

## **Common Core Services Installation Guide**

# **Oracle Banking Branch**

Release 14.6.0.6.0

**Part Number F90451-01**

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# 1. Preface

## 1.1 Introduction

This guide helps you to install the common core 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.

It is recommended to use dedicated managed server for each of the common core services.

## 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:

1. CMC-ACCOUNT-SERVICES
2. CMC ADDITIONAL-ATTRIBUTES-SERVICES
3. CMC-ADVICE-SERVICES
4. CMC-BASE-SERVICES
5. CMC-BATCH-SERVICES
6. CMC-BRANCH-SERVICES
7. CMC-BUSINESSOVERRIDES-SERVICES
8. CMC-CHARGES-CALCULATION-SERVICES
9. CMC-COREBANKING-ADAPTER-SERVICE
10. CMC-CURRENCY-SERVICES
11. CMC-CUSTOMER-SERVICES
12. CMC-DATASEGMENT-SERVICES
13. CMC-EXTERNAL-CHART-ACCOUNT
14. CMC-EXTERNAL-SYSTEM-SERVICES
15. CMC-EXTERNAL-VIRTUAL-ACCOUNT-SERVICES
16. CMC-FACILITIES-SERVICE
17. CMC-FC-AI-ML-SERVICES
18. CMC-ML-INDB-SERVICES
19. CMC-NLP-DASHBOARD-WIDGET-SERVICES
20. CMC-NLP- MAINTENANCE-SERVICES
21. CMC-NLP-OPENNLP-SERVICES
22. CMC-NLP-PIPELINE-SERVICES
23. CMC-NLP-TEXT-EXTRACTION-SERVICES
24. CMC-OBCBS-SERVICES
25. CMC-OBRRH-SERVICE
26. CMC-REPORT-SERVICE

27. CMC-RESOURCE-SEGMENT-ORCHESTRATOR-SERVICE
28. CMC-SCREENCLASS-SERVICES
29. CMC-SETTLEMENTS-SERVICES
30. CMC-TRANSACTIONCONTROLLER-SERVICES
31. CMC-TXN-CODE-SERVICES
32. CMC-OPDS-SERVICES
33. CMC-TXN-CODE-SERVICESCMC-APPLICATIONCATEGORY-SERVICES
34. CMC-CHECKLIST-SERVICES
35. CMC-CHECKLISTMANAGEMENT-SERVICES
36. CMC-COMMENTS-SERVICES
37. CMC-DOCUMENT-SERVICES
38. CMC-DOCUMENTMANAGEMENT-SERVICES
39. CMC-KYCCHECK-SERVICES
40. CMC-MAILNOTIFICATION-SERVICES
41. CMC-PRIORITY-SERVICES
42. CMC-PROCESSCODE-SERVICE
43. CMC-SEQUENCEGENERATOR-SERVICES
44. CMC-ADDITIONAL-ATTRIBUTES-SERVICES
45. CMC-SLA-SERVICES

## 1.5 **Documents**

- ANNEXURE-1

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## 2. Database Setup

### 2.1 Introduction

In this section you are going to setup database related configuration for Common Core Installation.

### 2.2 Prerequisite

Below setup is dependent on Common Core Schema and SMS schema. Before you proceed with below setup ensure Common Core Schema and SMS Schema is provided to you.

### 2.3 Database Setup

To setup DB for Common Core schema to be created:

| Service Name                          | Schema Required          |
|---------------------------------------|--------------------------|
| CMC-ACCOUNT-SERVICES                  | Yes (Common Core Schema) |
| CMC-ADDITIONAL-ATTRIBUTES-SERVICE     | Yes (Common Core Schema) |
| CMC-ADVICE-SERVICES                   | Yes (Common Core Schema) |
| CMC-BASE-SERVICES                     | Yes (Common Core Schema) |
| CMC-BATCH-SERVICES                    | Yes (Common Core Schema) |
| CMC-BRANCH-SERVICES                   | Yes (Common Core Schema) |
| CMC-BUSINESSOVERRIDES-SERVICES        | Yes (Common Core Schema) |
| CMC-CHARGES-CALCULATION-SERVICES      | Yes (Common Core Schema) |
| CMC-COREBANKING-ADAPTER-SERVICE       | Yes (Common Core Schema) |
| CMC-CURRENCY-SERVICES                 | Yes (Common Core Schema) |
| CMC-CUSTOMER-SERVICES                 | Yes (Common Core Schema) |
| CMC-DATASEGMENT-SERVICES              | Yes (Common Core Schema) |
| CMC-EXTERNAL-CHART-ACCOUNT            | Yes (Common Core Schema) |
| CMC-EXTERNAL-SYSTEM-SERVICES          | Yes (Common Core Schema) |
| CMC-EXTERNAL-VIRTUAL-ACCOUNT-SERVICES | Yes (Common Core Schema) |
| CMC-FACILITIES-SERVICE                | Yes (Common Core Schema) |
| CMC-FC-AI-ML-SERVICES                 | Yes (Common Core Schema) |
| CMC-ML-INDB-SERVICES                  | Yes (Common Core Schema) |

