Oracle® Banking Microservices Architecture Configuration and Deployment Guide





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Preface

- Purpose
- Audience
- Documentation Accessibility
- Critical Patches
- Diversity and Inclusion
- Related Resources
- Acronyms and Abbreviations

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.

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

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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	

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.

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.

- 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.



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 SCHEMANAME>
- -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 SCHEMANAME>
- -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-discoveryservice.server.port=<DISCOVERY_SERVICE_PORT>

//Plato UI-Config Services

- -Dflyway.domain.placeHolders.plato-ui-configservices.server.port=<UICONFIG SERVICE PORT>
- -Dflyway.domain.placeHolders.plato-uiconfig.username=<UICONFIG_SCHEMA_USERNAME>
- -Dflyway.domain.placeHolders.plato-uiconfig.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-apigatewayrouter.router.meadmin.port=<ROUTER_PORT>

//Plato Feed Services

- -Dflyway.domain.placeHolders.plato-feedservices.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-batchserver.plato.eventhub.kafka.brokers=<EVETNHUB_KAFKA_BROKERS>



- -Dflyway.domain.placeHolders.plato-batch-server.plato.eventhub.zk.nodes=<ZK NODES>
- -Dflyway.domain.placeHolders.plato-batchserver.username=<BATCH_SCHEMA_USERNAME>
- -Dflyway.domain.placeHolders.plato-batchserver.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-managementservices.plato.eventhub.kafka.brokers=<EVETNHUB_KAFKA_BROKERS>
- -Dflyway.domain.placeHolders.plato-alerts-managementservices.plato.eventhub.zk.nodes=<ZK NODES>
- -Dflyway.domain.placeHolders.plato-alerts-managementservices.username=<ALERTS_SCHEMA_USERNAME>
- -Dflyway.domain.placeHolders.plato-alerts-managementservices.password=<ALERTS_SCHEMA_PASSWORD>
- -Dflyway.domain.placeHolders.plato-alerts-managementservices.jdbcUrl=<ALERTS SCHEMA URL>
- -Dflyway.domain.placeHolders.plato-alerts-managementservices.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-configuratorservices.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-configuratorservices.username=<OBRC_SCHEMA_USERNAME>
- -Dflyway.domain.placeHolders. plato-regional-configuratorservices.password=<OBRC_SCHEMA_PASSWORD>

//Common core NLP services

- -Dflyway.domain.placeholders.cmc-nlp-annotatorservices.server.port=<CMC_NLP_ANNOTATOR_SERVICES_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-dashboard-widgetservices.server.port=<CMC_NLP_DASHBOARD_SERVICES_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-model-mngmntservices.server.port=<CMC_NLP_MODEL_MANGEMENT_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-online-processingservices.server.port=<CMC_NLP_ONLINE_PROCESSING_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-tag-maintservices.server.port=<CMC_NLP_TAG_MAINTENANCE_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-text-extractionservices.server.port=<CMC_NLP_TEXT_EXTRACTION_PORT>
- -Dflyway.domain.placeholders.cmc-nlp-txn-logservices.server.port=<CMC NLP TXN LOG SERVICES PORT>
- -Dflyway.domain.placeholders.cmc-nlp-utilservices.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-mlservices.server.emailServerHost=<Email_Server_Host>
- -Dflyway.domain.placeholders.cmc-fc-ai-mlservices.server.emailServerPort=<Email Server PORT>
- -Dflyway.domain.placeholders.cmc-fc-ai-mlservices.server.pollingFrequency=<Polling Frequency>
- -Dflyway.domain.placeholders.cmc-fc-ai-mlservices.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

(i) 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.workflowreconciler.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





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.

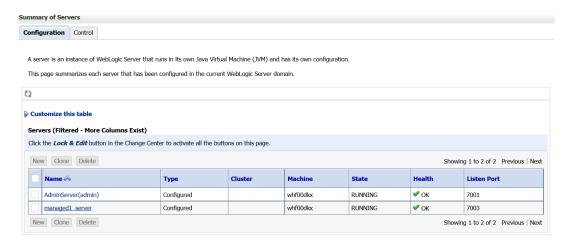
1.2 Method 2 – Via Passing the -D params in the Server Start Argument

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.

On Domain Structure, click Environment. Under Environment, click Servers.
 The Summary of Servers screen displays.

Figure 1-1 Summary of Servers

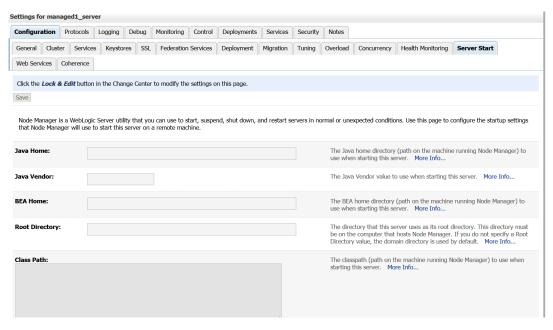


On the Servers (Filtered - More Columns Exist) table, click managed server to pass the values.

The Settings for managed server tab displays.

