



# Migration Portal

## Version 2.8

1	What's New	3
2	Supported Versions	7
3	Using Migration Portal	7
3.1	Overview of the Migration Portal Home Page	8
3.2	Overview of the Migration Portal Projects Page	9
3.3	Overview of the Migration Portal Wiki Page	12
4	Migrating a Database	12
4.1	Performing a Schema Extraction	13
4.2	Performing a Schema Assessment	17
4.3	Schema Migration	24
4.4	Data Migration	29
5	Advanced Data Migration	30

# 1 What's New

The following enhancements are added to the EDB Postgres Migration Portal for this release:

- The **Project Compatibility** gauge is color-coded to display which projects are the most compatible in a single glance. You can either fix the projects manually that are not fully compatible or contact an EDB representative for help.

# EDB Migration Portal

**Projects (287)**

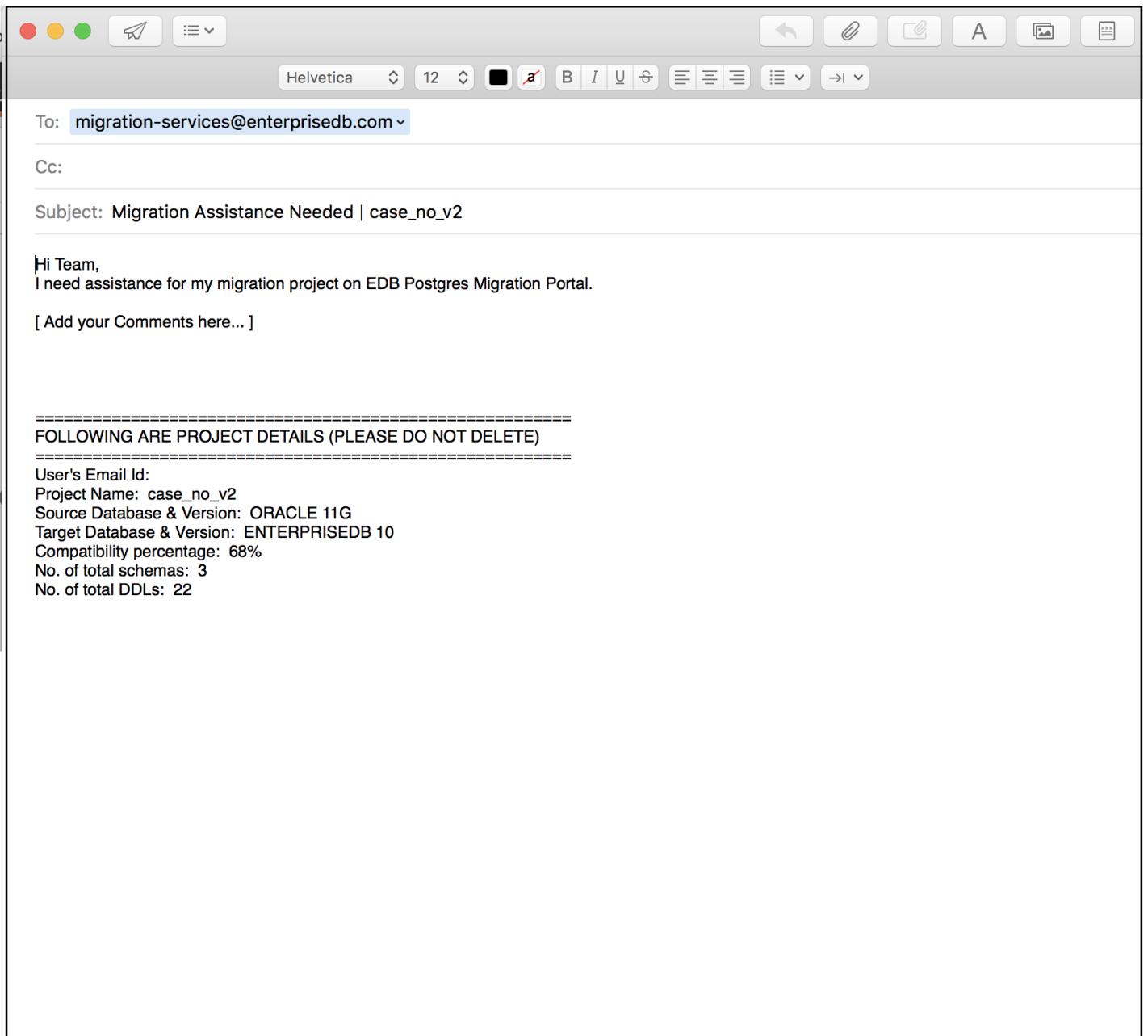
**+ New**

Search projects 

oracle11g to enterpriseDB12

 n1155_2	6 Dec 2019	1
 n1155	6 Dec 2019	2
 n1159_2	6 Dec 2019	1
 n1159_1	5 Dec 2019	1
 N1155_1	4 Dec 2019	1
 n951_2	3 Dec 2019	1
 N1096_1	3 Dec 2019	0

- Green indicates 100% compatible
- Blue indicates 31% to 99% compatible
- Red indicates 0% to 30% compatible
- If there are any issues while assessing the schemas, you can contact the EDB representative for help. You can click the migrating services email ID in the message box. A draft from the system's default email client will open with a prepopulated subject and body, saving you time drafting the request.



- The FAQ page is updated with the latest frequently asked questions. Use the following link to access the FAQ:  
<https://www.enterprisedb.com/migration-portal-faqs>
- Many changes have been made to the new UI for better user experience.

## New Repair Handler

The following repair handler is added to improve the Advance Server compatibility ratio:

- ERH 1012 - Insert Statement Alias:

Removes alias name and the references of the alias name from the INSERT statement inside any PL/SQL block.

For example:

```
CREATE OR REPLACE PROCEDURE REMOVE_ALIAS_TEST (IN_PARAM
VARCHAR2)
IS
V_VAR NUMBER (12, 0);
BEGIN
INSERT INTO TABLE_NAME ALIAS_NAME (ALIAS_NAME.ID,
ALIAS_NAME.NAME)
VALUES (1,
'test');
END;
```

would become:

```
CREATE OR REPLACE PROCEDURE REMOVE_ALIAS_TEST (IN_PARAM
VARCHAR2)
IS
V_VAR NUMBER (12, 0);
BEGIN
INSERT INTO TABLE_NAME (ALIAS_NAME.ID,
NAME)
VALUES (1,
'test');
END;
```

## New Knowledge Base entry

The following is a new knowledge base entry; refer to the Knowledge Base section on the Migration Portal for workaround details:

- **UTL\_I18N.STRING\_TO\_RAW and UTL\_I18N.RAW\_TO\_CHAR package functions:**

In Oracle, **UTL\_I18N.STRING\_TO\_RAW** function is used to convert **VARCHAR2** or **NVARCHAR2** string to another character set and returns the result as **RAW** data and **UTL\_I18N.RAW\_TO\_CHAR** function is used to convert **RAW** data that is not encoded in the database character set into a **VARCHAR2** string. However, in Advanced Server **encode** and **decode** functions are used to convert **VARCHAR2** or **NVARCHAR2** string to **RAW** data and vice-versa.

