

Oracle® Banking Cash Management Troubleshooting Guide



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Contents

Preface

| | |
|-----------------------------|-----|
| Purpose | i |
| Audience | i |
| Documentation Accessibility | i |
| Critical Patches | i |
| Diversity and Inclusion | ii |
| Related Resources | ii |
| Conventions | ii |
| Screenshot Disclaimer | ii |
| Acronyms and Abbreviations | ii |
| Prerequisites | iii |
| General Prevention | iii |
| Best Practices | iii |

1 Troubleshooting Technical Flows

| | |
|--|---|
| 1.1 Where is the Problem | 1 |
| 1.2 Preliminary Checks from UI | 1 |
| 1.3 Troubleshooting Environmental Issues | 3 |
| 1.3.1 Possible Issues While Deploying Services | 3 |
| 1.3.2 Possible Issues in Login and Screen Launch | 4 |

2 Troubleshooting Kafka

| | |
|--|---|
| 2.1 Consumer Services | 1 |
| 2.2 Producer Services | 1 |
| 2.3 Debugging Consumer/Producer health and troubleshooting | 1 |
| 2.4 Configurations | 2 |

3 Health Checks

| | | |
|-----|--|---|
| 4 | Troubleshooting Functional Workflows | |
| 4.1 | Log Analysis | 1 |
| 5 | Troubleshooting OutOfMemory issues | |
| 5.1 | Extract Heapdump | 1 |
| 5.2 | JFR Tool in Java | 2 |
| 5.3 | Quick Recovery | 2 |
| 6 | Troubleshooting Deployment Errors/Exceptions | |
| A | Business Error Codes | |
| | Index | |

Preface

- [Purpose](#)
- [Audience](#)
- [Documentation Accessibility](#)
- [Critical Patches](#)
- [Diversity and Inclusion](#)
- [Related Resources](#)
- [Conventions](#)
- [Screenshot Disclaimer](#)
- [Acronyms and Abbreviations](#)
- [Prerequisites](#)
- [General Prevention](#)
- [Best Practices](#)

Purpose

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

Audience

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

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 customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

Critical Patches

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

Related Resources

The related documents are as follows:

- *Oracle Banking Common Core User Guide*
- *Oracle Banking Getting Started User Guide*
- *Oracle Banking Security Management System User Guide*
- *Cashflow Forecasting User Guide*
- *Collections User Guide*
- *Netting User Guide*
- *Receivables and Payables User Guide*

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. |
| <i>italic</i> | Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values. |
| monospace | Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter. |

Screenshot Disclaimer

Information used in the interface or documents are dummy, it does not exist in real world, and its only for reference purpose.

Acronyms and Abbreviations

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

Table 1 Acronyms and Abbreviations

| Abbreviation | Description |
|--------------|-------------------------------|
| SMS | Security Management System |
| CMC | Common Core |
| MOC | Mid office Common Core |
| ELK | Elasticsearch Logstash Kibana |

Prerequisites

Prerequisites

The prerequisites are as follows:

- Basic understanding of Eventing platform
- Basic understanding application log analysis using tools
- Basic understanding DB changes

Pre-installed Softwares

The following softwares should be pre-installed:

- Zipkin
- Kafka
- ELK
- Any SQL Database like SQLDEVELOPER
- WinSCP

General Prevention

Do not make any changes to Flyway scripts manually.

Best Practices

The best practices are as follows:

- It is ideal to have ELK stack installed on a separate VM outside the product VMs to ensure the flow of logs in case of an app crash.
- Log levels can be adjusted to INFO and above to enable relevant logs to flow in.

1

Troubleshooting Technical Flows

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

This topic contains the following subtopics:

- [Where is the Problem](#)
This topic describes on the troubleshooting the problem in the distributed system.
- [Preliminary Checks from UI](#)
This topic provides systematic instructions to launch the application and check for the basic errors.
- [Troubleshooting Environmental Issues](#)
This topic describes on the troubleshooting environmental issues.

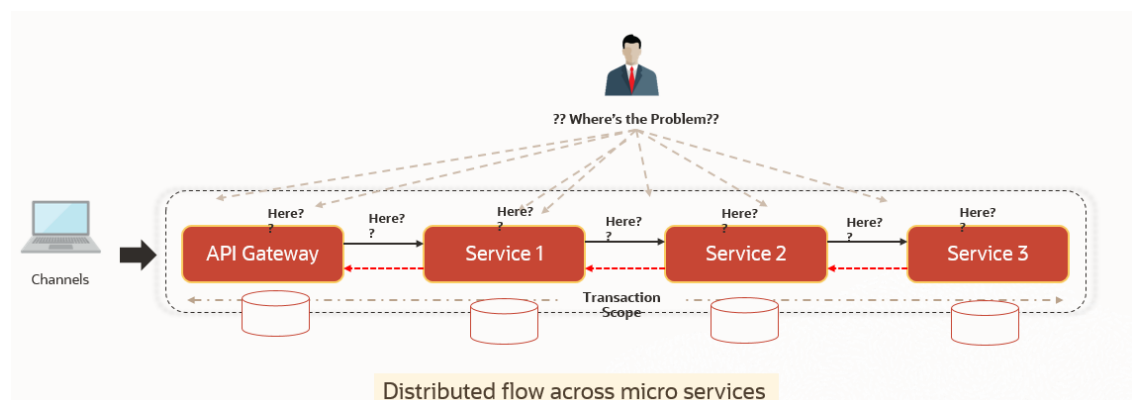
1.1 Where is the Problem

This topic describes on the troubleshooting the problem in the distributed system.

