



ORACLE



# Migration to Oracle Autonomous Database

## Part 1: Planning

Oracle

**DBAs**

run the world





## MIKE DIETRICH

Vice President  
Database Upgrade, Migrations & Patching



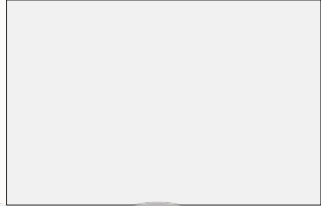
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# Download the Slides

<https://MikeDietrichDE.com/slides>



## Virtual Classroom Seminars

### Episode 16

(replaces Episode 1 from Feb 2021)

[Oracle Database Release and Patching Strategy for 19c and 23c](#)

115 minutes – May 10, 2023



### Episode 17

[From SR to Patch – Insights into the Oracle Database Development process](#)

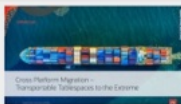
55 minutes – June 22, 2023



### Episode 18

[Cross Platform Migration – Transportable Tablespaces to the Extreme](#)

145 min – February 22, 2024



### Episode 19

[Move to Oracle Database 23ai – Everything you need to know about Multitenant PART 1](#)

145 min – May 16, 2024



### Episode 20

[Move to Oracle Database 23ai – Everything you need to know about Multitenant PART 2](#)

100 min – June 28, 2024



## Recorded Web Seminars

<https://MikeDietrichDE.com/videos>

More than 35 hours of technical content,  
on-demand, anytime, anywhere





# Why are ADB migrations different?

# KEYNOTE PRESENTATION

Oracle OpenWorld San Francisco 2017



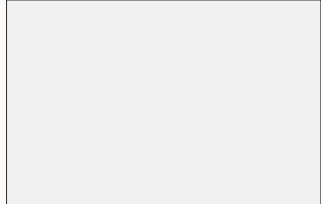


*A cloud database that automates  
routine management tasks*

---

**Oracle Autonomous Database**

# Let's Do This Together



## 1 PLANNING



## 2 PREPARING

May 15, 15:00 CET  
[Sign up](#)



## 3 MIGRATING

June 5, 15:00 CET  
[Sign up](#)



## 4 OPERATING

July 10, 15:00 CET  
[Sign up](#)

# Autonomous Database – Where?

## Public cloud

Autonomous Database

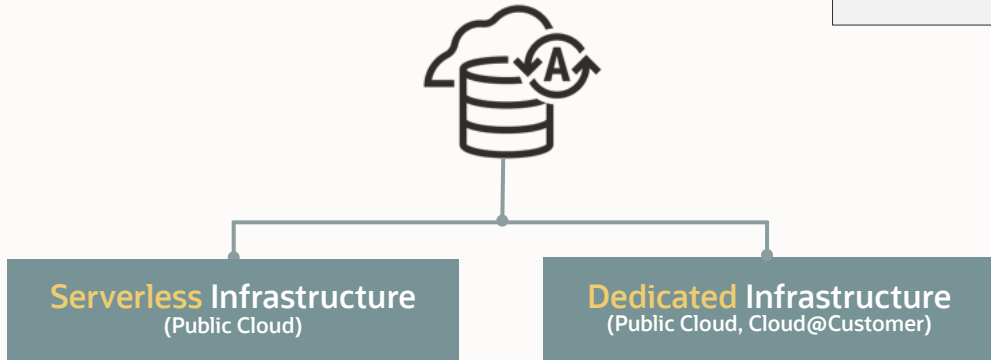


## Cloud@Customer

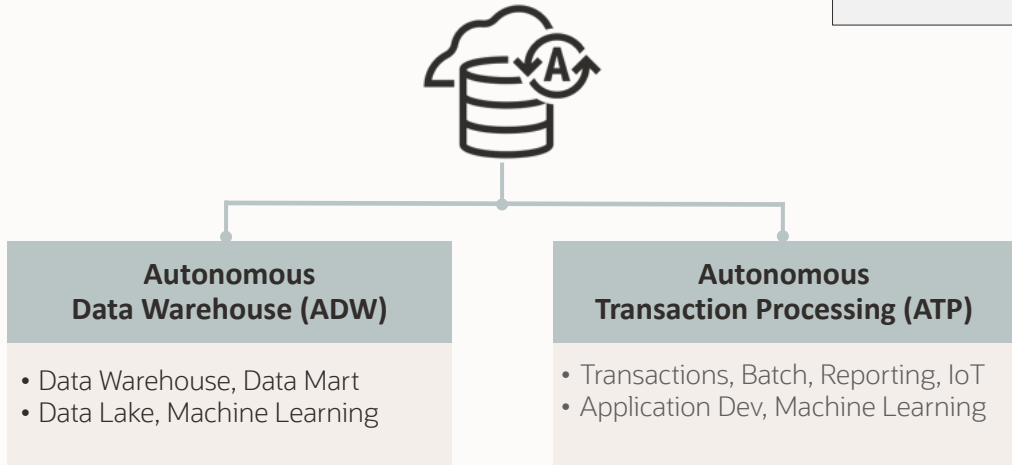
Autonomous Database  
in a VM environment



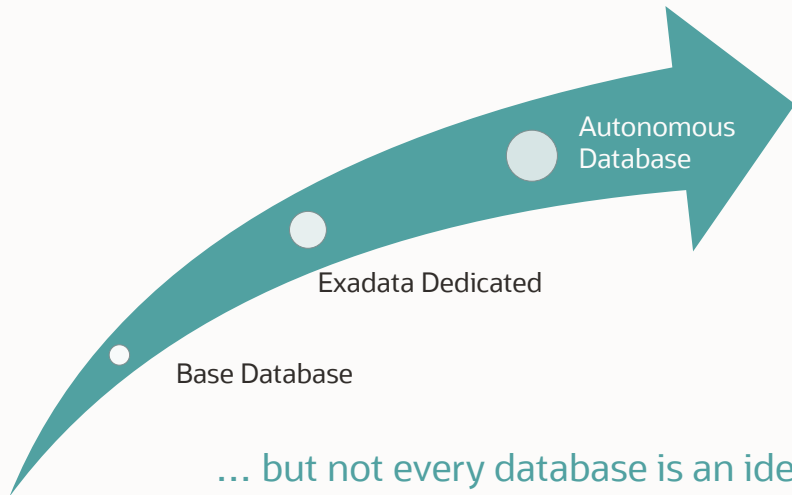
# Two Deployment Choices



# Workload Choices



# Modernization and Migration



... but not every database is an ideal candidate for ADB



Migration to Autonomous Database is always a **logical** migration

- Move the **data**, not the database
- Spoiler: There may be *another* option soon



# Tools out-of-the-box



## SQL Developer Web

Web-based Function rich,  
low code development env  
No client software needed



## Oracle REST Data Services

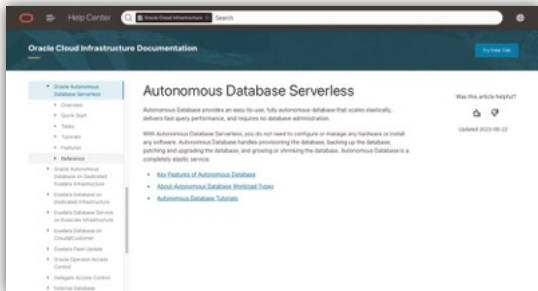
Ability to REST enable a  
schema and autogenerate  
REST endpoints for tables,  
views, and procedures



## APEX

Execute SQL and PL/SQL  
Build Data Models,  
generate DDL statements  
Monitor and manage the DB

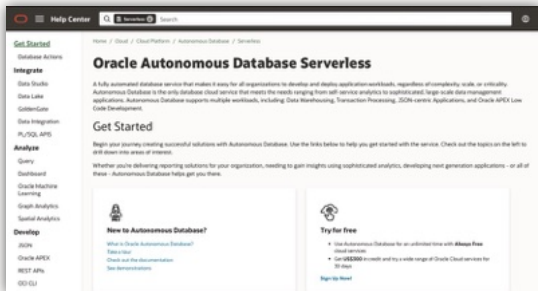
# Essentials



Outside the database,  
check [OCI Documentation](#)

Example: Deploy, start, stop, scale

# Essentials



Inside the database,  
check [Database Documentation](#)

Example: Schema, capabilities, connecting



# Planning



*How do we migrate our 5,000 databases  
to Oracle Autonomous Database?*

# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor

# Getting an Overview

1

Estate Explorer



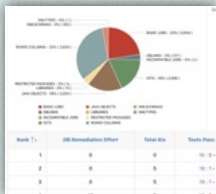
2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor





# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor



Analyze 1000's of databases in  
just a few hours



Provide a detailed TCO to  
compare on-premises and cloud



View innovative visualizations  
and detailed reports



Optimize your Autonomous  
Databases using Elastic Pools

# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor



# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor

**▼ Premigration Advisor Check Details List**

**Source Database**

Expand All Close All

**▼ Action Required ( 2 checks )**

**▼ OGG Minimal Supplemental Logging Not Enabled**

**Description:** Minimal supplemental logging is not enabled on the Database.

**Action:** Make sure minimal supplemental logging data is enabled by using executing the SQL command ALTER DATABASE ADD SUPPLEMENTAL LOG DATA; This command can be done while the database is online and no restart is required.

More Details

> Relevant Objects ( 1 relevant object )

> OGG Replication Not Enabled

> **Review Required ( 1 check )**

# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor



# Getting an Overview

1

Estate Explorer



2

Cloud Premigration  
Advisor Tool



3

Cloud Migration  
Advisor

Oracle Cloud Migration Advisor

mike.dietrich@oracle.com

Home

Guided Mode

Create Project

My Available Projects

Download Collectors

File Exchange with Custom...

REST Services

Help

Oracle Cloud Migration Advisor

Welcome to the Cloud Migration Advisor (CMA)

Oracle Cloud Migration Advisor brings you the expert technical knowledge of Oracle Database upgrade and migration development teams, combined with more than a century of combined real-world experience with customer migrations, to give your customer the **best possible migration advice**.

With **Guided Mode**, CMA will quickly tell you

- Which databases can be **most easily migrated** to Oracle Autonomous Database, or
- What is the **best migration method** to move chosen databases to a desired Oracle Cloud platform?

