

Oracle® Rdb Extension for SQL Developer

User Guide

Release 7.4

July 2026

ORACLE®

Oracle Rdb Extension for SQL Developer User Guide

Release 7.4.0.0.0

Copyright © 2018, 2026 Oracle and/or its affiliates. All rights reserved.
Oracle Corporation - Worldwide Headquarters, 2300 Oracle Way, Austin, TX 78741, United States.

Primary Author: Rdb Engineering and Documentation group.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited. The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing. If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle, Java, Oracle SQL Developer, Oracle Rdb, Hot Standby, LogMiner for Rdb, Oracle SQL/Services, Oracle CODASYL DBMS, Oracle RMU, Oracle CDD/Repository, Oracle Trace, and Rdb7 are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

Contents

Chapter 1 Introducing Oracle Rdb Extension for SQL Developer

Chapter 2 Installing Oracle Rdb Extension for SQL Developer

2.1 What You Need

- 2.1.1 SQL Developer
- 2.1.2 Oracle JDBC for Rdb
- 2.1.3 Oracle Rdb Database
- 2.1.4 Sample Data

2.2 Installing Oracle Rdb Extension for SQL Developer

2.3 Post-Installation Tasks

- 2.3.1 Precondition your databases
- 2.3.2 Reports and Snippets

2.4 Known Problems and Limitations.

- 2.4.1 Metadata Manipulation Restriction
- 2.4.2 Drag and Drop Restriction
- 2.4.3 Other Disabled features
- 2.4.4 Display of Function and Procedure source code

2.5 Oracle on the Web

Chapter 3 Browsing Rdb Database Schema using the Rdb Extension

3.1 Creating a New Connection

3.2 Displaying Database Objects

3.3 Database Objects

- 3.3.1 Constraints
- 3.3.2 Domains
- 3.3.3 Functions
- 3.3.4 Indexes
- 3.3.5 Procedures
- 3.3.6 Profiles, Users and Roles
- 3.3.7 Query Outlines
- 3.3.8 Sequences
- 3.3.9 Synonyms
- 3.3.10 Tables
- 3.3.11 Triggers
- 3.3.12 Views

3.4 Retrieving Data using the Table Display

Chapter 4 Rdb Snippets

4.1 Snippet Overview

4.2 Oracle syntax Snippets

4.3 Rdb syntax Snippets

Chapter 5 SQL Developer Reports

5.1 About Your Database reports

5.2 Administration reports

5.2.1 Database Administration reports

5.2.2 Server Administration reports

5.2.3 Information Tables

5.2.4 Temporary Tables

5.2.5 User Tables

5.2.6 User Views

Preface

Purpose of This Manual

The Oracle Rdb Extension for SQL Developer User Guide describes concepts, features, installation and usage of the Oracle Rdb Extension that you may choose to add to the Oracle SQL Developer application on your systems.

Audience

This document is intended for users responsible for:

- System management
- Database administration
- Application programming

To use this document, you must be familiar with Oracle SQL Developer and must have a working knowledge of Oracle Rdb.

Users should also be familiar with the use of Structured Query Language (SQL) to access information in relational database systems.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Reader Comments

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?

- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title, release date, chapter, section, and page number (if available).

Please direct all comments on, and corrections for this Oracle documentation to Oracle Support at <https://support.oracle.com>

If you have problems with the software described in this documentation, please contact your local Oracle Support for assistance. Please provide a clear description of the problem encountered as well as the product version and the operating system version.

Document Structure

This document consists of the following chapters:

Chapter 1	Introduction.
Chapter 2	Describes how to install Oracle Rdb Extension for SQL Developer and provides system requirements. Read this chapter <i>before</i> installing or updating Oracle Rdb Extension for SQL Developer.
Chapter 3	Describes how to browse Rdb database metadata and data using SQL Developer with the Rdb extension installed.
Chapter 4	Describes the Rdb-specific snippets available.
Chapter 5	Described the Rdb-specific reports available.

Related Documentation

For conceptual, usage, and reference information about Oracle SQL Developer, refer to the online help available when you are running SQL Developer.

Oracle error message documentation is available only in HTML. If you have access to the Oracle Documentation CD, you can browse the error messages by range.

Once you find the specific range, use your browser's "find in page" feature to locate the specific message. When connected to the Internet, you can search for a specific error message using the error message search feature of the Oracle online documentation.

To download free release notes, installation documentation, white papers, or other Collateral on SQL Developer, go to the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at:

<http://www.oracle.com/technology/join/index.html>

If you already have a user name and password for OTN, then you can go directly to the documentation section of the OTN Web site at:

<http://www.oracle.com/technology/documentation>

To download free release notes, installation documentation, white papers, or other collateral on Oracle Rdb, please visit the Oracle Rdb web site:

<http://www.oracle.com/rdb>

For more information, refer to these Oracle Rdb resources:

- *Oracle Rdb7 Guide to Database Design and Definition*
- *Oracle Rdb7 Guide to Database Performance and Tuning*
- *Oracle Rdb7 Introduction to SQL*
- *Oracle Rdb 7.4 SQL Reference Manual*
- *Oracle Rdb Guide to SQL Programming*
- *Oracle JDBC for Rdb User Guide*

Conventions

- Oracle Rdb Extension for SQL Developer is often referred to as Rdb extension.
- Oracle Rdb is often referred to as Rdb.
- Oracle JDBC for Rdb is referred to as Rdb JDBC or sometimes just JDBC.
- Oracle JDBC for Rdb thin driver is often referred to as Rdb thin driver.
- Oracle JDBC for Rdb thin server is often referred to as Rdb JDBC server.
- Oracle Rdb refers to Oracle Rdb Server for OpenVMS Alpha and OpenVMS IA-64 software.
- OpenVMS Industry Standard 64 for Integrity Servers is referred to as OpenVMS IA-64.

- OpenVMS refers to both the OpenVMS IA-64 and OpenVMS Alpha operating systems.
- Hewlett-Packard Enterprise Company is referred to as HPE.
- VMS Software Inc. is referred to as VSI.

The following conventions are used in this document:

word	A lowercase word in a format example indicates a syntax element that you supply.
[]	Brackets enclose optional clauses from which you can choose one or none.
{ }	Braces enclose clauses from which you must choose one alternative.
...	A horizontal ellipsis means you can repeat the previous item.
▪ ▪ ▪	A vertical ellipsis in an example means that information not directly related to the example has been omitted.

Conventions in Code Examples

Code examples illustrate SQL or other command-line statements. They are displayed in a monospace (fixed-width) font and separated from normal text as shown in this example:

```
SELECT last_name FROM employees;
```


Chapter 1 Introducing Oracle Rdb Extension for SQL Developer

Oracle SQL Developer is a graphical version of SQL*Plus that gives database developers a convenient way to perform basic tasks.

Using the Oracle Rdb Extension for SQL Developer, you can connect to any target Oracle Rdb database using standard Oracle Rdb database authentication.

Once connected, you can perform operations on objects in the database. You can browse database objects; run SQL statements and scripts; manipulate and export data; and view and create reports.

Chapter 2 Installing Oracle Rdb Extension for SQL Developer

To install and use Oracle Rdb Extension for SQL Developer, you simply download a ZIP file and unzip it into a desired parent directory or folder, invoke SQL Developer and then use a simple update process within SQL Developer to install the Oracle Rdb extension.

This chapter contains:

- [What You Need](#)
- [Installing Oracle Rdb Extension for SQL Developer](#)
- [Known Problems and Limitations.](#)
- [Oracle on the Web](#)

2.1 What You Need

This section lists the products and database schemas you need to run the examples provided in this guide.

2.1.1 SQL Developer

SQL Developer must be installed before you can install the Oracle Rdb Extension for SQL Developer.

