

**User Troubleshooting Guide**

**Oracle Banking Supply Chain Finance**

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## User Troubleshooting Guide

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# 1 Preface

## 1.1 About this Guide

This Troubleshooting Guide provides guidance to users for the issues within the application. It describes various methods to figure out the error and then troubleshoot it.

## 1.2 Audience

This guide is intended for the software developers and software testers.

## 1.3 Document 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 Acronyms and Abbreviations

The following acronyms/abbreviations are used in this guide:

**Table 1: Acronyms and Abbreviations**

Acronyms	Definition
OBBRN	Oracle Banking Branch
SMS	Security management system
CMC	Common Core
MOC	Mid office Common Core
OBMA	Oracle Banking Micro Service Architecture
ELK	Elasticsearch Logstash Kibana

## 1.5 List of Topics

This manual is organized into the following topics. The topics 1 to 3 are generic and applicable for OBMA platform wide troubleshooting and chapter 4 to 7 are specific to Oracle Banking Branch.

**Table 2: List of Topic**

Topic	Description
Troubleshooting Technical Flows	Explains the platform wide troubleshooting of technical flows. This includes UI side checking, Service side logs and some environment issues of WebLogic
Troubleshooting Kafka	This chapter details the various issues and troubleshooting techniques for Kafka use cases
Health Checks	Explains the health check measures and observability required.
Troubleshooting Functional Workflows	<LIST_DESCRIPTION_OF_WORKFLOWS_COVERED>
Troubleshooting Automator issues	This chapter discusses the steps to collect heap dump for OutOfMemory issues.
Acronyms, Abbreviations and Definitions	This provides Acronyms, abbreviations and their definitions
Related Documentation	This page provides the detailed documentation reference of Oracle Banking <PRODUCT_NAME>

## 1.6 Related Documents

<Add the Related Documents here, FSGBU Root page for documentation can be found at:

<https://www.oracle.com/technical-resources/documentation/fsgbu.html>.>

- Related document 1
- Related document 2

## 2 Troubleshooting Technical Flows

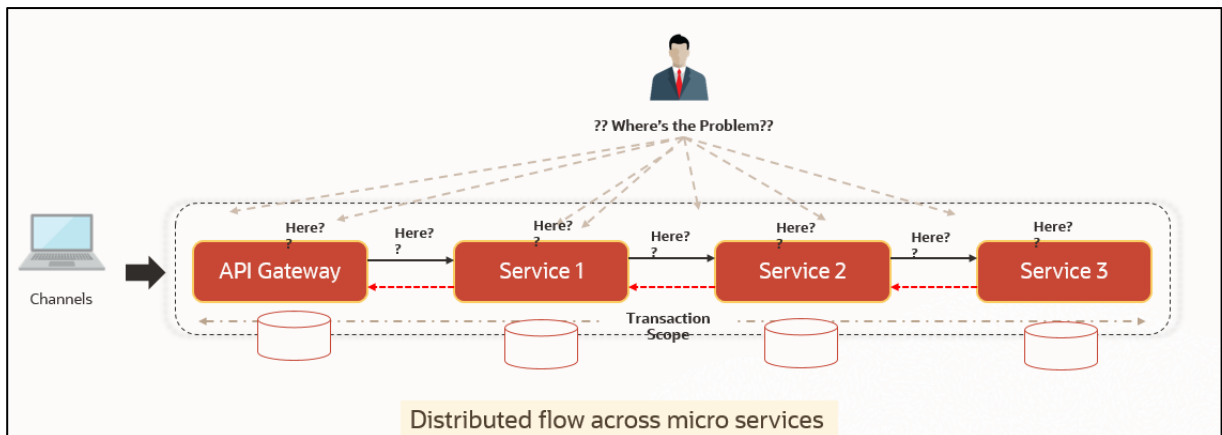
This chapter describes various programming issues, possible causes, and solutions to resolve the issues.

### 2.1 Where is the problem

Troubleshooting the problem in distributed system could be bit challenging if not understood fully. Each product has UI application components and service side application components. Each side requires different troubleshooting techniques and various logs that can be used to corroborate the problem.

The below picture shows that on service side, it is important to establish the area of the problem. This can be achieved by complete understanding of UI, Service side flows along with the data architecture of application.

**Figure 1: Distributed Flow across Micro Services**



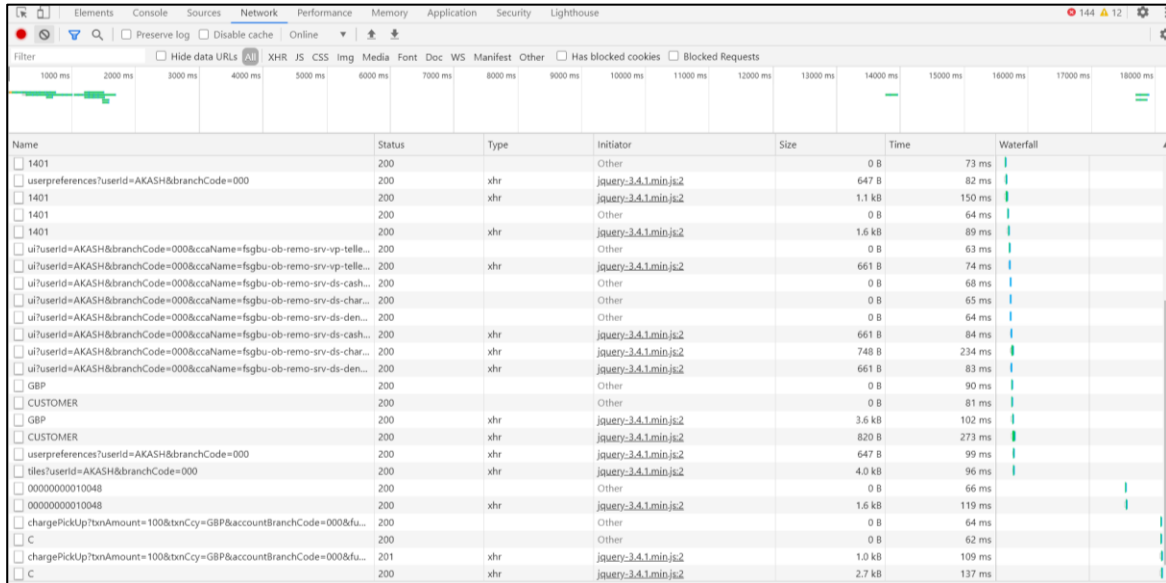
### 2.2 Preliminary checks from UI

This section describes how to launch the application and check for the basic errors. Perform the following steps:

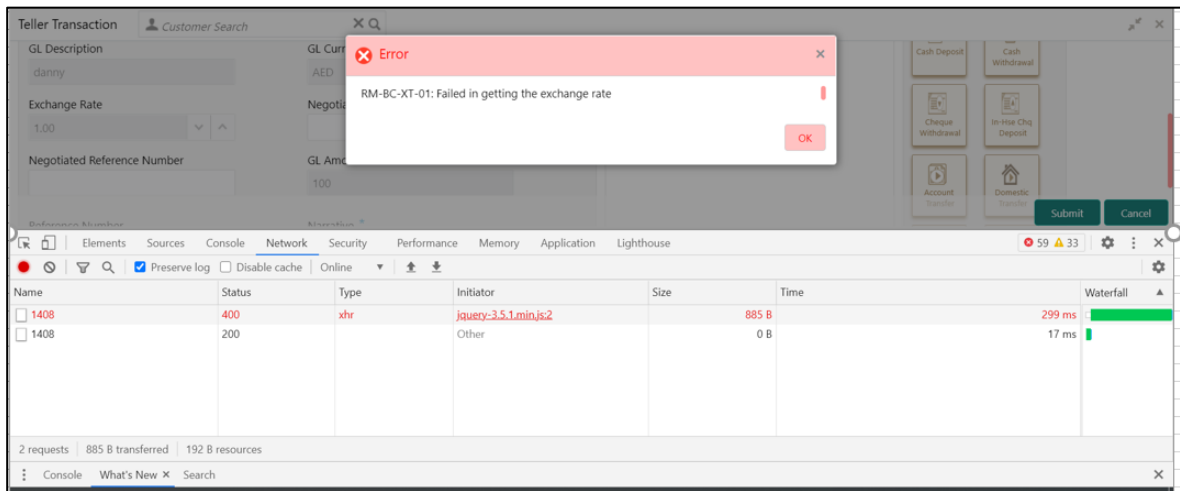
1. Launch the application with delegated URL.
2. Press **F12** key, and select **Inspect and See network** tab.

- Verify that all the calls responses are successful. Usually red color indicates non 2xx HTTP response.

**Figure 2: Call Responses**

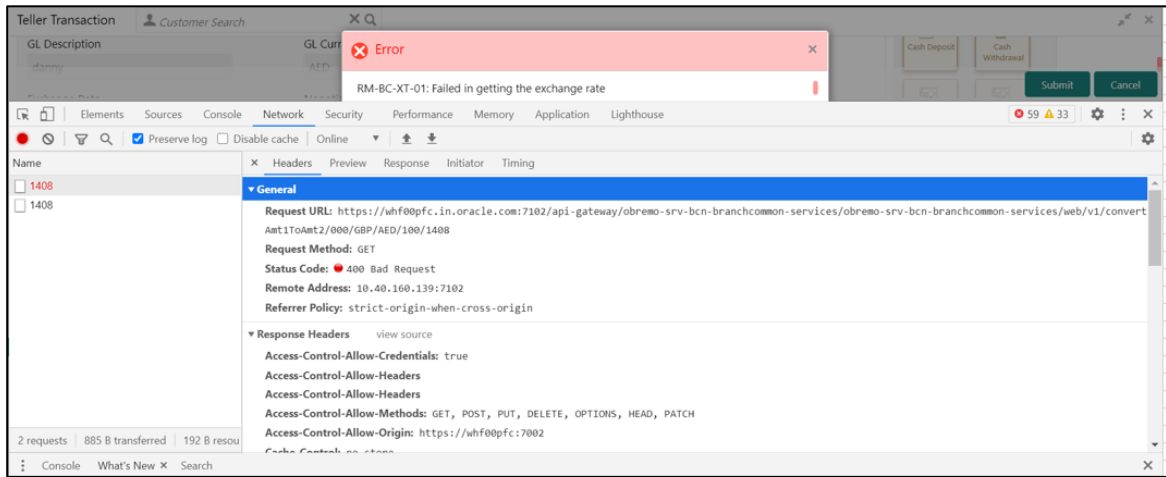


**Figure 3: Non 2xx Response**



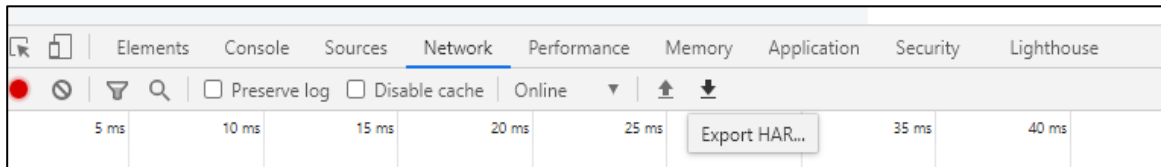


**Figure 4: Non 2xx Response Details**



**NOTE:** You can also export the trace using export option in browsers. Example in Chrome you would see this option as below:

**Figure 5: Export Option**



## 2.3 Troubleshooting Environmental Issues

### 2.3.1 Possible issues while deploying services

This subsection describes the possible issues that may occur in the environment.