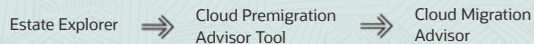
For more options, you can

- Create and configure migration scenarios using **Create Project**, or
- Access your existing migration projects and scenarios with **My Available Projects**.

Now it is time to start - let's move to the Oracle Cloud!

**Guided Mode** **My Available Projects** **Create New Project**

# Getting an Overview



- OCI Database Migration Service
- Zero Downtime Migration
- Autonomous Migration Automation
- Data Pump
- GoldenGate

↑  
*We cover this in part 3*

# Additional Resources

[Database Upgrade and Migrations](#)

[Estate Explorer](#)

[Cloud Premigration Advisor Tool \(CPAT\) Analyzes Databases for Suitability of Cloud Migration \(Doc ID 2758371.1\)](#)

[Blog post series: Cloud Premigration Advisor Tool](#)

[Cloud Migration Advisor](#)

[OCI Database Migration](#)

[Zero Downtime Migration](#)



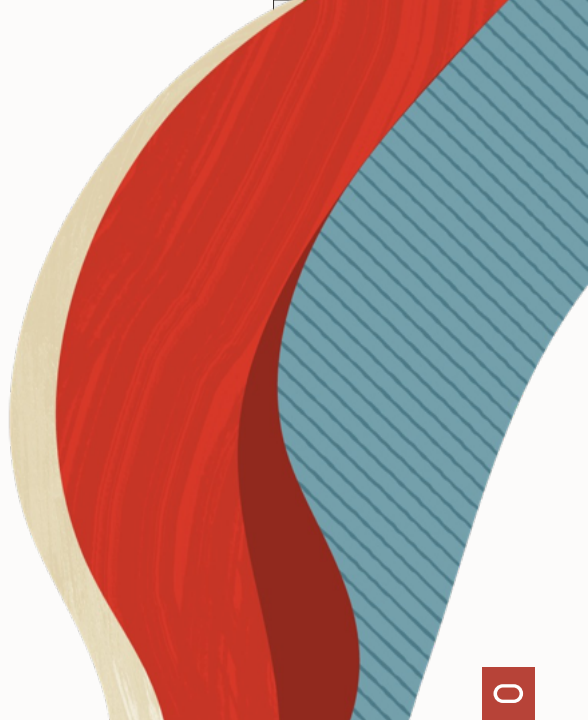


# Estate Explorer

# Demo

- Estate Explorer

Watch on [YouTube](#)





# Cloud Premigration Advisor Tool



## Evaluate an Oracle Database for compatibility with Autonomous Database

- Use Cloud Premigration Advisor Tool (CPAT)



Autonomous Database is not *just*  
another Oracle Database

# Overview



Connects



Checks



Reports



Fixes

(optional)

# Demo

- Install CPAT
- Run CPAT
- View report

Watch on [YouTube](#)

# Download CPAT from MOS Note: 2758371.1



## Patch 32613591: Cloud Premigration Advisor Tool (CPAT) for version 11.2.0.4 and Higher

**Last Updated** 11-Feb-2025 17:31 (12 days ago)

**Product** Oracle Database Upgrade Assistant

**Release** Oracle 11.2.0.4.8

**Platform** Generic Platform

**Size** 8.6 MB

**Download Access** Software

**Classification** General

**Patch Tag**

**Release** Oracle 11.2.0.4.8

**Platform** Generic Platform

**Language** American English

### Bugs Resolved by This Patch

List of bugs fixed is not available. Consult the Readme.

### View Related Knowledge to this Patch

[Read Me](#)

[Download](#)



[Add to Plan](#)



[Analyze with OPatch...](#)

All-time Downloads **50**

[View Trends](#)



[Discuss this patch in the community](#)



```
# Connection string to database  
# Use JDBC standard
```

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service>
```

# Generating Connection String

| Connection Description       | Connection String  | Notes  |
|------------------------------|--|--|
| Thin                         | <code>jdbc:oracle:thin:@&lt;host&gt;:&lt;port&gt;:&lt;sid&gt;</code>                               |  |
| Thin with PDB Service        | <code>jdbc:oracle:thin:@&lt;host&gt;:&lt;port&gt;/&lt;pdb-service-name&gt;</code>                  |  |
| Thin with AWS RDS            | <code>jdbc:oracle:thin:@database-1.xxx.us-east-1.rds.amazonaws.com:&lt;port&gt;:&lt;sid&gt;</code> | Consult the AWS RDS documentation for instructions on finding your database's endpoint and port details. See <a href="#">this blog</a> for an example. |
| OS Authentication            | <code>jdbc:oracle:oci:@</code>   | Command line must also include "--sysdba"  |
| OS Authentication with PDB   | <code>jdbc:oracle:oci:@</code>   | Command line must also include "--sysdba" and "--pdbname <pdb-name>"   |
| Wallet based with Java 8 JRE | <code>jdbc:oracle:thin:@&lt;service-name&gt;?TNS_ADMIN=&lt;path-to-wallet&gt;</code>               | This example is derived from <a href="#">Oracle Autonomous documentation</a>   |

# Generating Connection String

CPAT is a **Java-based tool** that uses **JDBC**

- Understanding JDBC connection strings is essential.

```
./premigration.sh --connectstring jdbc:oracle:oci:@ --targetcloud ATPD -sysdba
```

## JDBC Connection String Structure:

- **Connection strings are URLs** and always start with **jdbc:**.
- CPAT **only supports Oracle databases**, so the next segment is always **oracle:**.
- The third segment specifies the **JDBC driver type**:
  - **thin:** – Uses the Thin driver (lightweight, pure Java, requires hostname/port/service name).
  - **oci:** – Uses the Thick driver (Oracle Call Interface), which requires Oracle client libraries.
    - Note: "**oci**" here stands for **Oracle Call Interface**, not **Oracle Cloud Infrastructure**.
- The connection string **always includes an @**, but what follows depends on the specific use case.
- The choice between **Thin or Thick (OCI) drivers** depends on the connection requirements.

```
# User to run the check  
# Omit if you use OS authentication
```

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK
```

# Authentication Methods

## How does CPAT connect to the source (or target) database? Which authentication methods are supported?

- CPAT connects to your database using JDBC.
- Oracle JDBC connect strings are URL based and always begin with jdbc:oracle:thin:@ or jdbc:oracle:oci:@
- Example CPAT connect strings are given in the [CPAT MOS Note](#) and [Database Documentation](#)
- You can use whatever JDBC connection string works best for your situation (connectivity/security). Thin or Thick (OCI).
- Use whatever authentication/security you'd like:simple username/password
  - wallets
  - Kerberos
  - anything supported by OJDBC
- If you want to use OS Authentication then you need to use the thick driver and have an ORACLE\_HOME with the required binaries. ZDM typically uses OS Authentication

# If connectstring is to a CDB, CPAT analyzes  
# all PDBs, unless you specify a list of PDBs

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK \  
  --pdbname PDB_COMPLEX
```

```
# Which schemas to migrate
# If you don't specify any, it defaults to
# which is not recommended
./premigration.sh \
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \
  --username CPAT_CHECK \
  --pdbname PDB_COMPLEX \
  --schemas appuser,reportuser
```



# Where to store the reports and logs  
# Defaults to current directory

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK \  
  --pdbname PDB_COMPLEX \  
  --schemas appuser,reportuser \  
  --outdir /home/oracle/cpat-db
```



```
# Which target do you plan to migrate to
# default, atps, atpd, adws, adwd
```

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK \  
  --pdbname PDB_COMPLEX \  
  --schemas appuser,reportuser \  
  --outdir /home/oracle/cpat-db \  
  --targetcloud atps
```

```
# If you decided on a method already, specify it
# datapump, datapump_dblink, goldengate
```

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK \  
  --pdbname PDB_COMPLEX \  
  --schemas appuser,reportuser \  
  --outdir /home/oracle/cpat-db \  
  --targetcloud atps \  
  --migrationmethod goldengate
```

# One or more report formats separated by spaces  
# json html text

```
./premigration.sh \  
  --connectstring jdbc:oracle:thin:@<host>:<port>/<service> \  
  --username CPAT_CHECK \  
  --pdbname PDB_COMPLEX \  
  --schemas appuser,reportuser \  
  --outdir /home/oracle/cpat-db \  
  --targetcloud atps \  
  --migrationmethod goldengate \  
  --reportformat html
```

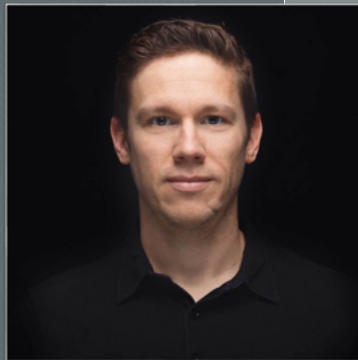


That's a lot of options.  
Help me out, please!