Information about SQL Developer including how to download and install this product may be found at the following web site:

<http://www.oracle.com/technetwork/developer-tools/sql-developer/>

If you have not yet installed SQL Developer you should read the [Oracle SQL Developer Installation Guide](#) before you perform the installation.

The following table shows the minimum recommended version of SQL Developer:

Table 2-1 Recommendations for SQL Developer

Resource	Recommended Minimum Value
SQL Developer	Release 24.3.1

2.1.2 Oracle JDBC for Rdb

The Rdb extension uses Oracle JDBC for Rdb to connect to your remote Rdb database.

The following minimum versions for Oracle JDBC for Rdb are required:

Table 2-2 Recommendations for client-side Oracle JDBC for Rdb

Resource	Recommended Minimum Value
Oracle JDBC for Rdb thin Driver JAR	Release 7.4.1.1.1

Note:

The Oracle JDBC for Rdb thin driver JAR in this installation kit complies with the above recommendation and may be a pre-release of the full JDBC kit. This thin driver JAR update was required to fix a problem preventing some of the example Oracle Rdb reports from working correctly.

Table 2-3 Recommendations for server-side Oracle JDBC for Rdb

Resource	Recommended Minimum Value
Oracle JDBC for Rdb server JAR files	Release 7.3.4.0.4

Refer to the **Oracle JDBC for Rdb User Guide** and the **Oracle JDBC for Rdb Installation Guide** for more information.

2.1.2.1 Oracle JDBC for Rdb thin driver

During installation, Rdb extension will place a copy of the Oracle JDBC for Rdb thin driver JAR file in the Rdb subdirectory of the SQL Developer's extensions directory:

```
<sqldeveloper installation dir>\sqldeveloper\extensions\oracle.rdb
```

In addition, the Rdb extension installation will configure SQL Developer to use this JAR for the Rdb JDBC access by adding the URL of this driver jar to the Third-party JDBC drivers list. The Third-party JDBC drivers list can be viewed using the **Tools:Preferences:databases:Third Party JDBC drivers** dialog within SQL Developer.

The new JAR will be inserted as the first element in the drivers list. If a URL to another instance of the Oracle JDBC for Rdb thin driver JAR already exists in the Third-Party JDBC driver list, the new driver URL will take precedence and SQL Developer will now use this new reference.

If you wish for SQL Developer to continue to use the previously existing Rdb thin driver JAR, you may move the older JAR URL entry to top of the list, however before doing so, you should ensure that the driver meets the minimum driver version as specified in **Table 2-2 Recommendations for client-side Oracle JDBC for Rdb**.

To ensure that the Rdb extension will function correctly, Oracle recommends using the Rdb thin driver JAR provided and installed by this installation.

2.1.2.2 Oracle JDBC for Rdb server

You must have an Oracle JDBC for Rdb server running on the remote computer.

The server must have access to the database you wish to connect too.

In order for the Rdb extension to work correctly within SQL Developer you should ensure that server meets the minimum driver version as specified in **Tables 2-3 Recommendations for server-side Oracle JDBC for Rdb**.

2.1.3 Oracle Rdb Database

You must have Oracle Rdb installed on the remote computer.

The minimum version of Oracle Rdb supported by the Oracle JDBC for Rdb Drivers may be found in the **Oracle JDBC for Rdb Installation Guide**.

2.1.3.1 Database Preconditioning

Your database may need to have some standard Rdb scripts executed on it prior to using some of the features within SQL Developer.

Refer to [Precondition your databases](#) for details on additional tasks that may be required.

2.1.4 Sample Data

The sample data used in this book is the data from `MF_PERSONNEL` database which is one of the Oracle Rdb Sample databases. The sample databases are included as part of the Oracle Rdb Database installation.

2.2 Installing Oracle Rdb Extension for SQL Developer

These steps demonstrate how to install Oracle Rdb Extension for SQL Developer once SQL Developer is installed.

Note:

As new versions of Oracle products are released, the install process may change slightly from what is shown in this guide. The screenshots are based on Oracle Rdb Extension for SQL Developer release 7.4.0.0.0 and Oracle SQL Developer version 24.3.1 running on a Windows machine.

To install:

1. Download the Oracle Rdb Extension for SQL Developer Installer.zip file.

Please contact Oracle Support for information on how to download the installation kit:

<https://support.oracle.com>

2. Invoke SQL Developer

To start SQL Developer, go to the `sqldeveloper` directory under the `<sqldeveloper_install>` directory, and do one of the following:

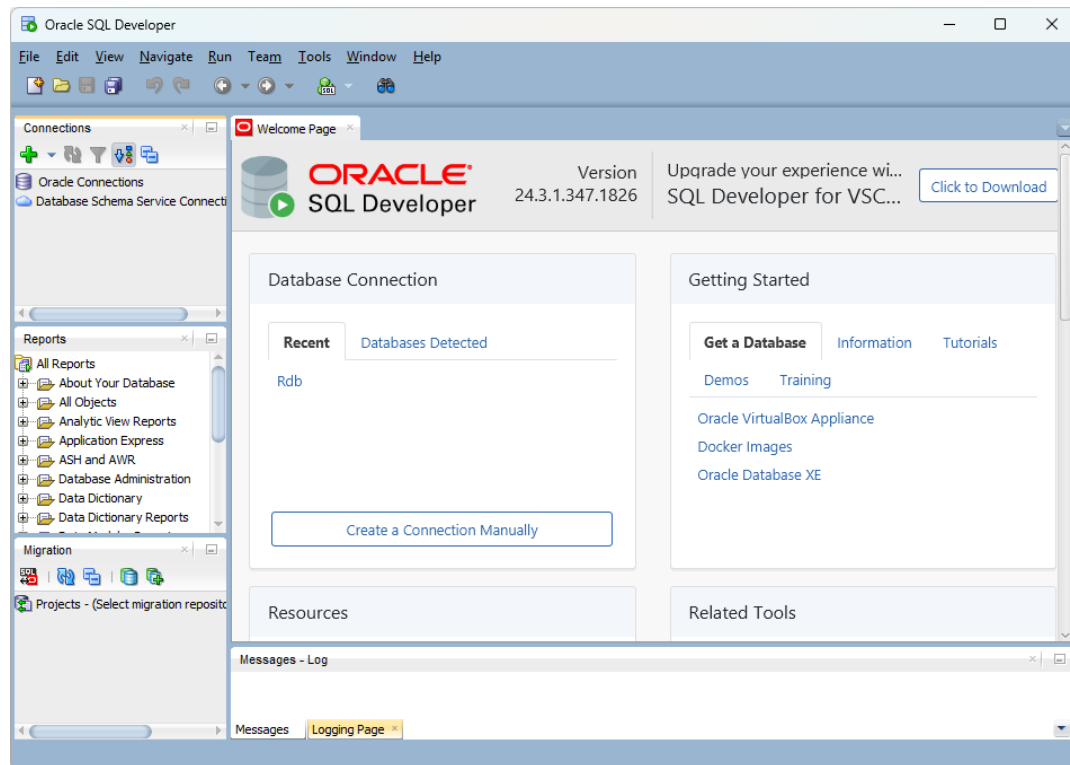
On Linux and Mac OS X systems, run **sh sqldeveloper.sh**.

On Windows systems, double-click **sqldeveloper.exe**.