| <b>Service Name</b>                       | <b>Schema Required</b>   |
|---|--------------------------|
| CMC-NLP-DASHBOARD-WIDGET-SERVICES         | Yes (Common Core Schema) |
| CMC-NLP-MAINTENANCE-SERVICES              | Yes (Common Core Schema) |
| CMC-NLP-OPENNLP-SERVICES                  | Yes (Common Core Schema) |
| CMC-NLP-PIPELINE-SERVICES                 | Yes (Common Core Schema) |
| CMC-NLP-TEXT-EXTRACTION-SERVICES          | Yes (Common Core Schema) |
| CMC-OBCBS-SERVICES                        | Yes (Common Core Schema) |
| CMC-OBRRH-SERVICE                         | Yes (Common Core Schema) |
| CMC-REPORT-SERVICE                        | Yes (Common Core Schema) |
| CMC-RESOURCE-SEGMENT-ORCHESTRATOR-SERVICE | Yes (Common Core Schema) |
| CMC-SCREENCLASS-SERVICES                  | Yes (Common Core Schema) |
| CMC-SETTLEMENTS-SERVICES                  | Yes (Common Core Schema) |
| CMC-TRANSACTIONCONTROLLER-SERVICES        | Yes (Common Core Schema) |
| CMC-TXN-CODE-SERVICES                     | Yes (Common Core Schema) |
| CMC-OPDS-SERVICES                         | Yes (Common Core Schema) |
| CMC-APPLICATIONCATEGORY-SERVICES          | Yes (Common Core Schema) |
| CMC-CHECKLIST-SERVICES                    | Yes (Common Core Schema) |
| CMC-CHECKLISTMANAGEMENT-SERVICES          | Yes (Common Core Schema) |
| CMC-COMMENTS-SERVICES                     | Yes (Common Core Schema) |
| CMC-DOCUMENT-SERVICES                     | Yes (Common Core Schema) |
| CMC-DOCUMENTMANAGEMENT-SERVICES           | Yes (Common Core Schema) |
| CMC-KYCCHECK-SERVICES                     | Yes (Common Core Schema) |
| CMC-MAILNOTIFICATION-SERVICES             | Yes (Common Core Schema) |
| CMC-PRIORITY-SERVICES                     | Yes (Common Core Schema) |
| CMC-PROCESSCODE-SERVICE                   | Yes (Common Core Schema) |
| CMC-SEQUENCEGENERATOR-SERVICES            | Yes (Common Core Schema) |
| CMC-SLA-SERVICES                          | Yes (Common Core Schema) |

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## 3. Domain and Cluster Configuration

### 3.1 Common Core Domain Configuration

#### 3.1.1 Prerequisites

1. Machine should have Java JDK installed.
2. Oracle Fusion Middleware has to be installed on the machine.  
**Note:** Before proceeding with below steps complete Oracle Banking Microservices Architecture installation guided.
3. Steps for creating all Common core domains, properties like port numbers, names will be changing based on the domain. Screenshots provided for such deviations. Domain creation process remains the same.  
**Note:** For the exact version to be installed, refer to **Tech Stack** section of Release Notes.

#### 3.1.2 Steps to Create Domain

It is recommended to have different managed server in one domain for each application. For Creating Domain and Configuration, refer to **How to create and Cluster Configuration** section in ANNEXURE-1.

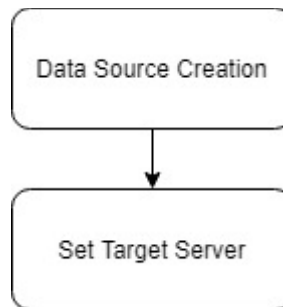
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## 4. Data Sources Creation

### 4.1 Prerequisite

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

The data sources for the respective micro-services must be created first before the application deployment. Each of the data source target to their corresponding servers on which the application will be deployed. The following sections explain the list of data sources required to be created for Common Core services and the steps to configure them in the server.