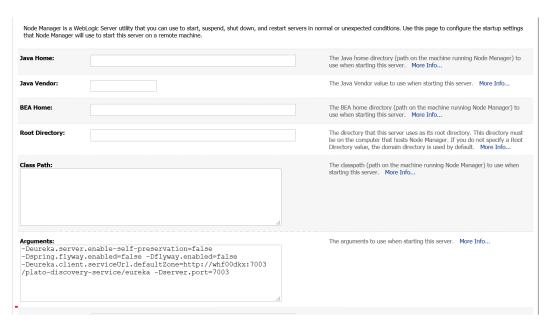


Figure 1-2 Settings for managed server



- 3. 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



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}"
if [ -f "$config_file" ]
 while read -r prop || [ -n "$prop" ]
   case "$prop" in \#*) continue ;; esac
   if [ -z "${prop}"]; then
   continue
 else
   PLACEHOLDERS=${PLACEHOLDERS}" "$(echo -D$prop)
   PLACEHOLDERS="${PLACEHOLDERS}"
fi
 done < "$config_file"
 echo "$config_file not found. please provide the property file to set -D parameter"
 exit 1
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.zookeper.hosts=

Kafka Security for all services
flyway.domain.placeholders.plato.eventhub.broker.hosts=
flyway.domain.placeholders.plato.eventhub.zookeper.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. jdbc Url =

flyway.domain.placeholders.plato-feed-services.jndi=jdbc/PLATOFEED

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. even thub. 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-business overrides-services. server. port=

flyway.domain.placeholders.cmc-resource-segment-orchestrator-service.server.port=

flyway. domain. placeholders. cmc-screen class-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.postingPath= 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.platooren.domain.schemasflyway.domain.placeholders.plato.alerts.email.userId=

nyway.domain.piacenoiders.piato.aierts.emain.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. en able SLA =

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.

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.taskPrioirty}",
 "applicationDate":
"${workflow.input.transactionModel.txnIdentification.applicationDate}",
 "applicationNumber":
"${workflow.input.transactionModel.txnIdentification.processRefNo}",
 "processRefNumber":
"${workflow.input.transactionModel.txnIdentification.processRefNo}",
 "branch": "${workflow.input.transactionModel.txnIdentification.branchCode}",
```

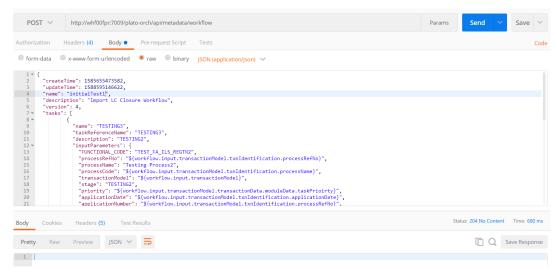


```
"user": "${workflow.input.transactionModel.txnIdentification.currentUser}",
  "customerNumber":
 "${workflow.input.transactionModel.transactionData.moduleData.customerId}",
  "amount":
 "${workflow.input.transactionModel.transactionData.moduleData.amount}",
  "currencyCode":
 "${workflow.input.transactionModel.transactionData.moduleData.currency}",
  "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



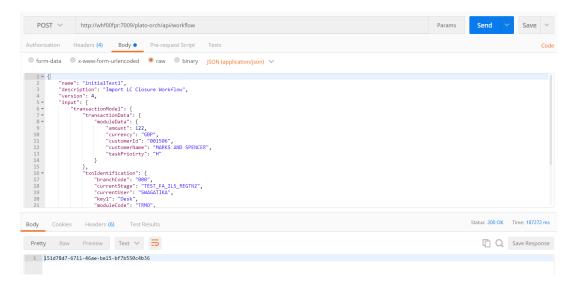
2. For workflow creation, call the API (/api/workflow) to create the workflow. This API provides the information to the workflow metadata which is created using previous call.

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

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



Figure 1-5 Body



Domain Creation and Cluster Configuration

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

- <u>Create Domain and Cluster Configuration</u>
 This topic provides the systematic instructions to create domain and cluster configuration.
- <u>Post Domain Creation Configurations</u>
 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.

(i) Note

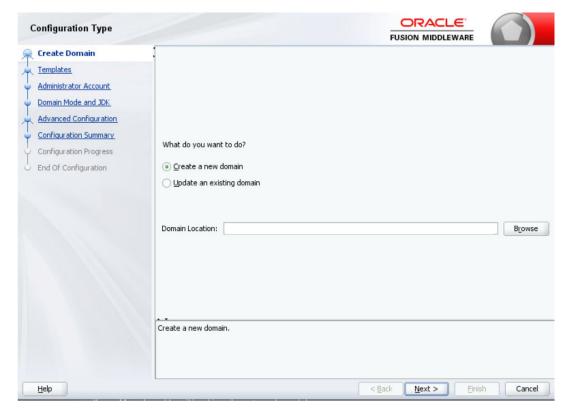
Names need not to be same as provided in the screenshot.

- Open /oracle_common/common/bin and run config.cmd (or .sh if operating system is linux).
- Create domain with required cluster and server configurations. Refer to the screenshots below.
- Select Create a new domain and specify the domain name. For example, platoinfra_domain.

The Create Domain screen displays.



Figure 2-1 Create Domain

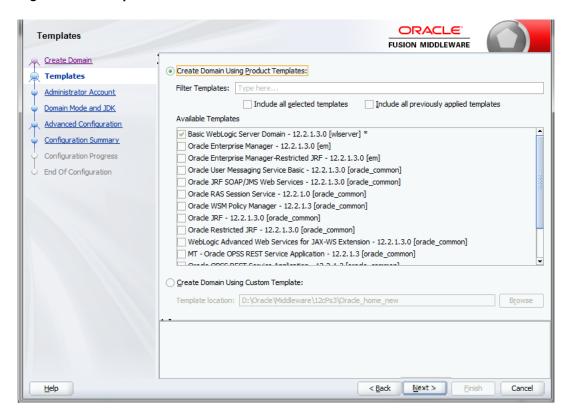


4. Click Next.

The **Templates** screen displays.



Figure 2-2 Templates

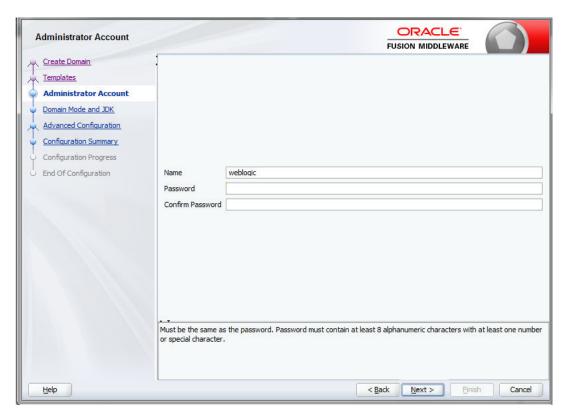


5. Click **Next** to create simple domain with default templates.

The Administrator Account screen displays.



