThreadCount=20
conductor.app.systemTaskMaxPollCount =20
conductor.app.systemTaskWorkerPollInterval=500
#new properties for above 4 keys
conductor.app.systemTaskWorkerQueueSize=500
conductor.app.systemTaskWorkerThreadCount=20
conductor.app.systemTaskMaxPollCount=20
conductor.app.systemTaskWorkerPollInterval=500
kafka.broker=kafka-headless.SUBNAMESPACE.svc.occloud:9094
conductor.db.type=oracle
conductor.indexing.enabled=false
conductor.jndi.resources.prefix=true
spring.application.name=plato-o
server.servlet.context-path=/plato-orch
conductor.workflow-reconciler.enabled=false
management.metrics.export.datadog.enabled=false
```

#### Note

- a. If the loadSample property already exists in the config.properties file of Conductor and is set to true, update it to false.
- b. Set conductor.workflow-reconciler.enabled to false. If the property decider.sweep.disable exists, update it to conductor.workflow-reconciler.enabled and set it to false.

```
management.metrics.export.datadog.enabled=false
```

#### **//Properties to be set for TOMCAT**

```
-Dspring.config.location=<path_to_config.properties_file>
-Dconductor.oracle.flywayEnabled=false
-Dconductor.metrics-prometheus.enabled=true
-Dmanagement.endpoints.web.exposure.include=prometheus
-Dmanagement.endpoint.prometheus.enabled=true
```

**Note**

**FOR WEBLOGIC** - the Dparam (Dspring.config.location=<path\_to\_config.properties\_file>) to map the config.properties file path must be only added for that **Particular Managed Server** where conductor will be deployed.

## 1.2 Method 2 – Via Passing the -D params in the Server Start Argument

This topic provides the systematic instructions to run the Oracle Banking Microservices Architecture services by passing the -D params in the Server start argument.

All the above mentioned -D parameters can be passed through the Server start argument in the respective managed server.

1. On **Domain Structure**, click **Environment**. Under **Environment**, click **Servers**.

The **Summary of Servers** screen displays.

**Figure 1-1 Summary of Servers**

Summary of Servers

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.

This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Clone Delete Showing 1 to 2 of 2 Previous Next

	Name	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured		whf00dkx	RUNNING	OK	7001
<input type="checkbox"/>	managed1_server	Configured		whf00dkx	RUNNING	OK	7003

New Clone Delete Showing 1 to 2 of 2 Previous Next

2. On the **Servers (Filtered - More Columns Exist)** table, click managed server to pass the values.

The **Settings for managed server** tab displays.

**Figure 1-2 Settings for managed server**

Settings for managed1\_server

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Concurrency Health Monitoring **Server Start**

Web Services Coherence

Click the **Lock & Edit** button in the Change Center to modify the settings on this page.

Save

Node Manager is a WebLogic Server utility that you can use to start, suspend, shut down, and restart servers in normal or unexpected conditions. Use this page to configure the startup settings that Node Manager will use to start this server on a remote machine.

<b>Java Home:</b>	<input type="text"/>	The Java home directory (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Java Vendor:</b>	<input type="text"/>	The Java Vendor value to use when starting this server. <a href="#">More Info...</a>
<b>BEA Home:</b>	<input type="text"/>	The BEA home directory (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Root Directory:</b>	<input type="text"/>	The directory that this server uses as its root directory. This directory must be on the computer that hosts Node Manager. If you do not specify a Root Directory value, the domain directory is used by default. <a href="#">More Info...</a>
<b>Class Path:</b>	<input type="text"/>	The classpath (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>

- On **Settings for managed server** tab, select **Server Start** tab.
- Edit the **Arguments** field and pass all the environment parameters required for the service to run.

**Figure 1-3 Arguments**

Node Manager is a WebLogic Server utility that you can use to start, suspend, shut down, and restart servers in normal or unexpected conditions. Use this page to configure the startup settings that Node Manager will use to start this server on a remote machine.

<b>Java Home:</b>	<input type="text"/>	The Java home directory (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Java Vendor:</b>	<input type="text"/>	The Java Vendor value to use when starting this server. <a href="#">More Info...</a>
<b>BEA Home:</b>	<input type="text"/>	The BEA home directory (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Root Directory:</b>	<input type="text"/>	The directory that this server uses as its root directory. This directory must be on the computer that hosts Node Manager. If you do not specify a Root Directory value, the domain directory is used by default. <a href="#">More Info...</a>
<b>Class Path:</b>	<input type="text"/>	The classpath (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Arguments:</b>	<input type="text" value="-Deureka.server.enable-self-preservation=false\n-Dspring.flyway.enabled=false\n-Dflyway.enabled=false\n-Deureka.client.serviceUrl.defaultZone=http://whf00dkx:7003/plato-discovery-service/eureka\n-Dserver.port=7003"/>	The arguments to use when starting this server. <a href="#">More Info...</a>

- Save the configuration and restart the managed server.  
After restart, the service can be started or deployed properly.

## 1.3 Method 3 – Using env files and setUserOverrides.sh file

This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services by using env files and setUserOverrides.sh file.

1. Copy the **setUserOverrides.sh** file to each of the <domain>/bin folder.

The example of the file is given below:

```
#!/bin/bash
# shellcheck disable=SC1090
# Common functions

set -e -x

config_file=""
PLATO_CONFIG_MANAGED_SERVER_NAME=""

# This file is used only for PLATO-CONFIG service
plato_config_file="${DOMAIN_HOME}/bin/plato-config-deploy.env"

# This file is used for rest of the services
domain_config_file="${DOMAIN_HOME}/bin/domain-config-deploy.env"

if [ -f "$plato_config_file" ] ; then
    PLATO_CONFIG_MANAGED_SERVER_NAME=`cat ${DOMAIN_HOME}/bin/plato-config-
deploy.env | grep "PLATO_CONFIG_MANAGED_SERVER_NAME" | cut -d'=' -f2`
fi
if [ "${SERVER_NAME}" = "${PLATO_CONFIG_MANAGED_SERVER_NAME}" ] ; then
    # This will get executed only for Plato-config service entries
    config_file="{plato_config_file}"
fi
if [ -f "$config_file" ]
then
    while read -r prop || [ -n "$prop" ]
    do
        case "$prop" in \#*) continue ;; esac
        if [ -z "${prop}" ] ; then
            continue
        else
            PLACEHOLDERS=${PLACEHOLDERS}" "${(echo -D$prop)
            PLACEHOLDERS="${PLACEHOLDERS}"
        fi
    done < "$config_file"
else
    echo "$config_file not found. please provide the property file to set -
D parameter"
    exit 1
fi

PLACEHOLDERS="${PLACEHOLDERS}"

JAVA_OPTIONS="${JAVA_OPTIONS}${PLACEHOLDERS}"

export JAVA_OPTIONS

echo "${JAVA_OPTIONS}"
```

2. Place the **env** files containing all the key value pairs of the **-D params** in the respective <domain>/env folder.



The `plato-config-deploy.env` file contains all the key value pairs specific only to the `plato-config-service` and need to be placed in the `bin` folder of the `plato-domain`. The `domain-config-deploy.env` file contains the key-value pairs for the rest of the services and should be placed in each `<domain>/bin` folder.

Sample file for **plato-config-deploy.env** is given below:

```
### Managed server name of plato-config service ###
PLATO_CONFIG_MANAGED_SERVER_NAME=

### plato config flyway connection entries ###
flywayTask=migrate
flyway.enabled=true
spring.flyway.enabled=false
plato-config.flyway.domain.db.username=
plato-config.flyway.domain.db.password=
plato-config.flyway.domain.db.jdbcUrl=
plato-config.flyway.domain.schemas=
plato-config.flyway.domain.locations=db/migration/domain/plato,db/
migration/domain/sms,db/migration/domain/cmc,db/migration/domain/obvam

#### Kafka properties for all services ####
flyway.domain.placeholders.plato.eventhub.broker.hosts=
flyway.domain.placeholders.plato.eventhub.zookeeper.hosts=

#### Kafka Security for all services ####
flyway.domain.placeholders.plato.eventhub.broker.hosts=
flyway.domain.placeholders.plato.eventhub.zookeeper.hosts=
flyway.domain.placeholders.kafka.ssl.truststore.location=
flyway.domain.placeholders.kafka.ssl.truststore.password=
flyway.domain.placeholders.kafka.broker.username=
flyway.domain.placeholders.kafka.broker.password=

### common entries for all services ###
flyway.domain.placeholders.driver.className=oracle.jdbc.driver.OracleDriver
spring.cloud.loadbalancer.ribbon.enabled=false
spring.main.allow-circular-references=true

### eureka entries for all services ###
flyway.domain.placeholders.eureka.host=
flyway.domain.placeholders.eureka.port=

### zipkin entries for all services ###
flyway.domain.placeholders.zipkin.host=
flyway.domain.placeholders.zipkin.port=

### plato config flyway placeholder entries ###
flyway.domain.placeholders.plato-config.username=
flyway.domain.placeholders.plato-config.password=
flyway.domain.placeholders.plato-config.jdbcUrl=
flyway.domain.placeholders.plato-config.schemas=
flyway.domain.placeholders.plato-config.sessionIdleTimeout=
flyway.domain.placeholders.plato-config.sessionIdleWarningTime=
flyway.domain.placeholders.plato-config.environment=

### plato api-gateway flyway placeholder entries ###
```

```
flyway.domain.placeholders.api-gateway.host=
flyway.domain.placeholders.api-gateway.username=
flyway.domain.placeholders.api-gateway.password=
flyway.domain.placeholders.api-gateway.jdbcUrl=
flyway.domain.placeholders.api-gateway.schemas=
flyway.domain.placeholders.plato-api-gateway.server.port=

### plato api-gateway LDAP flyway placeholder entries ###
flyway.domain.placeholders.USER.STORE=
flyway.domain.placeholders.LDAP.CORS.allowed.origin=
flyway.domain.placeholders.LDAP.credential.SALT=
flyway.domain.placeholders.JWT.EXPIRY.seconds=
flyway.domain.placeholders.LDAP.url=
flyway.domain.placeholders.LDAP.userId=
flyway.domain.placeholders.LDAP.server.base=
flyway.domain.placeholders.LDAP.server.credential=
flyway.domain.placeholders.LDAP.usersearch.base=
flyway.domain.placeholders.LDAP.user.prefix=
# Allowed values for LDAP provider are: EMBEDDED_WEBLOGIC, PLATO
# If LDAP is running in weblogic then value should be EMBEDDED_WEBLOGIC
# If spring based LDAP(which is run through a jar provided) is used, then
the value should be PLATO
flyway.domain.placeholders.LDAP.provider=
flyway.domain.placeholders.TOKEN.autoregenerate=
flyway.domain.placeholders.SSO.enabled=
flyway.domain.placeholders.TOKEN.regeneration.enabled=

### plato-ui-config flyway placeholder entries ###
flyway.domain.placeholders.plato-ui-config.username=
flyway.domain.placeholders.plato-ui-config.password=
flyway.domain.placeholders.plato-ui-config.jdbcUrl=
flyway.domain.placeholders.plato-ui-config.schemas=
flyway.domain.placeholders.plato-ui-config-services.server.port=
flyway.domain.placeholders.apigateway.host=
flyway.domain.placeholders.apigateway.port=

### plato-discovery flyway placeholder entries ###
flyway.domain.placeholders.plato-discovery-service.server.port=

### plato-apigateway-router flyway placeholder entries ###
flyway.domain.placeholders.plato-apigateway-router.server.port=
flyway.domain.placeholders.plato-apigateway-router.router.protocol=
flyway.domain.placeholders.plato-apigateway-router.router.meadmin.port=

### plato-orch flyway placeholder entries ###
flyway.domain.placeholders.plato-orch-service.server.port=
flyway.domain.placeholders.plato-orchestrator.hostname=

### plato-feed flyway placeholder entries ###
flyway.domain.placeholders.plato-feed-services.username=
flyway.domain.placeholders.plato-feed-services.password=
flyway.domain.placeholders.plato-feed-services.jdbcUrl=
flyway.domain.placeholders.plato-feed-services.jndi=jdbc/PLATOFEEED
flyway.domain.placeholders.plato-feed-services.schemas=
flyway.domain.placeholders.plato-feed-services.feed.upload.directory=
flyway.domain.placeholders.plato-feed-services.server.port=
```

```
### plato-batch flyway placeholder entries ###
flyway.domain.placeholders.plato-batch-server.username=
flyway.domain.placeholders.plato-batch-server.password=
flyway.domain.placeholders.plato-batch-server.jdbcUrl=
flyway.domain.placeholders.plato-batch-server.schemas=
flyway.domain.placeholders.plato-batch-server.server.port=
flyway.domain.placeholders.plato-batch-server.plato.eventhub.kafka.brokers=
flyway.domain.placeholders.plato-batch-server.plato.eventhub.zk.nodes=
flyway.domain.placeholders.plato-batch-server.jndi=jdbc/PLATOBATCH

### plato-alerts-management flyway placeholder entries ###
flyway.domain.placeholders.plato-alerts-management-services.username=
flyway.domain.placeholders.plato-alerts-management-services.password=
flyway.domain.placeholders.plato-alerts-management-services.jdbcUrl=
flyway.domain.placeholders.plato-alerts-management-services.schemas=
flyway.domain.placeholders.plato-alerts-management-services.server.port=

### sms flyway placeholder entries ###
flyway.domain.placeholders.sms-core-services.server.port=
flyway.domain.placeholders.sms.username=
flyway.domain.placeholders.sms.password=
flyway.domain.placeholders.sms.jdbcUrl=
flyway.domain.placeholders.sms.schemas=

### cmncore flyway placeholder entries ###
flyway.domain.placeholders.cmncore.username=
flyway.domain.placeholders.cmncore.password=
flyway.domain.placeholders.cmncore.jdbcUrl=
flyway.domain.placeholders.cmncore.schemas=
flyway.domain.placeholders.cmc-corebanking-adapter-service.server.port=
flyway.domain.placeholders.cmc-currency-services.server.port=
flyway.domain.placeholders.cmc-account-services.server.port=
flyway.domain.placeholders.cmc-base-services.server.port=
flyway.domain.placeholders.cmc-external-virtual-account-
services.server.port=
flyway.domain.placeholders.cmc-branch-services.server.port=
flyway.domain.placeholders.cmc-customer-services.server.port=
flyway.domain.placeholders.cmc-external-chart-account-services.server.port=
flyway.domain.placeholders.cmc-external-system-services.server.port=
flyway.domain.placeholders.cmc-advice-services.server.port=
flyway.domain.placeholders.cmc-facilities-services.server.port=
flyway.domain.placeholders.cmc-txn-code-services.server.port=
flyway.domain.placeholders.cmc-settlement-services.server.port=
flyway.domain.placeholders.cmc-businessoverrides-services.server.port=
flyway.domain.placeholders.cmc-resource-segment-orchestrator-
service.server.port=
flyway.domain.placeholders.cmc-screenclass-services.server.port=
flyway.domain.placeholders.cmc-datasegment-services.server.port=
flyway.domain.placeholders.cmc-settlements-services.server.port=
flyway.domain.placeholders.cmc-transactioncontroller-services.server.port=
flyway.domain.placeholders.cmc-report-services.server.port=
flyway.domain.placeholders.cmc-nlp-annotator-services.server.port=
flyway.domain.placeholders.cmc-nlp-dashboard-widget-services.server.port=
flyway.domain.placeholders.cmc-nlp-model-mngmnt-services.server.port=
flyway.domain.placeholders.cmc-nlp-online-processing-services.server.port=
```

```
flyway.domain.placeholders.cmc-nlp-tag-maint-services.server.port=
flyway.domain.placeholders.cmc-nlp-text-extraction-services.server.port=
flyway.domain.placeholders.cmc-nlp-txn-log-services.server.port=
flyway.domain.placeholders.cmc-nlp-util-services.server.port=
flyway.domain.placeholders.cmc-batch-services.server.port=
flyway.domain.placeholders.cmc-fc-ai-ml-services.server.port=
flyway.domain.placeholders.cmc-fc-ai-ml-services.postingPath=
flyway.domain.placeholders.cmc-fc-ai-ml-services.pollingEmail=
flyway.domain.placeholders.cmc-fc-ai-ml-services.emailServerPort=
flyway.domain.placeholders.cmc-fc-ai-ml-services.emailServerHost=
flyway.domain.placeholders.cmc-fc-ai-ml-services.pollingFrequency=
flyway.domain.placeholders.cmc-fc-ai-ml-services.pollerInitialDelay=
flyway.domain.placeholders.cmc-fc-ai-ml-services.emailPassword=
flyway.domain.placeholders.cmc-fc-ai-ml-services.pollingPath=