### 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.

| Data source Name   | Data source JNDI                 | Targets  |
|--|----------------------------------|--|
| PLATO  | jdbc/PLATO                       | Common Core Managed Server                     |
| CMNCORE  | jdbc/CMNCORE                     | Common Core Managed Server, API Gateway Server |
| PLATOBATCH   | jdbc/PLATOBATCH                  | Common Core Managed Server                     |
| SMS  | jdbc/sms                         | Common Core Managed Server                     |
| PLATOUI  | jdbc/PLATO_UI_CONFIG             | Common Core Managed Server                     |
| PLATOFEED  | jdbc/PLATOFEED                   | Common Core Managed Server                     |
| PLATOSECURITY  | jdbc/PLATO_SECURITY              | Common Core Managed Server                     |
| <PRODUCT PROJECTION SCHEMA><br>(Required only for DB based ML use cases) | jdbc/<PRODUCT PROJECTION SCHEMA> | Common Core Managed Server                     |

Steps to create data source in WebLogic is same for all the above except for the connection details and names. Check the below screenshots to understand data source creation.



### **Common Core Services using Plato-Feed**

The below listed common core services requires the data source to be created for plato-feeds on each domain prior to deployment of applications onto managed servers.

| <b>Service Name</b>     | <b>Data Source Name</b> | <b>Data Source JNDI</b> | <b>Target</b>              |
|-------------------------|-------------------------|-------------------------|----------------------------|
| cmc-account-services    | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |
| cmc-base-services       | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |
| cmc-branch-services     | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |
| cmc-settlement-services | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |
| cmc-currency-services   | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |
| cmc-customer-services   | PLATOFEED               | jdbc/PLATOFEED          | Common Core Managed Server |

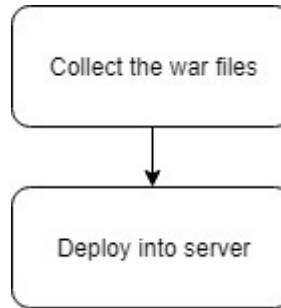
## **4.3 Creating Data source**

For creating data source, refer to **How to create Data sources** section in ANNEXURE-1.

## 5. Deployments

### 5.1 Prerequisite

The database setup and data sources creation need to be performed prior to the application deployment stage. Each of the services corresponds to a specific war file that needs to be deployed into the server. The following sections explain the list of war files of the Common Core service and the steps to deploy them into the server.



### 5.2 Deployments List

Below table give details of the deployments required on each domain for the Common Core application to run. Deploy one after other in the same given order.

| Application                       | Archive name                                     | OSDC path   | Targets                    |
|-----------------------------------|--|---|----------------------------|
| CMC-ACCOUNT-SERVICES              | cmc-account-services-{version}.war               | {Unzip OSDC Package}\cmc-account-services               | Common Core Managed Server |
| CMC-ADDITIONAL-ATTRIBUTES-SERVICE | cmc-additional-attributes-services-{version}.war | {Unzip OSDC Package}\cmc-additional-attributes-services | Common Core Managed Server |
| CMC-ADVICE-SERVICES               | cmc-advice-services-{version}.war                | {Unzip OSDC Package}\cmc-advice-services                | Common Core Managed Server |
| CMC-BASE-SERVICES                 | cmc-base-services-{version}.war                  | {Unzip OSDC Package}\cmc-base-services                  | Common Core Managed Server |
| CMC-BATCH-SERVICES                | cmc-batch-services-{version}.war                 | {Unzip OSDC Package}\cmc-batch-services                 | Common Core Managed Server |
| CMC-BRANCH-SERVICES               | cmc-branch-services-{version}.war                | {Unzip OSDC Package}\cmc-branch-services                | Common Core Managed Server |
| CMC-BUSINESSOVERRIDE-SERVICES     | cmc-businessoverrides-services-{version}.war     | {Unzip OSDC Package}\cmc-businessoverrides-services     | Common Core Managed Server |
| CMC-CHARGES-CALCULATION-SERVICES  | cmc-charges-calculation-services-{version}.war   | {Unzip OSDC Package}\cmc-charges-calculation-services   | Common Core Managed Server |

