

Installation Guide

Oracle Banking Virtual Account Management

Release 14.5.3.0.0

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1. Preface

1.1 Introduction

This guide would help you to install the Oracle Banking Virtual Account Management services on designated environment. It is assumed that all the prior setup is already done related with WebLogic installation, WebLogic managed server creation and Oracle DB installation.

Note: For the exact version to be installed, refer to **Tech Stack** section of Release Notes.

1.2 Audience

This document is intended for WebLogic admin or ops-web team who are responsible for installing the OFSS banking products.

1.3 Documentation Accessibility

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

1.4 Organization

This installation guide allows you to install following services in same order:

- OBVAM-ACCOUNT-SERVICES
- OBVAM-CORE-SERVICES
- OBVAM-ECA-SERVICES
- OBVAM-ENTITY-SERVICES
- OBVAM-EXTERNAL-DDA-SERVICES
- OBVAM-IDENTIFIER-SERVICES
- OBVAM-INTERNAL-TRANSFER-SERVICES
- OBVAM-STATEMENT-SERVICES
- OBVAM-STMT-ENT-ADAPTER
- OBVAM-TRANSACTION-JOURNAL-SERVICES
- EXTERNAL-LIQUIDITY-MANAGEMENT-SERVICE
- EXTERNAL-INTEREST-ENGINE-SERVICE
- OBVAM-PROJECTION-SERVICES
- VAMLM-CHARGE-SERVICES

User Interface

Follow the below steps to migrate from existing app-shell build to Foundation app-shell. With 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 components server deploy the war files mentioned below:

- app-shell
- cmc-component-server
- moc-component-server
- sms-component-server

For Domain Specific component server deploy the war file mentioned below:

- obvam-component-server
- obvamlm-component-server

2. Database Setup

In this section, you are going to setup database related configuration for Oracle Banking Virtual Account Management Installation.

It is recommended to create different schema for each application. Below setup is designed to work with separate schema for each application

2.1 Prerequisite

Before you proceed with below setup, make sure required schemas are provided to you.

3. Oracle Banking Virtual Account Management Domains Configuration

3.1 Prerequisites

1. Machine should have Java JDK has installed.
2. Oracle Fusion Middleware has to be installed on the machine.
3. Copy the below files from the OSDC path to <domain>/bin folder
 - pre_deployment_setup \ domain-config-deploy.env
(Edit this file and provide appropriate values)
 - pre_deployment_setup \ weblogic \ setUserOverrides.sh

For providing property values, refer to Oracle Banking Virtual Account Management Pre-Installation “**Annexure: domain-config-deploy.env**”

Note: For the exact version to be installed, refer to Tech Stack section of Release Notes.

It is recommended to create different domains for the below Oracle Banking Virtual Account Management applications:

1. OBVAM Core Domain
2. OBVAM Entities Domain
3. OBVAM Accounts Domain
4. OBVAM Identifiers Domain
5. OBVAM Transaction Journal Domain
6. OBVAM Transaction Internal Booking Domain
7. OBVAM DDA Domain
8. OBVAM External Credit Assessment Domain
9. OBVAM Statements Domain
10. OBVAM Statements Entity Aggregator Domain
11. OBVAM External Liquidity Management Domain
12. OBVAM External Interest Engine Domain
13. OBVAM Projection Server Domain
14. OBVAM Appshell Domain
15. VAMLM Charges Domain

For creating and configuring Domain, refer to Oracle Banking Microservices Platform Foundation Installation ANNEXURE-1 “**How to create Domain and Cluster Configuration**”.

4. Data Sources Creation

4.1 Prerequisite

Database and application setup for Oracle Banking Microservices Architecture has to be performed prior to deployment setup.

4.2 Data Sources List

The table below lists the data sources to be created on each domain prior to deployment of applications onto managed servers.