Figure 2-3 Administrator Account

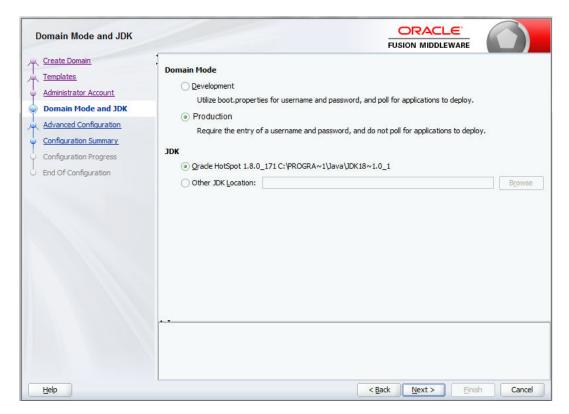


Fill the fields Password and Confirm Password to set the password, and click Next to proceed.

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



Figure 2-4 Domain Mode and JDK

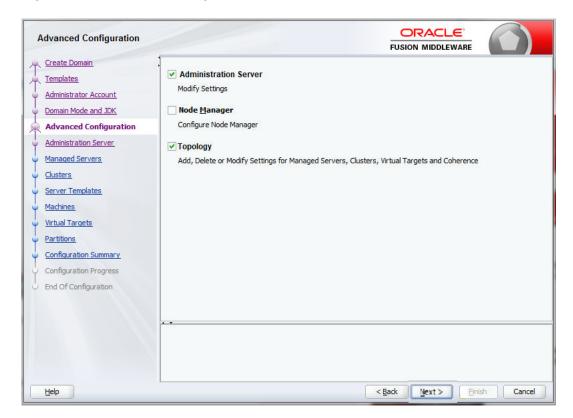


- Select Domain Mode as Production.
- 8. Select JDK, and click Next.

The Advanced Configuration screen displays.



Figure 2-5 Advanced Configuration

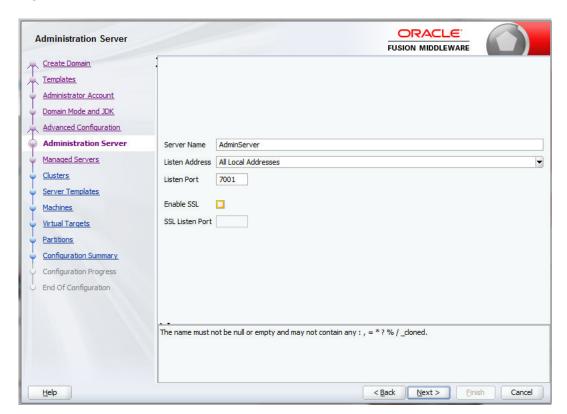


9. Select Administration Server and Topology, and click Next.

The Administration Server screen displays.



Figure 2-6 Administration Server

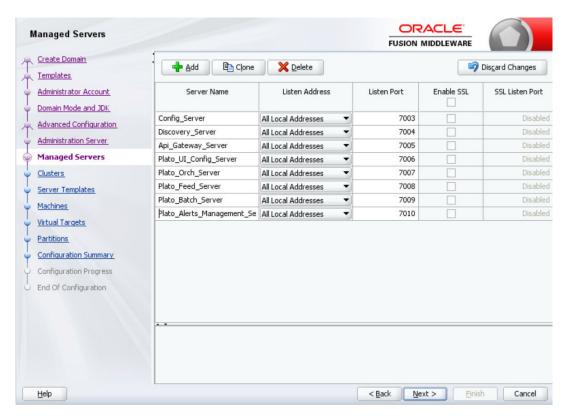


10. Edit the fields Listen Port and host configurations as required, and click Next.

The Managed Servers screen displays.



Figure 2-7 Managed Servers

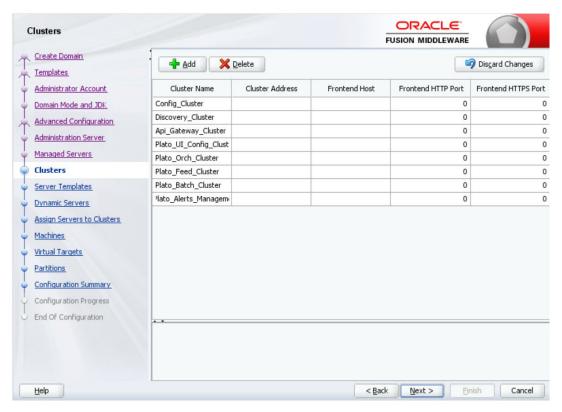


- 11. Click **Add** to add managed servers and edit the fields as required.
 - a. Specify the name in **Server Name** filed.
 - b. Edit the address in Listen Address filed.
 - Edit the port in Listen Port filed.
- 12. Click Next.

The Cluster screen displays.



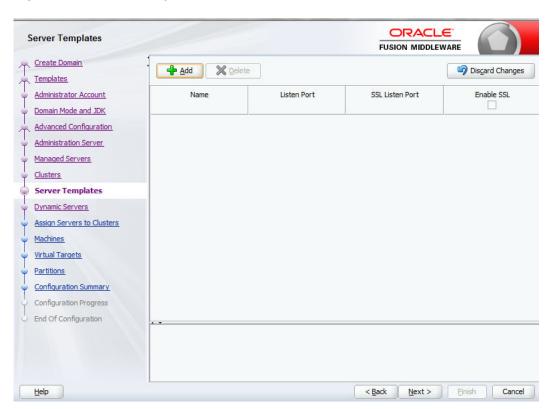
Figure 2-8 Cluster



13. Click Add to add clusters one for each Managed Servers, and click Next.

The **Server Template** screen displays.