Troubleshooting the problem in the distributed system can be 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.

It is important to establish the area of the problem on the service side. It can be achieved by a complete understanding of UI and service side flows along with the data architecture of an application.

Figure 1-1 Distributed Flow Across Micro Services



1.2 Preliminary Checks from UI

This topic provides systematic instructions to launch the application and check for the basic errors.

1. Launch the application with delegated URL.
2. Press **F12** key and select **Inspect and See network**.
3. Verify that all the call responses are successful.

Figure 1-2 Call Responses

| Name | Status | Type | Initiator | Size | Time | Waterfall |
|---|--------|------|---------------------|--------|--------|-----------|
| 1401 | 200 | | Other | 0 B | 73 ms | |
| userpreferences?userId=AKASH&branchCode=000 | 200 | xhr | jquery-3.4.1.min.js | 647 B | 82 ms | |
| 1401 | 200 | xhr | jquery-3.4.1.min.js | 1.1 kB | 150 ms | |
| 1401 | 200 | | Other | 0 B | 64 ms | |
| 1401 | 200 | xhr | jquery-3.4.1.min.js | 1.6 kB | 89 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-vp-telle... | 200 | | Other | 0 B | 63 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-vp-telle... | 200 | xhr | jquery-3.4.1.min.js | 661 B | 74 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-cash... | 200 | | Other | 0 B | 68 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-char... | 200 | | Other | 0 B | 65 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-den... | 200 | | Other | 0 B | 64 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-cash... | 200 | xhr | jquery-3.4.1.min.js | 661 B | 94 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-char... | 200 | xhr | jquery-3.4.1.min.js | 748 B | 234 ms | |
| vi?userId=AKASH&branchCode=000&ccaName=fgbu-ob-remo-srv-ds-den... | 200 | xhr | jquery-3.4.1.min.js | 661 B | 83 ms | |
| GBP | 200 | | Other | 0 B | 90 ms | |
| CUSTOMER | 200 | | Other | 0 B | 81 ms | |
| GBP | 200 | xhr | jquery-3.4.1.min.js | 3.6 kB | 102 ms | |
| CUSTOMER | 200 | xhr | jquery-3.4.1.min.js | 820 B | 273 ms | |
| userpreferences?userId=AKASH&branchCode=000 | 200 | xhr | jquery-3.4.1.min.js | 647 B | 99 ms | |
| tiles?userId=AKASH&branchCode=000 | 200 | xhr | jquery-3.4.1.min.js | 4.0 kB | 96 ms | |
| 0000000010048 | 200 | | Other | 0 B | 66 ms | |
| 0000000010048 | 200 | xhr | jquery-3.4.1.min.js | 1.6 kB | 119 ms | |
| chargePickUp?txnAmount=100&txnCcy=GBP&accountBranchCode=000&fu... | 200 | | Other | 0 B | 64 ms | |
| C | 200 | | Other | 0 B | 62 ms | |
| chargePickUp?txnAmount=100&txnCcy=GBP&accountBranchCode=000&fu... | 201 | xhr | jquery-3.4.1.min.js | 1.0 kB | 109 ms | |
| C | 200 | xhr | jquery-3.4.1.min.js | 2.7 kB | 137 ms | |

Note

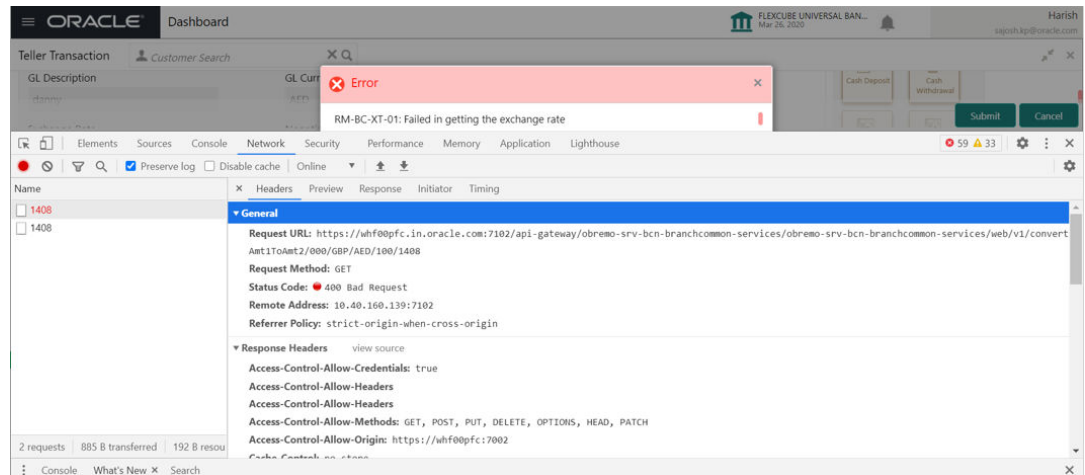
Usually Red color indicates non 2xx HTTP response.