Serial Number	Service Name	Data Source Name	Data Source JNDI	Targets
1	obvam-account-services	PLATO	jdbc/PLATO	Account Server
		CMC	jdbc/CMNCORE	
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATOFEED	jdbc/PLATOFEED	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAM	jdbc/VAM	
2	obvam-core-services	PLATO	jdbc/PLATO	Core Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAC	jdbc/VAC	
3	obvam-eca-services	PLATO	jdbc/PLATO	ECA Server
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAB	jdbc/VAB	
4	obvam-entity-services	PLATO	jdbc/PLATO	Entity Server
		CMC	jdbc/CMNCORE	
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATOFEED	jdbc/PLATOFEED	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAE	jdbc/VAE	
5	obvam-external-dda-services	PLATO	jdbc/PLATO	External-DDA Server
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		EDA	jdbc/EDA	
6	obvam-identifier-services	PLATO	jdbc/PLATO	Identifier Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAI	jdbc/VAI	
7	obvam-internal-transfer-services	PLATO	jdbc/PLATO	Internal Transfer Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	

Serial Number	Service Name	Data Source Name	Data Source JNDI	Targets
		VAN	jdbc/VAN	
8	obvam-statement-services	PLATO	jdbc/PLATO	Statement Server
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAS	jdbc/VAS	
9	obvam-stmt-ent-adapter	PLATO	jdbc/PLATO	Statement Entity Adapter
		PLATOBATCH	jdbc/PLATOBATCH	
		SMS	jdbc/sms	
		VAS_DS	jdbc/VAS_DS	
10	transaction-journal-services	PLATO	jdbc/PLATO	Transaction Journal Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAT	jdbc/VAT	
11	External-liquidity-management-service services	PLATO	jdbc/PLATO	Liquidity Management Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		ELM	jdbc/ELM	
12	External-Interest-Engine-Service services	PLATO	jdbc/PLATO	Interest Engine Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		EIE	jdbc/EIE	
13	Projection-services	PLATO	jdbc/PLATO	Projection Server
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAP	jdbc/VAP	
14	vamlm-charge-services	PLATO	jdbc/PLATO	Charges Server
		CMC	jdbc/CMNCORE	
		PLATOBATCH	jdbc/PLATOBATCH	
		PLATO_UI_CONFIG	jdbc/PLATO_UI_CONFIG	
		SMS	jdbc/sms	
		VAMLMCHG	jdbc/VAMLMCHG	
15	Appshell UI	None	None	Appshell Server

4.3 Creating Datasource

For creating datasource, refer Oracle Banking Microservices Platform Foundation Installation ANNEXURE-1 “How to create Datasource”.

5. Deployments

5.1 Prerequisite

Before you proceed with below setup, ensure that Kafka is configured, and the related properties are present in PLATO schema.

To avail feature of record level approval functionality in Plato-Feed, the below property would need to be maintained as part of weblogic VM argument by each product domain including plato. If not maintained, the default behavior will be of file level approval only.

property name - feed.recordLevelApprovalReqd

property value - true or false

default value - false

5.2 Deployments List

Below table give details of the deployments required on each domain for the Oracle Banking Virtual Account Management application to run. Deploy one after other in the same given order.

Application	Archive name	OSDC path	Targets
OBVAM Account Services	obvam-account-services-{version}.war	obvam_services \ obvam-account-services	OBVAM Account Server
OBVAM Transaction Journal Services	obvam-transaction-journal-services-{version}.war	obvam_services \ obvam-transaction-journal-services	OBVAM Transaction Journal Server
OBVAM Statement Services	obvam-statement-services-{version}.war	obvam_services \ obvam-statement-services	OBVAM Statement Server
OBVAM Statement Entity Adapter	obvam-stmt-ent-adapter-{version}.war	obvam_services \ obvam-stmt-ent-adapter	Statement Entity Adapter
OBVAM Internal Transfer Services	obvam-internal-transfer-services-{version}.war	obvam_services \ obvam-internal-transfer-services	OBVAM internal Transfer Server
OBVAM External DDA Services	obvam-external-dda-services-{version}.war	obvam_services \ obvam-external-dda-services	OBVAM External DDA Server
OBVAM External Credit Assessment and Block (ECA) Services	obvam-eca-services-{version}.war	obvam_services \ obvam-eca-services	OBVAM ECA Server
OBVAM Core Services	obvam-core-services-{version}.war	obvam_services \ obvam-account-services	OBVAM Core Server
OBVAM Identifier Services	obvam-identifier-services-{version}.war	obvam_services \ obvam-identifier-services	OBVAM Identifier Server
OBVAM Entity Services	obvam-entity-services-{version}.war	obvam_services \ obvam-entity-services	OBVAM Entity Server