## 2 Supported Versions

The Migration Portal supports assessment and migration from Oracle 11g and 12c to EDB Advanced Server 10, 11, or 12. Migration Portal is supported on the following browsers and operating systems:

### Supported Browsers

For the best user experience, we recommend using the Google Chrome browser. Migration Portal is also supported on the following browsers:

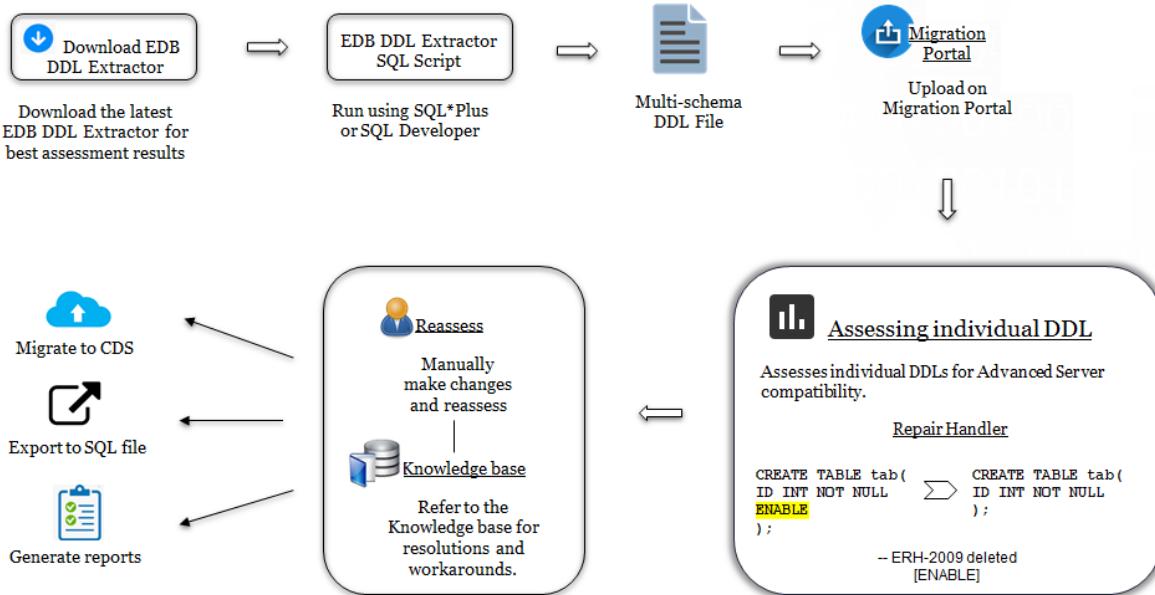
Browser	Supported Version
Apple Safari on Macintosh OS	11 and above
Google Chrome	68 and above
Microsoft Edge	42 and above
Mozilla Firefox	60 and above

### Supported Operating Systems

Operating Systems	Supported Version
Macintosh	OS X Sierra
Windows	10
Linux	CentOS 7

## 3 Using Migration Portal

The Migration Portal allows you to easily migrate your database schema from Oracle to Advanced Server. You can upload schemas for assessment and get immediate feedback and suggestions. The portal allows you to download assessed DDLs for all objects and create your EDB Postgres database on-premises or in the cloud.



To access the migration portal:

1. Open a browser and navigate to <https://www.enterprisedb.com/>
2. On the EnterpriseDB home page, click **Enterprise Postgres > EDB Postgres Migration Portal**.

The screenshot shows the EnterpriseDB homepage with the following navigation bar:

- Plans
- Blog
- Training
- Portals
- Login
- Language
- Downloads

The main content area features several links:

- EDB Postgres Platform**: EnterpriseDB Platform Overview
- Oracle® Database Compatibility**: Native compatibility with Oracle database
- EDB Postgres Advanced Server**: Oracle Compatible Postgres
- Data Adapters**: Transparent data integration for Postgres-based solutions
- Postgres Enterprise Manager**: Postgres Monitoring & Tuning
- PostGIS**: Provides spatial objects and functions in Postgres
- Backup And Recovery Tool**: Trouble-free backups and disaster recovery
- EDB Postgres Migration Portal**: Simplified Oracle to Postgres migration
- Replication Server**: Single-master or multi-master Postgres replication
- Failover Manager**: Fault-tolerant clusters for high availability Postgres
- Postgres On Kubernetes**: Cloud native Postgres orchestrated by Kubernetes

A banner at the bottom states: "When it comes to Postgres, we've got you covered". Below it, a message reads: "Our customers use EDB's versatile technology for a wide range of applications, benefiting from our deep commitment and contributions to the Postgres community." A link to the Migration Portal is provided: <https://www.enterprisedb.com/free-oracle-postgres-migration-tool>.

## 3.1 Overview of the Migration Portal Home Page

The Migration Portal home page provides quick access to migration tools.

The screenshot shows the EDB Migration Portal interface. The top navigation bar includes 'EDB Migration Portal', 'Projects' (287), '+ New', 'Portal Wiki 11', and 'Quick help 10'. The main content area is divided into several sections:

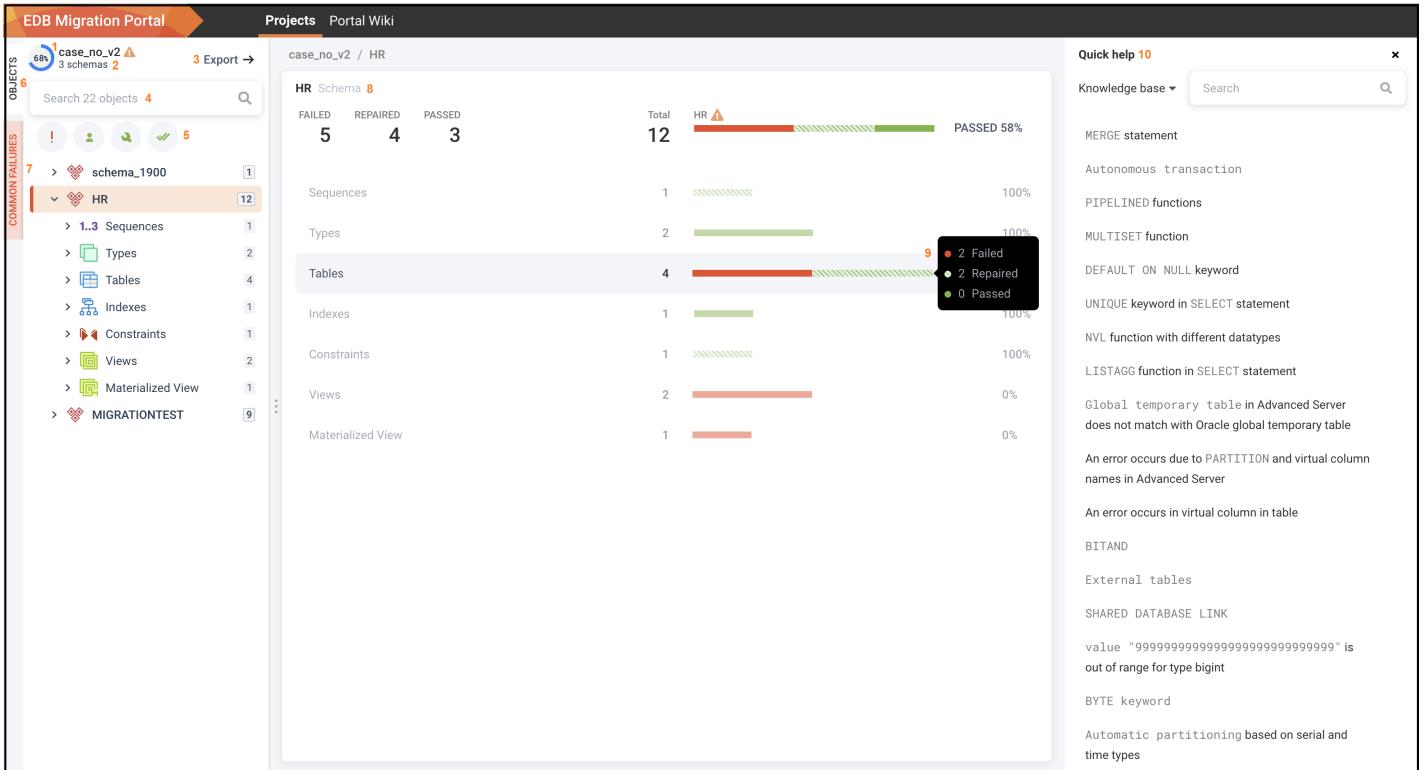
- Projects (287)**: A list of projects with details like name, source, target, and compatibility percentage (e.g., single\_txn1, oracle11g to enterpriseDB12, 75%).
- Overview**: Provides details for the selected project (single\_txn1) including interface (JDBC), source DB (ORACLE 11G), target DB (ENTERPRISEDB 12), and compatibility (75%). It also shows actions for Export (4), Report (5), and Delete (6).
- Schemas**: Shows assessment results for various schemas:
  - EBA\_INT: 6945 Objects, 91% compatibility, 565 failed, 5750 repaired, 630 passed.
  - EBBASE: 11842 Objects, 62% compatibility, 4466 failed, 6484 repaired, 892 passed.
  - EXAMPLE: 520 Objects, 100% compatibility, 0 failed, 432 repaired, 88 passed.
  - EXAMPLE2: 3 Objects, 100% compatibility, 0 failed, 3 repaired, 0 passed.
  - EXAMPLE3: 3 Objects, 100% compatibility, 0 failed, 3 repaired, 0 passed.
- Quick help**: Links to 'Getting Started', 'Quick Start guide', 'Migration Portal guide', and 'EDB DDL Extractor'.

