



# **Migration Portal 3.1 Guide**

*Release 1.0.0*

**EnterpriseDB**

**May 30, 2021**



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Migration Portal is a web-based service for migrating Oracle database schemas to the EDB Postgres platform. The Migration Portal assesses and analyzes Oracle database schemas and converts types, tables, sequences, constraints, triggers, views, stored procedures, packages, database links (dblinks), materialized views, and indexes, producing DDLs compatible with EDB Postgres Advanced Server.

The user-friendly portal interface simplifies the assessment and migration process. Log in to the portal and start with the migration process.

The Migration Portal guide provides a high-level description of the steps involved in the migration process. The guide also includes solutions to common migration problems and details of unsupported features and their potential workarounds.

EnterpriseDB has helped companies migrate their existing database systems to Postgres for years. For more information, visit the EnterpriseDB website at: <https://www.edbpostgres.com/>



## WHAT'S NEW

The following enhancements are added to the Migration Portal for the release 3.1.0:

- Asynchronous/Parallel assessment  
You can now create multiple projects and run the assessments in parallel, getting notified once the assessment completes. Also, use multiple browser tabs to work on projects simultaneously.
- Restructured schema assessment report for enhanced readability along with consolidated information about the incompatible function/package
- Refined object search and filter experience along with other UI enhancements
- Starting this release, Migration Portal detects function/procedure names from the packages which are not supported in EPAS, for example, 'Incompatible function/package found : UTL\_FILE.GET\_RAW', giving a better understanding of error and the migration efforts required.

### Updated Repair Handler

Repair handlers convert Oracle syntax to Postgres-compatible syntax so that you don't have to do it manually.

- **ERH-2055 - UNSUPPORTED\_USING\_INDEX\_CLAUSE**  
Updated the repair handler such that it does not remove GLOBAL indexes from the table definition
- **ERH-1012 - INSERT\_STATEMENT\_ALIAS**  
Modified the repair handler as it was not firing for scenarios where INSERT statements contained the SELECT statement
- **ERH-2090 - CONVERT\_FUNCTION**  
Enhanced the performance for large DDLs
- **ERH-2027 - SESSION\_GLOBAL\_SEQUENCE**  
Enhanced the accuracy so that it functions correctly for edge case DDLs
- **ERH-2079 - GLOBAL\_PARTITIONED\_INDEX**  
Removed this so that Global Partitioned Indexes will not be removed

### Knowledge Base

Knowledge base entries provide workarounds or solutions for the objects that fail during an assessment. You can view and apply the knowledge base solutions to reassess the fail objects.

### New Knowledge Base entries

Following are the new knowledge base entries added:

- **Workaround for Oracle SQLERRM function**

The `SQLERRM()` function returns the error message associated with the most recently raised error exception. You may use Advanced Server supported `SQLCODE` and `SQLERRM` variables in the exception block to get similar results.

- **Workaround for Oracle SQLCODE function**

In PL/SQL blocks, the `SQLCODE` can be used for getting numeric code of exception, in Advanced Server you can create custom function which can return numeric value of error.

- **Value assignment with %type operator for TYPE definition inside package**

This syntax is supported starting with Advanced Server v12, hence we recommend upgrading to Advanced Server v12 or above to resolve this error.

- **Global Indexes**

Global Indexes map one index to multiple partitioned tables. There can be multiple workarounds, for example, aligning partitioning keys across all referencing and referenced tables.

- **Workaround for NESTED Table**

In Advanced Server, `ARRAY` can be used to achieve the same kind of functionality.

- **Method Overloading**

In Oracle, users can overload the method inside the package by changing the name of the arguments. In Advanced Server, users should change the argument type to overload a method.

## **SUPPORTED PLATFORMS**

The Migration Portal supports assessment and migration from Oracle 11g and 12c to EDB Postgres Advanced Server 10, 11, 12, or 13. 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:

| <b>Browser</b>               | <b>Supported Version</b> |
|------------------------------|--------------------------|
| 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**

| <b>Operating Systems</b> | <b>Supported Version</b> |
|--------------------------|--------------------------|
| Macintosh                | OS X Sierra              |
| Windows                  | 10                       |
| Linux                    | CentOS 7                 |



## USING MIGRATION PORTAL

Migration Portal allows you to easily migrate your database schema from Oracle to EDB Postgres 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.

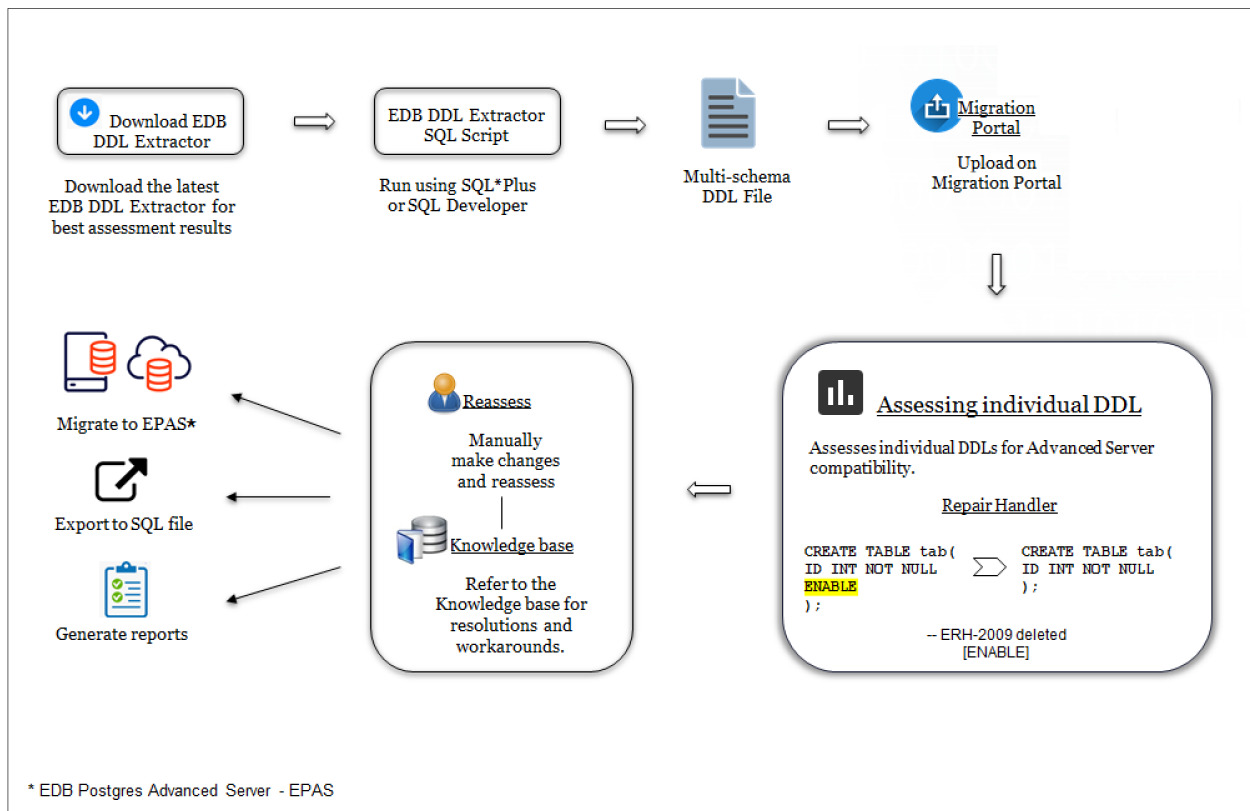


Fig. 1: The assessment and migration process

Figure 2-1: The assessment and migration process

**Note** Migration Portal currently does not have team collaboration features. We recommend collaborative meetings, screen sharing, and using the downloadable assessment report to share results.

To access the Migration Portal:

1. Open a browser and navigate to <https://www.edbpostgres.com/>.
2. On the EnterpriseDB home page, click Products > Migration Portal.

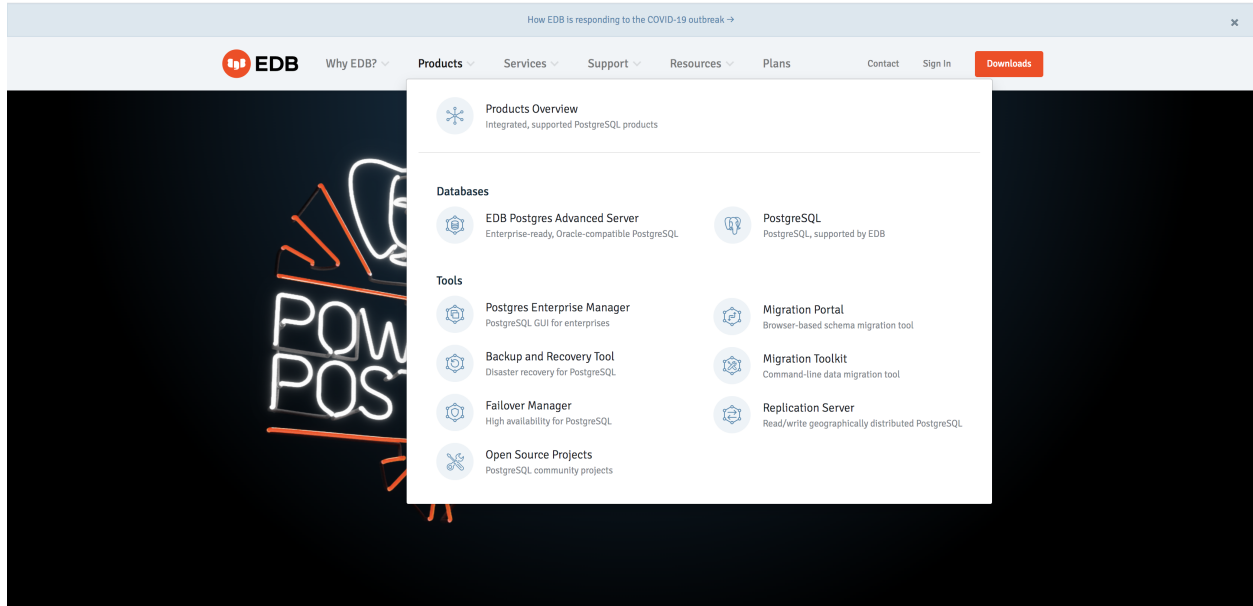


Fig. 2: Accessing the Migration Portal.

Figure 2-2: The assessment and migration process

3. Click Open Migration Portal.
4. Log in using your credentials.

### 3.1 Overview of the Migration Portal Home Page

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

Figure 2-3: The Migration Portal home

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

1. **Projects:** The `Projects` panel displays a list of assessed projects.
2. **Create project:** Click `+ New` (the button located to the right of the `Projects` label) to create a new project.  
**Note** Uploading large DDL files might freeze or crash the browser (depending on the browser and the system resources in use). In this scenario, try running Migration Portal in a different browser or extracting fewer schemas and uploading that file on Migration Portal.
3. **Search projects:** Use the `Search` box to search for projects.
4. **Overview:** The `Overview` panel provides details about the selected project and displays the compatibility percentage after schema assessment.
5. **Migrate to:** Use the `Migrate to` button to either download an EDB Postgres Advanced Server compatible `.sql` file or migrate a schema to an EDB Postgres Advanced Server on-premise or on the cloud. For more information, see [Schema Migration](#).
6. **Report:** Use the `Report` button to view and download the schema assessment report.
7. **Delete:** Use the `Delete` button to delete a selected project.

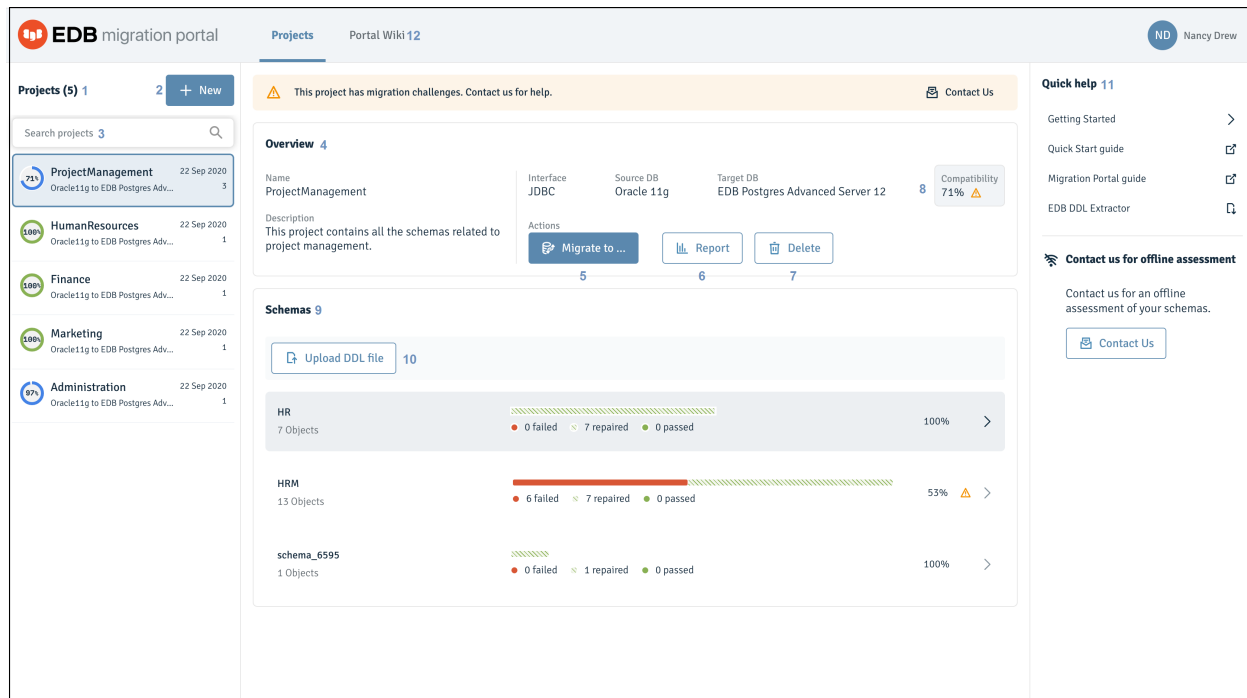


Fig. 3: The Migration Portal home page.

8. **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.
9. **Upload DDL file:** Use the Upload new schema button to upload a new or additional DDL file.
10. **Schemas:** The Schemas panel displays the assessment result from an uploaded DDL file.
11. **Quick help:** The Quick help panel contains quick handles to a few required resources.
12. **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.

Figure 2-4: The Migration Portal Projects Page overview

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

1. **Compatible:** The Compatible gauge displays the color on the basis of the compatibility percentage of the assessed schema.
2. **Schema Count:** Displays the number of schemas in a project.
3. **Migrate to:** Use the Migrate to to migrate the schema to an *EDB Postgres Advanced Server* on-premise or on cloud.
4. **Search objects:** Use the Search box to search for objects.
5. **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.
6. **Objects:** Displays the objects for the selected schemas.

