Oracle® Banking Retail Lending Servicing

Installation Guide

Innovation Release 14.8.2.0.0
G53481-01
April 2026

Oracle Banking Retail Lending Servicing Installation Guide, Innovation Release 14.8.2.0.0

G53481-01

Contents

11 Known Issues and Resolutions

Preface

Audience

This guide is intended for the WebLogic admin or ops-web team who are responsible for installing the banking products of Oracle Financial Services Software Limited.

Purpose

This guide helps the user to install the Oracle Banking Retail Lending Servicing services, user interface, and conductor process flow on designated environments. It is assumed that all the prior setup is already related to WebLogic installation, WebLogic-managed server creation, and Oracle database installation.

It is recommended to use a dedicated managed server for each of the Oracle Banking Microservices Architecture services, Oracle Banking Retail Lending Servicing services, and Oracle Banking Retail Lending Servicing user interface.

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 Critical Patches, Security Alerts and Bulletins. All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by Oracle Software Security Assurance Oracle Software Security Assurance.

Diversity and Inclusion

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.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which user supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that user enter.

Related Resources

For more information, see these Oracle resources:

- Getting Started User Guide
- Oracle Banking Retail Lending Servicing Pre-Installation Guide
- Configuration and Deployment Guide

Organization

This guide allows you to install the below mentioned Oracle Banking Retail Lending Servicing services, UI, process flow in the same order:

Oracle Banking Retail Lending Servicing Services

1. obrl-ln-maintenance-services
2. obrl-ln-lending-product-services
3. obrl-ln-product-segment-services
4. obrl-ln-account-services
5. obrl-ln-amendment-services
6. obrl-ln-payment-services
7. obrl-ln-restructure-maintenance-services

8. obrl-ln-restructure-services
9. obrl-ln-migration-services
10. obrl-ln-schedule-services
11. slpr-core-services
12. slpr-batchcategory-services
13. slp-setup-services
14. slp-integration-services
15. slpr-file-gen-services

User Interface

Follow the below steps to migrate from the existing app-shell build to the foundation app shell. With the foundation app-shell, UI war is split into individual component server war files. All the component server war files should be deployed in the same managed server

For common core war files, deploy the war files mentioned below:

1. `app-shell`
2. `cmc-component-server`
3. `moc-component-server`
4. `sms-component-server`
5. `obpy-component-server`

For domain-specific war files, deploy the individual component server war file mentioned below:

- `obrl-component-server`

Acronyms and Abbreviations

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

Table Acronyms and Abbreviations

Abbreviation	Description
OSDC	Oracle Software Delivery Cloud
OBMA	Oracle Banking Microservices Architecture
OBRLS	Oracle Banking Retail Lending Servicing
LDAP	Lightweight Directory Access Protocol
JDK	Java Development Kit
JNDI	Java Naming and Directory Interface
SMTP	Simple Mail Transfer Protocol
FOP	Formatting Objects Processor
SSL	Secure Sockets Layer
URI	Uniform Resource Identifier
ODA	Oracle Digital Assistant

1

Set up Database

User needs to setup the database-related configuration for the installation of the Oracle Banking Retail Lending Servicing. It is recommended to create a different schema for each application.

The prerequisites for setting up the database are as follows:

1. Make sure that the pre-installation setup is completed. The pre-installation setup includes the configuration of the database and setting up the `setUserOverrides.sh` file.
2. Configure the placeholders in the `setUserOverrides.sh` file for Oracle Banking Retail Lending Servicing installation. For the values of keys and placeholders, refer to Keys and Placeholders.

> **Note**
>
> To update the placeholders for Oracle Banking Microservices Architecture services, refer to Placeholder Update for Oracle Banking Microservices Architecture Services section in *Configuration and Deployment Guide*.

The setup is designed to work with a separate schema for each application.

To setup the database for Oracle Banking Retail Lending Servicing:

1. Create the **Oracle Banking Retail Lending Servicing** schemas. For information on schemas to be created, refer to the table below:

Table 1-1 Database Setup

Service Name	Schema Required
`obrl-ln-maintenance-services`	Yes(`RL_MAINTENANCE Schema`)
`obrl-ln-lending-product-services`	Yes(`RL_MAINTENANCE Schema`)
`obrl-ln-product-segment-services`	Yes(`RL_MAINTENANCE Schema`)
`obrl-ln-account-services`	Yes (`RL_ACCOUNT schema`)
`obrl-ln-amendment-services`	Yes (`RL_ACCOUNT schema`)
`obrl-ln-payment-services`	Yes (`RL_ACCOUNT schema`)
`obrl-ln-restructure-maintenance-services`	Yes(`RL_MAINTENANCE Schema`)
`obrl-ln-restructure-services`	Yes (`RL_ACCOUNT` schema)
`obrl-ln-migration-services`	Yes (`RL_MIGRATION`schema)

2. Create the user grants. For more information on creating user grants, refer to Create User Grants.

- Keys and Placeholders
  The values of the keys and their respective placeholders need to be configured in the `setUserOverrides.sh` file for installation of the Oracle Banking Retail Lending Servicing.

- Create User Grants
  User needs to create the user grants in the necessary schemas to setup the database-related configuration for Oracle Banking Retail Lending Servicing.

1.1 Keys and Placeholders

The values of the keys and their respective placeholders need to be configured in the `setUserOverrides.sh` file for installation of the Oracle Banking Retail Lending Servicing.

Values for All Services

The keys and placeholder for all services are as follows:

Table 1-2 Keys and Placeholders (All Services)

Key	Placeholder
`management.endpoints.web.exposure.include`	*prometheus,health*

Values for `plato-orch-service`

The key and placeholder values for `plato-orch-service` are as follows:

Table 1-3 Keys and Placeholders (`plato-orch-service`)

Key	Placeholder
`plato.orchestrator.enableSubWfDynamicAllocation`	*false(Property for enabling dynamic Allocation for subWorkflow)*
`plato-orchestrator.protocol`	*http/https* (based on env)

Values for `sms-core-services`

The key and placeholder values for `sms-core-services` are as follows:

Table 1-4 Keys and Placeholders (`sms-core-services`)

Key	Placeholder
`user.disableInactiveUsers`	*N*
`user.closeDisabledUsers`	*N*
`user.disableInactiveUsers.days`	*0*
`user.closeDisabledUsers.days`	*0*
`user.sameDayLoginRequired`	*Y*

Values for `cmc-obrh-services`

The key and placeholder values for `cmc-obrh-services` are as follows:

Table 1-5 Keys and Placeholders (`cmc-obrh-services`)

Key	Placeholder
`cmc-obrh-services.audit.retention.days`	This property is used to specify the number of days for retention policy. **Example:** *cmc-obrh-services.audit.retention.days=7*
`cmc-obrh-services.audit.retention.archival`	This property is used to specify whether purging or archiving is required. **Example:** cmc-obrh-services.audit.retention.archival=N **Note**: N for purging and Y for archiving.
`cmc-obrh-services.oic.oauth.scope`	This property is used to specify the OIC's oauth scope.
`cmc-obrh-services.oic.secretStore.url`	This property is used to specify the OIC's secretstore URL.
`cmc-obrh-services.oic.idcs.url`	This property is used to specify the OIC's idcs URL.

Values for `plato-alerts-management services`

The key and placeholder values for `plato-alerts-management services` are as follows:

Table 1-6 Keys and Placeholders (`plato-alerts-management services`)

Key	Placeholder
`spring.cloud.stream.kafka.binder.configuration.security.protocol`	*PLAINTEXT* (in case of non SSL setup)

Values for `plato-alerts-management-services`

The keys and placeholder values for `plato-alerts-management-services` are as follows. This setup is necessary to enable e-mail alerts.