### biPublisher related cmc-report-service entries ###
flyway.domain.placeholders.weblogic.userid=
flyway.domain.placeholders.weblogic.password=
flyway.domain.placeholders.biPublisher.host=
flyway.domain.placeholders.biPublisher.port=
flyway.domain.placeholders.runReportTemplate=
flyway.domain.placeholders.emailTemplate=
flyway.domain.placeholders.dms.host=
flyway.domain.placeholders.dms.port=

### flyway jndi connection details for shared services placeholder entries
###
flyway.domain.placeholders.plato.jndi=jdbc/PLATO
flyway.domain.placeholders.plato-config.jndi=jdbc/PLATO
flyway.domain.placeholders.plato-sec.jndi=jdbc/PLATO_SECURITY
flyway.domain.placeholders.plato-ui-config.jndi=jdbc/PLATO_UI_CONFIG
flyway.domain.placeholders.sms.jndi=jdbc/sms
flyway.domain.placeholders.cmncore.jndi=jdbc/CMNCORE

### flyway jndi connection details for obvam services placeholder entries
###
flyway.domain.placeholders.eie.jndi=jdbc/EIE
flyway.domain.placeholders.eie.server.port=
flyway.domain.placeholders.eie.schemas=

flyway.domain.placeholders.elm.jndi=jdbc/ELM
flyway.domain.placeholders.elm.server.port=
flyway.domain.placeholders.elm.schemas=

flyway.domain.placeholders.vam.jndi=jdbc/VAM
flyway.domain.placeholders.vam.server.port=
flyway.domain.placeholders.vam.schemas=

flyway.domain.placeholders.vac.jndi=jdbc/VAC
flyway.domain.placeholders.vac.server.port=
flyway.domain.placeholders.vac.schemas=

flyway.domain.placeholders.vab.jndi=jdbc/VAB
flyway.domain.placeholders.vab.server.port=
flyway.domain.placeholders.vab.schemas=
```

```
flyway.domain.placeholders.vae.jndi=jdbc/VAE
flyway.domain.placeholders.vae.server.port=
flyway.domain.placeholders.vae.schemas=

flyway.domain.placeholders.eda.jndi=jdbc/EDA
flyway.domain.placeholders.eda.server.port=
flyway.domain.placeholders.eda.schemas=

flyway.domain.placeholders.vai.jndi=jdbc/VAI
flyway.domain.placeholders.vai.server.port=
flyway.domain.placeholders.vai.schemas=

flyway.domain.placeholders.van.jndi=jdbc/VAN
flyway.domain.placeholders.van.server.port=
flyway.domain.placeholders.van.schemas=

flyway.domain.placeholders.vap.jndi=jdbc/VAP
flyway.domain.placeholders.vap.server.port=
flyway.domain.placeholders.vap.schemas=

flyway.domain.placeholders.vas.jndi=jdbc/VAS
flyway.domain.placeholders.vas.server.port=
flyway.domain.placeholders.vas.schemas=

flyway.domain.placeholders.vat.jndi=jdbc/VAT
flyway.domain.placeholders.vat.server.port=
flyway.domain.placeholders.vat.schemas=
flyway.domain.placeholders.vaj.server.port=
flyway.domain.placeholders.platoorch.domain.jndi=jdbc/PLATO-O
flyway.domain.placeholders.platoorch.domain.schemas=
flyway.domain.placeholders.plato.alerts.email.userId=
flyway.domain.placeholders.plato.alerts.email.password=
flyway.domain.placeholders.plato.alerts.cmc.userId=
flyway.domain.placeholders.plato.alerts.cmc.branchCode=
flyway.domain.placeholders.plato.alerts.cmc.appId=
flyway.domain.placeholders.plato-rule.hostname=
flyway.domain.placeholders.plato-rule-service.server.port=
flyway.domain.placeholders.platorule.domain.jndi=
flyway.domain.placeholders.platorule.domain.schemas=
flyway.domain.placeholders.obrh.import.data.disable-modify=
flyway.domain.placeholders.cmc-obrh-services.kafka.server.path=
flyway.domain.placeholders.cmc-obrh-services.zookeeper.server.path=
flyway.domain.placeholders.cmc.schemas=
flyway.domain.placeholders.cmc-nlp-opennlp-services.server.port=
flyway.domain.placeholders.cmc-nlp-maintenance-services.server.port=
flyway.domain.placeholders.cmc-nlp-pipeline-services.server.port=
flyway.domain.placeholders.cmc-nlp-docview-services.server.port=
flyway.domain.placeholders.cmc-ml-indb-services.server.port=
flyway.domain.placeholders.cmc-obrh-services.kafka.enabled=
flyway.domain.placeholders.cmc-sla-services.server.port=
flyway.domain.placeholders.cmc-obcbs-services.schemas=
flyway.domain.placeholders.obcbs.server.port=
flyway.domain.placeholders.orch.cmc.brn=
flyway.domain.placeholders.orch.cmc.user=
flyway.domain.placeholders.orch.enableDynamicAllocation=
flyway.domain.placeholders.orch.enableSLA=
```

```
flyway.domain.placeholders.report-service.server.port=
flyway.domain.placeholders.report-service.hostname=
flyway.domain.placeholders.report-service.domain.jndi=jdbc/PLATOREPORT
flyway.domain.placeholders.report-service.template-metadata-directory=
flyway.domain.placeholders.report-service.output-directory=
flyway.domain.placeholders.report-service.fop-config-file=

### generic entries for all services ###
spring.cloud.config.uri=
apigateway.url=
service.logging.environment=
service.logging.path=
```

Sample file for **domain-config-deploy.env** is given below:

```
### domain config flyway connection entries ###
flywayTask=migrate
flyway.enabled=true
spring.flyway.enabled=false

### generic entries for all services ###
spring.cloud.config.uri=
apigateway.url=
service.logging.environment=
service.logging.path=
```

## 1.4 Method 4 – Workflow Configuration

This topic provides the systematic instructions to run Oracle Banking Microservices Architecture services through workflow configuration.

### 1. Create Metadata of the workflow.

The sample DSL for workflow creation is given below:

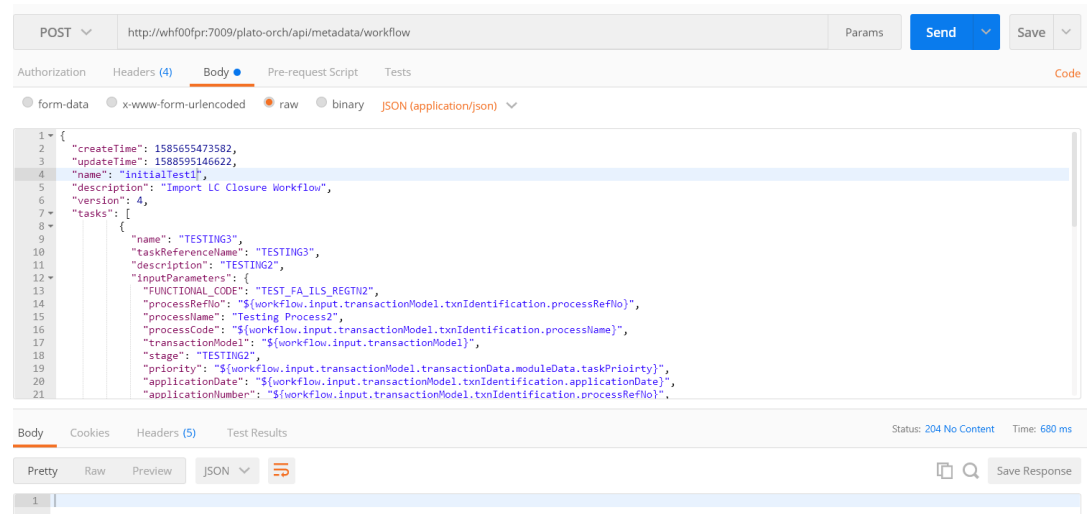
```
{
  "name": "initialTest",
  "description": "Test workflow",
  "version": 4,
  "tasks": [
    {
      "name": "TEST",
      "taskReferenceName": "TESTING3",
      "description": "TESTING2",
      "inputParameters": {
        "FUNCTIONAL_CODE": "TEST_FA_ILS_REGTN2",
        "processRefNo":
        "${workflow.input.transactionModel.txnIdentification.processRefNo}",
        "processName": "Testing Process2",
        "processCode":
        "${workflow.input.transactionModel.txnIdentification.processName}",
        "transactionModel": "${workflow.input.transactionModel}",
        "stage": "TESTING2",
        "priority":
        "$
```

```

{workflow.input.transactionModel.transactionData.moduleData.taskPriority}",
  "applicationDate":
    "$
{workflow.input.transactionModel.txnIdentification.applicationDate}",
  "applicationNumber":
    "${workflow.input.transactionModel.txnIdentification.processRefNo}",
  "processRefNumber":
    "${workflow.input.transactionModel.txnIdentification.processRefNo}",
  "branch": "$
{workflow.input.transactionModel.txnIdentification.branchCode}",
  "user": "$
{workflow.input.transactionModel.txnIdentification.currentUser}",
  "customerNumber":
    "$
{workflow.input.transactionModel.transactionData.moduleData.customerId}",
  "amount":
    "$
{workflow.input.transactionModel.transactionData.moduleData.amount}",
  "currencyCode":
    "$
{workflow.input.transactionModel.transactionData.moduleData.currency}",
  "TASK_OUTCOMES": [
    "PROCEED"
  ],
  "moduleCode": "OBTFPM",
  "customFilter": [
    {
      "key": "contractRefNo",
      "label": "Back Office Reference"
    },
    {
      "key": "otherRefNo",
      "label": "External Reference"
    }
  ]
},
"type": "WAIT",
"startDelay": 0,
"optional": false,
"asyncComplete": false
}
],
"outputParameters": {
  "stage": "CLMO_FA_SNPOAR_APPEN",
  "taskOutcome": "PROCEED_WITH_PARTICIPANT"
},
"schemaVersion": 2,
"restartable": true,
"workflowStatusListenerEnabled": false
}

```

Call the API (/api/metadata/workflow) and pass the DSL in body. The below screen depicts the sample workflow

**Figure 1-4 Body**

- For workflow creation, call the API (/api/workflow) to create the workflow. This API provides the information to the workflow metadata which is created using previous call.