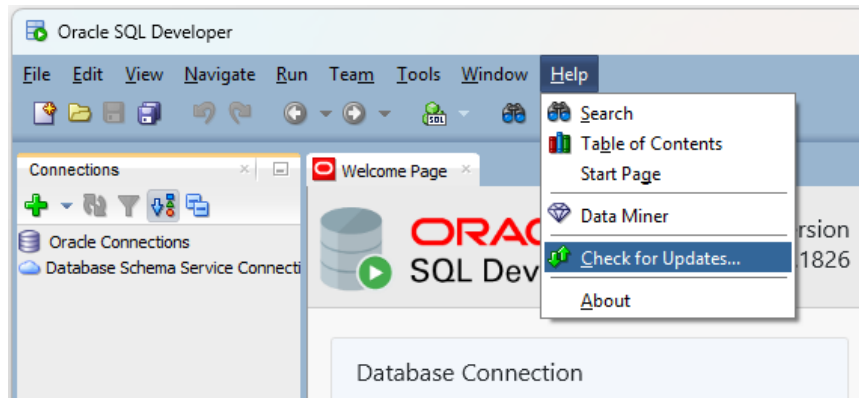
If you are asked to enter the full pathname for java.exe, click Browse and find **java.exe**. Note that SQL Developer 24.3.1 requires JDK17 or later versions.

For example, on a Windows system the path might have a name similar to:

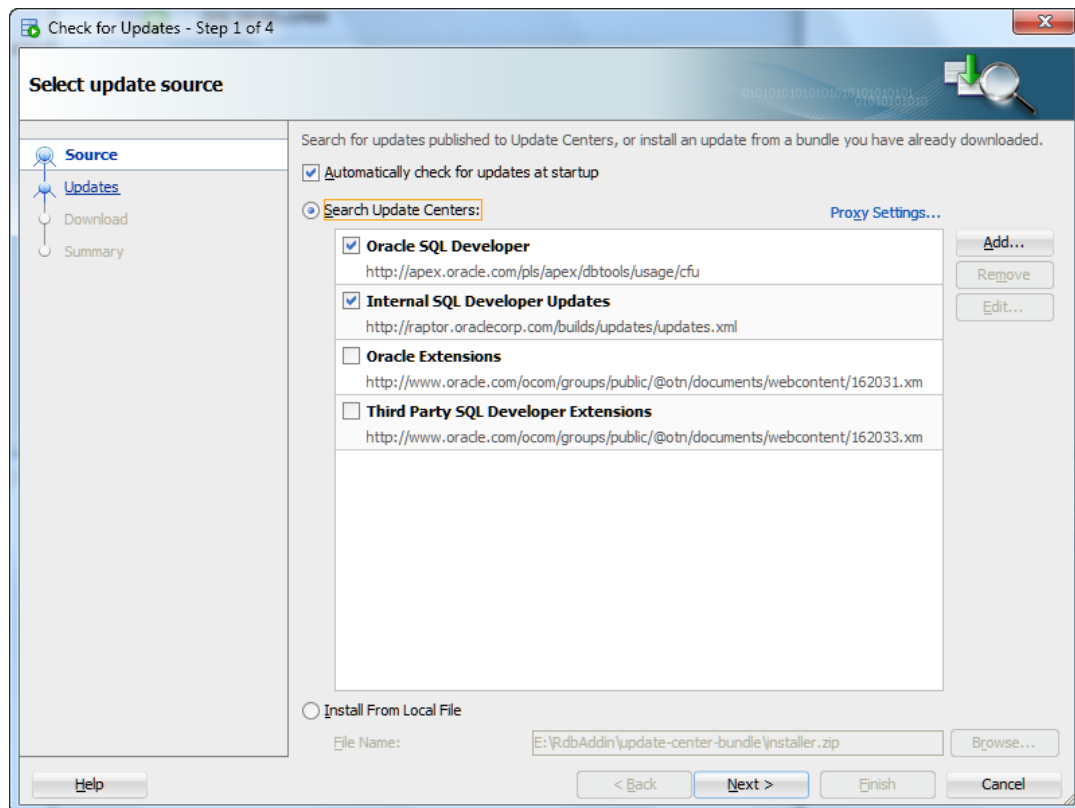
```
C:\Program Files\Java\jdk17.0.18\bin\java.exe
```



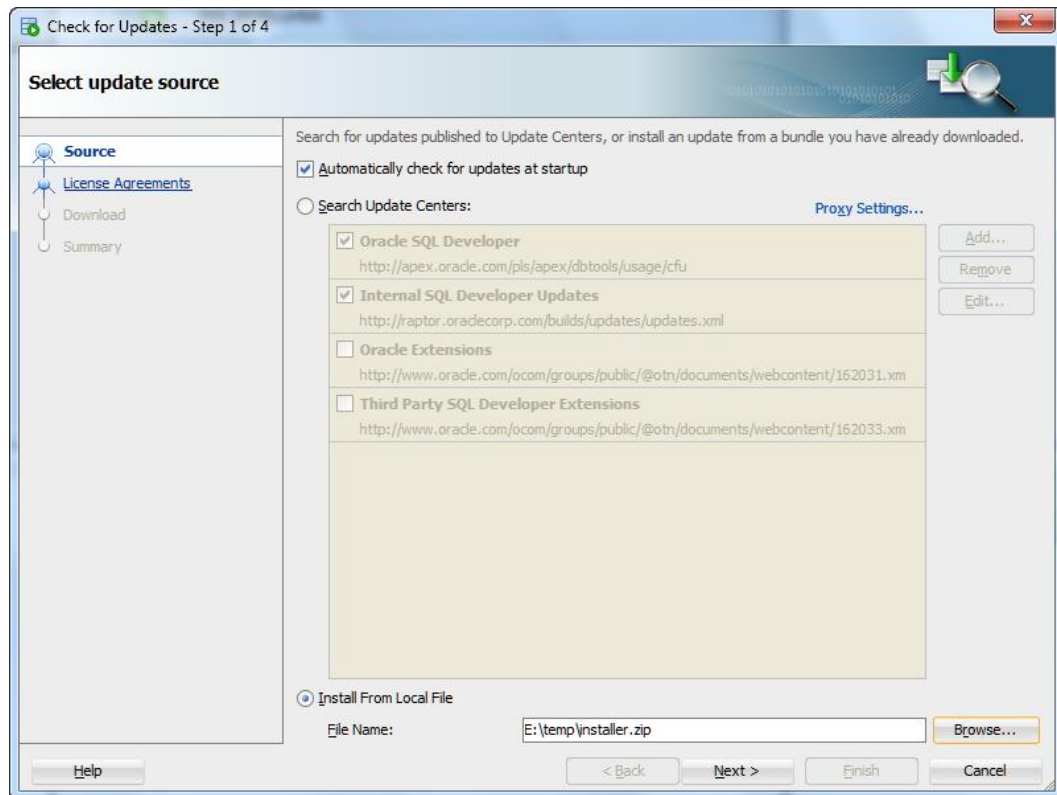
3. Click the **Check for Updates...** entry of the **HELP** menu within the SQL Developer main window.



A **Source** form will display.