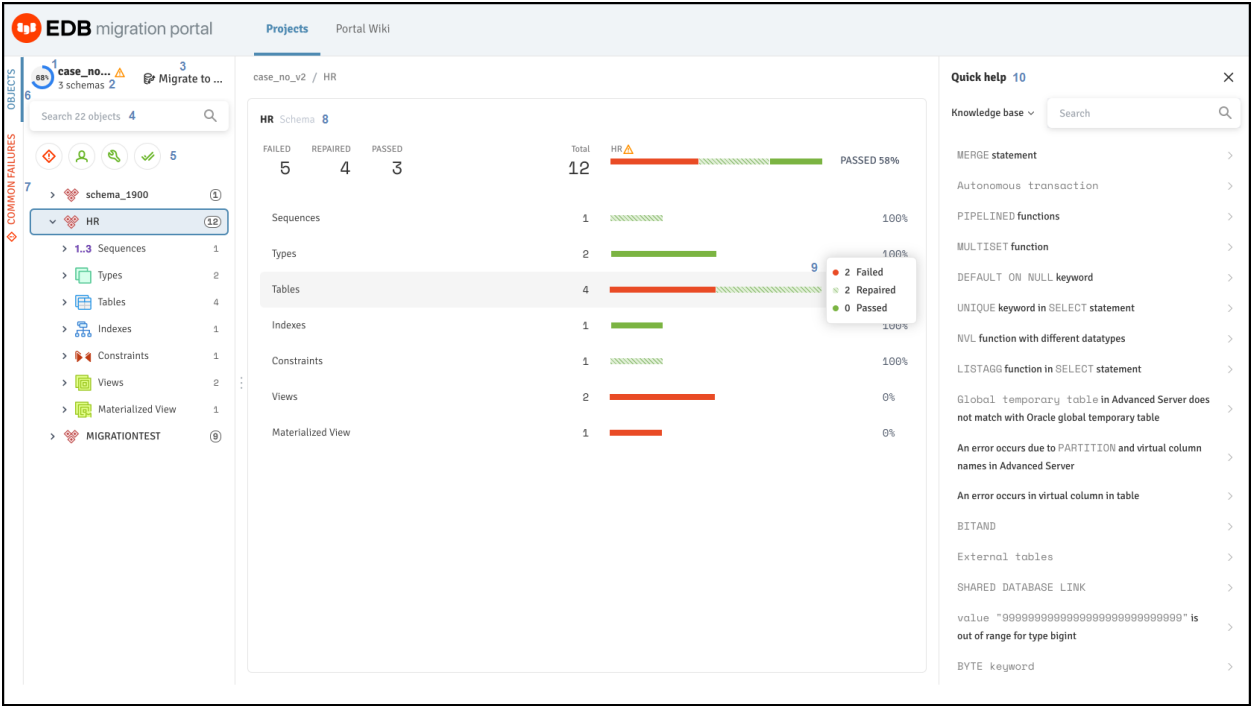


Fig. 4: The Migration Portal Projects Page overview.

7. **Common Failures:** Displays the reason for the failed objects for the selected schemas.

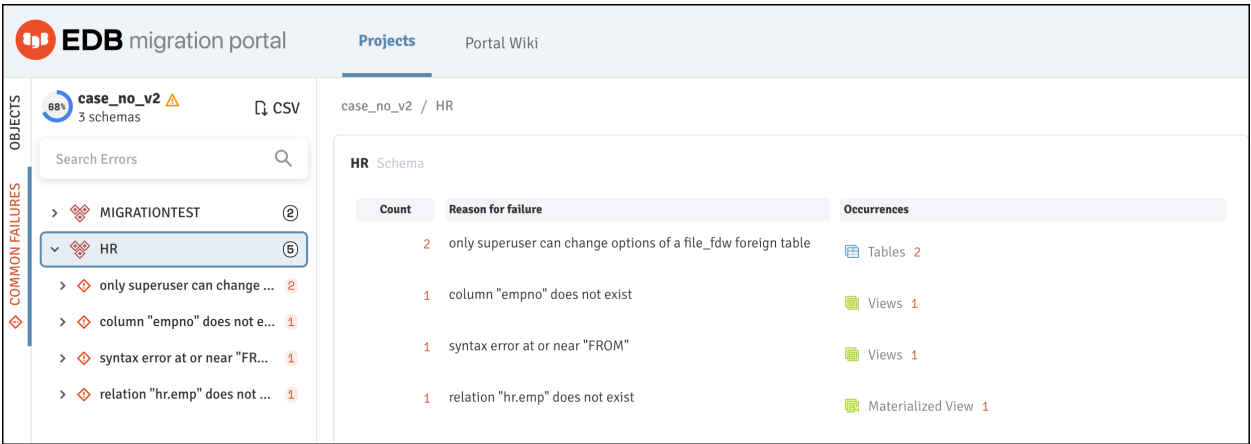


Fig. 5: Common Failures tab

Figure 2-5: Common Failures tab

**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.

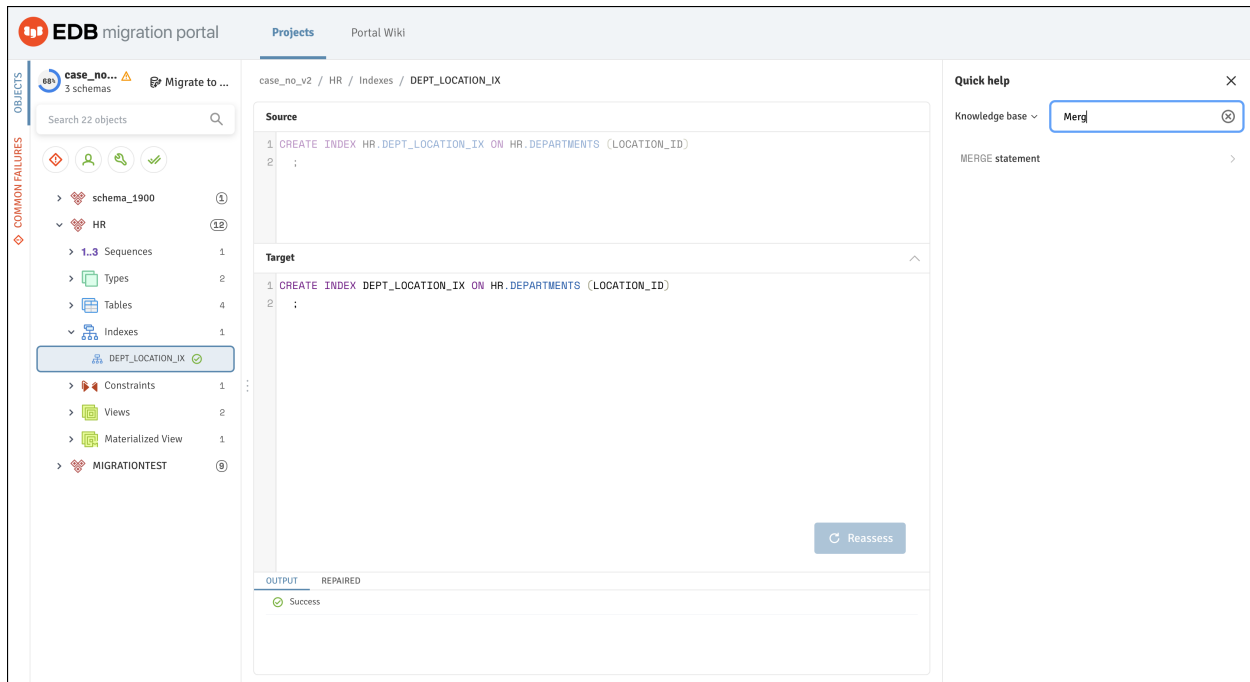


Fig. 6: Searching the Knowledge Base entry.

Figure 2-6: Searching the Knowledge Base entry

### 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
- Migrating Schema
- Migrating Data
- DDL Extractor guide
- Knowledge Base
- Repair handlers
- Migration Portal User's Guide
- FAQs

Figure 2-7: The Migration Portal Wiki page

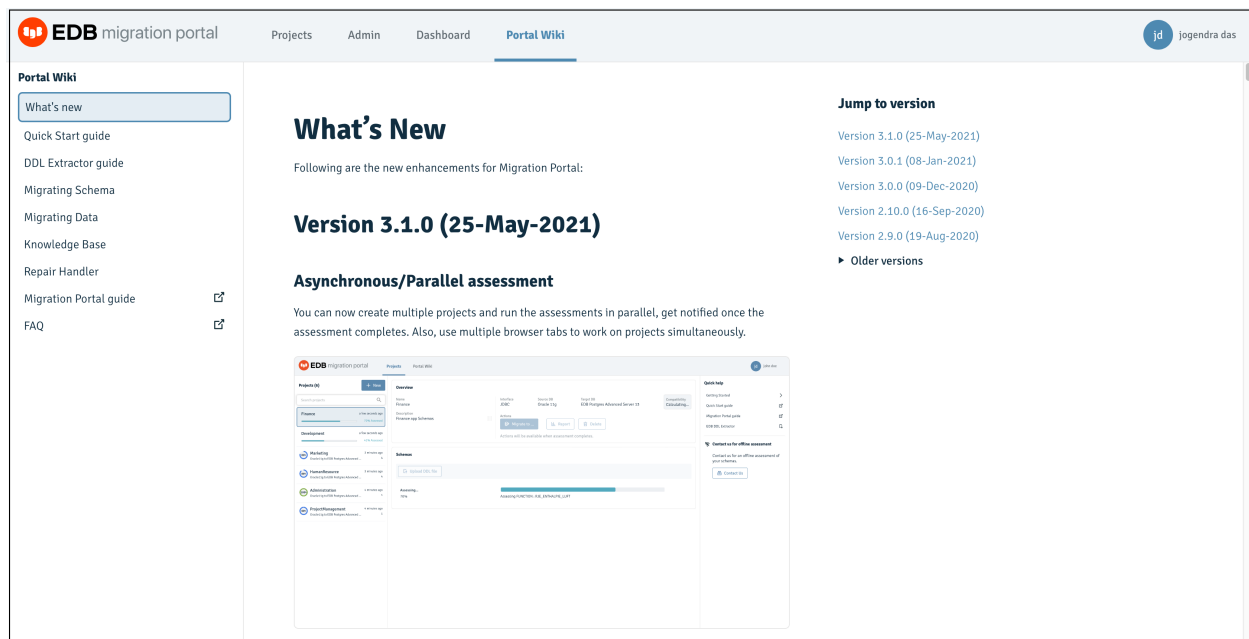


Fig. 7: The Migration Portal Wiki page.

## MIGRATING A DATABASE

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

1. Perform a [Schema Extraction](#).
2. Perform a [Schema Assessment](#).
3. Perform a [Schema Migration](#).
4. Perform a [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 uploaded to the portal and analyzed for EDB Postgres compatibility.

**Note** You must have CONNECT and SELECT\_CATALOG\_ROLE roles and CREATE TABLE privilege.

#### For SQL\*Plus

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

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

2. Provide the schema name and the path or directory 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 a comma separated list of schemas to be extracted (Default all schemas): HR,   
→SCOTT, FINANCE  
  