# CPAT COMPOSER

<https://macsdata.com/oracle/cpat-composer>

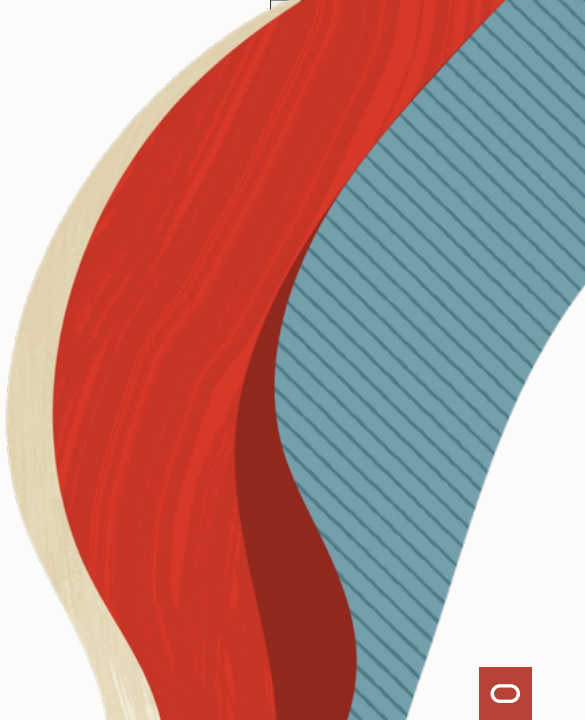
- Free to use
- Available online
- Not an official Oracle tool
- Created by Marcus Doeringer  
Our migration superstar



# Demo

- CPAT Composer

Watch on [YouTube](#)



# CPAT integration



Generate CPAT report

## ZERO DOWNTIME MIGRATION

Run as part of its migration assessment

## OCI DATABASE MIGRATION SERVICE

Run as part of its migration assessment

## ENTERPRISE MANAGER MIGRATION WORKBENCH

Run as part of its migration assessment

## SQL DEVELOPER / SQLcl

Through the MIGRATEADVISOR command



# Interpreting the CPAT Report

---



--CPAT outputs in a number of ways

```
./premigration.sh ... --reportformat json,text,html
```

# Cloud Premigration Advisor Tool (CPAT) Report

CPAT Version: 25.2.1-1  
Version Date: Feb 17, 2025  
Days Since Last CPAT Update: 38 days

## Table of Contents

- [Premigration Advisor Report Summary](#)
- [Report Details](#)
- [Report Analysis Notes](#)
- [Source Database Details](#)
- [Source Database Version Information](#)
- [Source Database Patch Information](#)
- [Source Database Redo Information](#)
- [Source Database Supplemental Information](#)
- [Source Database Schema Summary Information](#)
- [Premigration Advisor Check Details List](#)
- [Report Legend](#)

Expand All

Close All

▼ Premigration Advisor Report Summary

| Report Result               | Action Required           |
|-----------------------------|---------------------------|
| Number of schemas analyzed: | 4                         |
| List of schemas analyzed:   | [ORCLUSER, CO, HR, MYAPP] |

- [Premigration Advisor Check Details List](#)
- [Report Legend](#)

[Expand All](#)[Close All](#)

## ▼ Premigration Advisor Report Summary

### Report Result

### Action Required

Number of schemas analyzed:

4

List of schemas analyzed:

[PDBUSER, CO, HR, MYAPP]

## ▼ Report Results Overview

| Source Database  |    | Target Database  |    | Migration Method |   | Additional Tasks |    |
|------------------|----|------------------|----|------------------|---|------------------|----|
| Action Required  | 2  | Action Required  | 10 | Action Required  | 1 | Action Required  | 0  |
| Review Required  | 1  | Review Required  | 7  | Review Required  | 2 | Review Required  | 0  |
| Review Suggested | 2  | Review Suggested | 4  | Review Suggested | 1 | Review Suggested | 4  |
| Passed           | 16 | Passed           | 17 | Passed           | 4 | Passed           | 16 |

[Return to Table of Contents](#)

## ▼ Report Details

## ▼ Report Details

CPAT  
Application  
Version:

25.2.1-1

Report  
Generated On:

Sat Feb 22 20:59:44 UTC 2025

Analysis  
Property File:

premigration\_advisor\_analysis.properties

Analysis Mode:

FULL

Target Cloud  
Type:

ALL

Migration  
Method(s):

[DATAPUMP, DATAPUMP\_DBLINK, GOLDENGATE]

Command Line  
Options:

--connectstring jdbc:oracle:thin:@dbssystemaz:1521/pdb\_complex.sub07021512520.upgradeteam.oraclevcn.com --targetcloud ALL --username SYS --sysdba  
--analysisprops premigration\_advisor\_analysis.properties --outdir /home/oracle/cpat\_22\_feb\_2025 --logginglevel FINE --migrationmethod ALL --reportformat  
JSON HTML TEXT --resultlevel R0 --zip --gatherdetails ALL

More Details

## > Report Analysis Notes

[More Details](#)

[Return to Table of Contents](#)

› **Report Analysis Notes**

› **Source Database Details**

› **Source Database Version Information**

› **Source Database Patch Information**

› **Source Database Redo Information**

› **Source Database Supplemental Information**

› **Source Database Schema Summary Information**

▼ **Premigration Advisor Check Details List**

**Source Database**

▼ **Source Database Details**

|   |  |
|---|--|
| Source Cloud Vendor:  | Oracle Cloud Infrastructure (Database) |
| Source Database Host Name:  | dbsystemaz                             |
| Source Oracle SID:  | ORCL                                   |
| Source Database Created Date:   | Fri Jan 24 22:23:51 UTC 2025           |
| Source Database DBID:   | 1719058167                             |
| Source Database Unique Name:  | ORCL_5tr_iad                           |
| Source Instance Name:   | ORCL                                   |
| Source Database Name:   | ORCL                                   |
| Source Database Username:   | SYS                                    |
| Source Database Port String:  | x86_64/Linux 2.4.xx                    |
| Source Database Platform ID:  | 13                                     |
| Source Database Container Name:   | PDB_COMPLEX                            |
| Source DB Block Size in KB:   | 8                                      |
| Source DB Combined Size of DATA, TEMP, LOG, and CONTROL File Usage in GB: | 5.044                                  |
| Source DB Size of DATA File Usage in GB:                                  | 1.856                                  |
| Source DB Size of TEMP File Usage in GB:                                  | 0.17                                   |

[More Details](#)

[Return to Table of Contents](#)

› **Report Analysis Notes**

› **Source Database Details**

› **Source Database Version Information**

› **Source Database Patch Information**

› **Source Database Redo Information**

› **Source Database Supplemental Information**

› **Source Database Schema Summary Information**

▼ **Premigration Advisor Check Details List**

**Source Database**

✓ **Action Required ( 2 checks )**

✓ **OGG Minimal Supplemental Logging Not Enabled**

**Description:** Minimal supplemental logging is not enabled on the Database.

**Action:** Make sure minimal supplemental logging data is enabled by using executing the SQL command ALTER DATABASE ADD SUPPLEMENTAL LOG DATA; This command can be done while the database is online and no restart is required.

More Details

> **Relevant Objects ( 1 relevant object )**

✓ **OGG Replication Not Enabled**

**Description:** ENABLE\_GOLDENGATE\_REPLICATION init.ora parameter is not set.

**Action:** Make sure ENABLE\_GOLDENGATE\_REPLICATION is set to TRUE by using executing the SQL command: ALTER SYSTEM SET ENABLE\_GOLDENGATE\_REPLICATION=TRUE SCOPE=BOTH; This command can be done while the database is online and no restart is required.

More Details

> **Relevant Objects ( 1 relevant object )**





The documentation has additional information on each CPAT check

[Utilities Guide, Oracle Database 23ai](#)

# CPAT Checks

## ▼ Premigration Advisor Check Details List

### Source Database

Expand All

Close All

### ▼ Action Required ( 2 checks )

#### ▼ OGG Minimal Supplemental Logging Not Enabled

**Description:** Minimal supplemental logging is not enabled on the Database.

**Action:** Make sure minimal supplemental logging data is enabled by using executing the SQL command ALTER DATABASE ADD SUPPLEMENTAL LOG DATA; This command can be done while the database is online and no restart is required.

Hide Details

**Name:** gg\_supplemental\_log\_data\_min

**Migration Methods:** GOLDENGATE

**Failure Impact:** Not having minimal supplemental log data enabled will result in GoldenGate not functioning.

**Scope:** UNIVERSAL

**Executed SQL:** SELECT SUPPLEMENTAL\_LOG\_DATA\_MIN AS SUPP\_LOG\_DATA\_MIN\_ENABLED FROM V\$DATABASE WHERE SUPPLEMENTAL\_LOG\_DATA\_MIN = 'NO'

#### > Relevant Objects ( 1 relevant object )

# CPAT Checks



## 19.10.9 gg\_supplemental\_log\_data\_min

The Premigration Advisor Tool check `gg_supplemental_log_data_min` indicates that minimal supplemental logging is not enabled on the source database.

### Result Criticality

Action required

### Has Fixup

Yes

### Target Cloud

- ADWD Autonomous Data Warehouse Dedicated
- ADWS Autonomous Data Warehouse Shared
- ATPD Autonomous Transaction Processing Dedicated
- ATPS Autonomous Transaction Processing Shared
- Default (an Oracle Database instance that is not Oracle Autonomous Database)

### Scope

UNIVERSAL

### Description

This check applies to schemas for Oracle GoldenGate migrations. Minimal supplemental logging, a database-level option, is required for an Oracle source database when using Oracle GoldenGate. This configuration adds row chaining information, if any exists, to the redo log for update operations.



--Flood control in the CPAT report  
--Prevent one check from reporting huge amount of affected objects

```
./premigration.sh ... --maxrelevantobjects 100
```

```
./premigration.sh ... --maxtextdatarows 100
```



--Exclude checks that are "PASSED"  
--Produces a "cleaner" report that's easier to read

./premigration.sh ... --resultlevel R1



How do I fix the findings?



--Generates fixup scripts whenever possible  
--Stores the scripts on disk for review

`./premigration.sh ... --genfixups`

```
$ cat enable_javavm.sql
```

```
-- Check Name: has_java_source  
-- Check Result: Action Required
```

```
--
```

```
-- Action:
```

```
--     Enable the JAVAVM feature on the target system by executing this SQL  
--     and then restart your instance  
--
```

```
BEGIN
```

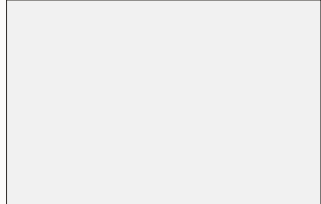
```
DBMS_CLOUD_ADMIN.ENABLE_FEATURE( feature_name => 'JAVAVM' );
```

```
END;
```

```
/
```



# Clearing the Findings



1 PLANNING



2 PREPARING



3 MIGRATING




4 OPERATING

May 15, 15:00 CET  
[Sign up](#)

# Best Practices

---



```
--Always use the latest version of CPAT  
--Verify that you are using the latest version  
--Download latest version from Doc ID 2758371.1
```

```
./premigration.sh --updatecheck
```

There is no newer version available of the Cloud Premigration Advisor Tool.  
The version you are running, 24.11.1, is the latest available version.