The Migration Portal home page allows access to the following Migration Portal features:

- Projects**: The **Projects** panel displays a list of assessed projects.
- Create project**: Click **+ New** (the button located to the right of the **Projects** label) to create a new project.
- Overview**: The **Overview** panel provides details about the selected project and displays the compatibility percentage after schema assessment.
- Export**: Use the **Export** button to either download an Advanced Server compatible **.sql** file or to migrate a schema to an EDB Cloud Database Services cluster.
- Report**: Use the **Report** button to view and download the schema assessment report.
- Delete**: Use the **Delete** button to delete a selected project.
- Warning sign**: A warning message is displayed if a project or a schema is less than 70% compatible or any DDL doesn't succeed after multiple attempts.
- Upload DDL file**: Use the **Upload new schema** button to upload a new or additional DDL file.
- Schemas**: The **Schemas** panel displays the assessment result from an uploaded DDL file.
- Quick help**: The **Quick help** panel contains all the help guides.
- Portal Wiki**: The **Portal Wiki** has links to product information and different help guides.

## 3.2 Overview of the Migration Portal Projects Page

The Migration Portal Projects page provides detailed information about your migration.



Use the following resources to gather information about your migration projects:

- Compatible:** The **Compatible** gauge displays the color on the basis of the compatibility percentage of the assessed schema.
- Schema Count:** Displays the number of schemas in a project.
- Export:** Use the **Export** icon to either download the **.sql** file or to migrate the schema to an *EDB Cloud Database Service* cluster.
- Search objects:** Use the **Search** box to search for objects.
- Filters:** You can filter the system repaired and manual repaired objects from the left panel of the Projects page. In addition, you can select one or more filter combinations to refine the information.
- Objects:** Displays the objects for the selected schemas.
- Common Failures:** Displays the reason for the failed objects for the selected schemas.

**Common Failures:**

- MIGRATIONTEST (2)
- HR (5)
  - only superuser can change ... (2)
  - column "empno" does not exist (1)
  - syntax error at or near "loc" (1)
  - relation "hr.emp" does not exist (1)

**Schema Panel:**

Count	Reason for failure	Occurrences
2	only superuser can change options of a file_fdw foreign table	Tables 2
1	column "empno" does not exist	Views 1
1	syntax error at or near "loc"	Views 1
1	relation "hr.emp" does not exist	Materialized View 1

**Quick help:**

- Knowledge base ▾
- Search
- MERGE statement
- Autonomous transaction
- PIPELINED functions
- MULTISET function
- DEFAULT ON NULL keyword
- UNIQUE keyword in SELECT statement

## Note

You can download a **CSV** file for the common failures for the project.

8. **Schema:** The **Schema** panel displays the result of the assessment.
9. **Tooltip:** Hover over a result set to display a tooltip with the number of passed, failed, and repaired objects.
10. **Quick help:** The **Quick help** panel displays links to Knowledge base articles and repair handler documentation.
11. **Search:** Use the **Search** box to search the **Knowledge base** entries or repair handler documentation for specific information.

**Source:**

```
1 CREATE SEQUENCE HR.AUTO_AUDIT_LOG MINVALUE 17244 MAXVALUE 99999999999999999999 INCREMENT BY 1
START WITH 20324 NOCACHE ORDER NOCYCLE ;
```

**Target:**

```
1 CREATE SEQUENCE HR.AUTO_AUDIT_LOG MINVALUE 17244 MAXVALUE 9223372036854775807 INCREMENT BY 1 START
WITH 20324 NO CYCLE ;
```

**Output:**

- Repaired
- Success

**Reassess**

### 3.3 Overview of the Migration Portal Wiki Page

The Portal Wiki page provides quick access to information:

- What's New information
- Quick Start guide
- Migration Data guide
- DDL Extractor guide
- Knowledge Base
- Repair handlers
- Migration Portal User's Guide
- FAQs

The screenshot shows the EDB Migration Portal Wiki page. On the left, there's a sidebar with links like 'Portal Wiki', 'What's new', 'Common Failures', 'CSV file available', and 'Search Errors'. The main content area has tabs for 'Projects' and 'Portal Wiki', with 'Portal Wiki' selected. Under 'What's new', it lists various versions from 2.6.0 to 2.7.0. Below that is a 'Common Failures' tab comparison between 'TestMigration / HR1' and 'TestMigration / HR1 Schema'. The 'TestMigration / HR1 Schema' table shows errors for 'DEPARTMENT\_ID', 'MAX\_SALARY', 'V', 'PRIMARY\_ID', and 'J'. The 'TestMigration / HR1' table shows errors for 'syntax error at or near "DEPARTMENT\_ID"', 'syntax error at or near "MAX\_SALARY"', 'syntax error at or near "V"', 'syntax error at or near "PRIMARY\_ID"', and 'syntax error at or near "J"'. At the bottom, there's a 'CSV file available' section with a download link.

## 4 Migrating a Database

To migrate a database, you must complete the following steps:

1. Perform a **Schema Extraction <mp\_schema\_extraction>**.
2. Perform a **Schema Assessment <mp\_schema\_assessment>**.
3. Perform a **Schema Migration <mp\_schema\_migration>**.
4. Perform a **Data Migration <mp\_data\_migration>**.

The following sections provide detailed information about each step in the migration process.

---

## 4.1 Performing a Schema Extraction

### Prerequisites

Before extracting a schema, you must download the latest EDB DDL Extractor script from the Migration Portal [Projects](#) page or from the link provided in the DDL Extractor guide in the Portal Wiki. The script can be run in SQL Developer or SQL\*Plus. It uses Oracle's [DBMS\\_METADATA](#) built-in package to extract DDLs for different objects under schemas (specified while running the script). The EDB DDL extractor creates the DDL file that will be uploaded to the portal and analyzed for EDB Postgres compatibility.

#### Note

The *script user* must have [CONNECT](#), [RESOURCE](#) and [SELECT\\_CATALOG\\_ROLE](#) roles.

### For SQL\*Plus

1. Connect to SQL\*Plus and run the command:

```
SQL>@edb_ddl_extractor.sql
```

2. Provide the schema name and the pathdirectory in which the extractor will store the extracted DDL. When extracting multiple schemas, use a comma (',') as a delimiter.

#### Note

If you want to extract all the user schemas from the current database, do not mention any schema names while extracting. However, it is recommended to mention the schema names that you would like to extract.