Location for output file (Default current location) : /home/oracle/extracted_ddls/
```

(continues on next page)

(continued from previous page)

WARNING:

Given schema(s) list may contain objects which are dependent on objects from other schema(s), not mentioned in the list. Assessment may fail for such objects. It is suggested to extract all dependent objects together.

Extract dependent object from other schemas?(yes/no) (Default no / Ignored for all schemas option): yes

### On Windows:

Enter comma separated list of schemas to be extracted (Default all schemas): HR, SCOTT, FINANCE

Location for output file (Default current location) : c:\Users\Example\Desktop\

WARNING:

Given schema(s) list may contain objects which are dependent on objects from other schema(s), not mentioned in the list. Assessment may fail for such objects. It is suggested to extract all dependent objects together.

Extract dependent object from other schemas?(yes/no) (Default no / Ignored for all schemas option): yes

### For SQL Developer

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

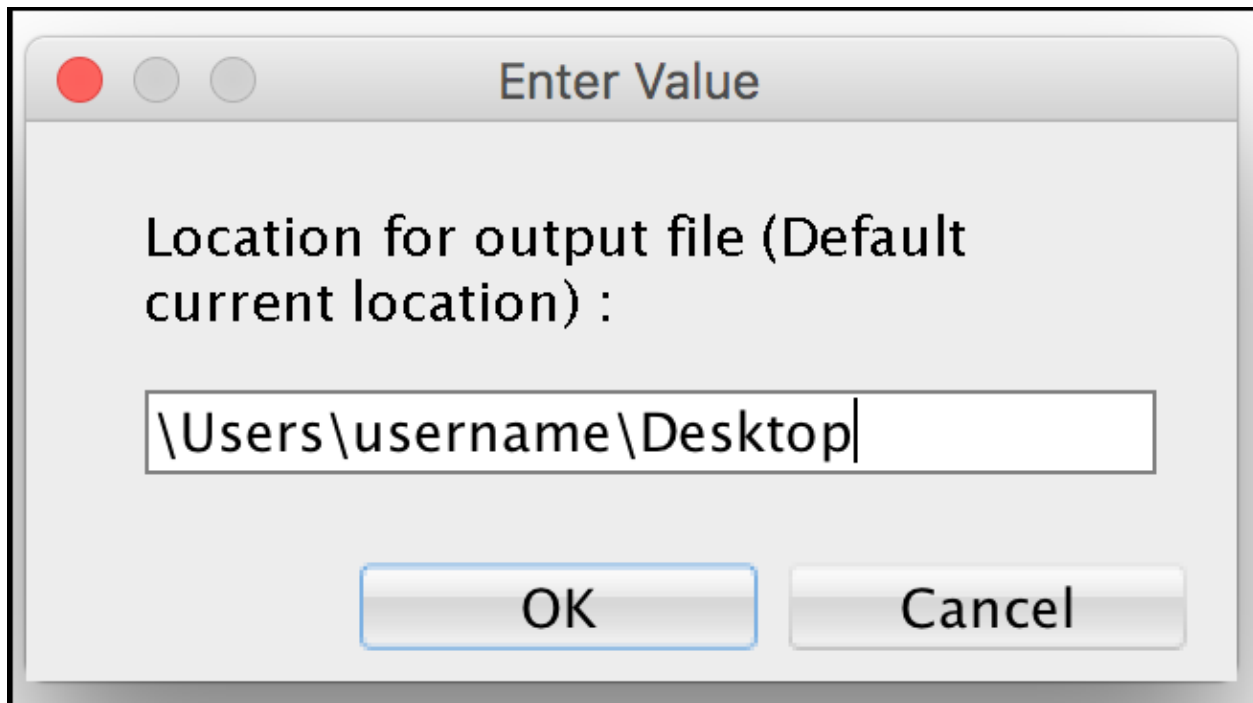


Fig. 1: Enter the path for Linux or Windows.

Figure 3-1: Enter the path for Linux or Windows

2. Enter a comma-separated list of schemas:

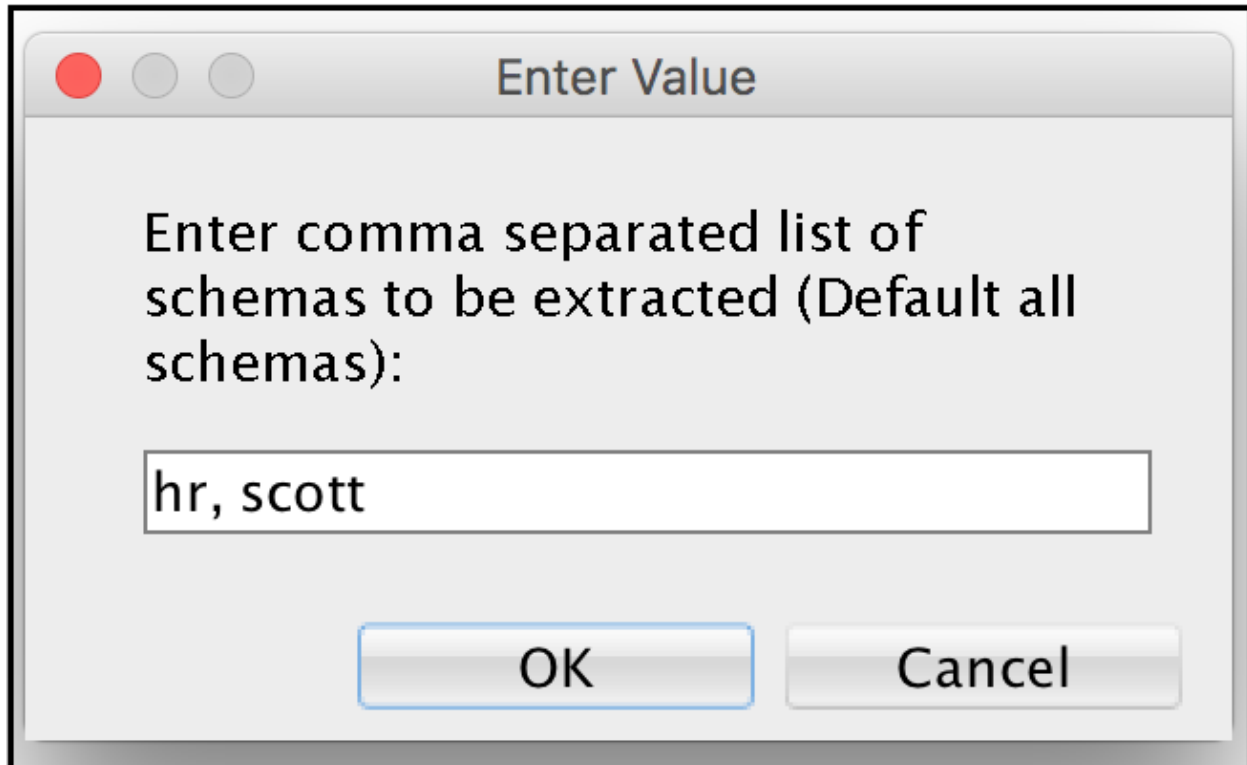


Fig. 2: Provide a list of schemas.

Figure 3-2: Provide a list of schemas

3. Enter the path for the output file:

Figure 3-3: Specify the output file path

4. Enter (yes/no) to extract dependant objects:

Figure 3-4: Extracting dependent objects

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

The script then 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 script does not extract objects restored using Flashback and still have names like `BIN$b54+4X1EYwPgUAB/AQBWA==$0`. If you want 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 EDB Postgres Advanced Server, WAL log files will be created.
- DDL Extractor creates Global Temporary tables to store the schema names and their dependency information. These tables are dropped at the end of successful extraction.
- DDL Extractor script does not extract schemas whose name starts with `PG_` because PostgreSQL does not support it. If you want to extract these schemas, you must change name of schema before extraction.

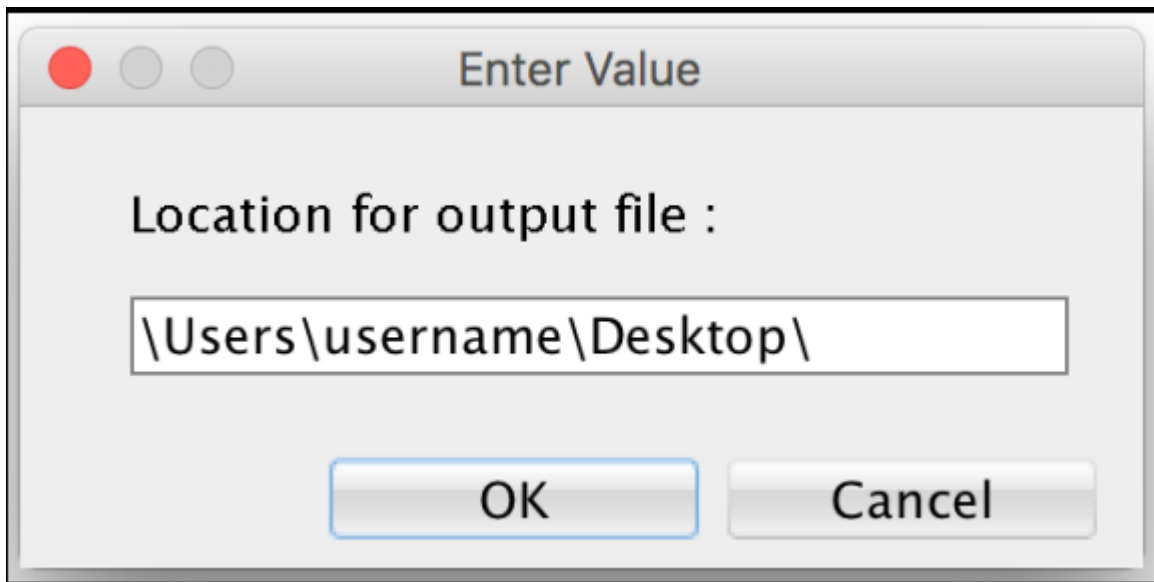


Fig. 3: Specify the output file path.

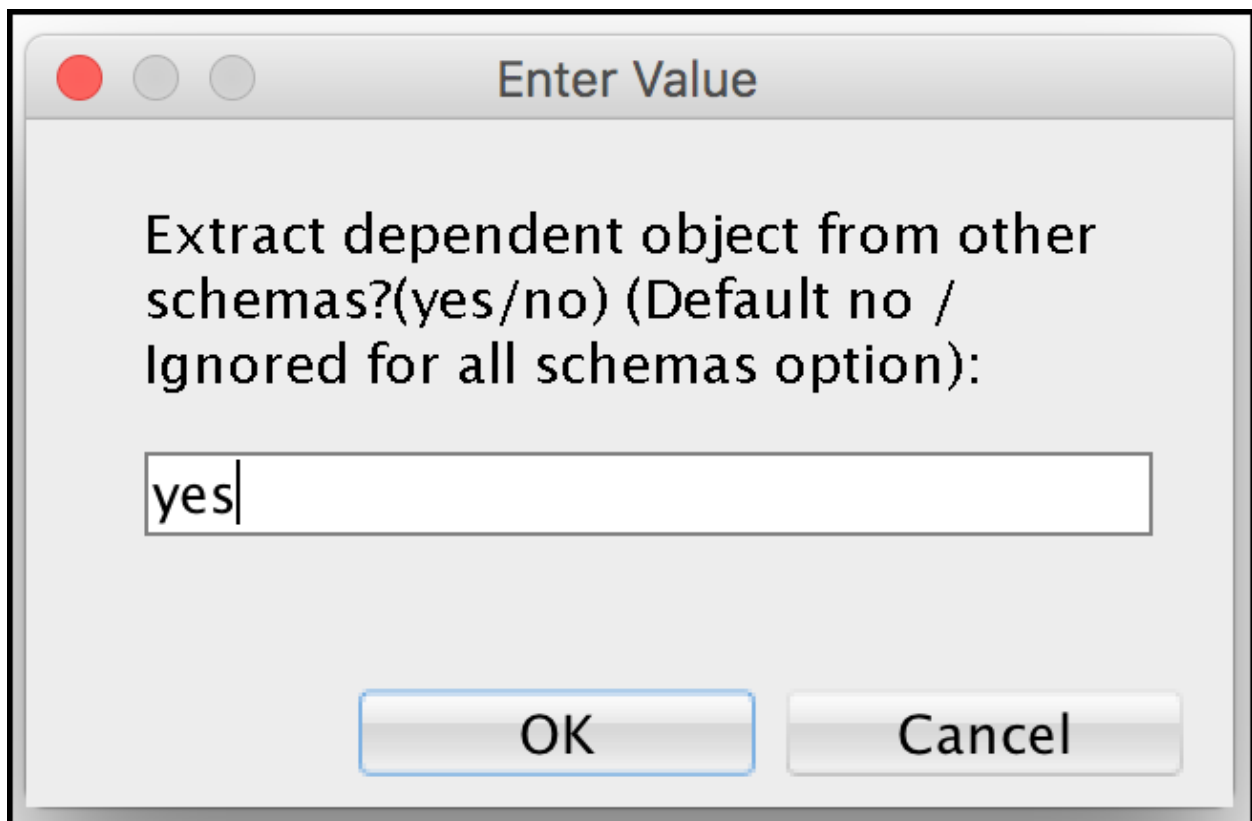


Fig. 4: Extracting dependent objects.

### 4.1.1 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 also supported.

### 4.1.2 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

### 4.1.3 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                    | OJVM SYS           |
| 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 EDB Postgres Advanced Server, you must:

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

Figure 3-5: The Migration Portal New project dialog box

4. On the New project dialog box, 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] (01\_mp\_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 EDB Postgres Advanced Server does not support the same name for tables and indexes.