- Use a parameter file with all your settings
- Avoid issue with long command and enclosing/escaping strings

```
./premigration.sh --parfile sales.cfg
```



Get more accurate recommendation by  
generating a target properties files

# Target Properties File

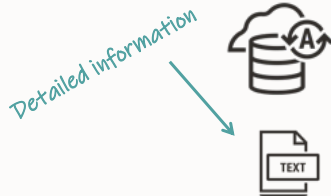


We don't have all  
the details



```
./premigration.sh ... --targetcloud ATPD
```

# Target Properties File



```
./premigration.sh ... --analysisprops <file>
```

```
./premigration.sh ... --gettargetprops
```


# Additional Information

---





You can run CPAT on a live database.  
It is completely non-intrusive



```
grant select any dictionary to cpat_check identified by ... ;  
grant create session to cpat_check;
```

```
--Only if character set conversions are needed  
--grant select on SYSTEM.DUM$COLUMNS to cpat_check;  
--grant select on SYSTEM.DUM$DATABASE to cpat_check;
```



## CPAT does not connect to the Internet

- Except for update check



But we're on Oracle Database 10.2.0.1

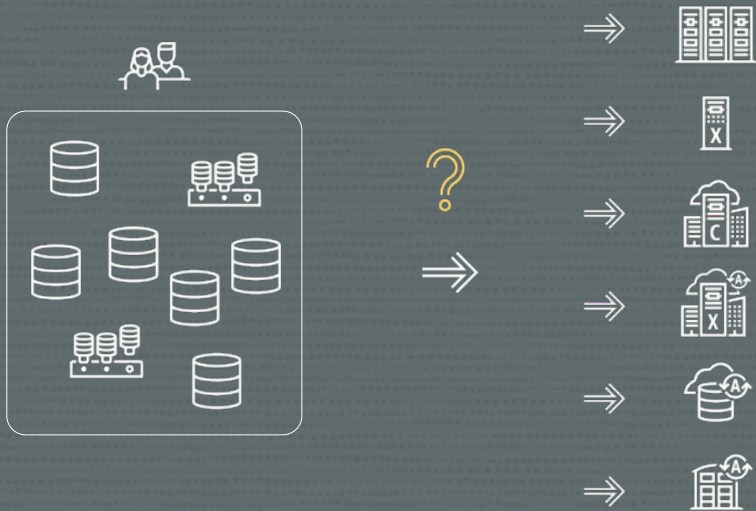
- CPAT fully supports Oracle Database 11.2.0.4 and later
- Supports earlier releases on a *best-effort* basis

# Additional Resources

- [Cloud Premigration Advisor Tool \(CPAT\) Analyzes Databases for Suitability of Cloud Migration \(Doc ID 2758371.1\)](#)
- [Blog post series: Cloud Premigration Advisor Tool](#)
- [Utilities Guide, Oracle Database 23ai](#)



# Cloud Migration Advisor



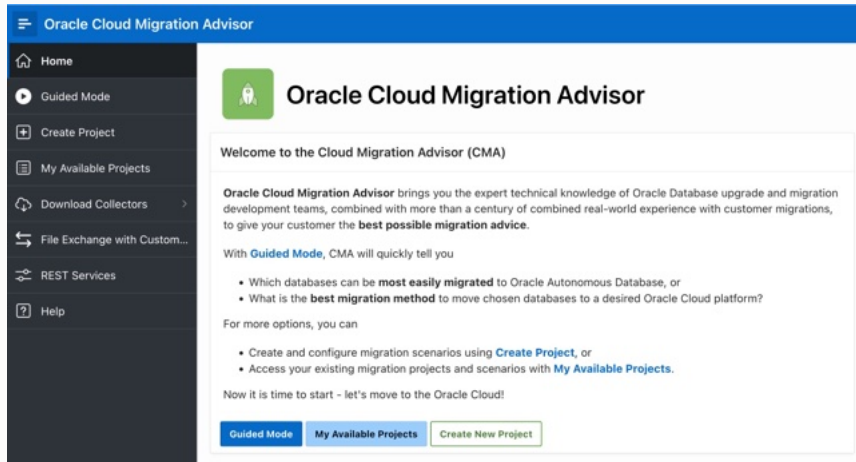


# 42 different migration methods

But which one is the best?



# CMA knows the answer



Oracle Cloud Migration Advisor

Home

Guided Mode

Create Project

My Available Projects

Download Collectors

File Exchange with Custom...

REST Services

Help

## Oracle Cloud Migration Advisor

Welcome to the Cloud Migration Advisor (CMA)

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With **Guided Mode**, CMA will quickly tell you

- Which databases can be **most easily migrated** to Oracle Autonomous Database, or
- What is the **best migration method** to move chosen databases to a desired Oracle Cloud platform?

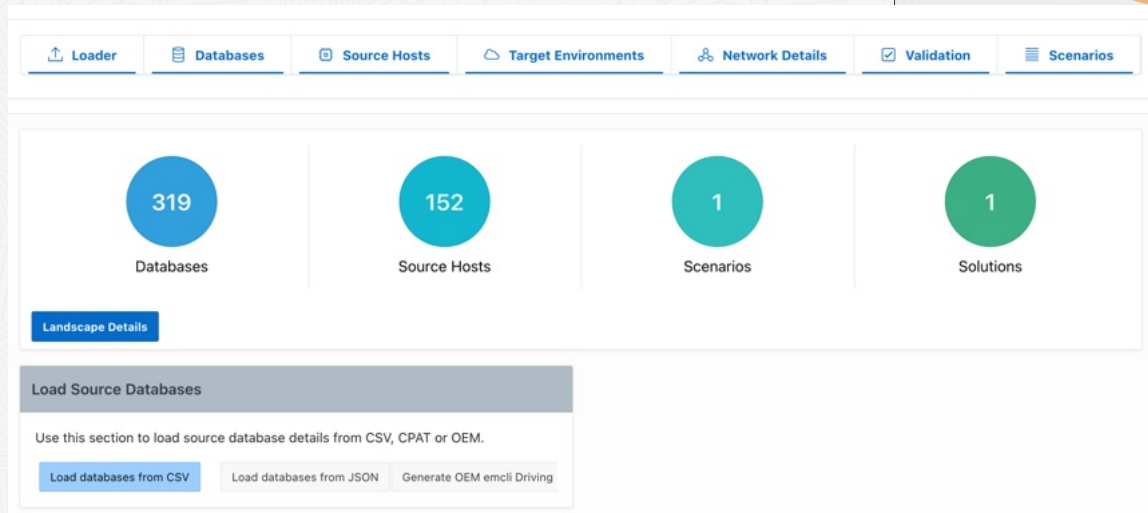
For more options, you can

- Create and configure migration scenarios using **Create Project**, or
- Access your existing migration projects and scenarios with **My Available Projects**.

Now it is time to start - let's move to the Oracle Cloud!

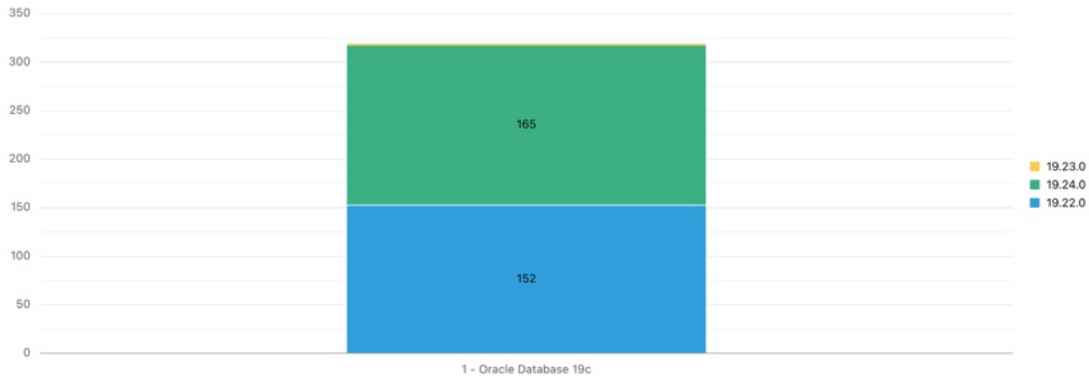
[Guided Mode](#) [My Available Projects](#) [Create New Project](#)

# Project Overview



# Project Overview

Oracle Database Version



# Project Overview

## Scenario Configuration

Select the **"Target Types"** and the **"Migration Methods"** you want to consider in this scenario.

Server types to advise

ADBD - Autonomous Database Dedicated  
ExaDB C@C - Exadata on Cloud@Customer  
ExaDB Dedicated - Exadata on Dedicated Infrastructure  
ExaDB XS - Exadata on Exascale Infrastructure  
Oracle Autonomous Database@GCP



ADBS - Autonomous Database Serverless  
Oracle Autonomous Database@Azure



Note: If there are more than two tied solutions, the server type with the higher priority (top) on this list will be selected.

Allowed migration technologies

☒ Enterprise Manager ☒ Golden Gate ☒ OCI Services

If you don't want one of the technologies above to be considered to perform the migrations, unselect it.

Migration methods to include

Classic Export and Import utilities  
Data Pump Conventional Export/Import  
Data Pump Full Transportable  
Data Pump Full Transportable + RMAN Convert  
Data Pump Import with DBLink



ZDM Logical Online  
ZDM Logical Offline  
ZDM Physical Offline  
ZDM Physical Online



Note: If there are more than two tied solutions, the migration method with the higher priority (top) on this list will be selected.

# Project Overview

Databases

Target Environment

Migration Methods

Checks Result

Search: All Text ColumnsGoActionsReset

| Target Name                           | Final Score<br>(the higher the better) | Complexity Score<br>(higher value = easier to migrate) | Target Accepted | Auto-Patching | Auto-Security | Administrator |
|---------------------------------------|--|--|-----------------|---------------|---------------|---------------|
| ADBS - Autonomous Database Serverless | 9.96                                   | 9.61   | Yes             | ★★★★★         | ★★★★★         | ★☆☆☆☆         |
| Oracle Autonomous Database@Azure      | 9.95                                   | 9.61   | Yes             | ★★★★★         | ★★★★★         | ★☆☆☆☆         |


1 rows selectedTotal 2

Note: The **green row** is the currently defined target environment. You can change it by **selecting another method** from another target.