#### 2.3.1.1 Environment Variables

The environment variables are as follows:



OBSCF\_Env.xlsx

**Table 3: Environment Variables**

Env Param name	Env Param value	Comments

#### 2.3.1.2 Configuration properties to be verified

The configuration properties are as follows:

**Table 4: Configuration Properties**

Service Name	Config Param name	Config Param value	Comments

#### 2.3.1.3 Miscellaneous issues

<MENTION ANY OTHER ISSUES HERE, ELSE REMOVE THE SECTION>

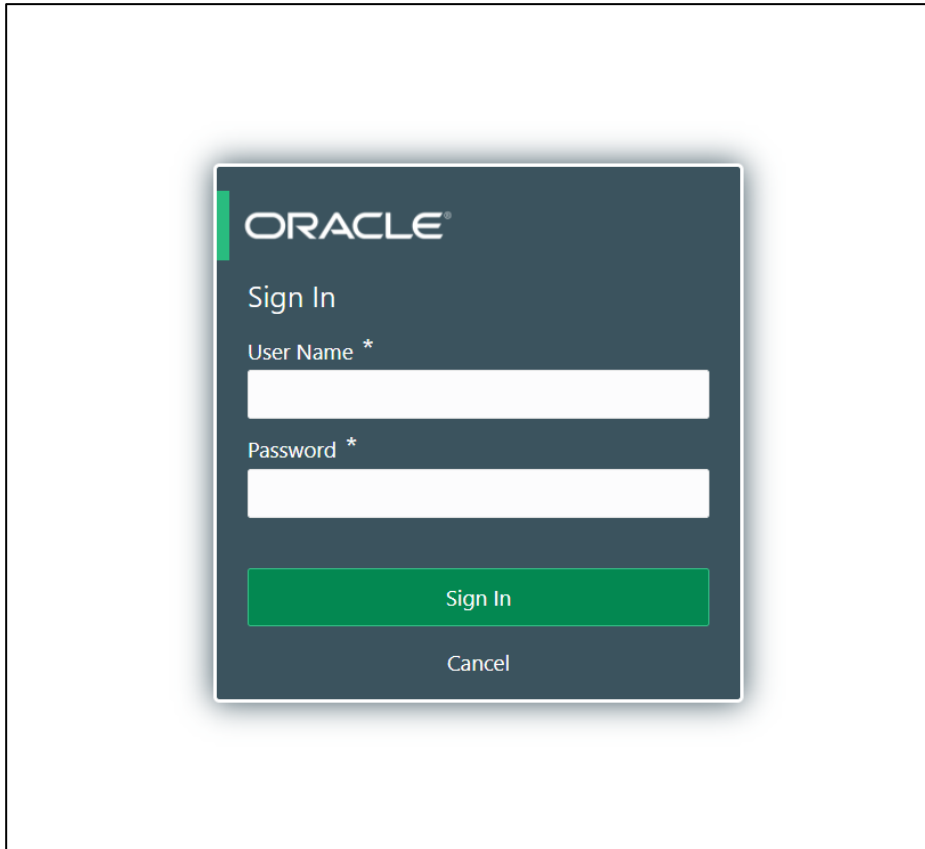
### 2.3.2 Possible issues in login and screen launch

This subsection describes the possible issues that may occur while logging in and launching the screens.

### 2.3.2.1 Login page is not launching

<UPDATE THE URL TO PRODUCT\_SPECIFIC\_URL>

Figure 6: Login Page



### 2.3.2.2 Unable to login after launching the application

If you are not able to login after the application is launched, make sure that the plato-api-gateway service, plato-ui-config service, sms-core-service, and common core services are up and running.

Figure 7: Status of Services

PLATO-API-GATEWAY	n/a (1) (1)	UP (1) - fsgbu-phx-54.snphxprshared1.gbucdsint02phx.oraclevcn.com:plato-api-gateway:5012
PLATO-DISCOVERY-SERVICE	n/a (1) (1)	UP (1) - fsgbu-phx-54.snphxprshared1.gbucdsint02phx.oraclevcn.com:plato-discovery-service:5012
PLATO-UI-CONFIG-SERVICES	n/a (1) (1)	UP (1) - fsgbu-phx-54.snphxprshared1.gbucdsint02phx.oraclevcn.com:plato-ui-config-services:5012
SMS-CORE-SERVICES	n/a (1) (1)	UP (1) - fsgbu-phx-54.snphxprshared1.gbucdsint02phx.oraclevcn.com:sms-core-services:5012

### 2.3.2.3 Unable to login after restarting the services

If you are not able to login after restarting the services, make sure that the LDAP server is up and running, and check if the entered credentials are correct.

### 2.3.2.4 Screens are not launching after logging in

If you are not able to launch the screens after logging in, make sure that the respective services are up and running.

**NOTE:** Verify the VPN connection while trying to troubleshoot the issues related to page launching, etc.

## 3 Troubleshooting Kafka

### 3.1 Consumer Services

- obscfcm-report-services
- obscf-report-services

### 3.2 Producer Services

- obscfcm-manual-recon-services
- obscf-finance-services
- obscf-core-services

## 3.3 Debugging Consumer/Producer health and troubleshooting

### 3.3.1 Logs to analyze

Logs of the Kafka, Zookeeper, Producer & Consumer needs to be checked, for details please check logs configuration section.

### 3.3.2 Tables to analyze

All the communication between producer & consumer happens via event hub and there are two tables in each schema for Producer & Consumer which keeps track of all the communication happen between them. These are PLATO\_EVENTHUB\_IN\_LOG & PLATO\_EVENTHUB\_OUT\_LOG like-

```
select * from PLATO_EVENTHUB_IN_LOG;
select * from PLATO_EVENTHUB_OUT_LOG;
```

Query Result x

SQL | Fetched 50 rows in 1.472 seconds

ID	TOPIC_NAME	MESSAGE_KEY	EVENT_TYPE	PAYLOAD
1 277fff11-e7e5-499c-867e-cccd74f50a97	relationshipMaster	(null)	(null)	{"id": "0be1516f-888c-4856-85a0-334148ee3838", "authStat":
2 1bd23ae2-d8d7-4e08-9a16-8ae72b801f37	relationshipMaster	(null)	(null)	{"id": "0903f003-485c-4122-9c3d-3d3a0beb8464", "authStat":
3 39ac6e99-4ba1-4362-a953-aac7a0b3a08f	relationshipMaster	(null)	(null)	{"id": "0be1516f-888c-4856-85a0-334148ee3838", "authStat":
4 35d602e5-0197-4012-9575-0b059eeac274	relationshipMaster	(null)	(null)	{"id": "0903f003-485c-4122-9c3d-3d3a0beb8464", "authStat":
5 56b3b33a-e696-4b9f-b715-ebf8852lea8a	PublishPaymentUpdated	(null)	(null)	{"id": "0be1516f-888c-4856-85a0-334148ee3838", "authStat":
6 c8f92ab0-8c0c-4910-a4a3-364598a6eb8f	relationshipMaster	(null)	(null)	{"id": "0903f003-485c-4122-9c3d-3d3a0beb8464", "authStat":
7 9854da1b-27c2-420d-8660-d5bcb42842ff	relationshipMaster	(null)	(null)	{"id": "0903f003-485c-4122-9c3d-3d3a0beb8464", "authStat":

## 3.4 Configurations

### 3.4.1 Setting up kafka

Download kafka from [https://www.apache.org/dyn/closer.cgi?path=/kafka/2.7.0/kafka\\_2.12-2.7.0.tgz](https://www.apache.org/dyn/closer.cgi?path=/kafka/2.7.0/kafka_2.12-2.7.0.tgz)

Download Zookeeper from <https://www.apache.org/dyn/closer.lua/zookeeper/zookeeper-3.6.2/apache-zookeeper-3.6.2-bin.tar.gz>

Now first we need to start zookeeper and then kafka.