Figure 1-3 Non 2xx Response

Error
RM-BC-XT-01: Failed in getting the exchange rate

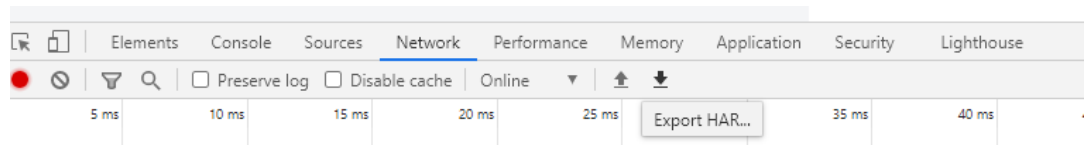
| Name | Status | Type | Initiator | Size | Time | Waterfall |
|------|--------|------|---------------------|-------|--------|-----------|
| 1408 | 400 | xhr | jquery-3.5.1.min.js | 885 B | 299 ms | |
| 1408 | 200 | | Other | 0 B | 17 ms | |

2 requests | 885 B transferred | 192 B resources

Figure 1-4 Non 2xx Response Details

4. Export the trace using the **Export** in browsers.

Example: The user can see the export option as shown below in Chrome.

Figure 1-5 Export Option

1.3 Troubleshooting Environmental Issues

This topic describes on the troubleshooting environmental issues.

This topic contains the following subtopics:

- [Possible Issues While Deploying Services](#)
This topic describes the possible issues that may occur while deploying services
- [Possible Issues in Login and Screen Launch](#)
This topic describes the possible issues that may occur while logging in and launching the screens.

1.3.1 Possible Issues While Deploying Services

This topic describes the possible issues that may occur while deploying services

For the Environment Variables for Oracle Banking Cash Management list, refer **Environment Variables for OBCM Managed Servers** section, in the **Environment Variable Setup Guide**.

1.3.2 Possible Issues in Login and Screen Launch

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

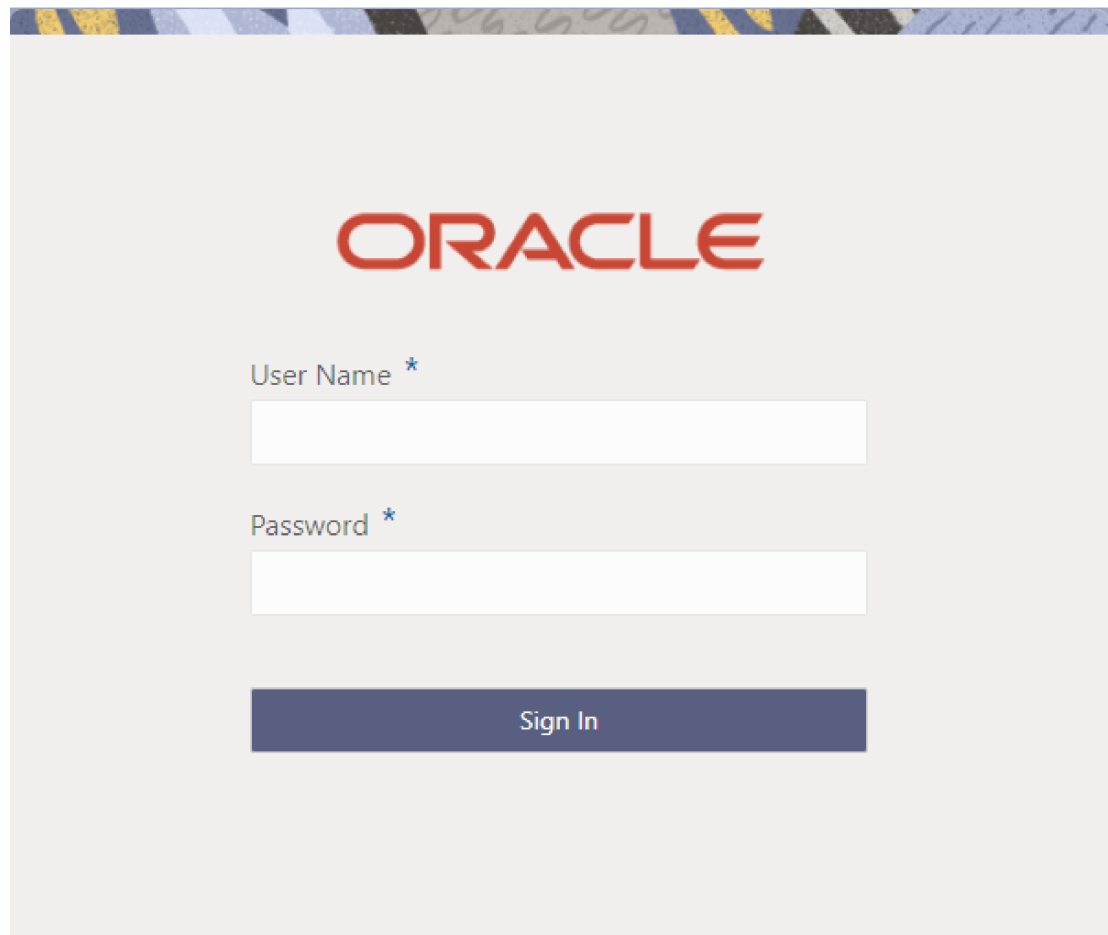
Login Page is not launching

Perform the following checks if the login page is not working

- Check if the app-shell war file is deployed.
- Make sure that the war file is up and running in the deployed managed server and try to login.
- Check if you are logged in with the appshell URL according to the war file deployed.