Migration Methods

This section shows the possible migration methods for the selected **target type** and **database**. You can change the defined migration method and target by clicking on the **"Select"** button (✓).


You can also check the instructions or simply click on the card and read more details about it on the "Decision Log".

**ZDM Logical Online**  
Complexity: Easy | Downtime: Low  
Migration Score: 9.96

The Logical Online Migration Workflow in ZDM leverages Data Pump for initial load and on Oracle GoldenGate for synchronization purposes and to preserve the online portion of the migration process. Oracle ZDM will run on a separate node and connect to both Source and Target to perform the migration.

✓ Select

Read Instructions

**ZDM Logical Offline**  
Complexity: Easy | Downtime: Medium  
Migration Score: 8.97

The Logical Offline Migration Workflow in ZDM leverages Data Pump for data transfer and target instantiation. Some Zero Downtime Migration logical migration work flows involve placing Oracle Data Pump dump files on storage media for transfer to the target database.

✓ Select

Read Instructions

# CMA – How to get the tool?

Send us an email – it is an APEX app

- Vagrant build
- Zip file ready to be installed into ADB-free
- Oracle internal: [cma.oraclecorp.com](mailto:cma.oraclecorp.com)



## Step 1

Collect estate information

# Cloud Migration Advisor

<https://www.oracle.com/goto/upgrade>



Customer  
Fleet



Download  
Extractor

- CPAT
- SQL Extractor
- OEM Extractor
- Excel sheet



Collect  
Information



**Option 2:**  
Install Cloud Agent  
to Oracle DB (via  
Vagrant Build)





Start here:

[www.oracle.com/goto/upgrade](http://www.oracle.com/goto/upgrade)

# Cloud Migration Advisor

AutoUpgrade tool for  
Oracle Database

**Cloud Migration Advisor  
(CMA)**

Database migration  
resources

Load data into Oracle  
Database

## Cloud Migration Advisor

The Oracle Cloud Migration Advisor (CMA) is the best tool for advising you about your migration to Oracle Autonomous Database, Oracle Exadata Cloud at Customer, Oracle Exadata Cloud Service, and other Oracle Cloud Infrastructure (OCI) Database services—and more.

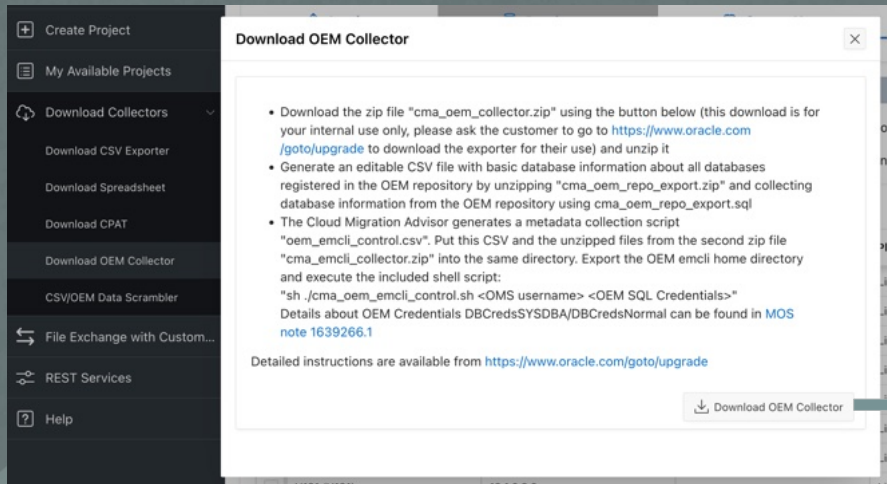
CMA collects database metadata details about your current Oracle Database environment, including patch levels. (No business data or customer information is collected.) CMA uses this database metadata to provide detailed technical advice about possible migration targets and methods.

Choose and download the most appropriate metadata collection method for your situation:

- Cloud Pre-Migration Advisor Tool (CPAT) (Use [Oracle SQLcl MIGRATEADVISOR Command](#), see [Jeff Smith's blog post](#) — or if you can't use SQLcl, [Download CPAT from My Oracle Support Note 2758371.1 — Documentation \(PDF\)](#))
- SQL CSV script ([Download — Documentation \(PDF\)](#))
- Oracle Enterprise Manager script ([Download — Documentation \(PDF\)](#))
- Spreadsheet ([Download — Documentation \(PDF\)](#))

The documentation for each method describes how to collect the metadata and share it with your Oracle advisor.

# Cloud Migration Advisor | OEM Collector



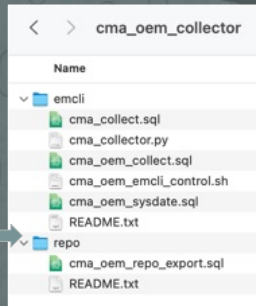
The screenshot shows the Cloud Migration Advisor interface with a sidebar on the left containing navigation options: 'Create Project', 'My Available Projects', 'Download Collectors', 'Download CSV Exporter', 'Download Spreadsheet', 'Download CPAT', 'Download OEM Collector', 'CSV/OEM Data Scrambler', 'File Exchange with Custom...', 'REST Services', and 'Help'. The 'Download OEM Collector' option is selected. A modal dialog box titled 'Download OEM Collector' is open, displaying instructions for downloading and using the OEM Collector. The instructions include downloading a zip file, generating a CSV file, and executing a shell script. A button labeled 'Download OEM Collector' is at the bottom right of the dialog.

**Download OEM Collector**

- Download the zip file "cma\_oem\_collector.zip" using the button below (this download is for your internal use only, please ask the customer to go to <https://www.oracle.com/goto/upgrade> to download the exporter for their use) and unzip it
- Generate an editable CSV file with basic database information about all databases registered in the OEM repository by unzipping "cma\_oem\_repo\_export.zip" and collecting database information from the OEM repository using cma\_oem\_repo\_export.sql
- The Cloud Migration Advisor generates a metadata collection script "oem\_emcli\_control.csv". Put this CSV and the unzipped files from the second zip file "cma\_emcli\_collector.zip" into the same directory. Export the OEM emcli home directory and execute the included shell script:  
"sh ./cma\_oem\_emcli\_control.sh <OMS username> <OEM SQL Credentials>"  
Details about OEM Credentials DBCredsSYSDBA/DBCredsNormal can be found in [MOS note 1639266.1](#)

Detailed instructions are available from <https://www.oracle.com/goto/upgrade>

[Download OEM Collector](#)



The screenshot shows a directory listing for 'cma\_oem\_collector'. The directory contains two subdirectories, 'emcli' and 'repo', and several files. The 'emcli' directory contains 'cma\_collect.sql', 'cma\_collector.py', 'cma\_oem\_collect.sql', 'cma\_oem\_emcli\_control.sh', 'cma\_oem\_sysdate.sql', and 'README.txt'. The 'repo' directory contains 'cma\_oem\_repo\_export.sql' and 'README.txt'.

| cma_oem_collector        |  |
|--------------------------|--|
| Name                     |  |
| emcli                    |  |
| cma_collect.sql          |  |
| cma_collector.py         |  |
| cma_oem_collect.sql      |  |
| cma_oem_emcli_control.sh |  |
| cma_oem_sysdate.sql      |  |
| README.txt               |  |
| repo                     |  |
| cma_oem_repo_export.sql  |  |
| README.txt               |  |

# Cloud Migration Advisor | OEM Collector



# Cloud Migration Advisor | CPAT

**CPAT - Cloud Premigration Advisor Tool**

More details about CPAT can be found in MOS note:  
**Cloud Premigration Advisor Tool (CPAT) Analyzes Databases for Suitability of Cloud Migration**  
([Doc ID 2758371.1](#)).

For optimal CPAT reports best matching CMA analysis options please run CPAT with these parameters:

```
"--targetcloud ALL --migrationmethod ALL"
```

To exchange files with customers please have a look at MOS note [Primary Document for Oracle SFTP](#)  
([Doc ID 2671535.1](#)).  
Accessing it through the **internal support portal shares internal information** about accessing the file share using the Oracle network. Accessing it through the external support site hides these internal details.

# Cloud Migration Advisor | CPAT



MOS Note: 2758371.1

```
premigration.sh
premigration.cmd
bin
README.txt
misc
lib
p32613591_112048_Generic.zip
```



Shell Script  
`cma.sh`



JSON

JSON

JSON

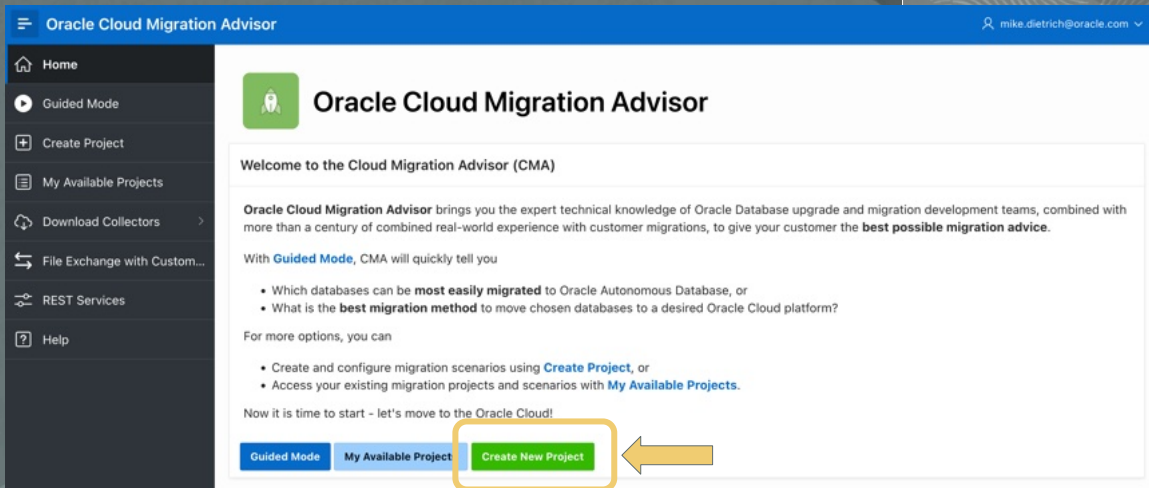
Discovers information from non-CDB  
or PDB individually on a per-DB basis



## Step 2

Load estate information into CMA

# Cloud Migration Advisor | New Project



Oracle Cloud Migration Advisor

mike.dietrich@oracle.com

Home

Guided Mode

Create Project

My Available Projects

Download Collectors

File Exchange with Custom...