Table 1-7 Keys and Placeholders (`plato-alerts-management-services`)

Key	Placeholder
`plato.eventhub.kafka.brokers`	*plato.eventhub.broker.hosts*
`plato.eventhub.zk.nodes`	*plato.eventhub.zookeper.hosts*
`server.port`	*cmc-deprecation-service.server.port*
`batchServer.protocol`	*apigateway.protocol*
`EMAIL.SMTP_HOST`	*plato.alerts.email.smtp.host*
`EMAIL.SMTP_OUT_PORT`	*plato.alerts.email.smtp.out.port*
`EMAIL.AUTH`	*plato.alerts.email.auth*
`EMAIL.SOCKETFACTORY_PORT`	*plato.alerts.email.socketfactory.port*

Values for `plato-feed-services`

The keys and placeholder values for `plato-feed-services` are as follows:

Table 1-8 Keys and Placeholders (`plato-feed-services`)

Key	Placeholder
`EMAIL.PASSWORD`	*plato.feed.email.password*
`EMAIL.USER_ID`	*plato.feed.email.userId*
`SMS.userId`	*plato.feed.sms.userId*
`SMS.branchCode`	*plato.feed.sms.branchCode*
`SMS.appId`	*plato.feed.sms.appId*
`SMS.multiEntityAdmin`	*plato.feed.sms.multiEntityAdmin*
`EMAIL.SMTP_HOST`	*plato.feed.email.smtp.host*
`EMAIL.SMTP_OUT_PORT`	*plato.feed.email.smtp.out.port*
`EMAIL.AUTH`	*plato.feed.email.auth*
`EMAIL.SOCKETFACTORY_PORT`	*plato.feed.email.socketfactory.port*

Values for `plato-password-policy-services`

The keys and placeholder values for `plato-password-policy-services` are as follows:

Table 1-9 Keys and Placeholders (`plato-password-policy-services`)

Key	Placeholder
`server.port`	*plato-password-policy-service.server.port*
`flyway.domain.db.jndi`	*plato-password-policy-service.jndi*
`flyway.domain.schemas`	*plato-password-policy-service.schemas*
`flyway.domain.locations`	*plato-password-policy-service.locations*

Values for `obrl-ln-maintenance-services`

The keys and placeholder values for `obrl-ln-maintenance-services` are as follows:

Table 1-10 Keys and Placeholders (`obrl-ln-maintenance-services`)

Key	Placeholder
`server.port`	*obrl-ln-maintenance-services.server.port*
`flyway.domain.schemas`	*obrl-ln-maintenance-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-maintenance-services.jndi*

Values for `obrl-ln-lending-product-services`

The keys and placeholder values for `obrl-ln-lending-product-services` are as follows:

Table 1-11 Keys and Placeholders (`obrl-ln-lending-product-services`)

Key	Placeholder
`server.port`	*obrl-ln-lending-product-services.server.port*
`flyway.domain.schemas`	*obrl-ln-lending-product-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-lending-product-services.jndi*

Values for `Obrl-ln-product-segment-services`

The keys and placeholder values for `Obrl-ln-product-segment-services` are as follows:

Table 1-12 Keys and Placeholders (`Obrl-ln-product-segment-services`)

Key	Placeholder
`server.port`	*obrl-ln-product-segment-services.server.port*
`flyway.domain.schemas`	*obrl-ln-product-segment-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-product-segment-services.jndi*

Values for `obrl-ln-restructure-maintenance-services`

The keys and placeholder values for `obrl-ln-restructure-maintenance-services` are as follows:

Table 1-13 Keys and Placeholders (`obrl-ln-restructure-maintenance-services`)

Key	Placeholder
`server.port`	*obrl-ln-restructure-maintenance-services.server.port*
`flyway.domain.schemas`	*obrl-ln-restructure-maintenance-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-restructure-maintenance-services.jndi*

Values for `obrl-ln-restructure-services`

The keys and placeholder values for `obrl-ln-restructure-services` are as follows:

Table 1-14 Keys and Placeholders (`obrl-ln-restructure-services`)

Key	Placeholder
`server.port`	*obrl-ln-restructure-services.server.port*
`flyway.domain.schemas`	*obrl-ln-restructure-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-restructure-services.jndi*
`kafka.enabled`	*obrl-ln-restructure-services.kafka.enabled*
`spring.cloud.stream.bindings.AccountData.destination`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountData.destination*
`spring.cloud.stream.bindings.AccountData.producers.partition-count`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountData.producers.partition-count*

Table 1-14 (Cont.) Keys and Placeholders (`obrl-ln-restructure-services`)

Key	Placeholder
`spring.cloud.stream.bindings.AccountDataCMC.destination`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountDataCMC.destination*
`spring.cloud.stream.bindings.AccountDataCMC.group`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountDataCMC.group*
`spring.cloud.stream.bindings.AccountDataIn.destination`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountDataIn.destination*
`spring.cloud.stream.bindings.AccountDataIn.group`	*obrl-ln-restructure-services.spring.cloud.stream.bindings.AccountDataIn.group*
`spring.cloud.stream.kafka.binder.autoAddPartitions`	*obrl-ln-restructure-services.spring.cloud.stream.kafka.binder.autoAddPartitions*
`spring.cloud.stream.kafka.binder.brokers`	*obrl-ln-restructure-services.spring.cloud.stream.kafka.binder.brokers*
`spring.cloud.stream.kafka.binder.zkNodes`	*obrl-ln-restructure-services.spring.cloud.stream.kafka.binder.zkNodes*

Values for `obrl-ln-account-services`

The keys and placeholder values for `obrl-ln-account-services` are as follows:

Table 1-15 Keys and Placeholders (`obrl-ln-restructure-services`)

Key	Placeholder
`server.port`	*obrl-ln-account-services.server.port*
`flyway.domain.schemas`	*obrl-ln-account-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-account-services.jndi*
`kafka.enabled`	*obrl-ln-restructure-services.kafka.enabled*
`spring.cloud.stream.bindings.AccountData.destination`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountData.destination*
`spring.cloud.stream.bindings.AccountData.producers.partition-count`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountData.producers.partition-count*
`spring.cloud.stream.bindings.AccountDataCMC.destination`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountDataCMC.destination*
`spring.cloud.stream.bindings.AccountDataCMC.group`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountDataCMC.group*
`spring.cloud.stream.bindings.AccountDataIn.destination`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountDataIn.destination*
`spring.cloud.stream.bindings.AccountDataIn.group`	*obrl-ln-account-services.spring.cloud.stream.bindings.AccountDataIn.group*
`spring.cloud.stream.kafka.binder.autoAddPartitions`	*obrl-ln-account-services.spring.cloud.stream.kafka.binder.autoAddPartitions*

Table 1-15 (Cont.) Keys and Placeholders (`obrl-ln-restructure-services`)

Key	Placeholder
`spring.cloud.stream.kafka.binder.brokers`	*obrl-ln-account-services.spring.cloud.stream.kafka.binder.brokers*
`spring.cloud.stream.kafka.binder.zkNodes`	*obrl-ln-account-services.spring.cloud.stream.kafka.binder.zkNodes*

Values for `obrl-ln-amendment-services`

The keys and placeholder values for `obrl-ln-amendment-services` are as follows:

Table 1-16 Keys and Placeholders (`obrl-ln-amendment-services`)

Key	Placeholder
`server.port`	*obrl-ln-amendment-services.server.port*
`flyway.domain.schemas`	*obrl-ln-amendment-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-amendment-services.jndi*
`management.endpoints.web.exposure.include`	*obrl-ln-amendment-services .management.endpoints.web.exposure.include*

Values for `obrl-ln-payment-services`

The keys and placeholder values for `obrl-ln-payment-services` are as follows:

Table 1-17 Keys and Placeholders (`obrl-ln-payment-services`)

Key	Placeholder
`server.port`	*obrl-ln-payment-services.server.port*
`flyway.domain.schemas`	*obrl-ln-payment-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-payment-services.jndi*
`management.endpoints.web.exposure.include`	*obrl-ln-payment-services .management.endpoints.web.exposure.include*

Values for `obrl-ln-schedule-services`

The keys and placeholder values for `obrl-ln-schedule-services` are as follows:

Table 1-18 Keys and Placeholders (`obrl-ln-schedule-services`)