**New project** ✕

**Project name**

**Application interface**  
☒ JDBC ☐ ODBC ☐ .NET ☐ OCI ☐ ProC ☐ Other

**Source DB**  
 ▼

**Version**  
 ▼

**Target DB**  
 ▼

**Version**  
 ▼

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

No file chosen

📁 Choose file

☐ **Add Index Prefix**  
Index objects will be prefixed with “idx” as unique names are required for tables and indexes.

**Description(Optional)**  
  
200 characters left

✕ Cancel ✓ Create & assess

Fig. 5: The Migration Portal New project dialog.

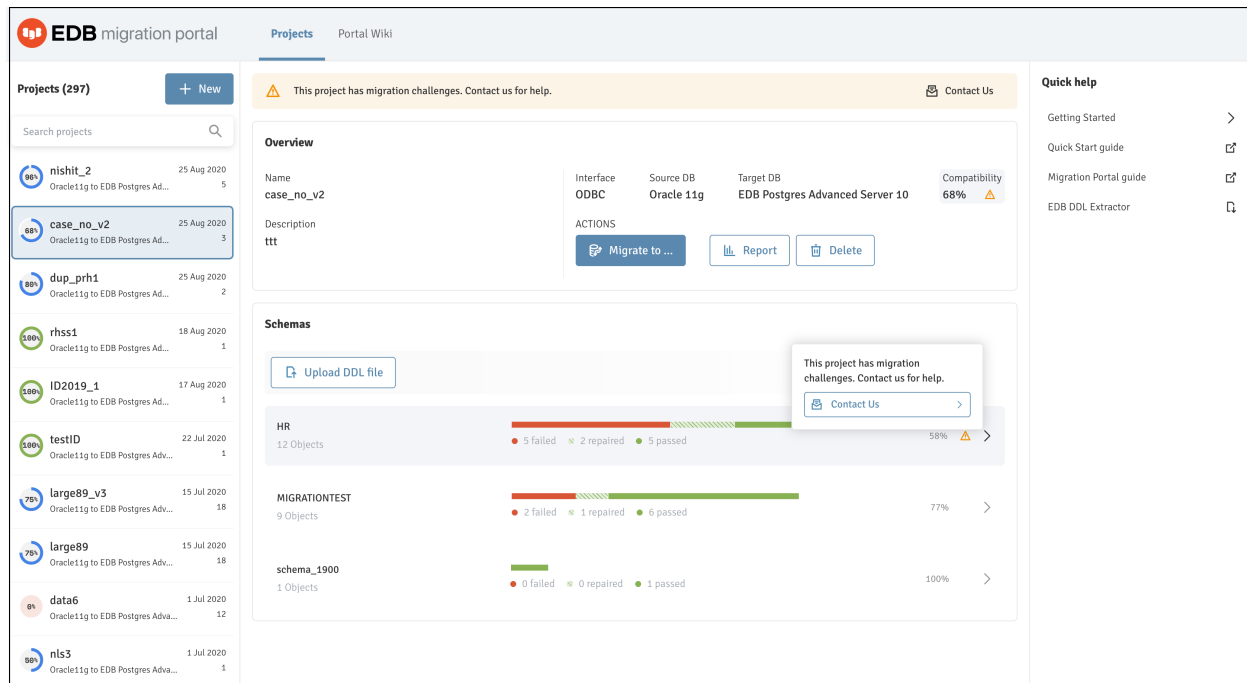


Fig. 6: The Schema analysis result.

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

Figure 3-6: The Schema analysis result

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

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

Figure 3-7: Verifying the DDL objects

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

Figure 3-8: Incompatible objects are identified

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

Figure 3-9: Assessment result with errors

- On the **Knowledge Base** tab, you can enter the error message for the incompatible objects with EDB Postgres 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.

Figure 3-10: Workaround or resolution for incompatible objects

Similarly, you can make all 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.

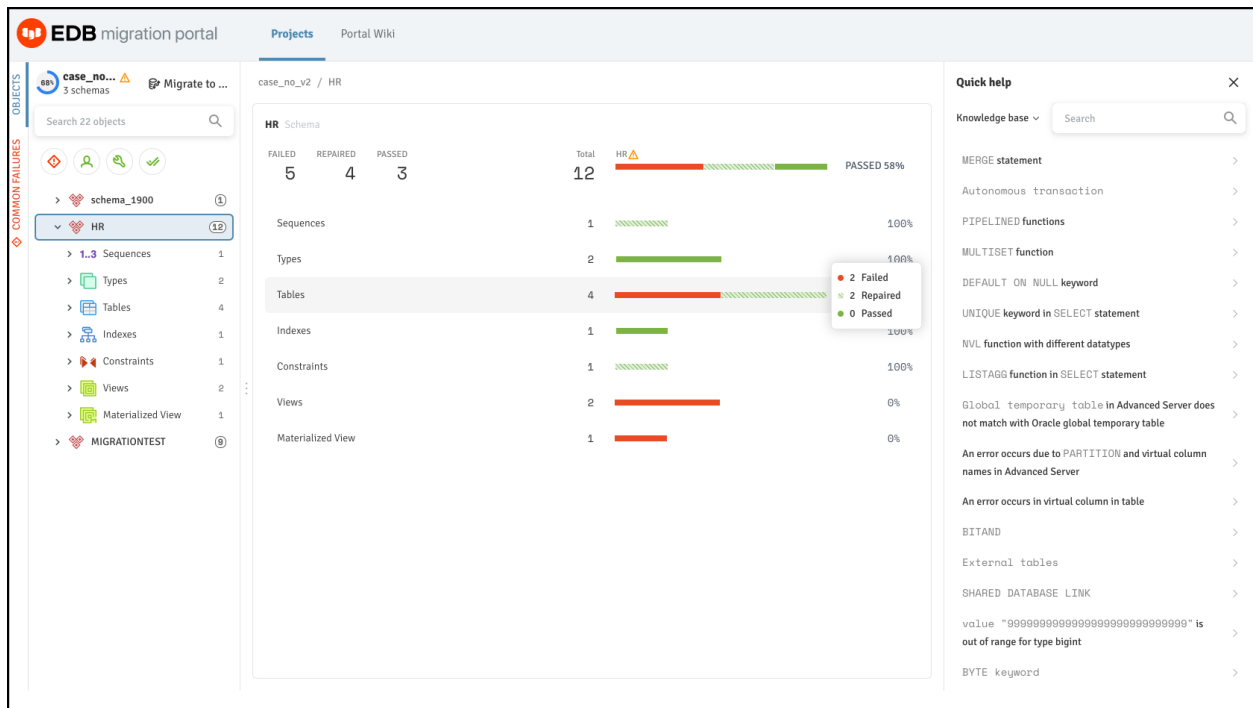


Fig. 7: Verifying the DDL objects.

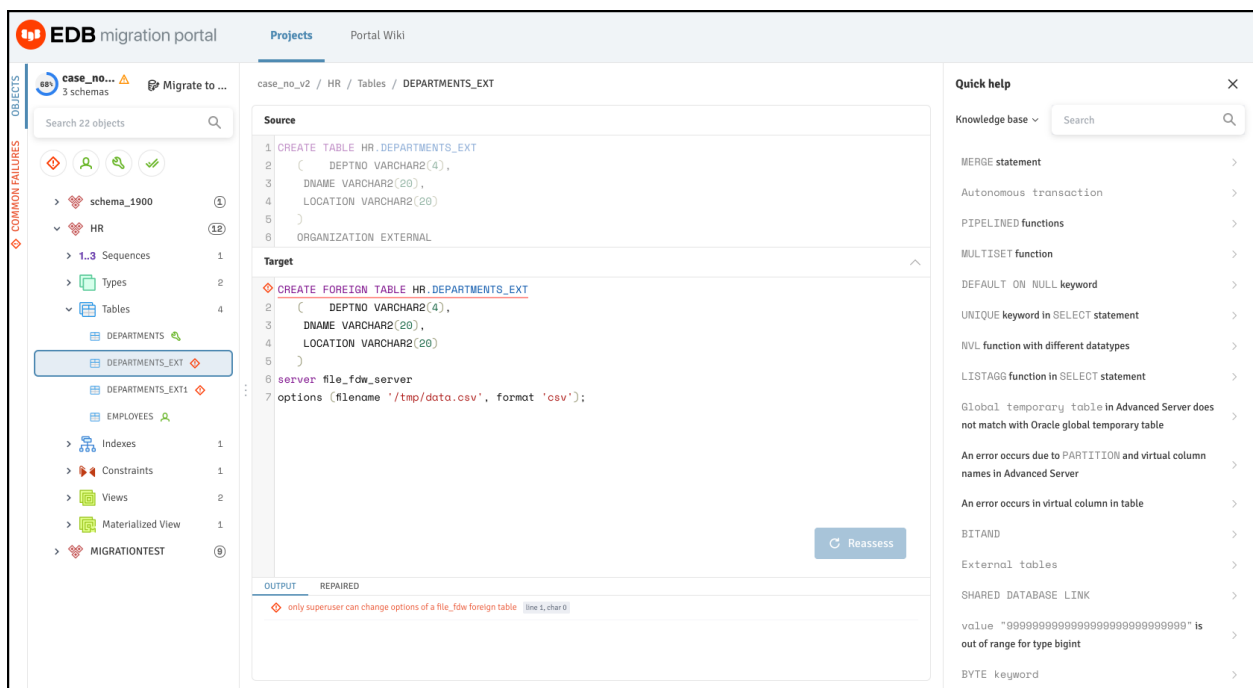


Fig. 8: Incompatible objects are identified.

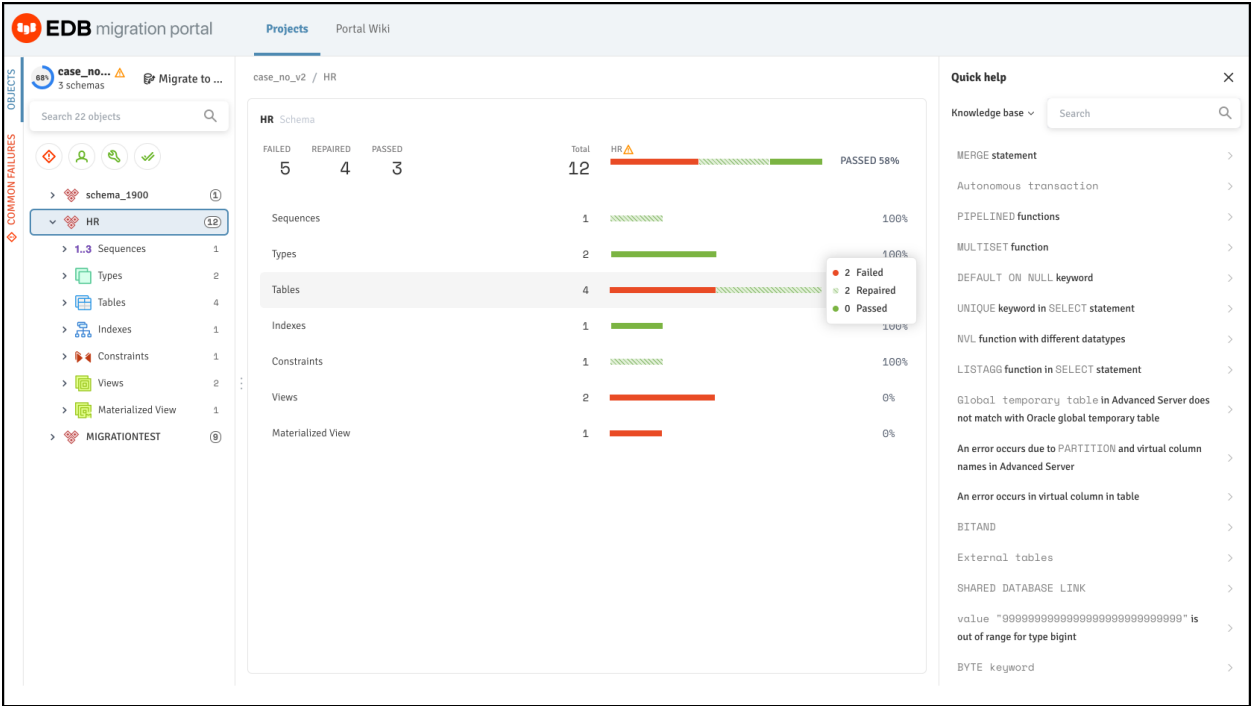


Fig. 9: Assessment result with errors.

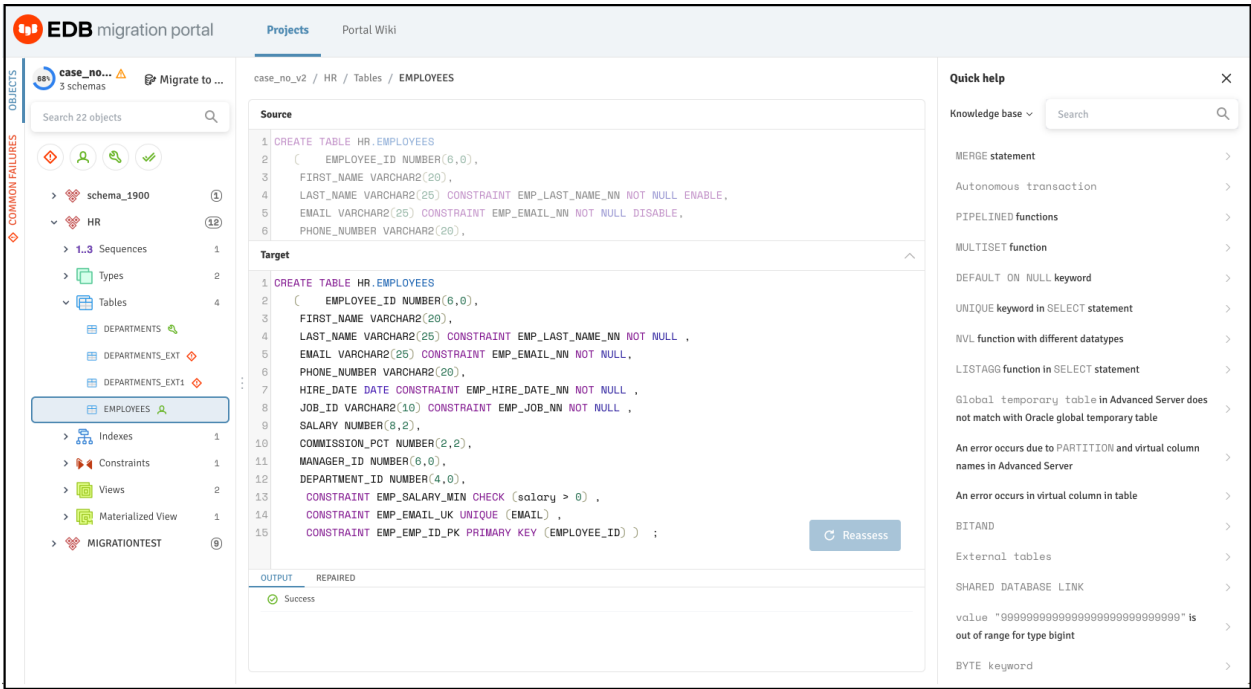


Fig. 10: Workaround or resolution for incompatible objects.

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 see, [Schema Migration](#).

### 4.2.1 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.

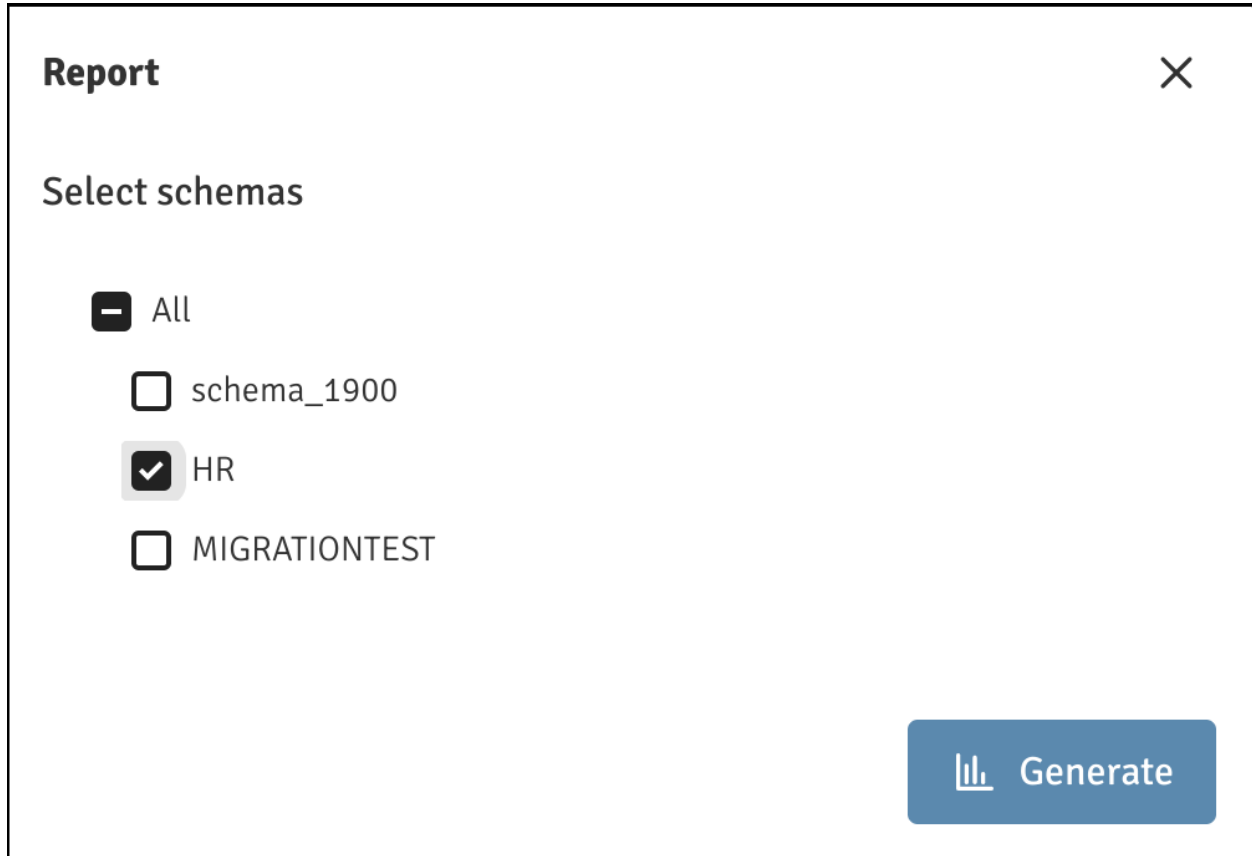


Fig. 11: Select schemas for reports.

Figure 3-11: Select schemas for reports

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.

Figure 3-12: The Schema Assessment Report

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.

Figure 3-13: The saved pdf report

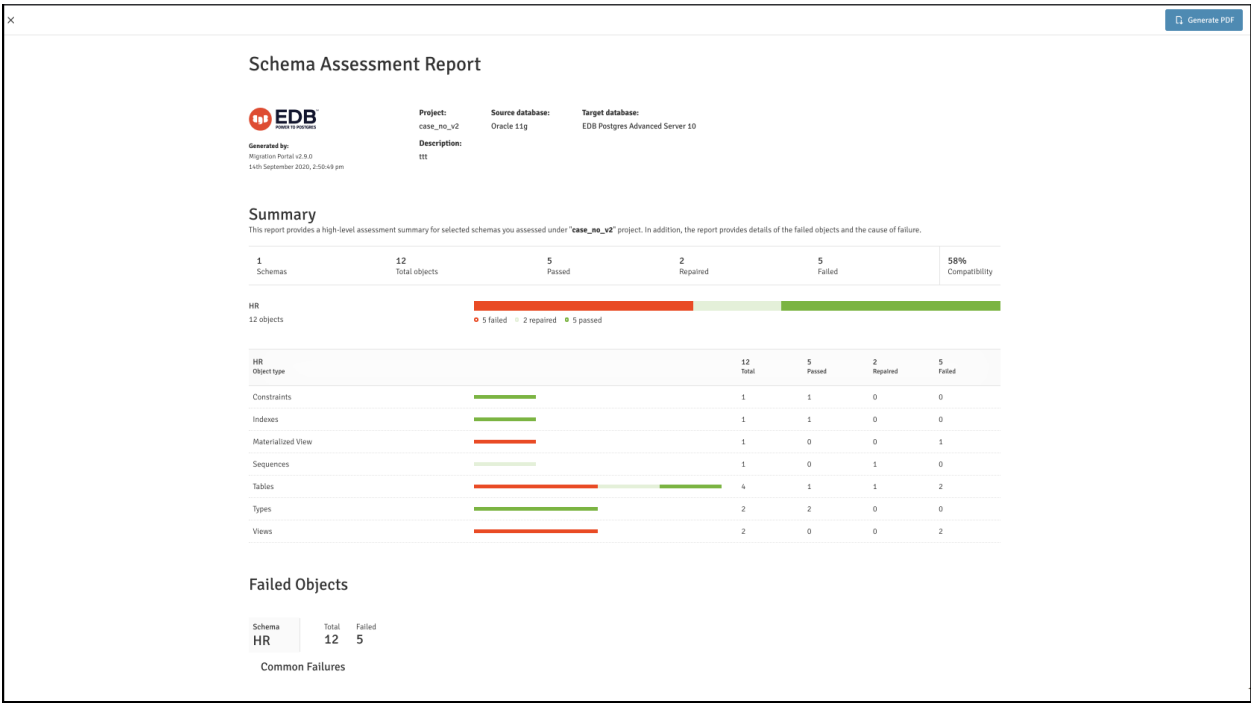


Fig. 12: The Schema Assessment Report.

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 Postgres Advanced Server.

Note

For more information about using Toad Edge **with** EDB Postgres Advanced Server, see [↪Toad Edge \*\*for\*\* Postgres](#).

You can choose one of the following options for migrating schemas; migrate to an:

- Existing on-premises EDB Postgres Advanced Server
- New on-premises EDB Postgres Advanced Server
- EDB Postgres Advanced Server on Cloud

Figure 3-14: Schema migration home page

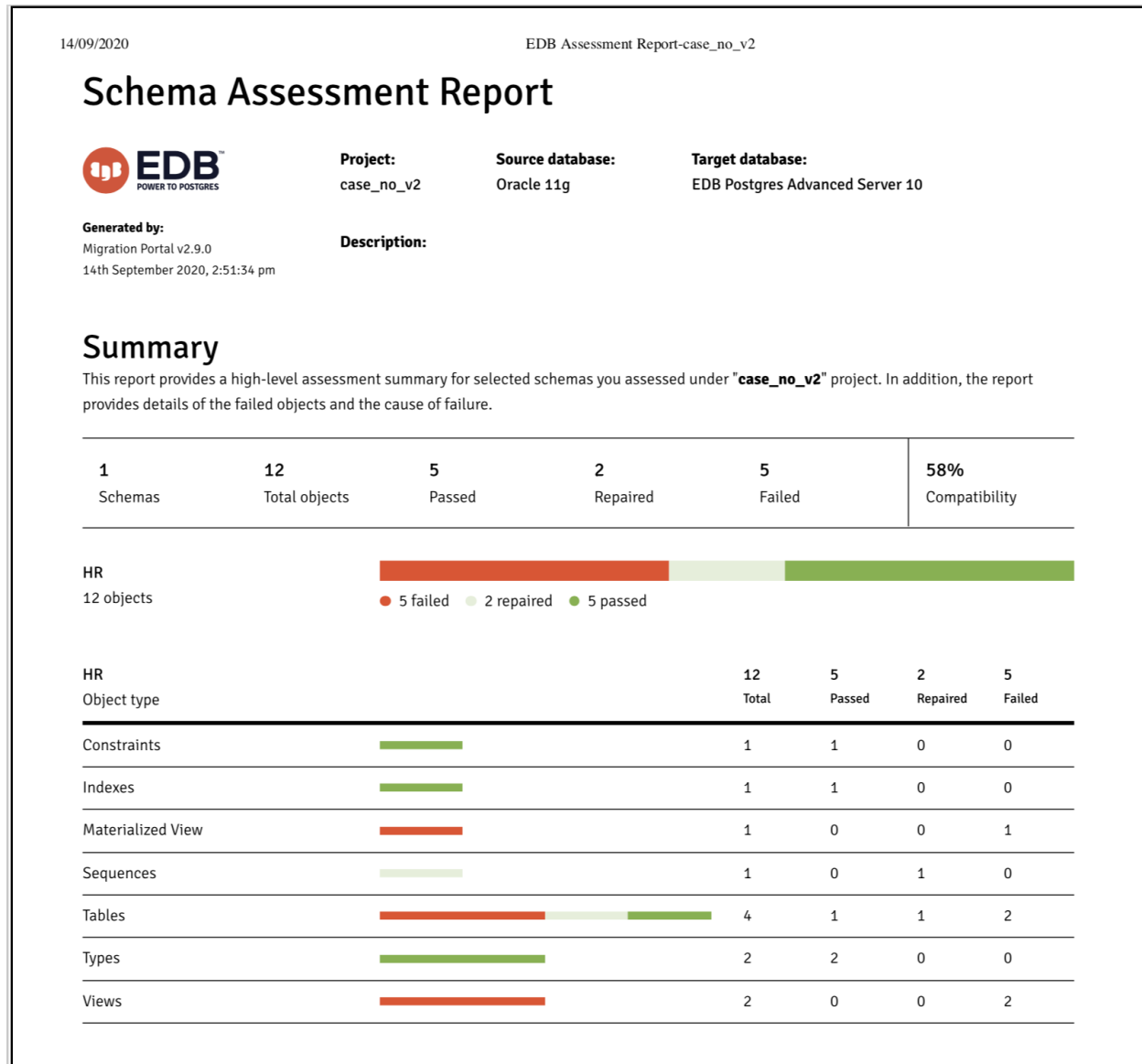


Fig. 13: The saved pdf report.

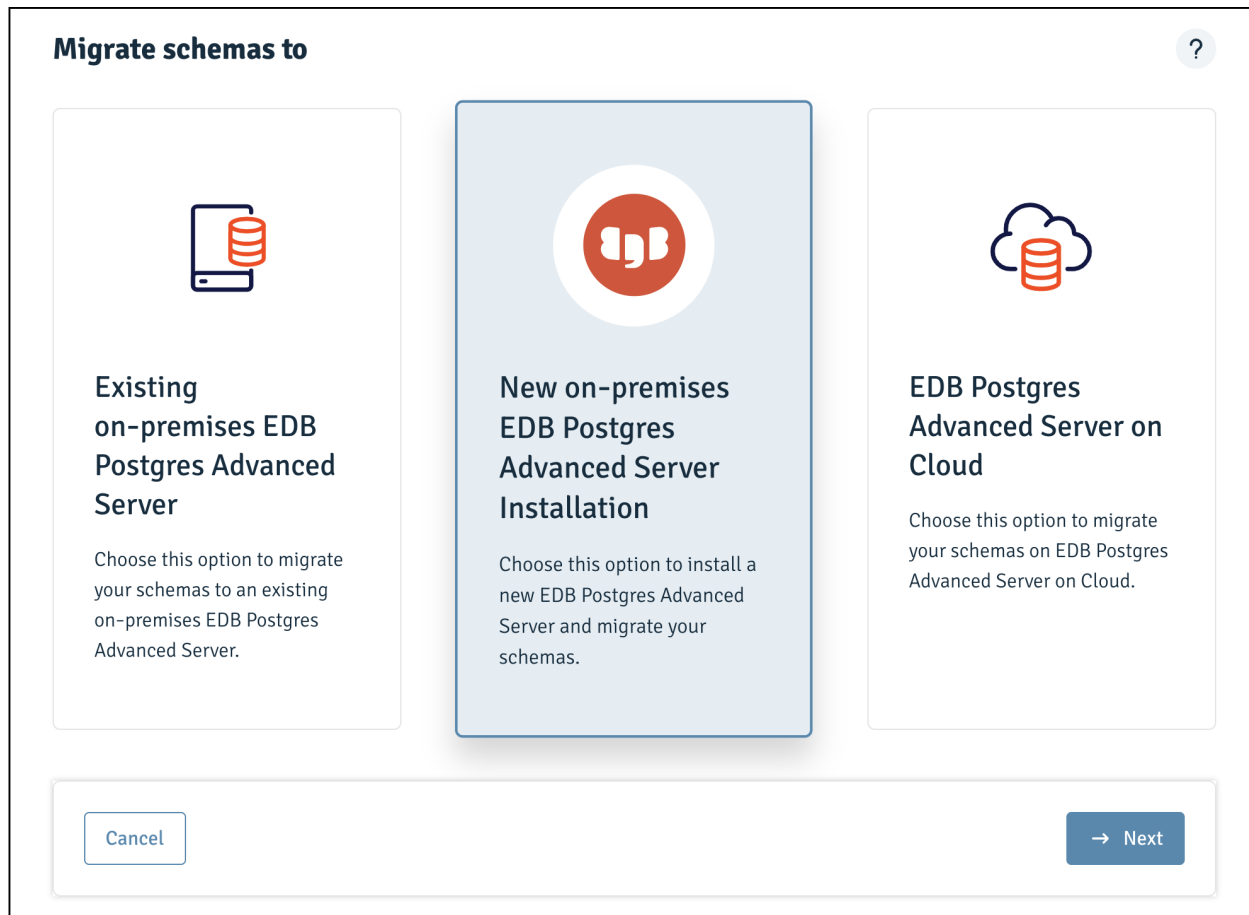


Fig. 14: Schema migration home page

### 4.3.1 Migrating to an Existing On-Premises EDB Postgres Advanced Server Host

You can migrate schemas to an existing on-premises EDB Postgres Advanced Server on Windows or Linux platforms.

#### Migrating Schemas on Windows

1. Select the Existing on-premises EDB Postgres Postgres Advanced Server option:

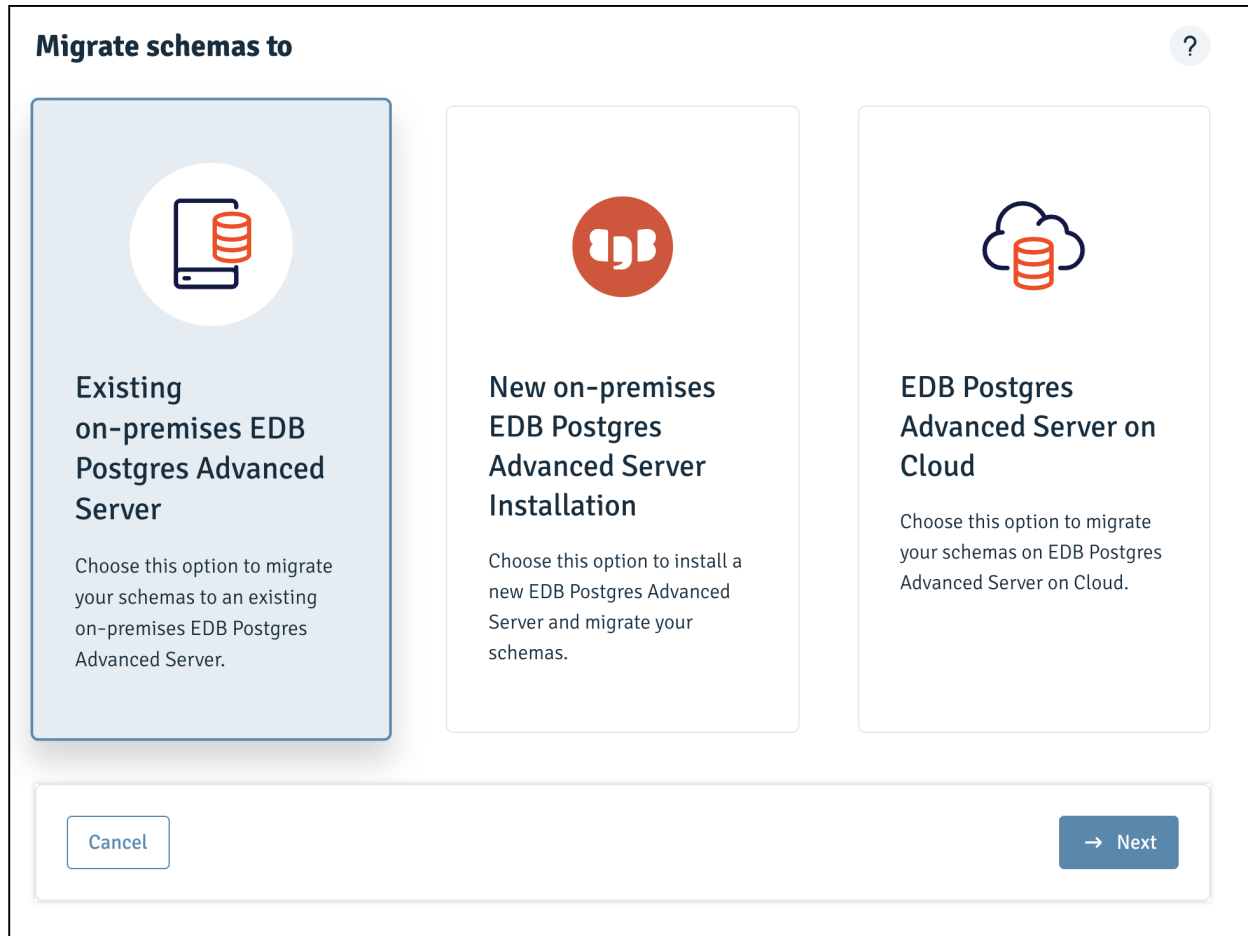