Figure 2-9 Server Template

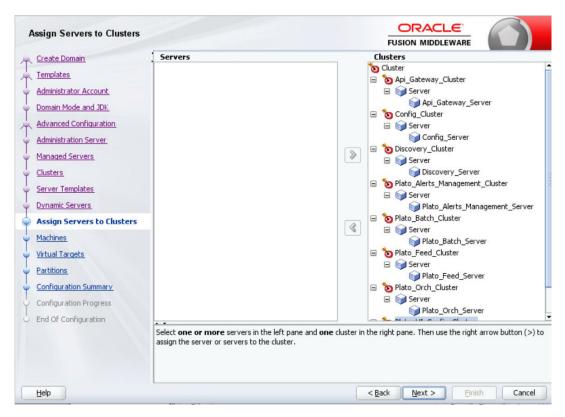




14. Skip the Server Templates and Dynamic Servers, and click Next.

The Assign Servers to Clusters screen displays.

Figure 2-10 Assign Servers to Clusters

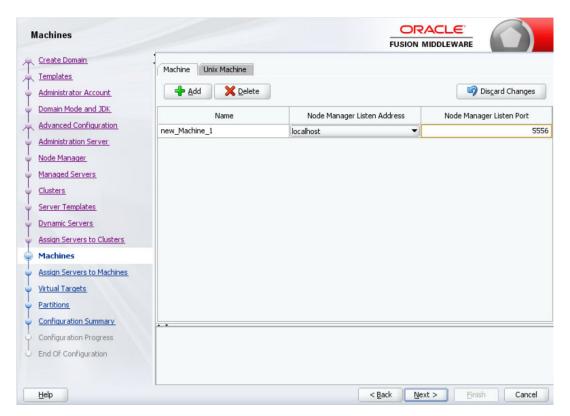


15. Assign clusters with servers, and click Next.

The Machines screen displays.



Figure 2-11 Machines

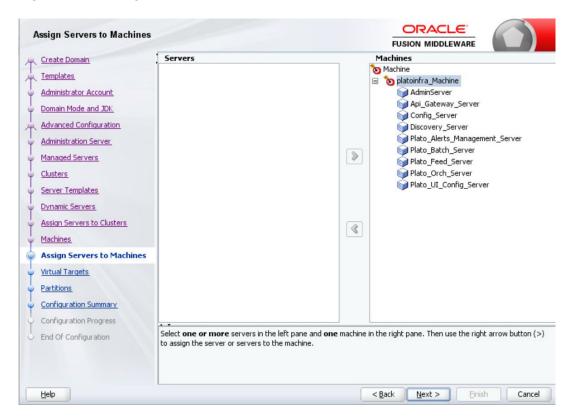


- **16.** Click **Add** to add **Machine** or **Unix Machine** based on the operating system and configure **Name**, **Node Manager Listen Address**, and **Node Manager Listen Port** as required.
- 17. Click Next.

The Assign Servers to Machines screen displays.



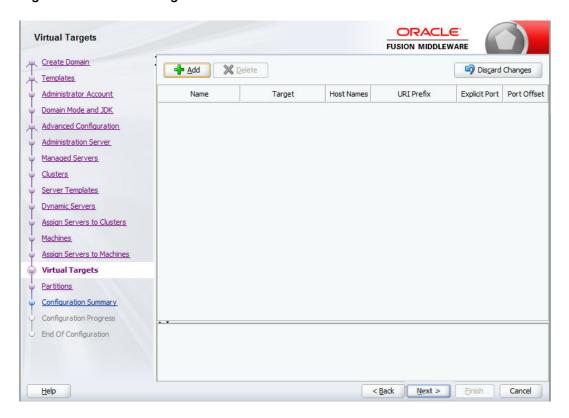
Figure 2-12 Assign Servers to Machines



18. Map all the managed servers under the machine created, and click Next.

The Virtual Targets screen displays.

Figure 2-13 Virtual Targets

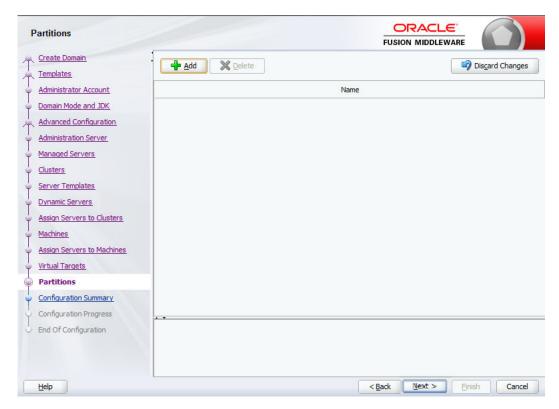




19. Skip or configure Virtual Targets, and click Next.

The Partitions screen displays.

Figure 2-14 Partitions

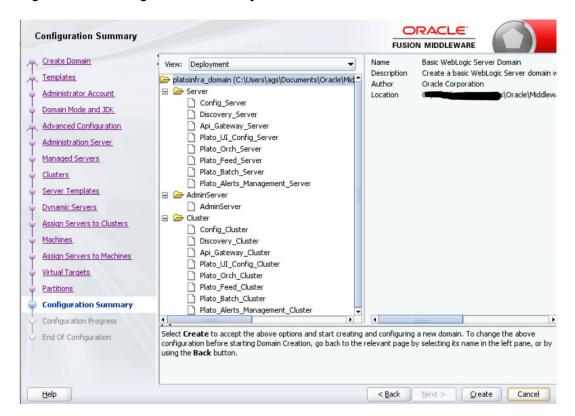


20. Skip or configure Partitions, and click Next.

The Configuration Summary screen displays.