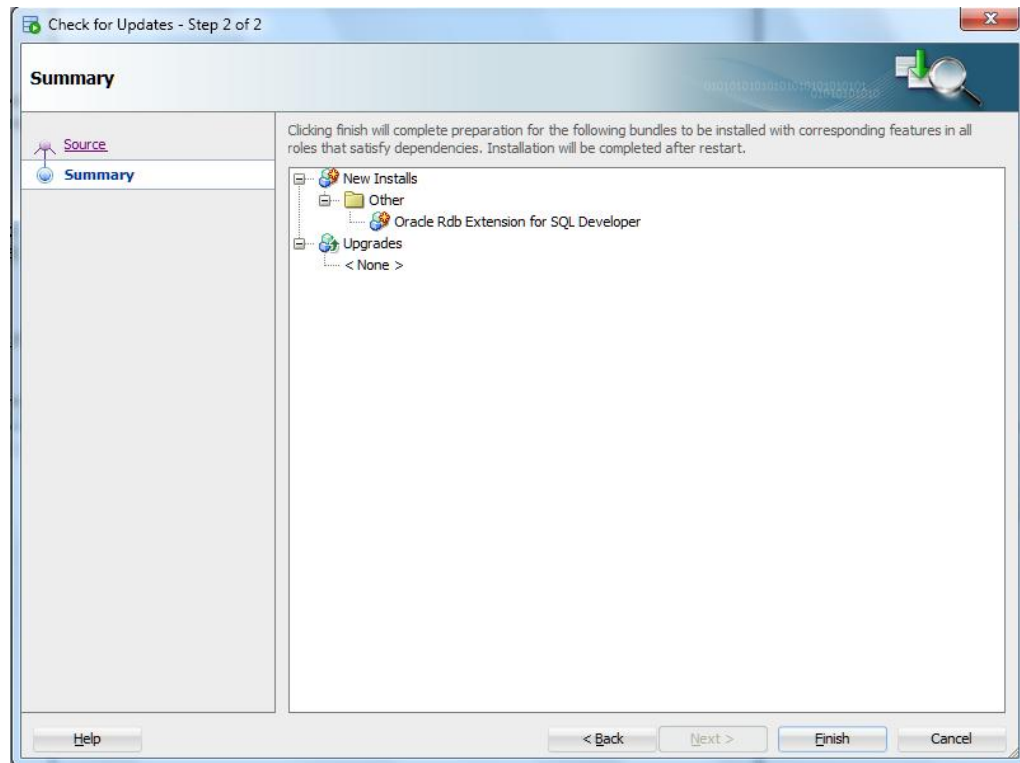


4. Click the **Install from Local File** radio button.
5. Browse or enter the path of the **installer.zip** file you downloaded.



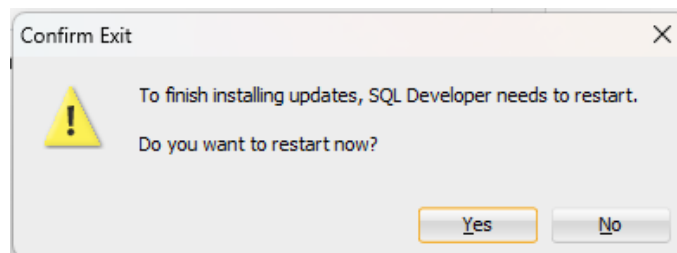
6. Click **Next**.

A **Summary** page will display.



7. Click **Finish**.

The system restart screen will appear.



8. Click **Yes**.

2.3 Post-Installation Tasks

After you have installed the Rdb extension, there is a further step that is required before you can utilize fully some of the features of SQL Developer.

- Precondition your databases

2.3.1 Precondition your databases

A number of the reports provided in `RdbSystemReports.xml` require some standard preconditioning of the database in order for the reports to execute correctly. These steps are described in the following sections.

2.3.1.1 Information Tables

The Rdb System Reports rely on the standard Rdb Information tables being present in the connected database.

The Rdb Information tables may be added to your database by executing the `Info_tables.sql` script that is placed in `SQL$SAMPLE` directory created during the installation of Oracle Rdb.

You must execute this script on all databases you wish to run the Rdb System Reports on.

Refer to your Oracle Rdb documentation for more information on Information Tables.

2.3.2 Reports and Snippets

During installation, Rdb extension will place a copy of the Oracle JDBC for Rdb reports and snippets in the Rdb subdirectory of the SQL Developer's extensions directory :

```
<sqldeveloper installation dir>\sqldeveloper\extensions\oracle.rdb
```

These are the same reports and snippets that were added to SQL Developer during the extension installation and are copied here for reference purposes.

2.4 Known Problems and Limitations.

This section details any known problems or limitations with the current version of Oracle Rdb Extension for SQL Developer.

2.4.1 Metadata Manipulation Restriction

This version of the Rdb extension only enables operations that operate on the data within the Rdb Database. Operations that manipulate the metadata are currently disabled.

Metadata operations include:

- Create Object (for example TABLE, INDEX, CONSTRAINT ...)
- Alter Object
- Drop Object
- Add Object
- Database Copy
- Database Export

2.4.2 Drag and Drop Restriction

The ability to drag and drop objects from an Rdb Connection is currently disabled.

For example, dragging a table object from the Connections navigator onto a SQL Worksheet will not create the appropriate SQL text segment.

This feature is disabled within the current version of SQL Developer but this restriction is expected to be lifted in a future version.

2.4.3 Other Disabled features

A number of features within SQL Developer and the SQL Worksheet, require functionality or features that are not available within Oracle Rdb.

In most cases these feature will be marked unavailable when used with an Rdb Connection and may be grayed-out on the UI.

Features that are specific to PL/SQL, SQL*Plus or OWA (Oracle Web Agent) will not work with Rdb connections.

The following is a list of a number of the features that are not supported when using an Rdb connection. Please note this list is incomplete.

- View menu
 - Breakpoints
 - Debugger
 - Run Manager

- Migrations
- DBMS Output
- OWA Output
- Run Menu
 - Run
 - Debug
- Tools Menu
 - Migration
 - Unit Tests
 - Database Copy
 - Database Diff
 - Database Export
 - Monitor SQL
 - Monitor Session

2.4.4 Display of Function and Procedure source code

When you click a Function or Procedure name within the **Connections** navigator, details about the object will be displayed in the SQL Developer main display region.

Selecting the **Code** tab within the function or procedure display will display the source code of the object.

Currently the display of this source code has the following limitations:

- Code is not displayed for any External routines .
- The code displayed for stored routines is not reformatted by SQL Developer. It will be displayed in the format it was created. Any **Tab**, **New Line** or other formatting characters within the original source will be retained and displayed appropriately.

2.5 Oracle on the Web

Oracle provides a number of resources on the Web. These are some sites you may find helpful:

- Oracle Rdb home page:
<http://www.oracle.com/rdb/>
- SQL Developer home page:
http://www.oracle.com/technology/products/database/sql_developer/

- SQL Developer discussion forum:
<https://forums.oracle.com/ords/apexds/domain/dev-community/category/sql-developer?tags=sql-developer>
- Oracle Accessibility site:
<http://www.oracle.com/accessibility/>
- Oracle Corporate site:
<http://www.oracle.com/>

Chapter 3 Browsing Rdb Database Schema using the Rdb Extension

This chapter explains how the Rdb extension may be used to browse the Rdb database metadata and contains:

- [Creating a New Connection](#)
- [Displaying Database Objects](#)

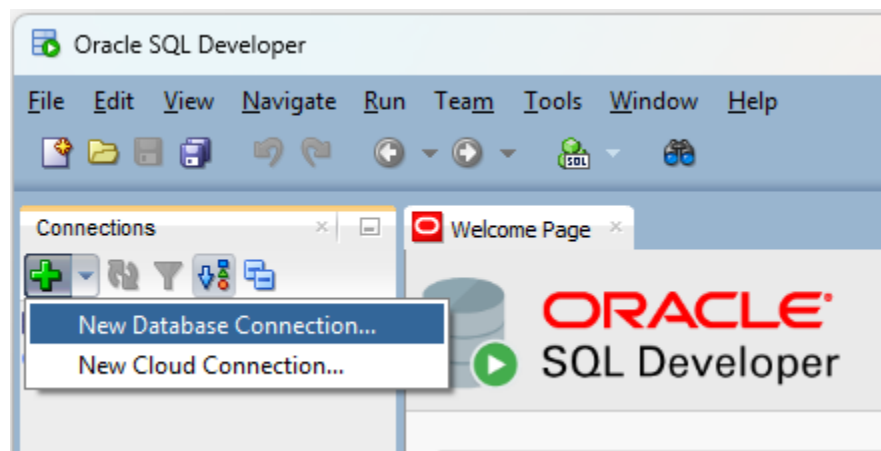
3.1 Creating a New Connection

A connection is a SQL Developer object that specifies the necessary information for connecting to a specific database as a specific user of that database. You must have at least one database connection (existing, created, or imported) to use SQL Developer.