Key	Placeholder
`server.port`	*obrl-ln-schedule-services.server.port*
`flyway.domain.schemas`	*obrl-ln-schedule-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-schedule-services.jndi*

Values for `obrl-ln-migration-services`

The keys and placeholder values for `obrl-ln-migration-services` are as follows:

Table 1-19 Keys and Placeholders (`obrl-ln-migration-services`)

Key	Placeholder
`server.port`	*obrl-ln-migration-services.server.port*
`flyway.domain.schemas`	*obrl-ln-migration-services.schemas*
`flyway.domain.db.jndi`	*obrl-ln-migration-services.db.jndi*
`management.endpoints.web.exposure.include`	*obrl-ln-migration-services.management.endpoints.web.exposure.include*
`v14.8.2.0.0.obrl_migration.migrations.attempt.abort`	*obrl-ln-migration-services.v14.8.2.0.0.obrl_migration.migrations.attempt.abort*
`v14.8.2.0.0.obrl_migration.migrations.attempts.stages`	*obrl-ln-migration-services.v14.8.2.0.0.obrl_migration.migrations.attempts.stages*
`v14.8.2.0.0.obrl_migration.migrations.globalstages`	*obrl-ln-migration-services.v14.8.2.0.0.obrl_migration.migrations.globalstages*
`v14.8.2.0.0.obrl_migration.migrations.stage.cleanup`	*obrl-ln-migration-services.v14.8.2.0.0.obrl_migration.migrations.stage.cleanup*

Values for `slpr-core-services`

The keys and placeholder values for `slpr-core-services` are as follows:

Table 1-20 Keys and Placeholders (`slpr-core-services`)

Key	Placeholder
`server.port`	*slpr-core-services.server.port*
`flyway.domain.schemas`	*slpr-core-services.schemas*
`flyway.domain.db.jndi`	*slpr-core-services.jndi*

Values for `slp-setup-services`

The keys and placeholder values for `slp-setup-services` are as follows:

Table 1-21 Keys and Placeholders (`slp-setup-services`)

Key	Placeholder
`server.port`	*slp-setup-services.server.port*
`flyway.domain.schemas`	*slp-setup-services.schemas*
`flyway.domain.db.jndi`	*slp-setup-services.jndi*

Values for `slp-integration-services`

The keys and placeholder values for `slp-integration-services` are as follows:

Table 1-22 Keys and Placeholders (`slp-integration-services`)

Key	Placeholder
`server.port`	*slp-integration-services.server.port*
`flyway.domain.schemas`	*slp-integration-services.schemas*
`flyway.domain.db.jndi`	*slp-integration-services.jndi*
`statement.modeOfReportGeneration`	*slp-integration-services.statement.modeOfReportGeneration*

Values for `slpr-batchcategory-services`

The keys and placeholder values for `slpr-batchcategory-services` are as follows:

Table 1-23 Keys and Placeholders (`slpr-batchcategory-services`)

Key	Placeholder
`server.port`	*slpr-batchcategory-services.server.port*
`flyway.domain.schemas`	*slpr-batchcategory-services.schemas*
`flyway.domain.db.jndi`	*slpr-batchcategory-services.jndi*
`categoryjobs.isHolidayProcessingToRun`	*slpr-batchcategory-services.categoryjobs.isHolidayProcessingToRun*
`categoryjobs.mocked`	*slpr-batchcategory-services.categoryjobs.mocked*
`spring.cloud.stream.bindings.platoBatchMessageInChannel.destination`	*slpr-batchcategory-services.spring.cloud.stream.bindings.platoBatchMessageInChannel.destination*
`spring.cloud.stream.bindings.platoBatchMessageInChannel.group`	*slpr-batchcategory-services.spring.cloud.stream.bindings.platoBatchMessageInChannel.group*
`spring.cloud.stream.bindings.platoBatchMessageOutChannel.destination`	*slpr-batchcategory-services.spring.cloud.stream.bindings.platoBatchMessageOutChannel.destination*
`spring.cloud.stream.bindings.platoBatchMessageOutChannel.producers.partition-count`	*slpr-batchcategory-services.spring.cloud.stream.bindings.platoBatchMessageOutChannel.producers.partition-count*
`spring.cloud.stream.kafka.binder.autoAddPartitions`	*slpr-batchcategory-services.spring.cloud.stream.kafka.binder.autoAddPartitions*

1.2 Create User Grants

User needs to create the user grants in the necessary schemas to setup the database-related configuration for Oracle Banking Retail Lending Servicing.

Make sure that the database setup and database link creation are completed as specified in Setup Database.

The common grants, common core grants, and Security Management System (SMS) grants are provided to the users. For more information on default grants provided to the users, refer to the table below.

Table 1-24 Grants Provided to the Users

Schema	Grants
Oracle Banking Retail Lending Servicing schema (common grants)	• `grant create session to PLATO;` • `grant create table to PLATO;` • `grant create sequence to PLATO;`
Common Core Schema (common core grants)	• `grant create procedure to CMNCORE;` • `grant create synonym to CMNCORE;` • `grant create sequence to CMNCORE;` • `grant create function to CMNCORE;`
SMS Schema (SMS grants))	• `grant create synonym to SMS;` • `grant create procedure to SMS;` • `grant create sequence to SMS;`

2

Product Installation using Installer

This section provides the systematic information to install Oracle Banking Retail Lending Servicing application using installer.

This topic contains the following sub-topics:

2.1 Pre-requisite

Before proceeding with installation setup, make sure that the database installation is completed and required schemas are created.

2.2 Installer Path

The following table provides the download path of the installer:

Table 2-1 Installer Download Path

Application	Archive Name	OSDC Path
OBMA (Oracle Banking Microservices Architecture)	obma.zip	/INSTALLER
OBRLS	obrls.zip	

> **Note**
>
> To install the application using installer, refer to **Oracle Banking Microservices Architecture Installer Guide**.

3

Configure Oracle Banking Retail Lending Servicing Service Domains

User needs to configure the services and domains as a part of the installation of the Oracle Banking Retail Lending Servicing.

The prerequisites are as follows:

1. The machine should have Java JDK has installed.
2. Install the Oracle Banking Microservices Platform Foundation services. For process to install, refer to the *Oracle Banking Microservices Platform Foundation Installation Guide*.
3. Check whether the machine have **Fusion Middleware Configuration Wizard** installed.

> **Note**
>
> For the exact version to be installed, refer to the *Software Prerequisites* section in the **Oracle Banking Retail Lending Servicing License Guide**.

The steps for creating all Oracle Banking Retail Lending Servicing domains are the same, and the properties like port numbers and names will be changing based on the domain. It is recommended to have a separate domain for the Oracle Banking Retail Lending Servicing application.

Create and configure the following services for the Oracle Banking Retail Lending Servicing domain.

> **Note**
>
> For more information on domain creation and configuration, refer to the How to create and Cluster Configuration section in the Configuration and Deployment Guide.

Table 3-1 Oracle Banking Retail Lending Servicing Services

Service Name	Domain Name
obrl-ln-maintenance-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-lending-product-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-product-segment-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-restructure-maintenance-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-account-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-amendment-services	Oracle Banking Retail Lending ServicingDomain

Table 3-1 (Cont.) Oracle Banking Retail Lending Servicing Services

Service Name	Domain Name
obrl-ln-payment-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-restructure-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-migration-services	Oracle Banking Retail Lending ServicingDomain
obrl-ln-schedule-services	Oracle Banking Retail Lending ServicingDomain
slpr-core-services	Oracle Banking Retail Lending ServicingDomain
slpr-batchcategory-services	Oracle Banking Retail Lending ServicingDomain
slp-setup-services	Oracle Banking Retail Lending ServicingDomain
slp-integration-services	Oracle Banking Retail Lending ServicingDomain
slpr-file-gen-services	Oracle Banking Retail Lending ServicingDomain

4
Create Data Sources

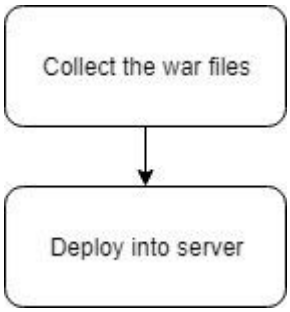
User needs to create the data sources in the necessary domains for the deployment of the Oracle Banking Retail Lending Servicing.