3. If you want to extract dependent objects from other schemas, enter [yes](#) or [no](#).

### For example, on Linux:

```
Enter SCHEMA NAME[S] to extract DDLs:
```

```
HR, SCOTT, FINANCE
```

Enter the PATH to store DDL file:

/home/oracle/extracted\_ddls/

Extract dependent objects from other schemas? (yes/no): yes

### On Windows:

Enter SCHEMA NAME[S] to extract DDLs:

HR, SCOTT, FINANCE

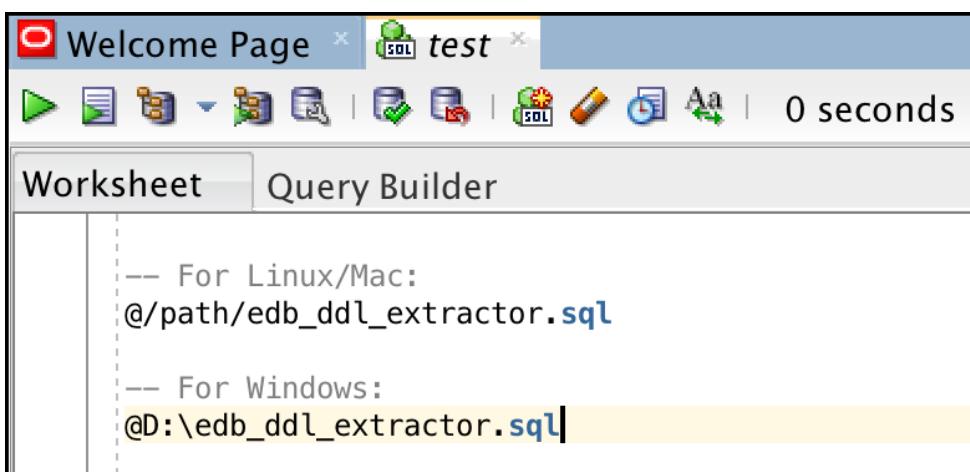
Enter the PATH to store DDL file:

C:\Users\Example\Desktop\

Extract dependent objects from other schemas? (yes/no): yes

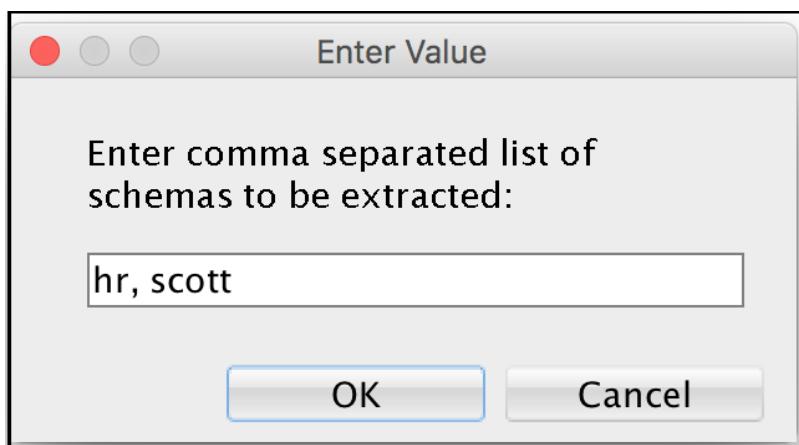
### For SQL Developer

1. Connect to the SQL server and run the following command:

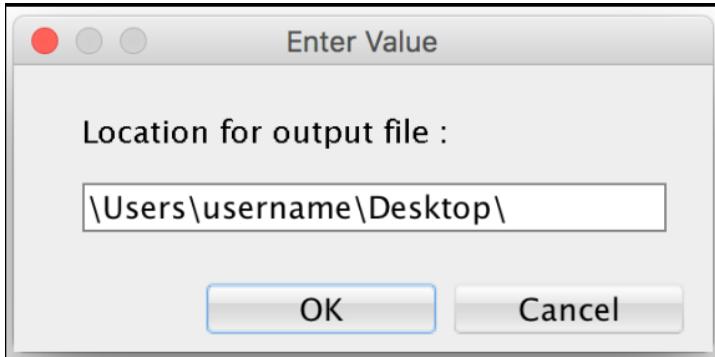


```
-- For Linux/Mac:  
@/path/edb_ddl_extractor.sql  
  
-- For Windows:  
@D:\edb_ddl_extractor.sql
```

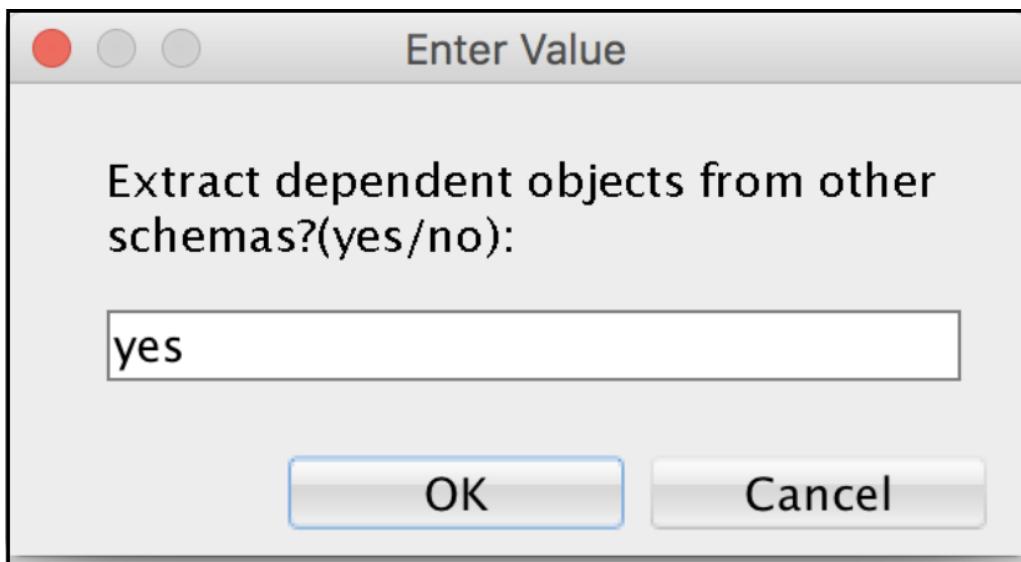
2. Enter a comma-separated list of schemas:



3. Enter file path for the output file:



4. Extract dependent objects from other schemas?(yes/no): **yes**



**Note:** You can also enter a single schema name in both the SQL\*Plus and SQL Developer tools.

5. The script iterates through the object types in the source database and once the task is completed, the .SQL output is stored at the entered location, i.e.,  
**c:\\Users\\Example\\Desktop\\**.

#### Additional Notes

- The EDB DDL Extractor does not extract objects that have names like:

**BIN\$b54+4XIEYwPgUAB/AQBWwA= =\$0**

To extract these objects, you must change the name of the objects and re-run the extraction process.

- DDL Extractor extracts **nologging** tables as normal tables. Once these tables are migrated to Advanced Server, WAL log files will be created.

## Supported Object Types

The migration portal supports the migration of the following object types:

- Synonyms
- DB Links
- Types and Type Body
- Sequences
- Tables
- Constraints
- Indexes (Except LOB indexes and indexes on materialized views)
- Views
- Materialized Views
- Triggers
- Functions
- Procedures
- Packages

### Note

COMMENTS on Columns, Tables, and Materialized Views are supported.