Application	Archive name	OSDC path	Targets
External Interest Engine Services	external-interest-engine-service-{version}.war	obvam_services \ external-interest-engine-service	OBVAM EIE Server
External Liquidity Management Services	external-liquidity-management-service-{version}.war	obvam_services \ external-liquidity-management-service	OBVAM ELM Server
OBVAM Projection Services	obvam-projection-services-{version}.war	obvam_services \ obvam-projection-services	OBVAM Projection Server
VAM LM Charge Services	vamlm-charge-services-{version}.war	obvam_services \ vamlm-charge-services	OBVAM Charge Server
OBVAM UI	app-shell-{version}.war cmc-component-server-{version}.war moc-component-server-{version}.war sms-component-server-{version}.war obvam-component-server-{version}.war obvamlm-component-server-{version}.war	ui \	OBVAM Appshell Server

NOTE: Refer to OSDC file for the exact version number for each service.

vamlm-charge-services Deployment:

vamlm-charge-services is the common service for Oracle Banking Virtual Account Management and Oracle Banking Liquidity Management. In a co-deployed situation, it should be deployed from only one of the packages.

Both the product packages contain the exact same version of this service. If you deploy it from the one of the product packages, then do not deploy it from the other one.

Note: The value of deployment type in the property table is dependent on the type of deployment.

- If the deployment is standalone for Oracle Banking Virtual Account Management, the value should be **vamchg**.
- If the deployment is standalone for Oracle Banking Liquidity Management, the value should be **lmchg**.
- If the deployment is common for both the products, the value should be **codeployed**.

obvamlm-component-server Deployment:

obvamlm-component-server is the common component server for Charges in Oracle Banking Virtual Account Management and Oracle Banking Liquidity Management. In a co-deployed situation, it should be deployed from only one of the packages.

Both the product packages contain the exact same version of this component server. If you deploy it from the one of the product packages, then do not deploy it from the other one.

obvam-stmt-ent-adapter Deployment:

After completing the deployment of obvam-statement-services and obvam-stmt-ent-adapter services, the below listed batches needs to be triggered.

- populateTmStatementHistoryJob
- populateTwStatementHistoryJob

NOTE: This is the one-time activity which needs to be performed on the first deployment only.

5.3 Steps to Deploy as Application

To deploy application, refer Oracle Banking Microservices Platform Foundation Installation Guide and ANNEXURE-1 “**How to deploy application**”.

6. Initial Setup

Once everything is deployed, run CMC and SMS initial setup scripts from the below OSDC path to create the required maintenances.

1. obvam_initial_setup / cmc_initial_setup.sql
 - To be compiled in Common Core schema
2. obvam_initial_setup / sms_initial_setup.sql
 - To be compiled in SMS schema

6.1 CMC Intial Setup

This script would prompt user to enter below values.

Serial Number	Field	Description
1	Bank Code	A four letter Bank Code
2	Bank Description	Description of the Bank Code
3	Branch Code	A three letter Branch Code
4	Branch Name	Name of the Branch
5	Branch Address Line 1	Address line 1 of the branch
6	Branch Address Line 2	Address line 2 of the branch
7	Branch Address Line 3	Address line 3 of the branch
8	Branch Currency	A three letter ISO Currency Code
9	Country Code	A two letter ISO Country Code
10	Walk-In Customer	Walk-in customer number
11	Host Code	Host code of the Branch
12	Host Description	Host code description
13	Host Process Time Zone	Host code time zone (ex: GMT+5.30)
14	Source System	External source system
15	Source System Description	Source system description
16	Source System Branch	Branch code as in the source system
17	Previous Working Day	Previous working day of the Branch
18	Current Working Day	Current working day of the Branch
19	Next Working Day	Next working day of the Branch

6.2 SMS Intial Setup

This script would prompt user to create two admin users.