The prerequisites are as follows:

- Make sure that the database setup for Oracle Banking Retail Lending Servicing. is completed before deployment setup.
- The data sources for respective microservices must be created before deployment of the application onto managed servers. Each of the data sources targets the corresponding servers on which the application will be deployed.

The following diagram depicts the process of creating data sources:

Figure 4-1 Process of Data Source Creation



To create the data sources:

1. Create the data sources on each domain.

   For more information on data source creation, refer to the *How to create Data sources* section in *Configuration and Deployment Guide*.

Table 4-1 Data Sources

Service Name	Data Source Name	Data Source JNDI	Targets
obrl-ln-maintenance-services	**OBRLMANT**	*jdbc/OBRLMANT*	OBRLS _Server1
obrl-ln-lending-product-services	**OBRLMANT**	*jdbc/OBRLMANT*	OBRLS _Server1
obrl-ln-product-segment-services	**OBRLMANT**	*jdbc/OBRLMANT*	OBRLS _Server1
obrl-ln-restructure-maintenance-services	**OBRLMANT**	*jdbc/OBRLMANT*	OBRLS _Server1
obrl-ln-account-services	**OBRLACCOUNT**	*jdbc/OBRLACCOUNT*	OBRLS _Server2

Table 4-1 (Cont.) Data Sources

Service Name	Data Source Name	Data Source JNDI	Targets
obrl-ln-amendment-services	**OBRLACCOUNT**	*jdbc/OBRLACCOUNT*	OBRLS _Server2
obrl-ln-payment-services	**OBRLACCOUNT**	*jdbc/OBRLACCOUNT*	OBRLS _Server2
obrl-ln-restructure-services	**OBRLACCOUNT**	*jdbc/OBRLACCOUNT*	OBRLS _Server2
obrl-ln-schedule-services	**SCHEDULE**	*jdbc/SCHEDULE*	OBRLS _Server3
obrl-ln-migration-services	**OBRLMIGRATION**	*jdbc/OBRLMIGRATION*	OBRLS _Server3
slpr-core-services	**SLPRCORE**	*jdbc/SLPRCORE*	OBRLS _Server4
slpr-batchcategory-services	**SLPR_BATCH**	*jdbc/SLPR_BATCH*	OBRLS _Server4
slp-setup-services	**SLPSETUP**	*jdbc/SLPSETUP*	OBRLS _Server5
slp-integration-services	**OBRLINTR**	*jdbc/OBRLINTR*	OBRLS _Server5
slpr-file-gen-services	**OBRLINTR**	*jdbc/OBRLINTR*	OBRLS _Server5

2. Map the following data sources to all the newly created managed servers for Oracle Banking Retail Lending Servicing.

> **Note**
>
> As part of the Oracle Banking Retail Lending Servicing, the flyway JNDI changes are incorporated. In order to deploy the services successfully, the data sources need to be mapped.

Table 4-2 Additional Data Sources

Data Source Name	Data Source JNDI	Targets
PLATO	*jdbc/PLATO*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATO_UI	*jdbc/ PLATO_UI_CONFIG*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATOFEED	*jdbc/PLATOFEED*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
SMS	*jdbc/sms*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
COMMON CORE	*jdbc/CMNCORE*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4

Table 4-2 (Cont.) Additional Data Sources

Data Source Name	Data Source JNDI	Targets
REPORTSERVICE	*jdbc/REPORTSERVICE*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATOSEC	*jdbc/PLATO_SECURITY*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATORULE	*jdbc/PLATORULE*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATOBATCH	*jdbc/PLATOBATCH*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATOARCH	*jdbc/PLATOARCH*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4
PLATOFDT	*jdbc/PLATOFDT*	OBRLS _Server1, OBRLS_Server2, OBRLS_Server3, OBRLS_Server4

5
Deploy Services

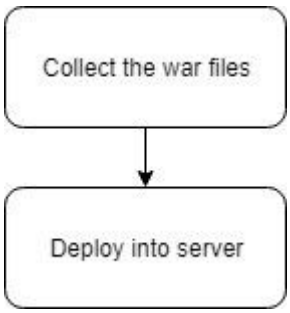
User needs to deploy the services in the specified order for the Oracle Banking Retail Lending Servicing application to run.

Make sure that the database setup and data sources creation for Oracle Banking Retail Lending Servicing are completed before application deployment.

Each of the services corresponds to a specific war file that needs to be deployed into the server.

The following diagram depicts the process of deploying the war files:

Figure 5-1 Process of Deployment



Deploy the war files one after the other in the specified order. For more information on deployments, refer to the *How to Deploy* section in the *Configuration and Deployment Guide*.

> **Note**
>
> The provided archive names are for reference purposes. Refer to the exact versions of archive names available as a part of the release.

Table 5-1 Deployments List

Application	Archive name	OSDC path	Targets
`obrl-ln-maintenance-services`	`obrl-ln-maintenance-services-`{version}.war	{**unzip the file**} OBRLS\obrl-ln-maintenance-services	OBRLS _Server1
`obrl-ln-lending-product-services`	`obrl-ln-lending-product-services-`{version}.war	{**unzip the file**}OBRLS\ obrl-ln-lending-product-services	OBRLS _Server1

Table 5-1 (Cont.) Deployments List

Application	Archive name	OSDC path	Targets
obrl-ln-product-segment-services	obrl-ln-product-segment-services-{version}.war	{**unzip the file**} OBRLS\obrl-ln-product-segment-services	OBRLS _Server1
obrl-ln-restructure-maintenance-services	obrl-ln-restructure-maintenance-services-{version}.war	{**unzip the file**} OBRLS\obrl-ln-restructure-maintenance-services	OBRLS _Server1
obrl-ln-account-services	obrl-ln-account-services-{version}.war	{**unzip the file**} OBRLS\obrl-ln-account-services	OBRLS _Server2
obrl-ln-amendment-services	obrl-ln-amendment-services-{version}.war	**{unzip the file}** OBRLS\obrl-ln-amendment-services	OBRLS _Server2
obrl-ln-payment-services	obrl-ln-payment-services -{version}.war	{**unzip the file**} OBRLS\obrl-ln-payment-services	OBRLS _Server2
obrl-ln-restructure-services	obrl-ln-restructure-services -{version}.war	**{unzip the file}** OBRLS\ obrl-ln-restructure-services	OBRLS _Server2
obrl-ln-schedule-services	obrl-ln-schedule-services -{version}.war	**{unzip the file}** OBRLS\ obrl-ln-schedule-services	OBRLS _Server3
obrl-ln-migration-services	obrl-ln-migration-services-{version}.war	**{unzip the file}** OBRLS\ obrl-ln-migration-services	OBRLS _Server3
slpr-core-services	slpr-core-services -{version}.war	**{unzip the file}** OBRLS\ slpr-core-services	OBRLS _Server3
slpr-batchcategory-services	slpr-batchcategory-services-{version}.war	**{unzip the file}** OBRLS\ slpr-batchcategory-services	OBRLS _Server4
slp-setup-services	slp-setup-services-{version}.war	**{unzip the file}** OBRLS\ slpr-batchcategory-services	OBRLS _Server3
slp-integration-services	slp-integration-services-{version}.war	**{unzip the file}** OBRLS\ slp-integration-services	OBRLS _Server3

Table 5-1 (Cont.) Deployments List

Application	Archive name	OSDC path	Targets
`slpr-file-gen-services`	`slpr-file-gen-services -` {version}.war	**{unzip the file}** OBRLS\ slpr-file-gen-services	OBRLS _Server3

6
Configure FOP

User needs to perform the configurations for Formatting Objects Processor (FOP) as a part of the installation of the Oracle Banking Retail Lending Servicing.

