

Cloud Migration Advisor – OEM Exporter Script

How to collect source database metadata with
Cloud Migration Advisor & OEM

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Purpose statement

This document explains how to collect database metadata information about the databases to be migrated using Cloud Migration Advisor and the Oracle Enterprise Manager (OEM) repository “emcli” metadata. Cloud Migration Advisor will analyse the metadata collected by the script and provide recommendations about migration methods and targets.

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Cloud Migration Advisor

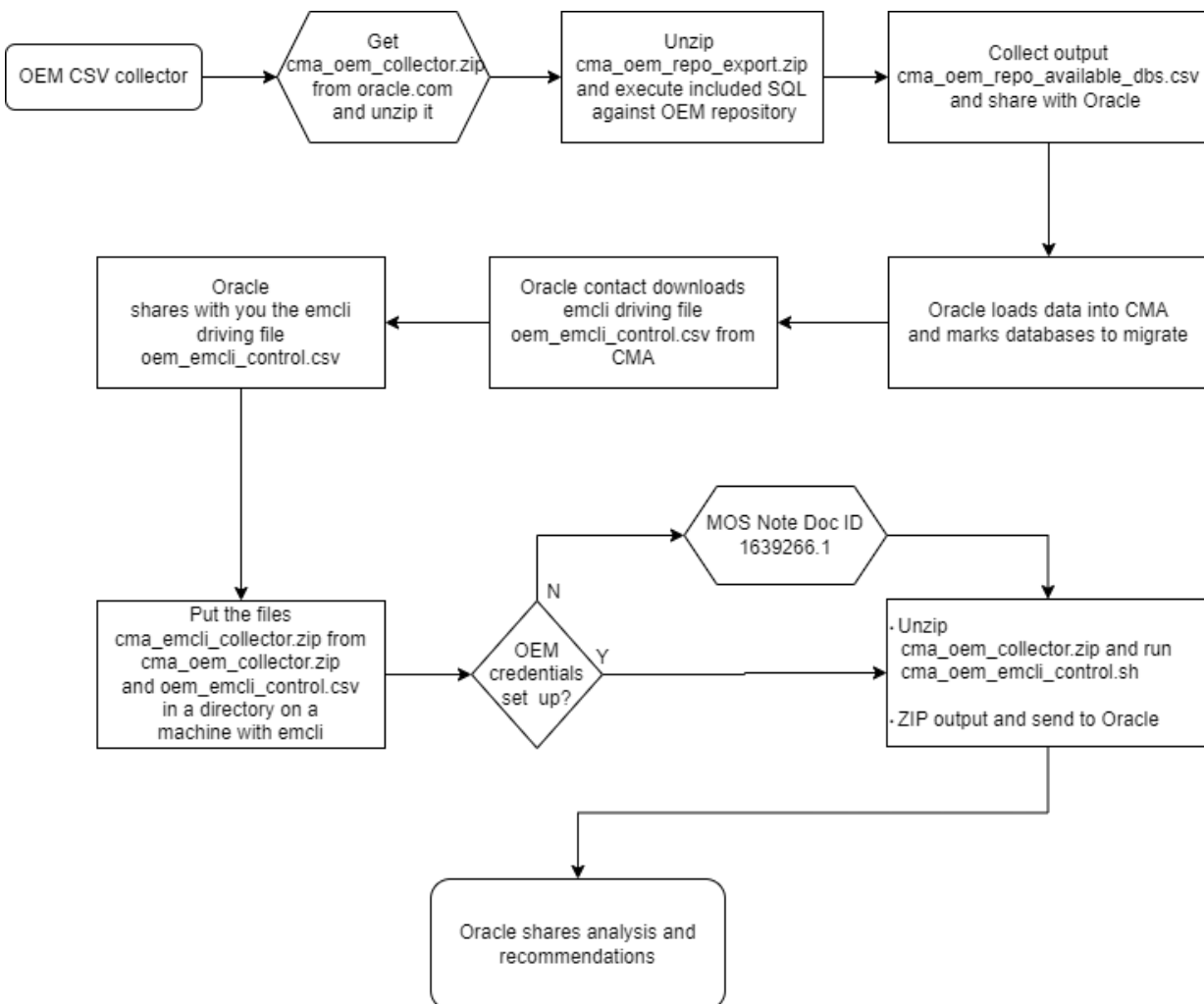
The Cloud Migration Advisor is a tool used by Oracle to analyse your database metadata and provide recommendations about migration methods and targets for one or more databases.