| <b>Application</b>                    | <b>Archive name</b>                                 | <b>OSDC path</b>   | <b>Targets</b>             |
|---------------------------------------|---|--|----------------------------|
| CMC-COREBANKING-ADAPTER-SERVICE       | cmc-corebanking-adapter-service-{version}.war       | {Unzip OSDC Package}\cmc-corebanking-adapter-service       | Common Core Managed Server |
| CMC-CURRENCY-SERVICES                 | cmc-currency-services-{version}.war                 | {Unzip OSDC Package}\cmc-currency-services                 | Common Core Managed Server |
| CMC-CUSTOMER-SERVICES                 | cmc-customer-services-{version}.war                 | {Unzip OSDC Package}\cmc-customer-services                 | Common Core Managed Server |
| CMC-DATASEGMENT-SERVICES              | cmc-datasegment-services-{version}.war              | {Unzip OSDC Package}\cmc-datasegment-services              | Common Core Managed Server |
| CMC-EXTERNAL-CHART-ACCOUNT            | cmc-external-chart-account-{version}.war            | {Unzip OSDC Package}\cmc-external-chart-account            | Common Core Managed Server |
| CMC-EXTERNAL-SYSTEM-SERVICES          | cmc-external-system-services-{version}.war          | {Unzip OSDC Package}\cmc-external-system-services          | Common Core Managed Server |
| CMC-EXTERNAL-VIRTUAL-ACCOUNT-SERVICES | cmc-external-virtual-account-services-{version}.war | {Unzip OSDC Package}\cmc-external-virtual-account-services | Common Core Managed Server |
| CMC-FACILITIES-SERVICE                | cmc-facilities-service-{version}.war                | {Unzip OSDC Package}\cmc-facilities-service                | Common Core Managed Server |
| CMC-FC-AI-ML-SERVICES                 | cmc-fc-ai-ml-services-{version}.war                 | {Unzip OSDC Package}\cmc-fc-ai-ml-services                 | Common Core Managed Server |
| CMC-ML-INDB-SERVICES                  | cmc-ml-indb-services-{version}.war                  | {Unzip OSDC Package}\cmc-ml-indb-services                  | Common Core Managed Server |
| CMC-NLP-DASHBOARD-WIDGET-SERVICES     | cmc-nlp-dashboard-widget-services-{version}.war     | {Unzip OSDC Package}\cmc-nlp-dashboard-widget-services     | Common Core Managed Server |
| CMC-NLP-MAINTENANCE-SERVICES          | cmc-nlp-maintenance-services-{version}.war          | {Unzip OSDC Package}\cmc-nlp-maintenance-services          | Common Core Managed Server |
| CMC-NLP-OPENNLP-SERVICES              | cmc-nlp-opennlp-services-{version}.war              | {Unzip OSDC Package}\cmc-nlp-opennlp-services              | Common Core Managed Server |
| CMC-NLP-PIPELINE-SERVICES             | cmc-nlp-pipeline-services-{version}.war             | {Unzip OSDC Package}\cmc-nlp-pipeline-services             | Common Core Managed Server |
| CMC-NLP-TEXT-EXTRACTION-SERVICES      | cmc-nlp-text-extraction-services-{version}.war      | {Unzip OSDC Package}\cmc-nlp-text-extraction-services      | Common Core Managed Server |
| CMC-OBCBS-SERVICES                    | cmc-obcbs-services-{version}.war                    | {Unzip OSDC Package}\cmc-obcbs-service                     | Common Core Managed Server |
| CMC-OBHR-SERVICES                     | cmc-obrh-services-{version}.war                     | {Unzip OSDC Package}\cmc-obrh-services                     | Common Core Managed Server |