Before adopting to the FOP servers, user requires to deploy `plato-report-services`.

To adopt FOP servers, follow the below steps to generate reports:

1. Copy the `template_metadata.zip` folder from`OBRLS_ADVICE_FORMATS/OBRLS-advice-formats-release/TELLER/FOP` and extract as per `fop.destination.file-system.template-metadata-directory` (PLATO schema against report-service) path on server.
2. Copy the `template_metadata.zip` folder from `OBRLS_ADVICE_FORMATS/OBRLS-advice-formats-release/DEPOSITS/FOP` and extract as per `fop.destination.file-system.template-metadata-directory` (PLATO schema against report-service) path on server.
3. Create a directory`/scratch/OBMA/report-service/output` (can be any valid location in server) and provide Read/Write access.
4. Copy the `fop.xconf on /scratch/OBMA/report-service` (can be any valid location in server) and provide Read/Write access.

7

Configure SSL

The configuration of SSL needs to be completed for the installation of the Oracle Banking Retail Lending Servicing.

Make sure that the Oracle Weblogic domain with the managed servers is created.

To configure SSL:

1. Start the `plato-apigateway-router` service with SSL arguments and make it registered in eureka.
2. Update the SSL URL in the `PLATOUI` schema's table `PRODUCT_SERVICES_ENV_LEDGER`.

   For example, *https://<localhost>:<SSL_PORT>*.
3. Update the placeholder value (`-Dapigateway.url`) in the `setUseroverride.sh` file to the SSL link.

   For example, `JAVA_OPTIONS="${JAVA_OPTIONS} -Dapigateway.url=https://<localhost>:<SSL_PORT>" export JAVA_OPTIONS;`
4. Restart and refresh all the managed servers.

8

Restart and Refresh

Once the deployments are completed, restart all the managed servers. For each application call path “/refresh” for refreshing the configuration properties.

To restart the server, refer to **Restart Server** section in *Configuration and Deployment Guide*.

9

Logging Area

The logs area contains the logs after deployment of Oracle Banking Retail Lending Servicing applications in the WebLogic server.

The Oracle Banking Retail Lending Servicing application writes logs in the below area of the server:

`<WEBLOGIC_DOMAIN_CONFIG_AREA/servers/APP/logs/APP.out`

A sample of logging area are as follows:

Table 9-1 Sample of Logging Area

Sample	Value
Domain Name	`OBRLS_domain`
managed_serverName	`OBRLSAPP`
Domain Area	Forexample, a domain is created with the above domain and managed server names in the following area of the server: `~/middleware/user_projects/domains/OBRLS_domain`
Loggingarea for Oracle Banking Retail Lending Servicing applications	`~/middleware/user_projects/domains/branch_domain/servers/OBRLSAPP/logs/OBRLSAPP.out`

10

Configure Oracle Banking Retail Lending Servicing UI Domain and Cluster

The configurations for the new domain and cluster need to be completed as a part of the installation of the Oracle Banking Retail Lending Servicing.

The prerequisites are as follows:

1. The machine should have Java JDK has installed.
2. The machine should have **Fusion Middleware Configuration Wizard** installed.

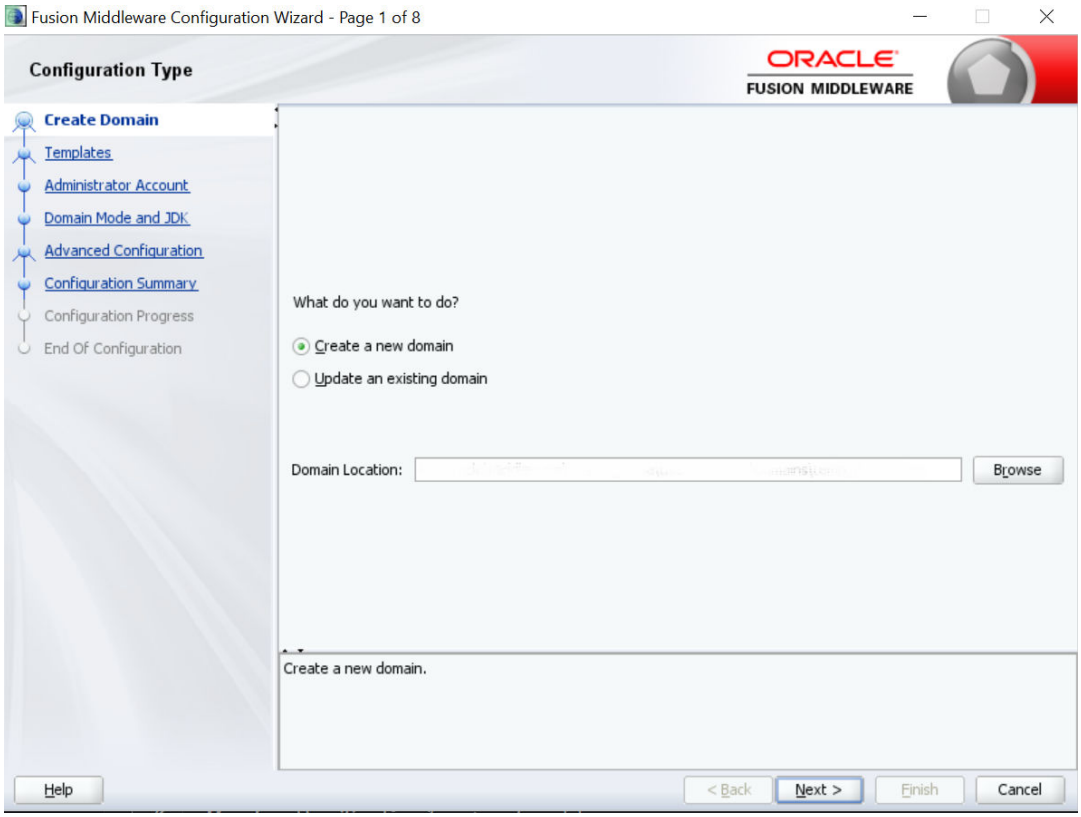
> **Note**
>
> For the exact version to be installed, refer to the *Software Pre-requisites* section in the **Oracle Banking Retail Lending Servicing License Guide**.

To configure the domain and cluster:

1. On the **Fusion Middleware Configuration Wizard** window, click **Create Domain**.

   The **Create Domain** segment is displayed.