Please follow steps mentioned here

<https://kafka.apache.org/quickstart>

### 3.4.2 Check if kafka is running

Run cmd `$ netstat -tlnp | grep :9092`

(9092 is default port of kafka)

#### **Possible issue while starting kafka**

1. Kafka is not starting may be because zookeeper is not yet started run cmd

`$ netstat -tlnp | grep :2181`

(2181 is default port of zookeeper)

if any service is not running on this port means zookeeper is down

2. Check if any permission issue is there for kafka log folder.

#### **Create console producer and consumer for troubleshooting**

here is a use full reference for that <http://cloudurable.com/blog/kafka-tutorial-kafka-from-command-line/index.html>

### 3.4.3 Some references that can be useful

[https://docs.cloudera.com/documentation/kafka/latest/topics/kafka\\_faq.html](https://docs.cloudera.com/documentation/kafka/latest/topics/kafka_faq.html)

## 4 Health Checks

### 4.1 Eureka Dashboard

Now, the health of services needs to be monitored using weblogic JVM managed server console and Eureka dashboard

**Figure 8: Eureka Dashboard**

Instances currently registered with Eureka			
Application	AMIs	Availability Zones	Status
CMC-ACCOUNT-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-account-services:7301
CMC-ADDITIONAL-ATTRIBUTES-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-additional-attributes-services:7301
CMC-ADVICE-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-advice-services:7301
CMC-BASE-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-base-services:7301
CMC-BATCH-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-batch-services:7301
CMC-BRANCH-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-branch-services:7301
CMC-BUSINESSOVERRIDES-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-businessoverrides-services:7301
CMC-CHARGES-CALCULATION-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-charges-calculation-services:7301
CMC-COREBANKING-ADAPTER-SERVICE	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-corebanking-adapter-service:7302
CMC-CURRENCY-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-currency-services:7302
CMC-CUSTOMER-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-customer-services:7302
CMC-DATASEGMENT-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-datasegment-services:7302
CMC-EXTERNAL-CHART-ACCOUNT-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-external-chart-account-services:7302
CMC-EXTERNAL-SYSTEM-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-external-system-services:7302
CMC-EXTERNAL-VIRTUAL-ACCOUNT-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-external-virtual-account-services:7302
CMC-FACILITIES-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-facilities-services:7302
CMC-MIS-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-mis-services:7303
CMC-OBRRH-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-obrrh-services:7303
CMC-REPORT-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-report-services:7303
CMC-RESOURCE-SEGMENT-ORCHESTRATOR-SERVICE	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-resource-segment-orchestrator-service:7303
CMC-RESOURCECLASS-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-resourceclass-services:7303
CMC-SCREENCLASS-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-screenclass-services:7303
CMC-SETTLEMENTS-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-settlements-services:7303
CMC-TRANSACTIONCONTROLLER-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-transactioncontroller-services:7303
CMC-TXN-CODE-SERVICES	n/a (1)	(1)	UP (1) - whf00ist.in.oracle.com:cmc-txn-code-services:7303
CONFIG-SERVICE	n/a (1)	(1)	UP (1) - whf00mfg.in.oracle.com:config-service:7101

PLATO-ALERTS-MANAGEMENT-SERVICES	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-alerts-management-services:7103
PLATO-API-GATEWAY	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-api-gateway:7102
PLATO-BATCH-SERVER	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-batch-server:7103
PLATO-DISCOVERY-SERVICE	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-discovery-service:8761
PLATO-FEED-SERVICES	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-feed-services:7103
PLATO-O	n/a (1) (1)	UP (1) - whf00pgq
PLATO-ORCH-SERVICE	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-orch-service:7103
PLATO-RULE-SERVICE	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-rule-service:7103
PLATO-UI-CONFIG-SERVICES	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:plato-ui-config-services:7102
SMS-CORE-SERVICES	n/a (1) (1)	UP (1) - whf00mfg.in.oracle.com:sms-core-services:7201

OBSCFCM-ACCOUNT-MAINTENANCE-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-account-maintenance-services:7202
OBSCFCM-ALERTS-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-alerts-services:7201
OBSCFCM-AUTO-RECON-BATCH	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-auto-recon-batch:7102
OBSCFCM-BATCH-JOBS	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-batch-jobs:7202
OBSCFCM-CHARGES-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-charges-services:7202
OBSCFCM-CHATBOT-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-chatbot-services:7001
OBSCFCM-CORE-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-core-services:7201
OBSCFCM-DAY0-SERVICE	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-day0-service:7204
OBSCFCM-EOD-BATCH	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-eod-batch:7102
OBSCFCM-FILTER-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-filter-services:7201
OBSCFCM-INSTRUMENTS-RECEIVABLES-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-instruments-receivables-services:7203
OBSCFCM-MANUAL-RECON-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-manual-recon-services:7202
OBSCFCM-MASTER-MAINTENANCE-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-master-maintenance-services:7203
OBSCFCM-REPORT-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-report-services:7201
OBSCFCM-WORKFLOW-MANAGEMENT-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscfcm-workflow-management-services:7203

OBSCF-CORE-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscf-core-services:7102
OBSCF-DAY0-SERVICE	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscf-day0-service:7103
OBSCF-FINANCE-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscf-finance-services:7101
OBSCF-LIMITS-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscf-limits-services:7101
OBSCF-REPORT-SERVICES	n/a (1) (1)	UP (1) - whf00pgq.in.oracle.com:obscf-report-services:7101