REST Services

Help

## Oracle Cloud Migration Advisor

Welcome to the Cloud Migration Advisor (CMA)

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Now it is time to start - let's move to the Oracle Cloud!

Guided Mode My Available Project **Create New Project**



# Cloud Migration Advisor | Load Data

## Load Source Databases

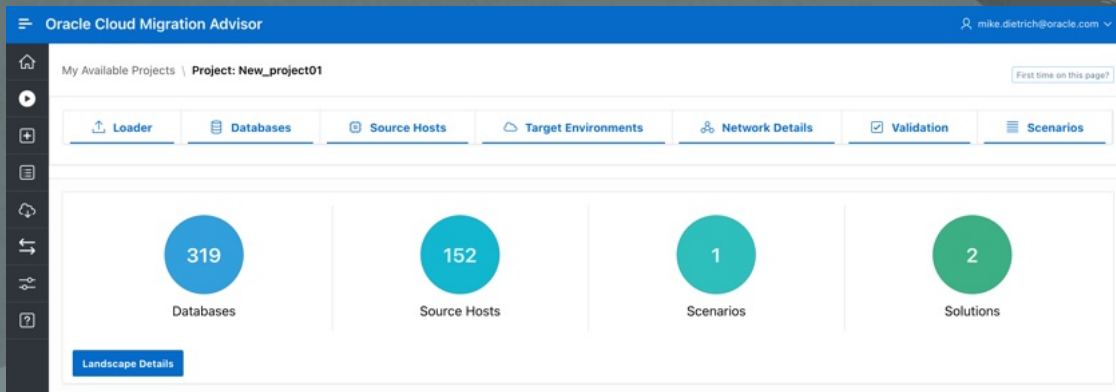
Use this section to load source database details from CSV, CPAT or OEM.

Load databases from CSV

Load databases from JSON

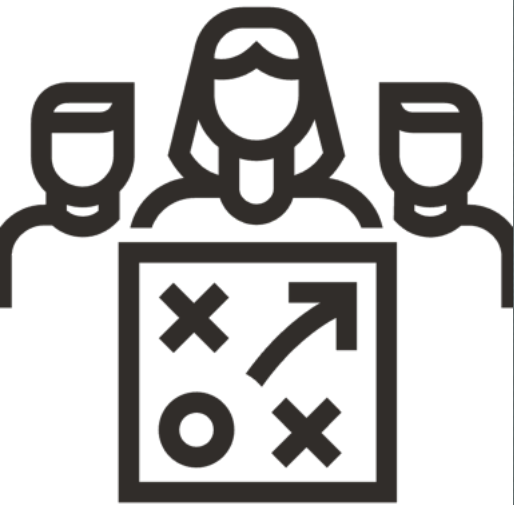
Generate OEM emcli Driving File

# Cloud Migration Advisor | Load Data



# Cloud Migration Advisor | Landscape Example





### Step 3

Add additional information and constraints

# Cloud Migration Advisor | DB Overview

## Databases

Here you have the source databases for this project. Click on "Manage Databases" button to add, modify or edit databases in this list.

The *Upgrade* and *Accepted Downtime* columns can be used to add information about business requirements for each database.

| <input type="checkbox"/> | Database Display | Database Name | CDB Name  | Database Version | Platform Name    | First Hostname | Instances | CPAT loaded? | Upgrade | Accepted Downtime |
|--------------------------|------------------|---------------|-----------|------------------|------------------|----------------|-----------|--------------|---------|-------------------|
| <input type="checkbox"/> | A100             | A100          | (non-cdb) | 19.24.0          | Linux x86 64-bit | lin'           | 1         | Yes          |         |                   |
| <input type="checkbox"/> | A101             | A101          | (non-cdb) | 19.22.0          | Linux x86 64-bit | pd             | 1         | Yes          |         |                   |
| <input type="checkbox"/> | A102             | A102          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin'           | 1         | Yes          |         |                   |
| <input type="checkbox"/> | A103             | A103          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin-----       | 1         | Yes          |         |                   |
| <input type="checkbox"/> | B100             | B100          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin'           | 1         | Yes          |         |                   |
| <input type="checkbox"/> | B101             | B101          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin            | 1         | Yes          |         |                   |
| <input type="checkbox"/> | B102             | B102          | (non-cdb) | 19.24.0          | Linux x86 64-bit | lin            | 1         | Yes          |         |                   |

< > 1 2 3 4 5 ... > | 1 - 10 of 61

# Cloud Migration Advisor | DB Overview

| Databases   |                  |               |           |                  |                  |                | Upgrade            | Accepted Downtime |
|---|------------------|---------------|-----------|------------------|------------------|----------------|--------------------|-------------------|
| Here you have the source databases for this project. Click on "Manage Databases" button to add, modify or edit data.                  |                  |               |           |                  |                  |                | Yes (DB must b...  | < 1min            |
| The <i>Upgrade</i> and <i>Accepted Downtime</i> columns can be used to add information about business requirements for each database. |                  |               |           |                  |                  |                |                    | < 1min            |
| <input type="checkbox"/>  | Database Display | Database Name | CDB Name  | Database Version | Platform Name    | First Hostname | No (DB can't be... | < 8h              |
| <input type="checkbox"/>  | A100             | A100          | (non-cdb) | 19.24.0          | Linux x86 64-bit | lin'           |                    | < 8h              |
| <input type="checkbox"/>  | A101             | A101          | (non-cdb) | 19.22.0          | Linux x86 64-bit | pd             |                    | < 8h              |
| <input type="checkbox"/>  | A102             | A102          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin'           |                    | < 8h              |
| <input type="checkbox"/>  | A103             | A103          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin-----       |                    | ZERO              |
| <input type="checkbox"/>  | B100             | B100          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin'           |                    | < 2d              |
| <input type="checkbox"/>  | B101             | B101          | (non-cdb) | 19.22.0          | Linux x86 64-bit | lin            |                    |                   |
| <input type="checkbox"/>  | B102             | B102          | (non-cdb) | 19.24.0          | Linux x86 64-bit | lin            |                    |                   |



#### Step 4

Group the databases

# Cloud Migration Advisor | Scenarios

## Scenarios

1-Click Solution1-Click Solution ADB

To build a migration plan, the next step is to create a scenario where you will define the migration settings. You can optionally use the **"1-Click Solution"** or the **"1-Click Solution ADB"** buttons to let CMA automatically create one for you.

Q

Search: All Text Columns

Go

Edit

Save

🗑️

Delete Selected

🔄

Reset Layout

Create Scenario

| <input checked="" type="checkbox"/> | (Open) | Scenario Name | Assigned Databases | Solutions |
|-------------------------------------|--------|---------------|--------------------|-----------|
|                                     |        |               |                    |           |
| Total 0                             |        |               |                    |           |



# Cloud Migration Advisor | Scenarios



The screenshot shows a 'Scenario' dialog box with a title bar containing a close button (X). Inside the dialog, there is a text input field labeled 'Scenario Name' with the text 'Migration to ADB-S' entered. At the bottom of the dialog, there are two buttons: a 'Cancel' button on the left and a 'Create' button on the right.

**Scenario** [X]

Scenario Name  
Migration to ADB-S

Cancel Create

# Cloud Migration Advisor | Scenarios

Oracle Cloud Migration Advisor

mike.dietrich@oracle.com

My Available Projects | Project: Chem | Scenario: Migration to ADB-S

First time on this page?

Scenario Databases

Select the databases you want to add to this scenario. To assign databases, check them on the left list and move them using the buttons below.  
After including, you can optionally also set some restrictions on the assigned databases, like the desired target version or the target type.

Available Databases

Search: All Text Columns Go Actions Reset

|                                     | Database Display Name ↑ | Database Version | Platform Name    | Storage Assigned GiB | DB Edit |
|-------------------------------------|-------------------------|------------------|------------------|----------------------|---------|
| <input checked="" type="checkbox"/> | A100                    | 19.24.0          | Linux x86 64-bit | 124                  |         |
| <input checked="" type="checkbox"/> | A101                    | 19.22.0          | Linux x86 64-bit | 11                   |         |
| <input checked="" type="checkbox"/> | A102                    | 19.22.0          | Linux x86 64-bit | 76                   |         |
| <input type="checkbox"/>            | A103                    | 19.22.0          | Linux x86 64-bit | 229                  |         |
| <input type="checkbox"/>            | B100                    | 19.22.0          | Linux x86 64-bit | 346                  |         |
| <input type="checkbox"/>            | B101                    | 19.22.0          | Linux x86 64-bit |                      |         |
| <input type="checkbox"/>            | B102                    | 19.24.0          | Linux x86 64-bit |                      |         |
| <input type="checkbox"/>            | B103                    | 19.24.0          | Linux x86 64-bit |                      |         |

3 rows selected

Assigned Databases

Search: All Text Columns Go Actions Reset

|               | Database Display Name ↑ | Database Version | Platform Name | Upgrade DB? |
|---------------|-------------------------|------------------|---------------|-------------|
| No data found |                         |                  |               |             |

Remove All

Remove Selected

# Cloud Migration Advisor | Scenarios

Oracle Cloud Migration Advisor

My Available Projects | Project: Chem | Scenario: Migration to ADB-S

First time on this page?

Assign Databases Database Restrictions Target Types Migration Methods Solution Priority Check Scores Solutions

### Scenario Databases

Select the databases you want to add to this scenario. To assign databases, check them on the left and move them using the buttons below.

After including, you can optionally also set some restrictions on the assigned databases, like the desired target version or the target type.