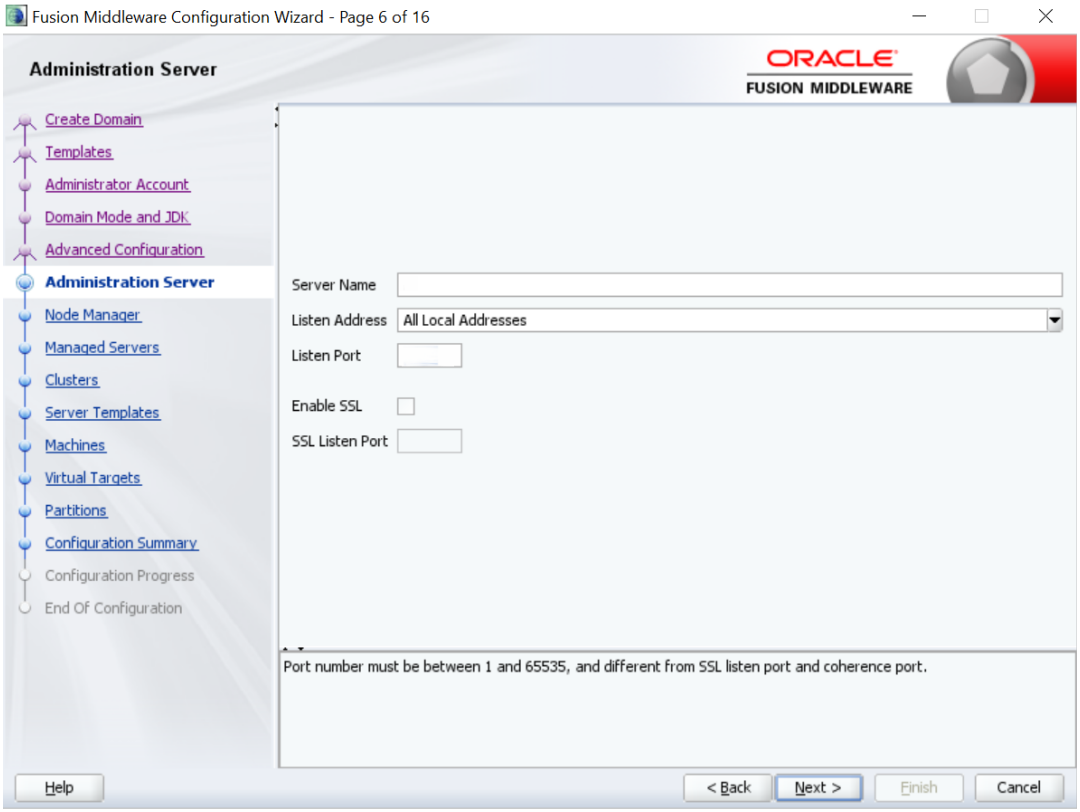
Figure 10-1 Create Domain



2. On the **Configuration Type** segment, select **Create a new domain**, and specify the file path of the domain in the **Domain Location** field.
3. Click **Next**.

   The **Administration Server** segment is displayed.

Figure 10-2 Administration Server Details



4. In the **Administration Server** segment, specify the fields. For more information on fields, refer to the field description table.

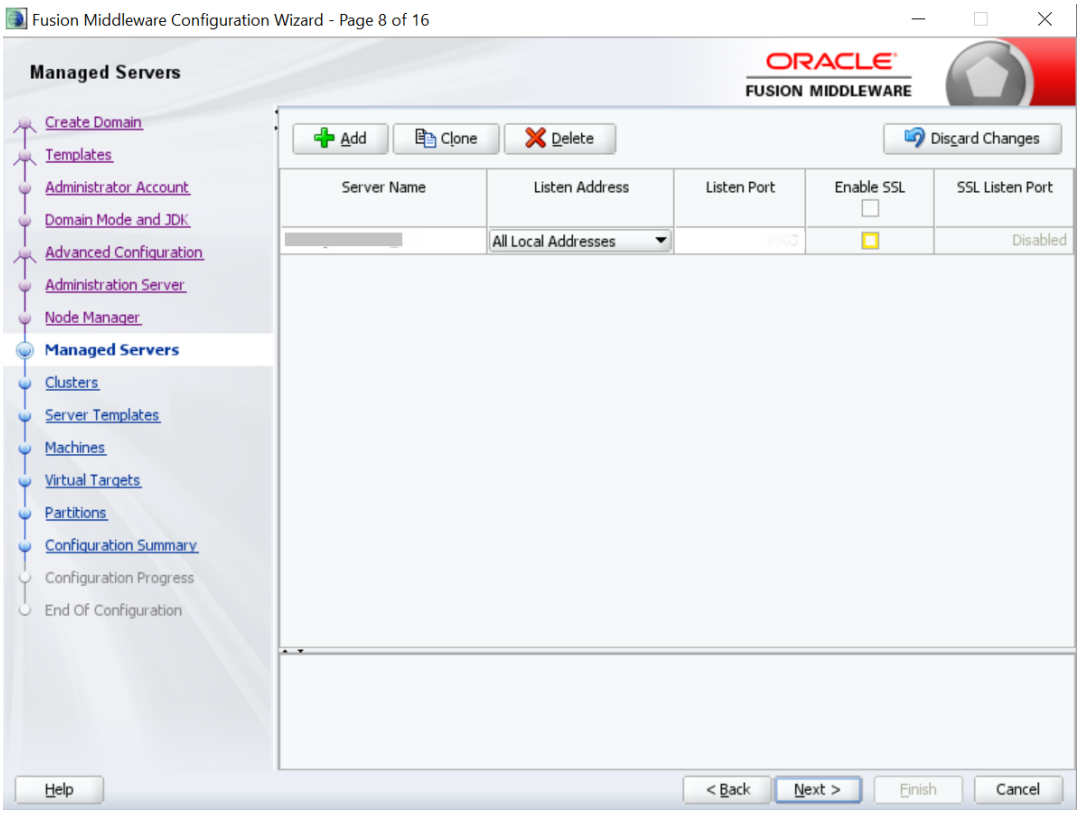
Table 10-1 Administration Server - Field Description

Field	Description
Server Name	Specify the name of the server.
Listen Address	Select **All Local Addresses** from the drop-down values.
Listen Port	Specify the listen port.
Enable SSL	Select if the SSL needs to be enabled.
SSL Listen Port	Specify the SSL listen port. **Note** This field is enabled only if **Enable SSL** is selected.

5. Click **Next**.

   The **Managed Servers** segment is displayed.

Figure 10-3 Managed Servers

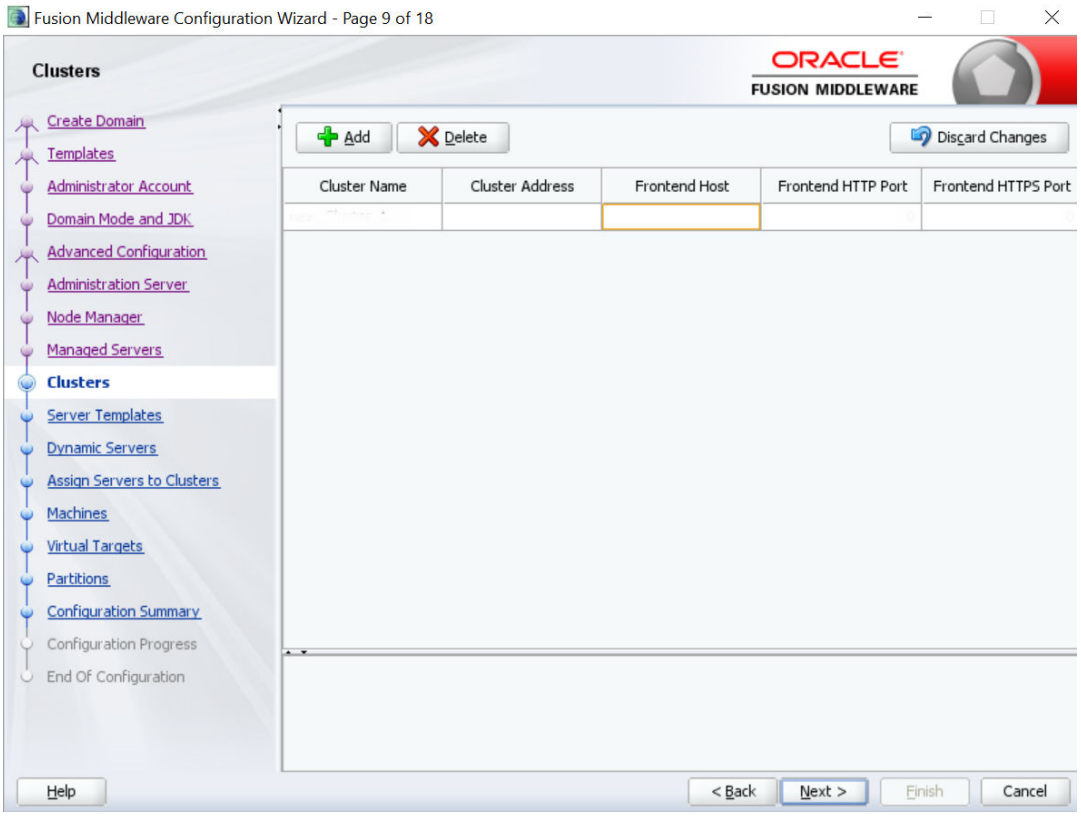


6. In the **Managed Servers** segment, add an entry for the managed server. For more information on fields, refer to the .

7. Click **Next**.

   The **Clusters** segment is displayed.

Figure 10-4 Clusters



8. In the **Clusters** segment, add an entry for the cluster. For more information on fields, refer to the field description table.