For example, `http://10.40.162.114:8731/app-shell/`. In this URL, the name app-shell is dynamic which depends on the name of war file deployed.

Figure 1-6 Login Page



Unable to login after launching the application

Perform the following check 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 1-7 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 |

Unable to login after restarting the services

Perform the following check if you are not able to log in after restarting the services

- Make sure that the LDAP server is up and running, and check if the entered credentials are correct.

Screens are not launching after logging in

Perform the following check if you are not able to launch the screens after logging in

- Make sure that the respective services are up and running.
- Verify the VPN connection while trying to troubleshoot the issues related to page launching, and so on.

2

Troubleshooting Kafka

This topic describes about the troubleshooting Kafka.

This topic contains the following subtopics:

- [Consumer Services](#)
This topic describes about the Consumer Services provided in Oracle Banking Cash Management.
- [Producer Services](#)
This topic describes about the Producer Services on Oracle® Banking Cash Management Cloud Service.
- [Debugging Consumer/Producer health and troubleshooting](#)
This topic describes about the Debugging Consumer/Producer health and troubleshooting.
- [Configurations](#)
This topic describes about the various configurations for the kafka and integration services.

2.1 Consumer Services

This topic describes about the Consumer Services provided in Oracle Banking Cash Management.

- obscfcm-report-services
- obcm-report-services
- obcm-cashflow-projection-services

2.2 Producer Services

This topic describes about the Producer Services on Oracle® Banking Cash Management Cloud Service.

- obscfcm-manual-recon-services
- obcm-collections-transaction-services
- obcm-cashflow-forecasting-services
- obcm-multilateral-netting-services
- obscfcm-instruments-receivables-services
- obscfcm-core-services

2.3 Debugging Consumer/Producer health and troubleshooting

This topic describes about the Debugging Consumer/Producer health and troubleshooting.

Logs to analyze

Logs of the Kafka, Zookeeper, Producer & Consumer needs to be checked. For more details, refer the Logs Configuration section.

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. The tables are:

- PLATO_EVENTHUB_IN_LOG
- PLATO_EVENTHUB_OUT_LOG

2.4 Configurations

This topic describes about the various configurations for the kafka and integration services.

Setup Kafka

- Download Kafka from https://www.apache.org/dyn/closer.cgi?path=kafka/3.8.0/kafka_2.13-3.8.0.tgz.
- Install Zookeeper first and then Kafka.
- zookeeper-3.8.0/apache-zookeeper-3.8.0-bin.tar.gz. As zookeeper is embedded in Kafka.
- Follow the steps mentioned here - <https://kafka.apache.org/quickstart>.

Check if kafka is running

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

(9092 is default port of kafka)

Possible issue while starting kafka

- 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

- Check if any permission issue is there for kafka log folder.
- Create console producer and consumer for troubleshooting.

Refer the following link for the same. <http://cloudurable.com/blog/kafka-tutorial-kafka-from-command-line/index.html>

Useful Links

https://docs.cloudera.com/documentation/kafka/latest/topics/kafka_faq.html

3

Health Checks

This topic describes the information for the health checks.

Eureka Dashboard

The health of services needs to be monitored using weblogic JVM managed server console and Eureka dashboard.

Figure 3-1 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 |

Application Services

Catalog of services required for Oracle Banking Cash Management.

Table 3-1 Services List

| Group | Service Name |
|-------|---------------------------------------|
| OBMA | plato-ui-config-services-{version} |
| OBMA | plato-feed-services-{version} |
| OBMA | plato-report-services-{version} |
| OBMA | plato-batch-server-{version} |
| OBMA | plato-config-service-{version} |
| OBMA | plato-ref-{version} |
| OBMA | plato-api-gateway-{version} |
| OBMA | plato-orch-service-{version} |
| OBMA | plato-edp-services-{version} |
| OBMA | plato-dynamic-data-services-{version} |

Table 3-1 (Cont.) Services List

| Group | Service Name |
|-------|---|
| OBMA | plato-alerts-management-services-{version} |
| OBMA | plato-swagger-api-{version} |
| OBMA | plato-regional-configurator-services-{version} |
| OBMA | plato-fast-data-transfer-service-{version} |
| OBMA | plato-dataload-framework-{version} |
| OBMA | plato-password-policy-service-{version} |
| OBMA | plato-apigateway-router-{version} |
| OBMA | plato-rule-service-{version} |
| OBMA | plato-discovery-service-{version} |
| OBMA | plato-security-toolkit-{version} |
| CMC | cmc-account-services-{version} |
| CMC | cmc-additional-attributes-services-{version} |
| CMC | cmc-advice-services-{version} |
| CMC | cmc-base-services-{version} |
| CMC | cmc-batch-services-{version} |
| CMC | cmc-branch-services-{version} |
| CMC | cmc-businessoverrides-services-{version} |
| CMC | cmc-charges-calculation-services-{version} |
| CMC | cmc-corebanking-adapter-service-{version} |
| CMC | cmc-currency-services-{version} |
| CMC | cmc-customer-services-{version} |
| CMC | cmc-datasegment-services-{version} |
| CMC | cmc-external-chart-account-{version} |
| CMC | cmc-external-system-services-{version} |
| CMC | cmc-external-virtual-account-services-{version} |
| CMC | cmc-facilities-service-{version} |
| CMC | cmc-fc-ai-ml-services-{version} |
| CMC | cmc-ml-indb-services-{version} |
| CMC | cmc-nlp-dashboard-widget-services-{version} |
| CMC | cmc-nlp-maintenance-services-{version} |
| CMC | cmc-nlp-pipeline-services-{version} |
| CMC | cmc-nlp-text-extraction-services-{version} |
| CMC | cmc-obcbs-services-{version} |
| CMC | cmc-obrh-service-{version} |
| CMC | cmc-report-service-{version} |
| CMC | cmc-resource-segment-orchestrator-service-{version} |
| CMC | cmc-screenclass-services-{version} |
| CMC | cmc-settlements-services-{version} |
| CMC | cmc-transactioncontroller-services-{version} |
| CMC | cmc-txn-code-services-{version} |
| CMC | cmc-ml-genai-admin-services-{version} |
| MOC | cmc-applicationcategory-services-{version} |
| MOC | cmc-checklistmanagement-services-{version} |