#### Available Databases

| Database Display Name | Database Version | Platform Name    | Storage Assigned GB | DB Edition |
|-----------------------|------------------|------------------|---------------------|------------|
| A103                  | 19.22.0          | Linux x86 64-bit | 229                 |            |
| B100                  | 19.22.0          | Linux x86 64-bit | 346                 |            |
| B101                  | 19.22.0          | Linux x86 64-bit |                     |            |
| B102                  | 19.24.0          | Linux x86 64-bit |                     |            |

#### Assigned Databases

| Database Display Name | Database Version | Platform Name    | Upgrade DB? |
|-----------------------|------------------|------------------|-------------|
| A100                  | 19.24.0          | Linux x86 64-bit |             |
| A101                  | 19.22.0          | Linux x86 64-bit |             |
| A102                  | 19.22.0          | Linux x86 64-bit |             |

# Cloud Migration Advisor | Scenarios



**Database Restrictions**Expand

Optionally, you can have some restrictions to the databases added in this scenario, like the target host, the database release, or the type of the target server.

Q

Search: All Text Columns

Go

Actions

Edit

Save

Reset

| Database Display Name ↑ | Database Version | Upgrade DB? | Platform Name    | Storage Assigned GiB | Target Version Restriction | Target Type Restriction | Target Host |
|-------------------------|------------------|-------------|------------------|----------------------|----------------------------|-------------------------|-------------|
| A100                    | 19.24.0          |             | Linux x86 64-bit | 124                  |                            |                         |             |
| A101                    | 19.22.0          |             | Linux x86 64-bit | 11                   |                            |                         |             |
| A102                    | 19.22.0          |             | Linux x86 64-bit | 76                   |                            |                         |             |

|<

<

1

>

|>

1 - 3 of 3

Note 1: If you don't restrict a database against a specific target type or target host, it will be evaluated against all the servers provided on the "Scenario Configuration".

Note 2: If you don't restrict a database against a specific database release, it will be evaluated against all the possible releases that the suggested target server is able to handle.

# Cloud Migration Advisor | Scenarios

## Scenario Configuration

Select the **"Target Types"** and the **"Migration Methods"** you want to consider in this scenario.

Server types to advise

ADBD - Autonomous Database Dedicated  
ExaDB C@C - Exadata on Cloud@Customer  
ExaDB Dedicated - Exadata on Dedicated Infrastructure  
ExaDB XS - Exadata on Exascale Infrastructure  
Oracle Autonomous Database@GCP



&gt;&gt;

&gt;

&lt;

&lt;&lt;

ADBS - Autonomous Database Serverless  
Oracle Autonomous Database@Azure

&gt;

&lt;

&gt;

&lt;

Note: If there are more than two tied solutions, the server type with the higher priority (top) on this list will be selected.

Allowed migration technologies

☐ Enterprise Manager ☒ Golden Gate ☒ OCI Services

If you don't want one of the technologies above to be considered to perform the migrations, unselect it.

# Cloud Migration Advisor | Scenarios

## Allowed migration technologies

☐ Enterprise Manager ☒ **Golden Gate** ☒ **OCI Services**

If you don't want one of the technologies above to be considered to perform the migrations, unselect it.

## Migration methods to include

Classic Export and Import utilities  
Data Pump Full Transportable  
Data Pump Full Transportable + RMAN Convert  
Data Pump Import with DBLink  
Data Pump Transportable Tablespace



Data Pump Conventional Export/Import  
OCI Database Migration Service Offline  
OCI Database Migration Service Online  
ZDM Logical Offline  
ZDM Logical Online



Note: If there are more than two tied solutions, the migration method with the higher priority (top) on this list will be selected.



## Step 5

Create solution

# Cloud Migration Advisor | Solution

## Solutions

After the scenario is ready, generate a solution using the **"Generate Solution"** button. You can always regenerate a solution after changing the scenario by repeating this process.

To open the proposed solution, click on the first column.

|                                     |                   |                          |                            |                  |  |                              |
|-------------------------------------|-------------------|--------------------------|----------------------------|------------------|--|------------------------------|
| <div>Save</div>                     |                   | <div>Refresh</div>       | <div>Delete Selected</div> | <div>Reset</div> |  | <div>Generate Solution</div> |
| <div><input type="checkbox"/></div> | <div>(Open)</div> | <div>Solution ID ↓</div> | <div>Created Date</div>    |                  |  | <div>Status</div>            |
| <div>No Solution Found</div>        |                   |                          |                            |                  |  |                              |



# Cloud Migration Advisor | Solution

## Solutions

After the scenario is ready, generate a solution using the **"Generate Solution"** button. You can always regenerate a solution after changing the scenario by repeating this process.

To open the proposed solution, click on the first column.

Save

Refresh

Delete Selected

Reset

Generate Solution

|                          |                   |               |              |           |
|--------------------------|-------------------|---------------|--------------|-----------|
| <input type="checkbox"/> | (Open)            | Solution ID ↓ | Created Date | Status    |
| <input type="checkbox"/> | <a href="#">🔗</a> | 3477          | 28-MAR-2025  | Processed |
|                          |                   |               |              | Total 1   |

# Cloud Migration Advisor | Solution

My Available Projects \ Project: Chem \ Scenario: Migration to ADB-S \ **Solution# 3477**

Checks Report

Solution ReportText ReportPDF Report

DatabasesTarget EnvironmentMigration MethodsChecks Result

This page has all the possible migration targets and methods for each database included in your scenario, based on the settings provided. To get a report, select "Checks Report" or "Solution Report" options above.

You can also use this page to navigate through the source databases, get the migration proposals and change it.

Databases

Q Search: All Text Columns Go Actions

Reset

| Database Display Name ↑ | Platform Name    | Database Version | Method Selects |
|-------------------------|------------------|------------------|----------------|
| A100                    | Linux x86 64-bit | 19.24.0          | By System      |
| A101                    | Linux x86 64-bit | 19.22.0          | By System      |
| A102                    | Linux x86 64-bit | 19.22.0          | By System      |

This table shows the possible targets for the selected database. **Select one target environment** to list the possible migration methods.


Note: The **green row** is the currently defined target environment. You can change it by **selecting another method** from another target.

# Cloud Migration Advisor | Solution

My Available Projects \ Project: Chem \ Scenario: Migration to ADB-S \ **Solution# 3477**

Checks Report **Solution Report** Text Report PDF Report


Databases Target Environment Migration Methods **Checks Result**

**OCI Database Migration Service Online**  
Complexity: Easy | Downtime: Low  
Migration Score: 9.54

DMS makes a point-in-time copy and replicates all subsequent changes from the source to the target database, using ZDM Logical Online. This allows applications to stay online during the migration and then be switched over from source to target database.

✓ Select


Read Instructions

**ZDM Logical Online**  
Complexity: Easy | Downtime: Low  
Migration Score: 9.47

The Logical Online Migration Workflow in ZDM leverages Data Pump for initial load and on Oracle GoldenGate for synchronization purposes and to preserve the online portion of the migration process. Oracle ZDM will run on a separate node and connect to both Source and Target to perform the migration.

✓ Select


Read Instructions

**OCI Database Migration Service Offline**  
Complexity: Easy | Downtime: Medium  
Migration Score: 4.63

DMS makes a point-in-time copy of the source to the target database, using ZDM Logical Offline. Any changes to the source database during migration are not copied, requiring any applications to stay offline for the duration of the migration.

✓ Select


Read Instructions

**Data Pump Conventional Export/Import**  
Complexity: Easy | Downtime: Medium  
Migration Score: 4.61

You can use this method regardless of the endian format and database character set of the source database. You can also use Data Pump to migrate data between different versions of Oracle Database. This method is simple to implement, provides the broadest cross-platform support and enables you to physically re-organize your target database.

✓ Select

Read Instructions

**ZDM Logical Offline**  
Complexity: Easy | Downtime: Medium  
Migration Score: 4.55

The Logical Offline Migration Workflow in ZDM leverages Data Pump for data transfer and target instantiation. Some Zero Downtime Migration logical migration work flows involve placing Oracle Data Pump dump files on storage media for transfer to the target database.

✓ Select

Read Instructions

# Cloud Migration Advisor | Complexity

## Migration Complexity Table

Migration Complexity Chart

Migration Complexity

All



Go

Actions

| Database Display Name | Database Version | Target Name                           | Method Title                          | Complexity Score<br>(higher value = easier to migrate) | Final Score<br>(the higher the better) | Solution Defined | Checks<br>(Action Required) | Checks<br>(Review Required) | Checks<br>(Review Suggested) |
|-----------------------|------------------|---------------------------------------|---------------------------------------|--|--|------------------|-----------------------------|-----------------------------|------------------------------|
| A102                  | 19.22.0          | ADBS - Autonomous Database Serverless | OCI Database Migration Service Online | 8.86   | 9.71                                   | System Defined   | 5                           | 3                           | 5                            |
| A101                  | 19.22.0          | ADBS - Autonomous Database Serverless | OCI Database Migration Service Online | 8.25   | 9.56                                   | System Defined   | 8                           | 7                           | 5                            |
| A100                  | 19.24.0          | ADBS - Autonomous Database Serverless | OCI Database Migration Service Online | 8.19   | 9.54                                   | System Defined   | 9                           | 6                           | 5                            |

1 - 3





**Alternative Route**


Guided Mode


# Cloud Migration Advisor | Guide Mode

## Guided Mode

  
Introduction

  
**Step 1**


  
Step 2


  
Step 3

Selected Option

☒ **What are the best candidates to move to ADB?**

☐ I have my target defined. What is the best migration method?

 Cancel

Next 

# Cloud Migration Advisor | Report

ORACLE

CMA - Solution Report

## 1 - Introduction

This report offers a comprehensive analysis of the migration of Oracle databases to the Oracle Cloud, integrating the upgrade of databases to newer versions. The transition to cloud infrastructure signifies a strategic move for the organization, motivated by the pursuit of enhanced scalability, agility, and cost efficiency.

The database migration is a strategic initiative for the organization, driven by the need for modernization, operational efficiency, and cost reduction.

The migration process comprised several critical phases, each indispensable for ensuring a seamless transition and maximizing the advantages of cloud adoption.

This report details the migration solution developed for a set of **3** databases in the **Chem** project owned by **mike.dietrich@oracle.com**.

In summary, CMA recommends that:

| Count | Target Type                           | Migration Method                      |
|-------|---------------------------------------|---------------------------------------|
| 3     | ADBS - Autonomous Database Serverless | OCI Database Migration Service Online |

## 2 - Scope

### 2.1 - Databases

- **3** databases, where:
  - **3** x Oracle Database 19c (**100%**)
- All have a CPAT file associated.
- All CPAT files were collected before **2024-12-28** (90 days ago).