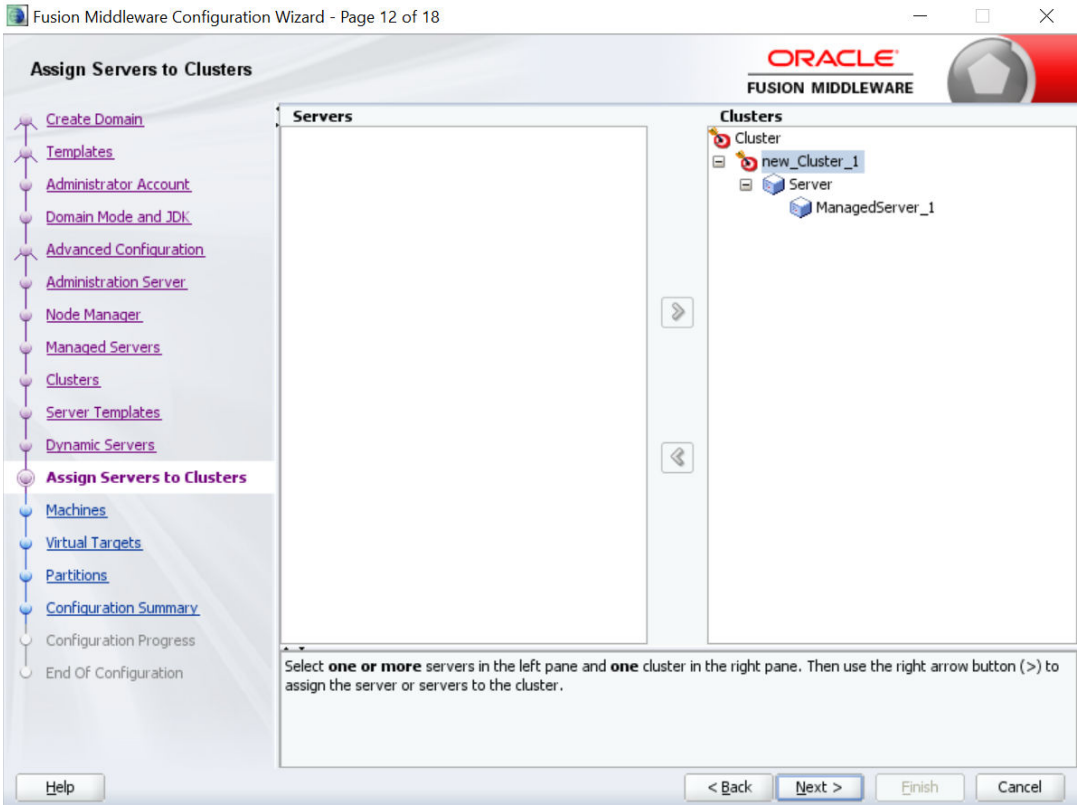
Table 10-2 Clusters - Field Description

Field	Description
Cluster Name	Specify the name of the cluster.
Cluster Address	Specify the address of the cluster.
Frontend Host	Specify the value of the front-end host.
Frontend HTTP Port	Specify the value of the front-end HTTP port.
Frontend HTTPS Port	Specify the value of the front-end HTTPS port.

9. Click **Next**.

   The **Assign Servers to Clusters** segment is displayed.

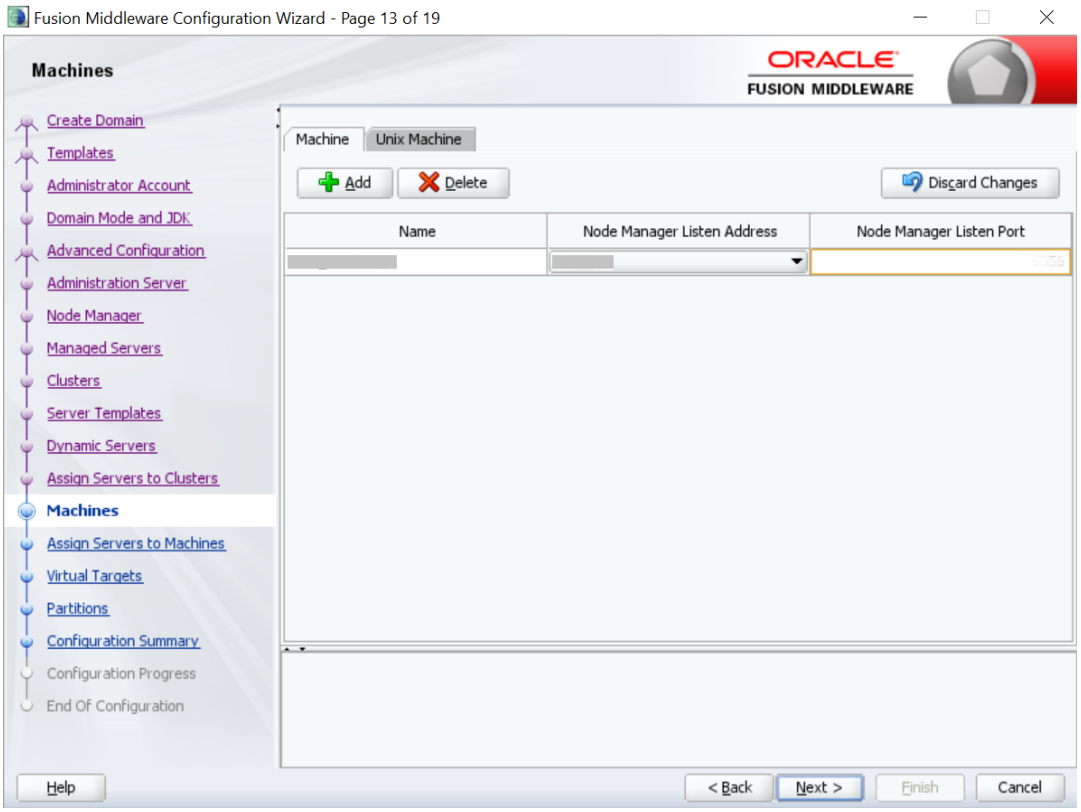
Figure 10-5 Assign Servers to Clusters



10. In the **Assign Servers to Clusters** segment, assign the necessary servers.
11. Click **Next**.

    The **Machines** segment is displayed.

Figure 10-6 Machines



12. In the **Machines** segment. add an entry for the machine. For more information on the fields, refer to the field description table.