Figure 2-15 Configuration Summary

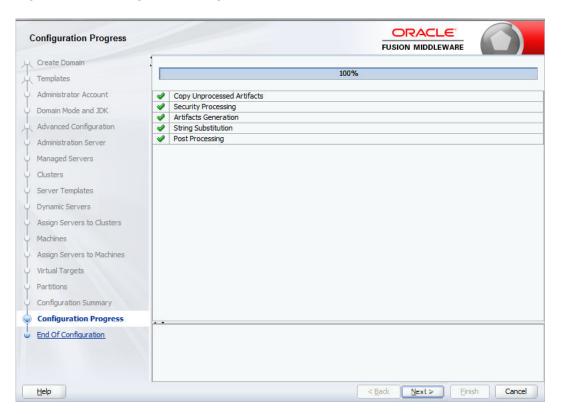


- 21. Check the Configuration Summary and confirm creating the domain.
- 22. Click Next.

The Configuration Progress screen displays.



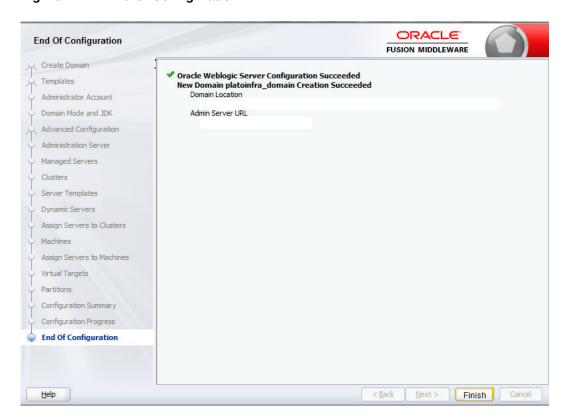
Figure 2-16 Configuration Progress



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

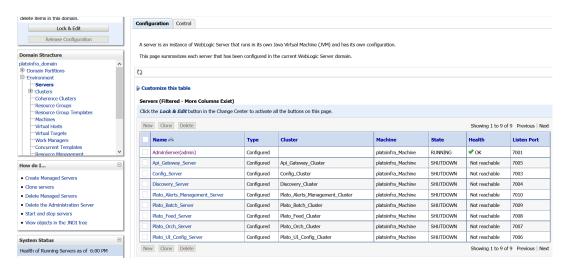
Once domain creation and cluster configuration is done, refer to Oracle Fusion Middleware documents for more details on how to start an admin server, node manager, and managed servers.

- 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.
- 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.



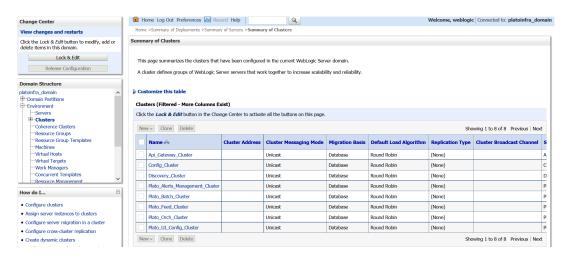
Figure 2-18 Summary of Services



14. Click Clusters and verify the Clusters (Filtered - More Coloumns Exist) table.

The Summary of Clusters screen displays.

Figure 2-19 Summary of Clusters

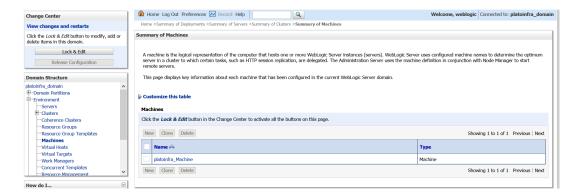


15. Click Machines and verify the Machines (Filtered - More Coloumns Exist) table.

The **Summary of Machines** screen displays.



Figure 2-20 Summary of Machines



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.

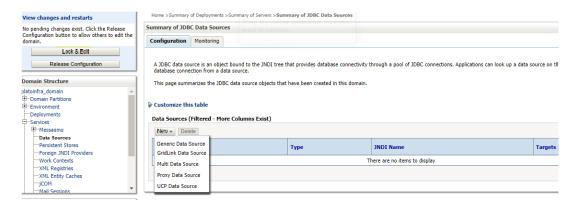
i Note

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

- On Domain Structure, click Services. Under Services, click Data Sources.
- 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

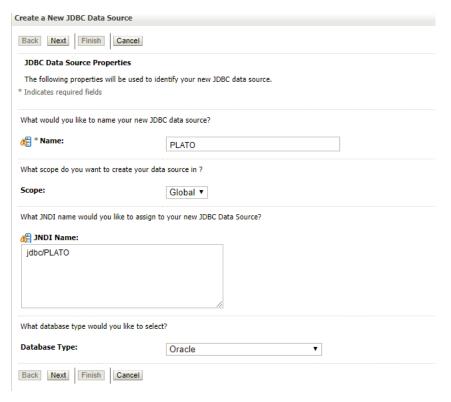


Specify the Name and JNDI Name on Create a New JDBC Data Source and click Next.

The Create a New JDBC Data Source screen displays.