Serial Number	Field	Description
1	User Login ID 1	Login ID of the first User
2	User Name 1	Name of the first User
3	User Login ID 2	Login ID of the second User
4	User Name 2	Name of the second User
5	Users Home Branch Code	A three letter Home-Branch Code of the users
6	Users Locale	Users locale (2 letter ISO country code)
7	Start Date	Start date
8	End Date	End date

These users will be assigned the default ADMIN_ROLE and below functional activities will be mapped.

1. SMS_FA_USER_NEW
2. SMS_FA_USER_AMEND
3. SMS_FA_USER_CLOSE
4. SMS_FA_USER_REOPEN
5. SMS_FA_USER_DELETE
6. SMS_FA_LOAN_DASHBOARD_PREFERENCE
7. SMS_FA_USER_VIEW
8. SMS_FA_USER_AUTHORIZE
9. SMS_FA_ROLE_NEW
10. SMS_FA_ROLE_AMEND
11. SMS_FA_ROLE_CLOSE
12. SMS_FA_ROLE_REOPEN
13. SMS_FA_ROLE_DELETE
14. SMS_FA_LOAN_DASHBOARD_PREFERENCE_PUT
15. SMS_FA_ROLE_VIEW
16. SMS_FA_ROLE_AUTHORIZE
17. SMS_FA_LOAN_DASHBOARD_VIEW
18. SMS_FA_APPLICATION_VIEW
19. SMS_FA_MENU_DASHBOARD_VIEW
20. CMC_FA_EXT_BRANCH_PARAMETERS_LOV
21. CMC_FA_EXT_BRANCH_PARAMETERS_VIEW
22. CMC_FA_EXT_BANK_PARAMETERS_VIEW
23. CMC_FA_EXT_BANK_PARAMETERS_LOV
24. CMC_FA_SYSTEM_DATES_VIEW
25. CMC_FA_CURRENCY_DEFN_VIEW
26. CMC_FA_LOCAL_HOLIDAY_VIEW
27. CMC_FA_LANGUAGE_CODE_VIEW

6.3 **LDAP Setup**

The users created using the above SMS script must also be created in the LDAP server. Refer Oracle Banking Microservices Platform Foundation Services – ANNEXURE-1 for LDAP setup.

7. Restarts and Refresh

Once everything is deployed, restart all the managed servers. And for each application call path “/refresh” for refreshing the configuration properties.

7.1 Restarting Servers

To restart the server, refer to Oracle Banking Microservices Platform Foundation Installation ANNEXURE-1 “**How to restart**” section.

8. Workflow Setup

8.1 Conductor & Plato-Orchestrator Setup

Refer " Oracle Banking Microservices Platform Foundation Installation Guide" and setup Conductor & Plato-Orchestrator

8.2 Account Closure Workflow

Workflow needs to be created manually and it's a one-time activity. Account Closure has 2 workflows that are factory shipped. These need to be created using plato-orch-service API through postman.

VirtualAccountClosure

This is the Main workflow which is started upon Batch Execution. This workflow instance will be assigned a new workflow id and can be tracked using this id.

VirtualAccountClosureSWF

This is the Sub workflow which is started by the Main workflow. This workflow will be assigned a new workflow id and can be tracked using this id.

Batch Job Setup

Virtual Account closure uses plato-batch-server for Job execution.

Account closure process uses "virtualAccountCloseJob" and below setup needs to be done for the same.