Fig. 15: Existing on-premises EDB Postgres Advanced Server home page

*Figure 3-15: Existing on-premises EDB Postgres Advanced Server home page*

2. Select one or more schemas to migrate to EDB Postgres Advanced Server:

*Figure 3-16: Selecting schemas for migration*

**Note** If your schemas are not 100% compatible, a banner will be displayed as shown; complete the [Contact Us](#) form for any assistance required.

*Figure 3-17: The Contact Us form*

3. Download the assessed schemas:

*Figure 3-18: Download the assessed schemas*

4. Click on Windows:

Migrate schemas to existing on-premises EDB Postgres Advanced Server

?

1 Select Schemas

2 Download Schema

3 Import

4 Finish

This project has migration challenges. Contact us for help.

Contact Us

X

|              |           |            |                                 |                 |
|--------------|-----------|------------|---------------------------------|-----------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility   |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <div></div> |

Select one or more schemas

All

schema\_1900

HR

MIGRATIONTEST

Cancel

← Previous

→ Next

Fig. 16: Selecting schemas for migration

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Chapter 4. Migrating a Database

**Contact Us**×

Your message...

Required project details will be sent along with your message.

☒ By submitting this form, I agree to EDB's [Terms & Conditions](#) and [Privacy Policy](#).

➤ Send

Fig. 17: The Contact Us form

Migrate schemas to existing on-premises EDB Postgres Advanced Server?

✓ Select Schemas

2 Download Schema

3 Import

4 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |                  |
|--------------|-----------|------------|---------------------------------|------------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility    |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <div>⚠</div> |

Download the assessed schemas

⬇️ Download SQL file

Note: Ensure the version number for the EDB Postgres Advanced Server database that you are migrating is 10 (your assessed version).

Cancel

← Previous

→ Next

Fig. 18: Download the assessed schemas

### Migrate schemas to existing on-premises EDB Postgres Advanced Server

✓ Select Schemas

✓ Download Schema

3 Import

4 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|                            |                   |                         |                                              |                           |
|----------------------------|-------------------|-------------------------|----------------------------------------------|---------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68%<br>⚠ |
|----------------------------|-------------------|-------------------------|----------------------------------------------|---------------------------|

#### Import the selected schemas

Run the following command:

Windows

Linux

On CLI

edb=# \i c:\users\...\<project\_name>.sql

On cmd/shell

edb-psql -f <project\_name>.sql

Cancel

← Previous

→ Next

Fig. 19: Selecting Windows operating system

Figure 3-19: Selecting Windows operating system

5. To import the schemas, run the following command:

- On CLI