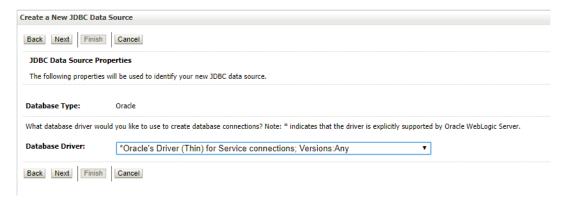
Figure 3-2 Create a New JDBC Data Source



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

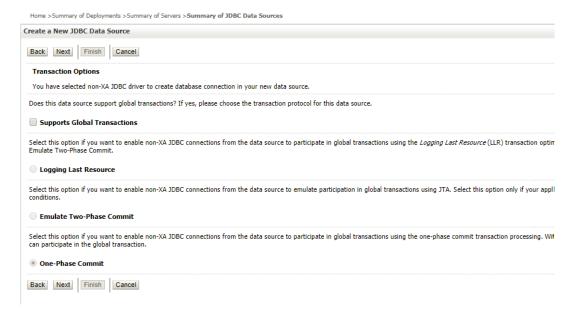


Uncheck the Supports Global Transactions and click Next.

The ${\bf Create}$ a ${\bf New}$ ${\bf JDBC}$ ${\bf Data}$ ${\bf Source}$ - ${\bf Transaction}$ ${\bf Options}$ screen displays.



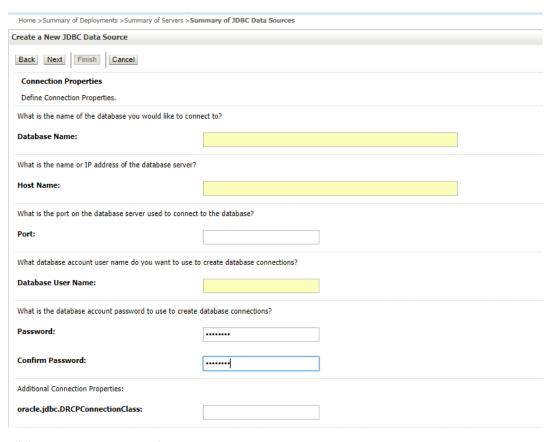
Figure 3-4 Create a New JDBC Data Source - Transaction Options



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



8. Click **Next** to test connection.

The Connection test succeeded message displays.

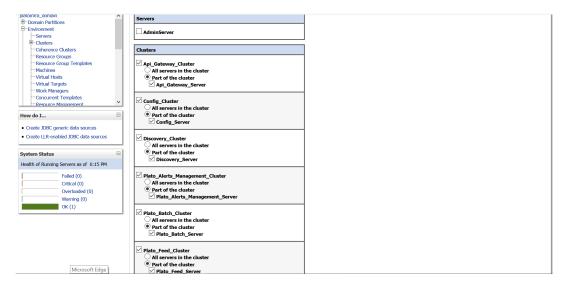


Figure 3-6 Connection test succeeded - Message



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

Figure 3-7 Servers and Clusters



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



Figure 3-8 Summary of JDBC Data Source - Configuration



12. On the Change Center, click Activate Changes once the details are confirmed.

All the changes are activated.

Figure 3-9 Change Center

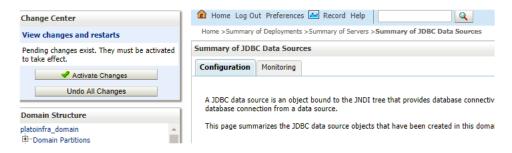
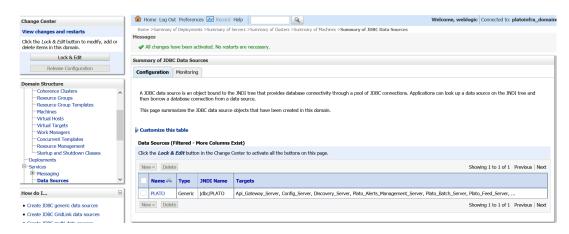


Figure 3-10 Changes - Success Message



Deploy Application

This topic provides the systematic instructions to deploy the application.

Deploy Application

4.1 Deploy Application

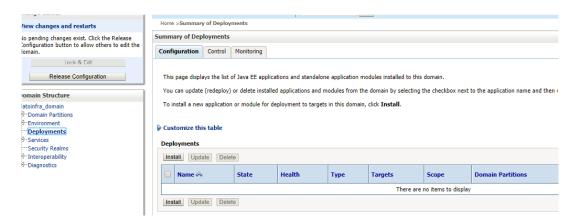
Specify User ID and Password to login to Oracle WebLogic Administration Console.

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.

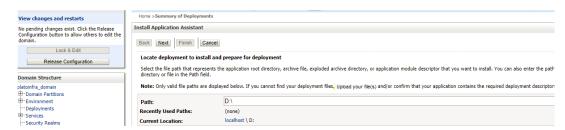
Figure 4-1 Summary of Deployments



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

The Install Application Assistant screen displays.

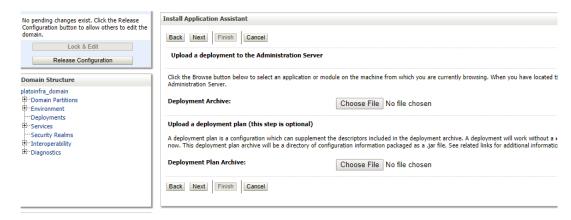
Figure 4-2 Install Application Assistant





5. Click Upload your file(s) to select archive. On Delpoyment Archive, select Choose File.

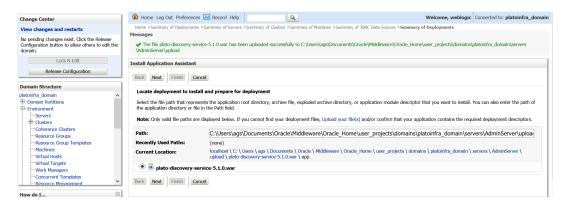
Figure 4-3 Install Application Assistant



Once the Archive is uploaded, click Next.

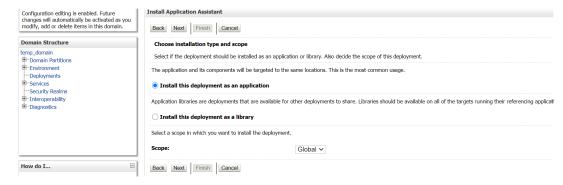
The file is uploaded successfully.