## Unsupported Object Types

- Editions
- Operators
- Schedulers
- LOB indexes and Indexes on Materialized Views
- XML Schemas
- Profiles
- Role and Object Grants
- Tablespaces
- Directories
- Users
- RLS Policy
- Queues

## Oracle System Schemas

EDB DDL Extractor script will ignore the following system schemas while extracting from Oracle:

ANONYMOUS	APEX_PUBLIC_USER	APEX_030200
APEX_040000	APEX_040000	APPQOSSYS
AUDSYS	BI	CTXSYS
DMSYS	DBSNMP	DIP
DVF	DVSYS	EXFSYS
FLOWS_FILES	FLOWS_020100	GSMADMIN_INTERNAL
GSMCATUSER	GSMUSER	IX
LBACSYS	MDDATA	MDSYS
MGMT_VIEW	OE	OJVMSYS
OLAPSYS	ORDPLUGINS	ORDSYS
ORDDATA	OUTLN	ORACLE_OCM
OWBSYS	OWBYSS_AUDIT	PM
RMAN	SH	SI_INFORMTN_SCHEMA
SPATIAL_CSW_ADMIN_USR	SPATIAL_WFS_ADMIN_USR	SYS
SYSBACKUP	SYSDG	SYSKM
SYSTEM SYSMAN	TSMSYS WKPROXY	WKSYS
WK_TEST XS\$NULL	WMSYS	XDB

## 4.2 Performing a Schema Assessment

To assess an Oracle database schema for compatibility with Advanced Server, you must:

1. Navigate to the [Migration Portal](#).
2. Enter your EDB credentials.
3. Click the **CREATE PROJECT** icon to create a new project.

## New project

Project name

Application interface  
 JDBC     ODBC     .NET     OCI     ProC     Other

Source DB

Version

Target DB

Version

DDL file [How to get a DDL file?](#)

Add Index Prefix  
i Index objects will be prefixed with "idx" as unique names are required for tables and indexes.

Description(Optional)  
  
200 characters left

4. On the **New project** dialog, enter the project name in the **Project name** field.

## 5. Specify project details:

- Select the radio button next to the **Application interface**.
- Select a **Source DB** and **Version** for the source.
- Select the **Target DB** and **Version** for the target.

## 6. Click **Choose file** to upload the .SQL file generated by the latest EDB DDL Extractor for Oracle Database.

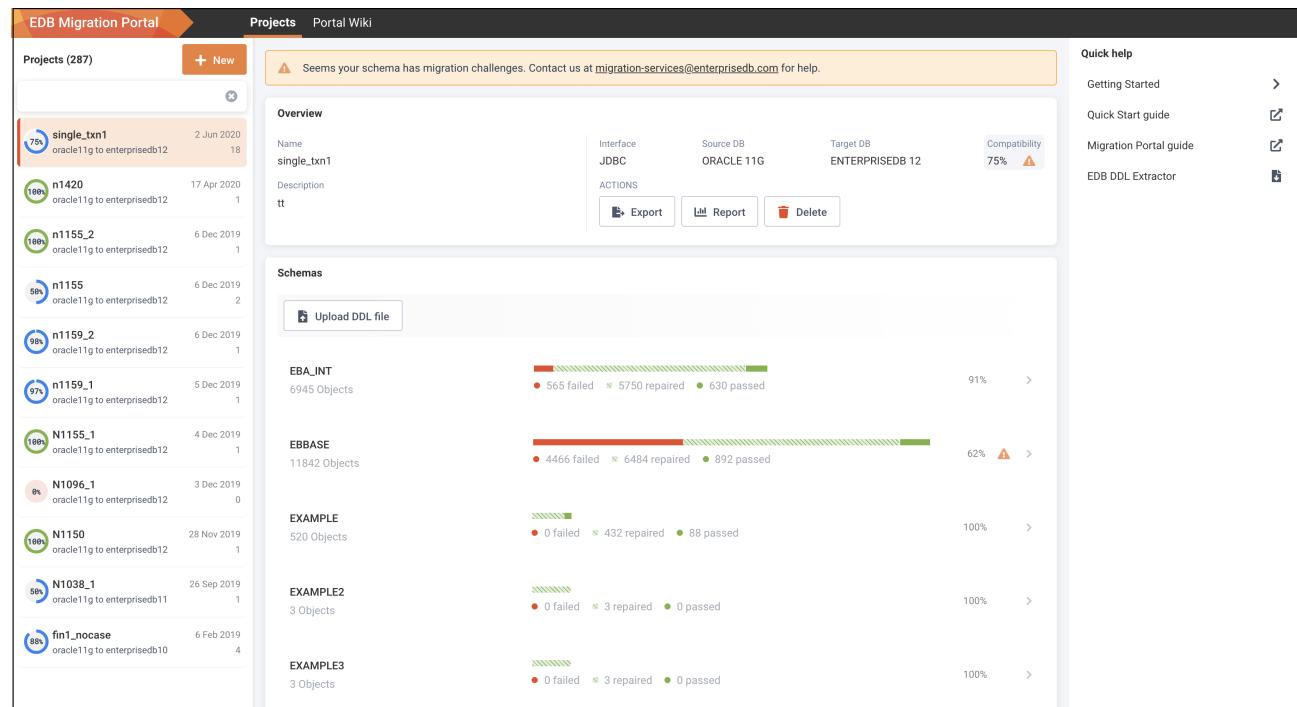
### Note:

- You should not modify the .SQL file.
- Only the .SQL file generated by the latest EDB DDL Extractor can be uploaded.

For more information, refer to the **Schema Extraction <mp\_schema\_extraction>** section.

## 7. Check the box next to **Add Index Prefix** to specify an index prefix (**idx**) when creating a project to ensure better assessment results, as Advanced Server does not support the same name for tables and indexes.

## 8. Click **Create & assess** to create a new project and to assess the schemas.



The analysis tool will review every construct and execute repair actions to improve compatibility with Advanced Server, and flag any remaining errors that require manual intervention.

## 9. Verify the DDL objects (e.g., TABLES) that do not show a 100% success ratio.

case\_no\_v2 / HR

HR Schema

FAILED	REPAIRED	PASSED	Total	Percentage
5	4	3	12	PASSED 58%

Sequences: 100%  
Types: 100%  
Tables: 2 Failed, 2 Repaired, 0 Passed  
Indexes: 100%  
Constraints: 100%  
Views: 0%  
Materialized View: 0%

**Quick help**

- MERGE statement
- Autonomous transaction
- PIPELINED functions
- MULTISET function
- DEFAULT ON NULL keyword
- UNIQUE keyword in SELECT statement
- NVL function with different datatypes
- LISTAGG function in SELECT statement
- Global temporary table in Advanced Server does not match with Oracle global temporary table
- An error occurs due to PARTITION and virtual column names in Advanced Server
- An error occurs in virtual column in table
- BITAND
- External tables
- SHARED DATABASE LINK
- value "99999999999999999999999999999999" is out of range for type bigint
- BYTE keyword
- Automatic partitioning based on serial and time types

10. Click the objects that are not compatible with EDB Postgres and view the details. At the bottom of the middle panel, you can view repair action details.

case\_no\_v2 / HR / Tables / DEPARTMENTS\_EXT

Source

```

1 CREATE TABLE HR.DEPARTMENTS_EXT
2   (
3     DEPTNO VARCHAR2(4),
4     DNAME VARCHAR2(20),
5     LOCATION VARCHAR2(20)
6   )
7   ORGANIZATION EXTERNAL
8     (TYPE ORACLE_LOADER
9      (DEPTNO, DNAME, LOCATION)
10     )
```

Target

```

1 CREATE FOREIGN TABLE HR.DEPARTMENTS_EXT
2   (
3     DEPTNO VARCHAR2(4),
4     DNAME VARCHAR2(20),
5     LOCATION VARCHAR2(20)
6   )
7   server file_fdw_server
8   options (filename '/tmp/data.csv', format 'csv');
```

**Output** Repaired

only superuser can change options of a file\_fdw foreign table line 1, char 0

**Quick help**

- MERGE statement
- Autonomous transaction
- PIPELINED functions
- MULTISET function
- DEFAULT ON NULL keyword
- UNIQUE keyword in SELECT statement
- NVL function with different datatypes
- LISTAGG function in SELECT statement
- Global temporary table in Advanced Server does not match with Oracle global temporary table
- An error occurs due to PARTITION and virtual column names in Advanced Server
- An error occurs in virtual column in table
- BITAND
- External tables
- SHARED DATABASE LINK
- value "99999999999999999999999999999999" is out of range for type bigint
- BYTE keyword
- Automatic partitioning based on serial and time types

11. Refer to the Knowledge Base information in the right panel to locate the possible workarounds for the objects that are not immediately compatible with Advanced Server. You can also view the Knowledge Base information on the Portal Wiki page.