```

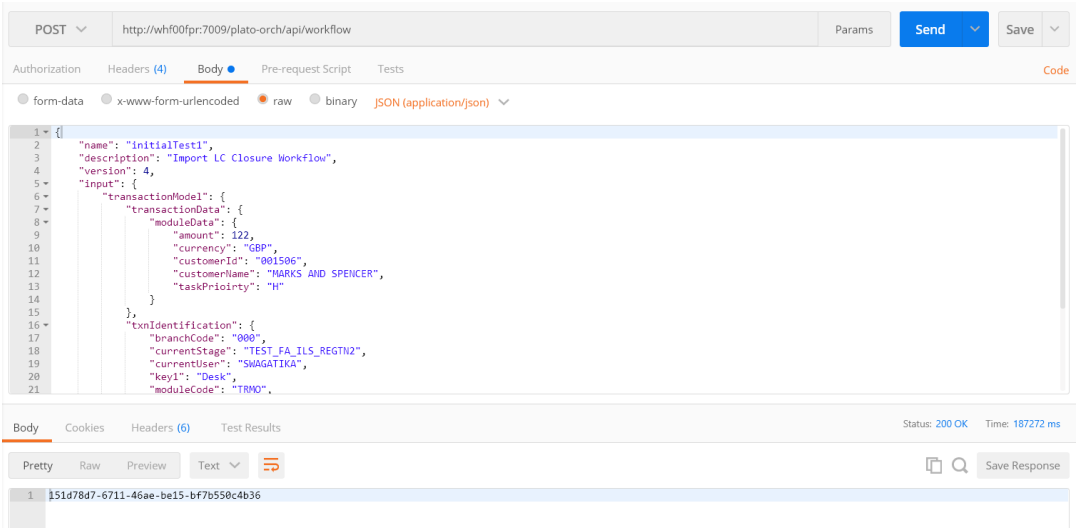
{
  "name": "initialTest",
  "description": "initialTest",
  "version": 4,
  "input": {
    "transactionModel": {
      "transactionData": {
        "moduleData": {
          "amount": 122,
          "currency": "GBP",
          "customerId": "001506",
          "customerName": "MARKS AND SPENCER",
          "taskPriority": "H"
        }
      }
    },
    "txnIdentification": {
      "branchCode": "000",
      "currentStage": "TEST_FA_ILS_REGTN2",
      "currentUser": "SWAGATIKA",
      "key1": "Desk",
      "moduleCode": "TRMO",
      "processName": "Testing Process2",
      "processRefNo": "300ILCI012260",
      "applicationDate": 1588582461960,
      "taskOutcome": "PROCEED",
      "taskPriority": "H"
    }
  }
}

```

Pass the DSL in body. The below screen depicts the sample workflow:



Figure 1-5 Body



# 2

## Domain Creation and Cluster Configuration

This topic provides the information about the domain creation instructions, cluster configuration, and post domain creation configurations.

- [Create Domain and Cluster Configuration](#)  
This topic provides the systematic instructions to create domain and cluster configuration.
- [Post Domain Creation Configurations](#)  
This topic provides the systematic instructions for the configurations to be performed once the domain is created.

### 2.1 Create Domain and Cluster Configuration

This topic provides the systematic instructions to create domain and cluster configuration.

#### ① Note

Names need not to be same as provided in the screenshot.

1. Open `/oracle_common/common/bin` and run **config.cmd** (or **.sh** if operating system is linux).
2. Create domain with required cluster and server configurations. Refer to the screenshots below.
3. Select **Create a new domain** and specify the domain name. For example, **platoinfra\_domain**.

The **Create Domain** screen displays.

**Figure 2-1 Create Domain**

Configuration Type

ORACLE®  
FUSION MIDDLEWARE

**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 domain

☐ Update an existing domain

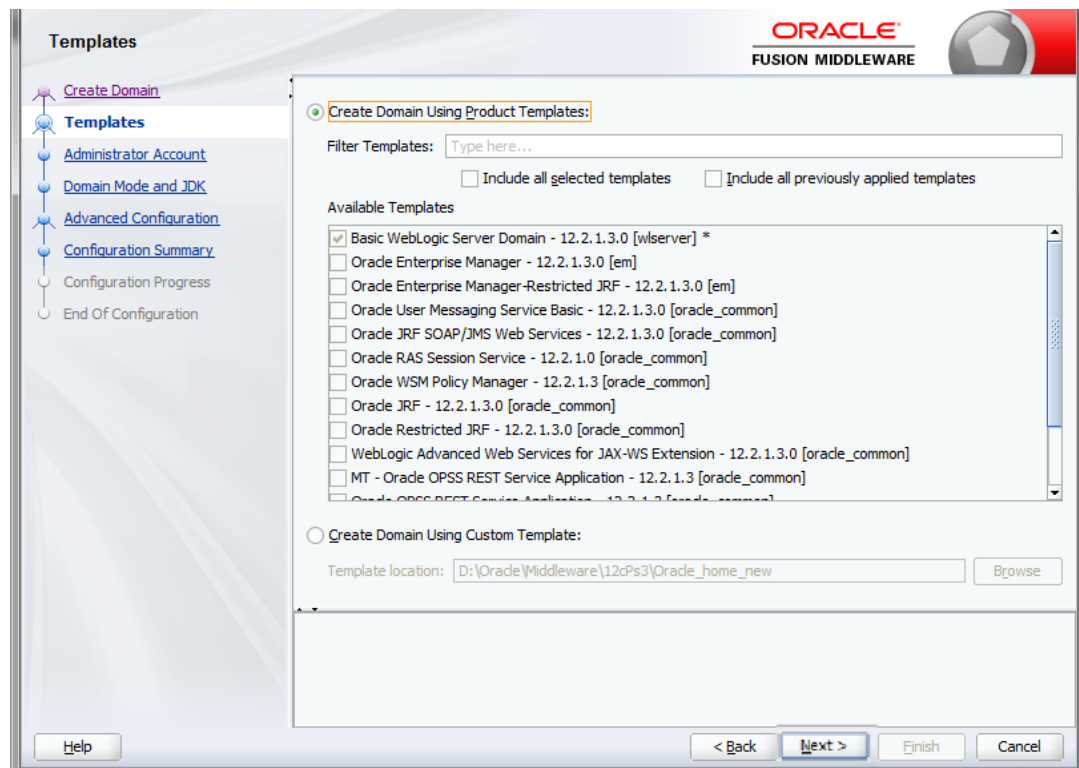
Domain Location:

Create a new domain.

4. Click **Next**.

The **Templates** screen displays.

Figure 2-2 Templates



5. Click **Next** to create simple domain with default templates.  
The **Administrator Account** screen displays.

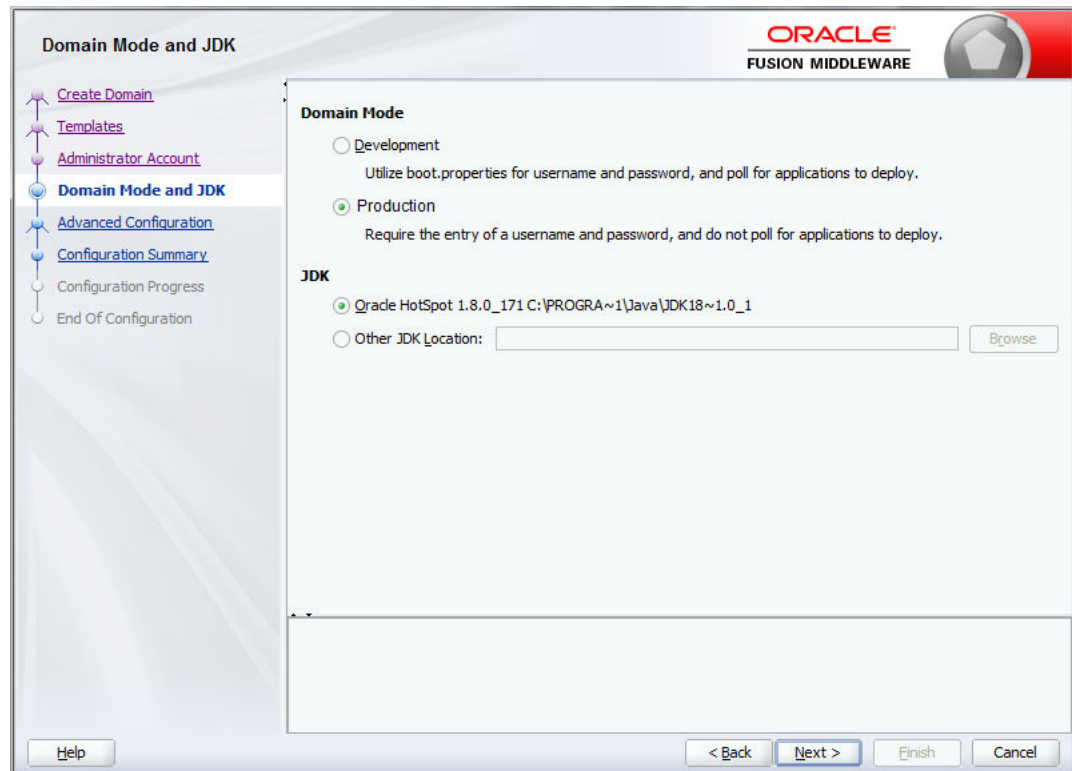
**Figure 2-3 Administrator Account**

The screenshot shows the 'Administrator Account' configuration window in the Oracle Fusion Middleware console. The left sidebar contains a navigation tree with the following items: 'Create Domain' (purple icon), 'Templates' (purple icon), 'Administrator Account' (blue icon and selected), 'Domain Mode and JDK' (blue icon), 'Advanced Configuration' (blue icon), 'Configuration Summary' (blue icon), 'Configuration Progress' (grey icon), and 'End Of Configuration' (grey icon). The main content area has the Oracle Fusion Middleware logo at the top right. Below the logo, there are three input fields: 'Name' (containing 'weblogic'), 'Password', and 'Confirm Password'. At the bottom of the main area, a text box states: 'Must be the same as the password. Password must contain at least 8 alphanumeric characters with at least one number or special character.' The bottom of the window features a 'Help' button on the left and '< Back', 'Next >', 'Finish', and 'Cancel' buttons on the right.

6. Fill the fields **Password** and **Confirm Password** to set the password, and click **Next** to proceed.

The **Domain Mode and JDK** screen displays.

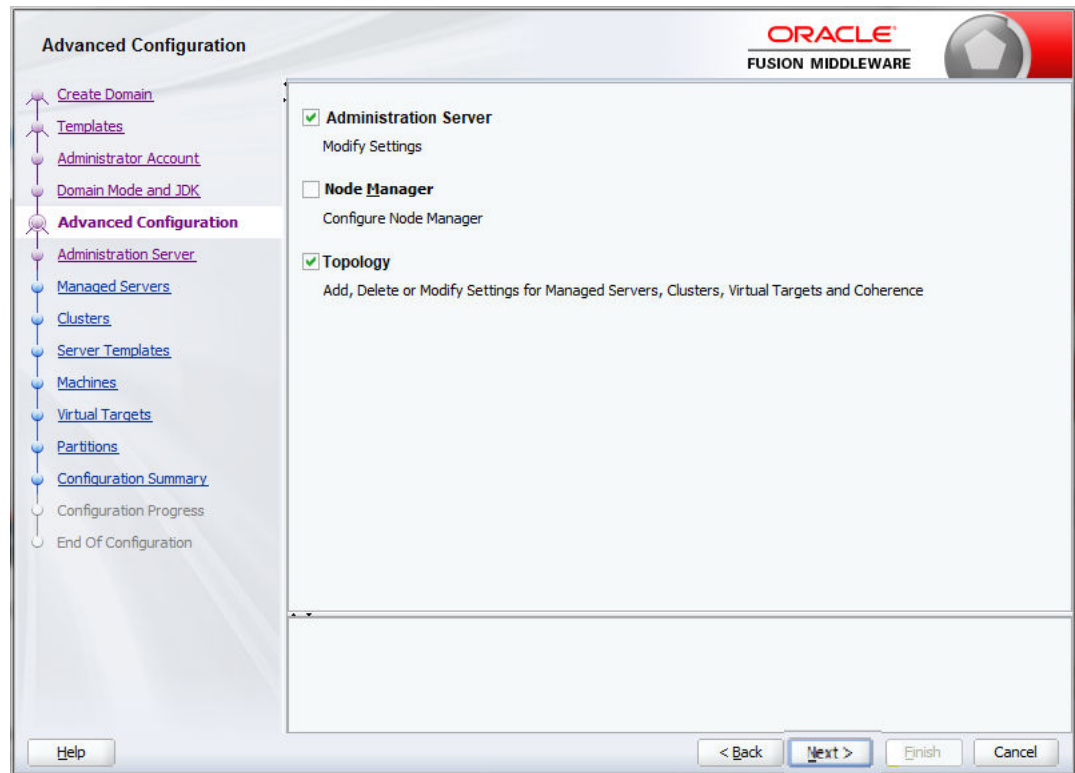
Figure 2-4 Domain Mode and JDK



7. Select **Domain Mode** as **Production**.
8. Select **JDK**, and click **Next**.

The **Advanced Configuration** screen displays.

Figure 2-5 Advanced Configuration



9. Select **Administration Server** and **Topology**, and click **Next**.

The **Administration Server** screen displays.

Figure 2-6 Administration Server

The screenshot shows the 'Administration Server' configuration window in Oracle Fusion Middleware. The left sidebar contains a navigation tree with the following items: 'Create Domain', 'Templates', 'Administrator Account', 'Domain Mode and JDK', 'Advanced Configuration', 'Administration Server' (highlighted), 'Managed Servers', 'Clusters', 'Server Templates', 'Machines', 'Virtual Targets', 'Partitions', 'Configuration Summary', 'Configuration Progress', and 'End Of Configuration'. The main area displays the configuration for the 'Administration Server' with the following fields: 'Server Name' (text box with 'AdminServer'), 'Listen Address' (dropdown menu with 'All Local Addresses'), 'Listen Port' (text box with '7001'), 'Enable SSL' (checkbox, currently unchecked), and 'SSL Listen Port' (text box). A validation message at the bottom states: 'The name must not be null or empty and may not contain any : , = \* ? % / \_ cloned.' The bottom of the window has a 'Help' button on the left and '< Back', 'Next >', 'Finish', and 'Cancel' buttons on the right.

10. Edit the fields **Listen Port** and host configurations as required, and click **Next**.  
The **Managed Servers** screen displays.



Figure 2-7 Managed Servers

The screenshot shows the 'Managed Servers' configuration window in Oracle Fusion Middleware. The left sidebar contains a navigation tree with the following items: Create Domain, Templates, Administrator Account, Domain Mode and JDK, Advanced Configuration, Administration Server, **Managed Servers** (selected), Clusters, Server Templates, Machines, Virtual Targets, Partitions, Configuration Summary, Configuration Progress, and End Of Configuration. The main area displays a table of managed servers. At the top of the main area are buttons for '+ Add', 'Clone', 'Delete', and 'Discard Changes'. The table has the following data:

Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port
Config_Server	All Local Addresses	7003	<input type="checkbox"/>	Disabled
Discovery_Server	All Local Addresses	7004	<input type="checkbox"/>	Disabled
Api_Gateway_Server	All Local Addresses	7005	<input type="checkbox"/>	Disabled
Plato_UI_Config_Server	All Local Addresses	7006	<input type="checkbox"/>	Disabled
Plato_Orch_Server	All Local Addresses	7007	<input type="checkbox"/>	Disabled
Plato_Feed_Server	All Local Addresses	7008	<input type="checkbox"/>	Disabled
Plato_Batch_Server	All Local Addresses	7009	<input type="checkbox"/>	Disabled
Plato_Alerts_Management_Se	All Local Addresses	7010	<input type="checkbox"/>	Disabled

At the bottom of the window are buttons for '< Back', 'Next >', 'Finish', and 'Cancel'. A 'Help' button is located at the bottom left.

11. Click **Add** to add managed servers and edit the fields as required.
  - a. Specify the name in **Server Name** field.
  - b. Edit the address in **Listen Address** field.
  - c. Edit the port in **Listen Port** field.
12. Click **Next**.  
The **Cluster** screen displays.

Figure 2-8 Cluster

**Clusters**

ORACLE® FUSION MIDDLEWARE

+ Add X Delete Discard Changes

Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port
Config_Cluster			0	0
Discovery_Cluster			0	0
Api_Gateway_Cluster			0	0
Plato_UI_Config_Cluster			0	0
Plato_Orch_Cluster			0	0
Plato_Feed_Cluster			0	0
Plato_Batch_Cluster			0	0
Plato_Alerts_Managem			0	0

Help < Back Next > Finish Cancel

13. Click **Add** to add clusters one for each **Managed Servers**, and click **Next**.  
The **Server Template** screen displays.

Figure 2-9 Server Template

**Server Templates**

ORACLE® FUSION MIDDLEWARE

+ Add X Delete Discard Changes

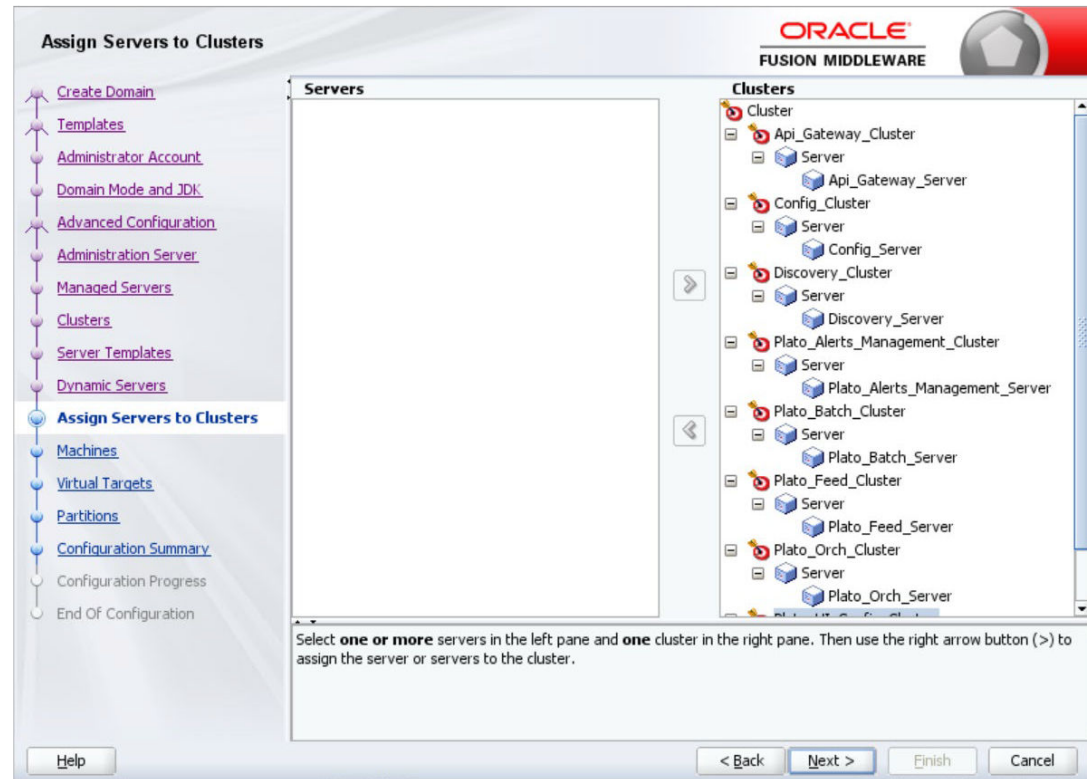
Name	Listen Port	SSL Listen Port	Enable SSL
			<input type="checkbox"/>

Help < Back Next > Finish Cancel

14. Skip the **Server Templates** and **Dynamic Servers**, and click **Next**.

The **Assign Servers to Clusters** screen displays.

**Figure 2-10 Assign Servers to Clusters**



15. Assign clusters with servers, and click **Next**.

The **Machines** screen displays.

**Figure 2-11 Machines**

**Machines**

ORACLE®  
FUSION MIDDLEWARE

Machine Unix Machine

+ Add X Delete Discard Changes

Name	Node Manager Listen Address	Node Manager Listen Port
new_Machine_1	localhost	5556

Help < Back Next > Finish Cancel

16. Click **Add** to add **Machine** or **Unix Machine** based on the operating system and configure **Name**, **Node Manager Listen Address**, and **Node Manager Listen Port** as required.
17. Click **Next**.

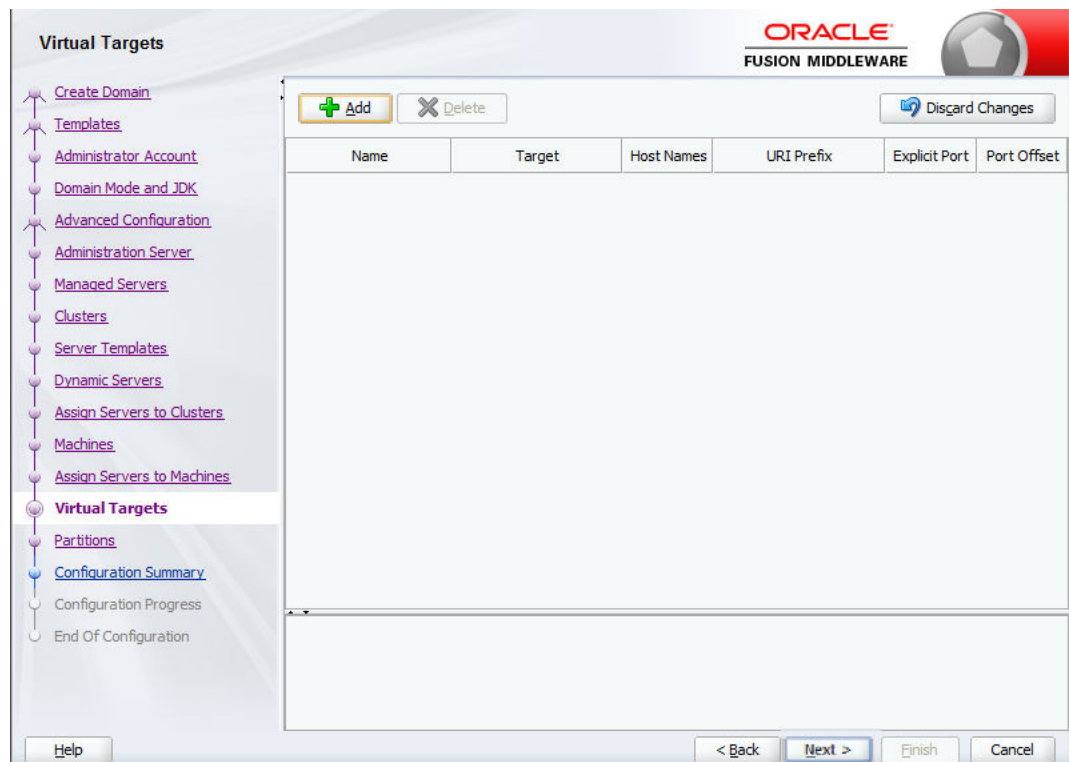
The **Assign Servers to Machines** screen displays.

Figure 2-12 Assign Servers to Machines



18. Map all the managed servers under the machine created, and click **Next**.  