Figure 4-4 File Upload - Success Message



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

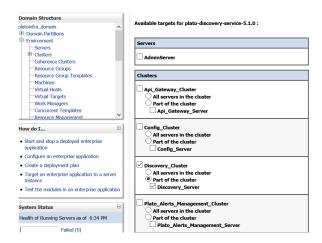
Figure 4-5 Install Application Assistant



Select the target Servers and Clusters to deploy.

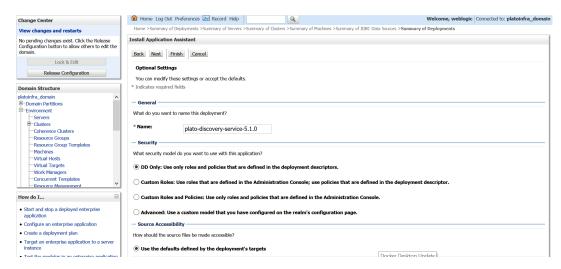


Figure 4-6 Available targets



Click Next.

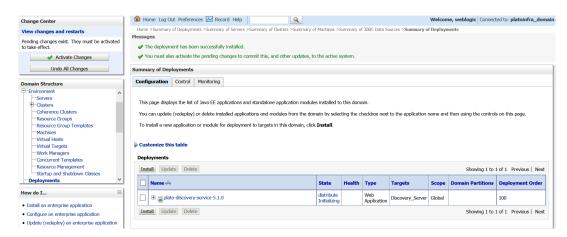
Figure 4-7 Install Application Assistant



11. Click Finish.

The deployment is successfully completed.

Figure 4-8 Deployment - Success Message





12. On Change Center, click Activate Changes.

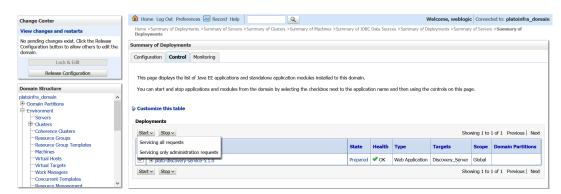
All the changes are activated.

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.

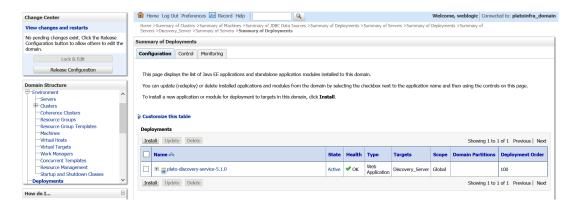
Figure 4-11 Start Application Assistant



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



Figure 4-12 Summary of Deployments - Configuration



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.

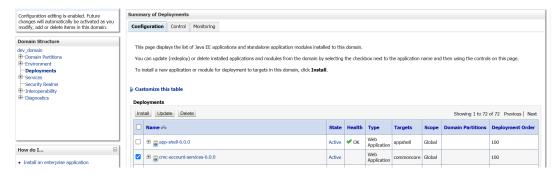
The **Summary of Deployments** screen displays.

Figure 5-1 Summary of Deployments



2. Click Lock and Edit.

Figure 5-2 Lock and Edit



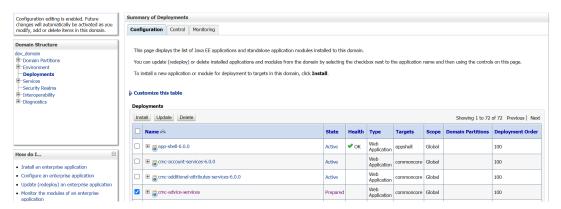
- 3. On the **Deployments** table, select the service that needs to be undeployed in Deployments.
- **4.** Go to **Control**. On the **Deployments** table, click **Stop** and select **Force stop now** from the drop-down list.

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.

Restart Servers

This topic provides the systematic instruction to restart the server.

Restart Servers

6.1 Restart Servers

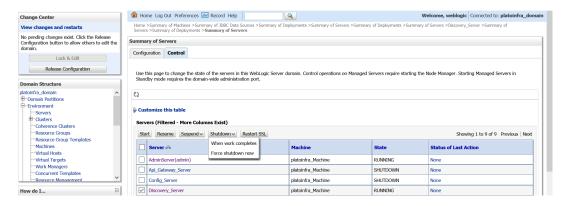
Specify User ID and Password to login to Oracle WebLogic Administration Console.

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



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

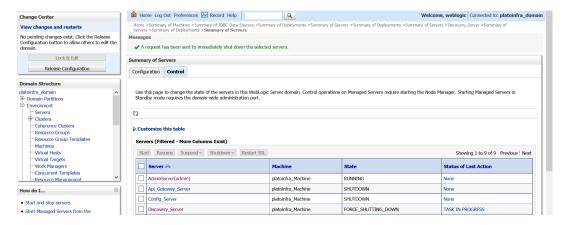


4. Click **Yes** to confirm shutdown.

A request is sent to immediately shut down the selected server.



Figure 6-3 Request Sent - Success Message



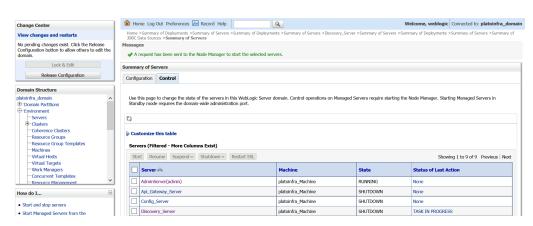
On the Servers (Filtered - More Columns Exist) table, select the server and click Start.
 The Server Life Cycle Assistant screen displays.