The screenshot shows the EDB Migration Portal interface. On the left, there's a sidebar titled 'COMMON FAILURES' listing various migration issues. The main area is titled 'case\_no\_v2 / HR' and shows a summary of object status: FAILED (5), REPAIRED (4), PASSED (3), and a total of 12 objects. Below this, detailed statistics are provided for Sequences, Types, Tables, Indexes, Constraints, Views, and Materialized View. The 'Tables' section is highlighted, showing 4 tables with 2 Failed, 2 Repaired, and 0 Passed. A legend indicates that red bars represent Failed objects, green bars represent Repaired objects, and grey bars represent Passed objects. The right side of the screen features a 'Quick help' panel with a search bar and a list of migration-related topics.

12. On the **Knowledge Base** tab, you can enter the error message for the incompatible objects with Advanced Server and click **Search**.

The object detail panel displays the workaround or the resolution for the failed object. You can manually make the changes on the **Assessment** tab for that object, and click **Reassess**.

**Note:** If any failed object passes while reassessing, the dependent objects for that object are also reassessed.

**Source**

```

1 CREATE TABLE HR.EMPLOYEES
2 (   EMPLOYEE_ID NUMBER(6,0),
3     FIRST_NAME VARCHAR2(20),
4     LAST_NAME VARCHAR2(25) CONSTRAINT EMP_LAST_NAME_NN NOT NULL ENABLE,
5     EMAIL VARCHAR2(25) CONSTRAINT EMP_EMAIL_NN NOT NULL DISABLE,
6     PHONE_NUMBER VARCHAR2(20),
7     HIRE_DATE DATE CONSTRAINT EMP_HIRE_DATE_NN NOT NULL ENABLE,
8     JOB_ID VARCHAR2(10) CONSTRAINT EMP_JOB_NN NOT NULL ,
9     SALARY NUMBER(8,2),
10    COMMISSION_PCT NUMBER(2,2),
11    MANAGER_ID NUMBER(6,0),
12    DEPARTMENT_ID NUMBER(4,0),
13    CONSTRAINT EMP_SALARY_MIN CHECK (salary > 0) ,
14    CONSTRAINT EMP_EMAIL_UK UNIQUE (EMAIL) ,
15    CONSTRAINT EMP_EMP_ID_PK PRIMARY KEY (EMPLOYEE_ID) ) ;

```

**Target**

```

1 CREATE TABLE HR.EMPLOYEES
2 (   EMPLOYEE_ID NUMBER(6,0),
3     FIRST_NAME VARCHAR2(20),
4     LAST_NAME VARCHAR2(25) CONSTRAINT EMP_LAST_NAME_NN NOT NULL ,
5     EMAIL VARCHAR2(25) CONSTRAINT EMP_EMAIL_NN NOT NULL ,
6     PHONE_NUMBER VARCHAR2(20),
7     HIRE_DATE DATE CONSTRAINT EMP_HIRE_DATE_NN NOT NULL ,
8     JOB_ID VARCHAR2(10) CONSTRAINT EMP_JOB_NN NOT NULL ,
9     SALARY NUMBER(8,2),
10    COMMISSION_PCT NUMBER(2,2),
11    MANAGER_ID NUMBER(6,0),
12    DEPARTMENT_ID NUMBER(4,0),
13    CONSTRAINT EMP_SALARY_MIN CHECK (salary > 0) ,
14    CONSTRAINT EMP_EMAIL_UK UNIQUE (EMAIL) ,
15    CONSTRAINT EMP_EMP_ID_PK PRIMARY KEY (EMPLOYEE_ID) ) ;

```

**Output** Repaired  
Success

**Quick help**

- MERGE statement
- Autonomous transaction
- PIPELINED functions
- MULTISET function
- DEFAULT ON NULL keyword
- UNIQUE keyword in SELECT statement
- NVL function with different datatypes
- LISTAGG function in SELECT statement
- Global temporary table in Advanced Server does not match with Oracle global temporary table
- An error occurs due to PARTITION and virtual column names in Advanced Server
- An error occurs in virtual column in table
- BITAND
- External tables
- SHARED DATABASE LINK
- value "99999999999999999999999999999999" is out of range for type bigint
- BYTE keyword
- Automatic partitioning based on serial and time types

Similarly, you can make all the incompatible objects compatible.

**Note:** If the information or workaround for incompatible objects is not available in the Knowledge Base, please contact the support team for assistance.

When you have finished working with the DDL, you can either download the modified EDB compatible DDL as a .sql file or migrate the schemas [to a CDS cluster](#).

## Generating an Assessment Report

Migration Portal's report functionality provides a high-level assessment summary of the schemas assessed for your project. In addition, the report provides details about the failed objects and the cause of failure.

## Report

Select schemas

All

MIGRATIONTEST

HR

 Generate

To generate a report:

1. Click the **Report** button to access the schema selection dialog.
2. Select the schemas that you wish to include in the report.
3. Click **Generate** to generate the onscreen report.

Schema Assessment Report

Generated by EDB Postgres Migration Portal on 6th February 2020, 2:56:38 pm Project idx: 1 Description: 1 Source database: ORACLE 11G Target database: ENTERPRISEDATABASE 10

**Summary**

This report provides a high-level assessment summary for selected schemas you assessed under "idx" project. In addition, the report provides details of the failed objects and the cause of failure.

Schemas	Total objects	Passed	Repaired	Failed	Compatibility
HR	42	17	22	3	92%

**HR** 42 objects

Object type	Total	Passed	Repaired	Failed
Constraints	11	0	10	1
Indexes	12	11	1	0
Materialized View	1	0	0	1
Procedures	2	2	0	0
Sequences	3	0	3	0
Tables	10	1	8	1
Triggers	2	2	0	0
Types	1	1	0	0

**Failed Objects**

Schema	Object type	Failed object	Reason for failing	Total	Failed
HR	Constraints	EMP_DEPTNO_Fkey	line 1, char 20 relation "hr.emp" does not exist	42	3
HR	Materialized View	HR_EMP	line 1, char 20 relation "hr.emp" does not exist	1	1
HR	Tables	EMP	line 3, char 76 syntax error at or near "DISABLE"	8	1

Repair Handlers Applied

You can optionally select **Generate PDF** to save the report in **.pdf** format. You can also view the count of distinct repair handlers applied to the DDLs under the selected schemas.

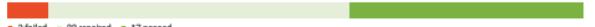
06/02/2020 EDB Assessment Report-idx

**Schema Assessment Report**

**EDB POSTGRES**  
Generated by  
EDB Postgres Migration Portal  
6th February 2020, 1:47:44 pm

Project: idx  
Description: t  
Source database: ORACLE 11G  
Target database: ENTERPRISEDB 10

**Summary**  
This report provides a high-level assessment summary for selected schemas you assessed under "idx" project. In addition, the report provides details of the failed objects and the cause of failure.