```
\i c:\users\...\<project_name>.sql
```

- On cmd/shell

```
edb-psql -f <project_name>.sql
```

**Note** You can also use pgAdmin instead.

The converted schemas are migrated to the target server.

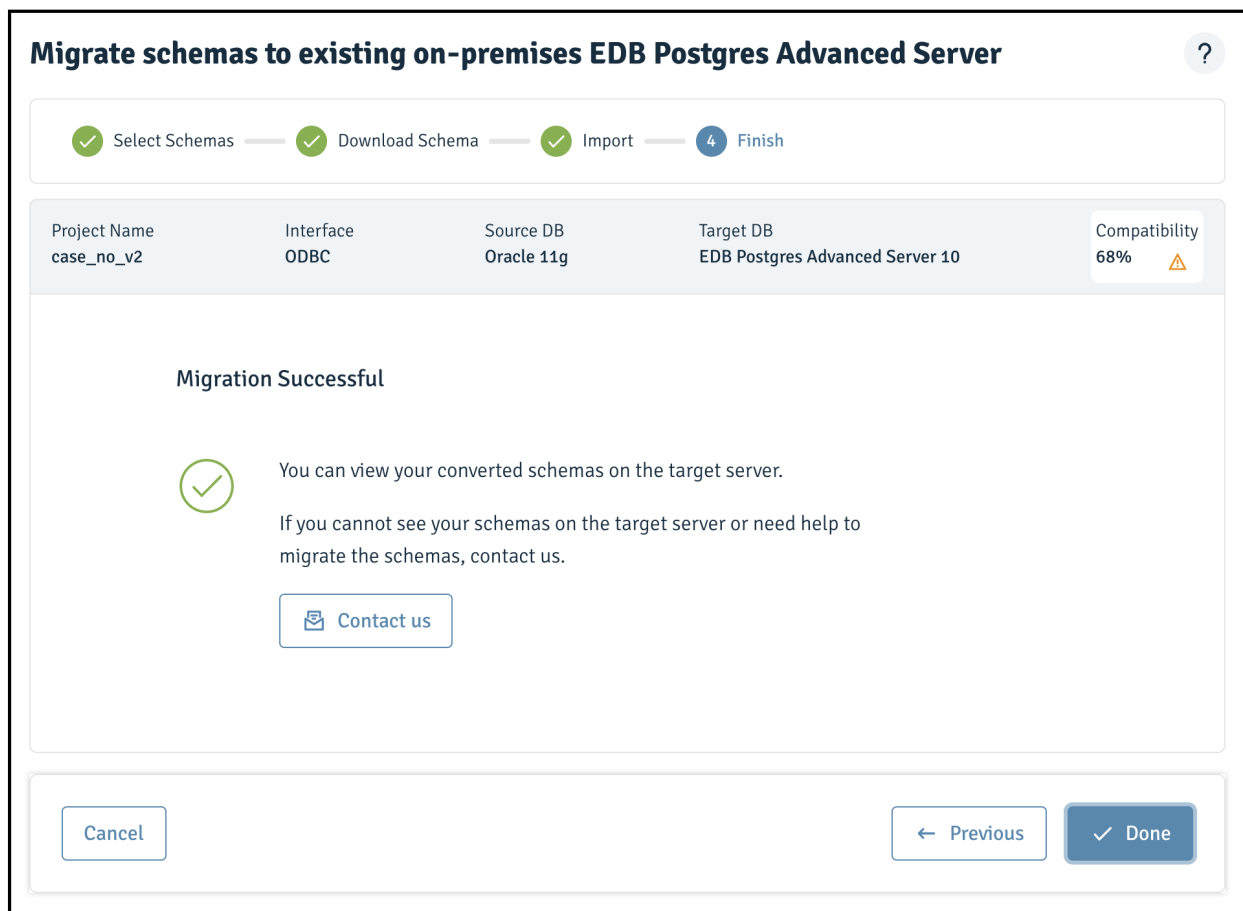


Fig. 20: A successful migration

Figure 3-20: A successful migration

## Migrating Schemas on Linux

To migrate schemas to an existing on-premises EDB Postgres Advanced Server on Linux, complete the following steps:

1. Click the Existing on-premises EDB Postgres Advanced Server option:

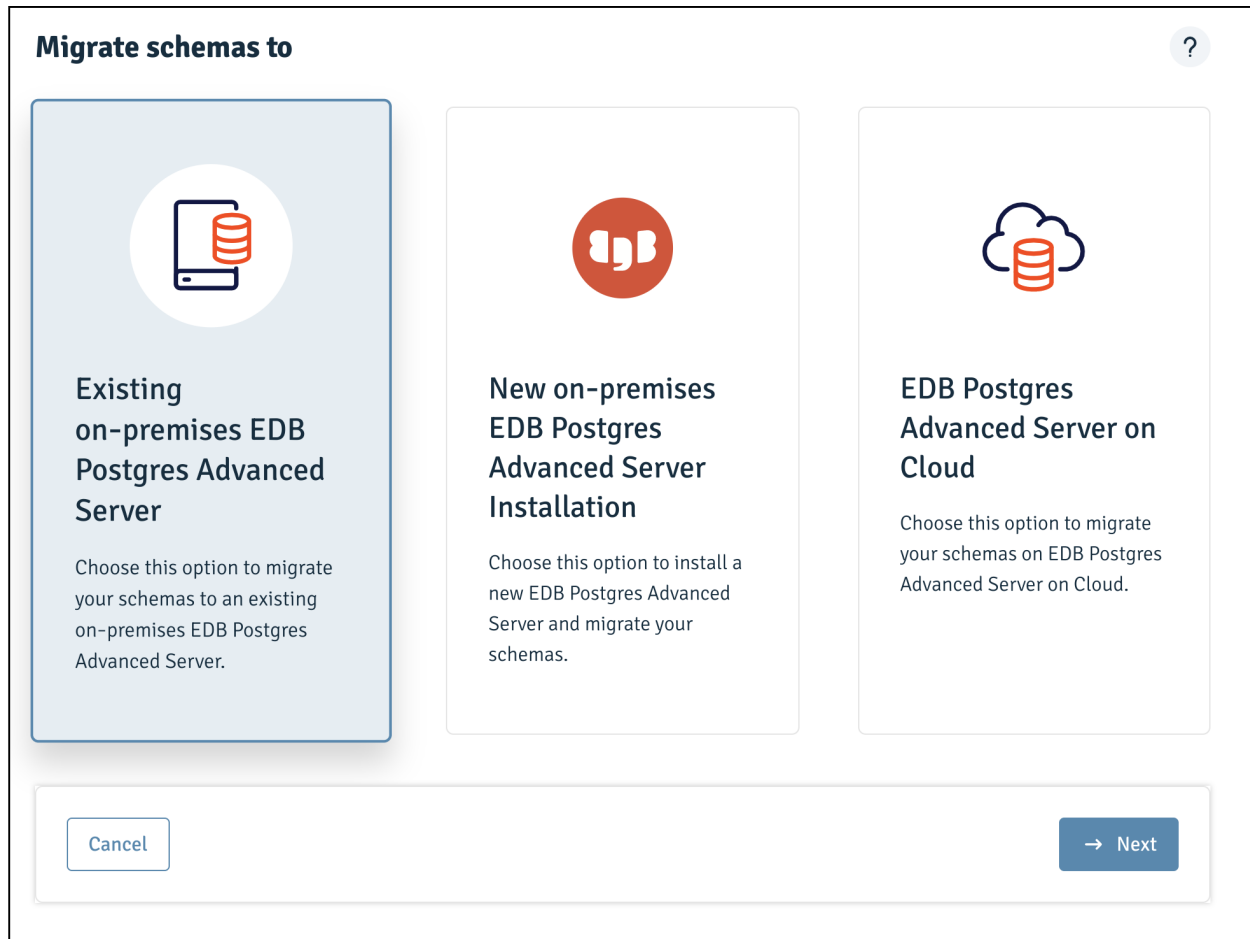


Fig. 21: Existing on-premises EDB Postgres Advanced Server home page

*Figure 3-21: Existing on-Premises EDB Postgres Advanced Server home page*

2. Select one or more schemas to migrate to EDB Postgres Advanced Server:

*Figure 3-22: Selecting schemas for migration*

3. Download the assessed schemas:

*Figure 3-23: Download the assessed schemas*

4. Click on Linux:

*Figure 3-24: Selecting Linux operating system*

5. To import the schemas, invoke the following `edb-psql` client commands:

```
sudo su - enterprisedb
edb-psql edb
```

(continues on next page)

Migrate schemas to existing on-premises EDB Postgres Advanced Server?

1 Select Schemas

2 Download Schema

3 Import

4 Finish

This project has migration challenges. Contact us for help.

Contact Us

|              |           |            |                                 |                 |
|--------------|-----------|------------|---------------------------------|-----------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility   |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <div></div> |

Select one or more schemas

All

☐ schema\_1900

☒ HR

☐ MIGRATIONTEST

Cancel

← Previous

→ Next

Fig. 22: Selecting schemas for migration

### Migrate schemas to existing on-premises EDB Postgres Advanced Server ?

✓ Select Schemas

**2** Download Schema

3 Import

4 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |                  |
|--------------|-----------|------------|---------------------------------|------------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility    |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <div>⚠</div> |

Download the assessed schemas

Download SQL file

Note: Ensure the version number for the EDB Postgres Advanced Server database that you are migrating is 10 (your assessed version).

Cancel

← Previous

→ Next

Fig. 23: Download the assessed schemas

### Migrate schemas to existing on-premises EDB Postgres Advanced Server

✓ Select Schemas

✓ Download Schema

3 Import

4 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |               |
|--------------|-----------|------------|---------------------------------|---------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% ⚠         |

#### Import the selected schemas

Run the following command:

Windows

Linux

Run the following command on Terminal

```
shell=$ sudo su - enterprisedb
shell=$ edb-psql edb
edb=# create database <database_name>;
edb=# \connect <database_name>
database_name=# \i <project_name>.sql
```

Cancel

← Previous

→ Next

Fig. 24: Selecting Linux operating system

(continued from previous page)