The **Virtual Targets** screen displays.

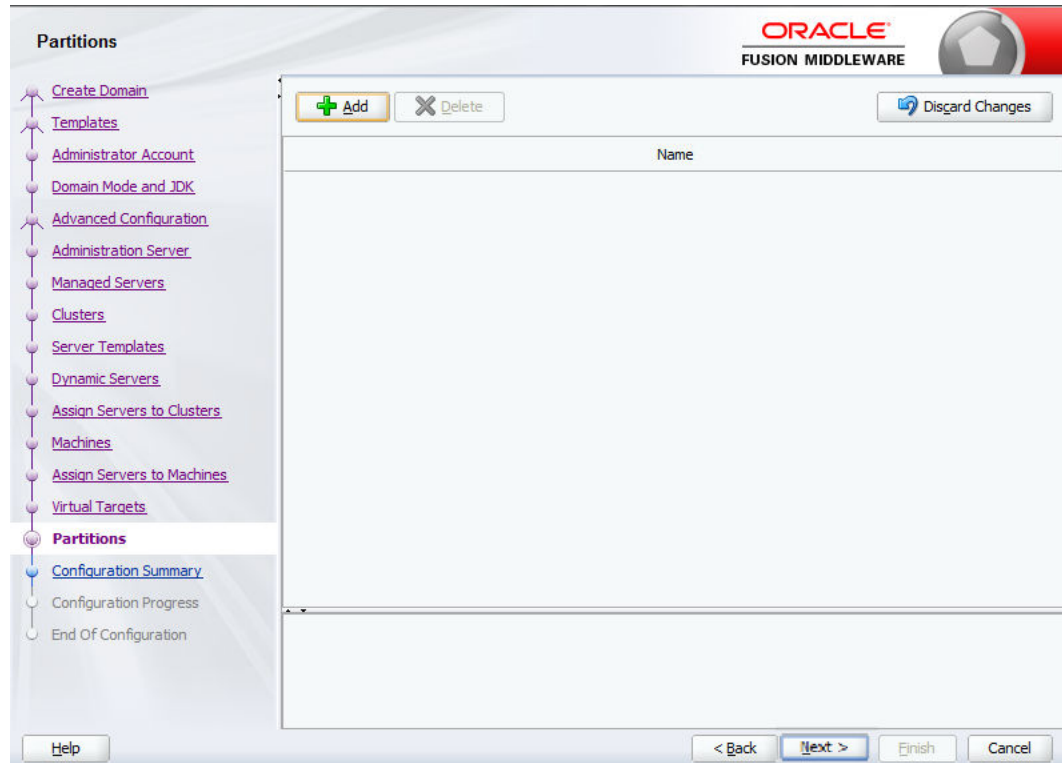
Figure 2-13 Virtual Targets



19. Skip or configure **Virtual Targets**, and click **Next**.

The **Partitions** screen displays.

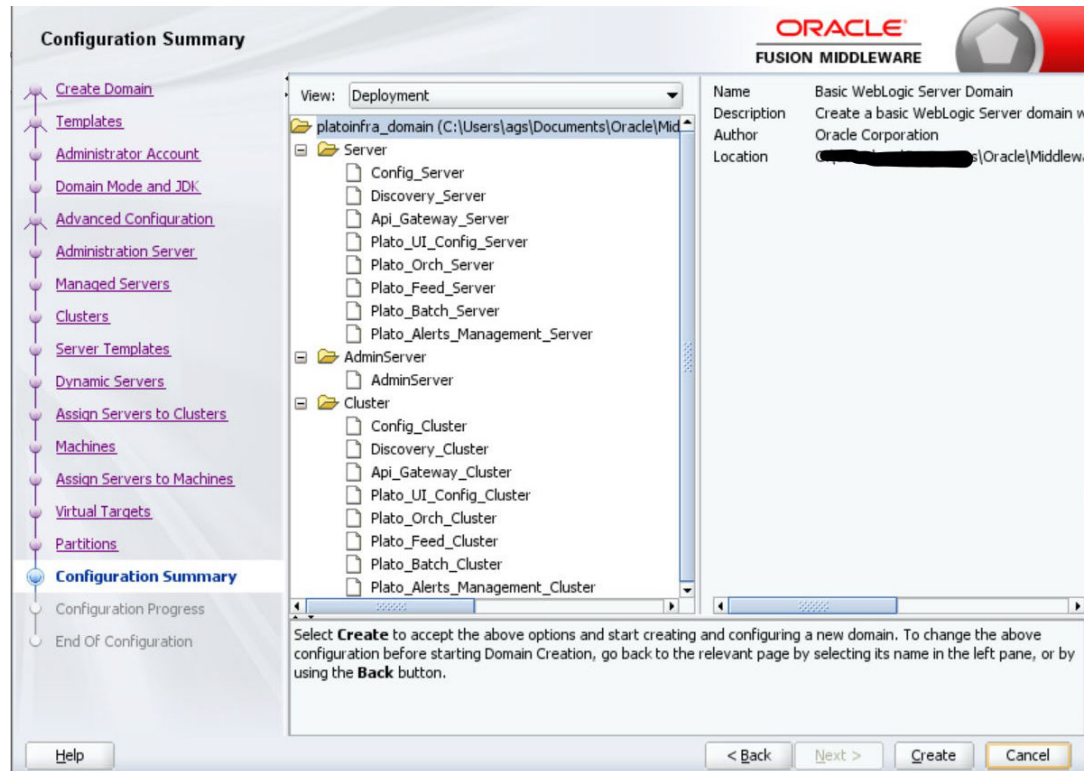
**Figure 2-14** Partitions



20. Skip or configure **Partitions**, and click **Next**.

The **Configuration Summary** screen displays.

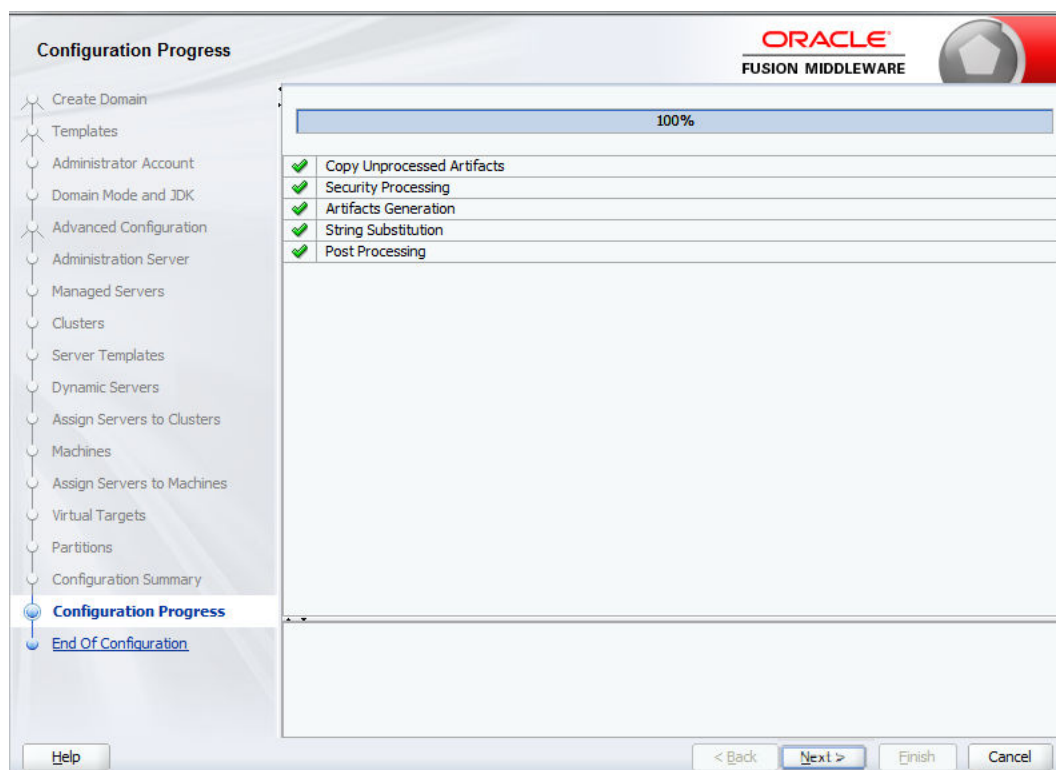
Figure 2-15 Configuration Summary



21. Check the **Configuration Summary** and confirm creating the domain.
22. Click **Next**.

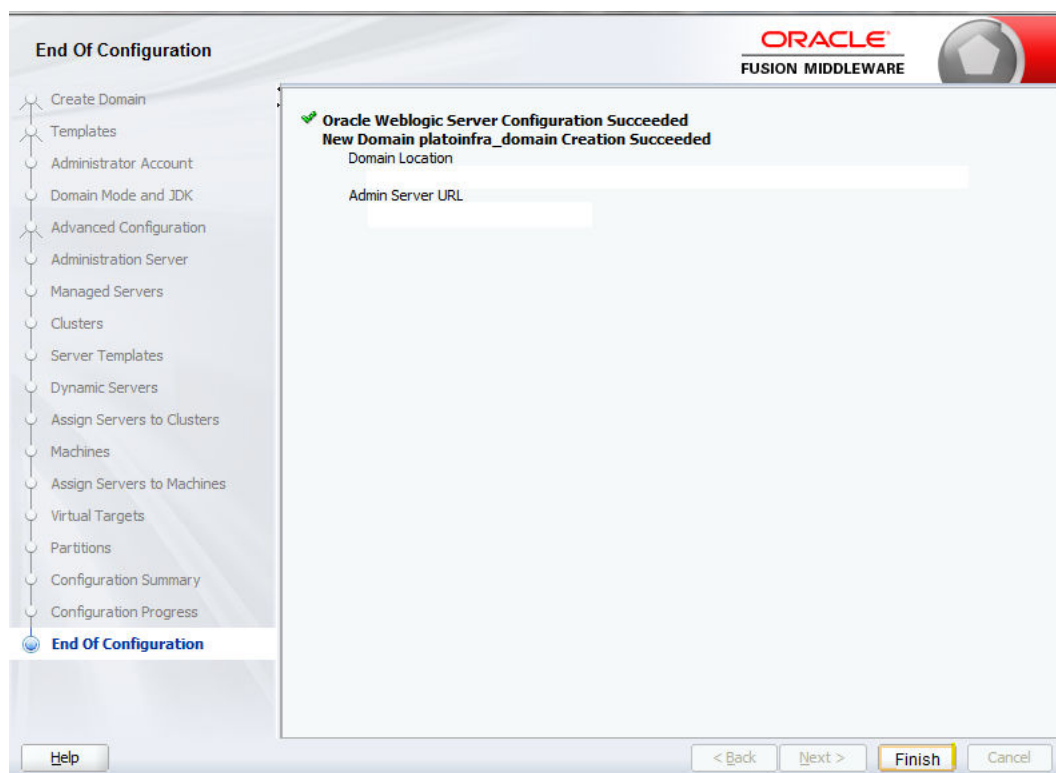
The **Configuration Progress** screen displays.



**Figure 2-16 Configuration Progress**

23. Check the **Configuration Progress** screen, and click **Next**.

The **End of Configuration** screen displays.

**Figure 2-17 End of Configuration**



24. Click **Finish** to complete the procedure.

The configuration is completed successfully.

## 2.2 Post Domain Creation Configurations

This topic provides the systematic instructions for the configurations to be performed once the domain is created.

### Note

Once domain creation and cluster configuration is done, refer to Oracle Fusion Middleware documents for more details on how to start an admin server, node manager, and managed servers.

1. Open `/user_projects/domain/platoinfra_domain/bin`.
2. Perform all the Environment Setup steps such as setting `-D` parameters, Embedded Weblogic Setup and, changes required for OAuth.
3. Run `startWeblogic.cmd`. Run `.sh` if operating system is linux.
4. Open `/user_projects/domains/platoinfra_domain/bin`.
5. Run `setNMJavaHome.cmd`. Run `.sh` if operating system is linux.
6. Open `/user_projects/domains/platoinfra_domain/nodemanager`.
7. Edit `nodemanager.properties` as required (`securelistner = false` if ssl and keystore is not given).
8. In admin console, select the following options in sequential order: Under **Machine**, select **platoinfra\_Machine**.
  - a. **Machine**
  - b. **platoinfra\_Machine**
  - c. **Node Manager**
  - d. **Type**
  - e. **Plain**
  - f. **Save**
9. Open `/user_projects/domains/platoinfra_domain/bin`.
10. Run `startNodeManager.cmd`. Run `.sh` if operating system is linux.
11. Start all managed servers.
12. Access the **Oracle WebLogic Administration Console**.
13. From **Domain Structure**, Click **Services** and verify the **Servers (Filtered - More Coloumns Exist)** table.

The **Summary of Services** screen displays.

Figure 2-18 Summary of Services

delete items in this domain.

Lock & Edit  
Release Configuration

Domain Structure

platoinfra\_domain

- Domain Partitions
- Environment
- Servers
  - Coherence Clusters
  - Resource Groups
  - Resource Group Templates
  - Machines
  - Virtual Hosts
  - Virtual Targets
  - Work Managers
  - Concurrent Templates
  - Resource Management

How do I...?

- Create Managed Servers
- Clone servers
- Delete Managed Servers
- Delete the Administration Server
- Start and stop servers
- View objects in the JNDI tree

System Status

Health of Running Servers as of: 6:00 PM

Configuration Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration. This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Clone Delete

Showing 1 to 9 of 9 Previous Next

Name	Type	Cluster	Machine	State	Health	Listen Port
AdminServer(admin)	Configured		platoinfra_Machine	RUNNING	OK	7001
APl_Gateway_Server	Configured	APl_Gateway_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7005
Config_Server	Configured	Config_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7003
Discovery_Server	Configured	Discovery_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7004
Plato_Alerts_Management_Server	Configured	Plato_Alerts_Management_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7010
Plato_Batch_Server	Configured	Plato_Batch_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7009
Plato_Feed_Server	Configured	Plato_Feed_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7008
Plato_Orch_Server	Configured	Plato_Orch_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7007
Plato_UI_Config_Server	Configured	Plato_UI_Config_Cluster	platoinfra_Machine	SHUTDOWN	Not reachable	7006

New Clone Delete

Showing 1 to 9 of 9 Previous Next

- Click **Clusters** and verify the **Clusters (Filtered - More Columns Exist)** table.

The **Summary of Clusters** screen displays.

Figure 2-19 Summary of Clusters

Change Center

View changes and restarts

Click the **Lock & Edit** button to modify, add or delete items in this domain.

Lock & Edit  
Release Configuration

Domain Structure

platoinfra\_domain

- Domain Partitions
- Environment
- Servers
  - Coherence Clusters
  - Resource Groups
  - Resource Group Templates
  - Machines
  - Virtual Hosts
  - Virtual Targets
  - Work Managers
  - Concurrent Templates
  - Resource Management
- Clusters

How do I...?

- Configure clusters
- Assign server instances to clusters
- Configure server migration in a cluster
- Configure cross-cluster replication
- Create dynamic clusters

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: platoinfra\_domain

Home > Summary of Deployments > Summary of Servers > Summary of Clusters

Summary of Clusters

This page summarizes the clusters that have been configured in the current WebLogic Server domain. A cluster defines groups of WebLogic Server servers that work together to increase scalability and reliability.

Customize this table

Clusters (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Clone Delete

Showing 1 to 8 of 8 Previous Next

Name	Cluster Address	Cluster Messaging Mode	Migration Basis	Default Load Algorithm	Replication Type	Cluster Broadcast Channel	S
APl_Gateway_Cluster		Unicast	Database	Round Robin	(None)		A
Config_Cluster		Unicast	Database	Round Robin	(None)		C
Discovery_Cluster		Unicast	Database	Round Robin	(None)		D
Plato_Alerts_Management_Cluster		Unicast	Database	Round Robin	(None)		P
Plato_Batch_Cluster		Unicast	Database	Round Robin	(None)		P
Plato_Feed_Cluster		Unicast	Database	Round Robin	(None)		P
Plato_Orch_Cluster		Unicast	Database	Round Robin	(None)		P
Plato_UI_Config_Cluster		Unicast	Database	Round Robin	(None)		P

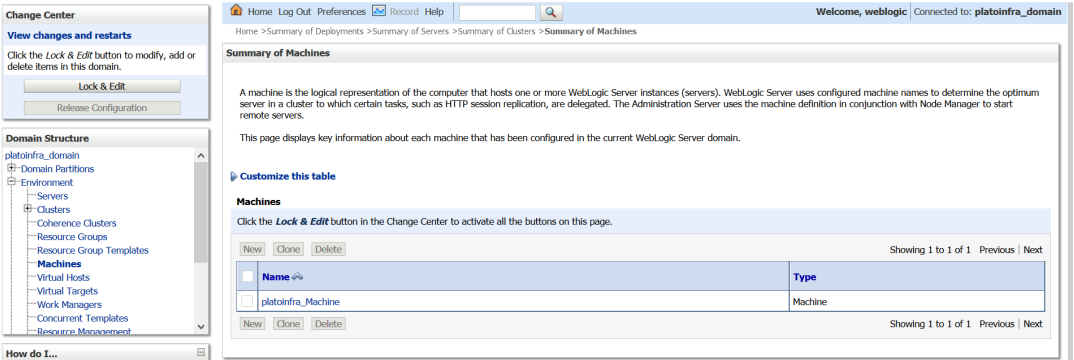
New Clone Delete

Showing 1 to 8 of 8 Previous Next

- Click **Machines** and verify the **Machines (Filtered - More Columns Exist)** table.

The **Summary of Machines** screen displays.

Figure 2-20 Summary of Machines



# 3

## Datasource Creation

This topic provides the systematic instruction to create datasource.

- [Create Datasource](#)

### 3.1 Create Datasource

Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

Perform the following steps to create data source:

1. Start **AdminServer** and **Node Manager**.

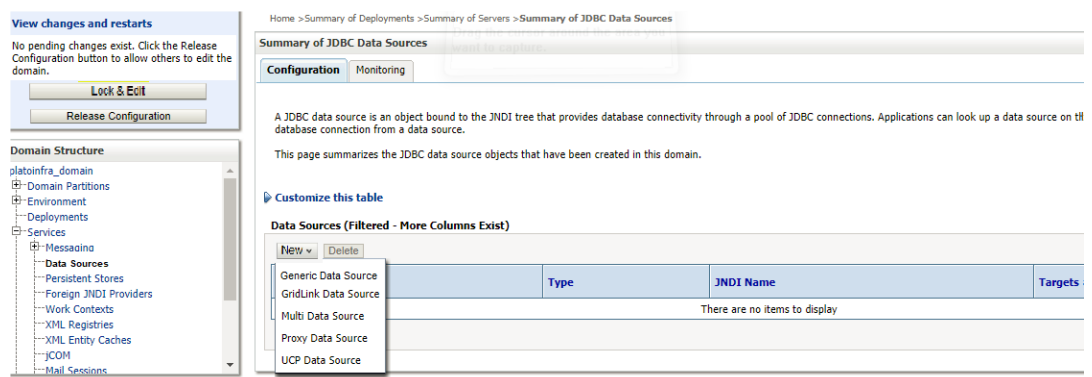
#### Note

Make sure that all the managed servers (targets) are in running mode.

2. On **Domain Structure**, click **Services**. Under **Services**, click **Data Sources**.
3. On the **Data Sources (Filtered - More Columns Exist)** table, click **New** and select **Generic Data Source** from drop-down list.

The **Summary of JDBC Data Sources** screen displays.

**Figure 3-1 Summary of JDBC Data Source**



4. Specify the **Name** and **JNDI Name** on **Create a New JDBC Data Source** and click **Next**.

The **Create a New JDBC Data Source** screen displays.

Figure 3-2 Create a New JDBC Data Source

**Create a New JDBC Data Source**

Back Next Finish Cancel

**JDBC Data Source Properties**

The following properties will be used to identify your new JDBC data source.

\* Indicates required fields

What would you like to name your new JDBC data source?

\* Name: PLATO

What scope do you want to create your data source in ?

Scope: Global ▼

What JNDI name would you like to assign to your new JDBC Data Source?

JNDI Name: jdbc/PLATO

What database type would you like to select?

Database Type: Oracle ▼

Back Next Finish Cancel

- On **Database Driver**, select **Thin for Service Connections (Instant)** from drop-down list and click **Next**.

The **Create a New JDBC Data Source - Database Driver** screen displays.

Figure 3-3 Create a New JDBC Data Source - Database Driver

**Create a New JDBC Data Source**

Back Next Finish Cancel

**JDBC Data Source Properties**

The following properties will be used to identify your new JDBC data source.

Database Type: Oracle

What database driver would you like to use to create database connections? Note: \* indicates that the driver is explicitly supported by Oracle WebLogic Server.

Database Driver: \*Oracle's Driver (Thin) for Service connections; Versions:Any ▼

Back Next Finish Cancel