Your source database metadata can be collected in various ways. This document describes how to collect metadata using an Oracle Enterprise Manager script that stores it in a CSV file.

The process to use the OEM repository information comprises three steps:

- **Download the zip file** and find additional information about CMA at: www.oracle.com/goto/upgrade
- **Select migration candidates**
Generate an editable CSV file with basic database information and provide it to your Oracle contact.
- **Collect migration details**
Cloud Migration Advisor generates a metadata collection script that you will run using the OEM emcli tool on your databases. Share the CSV output with your Oracle contact.

Process flow



Select migration candidates

Get the OEM collector script `cma_oem_collector.zip`.

Transfer `cma_oem_collector.zip` to a host that has SQL*Plus installed and can connect to your Oracle Enterprise Manager repository.

Unzip `cma_oem_collector.zip`

It contains 2 ZIP files – for the repository collector unzip `cma_oem_repo_export.zip` It contains a SQL file. Connect to the OEM repository database and execute the SQL file. It will collect information about all databases in your OEM repository. The output is a CSV file that can be edited to remove a particular database if needed.

Provide this CSV file to your Oracle contact.

Step-by-step instructions

1. **Download** the `cma_oem_collector.zip` file from www.oracle.com/goto/upgrade
2. **Unzip** the `cma_oem_collector.zip` file into your working directory. It contains two ZIP files. For the first step unzip `cma_oem_repo_export.zip`. It includes a SQL script named `cma_oem_repo_export.sql`

3. **Connect to your OEM repository** database with SQL*Plus and execute this script, for example:

```
sqlplus sysman/<OEM password>@<OEM repo>:<listener port of the OEM
repository database listener>/<service name of your OEM repository
database> @cma_oem_repo_export.sql
```

4. **Generate an CSV output file** `cma_oem_repo_available_dbs.csv` in your working directory that lists all available databases in the OEM repository.

```
[ORACLE@LOCALHOST CMA/COLLECT_REPOSITORY> SQLPLUS SYSMAN@LOCALHOST/EMREP
@cma_oem_repo_export.sql

SQL*PLUS: RELEASE 19.0.0.0.0 - PRODUCTION ON FRI FEB 10 09:11:04 2023
VERSION 19.3.0.0.0

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CONNECTED TO:
ORACLE DATABASE 19C ENTERPRISE EDITION RELEASE 19.0.0.0.0 - PRODUCTION
VERSION 19.3.0.0.0

HOST_NAME,TARGET_NAME,TARGET_TYPE,TARGET_GUID,DATABASE_NAME,GLOBAL_NAME,BANNER,INSTANCE_N
AME,RELEASE,EDITION,DBVERSION
HOL3T.CMAAPP.CMAVCN.ORACLEVCN.COM,CDB1.CMAAPP.CMAVCN.ORACLEVCN.COM,ORACLE_DATABASE,FDE759
B85FEEB951E7A3F8783E782230,CDB1,CDB1.CMAAPP.CMAVCN.ORACLEVCN.COM,ORACLE DATABASE 21C
ENTERPRISE EDITION RELEASE 21.0.0.0.0 - PRODUCTION,CDB1,ORACLE DATABASE 21C,ENTERPRISE
EDITION,21.0.0.0.0
...
HOL1S.CMAAPP.CMAVCN.ORACLEVCN.COM,EDU12,ORACLE_DATABASE,EE4971CCE5DE6924E053100000AB958,
EDU12,EDU12,ORACLE DATABASE 12C ENTERPRISE EDITION RELEASE 12.1.0.2.0 - 64BIT
PRODUCTION,EDU12,ORACLE DATABASE 12C,ENTERPRISE EDITION,12.1.0.2.0
HOL2S.CMAAPP.CMAVCN.ORACLEVCN.COM,EDU121,ORACLE_DATABASE,A9E7B7730E53482557B0A62B98DC7F75
,EDU12,EDU12,ORACLE DATABASE 12C ENTERPRISE EDITION RELEASE 12.1.0.2.0 - 64BIT
PRODUCTION,EDU12,ORACLE DATABASE 12C,ENTERPRISE EDITION,12.1.0.2.0
...
[ORACLE@LOCALHOST CMA/COLLECT_REPOSITORY>
```