| <b>Application</b>                        | <b>Archive name</b>                                     | <b>OSDC path</b>   | <b>Targets</b>             |
|---|---|--|----------------------------|
| CMC-OBHR-KAFKA-CONSUMER                   | cmc-obrh-kafka-consumer-{version}.war                   | {Unzip OSDC Package}\cmc-obrh-kafka-consumer                   | Common Core Managed Server |
| CMC-REPORT-SERVICE                        | cmc-report-service-{version}.war                        | {Unzip OSDC Package}\cmc-report-service                        | Common Core Managed Server |
| CMC-RESOURCE-SEGMENT-ORCHESTRATOR-SERVICE | cmc-resource-segment-orchestrator-service-{version}.war | {Unzip OSDC Package}\cmc-resource-segment-orchestrator-service | Common Core Managed Server |
| CMC-SCREENCLASS-SERVICES                  | cmc-screenclass-services-{version}.war                  | {Unzip OSDC Package}\cmc-screenclass-services                  | Common Core Managed Server |
| CMC-SETTLEMENTS-SERVICES                  | cmc-settlements-services-{version}.war                  | {Unzip OSDC Package}\cmc-settlements-services                  | Common Core Managed Server |
| CMC-TRANSACTIONCONTROLLER-SERVICES        | cmc-transactioncontroller-services-{version}.war        | {Unzip OSDC Package}\cmc-transactioncontroller-services        | Common Core Managed Server |
| CMC-TXN-CODE-SERVICES                     | cmc-txn-code-services-{version}.war                     | {Unzip OSDC Package}\cmc-txn-code-services                     | Common Core Managed Server |
| CMC-APPLICATIONCATEGORY-SERVICES          | cmc-applicationcategory-services-{version}.war          | {Unzip OSDC Package}\cmc-applicationcategory-services          | Mid-Office Managed Server  |
| CMC-CHECKLIST-SERVICES                    | cmc-checklist-services-{version}.war                    | {Unzip OSDC Package}\cmc-checklist-services                    | Mid-Office Managed Server  |
| CMC-CHECKLISTMANAGEMENT-SERVICES          | cmc-checklistmanagement-services-{version}.war          | {Unzip OSDC Package}\cmc-checklistmanagement-services          | Mid-Office Managed Server  |
| CMC-COMMENTS-SERVICES                     | cmc-comments-services-{version}.war                     | {Unzip OSDC Package}\cmc-comments-services                     | Mid-Office Managed Server  |
| CMC-DOCUMENT-SERVICES                     | cmc-document-services-{version}.war                     | {Unzip OSDC Package}\cmc-document-services                     | Mid-Office Managed Server  |
| CMC-DOCUMENTMANAGEMENT-SERVICES           | cmc-documentmanagement-services-{version}.war           | {Unzip OSDC Package}\cmc-documentmanagement-services           | Mid-Office Managed Server  |
| CMC-KYCCHECK-SERVICES                     | cmc-kyccheck-services-{version}.war                     | {Unzip OSDC Package}\cmc-kyccheck-services                     | Mid-Office Managed Server  |
| CMC-MAILNOTIFICATION-SERVICES             | cmc-mailnotification-services-{version}.war             | {Unzip OSDC Package}\cmc-mailnotification-services             | Mid-Office Managed Server  |
| CMC-PRIORITY-SERVICE                      | cmc-priority-service-{version}.war                      | {Unzip OSDC Package}\cmc-priority-service                      | Mid-Office Managed Server  |

| Application                    | Archive name                                 | OSDC path   | Targets                    |
|--------------------------------|--|---|----------------------------|
| CMC-PROCESSCODE-SERVICE        | cmc-processcode-service-{version}.war        | {Unzip OSDC Package}\cmc-processcode-service        | Mid-Office Managed Server  |
| CMC-SEQUENCEGENERATOR-SERVICES | cmc-sequencegenerator-services-{version}.war | {Unzip OSDC Package}\cmc-sequencegenerator-services |                            |
| CMC-SLA-SERVICES               | cmc-sla-services-{version}.war               | {Unzip OSDC Package}\cmc-sla-services               |                            |
| CMC-OPDS-SERVICES              | cmc-opds-services-{version}.war              | {Unzip OSDC Package}\cmc-opds-services              | Common Core Managed Server |

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

### 5.3 Steps to Deploy as Application

To deploy application, refer to **How to deploy section** in ANNEXURE-1.

### 5.4 Deprecated Services

Deploy the common core service to clean up the deprecated service-related DB objects from common core / SMS / PLATO schemas.

| Application                 | Archive name                              | OSDC path  | Targets                    |
|-----------------------------|---|--|----------------------------|
| CMC-SERVICE-DEPRECATION-SVC | cmc-service-deprecation-svc-{version}.war | {Unzip OSDC Package}\cmc-service-deprecation-svc | Common Core Managed Server |

Below table give details of the deprecated services in Common Core application and undeploy the services one after other in the same given order as given below.

| Application                 | Archive name                              | Targets                    |
|-----------------------------|---|----------------------------|
| CMC-EARMARK-SERVICES        | cmc-earmark-services-{version}.war        | Common Core Managed Server |
| CMC-QUEUE-SERVICES          | cmc-queue-services-{version}.war          | Common Core Managed Server |
| CMC-SERVICE-DEPRECATION-SVC | cmc-service-deprecation-svc-{version}.war | Common Core Managed Server |

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

### 5.5 Steps to undeploy the deprecated application

To undeploy the deprecated applications, please refer ANNEXURE-1. “**How to undeploy Application**” section.