You can connect to any target Oracle Rdb database using standard Oracle database authentication. Once connected, you can perform operations on objects in the database.

The connection you create in this chapter serves as a starting point for work in subsequent chapters, so it is important to follow the order of this guide.

1. Start SQL Developer and create a new connection.

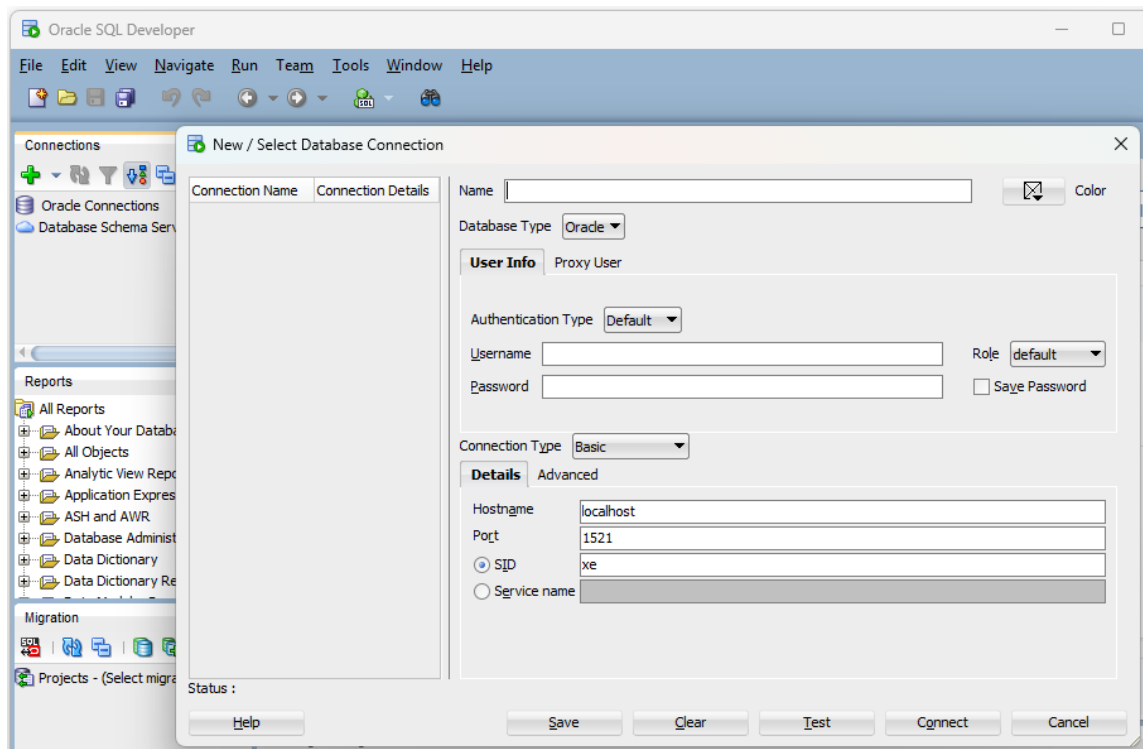


To create a new database connection, right-click the **Green+** under the connections subpanel and select **New Database Connection...**

You can also create a new database connection by selecting an existing connection in that dialog box, changing the connection name, changing other connection attributes as needed, and clicking **Save** or **Connect**.

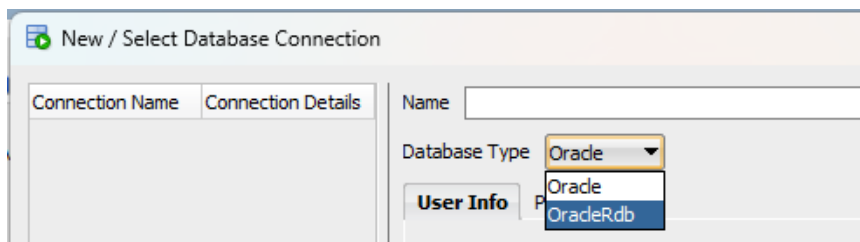
In this example we will be creating a new connection called **MF_PERS**.

2. A **New/Select Database Connection** form will display.



Use the dialog box to specify information about the connection (Refer to SQL Developer [Section 5.13, "Create/Edit/Select Database Connection"](#)).

3. In the Database Type drop down select **OracleRdb**.



This brings up the connection information specific to Oracle Rdb.

The screenshot shows a dialog box titled "New / Select Database Connection". It has two tabs: "Connection Name" and "Connection Details". The "Connection Details" tab is selected. The fields in this tab are: "Name" (text box), "Database Type" (dropdown menu showing "OracleRdb"), "Username" (text box), "Password" (text box), "Host" (text box showing "localhost"), "Port" (text box showing "1701"), and "Database" (dropdown menu). There is a "Retrieve databases" button below the "Database" field. To the right of the "Password" field is a checkbox labeled "Save Password". At the bottom of the dialog are buttons for "Help", "Save", "Clear", "Test", "Connect", and "Cancel".

4. Enter the connection information.

The database connection dialog box is used to create a new connection.

The following information is required to be entered:

Connection Name: An name for a connection to the database using the information that you enter. (The connection name is not stored in the database, and the connection is not a database object.) Suggestion: Include the database name, or name hint, and node in the connection name. Example: mf_personnel_node1 for connecting to MF_PERSONNEL on NODE1.

Username: Name of the database user for the connection. This user must have sufficient privileges to perform the tasks that you want to perform while connected to the database, such as creating, editing, and deleting tables, views, and other objects. Refer to Oracle Rdb Installation Guide about user accounts and its privileges.

Password: Password associated with the specified database user.

Save Password: If this option is checked, the password is saved with the connection information, and you will not be prompted for the password on subsequent attempts to connect using this connection.

Host: Host system for the Oracle Rdb database where the Oracle JDBC for Rdb server is running.

Port: TCP/IP Port on which Oracle JDBC for Rdb server will listen.

Database: The file specification of the database you wish to attach to. You may enter this information directly into the field or if you have already pressed the **Retrieve Databases** button you may select from the drop-down list of available databases.

Retrieve Databases: Displays a list of databases known to the Oracle JDBC for Rdb server. As part of the configuration of the JDBC server, your system administration or database administrator may specify a list of databases that the server may access. If provided, this list will be displayed when you press this button.