1 Schemas	42 Total objects	17 Passed	22 Repaired	3 Failed	92% Compatibility
HR	42 objects				
HR Object type		42 Total	17 Passed	22 Repaired	3 Failed
Constraints		11	0	10	1
Indexes		12	11	1	0
Materialized View		1	0	0	1
Procedures		2	2	0	0
Sequences		3	0	3	0
Tables		10	1	8	1
Triggers		2	2	0	0
Types		1	1	0	0

**Failed Objects**

Schema: HR	Object type	Failed object	Reason for failing	Total: 42 Failed: 3
Constraints	EMP_DEPTNO_fkey		line1,char0 relation "hr.emp" does not exist	1 Failed
Materialized View	HR_EMP		line1,char209 relation "hr.emp" does not exist	0 Repaired
Tables	EMP		line3,char76 syntax error at or near "DISABLE"	0 Passed

## 4.3 Schema Migration

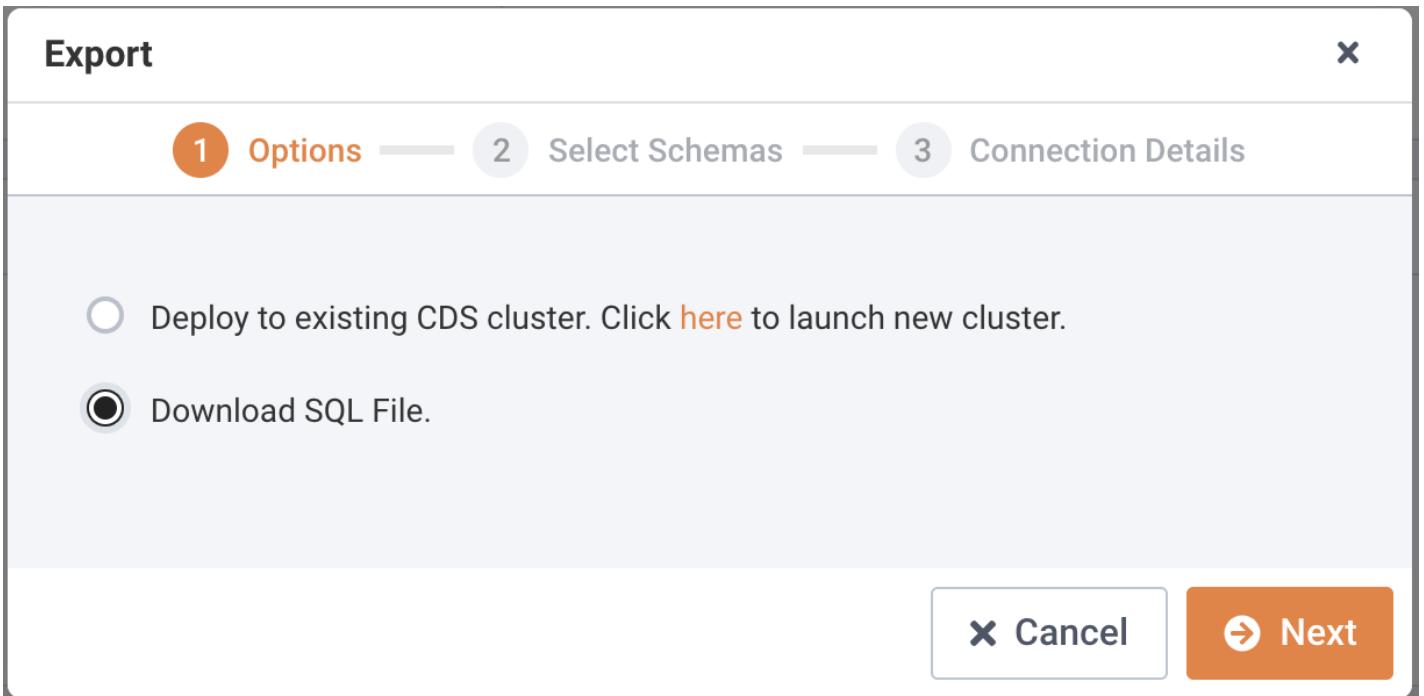
After resolving errors in your schemas, you can use the schemas with a client application such as pgAdmin, ToadEdge, or the PSQL client, or migrate the schema to an EDB Cloud Database Service (CDS) cluster.

**Please Note:** For more information about using Toad Edge with Advanced Server, see [Toad Edge for Postgres](#).

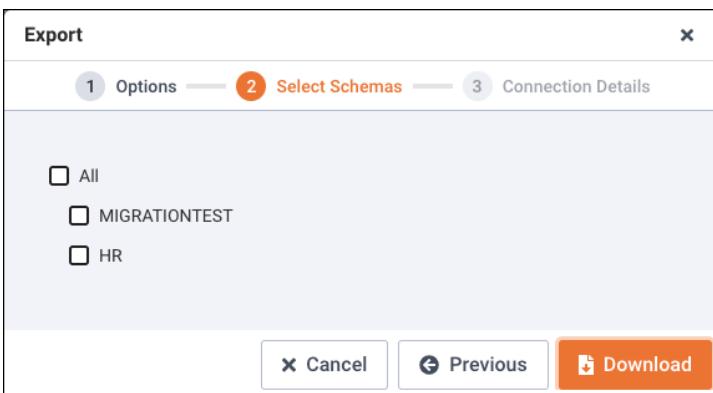
### Using PSQL or pgAdmin to Deploy a schema

After ensuring that the assessed schema is 100% compatible on Migration Portal, you can perform the following steps to deploy a schema using PSQL or pgAdmin:

1. On the Project Page, select the required project.
2. Click Export to download the assessed file.



3. Click Download.



4. (For PSQL) Connect to desired Advanced Server using the psql/edb-psql client and run the following command:

```
edb=# \i /exported_ddls_folder/hr_schema/ProjHR_hr.sql
```

5. (For pgAdmin) Connect to the desired database and click Open.

6. Upload the schema and click Run.

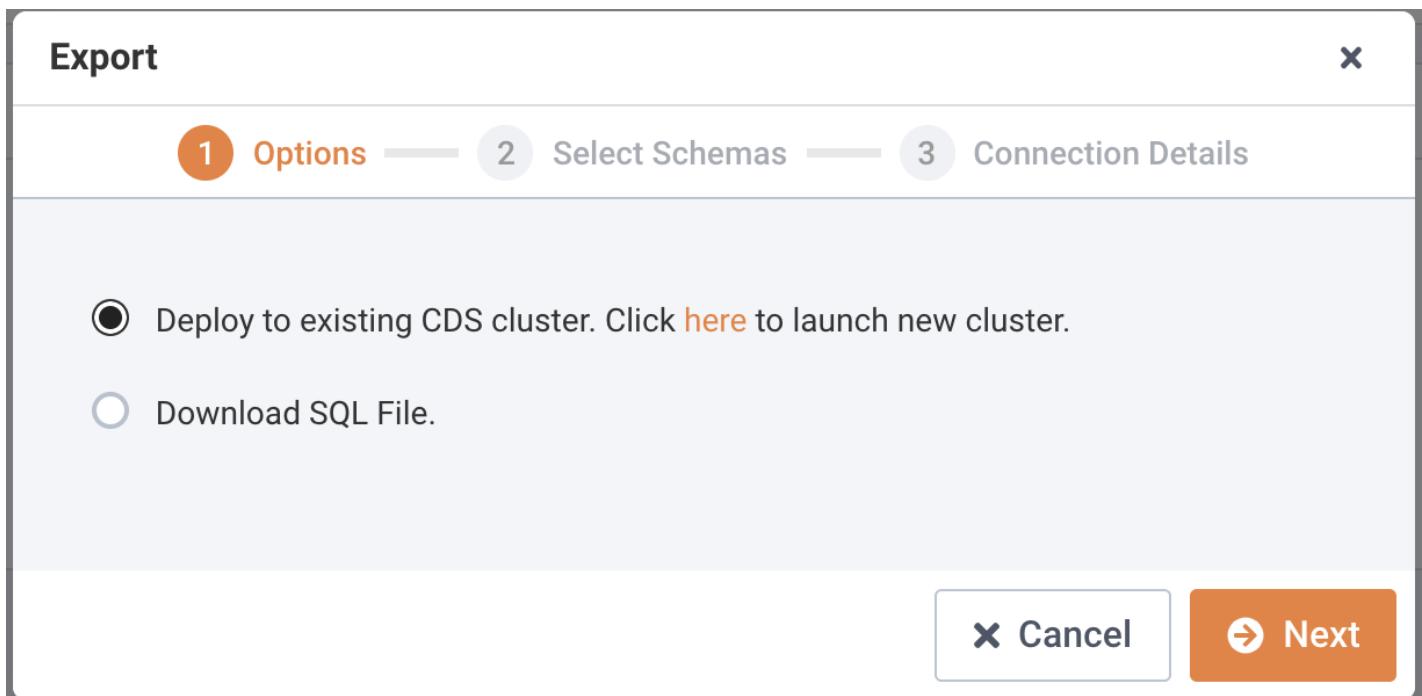
The Advanced Server instance must be installed in Oracle Mode to enable native compatibility with key Oracle capabilities.