Figure 6-4 Server Life Cycle Assistant



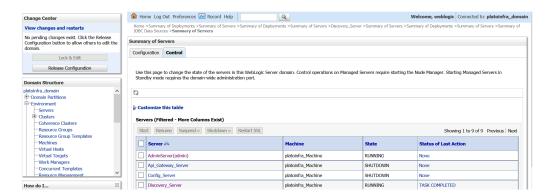
- Click Yes to confirm the action.
 - A request is sent to the node manager to start the selected servers.

Figure 6-5 Resquest Sent - Success Message



All the requested servers are running in the state column.

Figure 6-6 Summary of Servers - Control



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

Figure 6-7 Summary of Deployments



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

	Name ↔	Туре	Cluster	Machine	State	Health	Listen Port
	AdminServer(admin)	Configured			RUNNING	✓ ok	7020
	managed_server1	Configured		Machine 1	RUNNING	⊘ ОК	7023

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

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.
- <u>Create Users</u>
 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.

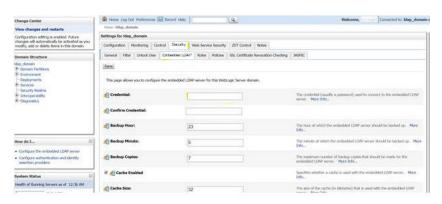
8.1 Configure WebLogic LDAP

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.



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.



On Domain Structure, click Security Realms.

The Summary of Security Realms screen displays.

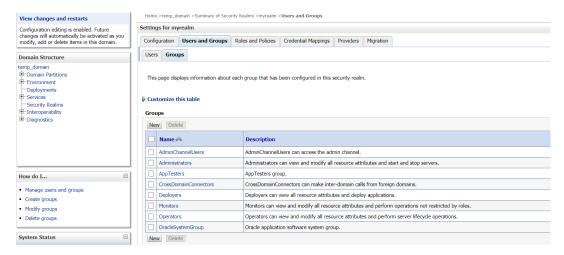
Figure 8-2 Summary of Security Realms



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

The **Setting of myrealm** screen displays.

Figure 8-3 Settings for myrealm

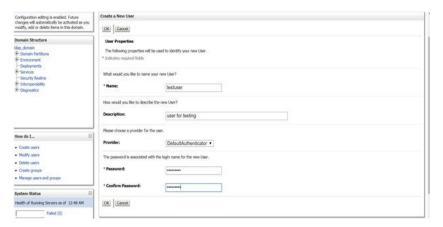


- 3. Under Settings for myrealm, click Users and Groups
- 4. Click Groups. On the Groups table, Click New.

The Create a New User screen displays.



Figure 8-4 Create a New User

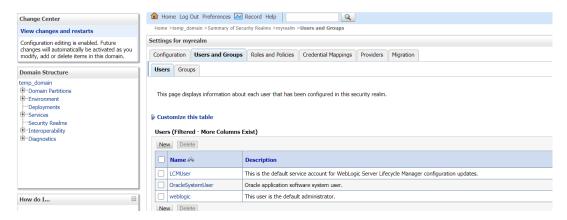


Specify all the required details and click OK.

The new group is created.

6. Go to Settings for myrealm, click Users.

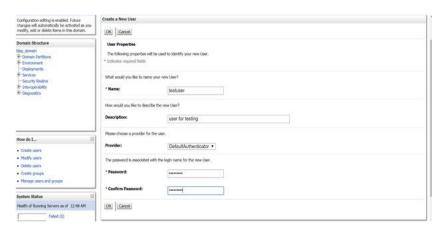
Figure 8-5 Settings for myrealm



On the Users table, Click New.

The Create a New User screen displays.

Figure 8-6 Create a New User

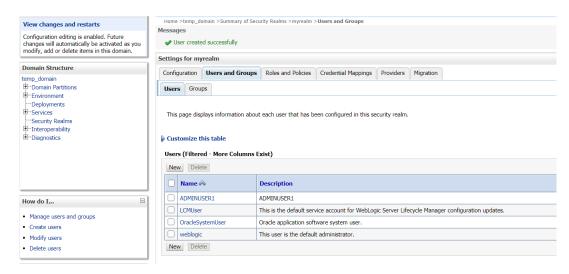




8. Specify all the required details and click **OK**.

The new user is created.

Figure 8-7 User Creation- Success Message

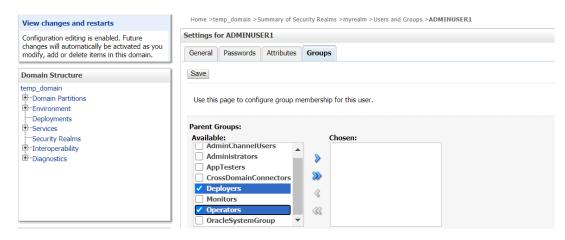


On the Users (Filtered - More Columns Exist) table, click on the newly created user to assign to some group.

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

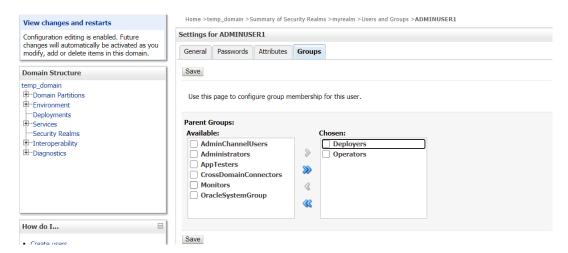


11. Click Save.

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_CREDENTI AL	ylksiMFfjVbfcpA7Qheh8Q==	LDAP server credentials in encrypted form (For Encryption steps, refer to Encrypted Utility section below)
LDAP_USER_SEARCH_BAS E	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.

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 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 encrpt –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:

VmtjMWQxTnJOVlpPV0VaWFZrVndUMWxYTVU1bFJsSlpZMFZLYTFaVVZrWldWbWgzVkRG S1JsWnFVVDA9

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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