The screenshot shows a 'New / Select Database Connection' dialog box. It has two tabs: 'Connection Name' and 'Connection Details'. The 'Connection Details' tab is selected. The fields are as follows:

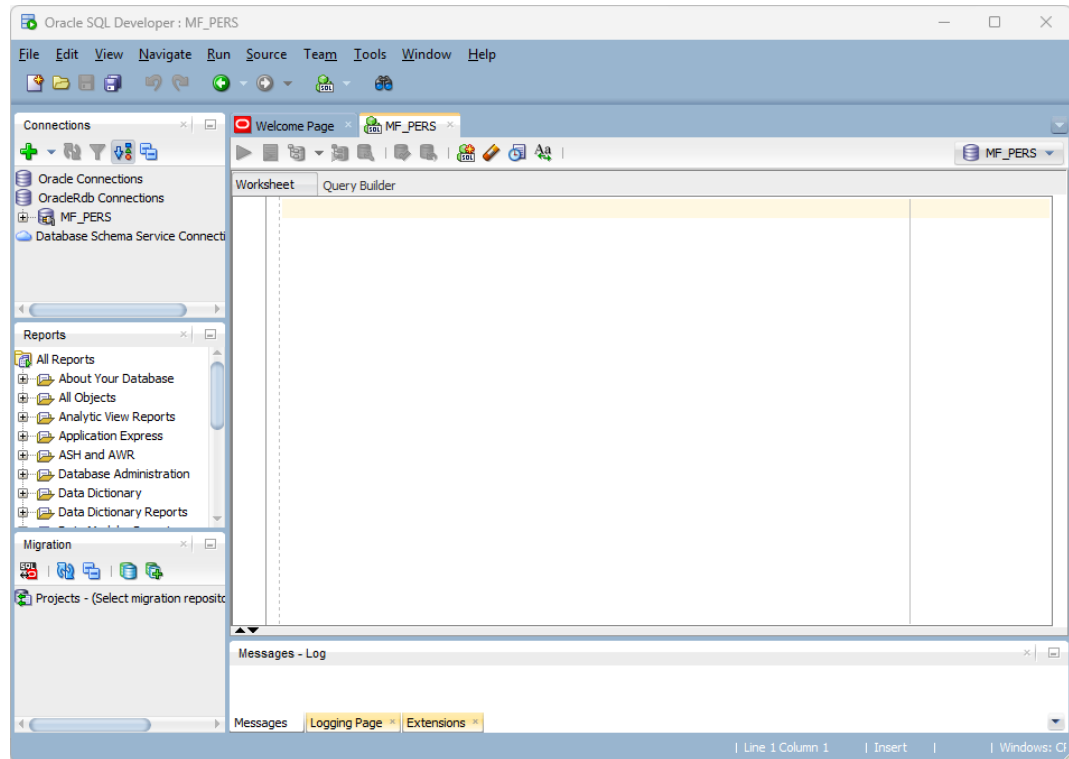
- Name: MF_PERS
- Database Type: OracleRdb (dropdown)
- Username: TEST_USER
- Password: [masked]
- Host: node1
- Port: 1701
- Database: DISKA:[DBS]MF_PERSONNEL (dropdown)

There is a 'Retrieve databases' button below the Database field. A 'Save Password' checkbox is checked. At the bottom, there are buttons for 'Help', 'Save', 'Clear', 'Test', 'Connect', and 'Cancel'.

To test the connection before you create it, click **Test**.

5. Click **Connect**.

Your connection will be saved and will be displayed in the **Connections** navigator.



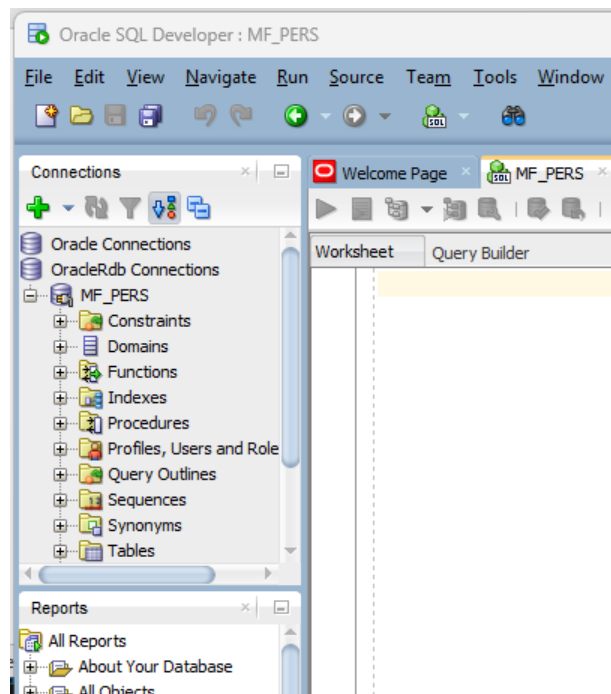
3.2 Displaying Database Objects

This section shows you how SQL Developer **Connections** navigator may be used to drill down on database objects held in the connected database.

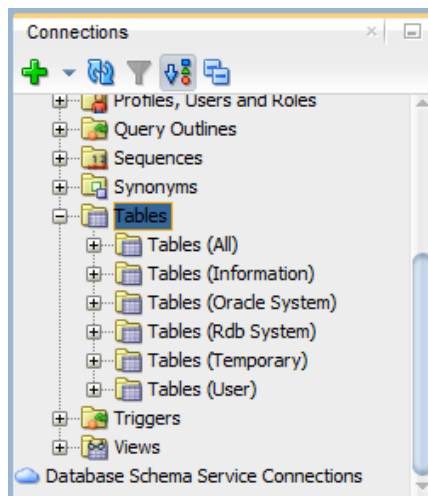
In this example we will drill down on User tables.

1. Select the database connection from the **Connections** navigator by clicking on the node for the database you wish to connect to.

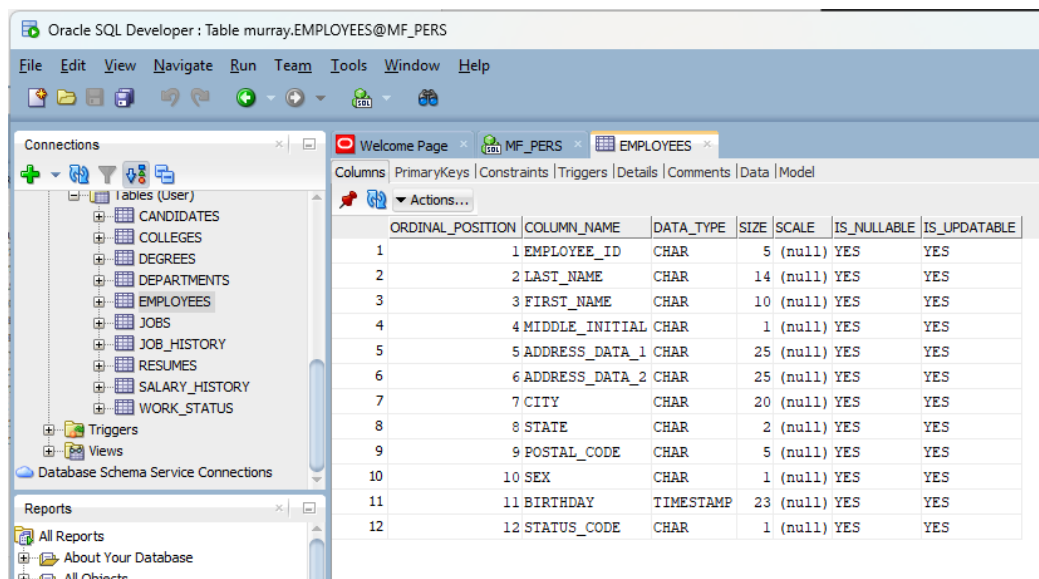
SQL Developer will make a connection to the database, if it is not already connected.



2. Select the object type you wish to drill down on, in this case we choose **Tables**.



3. Click on **Tables (User)** to show a list of user tables and then click on the **Employees** table.



A list of columns belonging to the table will be displayed in the navigator panel and details about the table will be displayed in the **Employees** tab to the right of the display.

The following information is available for each table and may be shown by clicking the appropriate tab within the table display:

Columns: shows details of the columns for the table.

Primary Keys: displays any primary key placed on the table.

Constraints: displays any table constraints for this table.

Triggers: displays any triggers created on this table.

Details: displays details such as creation date and creator of this database object.

Comments: shows any comment on the table.

Data: displays a table of sample data from the table.

Model: displays **Entity-Relationship Diagrams (ERDs)** for the table.