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## 6. Document Verification Framework

### 6.1 Introduction

This section describes the document verification framework where after deployment of Common Core Applications in the WebLogic server.

### 6.2 Prerequisite

For running document verification APIs, python, tesseract, and other required libraries must be installed.

#### 6.2.1 Python Installation

Oracle Linux yum server hosts software for Oracle Linux and compatible distributions. If the latest approved distribution of python (python 3.9.5) is not available on the yum server, then follow the steps mentioned in the below location for installing python manually. Please make sure you specify the python version properly.

```
1.  sudo yum install wget
2.  sudo yum install gcc readline readline-devel
3.  sudo yum install zlib zlib-devel
4.  sudo yum install libffi-devel openssl-devel
5.  wget https://www.python.org/ftp/python/3.9.5/Python-3.9.5.tgz
6.  tar xzf Python-3.9.5.tgz
7.  cd Python-3.9.5
8.  sudo ./configure --enable-optimizations --
    prefix=/scratch/software/python39
9.  sudo make altinstall (make altinstall is used to prevent
    replacing the default python binary file /usr/bin/python.)
10. sudo update-alternatives --install /usr/bin/python3 python3
    /scratch/software/python39/bin/python3.9 (Adding symlink to
    python3)
11. sudo update-alternatives --config python3 (This will show the
    list of symlinks available. Select the required/particular
    version, in our case python3.9.5)
```

**Note:** You may encounter some problems while executing the 10th and 11th steps. If you get an error as shown below, then you should be a root user to perform these two additional steps.

**Error:** "sudo: update-alternatives: command not found"

To be a root user, you will have to execute the command mentioned below and then continue to execute 10th and 11th step,

sudo su – root

### 6.2.2 Tesseract installation

Tesseract is an optical character recognition (OCR) engine for various operating systems. The latest version must be installed on the machine to extract the text from the documents.

Refer to **Section 10.4** in **Oracle Banking Microservices Platform Foundation Installation Guide** to manually install the latest version of the tesseract.

## 6.3 Document Verification Application Installation

The app will be shipped as a byte-coded whl file. This wheel file will install all the implementation files without the dependencies. All the required dependencies are bundled together in a python.zip file which are to be extracted and installed separately (refer to Step 4 below). It's recommended to install the whl file and the dependencies in a virtual environment using "pip" so that it doesn't affect any other operations or applications running in the system. In addition to this, a Config.ini file is required for the Eureka server configuration. Please create a config file with the name Config.ini and paste the text below:

```
[DEFAULT]
eureka_server=http://whf00itb.in.oracle.com:7002/plato-discovery-service/eureka
```

You can edit the eureka server address if needed. The app name should not be changed. This is important for Role-Based Access Control. Please note that registering the app on Eureka is optional and you can skip this if not needed. But in any case, Config.ini is required. In eureka\_server variable you can simply give localhost url.

The folder structure to be followed is:

```
├── root_dir
│   ├── python
│   ├── Config.ini
│   └── venv
```

**Note:** Please make sure that you are using linux operating system and the installed Python version is 3.9.5 and that of pip is above 20.0.0. Run the following command to upgrade pip to the latest version.

```
pip install --upgrade pip
```

Once the pip is upgraded, follow the steps below to install the app and the dependencies:

1. Create python virtual environment using the following command in python3.9.5,

```
python -m venv <venv_name>
```

2. Activate the newly created virtual environment by using the following command.

```
source <venv_name>/bin/activate
```

3. Use the below command to install the application wheel package provided, e.g. `ofss_ml_document_verification_server_without_req-{Version}-py3-none-any.whl`

```
pip install <wheel_package_name>.whl
```