1. In PLATO_BATCH_TASK_TRIGGER_DEFINITIONS table, an entry for "virtualAccountCloseJob" should be added and its definition should be as below
"appld:::VAM;microServiceName:::obvam-account-services;contextRoot:::obvam-account-services;jobName:::virtualAccountCloseJob;type:::schedule;cronExpression:::0 0/1 * * * ?"
In the above definition, cronExpression is the string containing details of schedule.
2. In PROPERTIES table, the following entries should have valid user and branch code for which applicable roles are present to run the job
APPLICATION = "plato-batch-server", KEY = "batchServer.userId", VALUE = "<user-id>"
APPLICATION = "plato-batch-server", KEY = "batchServer.branchCode", VALUE = "<branch-code>"
3. After above setup, plato-batch-server needs to be restarted.

Note:

Postings on virtual accounts for which closure request is in progress is controlled through a non-mandatory header parameter "allowPosting" in Balance Transfer stage. The values to this can either be

- "Y" – This indicates transaction postings are allowed.
- "N" - This indicates transaction postings are not allowed.

Once the latest subworkflow is registered, on triggering the "virtualAccountCloseJob", the workflow ID gets generated and the table VAM_TB_VA_CLOSURE_STATUS will be updated for the picked up virtual accounts (VA's with closure status as 'P') with the value (Y/N) that is defined in the subworkflow.

External Validation

External validation is done using Oracle Banking Payments. This has to be configured in the Routing-Hub using Oracle Banking Routing Hub config files that are factory shipped.

8.3 EOD Workflow

EOD has 2 workflows that are factory shipped.
Please refer **EOD Configuration Guide** and do the setup

9. Oracle Analytical Server Configuration

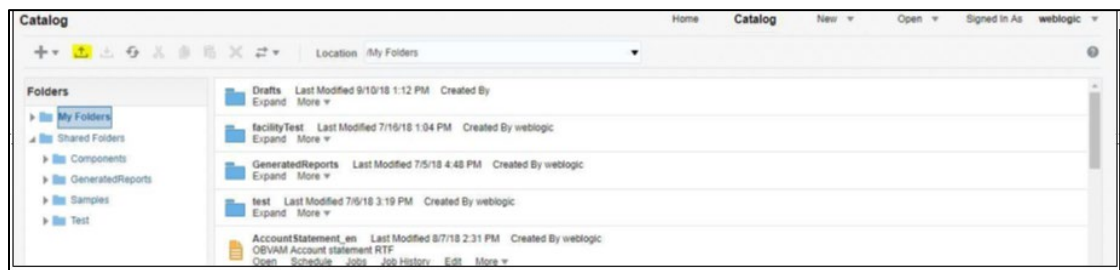
This documentation is focused on the configuration of Oracle Analytical Server for the generation of reports. The procedure includes two steps:

- Configuring the Data Model
- Configuring the Report Absolute Path

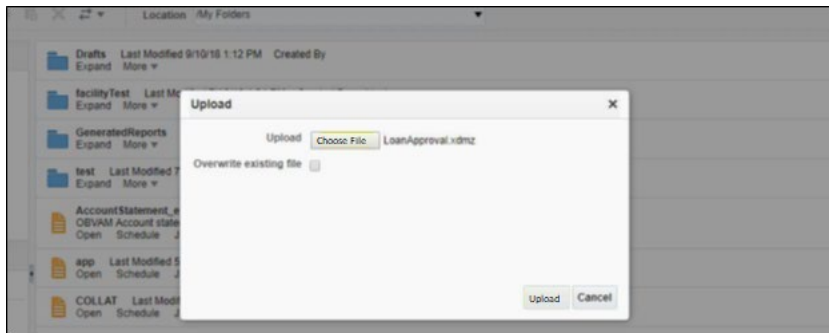
9.1 Configuring Data Model

The data model designed for the report is to be uploaded to the Oracle Analytical server.

1. Open the Oracle Analytical Server console. **Sign in** with credentials.
2. Click **Catalog** and select the folder on which the data model file needs to be uploaded.
3. Click **Upload** icon to upload a file.