## 4.2 Application Services

Catalog of services required for <PRODUCT\_NAME>

**Table 5: Application Services**

<b>OBMA Group (eg Plato, CMC, MOC)</b>	<b>Service Name (Name of the service)</b>	<b>Comments (Business relevance or additional details)</b>
Plato	plato-ui-config-services-7.3.0	
Plato	plato-feed-services-7.3.0	
Plato	plato-report-services-7.3.0	
Plato	plato-batch-server-7.3.0	
Plato	plato-config-service-7.3.0	
Plato	plato-ref-6.0.0	
Plato	plato-api-gateway-7.3.0	
Plato	plato-orch-service-7.3.0	
Plato	plato-alerts-management-services-7.3.0	
Plato	plato-swagger-api-7.3.0	
Plato	plato-rule-service-7.3.0	
Plato	plato-discovery-service-7.2.0	
Plato	plato-security-toolkit-7.2.0	

CMC	cmc-account-services-7.3.0	
CMC	cmc-additional-attributes-services-7.3.0	
CMC	cmc-advice-services-7.3.0	
CMC	cmc-base-services-7.3.0	
CMC	cmc-batch-services-7.3.0	
CMC	cmc-branch-services-7.3.0	
CMC	cmc-businessoverrides-services-7.3.0	
CMC	cmc-charges-calculation-services-7.3.0	
CMC	cmc-corebanking-adapter-service-7.3.0	
CMC	cmc-currency-services-7.3.0	
CMC	cmc-customer-services-7.3.0	
CMC	cmc-datasegment-services-7.3.0	
CMC	cmc-external-chart-account-7.3.0	
CMC	cmc-external-system-services-7.3.0	
CMC	cmc-external-virtual-account-services-7.3.0	
CMC	cmc-facilities-service-7.3.0	
CMC	cmc-fc-ai-ml-services-7.3.0	
CMC	cmc-ml-indb-services-7.3.0	

CMC	cmc-nlp-dashboard-widget-services-7.3.0	
CMC	cmc-nlp-maintenance-services-7.3.0	
CMC	cmc-nlp-opennlp-services-7.3.0	
CMC	cmc-nlp-pipeline-services-7.3.0	
CMC	cmc-nlp-text-extraction-services-7.3.0	
CMC	cmc-obcbs-services-7.3.0	
CMC	cmc-obrh-service-7.3.0	
CMC	cmc-report-service-7.3.0	
CMC	cmc-resource-segment-orchestrator-service-7.3.0	
CMC	cmc-screenclass-services-7.3.0	
CMC	cmc-settlements-services-7.3.0	
CMC	cmc-transactioncontroller-services-7.3.0	
CMC	cmc-txn-code-services-7.3.0	
MOC	cmc-applicationcategory-services-7.3.0	
MOC	cmc-checklistmanagement-services-7.3.0	
MOC	cmc-checklist-services-7.3.0	
MOC	cmc-comments-services-7.3.0	
MOC	cmc-documentmanagement-services-7.3.0	

MOC	cmc-document-services-7.3.0	
MOC	cmc-earmark-services-7.3.0	
MOC	cmc-kyccheck-services-7.3.0	
MOC	cmc-mailnotification-services-7.3.0	
MOC	cmc-priority-service-7.3.0	
MOC	cmc-processcode-service-7.3.0	
MOC	cmc-queue-service-7.3.0	
MOC	cmc-sequencegenerator-services-7.3.0	
MOC	cmc-sla-services-7.3.0	
OBSCF	obscfcm-account-maintenance-services-7.3.0	
OBSCF	obscfcm-alerts-services-7.3.0	
OBSCF	obscfcm-auto-recon-batch-7.3.0	
OBSCF	obscfcm-batch-jobs-7.3.0	
OBSCF	obscfcm-charges-services-7.3.0	
OBSCF	obscfcm-chatbot-services-7.3.0	
OBSCF	obscfcm-core-services-7.3.0	
OBSCF	obscfcm-day0-service-7.3.0	
OBSCF	obscfcm-filter-services-7.3.0	

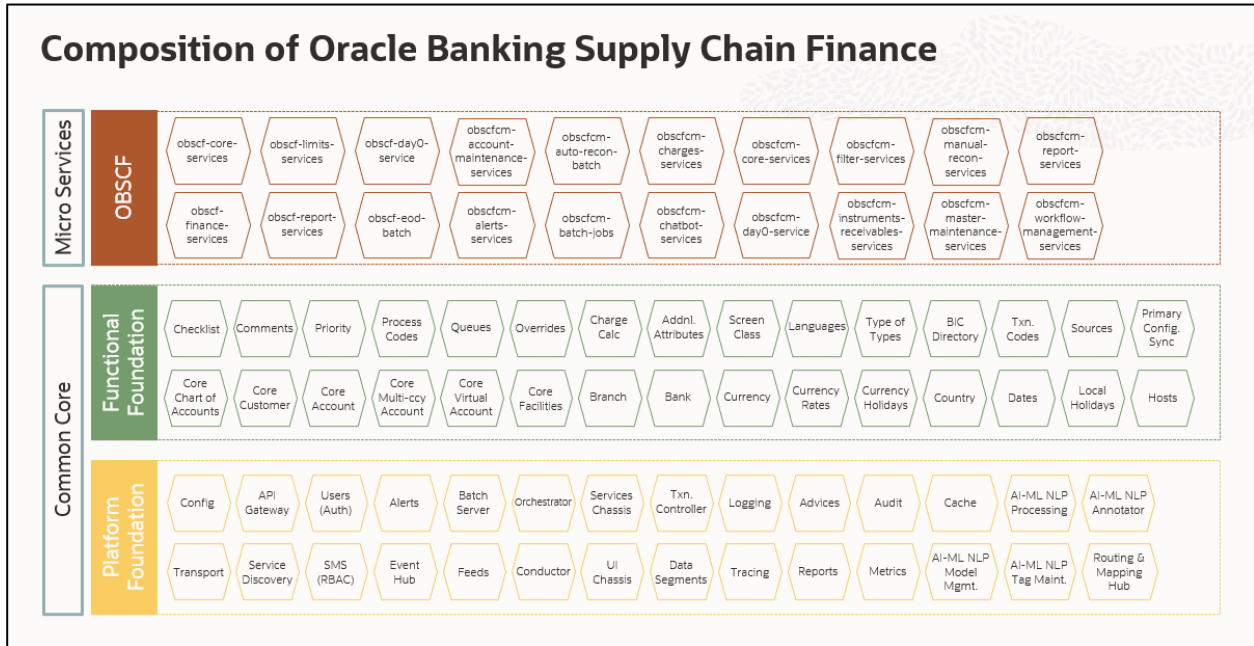
OBSCF	obscfcm-instruments-receivables-services-7.3.0	
OBSCF	obscfcm-manual-recon-services-7.3.0	
OBSCF	obscfcm-master-maintenance-services-7.3.0	
OBSCF	obscfcm-report-services-7.3.0	
OBSCF	obscfcm-workflow-management-services-7.3.0	
OBSCF	obscfcm-eod-batch-7.3.0	
UI	app-shell-7.3.0	
UI	cmc-component-server-7.3.0	
UI	moc-component-server-7.3.0	
UI	obpy-component-server-7.3.0	
UI	obreports-component-server-7.3.0	
UI	obscfcm-component-server-7.3.0	
UI	obscf-component-server-7.3.0	
UI	sms-component-server-7.3.0	
OBSCF	obscf-core-services-7.3.0	
OBSCF	obscf-report-services-7.3.0	
OBSCF	obscf-day0-service-7.3.0	
OBSCF	obscf-finance-services-7.3.0	