- Uncheck the **Supports Global Transactions** and click **Next**.

The **Create a New JDBC Data Source - Transaction Options** screen displays.

**Figure 3-4 Create a New JDBC Data Source - Transaction Options**

Home > Summary of Deployments > Summary of Servers > Summary of JDBC Data Sources

Create a New JDBC Data Source

Back Next Finish Cancel

**Transaction Options**

You have selected non-XA JDBC driver to create database connection in your new data source.

Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.

☐ Supports Global Transactions

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the *Logging Last Resource (LLR)* transaction option. Emulate Two-Phase Commit.

☐ Logging Last Resource

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 participate in the global transaction.

☐ Emulate Two-Phase Commit

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the one-phase commit transaction processing. With this option, the data source can participate in the global transaction.

☒ One-Phase Commit

Back Next Finish Cancel

- Specify the required fields on **Connection Properties**.

The **Create a New JDBC Data Source - Connection Properties** screen displays.

**Figure 3-5 Create a New JDBC Data Source - Connection Properties**

Home > Summary of Deployments > Summary of Servers > Summary of JDBC Data Sources

Create a New JDBC Data Source

Back Next Finish Cancel

**Connection Properties**

Define Connection Properties.

What is the name of the database you would like to connect to?

**Database Name:**

What is the name or IP address of the database server?

**Host Name:**

What is the port on the database server used to connect to the database?

**Port:**

What database account user name do you want to use to create database connections?

**Database User Name:**

What is the database account password to use to create database connections?

**Password:**

**Confirm Password:**

Additional Connection Properties:

**oracle.jdbc.DRCPConnectionClass:**

- Click **Next** to test connection.

The **Connection test succeeded** message displays.

Figure 3-6 Connection test succeeded - Message

Home > Summary of Deployments > Summary of Servers > Summary of JDBC Data Sources

**Messages**

✓ Connection test succeeded.

**Create a New JDBC Data Source**

Test Configuration | Back | Next | Finish | Cancel

**Test Database Connection**

Test the database availability and the connection properties you provided.

What is the full package name of JDBC driver class used to create database connections in the connection pool?

(Note that this driver class must be in the classpath of any server to which it is deployed.)

**Driver Class Name:**

9. Select the target **Servers** and **Clusters** to deploy the data source and click **Next**.

Figure 3-7 Servers and Clusters

platonra\_domain

- Domain Partitions
- Environment
  - Servers
  - Clusters
    - Coherence Clusters
    - Resource Groups
    - Resource Group Templates
    - Machines
    - Virtual Hosts
    - Virtual Targets
    - Work Managers
    - Concurrent Templates
    - Resource Management

**How do I...**

- Create JDBC generic data sources
- Create LLR-enabled JDBC data sources

**System Status**

Health of Running Servers as of 6:15 PM

Failed (0)	OK (1)
Critical (0)	
Overloaded (0)	
Warning (0)	

**Servers**

☐ AdminServer

**Clusters**

☒ Api\_Gateway\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Api\_Gateway\_Server

☒ Config\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Config\_Server

☒ Discovery\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Discovery\_Server

☒ Plato\_Alerts\_Management\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Plato\_Alerts\_Management\_Server

☒ Plato\_Batch\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Plato\_Batch\_Server

☒ Plato\_Feed\_Cluster

☐ All servers in the cluster

☒ Part of the cluster

☒ Plato\_Feed\_Server

Microsoft Edge

10. Go to **Summary of JDBC Data Sources**.
11. On the **Data Sources (Filtered - More Columns Exist)** table, verify the **JNDI Name** and **Targets**.

Figure 3-8 Summary of JDBC Data Source - Configuration

**Summary of JDBC Data Sources**

**Configuration** | Monitoring

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

[Customize this table](#)

**Data Sources (Filtered - More Columns Exist)**

New Delete Showing 1 to 1 of 1 Previous Next

Name	Type	JNDI Name	Targets
PLATO	Generic	jdbc/PLATO	Api_Gateway_Server, Config_Server, Discovery_Server, Plato_Alerts_Management_Server, Plato_Batch_Server, Plato_Feed_Server, ...

New Delete Showing 1 to 1 of 1 Previous Next

12. On the **Change Center**, click **Activate Changes** once the details are confirmed.  
All the changes are activated.

Figure 3-9 Change Center

**Change Center**

**View changes and restarts**

Pending changes exist. They must be activated to take effect.

Activate Changes

Undo All Changes

**Domain Structure**

platoinfra\_domain

Domain Partitions

Home Log Out Preferences Record Help

Home > Summary of Deployments > Summary of Servers > Summary of JDBC Data Sources

**Summary of JDBC Data Sources**

**Configuration** | Monitoring

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

Figure 3-10 Changes - Success Message

**Change Center**

**View changes and restarts**

Click the **Lock & Edit** button to modify, add or delete items in this domain.

Lock & Edit

Release Configuration

**Domain Structure**

Coherence Clusters

Resource Groups

Resource Group Templates

Machines

Virtual Hosts

Virtual Targets

Work Managers

Concurrent Templates

Resource Management

Startup and Shutdown Classes

Deployments

Services

Messaging

**Data Sources**

How do I...

- Create JDBC generic data sources
- Create JDBC GridLink data sources
- Create JDBC OCI data sources

Home Log Out Preferences Record Help

Welcome, weblogic Connected to: platoinfra\_domain

Home > Summary of Deployments > Summary of Servers > Summary of Clusters > Summary of Machines > Summary of JDBC Data Sources

**Messages**

All changes have been activated. No restarts are necessary.

**Summary of JDBC Data Sources**

**Configuration** | Monitoring

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a pool of JDBC connections. Applications can look up a data source on the JNDI tree and then borrow a database connection from a data source.

This page summarizes the JDBC data source objects that have been created in this domain.

[Customize this table](#)

**Data Sources (Filtered - More Columns Exist)**

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Delete Showing 1 to 1 of 1 Previous Next

Name	Type	JNDI Name	Targets
PLATO	Generic	jdbc/PLATO	Api_Gateway_Server, Config_Server, Discovery_Server, Plato_Alerts_Management_Server, Plato_Batch_Server, Plato_Feed_Server, ...

New Delete Showing 1 to 1 of 1 Previous Next



# 4

## Deploy Application

This topic provides the systematic instructions to deploy the application.

- [Deploy Application](#)

### 4.1 Deploy Application

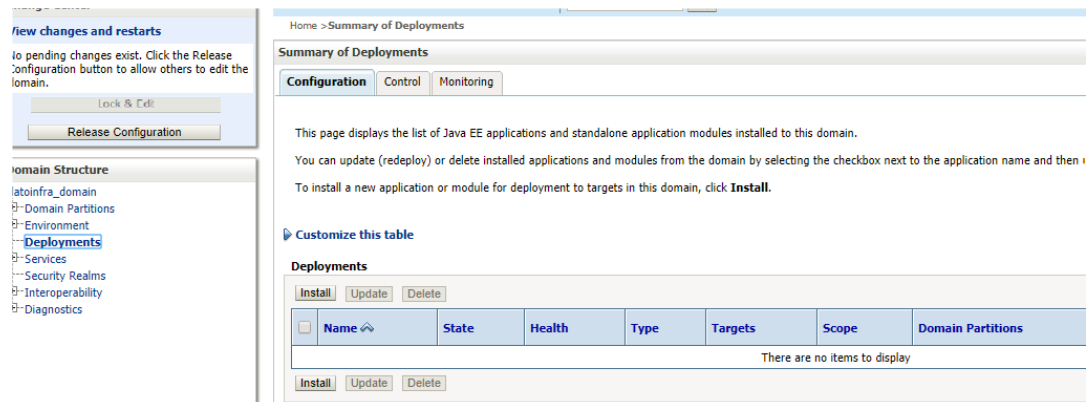
Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

The steps for deploying archives as an application in WebLogic are the same for all of the above except the managed server and the domain, where we deploy differs.

1. Navigate to left menu and click **Domain Structure**.
2. On **Domain Structure**, click **Deployments**.

The **Summary of Deployments** screen displays.

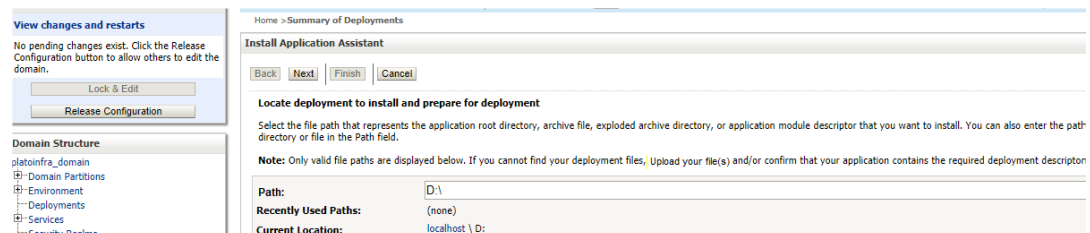
**Figure 4-1 Summary of Deployments**



3. On the **Change Center**, click **Lock and Edit**.
4. On the **Deployments** table, click **Install**.

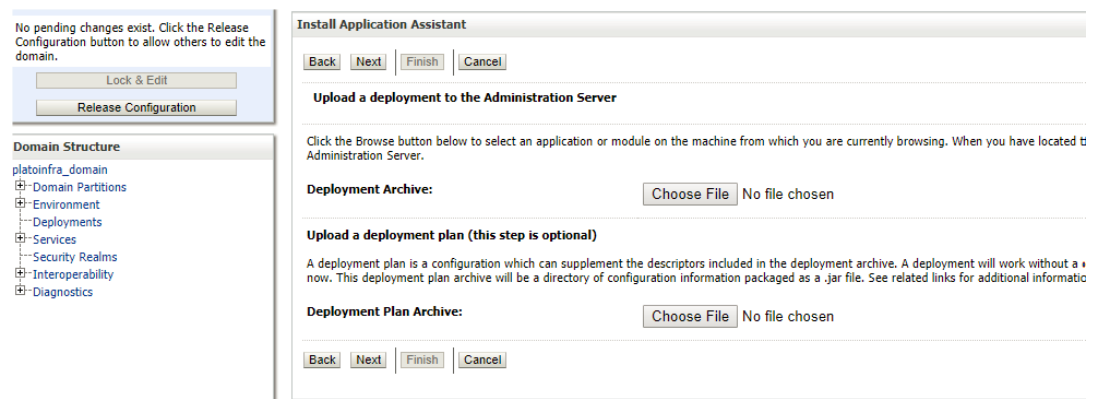
The **Install Application Assistant** screen displays.

**Figure 4-2 Install Application Assistant**



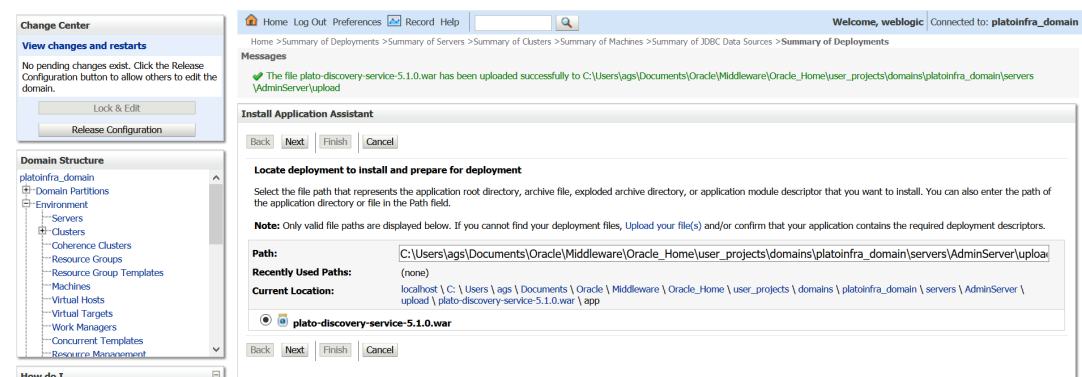
- Click **Upload your file(s)** to select archive. On **Deployment Archive**, select **Choose File**.

**Figure 4-3 Install Application Assistant**



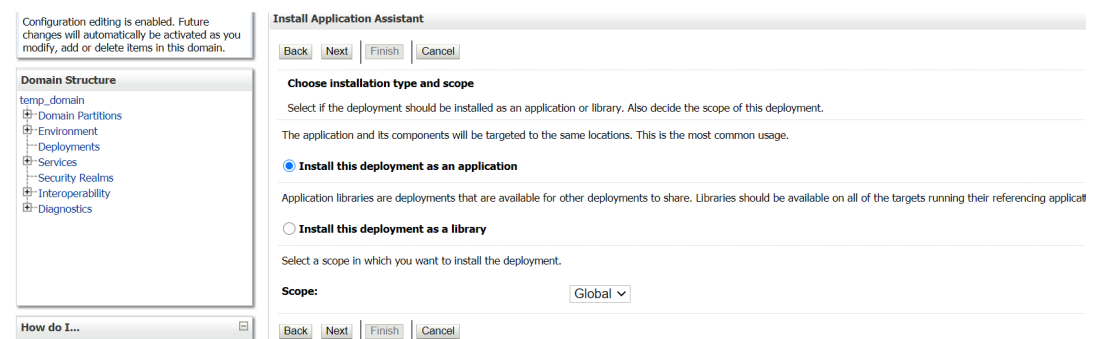
- Once the Archive is uploaded, click **Next**.  
The file is uploaded successfully.

**Figure 4-4 File Upload - Success Message**



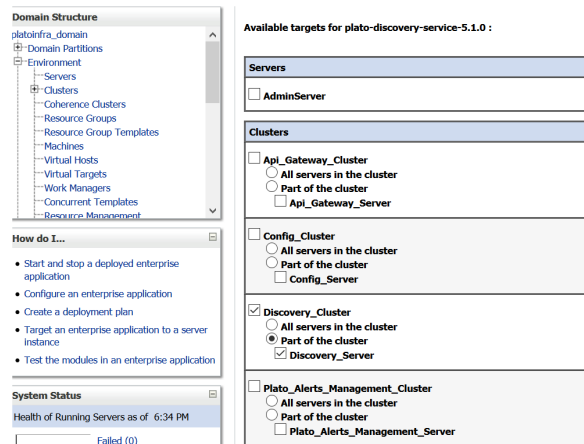
- Click **Next**.
- Select **Install this deployment as an application** and click **Next**.

**Figure 4-5 Install Application Assistant**



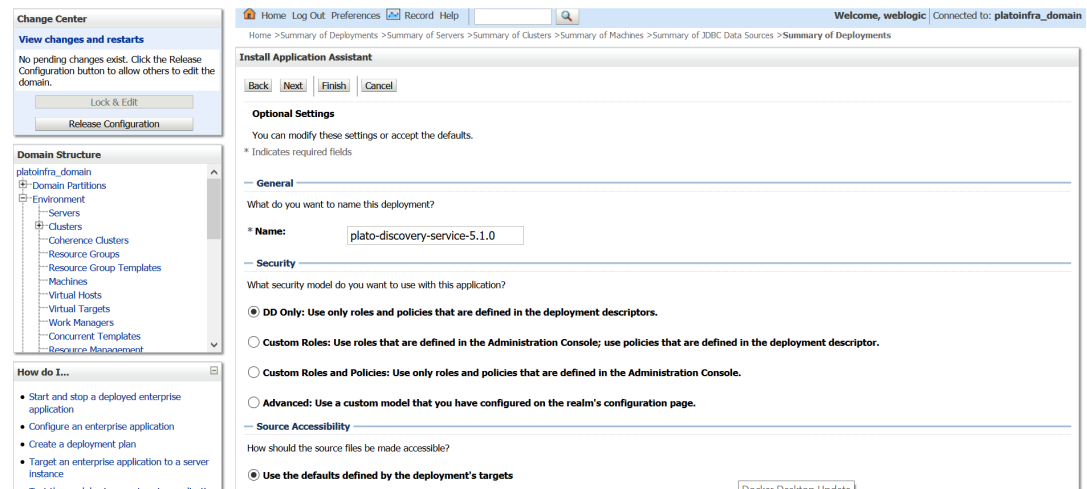
- Select the target **Servers** and **Clusters** to deploy.

Figure 4-6 Available targets



10. Click Next.

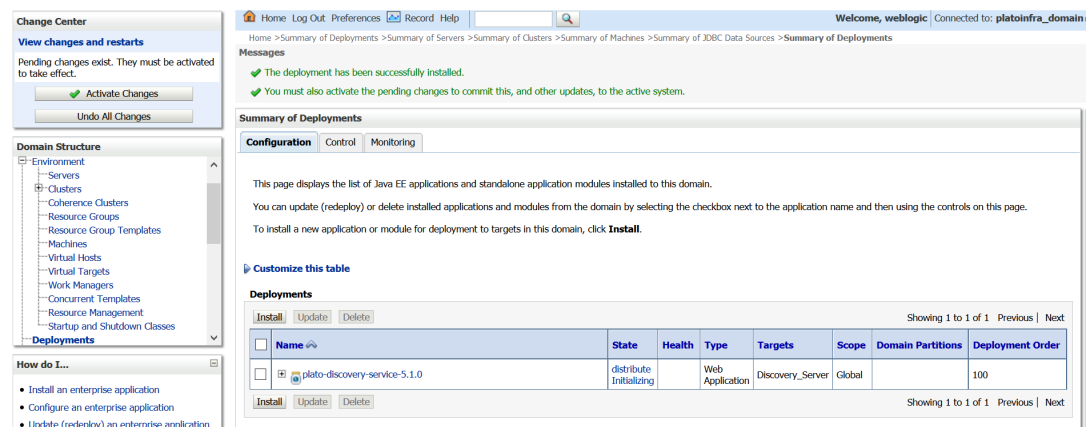
Figure 4-7 Install Application Assistant



11. Click Finish.

The deployment is successfully completed.

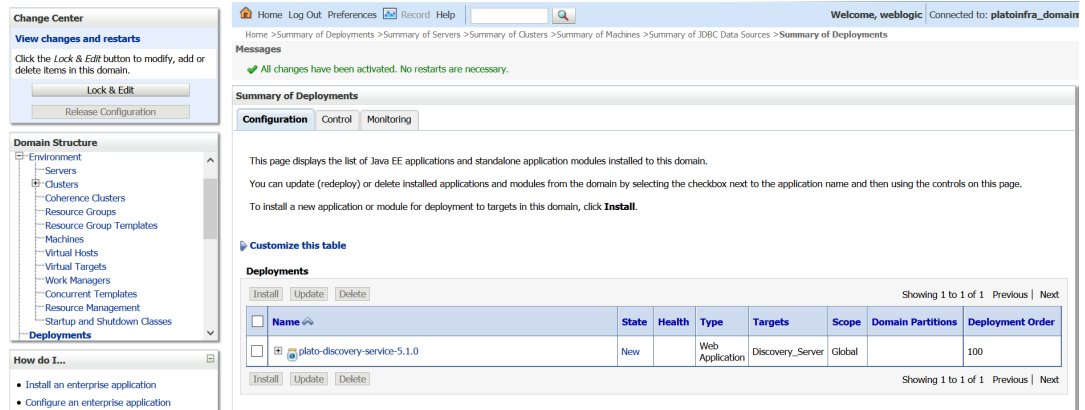