**Note:** Refer to OSDC file for the exact version number.

4. Now all the dependencies need to be installed. In order to do this, extract the python.zip file provided, go into the python folder (`cd python/` ) and run the following commands:

```
pip install configparser --no-index --find-links.
pip install connexion --no-index --find-links.
pip install datefinder --no-index --find-links.
pip install dateparser --no-index --find-links.
pip install Flask --no-index --find-links.
pip install importlib-metadata --no-index --find-links.
pip install numpy --no-index --find-links.
pip install opencv-python --no-index --find-links.
pip install pdf2image --no-index --find-links.
pip install Pillow --no-index --find-links.
pip install pyap --no-index --find-links.
pip install pybase64 --no-index --find-links.
pip install pytesseract --no-index --find-links.
pip install python-dateutil --no-index --find-links.
pip install scipy --no-index --find-links.
pip install six --no-index --find-links.
pip install python-magic --no-index --find-links.
(optional) pip install py-eureka-client --find-links.
```

**Installing py-eureka-client is optional as it is needed only if you want to register the app on Eureka.**

5. After installing the wheel package and the dependencies, we can run the document verification server using the below-mentioned command,

```
python -m ofss_ml_document_verification_server
```

6. Please note: This will by default run the app on port 8090 and not register the app to Eureka. To do that please use the below-mentioned command:

```
python -m ofss_ml_document_verification_server -p 5000 -r true
```

The above commands make the app run on port 5000 and registers to the Eureka server as well. These arguments may or may not be used together and the port number can be any. By default, the system has been configured to `-r false`.

Please note that once the service is registered on Eureka, it will need role-based access to send and receive requests.

For example: if the app is registered on <http://whf00itb.in.oracle.com:7002/plato-discovery-service>, then we need a bearer token from <http://whf00itb.in.oracle.com:7002/api-gateway/platojwtauth> and then call <http://whf00itb.in.oracle.com:7002/api->



[gateway/ofss\\_ml\\_document\\_verification\\_server/extractInformation](#) with the following headers:

1. Authorization - bearer <token>
2. appid- (ex- CMNCORE)
3. branchCode
4. content-Type - application/json
5. userId

Please note that the `userId` and `branchCode` will be based on the flyway script entries.

### SMS Scripts:

```
Insert into SMS_TM_SERVICE_ACTIVITY
(SERVICE_ACTIVITY_CODE,DESCRIPTION,CLASS_NAME,METHOD_NAME,APPLICATION_ID,SERVICE_TYPE,UI_ACTIVITY_CODE) values
('CMC_SA_OFSS_ML_DOCUMENT_VERIFICATION_EXTRACT_INFORMATION','Extracts meaningful details from an image','OFSS_ML_DOCUMENT_VERIFICATION_SERVER','extractInformation','CMC','Service API',null);
commit;
```

```
Insert into SMS_TM_FUNCTIONAL_ACTIVITY
(FUNCTIONAL_ACTIVITY_CODE, APPLICATION_ID, TYPE) values
('CMC_FA_OFSS_ML_DOCUMENT_VERIFICATION_EXTRACT_INFORMATION','CMC','O');
commit;
```

```
Insert into SMS_TM_FUNC_ACTIVITY_DETAIL
(ID,FUNCTIONAL_ACTIVITY_CODE,SERVICE_ACTIVITY_CODE) values
('CMC_FD_OFSS_ML_DOCUMENT_VERIFICATION_EXTRACT_INFORMATION','CMC_FA_OFSS_ML_DOCUMENT_VERIFICATION_EXTRACT_INFORMATION','CMC_SA_OFSS_ML_DOCUMENT_VERIFICATION_EXTRACT_INFORMATION');
commit;
```

### Plato Scripts:

```
Insert into PROPERTIES (ID,APPLICATION,PROFILE,LABEL,KEY,VALUE)
values (PROPERTIES_ID_SEQ.NEXTVAL,'plato-api-gateway','jdbc','jdbc','zuul.routes.ofssmldoc.path','/ofss_ml_document_verification_server/**');
Insert into PROPERTIES (ID,APPLICATION,PROFILE,LABEL,KEY,VALUE)
values (PROPERTIES_ID_SEQ.NEXTVAL,'plato-api-gateway','jdbc','jdbc','zuul.routes.ofssmldoc.serviceId','ofss_ml_document_verification_server');
Insert into PROPERTIES (ID,APPLICATION,PROFILE,LABEL,KEY,VALUE)
values (PROPERTIES_ID_SEQ.NEXTVAL,'plato-api-gateway','jdbc','jdbc','zuul.routes.ofssmldoc.stripPrefix','false');
commit;
```

This procedure makes sure that only authenticated users can use the API.

However, developers running the app have an option to disable registry on Eureka and test the API normally.