OBSCF	obscf-limits-services-7.3.0	
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## 5 Troubleshooting Functional Workflows

### 5.1 Oracle Banking Supply Chain Finance / Cash Management – Subdomains List

Figure 9: Subdomains



## 5.2 <Transaction\_Flow\_Name> – High level flow diagram

Add one section for each flow.



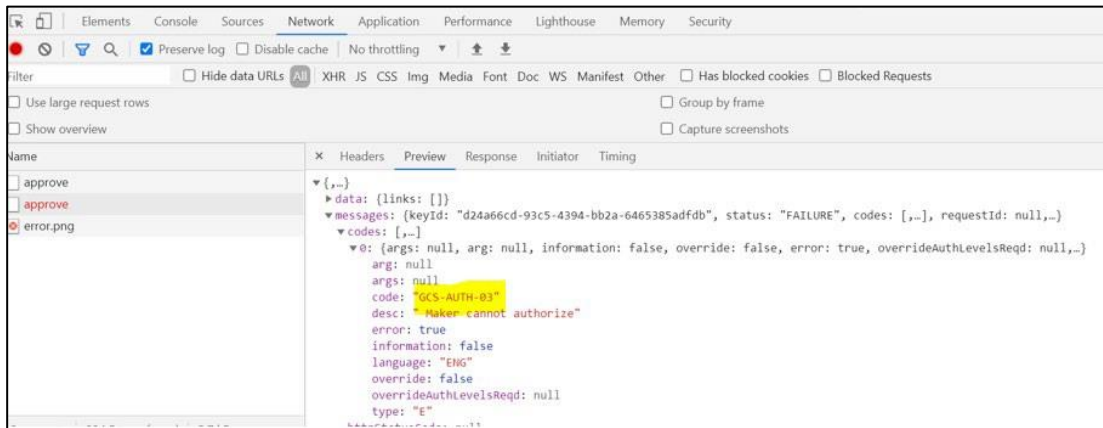
## 5.2.1 Log analysis

This subsection describes the possible ways to use logs to analyze issues in a transaction using logs. Please provide details of what 'states' to expect for what parameters in logs for the transaction.

### 5.2.1.1 Error Message not shown

If there is any improper calls, check ERTB\_MSGS table of the respective schema to understand the cause of the error. Open the Networks tab (F12), check the error code in the response.

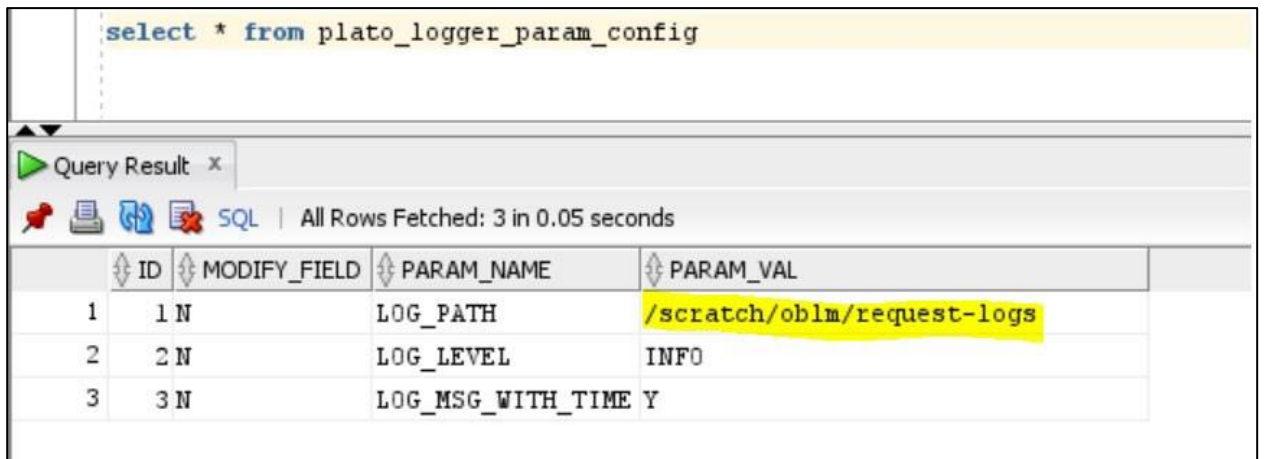
**SELECT \* FROM ERTB\_MSGS WHERE ERR\_CODE='GCS\_AUTH-03'**



### 5.2.1.2 Setting Log file path

Log generation path needs to be defined in PLATO\_LOGGER\_PARAM\_CONFIG table of PLATO schema.