## Migrating a Schema to a CDS cluster

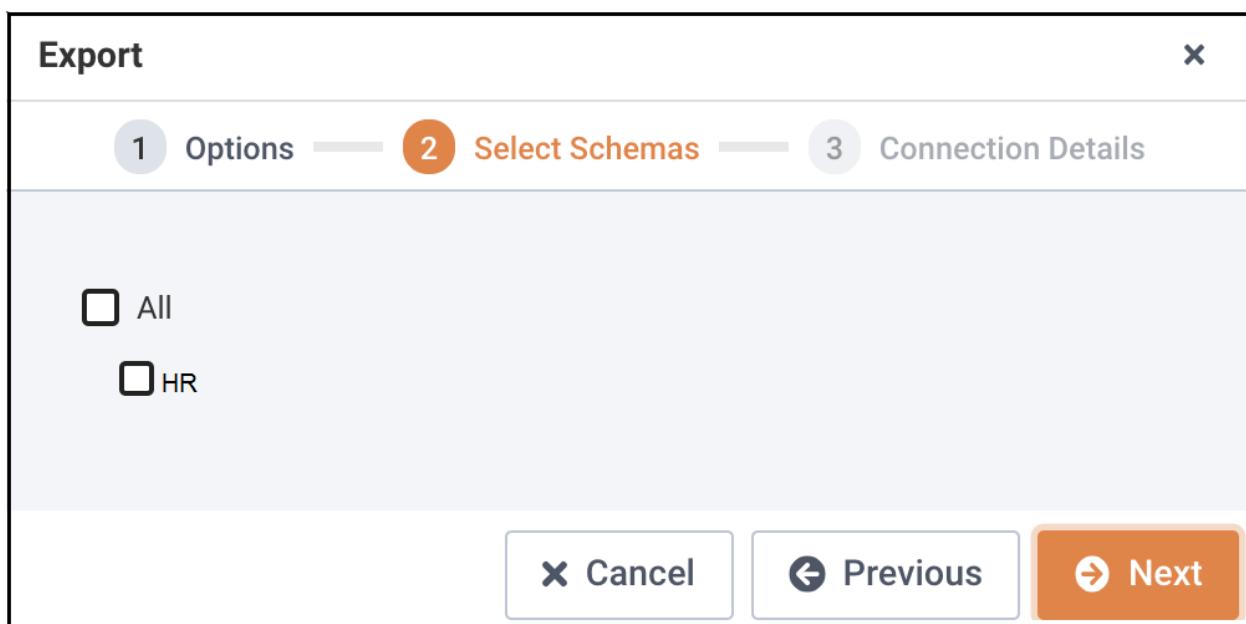
Perform the following steps to migrate your database to a CDS cluster:

1. On the **Project** page, click **Export**.
2. Select the **Deploy to existing CDS cluster. Click here to launch new cluster** option.

For information about creating a new cluster, see [Creating a Server Cluster](#).



3. Click **Next**.
4. Select the schemas you wish to migrate.



5. Click **Next** to continue.

Export

1 Options — 2 Select Schemas — 3 Connection Details

Target database  
RHS

Host name/address

Port  
9999

Maintenance database  
edb

Username

Password  
.....

The screenshot shows the 'Connection Details' step of the 'Export' wizard. It contains fields for the target database ('RHS'), host name/address, port ('9999'), maintenance database ('edb'), and username. The password field is redacted with dots. At the bottom are buttons for 'Cancel', 'Previous', and 'Test Connection'.

6. Enter the required details in the **Connection Details** dialog box.

**Export**

1 Options —— 2 Select Schemas —— 3 Connection Details

Target database	RHS	Edit
Host name/address	52.5.148.59	
Port	5444	
Maintenance database		
Username		
Password	*****	

Connection successful.

**Note:**

- Deployment will create a new database **RHS** on target server, if the database does not exist.
- Ensure that all schemas have a 100% success ratio before deployment.
- Existing schemas with similar names will be dropped during deployment.

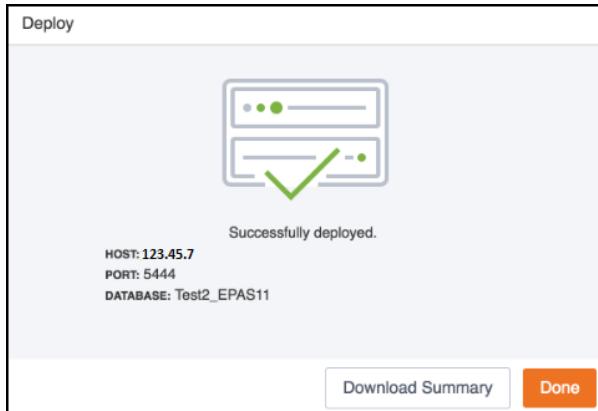
Cancel
 Previous
 Deploy

7. Click **Test Connection** to verify the connection details.

Note: You can click **Edit** to make changes to the connection details and retest the connection details.

8. Once the connection is successful, click **Deploy**.

9. You can view the deployment details on the **Deploy** dialog; click **Download Summary** to download the deployment log.



- Click **Done** to close the window.

## 4.4 Data Migration

After performing the schema migration, complete the following steps to migrate data:

- Use EDB Postgres Migration Toolkit to migrate the data. For detailed information about using Migration Toolkit, see the [EDB Postgres Migration Toolkit Guide](#).
- Configure the Migration Toolkit `toolkit.properties` file, ensuring that connection information for the source and target databases is available in the property file:

```

SRC_DB_URL = jdbc:oracle:thin:@localhost:1521:ORCL
SRC_DB_USER = user_name
SRC_DB_PASSWORD = password
TARGET_DB_URL= jdbc:edb://localhost:5444/migration
TARGET_DB_USER = enterprisedb
TARGET_DB-PASSWORD = password

```

For more information, see [Building the toolkit.properties File](#).

- Invoke Migration Toolkit in `--dataOnly` mode; include the `--truncLoad` keyword to resolve foreign key dependencies across tables.

For example, the following command:

```
runMTK.sh --dataOnly --targetSchema hr --truncLoad HR
```

The command migrates the specified source\_schema to the `target_schema`. The data is loaded into the locally installed EDB Postgres instance with a database superuser named `enterprisedb` and the password of `password`.

**Note:** The tables are truncated before attempting the data load.

---

## 5 Advanced Data Migration

For larger databases that require a parallel data load, you can use one of the following methods:

- Use the EDB Postgres Advanced Server database link feature (for compatibility with Oracle databases).

Or

- Use a Dblink or a database link style migration (if your data contains **CLOB** data).

For more information, see the [EDB Postgres Migration Toolkit Guide](#).