```
create database <database_name>;
\\connect <database_name>
\\i <project_name>.sql
```

**Note** You can optionally use the pgAdmin client for the import.

The converted schemas are migrated to the target server.

### Migrate schemas to existing on-premises EDB Postgres Advanced Server

✓ Select Schemas

✓ Download Schema

✓ Import

4 Finish

|                            |                   |                         |                                              |                      |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68% |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------|

#### Migration Successful

You can view your converted schemas on the target server.

If you cannot see your schemas on the target server or need help to migrate the schemas, contact us.

Contact us

Cancel

← Previous

✓ Done

Fig. 25: A successful schema migration

Figure 3-25: A successful schema migration

## 4.3.2 Migrating to a New On-Premises EDB Postgres Advanced Server Installation

You can install new EDB Postgres Advanced Server on-premises on Windows or Linux platforms and migrate the schemas.

### Migrating Schemas on Windows

To migrate schemas to a new on-premises EDB Postgres Advanced Server on Windows, complete the following steps:

1. Click `New on-premises EDB Postgres Postgres Advanced Server` option.

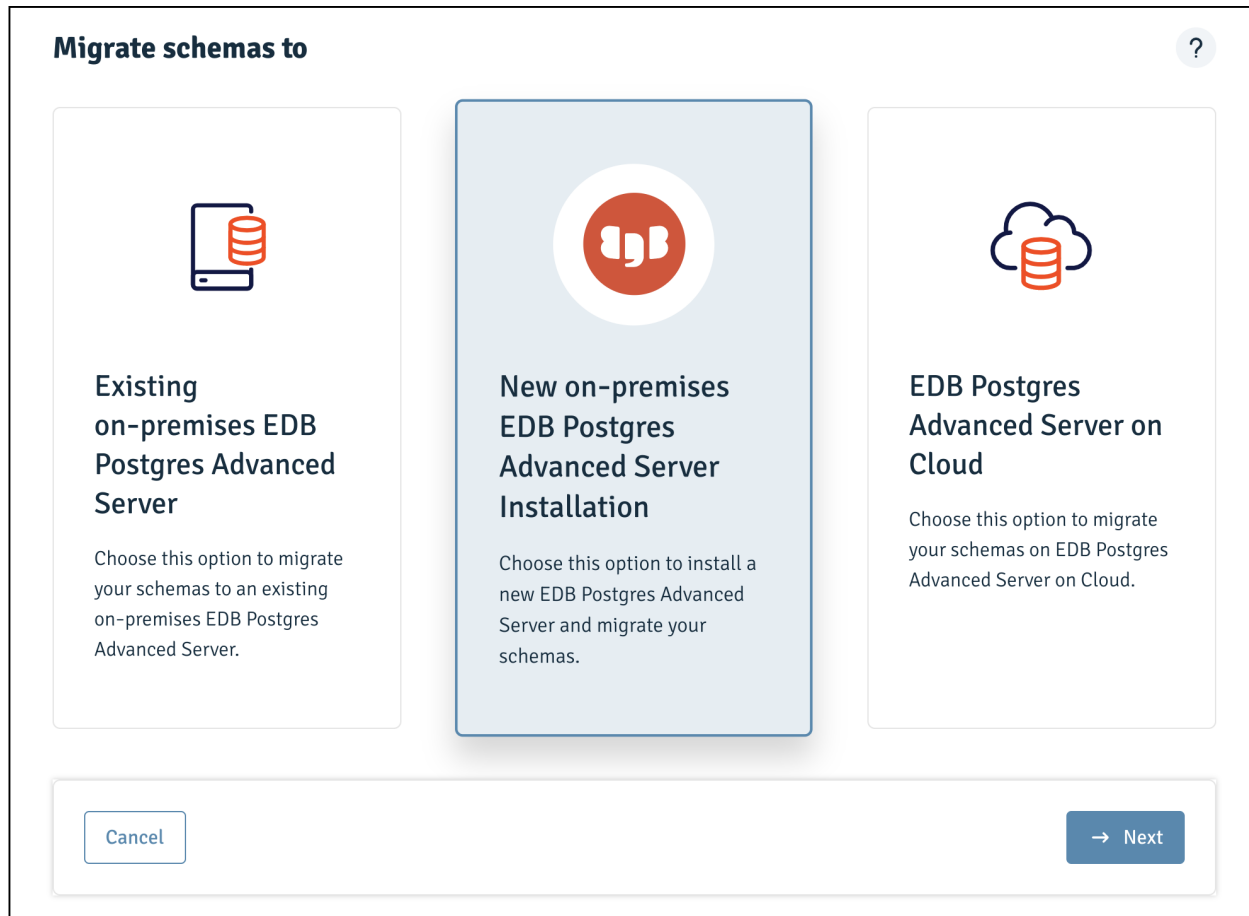


Fig. 26: New on-premises EDB Postgres Advanced Server home page

*Figure 3-26: New on-premises EDB Postgres Advanced Server home page*

2. Select one or more schemas to migrate on EDB Postgres Advanced Server.

*Figure 3-27: Selecting schemas for migration*

3. Select the `Windows` operating system.

*Figure 3-28: Selecting Windows operating system*

4. Download `Windows Installer`.

*Figure 3-29: Downloading Windows installer*

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

1 Select Schemas

2 Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Ser >

 This project has migration challenges. Contact us for help.

Contact Us ×

|                            |                   |                         |                                              |                                                                                                          |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68%  |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|

Select one or more schemas

☒ All

☐ schema\_1900

☒ HR

☐ MIGRATIONTEST

Cancel

← Previous

→ Next

Fig. 27: Selecting schemas for migration

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

✓ Select Schemas

**2** Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Ser >

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|                            |                   |                         |                                              |                           |
|----------------------------|-------------------|-------------------------|----------------------------------------------|---------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68%<br>⚠ |
|----------------------------|-------------------|-------------------------|----------------------------------------------|---------------------------|

Select the Operating System/Platform

☒ Windows 64-bit

☐ Linux 64-bit

Cancel

← Previous

→ Next

Fig. 28: Selecting Windows operating system

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

✓ Select Schemas

✓ Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Ser >

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |                    |
|--------------|-----------|------------|---------------------------------|--------------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility      |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <span>⚠</span> |

#### Install EDB Postgres Advanced Server for Windows

 Download Windows installer 

Cancel

← Previous

→ Next

Fig. 29: Downloading Windows installer

4.3. Schema Migration

41

5. For installation steps, click EDB Postgres Advanced Server Installation Guide for Windows.

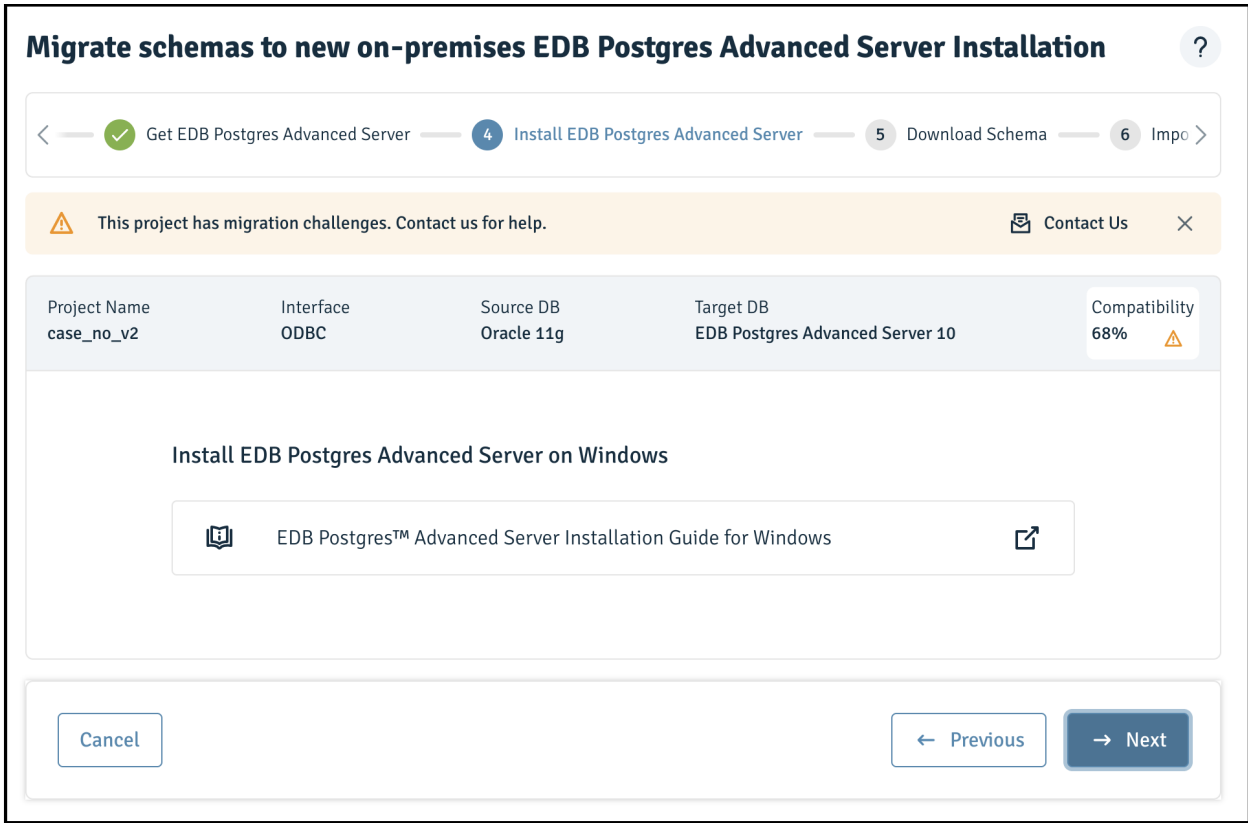


Fig. 30: View Windows installation guide

Figure 3-30: A successful schema migration

6. Download the assessed schemas.

Figure 3-31: Downloading the assessed file

7. You can import schemas by running the following command:

- On CLI

```
\i c:\users\...\<project_name>.sql
```

- On cmd/shell

```
edb-psql -f <project_name>.sql
```

Figure 3-32: Importing schemas into EDB Postgres Advanced Server

**Note** You can also use pgAdmin instead.

The schemas are migrated to the target server.

Figure 3-33: Importing schemas into EDB Postgres Advanced Server

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation

< Postgres Advanced Server

✓ Install EDB Postgres Advanced Server

5 Download Schema

6 Import

7 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
|--------------|-----------|------------|---------------------------------|---------------|
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% ⚠         |

#### Download the assessed schemas

Download SQL file

Note: Ensure the version number for the EDB Postgres Advanced Server database that you are migrating is 10 (your assessed version).

Cancel

← Previous

→ Next

Fig. 31: Downloading the assessed file

Migrate schemas to new on-premises EDB Postgres Advanced Server Installation?

< Postgres Advanced Server

✓ Install EDB Postgres Advanced Server

✓ Download Schema

6 Import

7 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |               |
|--------------|-----------|------------|---------------------------------|---------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68%<br>⚠      |

Import schemas into EDB Postgres Advanced Server

On CLI

edb=# \i c:\users\...\<project\_name>.sql

On cmd/shell

edb-psql -f <project\_name>.sql

[PSQL Documentation](#) | [Advanced Server Documentation](#)

Use pgAdmin instead.

Cancel

← Previous

→ Next

Fig. 32: Importing schemas into EDB Postgres Advanced Server

## Migrating Schemas on Linux

To migrate schemas to an on-premises EDB Postgres Advanced Server on Linux, complete the following steps:

1. Click **New On-premises EDB Postgres Advanced Server option**.

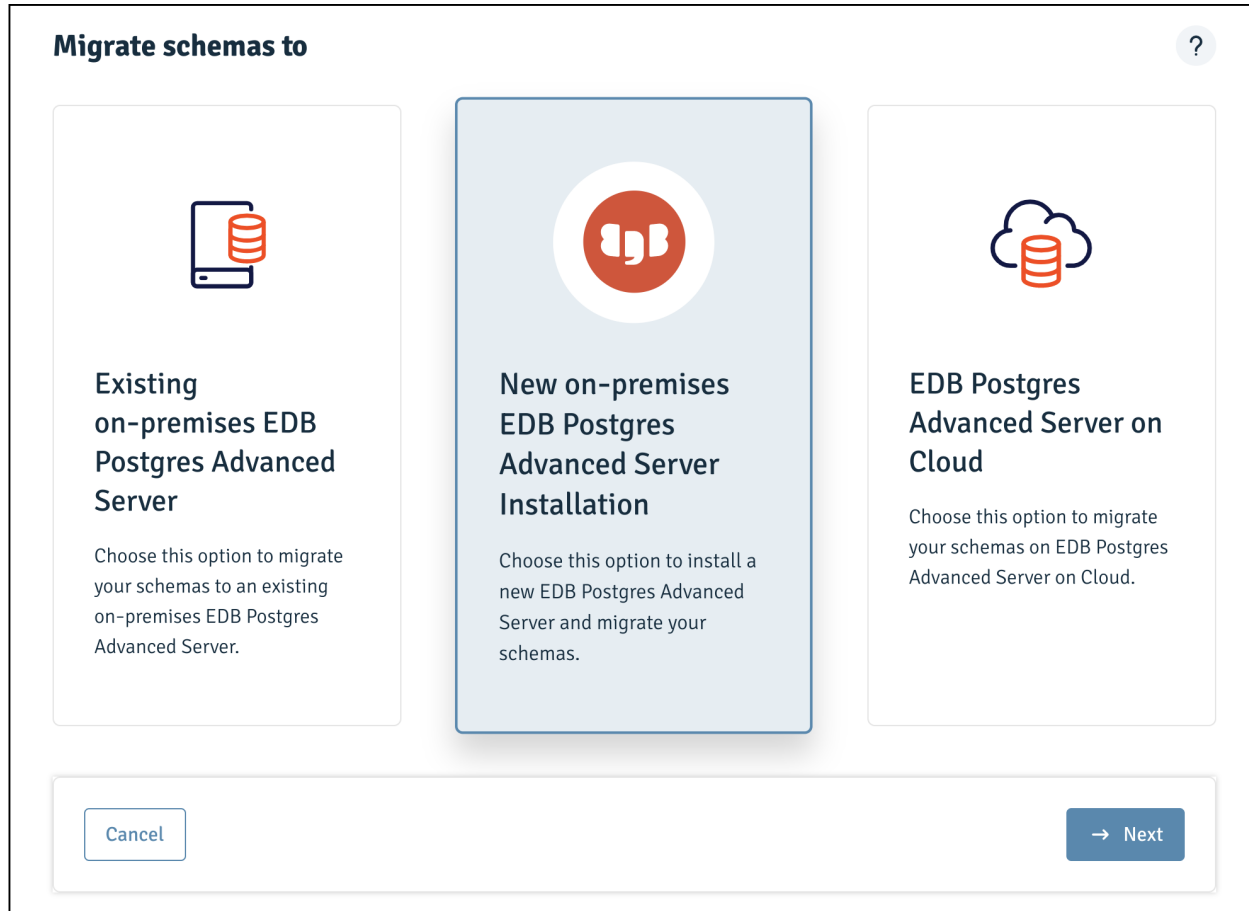


Fig. 33: Migrating schemas home page

*Figure 3-34: Migrating schemas home page*

2. Select one or more schemas to migrate on EDB Postgres Advanced Server.

*Figure 3-35: Selecting schemas for migration*

3. Select the **Linux** operating system.

*Figure 3-36: Selecting Linux operating system*

4. You can select one of the following options to install the EDB Postgres Advanced Server:

- Repository
- More options

*Figure 3-37: Selecting Linux repository*

5. For information on the installation procedure, click **EDB Postgres Advanced Server Installation Guide for Linux**:

*Figure 3-38: Selecting Linux installation guide*

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

1 Select Schemas

2 Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Ser >

 This project has migration challenges. Contact us for help.

Contact Us ×

|                            |                   |                         |                                              |                                                                                                          |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68%  |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|

Select one or more schemas

☒ All

☐ schema\_1900

☒ HR

☐ MIGRATIONTEST

Cancel

← Previous

→ Next

Fig. 34: Selecting schemas for migration

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

✓ Select Schemas

2 Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Server >

⚠ This project has migration challenges. Contact us for help.

Contact Us

×

|                            |                   |                         |                                              |                                     |
|----------------------------|-------------------|-------------------------|----------------------------------------------|-------------------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68% <span>⚠</span> |
|----------------------------|-------------------|-------------------------|----------------------------------------------|-------------------------------------|

Select the Operating System/Platform

☐ Windows 64-bit 

☒ Linux 64-bit 

Cancel

← Previous

→ Next

Fig. 35: Selecting Linux operating system

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

✓ Select Schemas

✓ Select Platform

3 Get EDB Postgres Advanced Server

4 Install EDB Postgres Advanced Ser >

 This project has migration challenges. Contact us for help.

Contact Us ×

|                            |                   |                         |                                              |                                                                                                          |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68%  |
|----------------------------|-------------------|-------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------|

#### Install EDB Postgres Advanced Server for Linux

 Repository 

...

 More options 

Cancel

← Previous

→ Next

Fig. 36: Selecting Linux repository

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation ?

< ✓ Get EDB Postgres Advanced Server 4 Install EDB Postgres Advanced Server 5 Download Schema 6 Impo >

⚠ This project has migration challenges. Contact us for help. ✉ Contact Us ✕

|                            |                   |                         |                                              |                                     |
|----------------------------|-------------------|-------------------------|----------------------------------------------|-------------------------------------|
| Project Name<br>case_no_v2 | Interface<br>ODBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 10 | Compatibility<br>68% <span>⚠</span> |
|----------------------------|-------------------|-------------------------|----------------------------------------------|-------------------------------------|

#### Install EDB Postgres Advanced Server on Linux

📖 EDB Postgres™ Advanced Server Installation Guide for Linux 🔗

Cancel

← Previous

→ Next

Fig. 37: Selecting Linux installation guide

6. Download the assessed schemas:

**Migrate schemas to new on-premises EDB Postgres Advanced Server Installation**

[← Postgres Advanced Server](#)
✓
[Install EDB Postgres Advanced Server](#)
5
[Download Schema](#)
6
[Import](#)
7
[Finish](#)

⚠ This project has migration challenges. Contact us for help.
 [Contact Us](#)

| Project Name | Interface | Source DB  | Target DB                       | Compatibility      |
|--------------|-----------|------------|---------------------------------|--------------------|
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% <span>⚠</span> |

**Download the assessed schemas**

[Download SQL file](#)

Note: Ensure the version number for the EDB Postgres Advanced Server database that you are migrating is 10 (your assessed version).

[Cancel](#)
[← Previous](#)
[→ Next](#)

Fig. 38: Downloading the assessed schemas

*Figure 3-39: Downloading the assessed schemas*

7. To import the schemas, run the following command:

```
sudo su - enterprisedb
edb-psql edb
create database <database_name>;
\connect <database_name>
\i <project_name>.sql
```

*Figure 3-40: Importing schemas into EDB Postgres Advanced Server*

**Note** You can also use pgAdmin instead.

The converted schemas are migrated to the target server.

*Figure 3-41: A successful schema migration*

### Migrate schemas to new on-premises EDB Postgres Advanced Server Installation

< Postgres Advanced Server

✓ Install EDB Postgres Advanced Server

✓ Download Schema

6 Import

7 Finish

⚠ This project has migration challenges. Contact us for help.

Contact Us

|              |           |            |                                 |               |
|--------------|-----------|------------|---------------------------------|---------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68% ⚠         |

#### Import schemas into EDB Postgres Advanced Server

Run the following command on Terminal

```
shell=$ sudo su - enterprisedb
shell=$ edb-psql edb
edb=# create database <database_name>;
edb=# \connect <database_name>
database_name=# \i <project_name>.sql
```

[PSQL Documentation](#) | [Advanced Server Documentation](#)

Use  pgAdmin instead.

Cancel

← Previous

→ Next

Fig. 39: Importing schemas into EDB Postgres Advanced Server

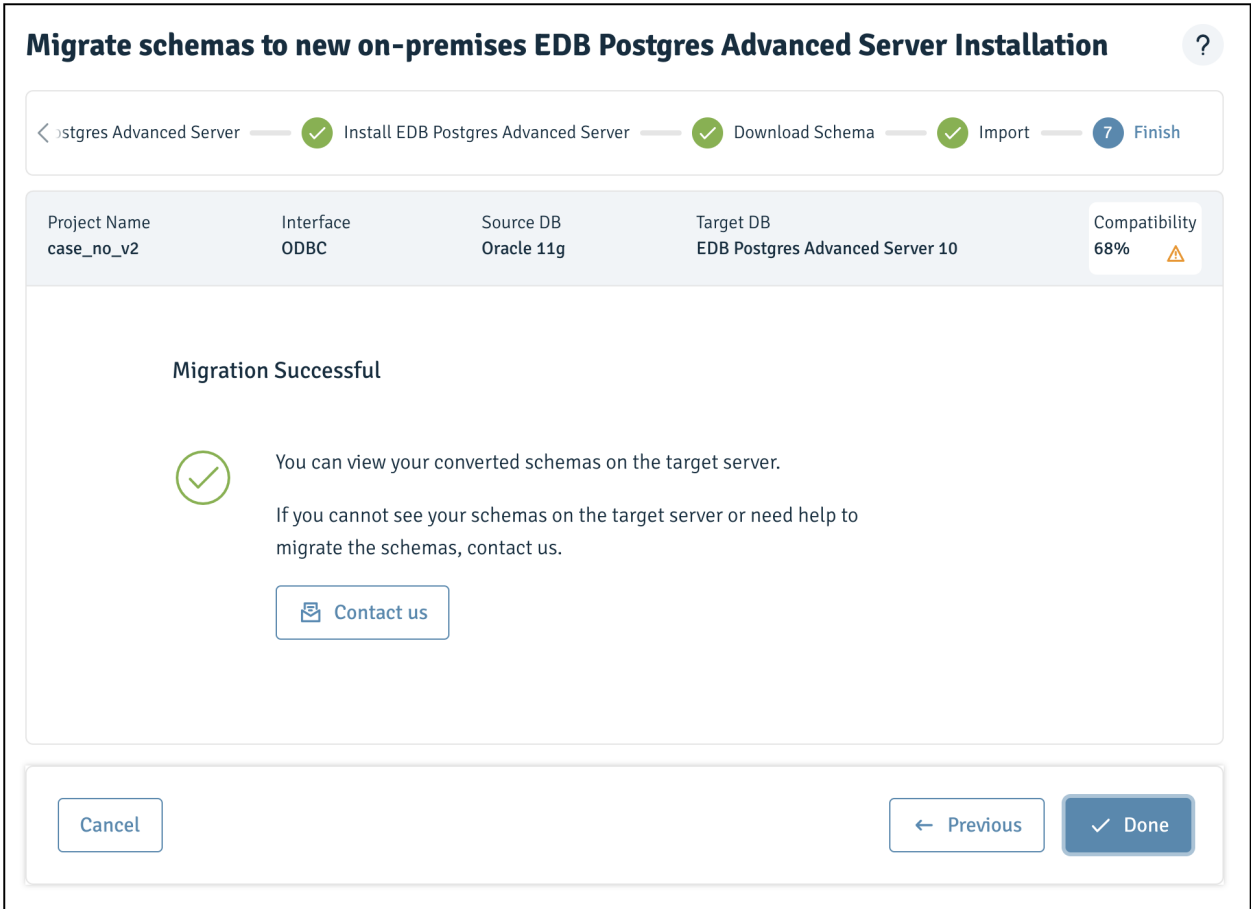


Fig. 40: A successful schema migration

### 4.3.3 Migrating to the Cloud

To migrate schemas on EDB Postgres Advanced Server to Cloud, complete the following steps:

2. Click `EDB Postgres Advanced Server on Cloud` option:

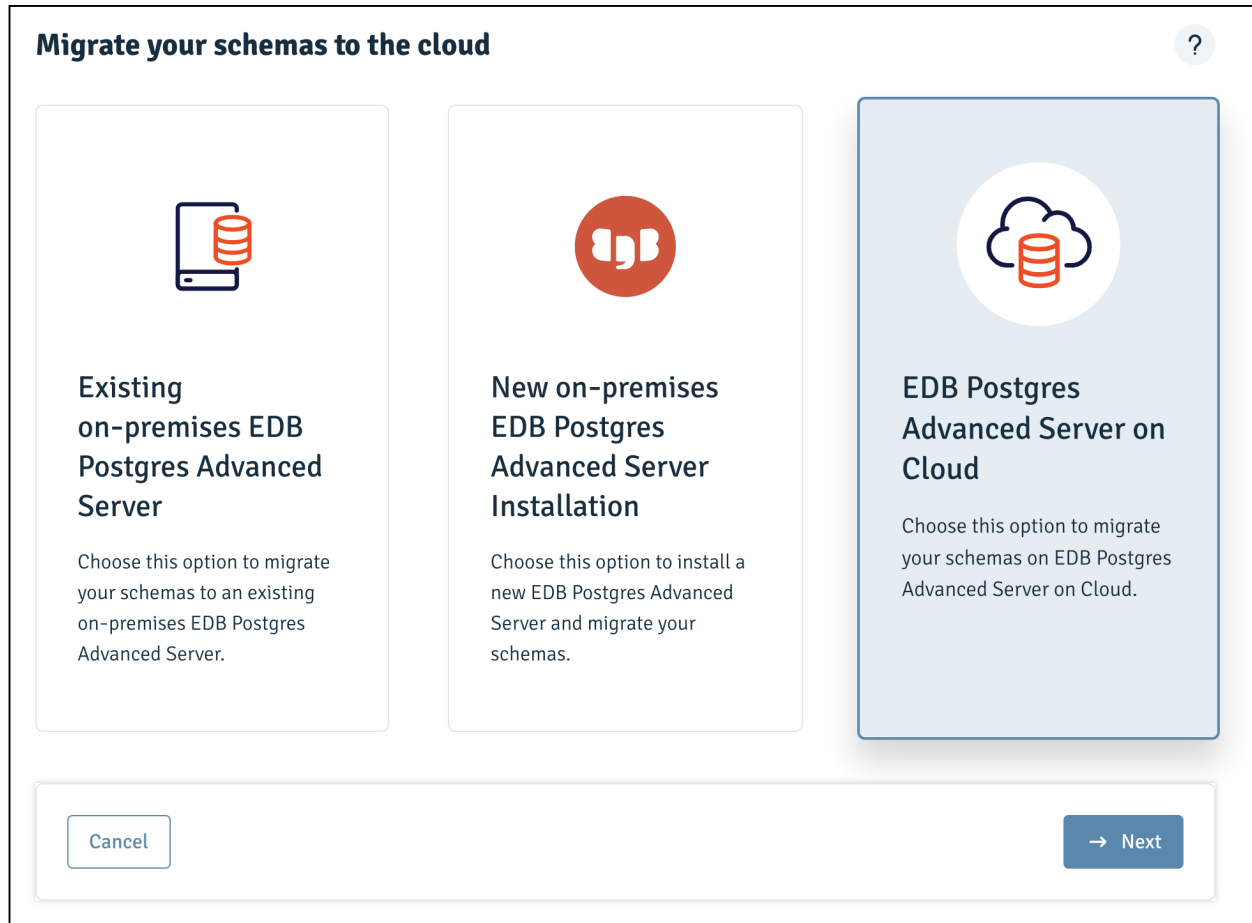


Fig. 41: EDB Postgres Advanced Server on Cloud

*Figure 3-42: EDB Postgres Advanced Server on Cloud*

3. Select one or more schemas to migrate to EDB Postgres Advanced Server:

*Selecting schemas for migration*

4. Select the cloud platform. For example, IBM Cloud:

*Figure 3-43: Selecting cloud option for migration*

5. To launch a new cluster, click `Go to Cloud`:

*Figure 3-44: Launching a cloud cluster*

Or, if you have an existing cluster running, click `Next`.

6. Enter the required connection details on the `Connect` page:

*Figure 3-45: Connecting to the cloud cluster*

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

## Migrate your schemas to the cloud

1

Select Schemas

2

Select Platform

3

Launch Cluster

4

Connect

5

Deploy

6

Finish

 This project has migration challenges. Contact us for help.

Contact Us

×

|              |           |            |                                 |                                                                                         |
|--------------|-----------|------------|---------------------------------|-----------------------------------------------------------------------------------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility                                                                           |
| case_no_v2   | ODBC      | Oracle 11g | EDB Postgres Advanced Server 10 | 68%  |

Select one or more schemas

☒ All

☐ schema\_1900

☒ HR

☐ MIGRATIONTEST

Cancel

← Previous

→ Next

Fig. 42: Selecting schemas for migration

### Migrate your schemas to the cloud

✓ Select Schemas

2 Select Platform

3 Launch Cluster

4 Connect

5 Deploy

6 Finish

|                                |                   |                         |                                              |                       |
|--------------------------------|-------------------|-------------------------|----------------------------------------------|-----------------------|
| Project Name<br>HumanResources | Interface<br>JDBC | Source DB<br>Oracle 11g | Target DB<br>EDB Postgres Advanced Server 12 | Compatibility<br>100% |
|--------------------------------|-------------------|-------------------------|----------------------------------------------|-----------------------|

Select the Cloud Platform

☒  IBM Cloud

☐ AWS

☐ Google Cloud

☐ Microsoft Azure

Cancel

← Previous

→ Next

Fig. 43: Selecting cloud option for migration

### Migrate schemas to EDB Postgres Advanced Server on Cloud

✓ Select Schemas

✓ Select Platform

3 Launch Cluster

4 Connect

5 Deploy

6 Finish

|              |           |            |                                 |               |
|--------------|-----------|------------|---------------------------------|---------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
| ID2019_1     | JDBC      | Oracle 11g | EDB Postgres Advanced Server 12 | 100%          |

Launch new IBM™ Cloud cluster

Navigate to IBM™ Cloud to launch a new cluster.

[→ Go to IBM™ Cloud](#)

Note: If you have an existing cluster running, click Next.

Cancel

[← Previous](#)

[→ Next](#)

Fig. 44: Launching a cloud cluster

### Migrate schemas to EDB Postgres Advanced Server on Cloud

✓ Select Schemas

✓ Select Platform

✓ Launch Cluster

4 Connect

5 Deploy

6 Finish

|              |           |            |                                 |               |
|--------------|-----------|------------|---------------------------------|---------------|
| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
| ID2019_1     | JDBC      | Oracle 11g | EDB Postgres Advanced Server 12 | 100%          |

#### Connect to IBM™ Cloud cluster

Target Database

ID2019\_1

Host Name/Address

Host Name/Address

Port

9999

Note: Ensure that your database server is accessible from Migration Portal.

Maintenance Database

edb

Username

enterprisedb

Password

Password

Cancel

← Previous

→ Next

Fig. 45: Connecting to the cloud cluster

7. Click `Test Connection` to verify the connection details:

Migrate schemas to EDB Postgres Advanced Server on Cloud?

✓ Select Schemas

✓ Select Platform

✓ Launch Cluster

4 Connect

5 Deploy

6 Finish

| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
|--------------|-----------|------------|---------------------------------|---------------|
| ID2019_1     | JDBC      | Oracle 11g | EDB Postgres Advanced Server 12 | 100%          |

Target Database

ID2019\_1

Host Name/Address

Port

52.5.148.59

9999

Maintenance Database

dmp\_exec

Note: Deployment will create a new database **ID2019\_1** 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.

Edit Connection

Cancel

← Previous

→ Next

Fig. 46: Verify the connection details

Figure 3-46: Verify the connection details

8. Once the connection is successful, click `Next`:

Figure 3-47: A successful migration

The converted schemas are migrated to the target server.

### Migrate schemas to EDB Postgres Advanced Server on Cloud

✓ Select Schemas

✓ Select Platform

✓ Launch Cluster

✓ Connect

✓ Deploy

6 Finish

| Project Name | Interface | Source DB  | Target DB                       | Compatibility |
|--------------|-----------|------------|---------------------------------|---------------|
| ID2019_1     | JDBC      | Oracle 11g | EDB Postgres Advanced Server 12 | 100%          |

#### Migration Successful

✓

You can view your converted schemas on the target server.

Download Summary

If you cannot see your schemas on the target server or need help to migrate the schemas, contact us.

Contact us

Cancel

← Previous

✓ Done

Fig. 47: A successful migration

## 4.4 Data Migration

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

1. Use Migration Toolkit to migrate the data. For detailed information about using Migration Toolkit, see the [Migration Toolkit Guide](#).
2. 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](#).

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

For example, the following command migrates data to a schema named `hr`:

```
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.

## **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 [Migration Toolkit Guide](#).