5. **Optionally, edit this CSV file** and remove databases that aren't migration candidates before sharing this file with Oracle.
6. **Share the output file** `cma_oem_repo_available_dbs.csv` **with Oracle** by email, your FTP site or `sftp.oracle.com` (please see MOS note External Access to Oracle SFTP (Doc ID 2813938.1)). The Oracle contact uses this CSV output file and the Cloud Migration Advisor to **generate an emcli driving file called "oem_emcli_control.csv"**

Collect migration details

Use the `oem_emcli_control.csv` script with OEM `emcli` to collect database metadata from your migration candidates.

Step-by-step instructions

1. Obtain the `oem_emcli_control.csv` containing the driving script from your Oracle contact.
2. Store `oem_emcli_control.csv` and unzip from `cma_oem_collector.zip` now `cma_emcli_collector.zip` into the same working directory on the host that has `emcli` installed. Please ensure those files are in the same directory or `emcli` will not execute properly.
3. Set and export the `EMCLI_HOME` environment variable to the `emcli` directory – for example:

```
export EMCLI_HOME=/u01/app/oracle/emcli/bin
```
4. Run `emcli` using the driver script and the CSV file containing the list of databases from which to collect, for example:

```
sh ./cma_oem_emcli_control.sh <OMS username> <OEM SQL Credentials>
```

where

<OMS username>: is the owner of the OEM repository, e.g. `sysman`

<OEM SQL Credentials>: Valid OEM SQL credentials usually are `DBCredsNormal` or `DBCredsSYSDBA`. If you require assistance setting up these credentials, please consult:

[MOS Note 1639266.1: Emcli Execute sql Fails With Error 'Preferred Credentials Do Not Exist For Some Targets' in EM](#)

```
[ORACLE@LOCALHOST CMA/EMCLI_COLLECTOR> EXPORT EMCLI_HOME=/ORACLE/SOFTWARE/APP/MIDDLEWARE/BIN
[ORACLE@LOCALHOST CMA/EMCLI_COLLECTOR> SH ./OEM_EMCLI_CONTROL.SH SYSMAN DBCREDSNORMAL
PASSWORD FOR USER SYSMAN:
WORKING ON: EDU12:ORACLE_DATABASE:EE4971CCE5DE6924E0531000000AB958 USING DBCREDSNORMAL
CREDENTIALS
SUCCESSFULLY LOGGED IN
GATHERING SYSDATE
WRITING OUTPUT TO FILE: ./CMA_EE4971CCE5DE6924E0531000000AB958_20230210_0913.OUT
RUNNING CMA COLLECTOR SCRIPT
WORKING ON: EDU121:ORACLE_DATABASE:A9E7B7730E53482557B0A62B98DC7F75 USING DBCREDSNORMAL
CREDENTIALS
SUCCESSFULLY LOGGED IN
GATHERING SYSDATE
WRITING OUTPUT TO FILE: ./CMA_A9E7B7730E53482557B0A62B98DC7F75_20230210_0914.OUT
RUNNING CMA COLLECTOR SCRIPT
...
```

5. `emcli` generates a separate output file for each database containing the metadata needed by Cloud Migration Advisor to give migration advice for that database. Collecting the metadata with `emcli` may take several minutes depending on the number of databases being processed.

The files will be named: `cma_<ID>_<DATE>.out`

6. Please zip the `*.out` files together and share them with your Oracle contact
7. The Oracle contact analyses the metadata with the Cloud Migration Advisor, generates recommendations about potential migration targets and methods, and shares them with you.

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