3.3 Database Objects

The following list describes the nodes that display as you traverse the Connection navigator for a Rdb Connection:

Constraints: Folder of different constraint types.

Constraints (All) : Folder of all constraints.

Constraints (Foreign) : Folder of all Foreign Key constraints.

Constraints (Non Null) : Folder of all Not Null constraints.

Constraints (Other) : Folder of all constraints that are not Foreign Key, Primary Key, Not Null or Unique constraints.

Constraints (Primary) : Folder of all Primary Key constraints.

Constraints (Unique) : Folder of all Unique constraints.

Domains: Folder of different domain types.

Domains (All): Folder of all domains.

Domains (Oracle System): Folder of domains associated with the Oracle system relations. These will only exist if you have preconditioned your database for OCI use.

Domains(Rdb System): Folder of domains associated with Rdb system relations.

Domains(SQL): Folder of domains created by SQL for internal use.

Domains(User) : Folder of all user-defined domains.

Functions: Folder of different function types.

Functions (All): Folder of all functions.

Functions (Oracle System): Folder of all functions associated with the Oracle system relations. These will only exist if you have preconditioned your database for OCI use.

Functions (Rdb System): Folder of all Rdb system functions.

Functions (User) : Folder of all user-defined functions.

Indexes: Folder of different index types.

Indexes (All): Folder of all indexes.

Indexes (Oracle System): Folder of Oracle system indexes. These will only exist if you have preconditioned your database for OCI use.

Indexes (Rdb System): Folder of Rdb system indexes.

Indexes (User) : Folder of all non-system indexes.

Indexes (User Hashed) : Folder of all non-system Hashed indexes.

Indexes (User Sorted) : Folder of all non-system Sorted indexes.

Indexes (User Sorted Ranked) : Folder of all non-system Sorted ranked indexes.

Query Outlines: Folder of all query outlines.

Procedures: Folder of different procedure types.

Procedures (All): Folder of all procedures.

Procedures (Oracle System): Folder of all procedures associated with the Oracle system relations. These will only exist if you have preconditioned your database for OCI use.

Procedures (Rdb System): Folder of all Rdb system procedures.

Procedures (User) : Folder of all user-defined procedures.

Profiles, Users and Roles: Folder of profile security objects.

All: Folder of all users, roles and profiles.

Default Roles: Folder of all default roles.

Roles: Folder of all roles.

Profiles : Folder of all profiles.

Users: Folder of all security profile entries identified as database users.

Sequences: Folder of different sequence types.

Sequences (All): Folder of all sequences.

Sequences (System): Folder of all system sequences.

Sequences (User) : Folder of all user-defined sequences.

Synonyms: Folder of all synonyms.

Tables: Folder of different table types.

Tables (All): Folder of all tables.

Tables (Information) : Folder of all information tables.

Tables (Oracle System): Folder of Oracle system tables. These will only exist if you have preconditioned your database for OCI use.

Tables (Rdb System): Folder of Rdb system tables.

Tables (Temporary) : Folder of all temporary tables.

Tables (User) : Folder of all non-system tables.

Triggers: Folder of all triggers.

Views: Folder of different view types.

Tables (All): Folder of all views.

Tables (Oracle System): Folder of Oracle system views. These will only exist if you have preconditioned your database for OCI use.

Tables (Rdb System): Folder of Rdb system views.

Tables (User) : Folder of all non-system views.

3.3.1 Constraints

A **constraint** specifies a condition that restricts the values that can be stored in a table.

You can perform the following operations on a constraint by right-clicking the constraint name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the constraint.

3.3.2 Domains

A **domain** defines the set of values, character set, collating sequence, and formatting clause that a column in a table can have.

You can perform the following operations on a domain by right-clicking the domain name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the domain.

3.3.3 Functions

A **function** is a type of SQL subprogram, which is a programming object that can be stored and executed in the database server, and called from other programming objects or applications. (Functions return a value; procedures do not return a value.)

Rdb supports both stored and external functions.

A **stored** function is defined using the CREATE MODULE statement.

An **external** function is defined using the CREATE FUNCTION statement.

For help with specific options in creating a stored or external function, refer to your Oracle Rdb SQL documentation.

You can perform the following operations on a function by right-clicking the function name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the function.

3.3.4 Indexes

An **index** is a database object that contains an entry for each value that appears in the indexed column(s) of the table or cluster and provides direct, fast access to rows.

You can perform the following operations on an index by right-clicking the index name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the index.

3.3.5 Procedures

A **procedure** is a type of SQL subprogram, which is a programming object that can be stored and executed in the database server, and called from other programming objects or applications. (Procedures do not return a value; functions return a value).

Rdb supports both stored and external procedures.

A **stored** procedure is defined using the CREATE MODULE statement.

An **external** procedure is defined using the CREATE PROCEDURE statement.

For help with specific options in creating a stored or external procedure, refer to your Oracle Rdb SQL documentation.

You can perform the following operations on a procedure by right-clicking the procedure name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the procedure.

3.3.6 Profiles, Users and Roles

Profiles, Users and Roles are security objects within the database that may be used to control what users may do within the database.

A **profile** may be used to extend a user definition within the database with special attributes that control transactions and resource usage.

A **role** is a security object to which privileges and other roles can be granted. A role can be granted to a user or another role.

A **user** is a special security profile entry to identify a database user. That user can be granted roles, which in turn provide access to database objects.

For information about security objects, see your Oracle Rdb documentation.

You can perform the following operations on a profile object by right-clicking the object name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the object.

3.3.7 Query Outlines

A **query outline** is an overall plan for how a query can be implemented and may contain directives that control the join order, join methods, index usage (or all of these) the optimizer selects when processing a query. Use of query outlines help ensure that query performance is highly stable across releases of Oracle Rdb.

For information about query outlines, refer to your Oracle Rdb SQL documentation.

You can perform the following operations on a query outline by right-clicking the query outline name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the query outline.
- **Compile:** Compile an outline that has been marked invalid.

3.3.8 Sequences

Sequences are used to generate unique integers. You can use sequences to automatically generate primary key values.

For information about sequences, refer to your Oracle Rdb SQL documentation.

You can perform the following operations on a sequence by right-clicking the sequence name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the sequence.

3.3.9 Synonyms

Synonyms provide alternative names for tables, views, sequences, procedures, functions, or other synonyms.

For information about synonyms, refer to your Oracle Rdb SQL documentation.

You can perform the following operations on a synonym by right-clicking the synonym name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the synonym

3.3.10 Tables

Tables are used to hold data. Each table typically has multiple columns that describe attributes of the database entity associated with the table, and each column has an associated data type.

You can perform the following operations on table by right-clicking the table name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the table.
- **Table:** Table actions include Rename, Drop (delete the table), Truncate (delete existing data without affecting the table definition), Lock (set the table lock mode: shared read, exclusive write, and so on), Comment (descriptive comment explaining the use or purpose of the table) and Count Rows (return the number of rows).

- **Column:** Column actions include Comment (descriptive comment about a column), Add and Drop.
- **Constraint:** Includes options for adding, dropping, enabling, and disabling constraints.
- **Trigger:** Options include Create, Create PK from Sequence (create a before-insert trigger to populate the primary key using values from a specified sequence), Enable or Disable All, Enable or Disable Single, and Drop (delete the trigger).
- **Export Data:** Enables you to export some or all of the table data to a file or to the system clipboard, in any of the following formats: XML (XML tags and data), CSV (comma-separated values including a header row for column identifiers), SQL Insert (INSERT statements), or SQL Loader (SQL*Loader control file). After you select a format, the [Export Table Data](#) dialog box is displayed.

3.3.11 Triggers

A **trigger** defines the actions to occur before or after a specified table is updated (by a write operation such as an INSERT, DELETE, or UPDATE statement).