Table 3-1 (Cont.) Services List

| Group | Service Name |
|-------|--|
| MOC | cmc-checklist-services-{version} |
| MOC | cmc-comments-services-{version} |
| MOC | cmc-documentmanagement-services-{version} |
| MOC | cmc-document-services-{version} |
| MOC | cmc-mailnotification-services-{version} |
| MOC | cmc-priority-service-{version} |
| MOC | cmc-processcode-service-{version} |
| MOC | cmc-queue-service-{version} |
| MOC | cmc-sequencegenerator-services-{version} |
| MOC | cmc-sla-services-{version} |
| OBCM | obscfcm-account-maintenance-services-{version} |
| OBCM | obscfcm-auto-recon-batch-{version} |
| OBCM | obscfcm-batch-jobs-{version} |
| OBCM | obscfcm-charges-services-{version} |
| OBCM | obscfcm-chatbot-services-{version} |
| OBCM | obscfcm-core-services-{version} |
| OBCM | obscfcm-filter-services-{version} |
| OBCM | obscfcm-instruments-receivables-services-{version} |
| OBCM | obscfcm-manual-recon-services-{version} |
| OBCM | obscfcm-master-maintenance-services-{version} |
| OBCM | obscfcm-report-services-{version} |
| OBCM | obscfcm-workflow-management-services-{version} |
| OBCM | obcm-cashflow-forecasting-services-{version} |
| OBCM | obcm-cashflow-projection-services-{version} |
| OBCM | obcm-collections-maintenance-services-{version} |
| OBCM | obcm-collections-transaction-services-{version} |
| OBCM | obcm-multilateral-netting-services-{version} |
| OBCM | obcm-report-services-{version} |
| OBCM | obscfcm-eod-batch-{version} |
| OBCM | obscfcm-genai-integration-services-{version} |
| SFS | sfs-alerts-services-{version} |
| UI | app-shell-{version} |
| UI | cmc-component-server-{version} |
| UI | moc-component-server-{version} |
| UI | obpy-component-server-{version} |
| UI | obreports-component-server-{version} |
| UI | obscfcm-component-server-{version} |
| UI | obcm-component-server-{version} |
| UI | sms-component-server-{version} |

Note

Refer to OSDC zip for the exact version number for each service.

4

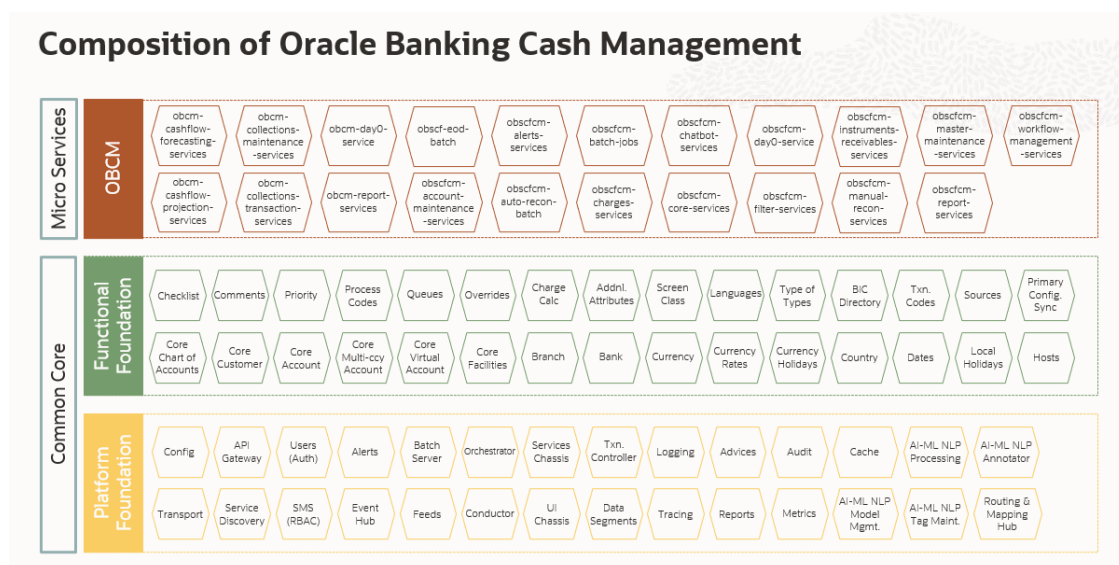
Troubleshooting Functional Workflows

This topic describes about the troubleshooting functional workflows.