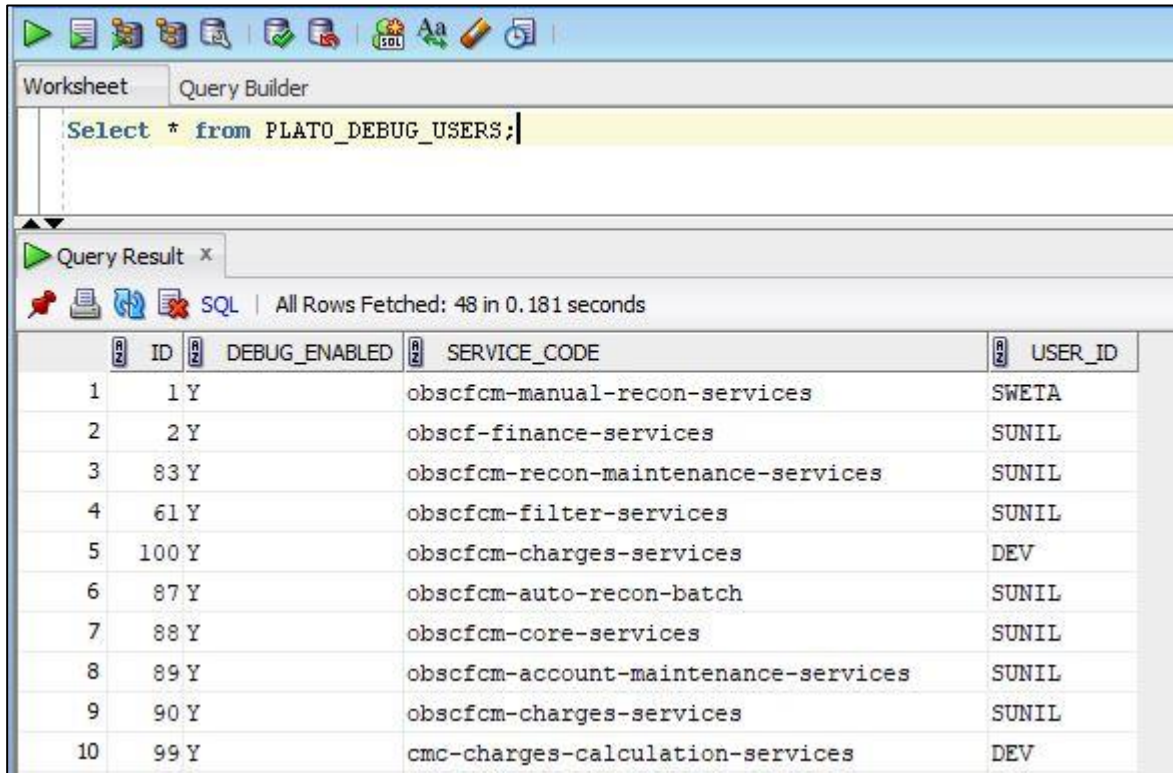
**Select \* from PLATO\_LOGGER\_PARAM\_CONFIG;**



### 5.2.1.3 Dynamic log generation issues

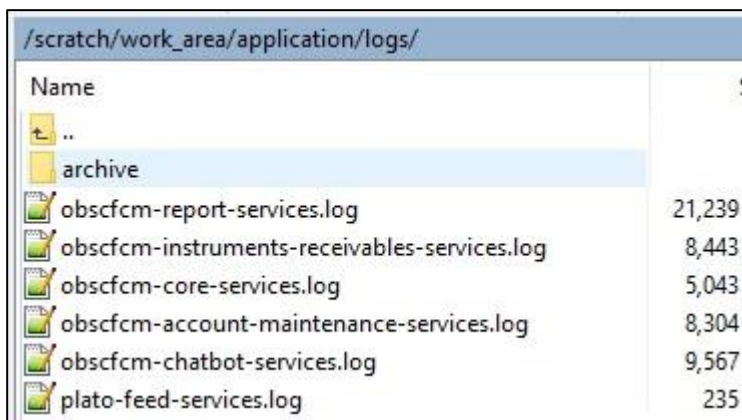
For generating dynamic service logs, you need to insert data to PLATO\_DEBUG\_USERS table as shown in below screenshot.

Select \* from PLATO\_DEBUG\_USERS;



The screenshot shows a Query Builder interface with a SQL query entered in the 'Query Builder' tab. The query is 'Select \* from PLATO\_DEBUG\_USERS;'. Below the query, the 'Query Result' tab displays the results of the query. The results are shown in a table with 10 rows and 5 columns: ID, DEBUG\_ENABLED, SERVICE\_CODE, and USER\_ID. The table contains the following data:

ID	DEBUG_ENABLED	SERVICE_CODE	USER_ID
1	Y	obscfcm-manual-recon-services	SWETA
2	Y	obscf-finance-services	SUNIL
83	Y	obscfcm-recon-maintenance-services	SUNIL
61	Y	obscfcm-filter-services	SUNIL
100	Y	obscfcm-charges-services	DEV
87	Y	obscfcm-auto-recon-batch	SUNIL
88	Y	obscfcm-core-services	SUNIL
89	Y	obscfcm-account-maintenance-services	SUNIL
90	Y	obscfcm-charges-services	SUNIL
99	Y	cmc-charges-calculation-services	DEV



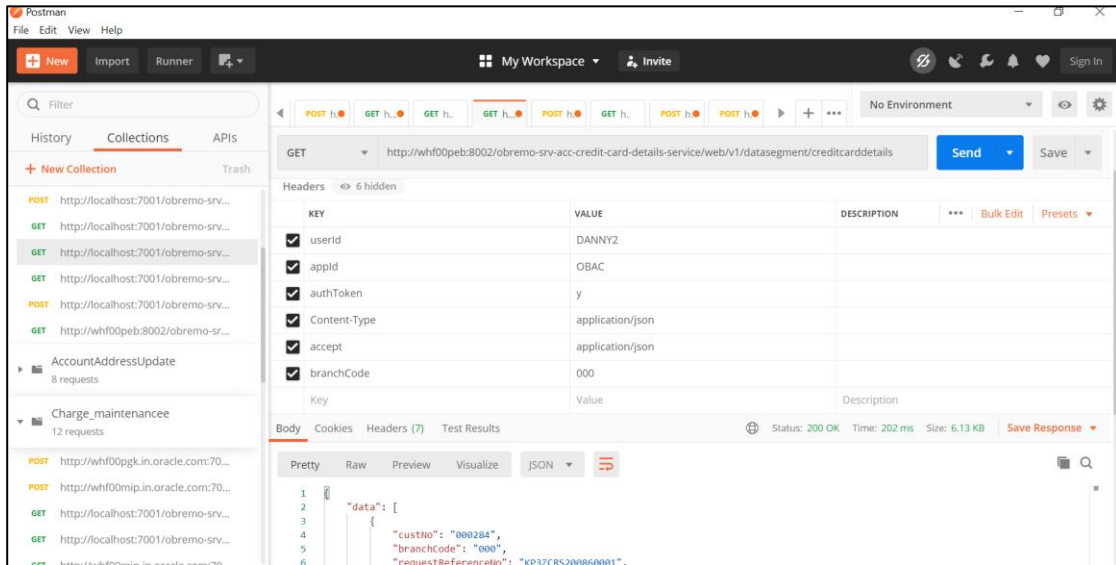
The screenshot shows a file explorer window displaying a directory of log files. The directory path is '/scratch/work\_area/application/logs/'. The files listed are:

Name	Size
..	
archive	
obscfcm-report-services.log	21,239
obscfcm-instruments-receivables-services.log	8,443
obscfcm-core-services.log	5,043
obscfcm-account-maintenance-services.log	8,304
obscfcm-chatbot-services.log	9,567
plato-feed-services.log	235

### 5.2.1.4 In case Logs are not generated

If you are not getting logs, put the loggers across API, hit through postman, and test again.

Figure 10: Logs



### 5.2.1.5 404 error

The possible causes for 404 error are as follows:

- Check service is not running on Eureka
- Check service is not deployed in Weblogic

### 5.2.1.6 500 internal error

The possible causes for 500 internal error are as follows:

- Issue with Plato entries
- Issue with Eureka
- Issue with any peace of code

The server-side debugging is needed for the above-mentioned issues, if it is not captured in logs.

## 5.2.2 Analysis using exceptions captured in tables



OBSCF - Error  
Codes.xlsx

## 5.3 Troubleshooting Errors in Conductor – Process Screens and Tasks

< Provide description >

## 5.4 Troubleshooting SMS Errors

< Provide description >

## 5.5 Oracle Banking Routing Hub configuration

< Provide description >

## 5.6 Purging and Archival

< Provide description >



## 6 Troubleshooting OutOfMemory issues

### 6.1 Extracting Heapdump

If there is an error like GC Overhead limit exceeded or OutOfMemoryException is thrown while starting the services, the following details need to be shared.

#### 6.1.1 Heap Dump

A heap dump is a snapshot of objects that are in memory in the JVM at a certain timestamp in a transaction. Heap dumps help to troubleshoot memory-leak problems and optimize memory usage in microservices. Heap dumps are usually stored in binary format hprof files.

The HeapDumpOnOutOfMemoryError command-line option that generates a heap dump when a `java.lang.OutOfMemoryError` is thrown can be used to generate heap dumps:

```
java -XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=<file-or-dir-path>
```

##### 6.1.1.1 Remote Heap Monitor setup

Alternatively, one can setup remote heap monitor to observe the memory leaks in the product. Perform the following steps:

1. To enable jmx, set the following environment variable to start jmx:

- `-Dcom.sun.management.jmxremote`
- `-Dcom.sun.management.jmxremote.port=8888`
- `-Dcom.sun.management.jmxremote.authenticate=false`
- `-Dcom.sun.management.jmxremote.ssl=false`

**NOTE:** If the above variable are set, a jmx service will start on specified port.

2. Setup JVisualVM as follows, to collect heap dumps:

- a) Start *JVisualVM*.
- b) Under "Remote" option, add a host.
- c) Under new host, add new *jmx* connection.

**NOTE:** With this setup, the JAVA process can be monitored remotely.

## 6.2 JFR Tool in Java

**Java Flight Recorder (JFR)** is a **tool** for collecting diagnostic and profiling data about a running **Java** application. It is integrated into the **Java** Virtual Machine (JVM) and causes almost no performance overhead, so it can be used even in heavily loaded production environments.

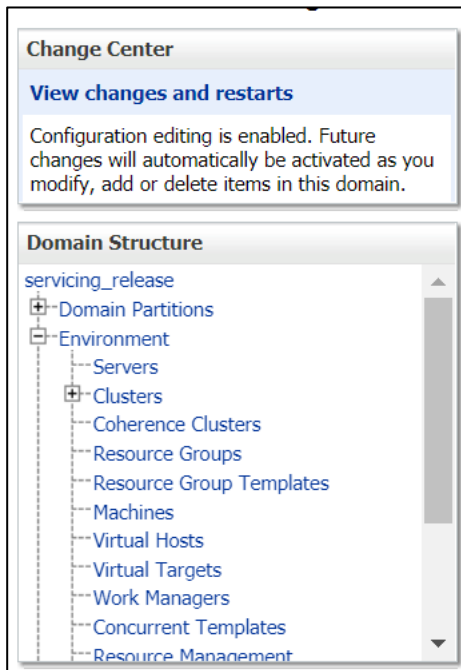
The below documentation provides steps to use JFRs to collect performance details and profiling data of services and can be used to report performance issues for OBMA services.

## 6.3 Quick Recovery

As a quick fix, try to restart the managed server or try to increase the memory allocated to the managed server. Perform the following steps to increase the memory:

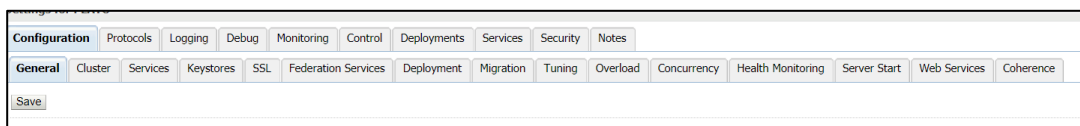
1. Click **Servers**.

**Figure 11: Domain Structure**



2. Select the managed server from which you are getting `OutOfMemoryException` or GC Overhead Limit exceeded, and click **Server Start** tab.

**Figure 12: Server Start**



3. Specify the memory (which needs to be increased) according to requirement in 512, 1024, 2048 etc., and restart the managed server to fix the issue.

**Figure 13: Memory Requirements**