Figure 4-8 Deployment - Success Message



12. On **Change Center**, click **Activate Changes**.

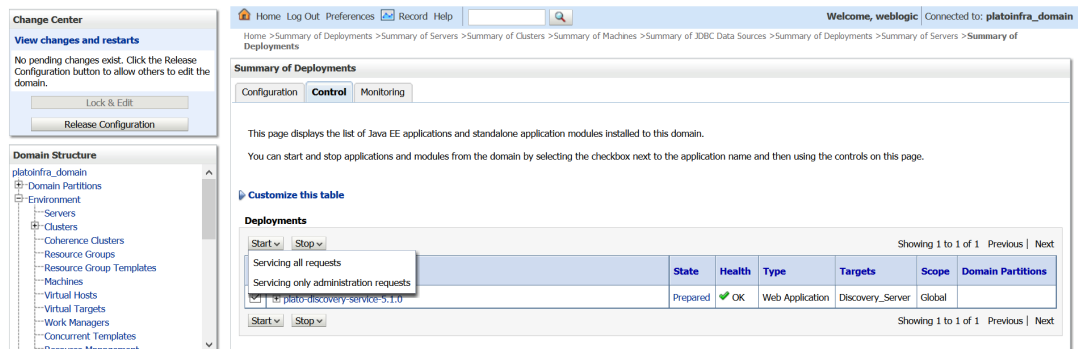
All the changes are activated.

**Figure 4-9 Activate Changes - Success Message**



13. On the **Summary of Deployments**, click **Control** to change the status from prepared to active.

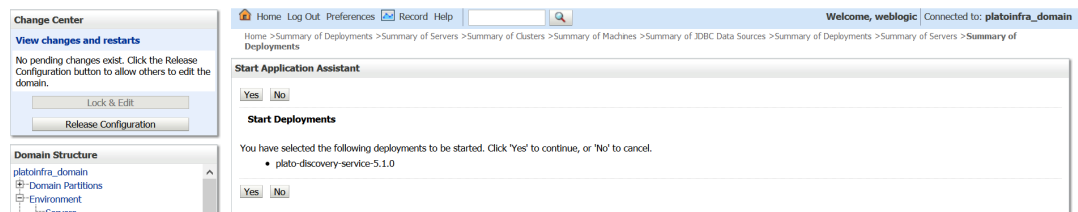
**Figure 4-10 Summary of Deployments - Control**



14. On **Deployments** table, select the server. Click **Start** and select **Servicing all requests** from the drop-down list.

**Start Application Assistant** screen displays.

**Figure 4-11 Start Application Assistant**



15. Click **Yes**.
16. The status is displayed as **Active** in the state column.

Figure 4-12 Summary of Deployments - Configuration

Change Center

View changes and restarts

No pending changes exist. Click the Release Configuration button to allow others to edit the domain.

Lock & Edit

Release Configuration

Domain Structure

Environment

- Servers
- Clusters
  - Coherence Clusters
  - Resource Groups
  - Resource Group Templates
- Machines
- Virtual Hosts
- Work Managers
- Concurrent Templates
- Resource Management
- Startup and Shutdown Classes

Deployments

How do I...

Home Log Out Preferences Record Help

Welcome, weblogic | Connected to: platoinfra\_domain

Home > Summary of Clusters > Summary of Machines > Summary of JDBC Data Sources > Summary of Deployments > Summary of Servers > Summary of Deployments > Summary of Servers > Discovery\_Server > Summary of Servers > Summary of Deployments

Summary of Deployments

Configuration Control Monitoring

This page displays the list of Java EE applications and standalone application modules installed to this domain.


You can update (redeploy) or delete installed applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on this page.

To install a new application or module for deployment to targets in this domain, click **Install**.

Customize this table

Install Update Delete

Showing 1 to 1 of 1 Previous Next

<input type="checkbox"/>	Name ↕	State	Health	Type	Targets	Scope	Domain Partitions	Deployment Order
<input type="checkbox"/>	 plato-discovery-service-5.1.0	Active	OK	Web Application	Discovery_Server	Global		100

Install Update Delete

Showing 1 to 1 of 1 Previous Next

# 5

## Undeploy Application

This topic provides the systematic instructions to undeploy the application.

- [Undeploy Application](#)

### 5.1 Undeploy Application

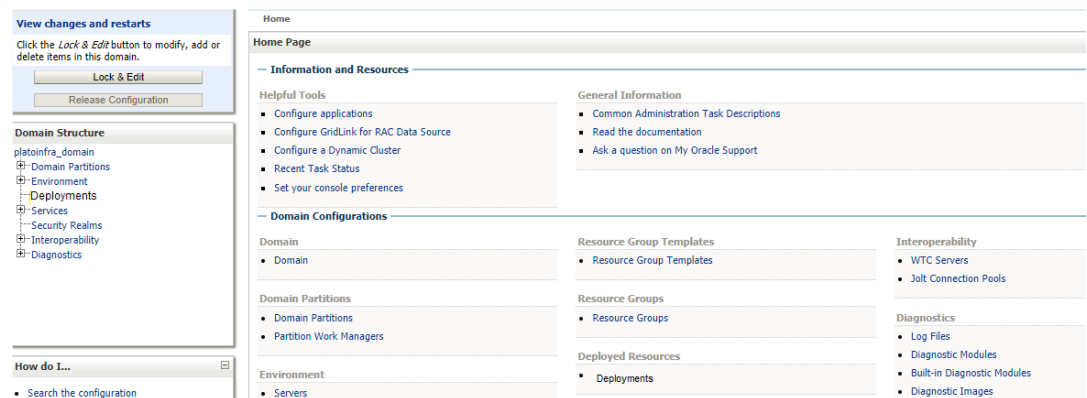
Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

Perform the following steps to undeploy the application:

1. On **Domain Structure**, click **Deployments**.

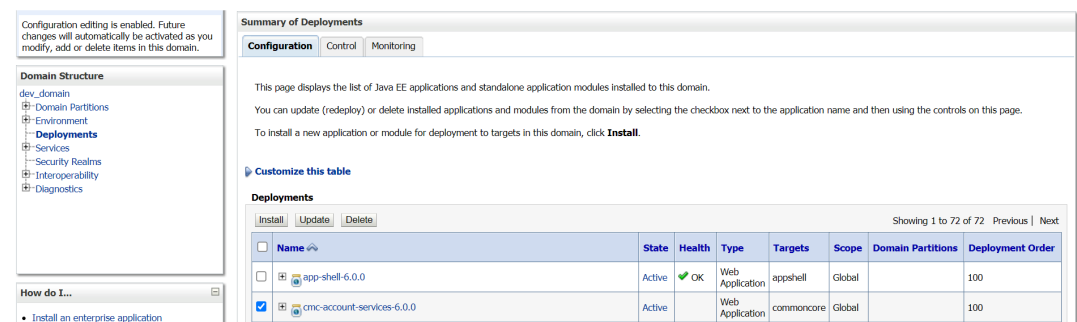
The **Summary of Deployments** screen displays.

**Figure 5-1 Summary of Deployments**



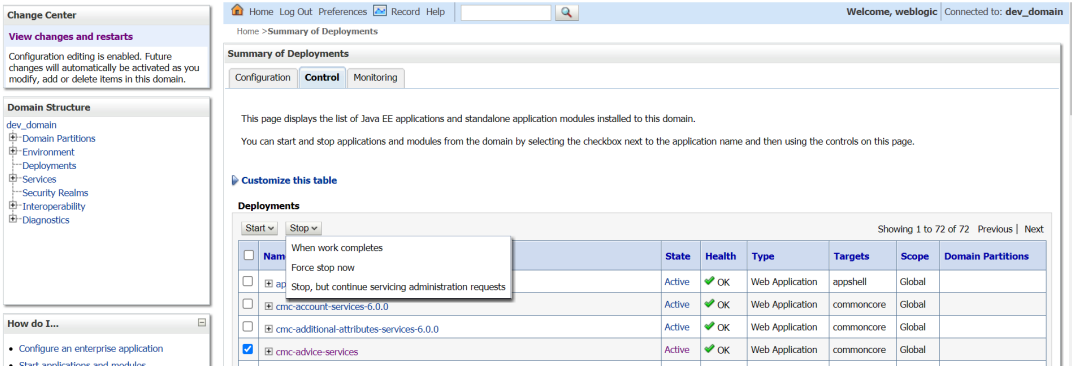
2. Click **Lock and Edit**.

**Figure 5-2 Lock and Edit**



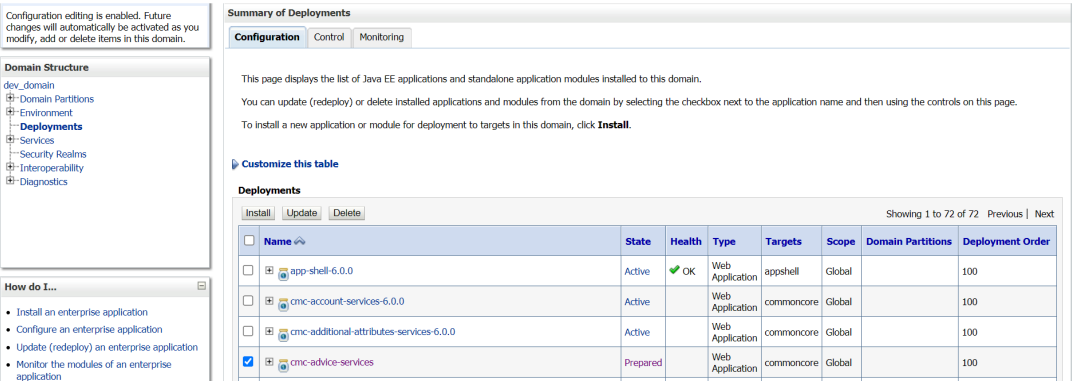
3. On the **Deployments** table, select the service that needs to be undeployed in Deployments.
4. Go to **Control**. On the **Deployments** table, click **Stop** and select **Force stop now** from the drop-down list.

Figure 5-3 Summary of Deployments - Control



5. Once the status is changed to **Prepared** state, go to **Configuration**.

Figure 5-4 Summary of Deployments



6. Select the service again and click **Delete** to undeploy the service.

# 6

## Restart Servers

This topic provides the systematic instruction to restart the server.

- [Restart Servers](#)

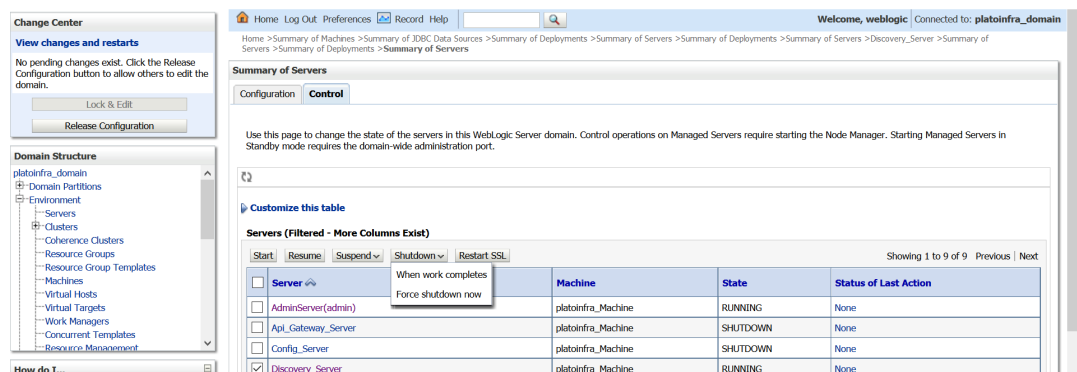
### 6.1 Restart Servers

Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

Perform the following steps to restart the server:

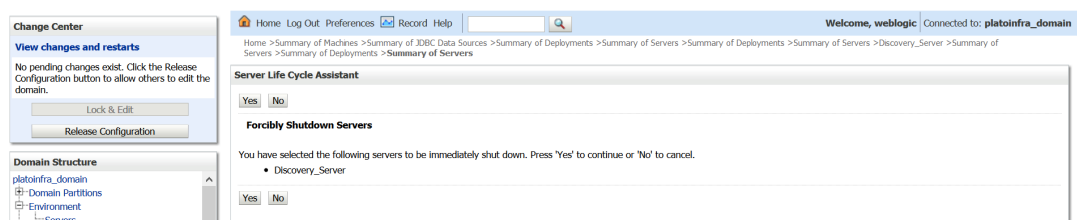
1. On Domain Structure, click **Environment**. Under **Environment**, click **Servers**.  
The **Summary of Servers** screen displays.
2. On the **Summary of Servers** screen, click **Control**.  
The **Summary of Servers - Control** screen displays.

**Figure 6-1 Summary of Servers - Control**



3. On the **Servers (Filtered - More Columns Exist)** table, select the server. Click **Shutdown** and select the required option from the drop-down list.  
The **Server Life Cycle Assistant** screen displays.

**Figure 6-2 Server Life Cycle Assistant**



4. Click **Yes** to confirm shutdown.  
A request is sent to immediately shut down the selected server.



Figure 6-3 Request Sent - Success Message

The screenshot shows the Oracle WebLogic Console interface. On the left, the 'Change Center' panel displays 'View changes and restarts' with a message: 'No pending changes exist. Click the Release Configuration button to allow others to edit the domain.' Below this is the 'Domain Structure' tree, showing a hierarchy from 'platoinfra\_domain' down to 'Servers'. The 'How do I...' panel lists 'Start and stop servers' and 'Start Managed Servers from the...'. The main content area shows a 'Summary of Servers' table with columns: Server, Machine, State, and Status of Last Action. The table lists four servers: AdminServer(admin), Api\_Gateway\_Server, Config\_Server, and Discovery\_Server. The Discovery\_Server is highlighted in blue, indicating it is the selected server. A message at the top states: 'A request has been sent to immediately shut down the selected servers.'

Server	Machine	State	Status of Last Action
AdminServer(admin)	platoinfra_Machine	RUNNING	None
Api_Gateway_Server	platoinfra_Machine	SHUTDOWN	None
Config_Server	platoinfra_Machine	SHUTDOWN	None
Discovery_Server	platoinfra_Machine	FORCE_SHUTTING_DOWN	TASK IN PROGRESS

- On the **Servers (Filtered - More Columns Exist)** table, select the server and click **Start**. The **Server Life Cycle Assistant** screen displays.

Figure 6-4 Server Life Cycle Assistant

The screenshot shows the 'Server Life Cycle Assistant' screen. It has a 'Yes' button and a 'No' button. Below the buttons, it says 'Start Servers'. A message states: 'You have selected the following servers to be started. Press 'Yes' to continue or 'No' to cancel.' Below this, it lists 'Discovery\_Server' as the selected server. At the bottom, there are 'Yes' and 'No' buttons.

- Click **Yes** to confirm the action.
  - A request is sent to the node manager to start the selected servers.

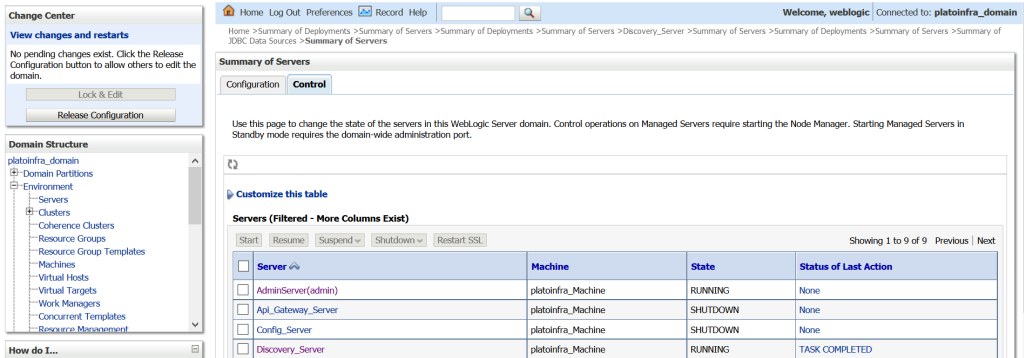
Figure 6-5 Resquest Sent - Success Message

The screenshot shows the Oracle WebLogic Console interface. On the left, the 'Change Center' panel displays 'View changes and restarts' with a message: 'No pending changes exist. Click the Release Configuration button to allow others to edit the domain.' Below this is the 'Domain Structure' tree, showing a hierarchy from 'platoinfra\_domain' down to 'Servers'. The 'How do I...' panel lists 'Start and stop servers' and 'Start Managed Servers from the...'. The main content area shows a 'Summary of Servers' table with columns: Server, Machine, State, and Status of Last Action. The table lists four servers: AdminServer(admin), Api\_Gateway\_Server, Config\_Server, and Discovery\_Server. The Discovery\_Server is highlighted in blue, indicating it is the selected server. A message at the top states: 'A request has been sent to the Node Manager to start the selected servers.'

Server	Machine	State	Status of Last Action
AdminServer(admin)	platoinfra_Machine	RUNNING	None
Api_Gateway_Server	platoinfra_Machine	SHUTDOWN	None
Config_Server	platoinfra_Machine	SHUTDOWN	None
Discovery_Server	platoinfra_Machine	SHUTDOWN	TASK IN PROGRESS

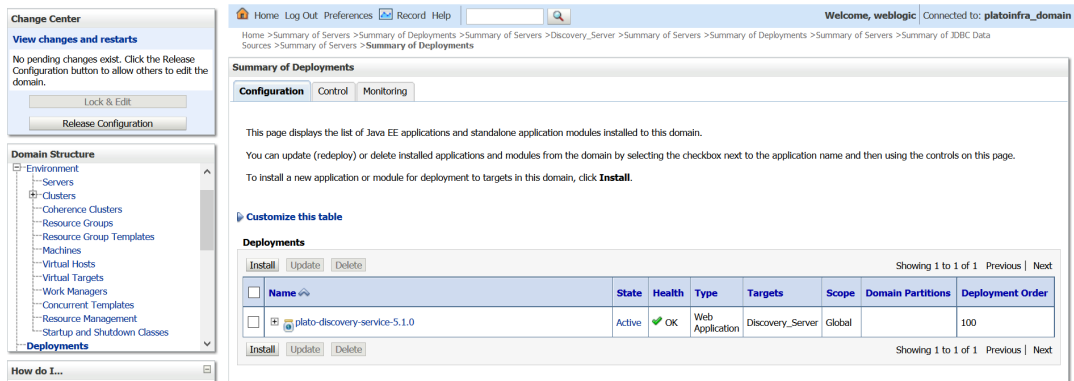
- All the requested servers are running in the state column.

Figure 6-6 Summary of Servers - Control



7. When all requested servers are running, go to **Summary of Deployments** and check if deployments status is active.

Figure 6-7 Summary of Deployments



# 7

## Check Port Number

This topic describes the systematic instructions to check the port number.

Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

1. On **Domain Structure**, click **Environment**. Under **Environment**, click **Servers**.

The **Summary of Servers** screen displays.

**Figure 7-1 Summary of Servers**

<input type="checkbox"/>	Name ↕	Type	Cluster	Machine	State	Health	Listen Port
<input type="checkbox"/>	AdminServer(admin)	Configured			RUNNING	✓ OK	7020
<input type="checkbox"/>	managed_server1	Configured		Machine1	RUNNING	✓ OK	7023

2. On the **Servers (Filtered - More Columns Exist)** table, check all the listed servers.

# 8

## WebLogic Embedded LDAP Setup

This topic provides the information to configure the Weblogic Embedded LDAP server for Oracle Banking Microservices Architecture

- [Configure WebLogic LDAP](#)  