Oracle Banking Cash Management – Subdomains List

The subdomains of Oracle Banking Cash Management are shown as follows.

Figure 4-1 Oracle Banking Cash Management – Subdomains



This topic contains the following subtopics:

- [Log Analysis](#)
This topic describes the possible issues to use logs to analyze issues in a transaction using logs.

4.1 Log Analysis

This topic describes the possible issues to use logs to analyze issues in a transaction using logs.

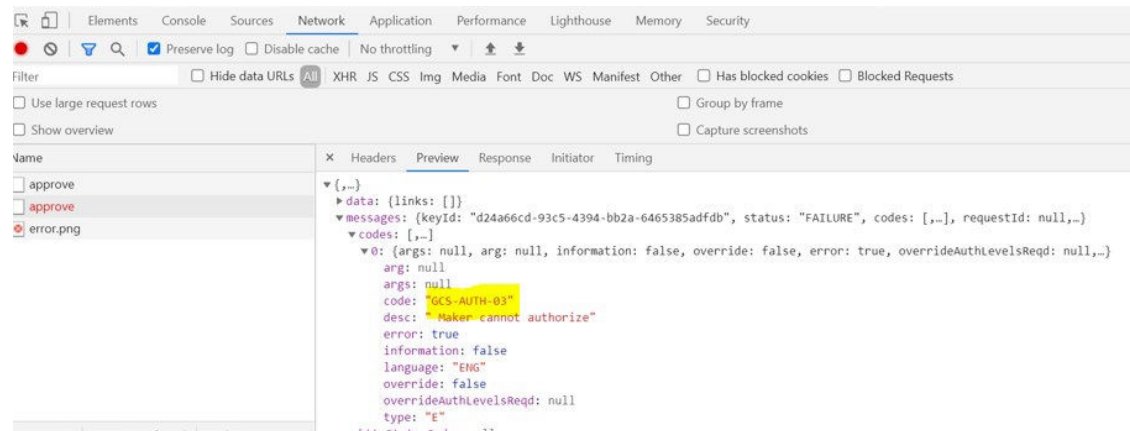
Error Message not shown

If there are any improper calls, check the ERTB_MSGS table of the respective schema to understand the cause of the error.

1. Press **F12** to open the **Networks**.
2. Check the error code in the response.

Query: SELECT * FROM ERTB_MSGS WHERE ERR_CODE='GCS_AUTH-03'

Figure 4-2 Error Code



Setting Log file path

Log generation path needs to be defined in **PLATO_LOGGER_PARAM_CONFIG** table of PLATO schema.

Query: Select * from PLATO_LOGGER_PARAM_CONFIG;

Figure 4-3 PLATO_LOGGER_PARAM_CONFIG

```
select * from plato_logger_param_config
```

| ID | MODIFY_FIELD | PARAM_NAME | PARAM_VAL |
|----|--------------|-------------------|----------------------------|
| 1 | 1 N | LOG_PATH | /scratch/oblm/request-logs |
| 2 | 2 N | LOG_LEVEL | INFO |
| 3 | 3 N | LOG_MSG_WITH_TIME | Y |

Dynamic Log Generation Issues

For generating dynamic service logs, insert the data to **PLATO_DEBUG_USERS** table.

Query: Select * from PLATO_DEBUG_USERS;

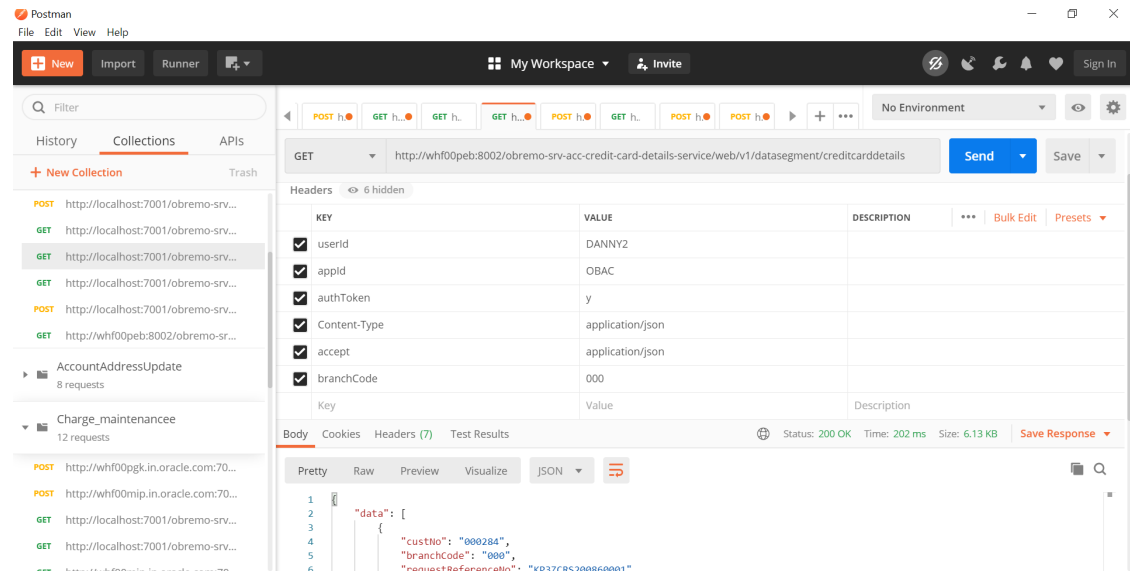
Figure 4-4 Service Logs

The screenshot shows the Oracle SQL Developer interface. At the top, there's a 'Worksheet' tab with a 'Query Builder' view. The SQL statement entered is 'Select * from PLATO_DEBUG_USERS'. Below this, the 'Query Result' tab is active, displaying a table with 42 rows. The table has four columns: 'ID', 'DEBUG_ENABLED', 'SERVICE_CODE', and 'USER_ID'. The data shows various service codes and their corresponding user IDs, with 'DEBUG_ENABLED' always set to 'Y'.