7. To run the document verification server in the background, use the command below.

```
nohup python -m ofss_ml_document_verification_server & tail -f nohup.out
```

**Note:** After the execution of the above command, all the execution logs will be added to `nohup.out` (text file). Now you may close the terminal and the app will still be running on port.

8. To terminate/kill the app, we can use the netstat command to find the process\_id using the port on which the app is running and then use the kill command with the process\_id of the app as shown below to terminate the application.

```
netstat -nltp | grep 8090
```

```
kill -9 <process_id>
```

---

## 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 **How to restart** section in ANNEXURE-1.

---

## 8. Logging Area

### 8.1 Introduction

This part of the document will talk about the logs area where after deployment of Common Core Applications in WebLogic server.

#### 8.1.1 Logging Area

Common Core Application writes logs in the below area of the server:

<WEBLOGIC\_DOMAIN\_CONFIG\_AREA>/servers/CMNCOREAPP/logs/ CMNCOREAPP.out

Let's assume a domain has been created **CommonCore\_domain** with **managed\_server** name called **CMNCOREAPP** in the following area of the server

/scratch/oracle/middleware/user\_projects/domains/**CommonCore\_domain**. Logging area for Common core would be **/scratch/oracle/middleware/user\_projects/domains/ CommonCore\_domain/servers/CMNCOREAPP/logs/CMNCOREAPP.out**

---

## 9. Known Issues - Resolutions

### 9.1 cmc-ml-indb-services

Troubleshooting deployment failure in cmc-ml-indb-services.war –

#### Deployment Error –

1. org.flywaydb.core.api.FlywayException: Validate failed: Migration checksum mismatch for migration version 101.32.5.0.0.4.101032004.1.1 -> Applied to database : 589007451 -> Resolved locally : -692687536 :org.flywaydb.core.api.FlywayException:Validate failed: Migration checksum mismatch for migration version 101.32.5.0.0.4.101032004.1.1 -> Applied to database : 589007451 -> Resolved locally : -692687536
2. org.flywaydb.core.api.FlywayException: Validate failed: Migration checksum mismatch for migration version 101.32.5.0.0.4.101032004.1.1 -> Applied to database : -692687536-> Resolved locally : 589007451:org.flywaydb.core.api.FlywayException:Validate failed: Migration checksum mismatch for migration version 101.32.5.0.0.4.101032004.1.1 -> Applied to database : -> -692687536 Resolved locally : 589007451

#### Resolution –

1. Error 1 should get resolved after applying the war from latest patchset.
2. Error 2 will result in case there have been manual modifications made in table “flyway\_schema\_history” i.e. checksum of script/file  
V101\_32\_5.0.0\_4\_101032004\_1\_1\_\_CMC\_TM\_ML\_ALGO\_REPO.sql has been manually changed/updated to -692687536 in flyway table. If so please delete all the entries in “flyway\_schema\_history” for script  
V101\_32\_5.0.0\_4\_101032004\_1\_1\_\_CMC\_TM\_ML\_ALGO\_REPO.sql then redeploy/re-run the latest cmc-ml-indb-services.war.

### 9.2 cmc-branch-service

Troubleshooting steps for failed cmc-branch-service-6.0.0:

For branch service the following steps will need to be executed for deploying the service over March patchset:

1. Run the following scripts on the SMS schema:  
delete from "flyway\_schema\_history" where "version" in ('101.4.5.11.0.1.00051001006.10.1');  
  
delete from SMS\_TM\_FUNC\_ACTIVITY\_DETAIL where ID in ('CMC\_FA\_BRANCH\_WORKHR\_GETALL','CMC\_BRANCH\_WORKHR\_GETID','CMC\_BRANCH\_WORKHR\_SAVE','CMC\_FA\_BRANCH\_TIME\_GETALL','CMC\_BRANCH\_WORKHR\_AUTHQRY','CMC\_BRANCH\_WORKHR\_AUTH','CMC\_BRANCH\_WORKHR\_CLOSERECRD','CMC\_BRANCH\_WORKHR\_DELETE','CMC\_BRANCH\_WORKHR\_GETHISTORY','CMC\_BRANCH\_WORKHR\_MODRECRD','CMC\_BRANCH\_WORKHR\_ROPNRECRD');  
  
commit;
2. Start the cmc-branch-service-6.0.0 application in Weblogic.



## **Common Core Services Installation Guide**

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