This topic provides systematic instructions to configure WebLogic LDAP Setup.
- [Create Users](#)  
This topic provides systematic instructions to create users.
- [Oracle Banking Microservices Architecture Security Config Table Entries](#)  
This topic describes about Oracle Banking Microservices Architecture Security Config Table Entries.
- [Workaround for plato-api-gateway Service Deployment Issue with OJDBC11 Background](#)  
This topic provides the information about the Workaround for plato-api-gateway Service Deployment Issue with OJDBC11 Background.

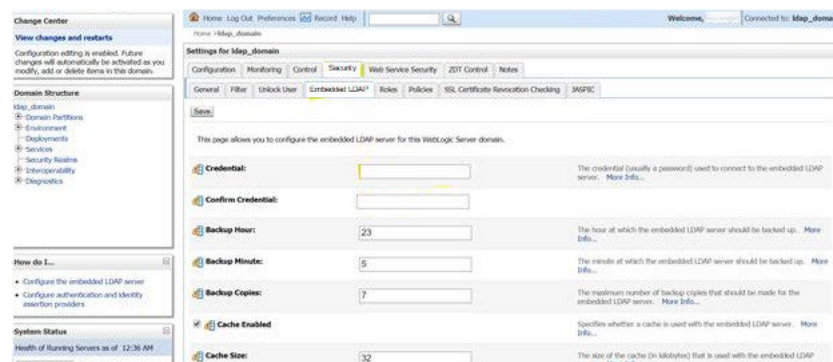
### 8.1 Configure WebLogic LDAP

This topic provides systematic instructions to configure WebLogic LDAP Setup.

Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

1. Navigate to left panel and click domain name.
2. Under **Settings for Idap\_domain**, click **Security** and **Embedded LDAP**.

**Figure 8-1 Settings for Idap\_domain**



3. Set the **Credential** for WebLogic Embedded LDAP store.

#### Note

This is needed in the Security Config table.

## 8.2 Create Users

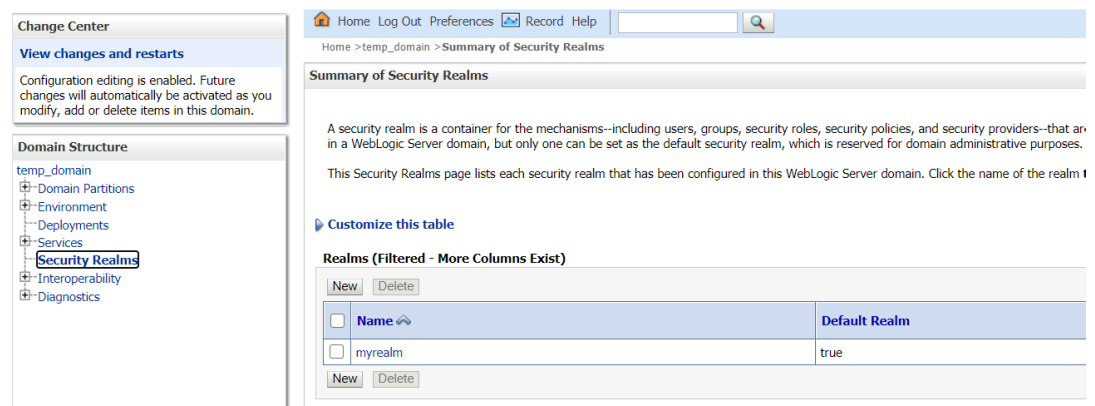
This topic provides systematic instructions to create users.

Specify **User ID** and **Password** to login to **Oracle WebLogic Administration Console**.

1. On **Domain Structure**, click **Security Realms**.

The **Summary of Security Realms** screen displays.

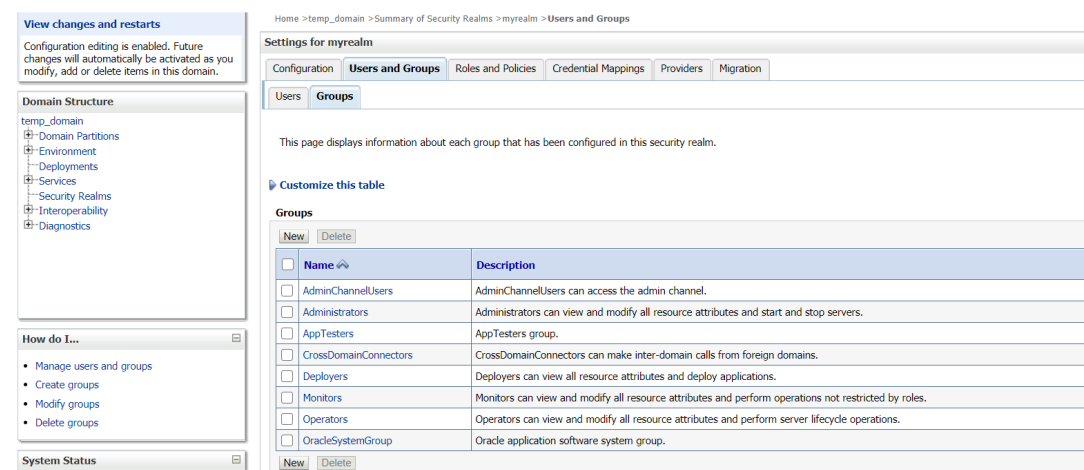
**Figure 8-2 Summary of Security Realms**



2. On the **Realms (Filtered - More Columns Exist)** table, click **myrealm**.

The **Setting of myrealm** screen displays.

**Figure 8-3 Settings for myrealm**



3. Under **Settings for myrealm**, click **Users and Groups**
4. Click **Groups**. On the **Groups** table, Click **New**.

The **Create a New User** screen displays.

**Figure 8-4 Create a New User**

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

**Domain Structure**

- temp\_domain
  - Domain Partitions
  - Environment
  - Deployments
  - Services
  - Security Realms
  - Interoperability
  - Diagnostics

**How do I...**

- Create users
- Modify users
- Delete users
- Create groups
- Manage users and groups

**System Status**

Health of Running Servers as of: 12:48 AM

Failed (0)

**Create a New User**

OK Cancel

**User Properties**

The following properties will be used to identify your new user.

\* Indicates required fields

What would you like to name your new user?

\* Name: testuser

How would you like to describe the new user?

Description: user for testing

Please choose a provider for the user.

Provider: DefaultAuthenticator

The password is associated with the login name for the new user.

\* Password: \*\*\*\*\*

\* Confirm Password: \*\*\*\*\*

OK Cancel

- Specify all the required details and click **OK**.  
The new group is created.
- Go to **Settings for myrealm**, click **Users**.

**Figure 8-5 Settings for myrealm**

**Change Center**

**View changes and restarts**

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

**Domain Structure**

- temp\_domain
  - Domain Partitions
  - Environment
  - Deployments
  - Services
  - Security Realms
  - Interoperability
  - Diagnostics

**How do I...**

- Create users
- Modify users
- Delete users
- Create groups
- Manage users and groups

**System Status**

Health of Running Servers as of: 12:48 AM

Failed (0)

**Settings for myrealm**

Home Log Out Preferences Record Help

Home > temp\_domain > Summary of Security Realms > myrealm > Users and Groups

**Settings for myrealm**

Configuration Users and Groups Roles and Policies Credential Mappings Providers Migration

**Users** Groups

This page displays information about each user that has been configured in this security realm.

**Customize this table**

**Users (Filtered - More Columns Exist)**

New Delete

Name	Description
LCMUser	This is the default service account for WebLogic Server Lifecycle Manager configuration updates.
OracleSystemUser	Oracle application software system user.
weblogic	This user is the default administrator.

New Delete

- On the **Users** table, Click **New**.  
The **Create a New User** screen displays.

**Figure 8-6 Create a New User**

Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.

**Domain Structure**

- temp\_domain
  - Domain Partitions
  - Environment
  - Deployments
  - Services
  - Security Realms
  - Interoperability
  - Diagnostics

**How do I...**

- Create users
- Modify users
- Delete users
- Create groups
- Manage users and groups

**System Status**

Health of Running Servers as of: 12:48 AM

Failed (0)

**Create a New User**

OK Cancel

**User Properties**

The following properties will be used to identify your new user.

\* Indicates required fields

What would you like to name your new user?

\* Name: testuser

How would you like to describe the new user?

Description: user for testing

Please choose a provider for the user.

Provider: DefaultAuthenticator

The password is associated with the login name for the new user.

\* Password: \*\*\*\*\*

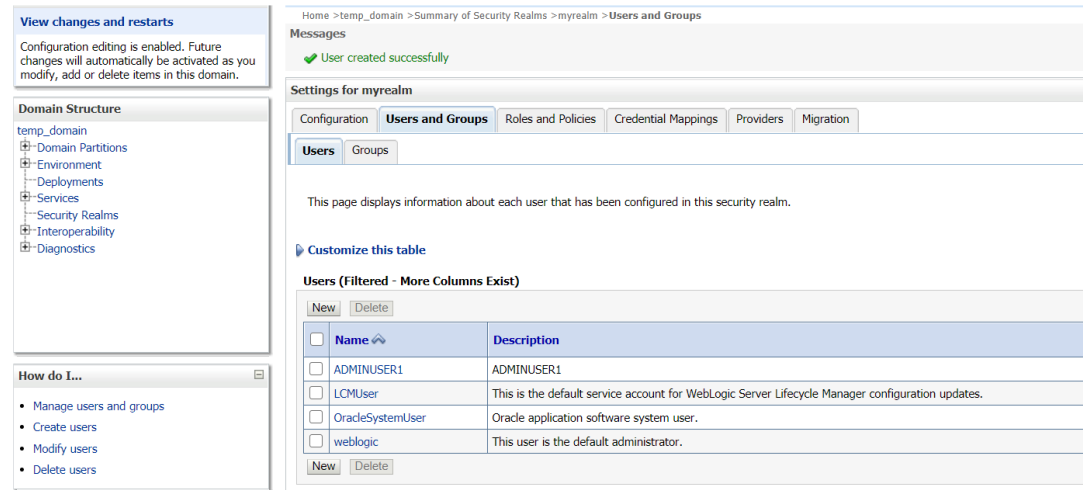
\* Confirm Password: \*\*\*\*\*

OK Cancel

8. Specify all the required details and click **OK**.

The new user is created.

**Figure 8-7 User Creation- Success Message**

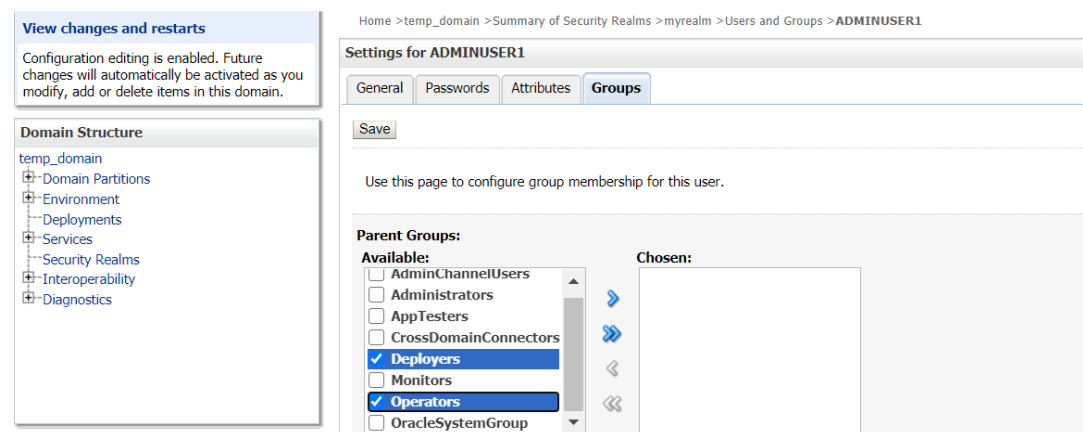


9. On the **Users (Filtered - More Columns Exist)** table, click on the newly created user to assign to some group.

The **Setting for ADMINUSER1** screen displays.

10. On **Setting for ADMINUSER1** (or whatever your user name is) window, click **Groups** and select the required groups to assign to the user and click single right button as shown below.

**Figure 8-8 Setting for ADMINUSER1**



11. Click **Save**.

The selected groups displays on **Chosen**.

**Figure 8-9 Setting for ADMINUSER1**

## 8.3 Oracle Banking Microservices Architecture Security Config Table Entries

This topic describes about Oracle Banking Microservices Architecture Security Config Table Entries.

Connection details for the embedded LDAP of WebLogic (assuming the admin server is running on 10.99.99.10:7001) are given below:

### Connection Details:

**URL:** ldap:// 10.99.99.10:7001

**Server Base:** dc={DOMAIN\_NAME} ( in our case it would be dc=ldap\_domain)

**User Search Base:** ou=people,ou=myrealm

**Server User:** cn=admin

**Server Credentials:** As setup in step Point 3 under 1.8.1

### Security Config Table Entries:

**Table 8-1 Security Config Table Entries:**

ID	VALUE	Description
LDAP_URL	ldap:// 10.99.99.10:7001	Valid LDAP Server address with port.
LDAP_SERVER_USER	cn=admin	LDAP server login username
LDAP_SERVER_BASE	dc=ldap_domain	LDAP Server Base
LDAP_SERVER_CREDENTIAL	ylksiMFfjVbfcA7Qheh8Q==	LDAP server credentials in encrypted form (For Encryption steps, refer to Encrypted Utility section below)
LDAP_USER_SEARCH_BASE	ou=people,ou=myrealm	LDAP User Search Base



**Table 8-1 (Cont.) Security Config Table Entries:**

ID	VALUE	Description
LDAP_PROVIDER	EMBEDDED_WEBLOGIC	Which LDAP Provider to be used. Also, if this row is not present in this table, then In-House Spring Plato LDAP will be used.

## 8.4 Workaround for plato-api-gateway Service Deployment Issue with OJDBC11 Background

This topic provides the information about the Workaround for plato-api-gateway Service Deployment Issue with OJDBC11 Background.

The plato-api-gateway service deployment may fail when using the default `ojdbc11` JAR provided with WebLogic 14.1.2. As a temporary workaround, you can manually replace the JDBC driver with version **21.11.0.0.0**.

### Temporary Workaround: Replace ojdbc11 with Version 21.11.0.0.0

#### 1. Locate and Backup Current Driver

Navigate to the existing `ojdbc11` JAR

location: `/scratch/obma/fmw/oracle_common/modules/oracle.jdbc`

Optional: Back up the current version of `ojdbc11.jar` for rollback.

#### 2. Replace JAR File

Download `ojdbc11` version **21.11.0.0.0** and place it as needed in the directory above, replacing the existing JAR.

# How to deploy Plato-Apigateway Router

This topic provides the systematic instructions to deploy the plato-apigateway router.

## Router deployment steps

The following services must be deployment in below order to setup router service:

### 1. Deploy plato-config-service

- a. Set placeholder -Dflyway.domain.placeholders.plato-apigateway-router.server.port=<new server port for plato-apigateway-router>

### 2. Deploy plato-ui-config-service

- a. set -Dflyway.domain.placeholders.apigateway.port=<new server port for plato-apigateway-router>
- b. set -Dflyway.domain.placeholders.apigateway.host=<server host for plato-apigateway-router>

### 3. Deploy plato-api-gateway

- a. Migrate existing OAuth users:

```
API for migration - /api-gateway/migrateOAuthUsers
Example: http://hostname:8080/api-gateway/migrateOAuthUsers
Authorization - jwtToken
Headers:
appId,userId,entityId
Body (Json): ["client1", "client2"] - Migrate selected list of clients
or
Body (Json): ["ALL"] -Migrate all clients.
```

### 4. Deploy plato-apigateway-router

```
java -jar plato-apigateway-router.jar --plato.services.config.uri=http://hostname:8001--
plato.service.logging.path=/logfilePath
```

--plato.services.config.uri - Config server URI which is referred by all other services.

--plato.service.logging.path - Path where log file(plato-apigateway-router.log) must be created. Specify the same path as that of other services.

We can enable SSL for plato-apigateway-router by providing:

```
--server.ssl.enabled=true
--server.ssl.key-store=C:/Users/KEYS/keytool/keystore.jks
--key-store-password=xxxx
--server.ssl.trust-store=C:/Users/KEYS/keytool/truststore.jks
--trust-store-password=xxxxx
--salt=xxxxx
```

**Note:** Passwords and salt must be encrypted value generated using respective toolkits.

Provide ssl certs of plato-api-gateway required for validation call when plato-api-gateway is deployed in different server.:

```
--apigateway.useServerSSLKeys=false
--apigateway.ssl.key-store=C:/Users/KEYS/keytool/keystore.jks
--apigateway.ssl.key-store-password=xxxx
--apigateway.ssl.trust-store=C:/Users/KEYS/keytool/truststore.jks
--apigateway.ssl.trust-store-password=xxxxx
```

**Note:** Above certificates can be different than that of plato-apigateway-route

we must also provide trust certificates as

```
--spring.cloud.gateway.httpclient.ssl.trusted-x509-certificates=C:/Users/KEYS/keytool/
keystore1.pem, C:/Users/KEYS/keytool/keystore2.pem
```

Note: Run this service with nohup command to that process will run on background

App-shell must point to plato-apigateway-router service. Update 'apigateway.url' by correcting it to "http://hostname:8080" - here 8080 is the port is configured for plato-apigateway-router.

### Generation pem file and encryption of secrets:

Use plato-security-toolkit to encrypt secrets ---key-store-password, --trust-store-password, --apigateway.ssl.key-store-password, --apigateway.ssl.trust-store-password and these encrypted values must be passed to router service.

#### Encryption of secrets:

To encrypt the passwords as per Oracle Standards, we recommend toolkit - plato-security-toolkit

Encrypted Password: m4Q1rbtegkWse2s7D2jKfw==

Usage: java -jar plato-security-toolkit-9.1.0.jar

Enter pass phrase: Test123

Enter Salt: 0.9412345671234567

#### Encryption of salt:

To encrypt --salt value used while generating encrypted secret. This encrypt salt must be passed to router service.

To encrypt the salt as per Oracle Standards, we recommend toolkit - plato-security-salt-encryption-toolkit

Usage: java -jar plato-security-salt-encryption-toolkit-9.1.0.jar

Enter Salt: 0.9412345671234567

Encrypted Password:

VmtjMWQxTnJOVlpPV0VaWFZrVndUMWxYTVU1bFJsSlpZMFZLYTFaVVZrWldWbWgzVvRG  
S1JsWnFVVD9

### PEM file from keystore

```
keytool -exportcert -alias localhost -keystore keystore.jks -rfc -file keystore.pem
```

### Timeout parameters

# These parameters are similar to earlier ribbon timeout params:

```
spring.cloud.gateway.httpclient.connect-timeout= 3000 //seconds
spring.cloud.gateway.httpclient.response-timeout= 360s
spring.cloud.gateway.httpclient.pool.acquire-timeout=6000 //milliseconds
spring.cloud.gateway.httpclient.pool.max-connections=10000
```

#Properties used webclient call is made to plato-api-gateway for validation:

```
webclient.http.max.connections=1000
webclient.http.acquire.timeout.millisec=5000
webclient.http.connection.timeout.millisec=20000
webclient.http.read.timeout.seconds=20000
webclient.http.write.timeout.seconds=20000
```

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