As we can see in the graphs below:

- All are Single Instances.
- All are NON-CDBs.
- All databases are still supported by Oracle.
- All databases will be moved to a new release supported by Oracle.

## 3 - Solution Summary

Total databases per suggested target type covered in this scenario:

- **3** in "ADBS - Autonomous Database Serverless" (**100%**).

Total databases per suggested migration method covered in this scenario:

- **3** using "OCI Database Migration Service Online" (**100%**).

## 4 - Database Fleet Summary

### 4.1 - Proposed Solution **ADBS - Autonomous Database Serverless** using **OCI Database Migration Service Online**

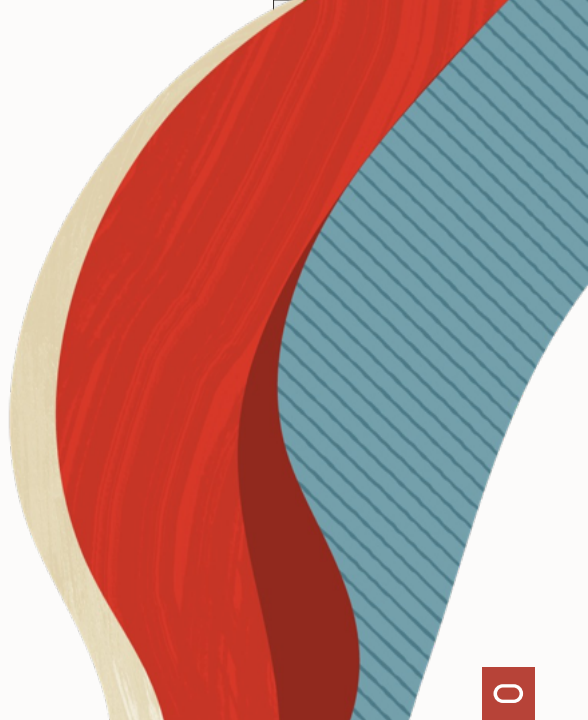
| Database Name | Version | Multitenant | RAC | CPAT | Upgrade | Score | Complexity |
|---------------|---------|-------------|-----|------|---------|-------|------------|
| A102          | 19.22.0 | No          | No  | Yes  | -       | 9.71  | Easy       |
| A101          | 19.22.0 | No          | No  | Yes  | -       | 9.56  | Easy       |
| A100          | 19.24.0 | No          | No  | Yes  | -       | 9.54  | Easy       |



# Demo

- Cloud Migration Advisor

Watch on [YouTube](#)





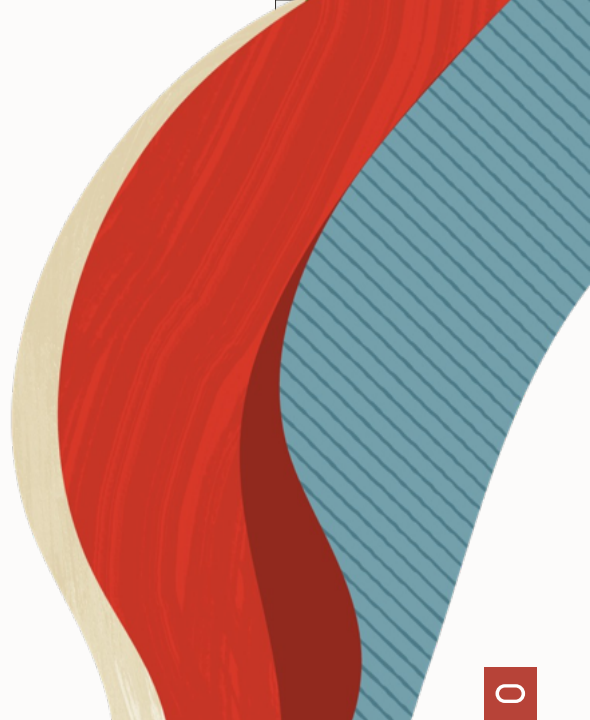
# Introducing ...

## ... the databases we are going to migrate

# Sample Databases

In this series, we will use two databases:

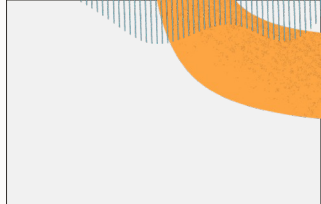
- The Simple Database
- The Complex Database



# Simple Database

**The Simple Database** is based on Oracle Sample Schemas

<https://github.com/oracle-samples/db-sample-schemas>



# Complex Database

**The Complex Database** is based on Oracle Sample Schemas  
+ Manually created common application objects:

<https://alexzaballa.com/webinar-migration-to-oracle-autonomous-database-sample-databases/>

# Complex Database

- External Tables
- Tables with encrypted columns
- Tables with XML columns
- Tables using Spatial
- Tables with ROWID columns
- Table Clusters
- Scheduler Jobs running external scripts
- External Library
- Java Objects
- XML Schemas
- Profiles using custom password verification functions
- SQL Patches and SQL Plan Baselines
- Jobs using DBMS\_JOB
- Procedure calling DBMS\_SHARED\_POOL and UTL\_HTTP



# Deploy ADB on your laptop



You can run ADB on a container in your local environment



# ADB Container

- Database versions: 19c and 23ai
- Workload types: ATP and ADW
- Platform: x86\_64
- Licensed under [Oracle Free Use Terms and Conditions](#)



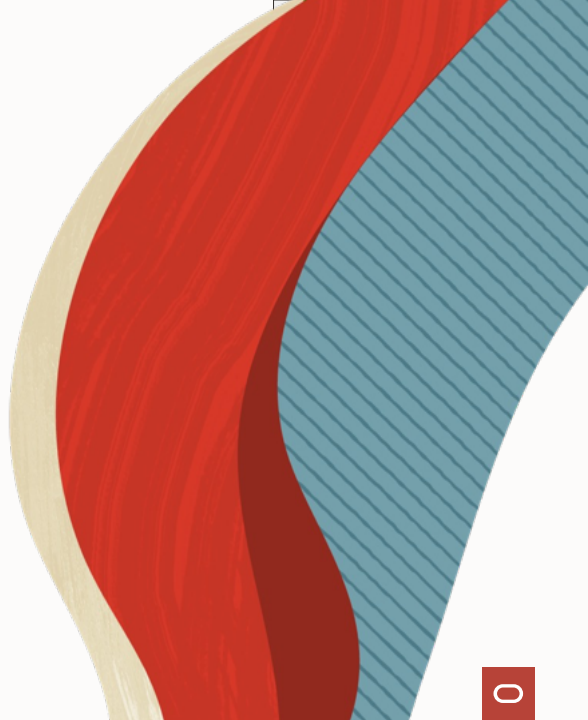
Use with podman on own  
MacOS (x86\_64) or Windows (x86\_64)

[Oracle Autonomous Database Free](#)

# Demo

- Install ADB Container

Watch on [YouTube](#)



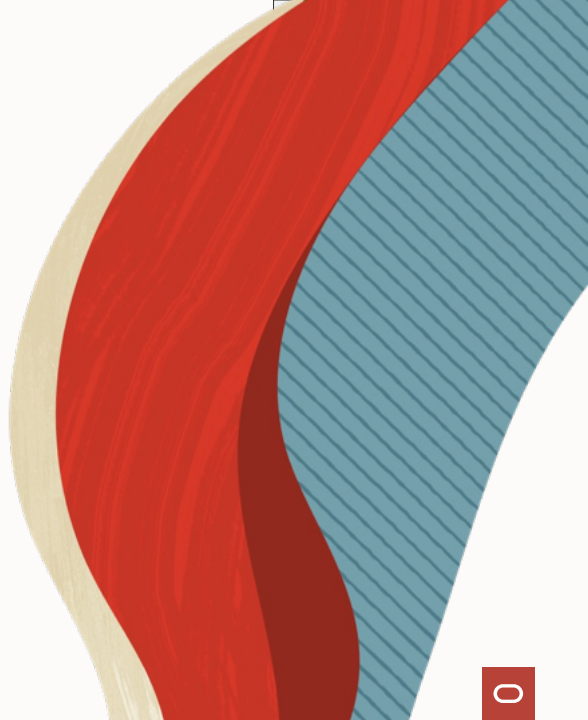
# ADB Container Features

- Oracle Rest Data Services (ORDS)
- APEX
- Database Actions
- Mongo API
- Oracle Estate Explorer (OEE)

# Demo

- Use ADB Container

Watch on [YouTube](#)





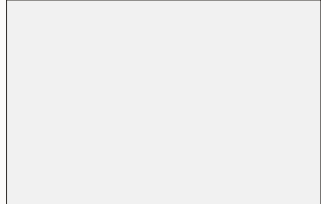
# Wrapping Up



Try it out, please!!

- We are looking for reference customers
- Get in touch with us

# Join Us Next Time



## 1 PLANNING



## 2 PREPARING

May 15, 15:00 CET  
[Sign up](#)



## 3 MIGRATING

June 5, 15:00 CET  
[Sign up](#)



## 4 OPERATING

July 10, 15:00 CET  
[Sign up](#)



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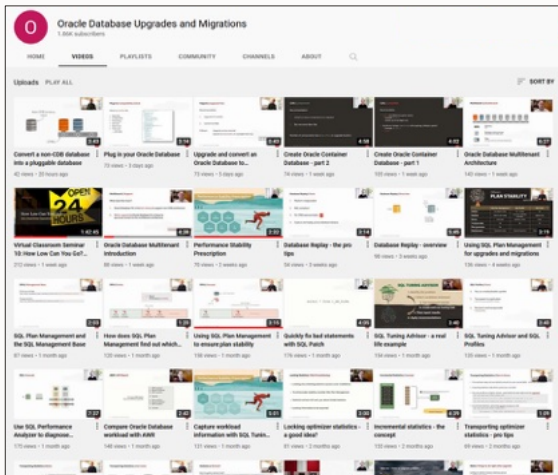
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- No marketing
- No buzzwords
- All tech



# Thank You

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