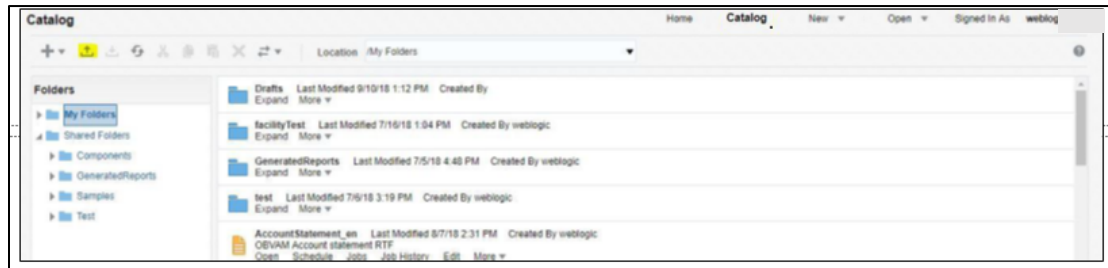
4. Choose the data model file from OBVAM_SERVICES\obvam-statement-services\BIP\DataModels path (.xdmz) and click **Upload**.



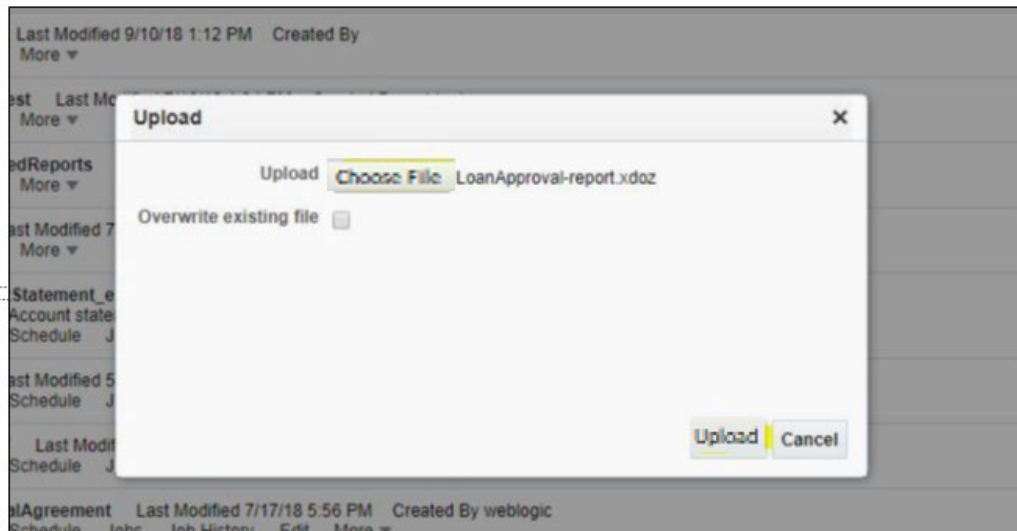
9.2 Configuring the Report Absolute Path

The report absolute path file created for the report is to be uploaded to the BIP server.

1. Click **Catalog** and select the folder on which the file must be uploaded.
2. Click **Upload** icon to upload a file.



3. Choose the report absolute path file from **OBVAM_SERVICES\obvam-statement-services\BIP\Reports\AccountStatement\AccountStatement_en.xdoz (.xdoz)** and click **Upload**.



10. Logging Area

This part of the document will talk about the logging area of Oracle Banking Virtual Account Management applications in server.

10.1 Logging Area

Logging area is configurable, you can configure any path within the server, where you want Oracle Banking Virtual Account Management application to write logs. Oracle Banking Virtual Account Management applications will write logs in the configured path with below name:

<Application name>.logs

Example: if application name is **obvam-account-services**, then logs file name would be obvam-account-services.logs

To configure logging path, refer Oracle Banking Virtual Account Management Pre-Installation "Annexure: domain-config-deploy.env" Section.



Installation Guide

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