| | ID | DEBUG_ENABLED | SERVICE_CODE | USER_ID |
|----|-----|---------------|---|----------|
| 1 | 1 | Y | obscfcm-manual-recon-services | SWETA |
| 2 | 83 | Y | obscfcm-recon-maintenance-services | SUNIL |
| 3 | 61 | Y | obscfcm-filter-services | SUNIL |
| 4 | 100 | Y | obscfcm-charges-services | DEV |
| 5 | 87 | Y | obscfcm-auto-recon-batch | SUNIL |
| 6 | 88 | Y | obscfcm-core-services | SUNIL |
| 7 | 89 | Y | obscfcm-account-maintenance-services | SUNIL |
| 8 | 90 | Y | obscfcm-charges-services | SUNIL |
| 9 | 99 | Y | cmc-charges-calculation-services | DEV |
| 10 | 104 | Y | obcm-cashflow-forecasting-services | MAYANK |
| 11 | 106 | Y | obcm-cashflow-projection-services | MRINMAY |
| 12 | 81 | Y | obscfcm-report-services | SWETA |
| 13 | 82 | Y | obscfcm-workflow-management-services | SUNIL |
| 14 | 84 | Y | obscfcm-master-maintenance-services | SUNIL |
| 15 | 85 | Y | obscfcm-manual-recon-services | PRASHANT |
| 16 | 86 | Y | obscfcm-instruments-receivables-services | PRASHANT |
| 17 | 110 | Y | cmc-resource-segment-orchestrator-service | SUNIL |

Logs are not generated

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

Figure 4-5 Postman

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

500 Internal Error

The possible causes for 500 internal error are as follows:

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

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

5

Troubleshooting OutOfMemory issues

This topic describes about Troubleshooting OutOfMemory issues

This topic contains the following subtopics:

- [Extract Heapdump](#)
This topic describes about the troubleshooting information to extract Heapdump.
- [JFR Tool in Java](#)
This topic describes about JFR Tool in Java.
- [Quick Recovery](#)
This topic provides systematic instruction to troubleshoot the application for quick recovery.

5.1 Extract Heapdump

This topic describes about the troubleshooting information to extract 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.

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>
```

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:
 - Start JVisualVM.

- Under "Remote" option, add a host.
- Under the new host, add new jmx connection.

Note

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

5.2 JFR Tool in Java

This topic describes about 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.

5.3 Quick Recovery

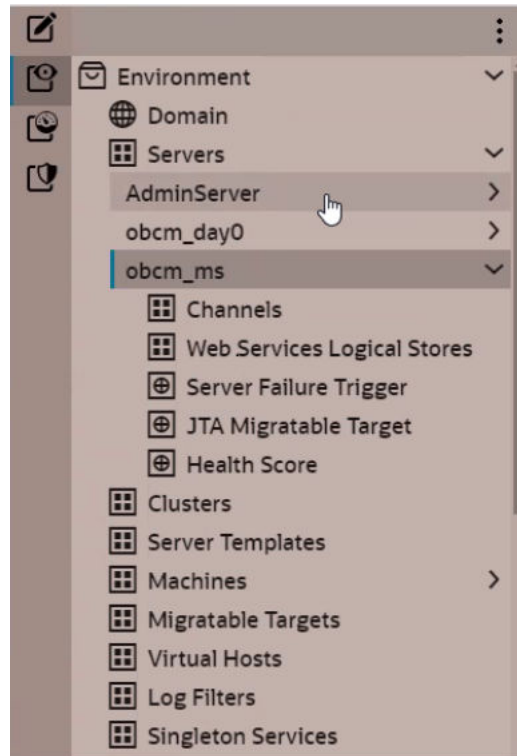
This topic provides systematic instruction to troubleshoot the application for quick recovery.

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:

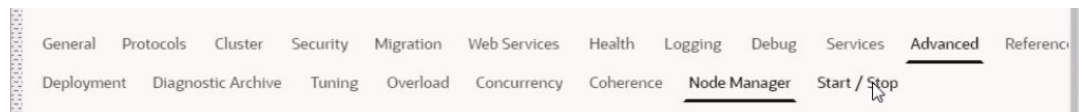
1. Click **Servers**.

Figure 5-1 Domain Structure



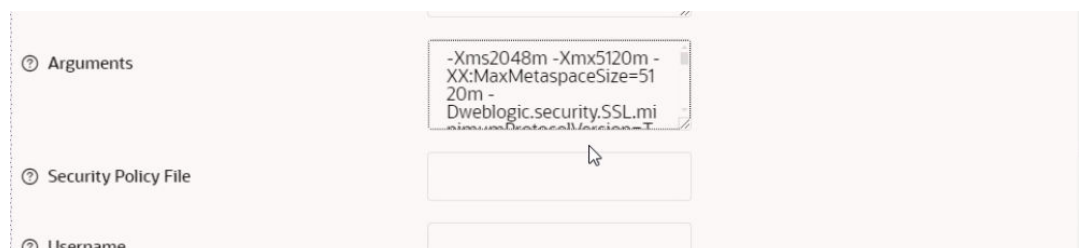
2. Select the managed server from which you are getting OutOfMemoryException or GC Overhead Limit exceeded.
3. Click **Node Manager** tab.

Figure 5-2 Server Start



4. 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 5-3 Memory Requirements



6

Troubleshooting Deployment Errors/Exceptions

This topic describes the troubleshooting information for Errors/Exceptions that can occur due to flyway while deployment.

Errors / Exceptions on Flyway Deployment

The error description is given below:

```
org.springframework.beans.factory.UnsatisfiedDependencyException:  
Error creating bean with name 'application': Unsatisfied dependency  
expressed through field 'flywayApplicationConfig'; nested exception is  
org.springframework.beans.factory.BeanCreationException: Error creating  
bean with name 'executeDomain' defined in class path resource  
[oracle/fsgbu/plato/flyway/FlywayConfig.class]: Bean instantiation via  
factory method failed; nested exception...SQL State : 42000
```

In the error, the bean-name can be any of the following:

- **executeDomain**
- **executePlato**
- **executePlatoSec**
- **executePlatoUI**
- **executeSms**
- **executeCmc**
- **executeMidofcmc**
- **executePlatofeed**
- **executePlatobatch**
- **executePlatoorch**

Solution for Errors/Exceptions

- At first for each case,, the service through Plato-configuration-service should be checked to see if it is suggesting the correct scheme via the **plato-config-service**.
- After checking that it is to be ensured for that particular APPLICATION, the following entries are present in the PROPERTIES table in the plato Schema.

Table 6-1 Properties Table

| BEAN | PROPERTY_SET NEED TO BE PRESENT |
|-----------------|---------------------------------|
| executeDomain | flyway.domain.db.* |
| executePlato | flyway.plato.db.* |
| executePlatoSec | flyway.platosec.db.* |

Table 6-1 (Cont.) Properties Table

| BEAN | PROPERTY_SET NEED TO BE PRESENT |
|-------------------|---------------------------------|
| executePlatoUI | flyway.platoui.db.* |
| executeSms | flyway.sms.db.* |
| executeCmc | flyway.cmc.db.* |
| executeMidofcmc | flyway.domain.db.* |
| executePlatofeed | flyway.platofeed.db.* |
| executePlatobatch | flyway.platobatch.db.* |
| executePlatoorch | flyway.platoorch.db.* |

Depending on whether for the flyway db connection, JNDI name is being used or the JDBC URL and other details are used, each property set will look as follows:

CASE 1: USING JDBC

```
flyway.domain.db.username
flyway.domain.db.password
flyway.domain.db.jdbcUrl
flyway.domain.db.driver-class-name
flyway.domain.schemas
flyway.domain.locations
flyway.domain.placeholderReplacement
flyway.domain.ignoreMissingMigrations
flyway.domain.outOfOrder
```

CASE 2: USING JNDI

```
flyway.domain.db.jndi
flyway.domain.schemas
flyway.domain.locations
flyway.domain.placeholderReplacement
flyway.domain.ignoreMissingMigrations
flyway.domain.outOfOrder
flyway.jndi.datasource.enabled
```

In each case, make sure that all the relevant placeholders are available in the scripts in the respective locations.

Error Description:

No value provided for placeholder: \${eureka.host}. Check your configuration!

In the example above, an error occurred due to the absence of passing the following parameter in the properties table:

```
flyway.domain.placeholders.eureka.host
```

Solution:

Similarly, any placeholder where the error occurred must pass to the environment through the properties table or the command line arguments (as -D parameters).

A

Business Error Codes

This topic describes about error codes and messages.

For Error codes and messages, refer to [Business Error Codes](#).

Index

Numerics

404 Error, [4](#)
500 Internal Error, [4](#)

B

Business Error Codes, [A-1](#)

C

Configurations, [2](#)
Consumer Services, [1](#)

D

Debugging Consumer/Producer health and
troubleshooting, [1](#)
Dynamic Log Generation Issues, [2](#)

E

Error Message not shown, [1](#)
Extract Heapdump, [1](#)

H

Health Checks, [1](#)
Heap Dump, [1](#)

J

JFR Tool in Java, [2](#)

L

Log Analysis, [1](#)

Login Page is not launching, [4](#)
Logs are not generated, [3](#)
Logs to analyze, [1](#)

P

Possible Issues While Deploying Services, [3](#)
Preliminary Checks from UI, [1](#)
Producer Services, [1](#)

Q

Quick Recovery, [2](#)

S

Screens are not launching after logging in, [5](#)
Setting Log file path, [2](#)

T

Tables to analyze, [2](#)
Troubleshooting Deployment Errors/Exceptions, [1](#)
Troubleshooting Environmental Issues, [3](#)
Troubleshooting Functional Workflows, [1](#)
Troubleshooting Kafka, [1](#)
Troubleshooting OutOfMemory issues, [1](#)
Troubleshooting Technical Flows, [1](#)

U

Unable to login after launching the application, [4](#)
Unable to login after restarting the services, [5](#)

W

Where is the Problem, [1](#)