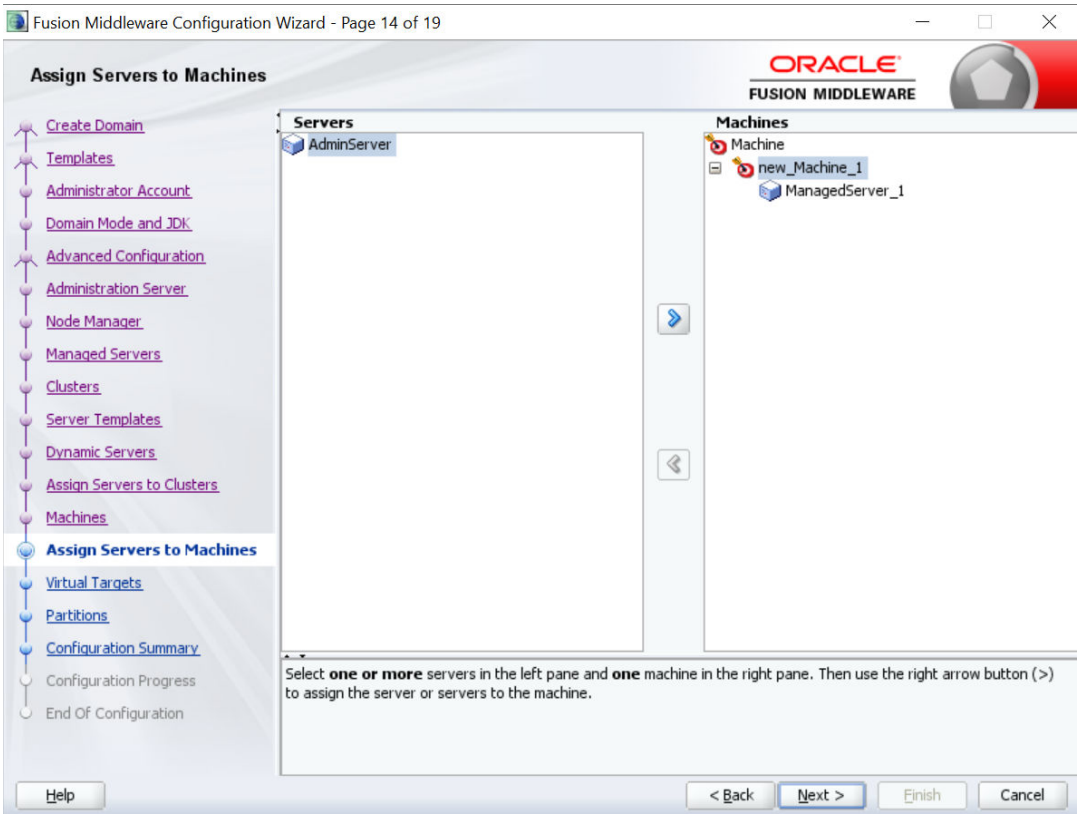
Table 10-3 Machines - Field Description

Field	Description
Name	Specify the name of the machine.
Node Manager Listen Address	Select the listen address of the node manager from the drop-down values.
Node Manager Listen Port	Specify the listen port of the node manager.

13. Click **Next**.

    The **Assign Servers to Machines** segment is displayed.

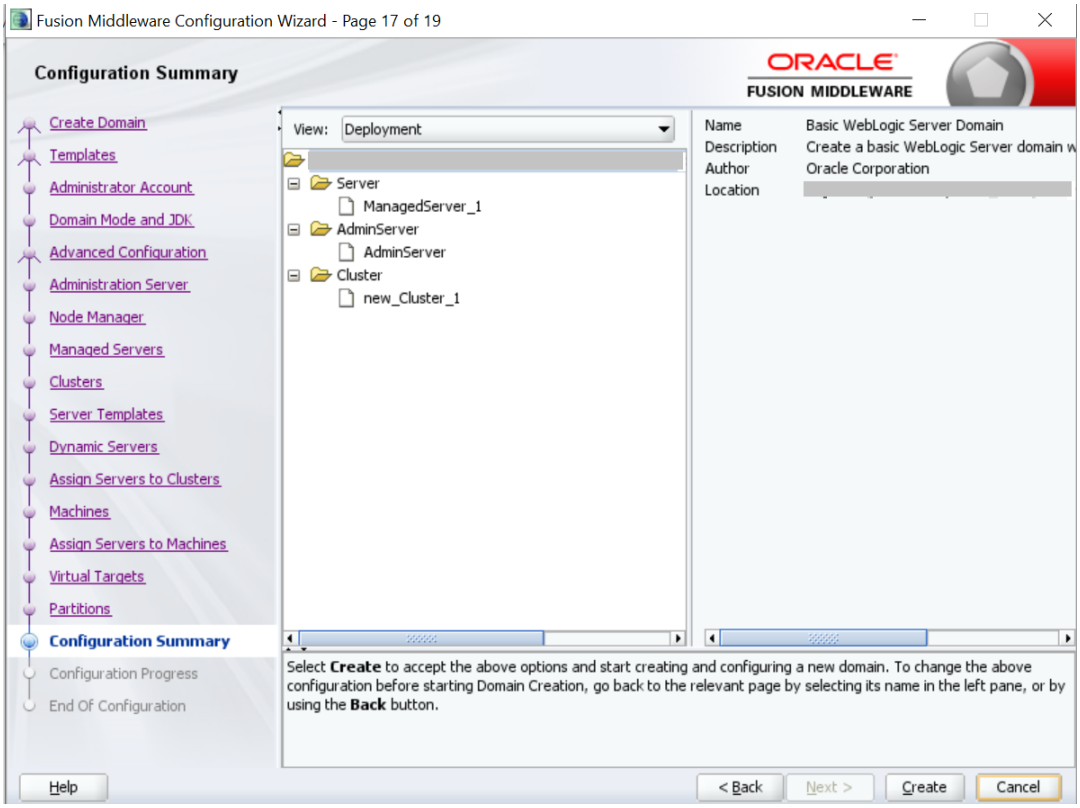
Figure 10-7 Assign Servers to Machines



14. In the **Assign Servers to Machines** segment, assign the required machine
15. Click **Next**.

    The **Configuration Summary** segment is displayed.

Figure 10-8 Configuration Summary



16. Click **Create** to configure a new domain.

11

Known Issues and Resolutions

This section provides the troubleshooting for the deployment failure in Oracle Banking Retail Lending Servicing services.

Troubleshoot LDAP Login Issue

If you are facing login issue after upgrade, regenerate the LDAP password by using the encryption utility available in location: `/OBRLS_INITIAL_SETUP/plato-security-toolkit-9.6.0.jar.`.

Command: `java -jar target\plato-security-toolkit-9.6.0.jar`

Input and Output Examples as below:

- Enter pass phrase: Test123
- Enter Salt: 0.9412345671234567
- Encrypted Password: AAAAAAAAAAAAAAAA282FCixC1h98xgwSOD/U2u1DivwLZ1E=

Deployment Order for Common Core Services

- CMC-ACCOUNT-SERVICES
- CMC ADDITIONAL-ATTRIBUTES-SERVICES
- CMC-ADVICE-SERVICES
- CMC-BASE-SERVICES
- CMC-BATCH-SERVICES
- CMC-BRANCH-SERVICES
- CMC-BUSINESSOVERRIDES-SERVICES
- CMC-COREBANKING-ADAPTER-SERVICE
- CMC-CURRENCY-SERVICES
- CMC-DATASEGMENT-SERVICES
- CMC-SCREENCLASS-SERVICES
- CMC-CUSTOMER-SERVICES
- CMC-EXTERNAL-CHART-ACCOUNT
- CMC-EXTERNAL-SYSTEM-SERVICES
- CMC-EXTERNAL-VIRTUAL-ACCOUNT-SERVICES
- CMC-FACILITIES-SERVICE
- CMC-FC-AI-ML-SERVICES
- CMC-ML-INDB-SERVICES
- CMC-NLP-DASHBOARD-WIDGET-SERVICES
- CMC-NLP- MAINTENANCE-SERVICES
- CMC-NLP-OPENNLP-SERVICES

- CMC-NLP-PIPELINE-SERVICES
- CMC-NLP-TEXT-EXTRACTION-SERVICES
- CMC-OBCBS-SERVICES
- CMC-OBRH-SERVICE
- CMC-REPORT-SERVICE
- CMC-RESOURCE-SEGMENT-ORCHESTRATOR-SERVICE
- CMC-SETTLEMENTS-SERVICES
- CMC-TRANSACTIONCONTROLLER-SERVICES
- CMC-TXN-CODE-SERVICES
- CMC-CHARGES-CALCULATION-SERVICES
- CMC-OPDS-SERVICES
- CMC-TXN-CODE-SERVICES

Issue in SMS Services

After deploying `sms-core-services`, if an user face error as java.lang.IllegalStateException: No instances available for `SMS-CORE-SERVICES`, add the following -Dparam at setuseroverrides.sh file and restart all the managed servers.

-Dspring.cloud.loadbalancer.ribbon.enabled = false.

Issue in OBMA Services

After deploying the `microservices`, and if the user gets below error during activation, add the below -Dparam at `setuseroverrides.sh` file and restart the impacted managed servers.

-Dspring.main.allow-circular-references = true.

-Dweblogic.security.SSL.minimumProtocolVersion=TLSv1.2

Error: An error occurred during activation of changes, please see the log for details.

org.springframework.beans.factory.BeanCurrentlyInCreationException: Error creating bean with name 'customHealthIndicator': Requested bean is currently in creation: Is there an unresolvable circular reference.