A trigger can be thought of as a rule on a single table, which takes effect at a specific time for a particular type of update and causes one or more triggered actions to be performed.

You can perform the following operations on a trigger by right-clicking the trigger name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the trigger.

3.3.12 Views

Views are virtual tables (analogous to queries in some database products) that select data from one or more underlying tables.

You can perform the following operations on a view by right-clicking the view name in the Connections navigator and selecting an item from the menu:

- **Open:** Displays information about the view.
- **Count:** Count the number of rows within the view.

3.4 Retrieving Data using the Table Display

You may use the Table display to show the first 'n' rows of the table.

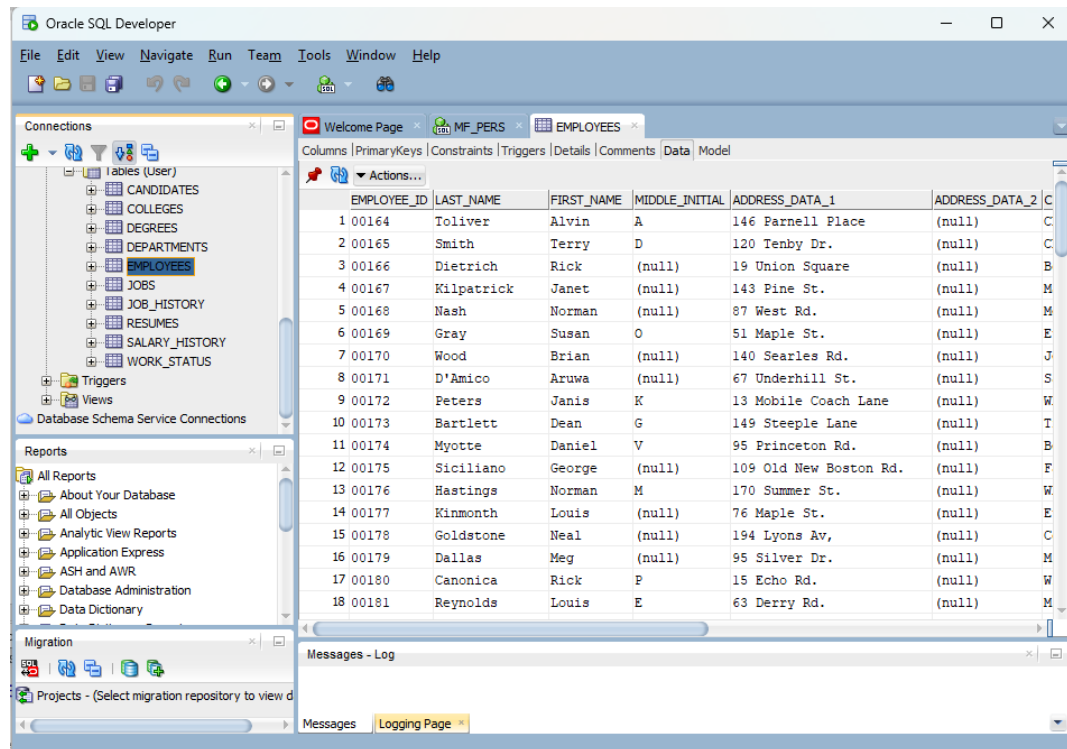
When you click on a table within the Connection navigator, several tabs will be displayed under that table name within the SQL Developer display area.

The **Data** tab allows you to see a sample of data from the table.

The number of rows displayed will depend on the setting within SQL Developer. Refer to the SQL Developer documentation for information about these options such as maximum display rows.

To see sample data from a table:

1. Select the database connection from the Connections navigator by clicking on the node for the database you wish to connect to.
2. Click the **Tables** node.
3. Click the **Tables (user)** node.
4. Click the **Employees** node.
5. Click on **Data** tab under the **Employees** tab within the display area.



You may have to adjust each column's size within the displayed table of data so that your data may be displayed correctly.

Chapter 4 Rdb Snippets

This chapter explains how snippets may be used when creating SQL queries and contains the following sections:

- [Snippet Overview](#)
- [Oracle syntax Snippets](#)
- [Rdb syntax Snippets](#)

4.1 Snippet Overview

Snippets are code fragments, such as SQL functions, and miscellaneous SQL programming techniques. Some snippets are just syntax, and others are examples. You can insert and edit snippets when you are using the SQL Worksheet or creating or editing a SQL function or procedure.

To display snippets, from the **View** menu, select **Snippets**. In the snippets window (on the right side), use the drop-down to select a group (such as Aggregate Functions or Character Functions).

A **Snippets** button is placed in the right window margin, so that you can display the snippets window if it becomes hidden.

To insert a snippet into your code in a SQL Worksheet or in a SQL function or procedure, drag the snippet from the snippets window and drop it into the desired place in your code; then edit the syntax so that the SQL function is valid in the current context. To see a brief description of a SQL function in a tooltip, hold the pointer over the function name.

For example, you could type SELECT and then drag CONCAT(char1, char2) from the Character Functions group. Then, edit the CONCAT function syntax and type the rest of the statement, such as in the following:

```
SELECT CONCAT(title, ' is a book ') FROM books;
```

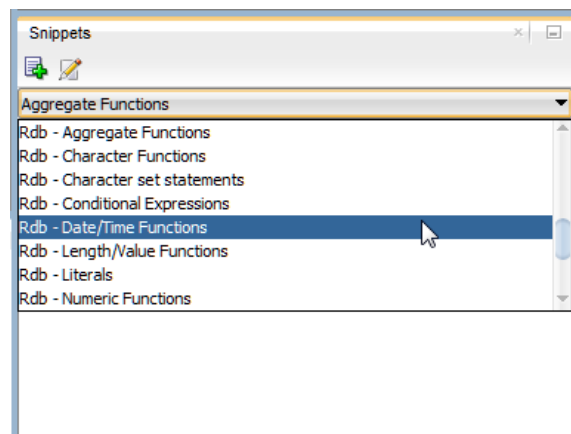
4.2 Oracle syntax Snippets

SQL Developer is installed with a set of snippets specifically created for PL/SQL and Oracle database use. Many of these snippets contain SQL syntax that is not compatible with the Oracle Rdb SQL compilers and may cause syntax or other exceptions if used in queries that will be executed using the Oracle JDBC for Rdb thin driver on an Rdb database.

4.3 Rdb syntax Snippets

During installation Rdb extension will add Rdb-specific syntax snippets to the SQL Developer snippet library. These Snippets may be used in queries that will be sent down to Rdb for execution as they contain valid Rdb SQL syntax.

Rdb snippets may be found in the snippet window within groups that are prefixed with **Rdb**.



In most cases, the fragments in each group do not represent all available objects in that logical grouping, or all formats and options of each fragment shown. For complete and detailed information, refer to the Oracle Rdb Database documentation.

Chapter 5 SQL Developer Reports

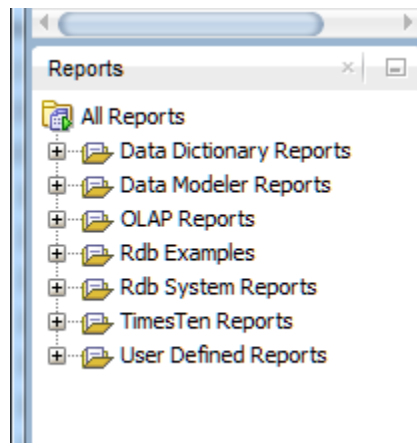
SQL Developer provides many reports about the database and its objects. You can also create your own user-defined reports.

To display reports, click the Reports tab on the left side of the window (refer to [SQL Developer User Interface](#)).

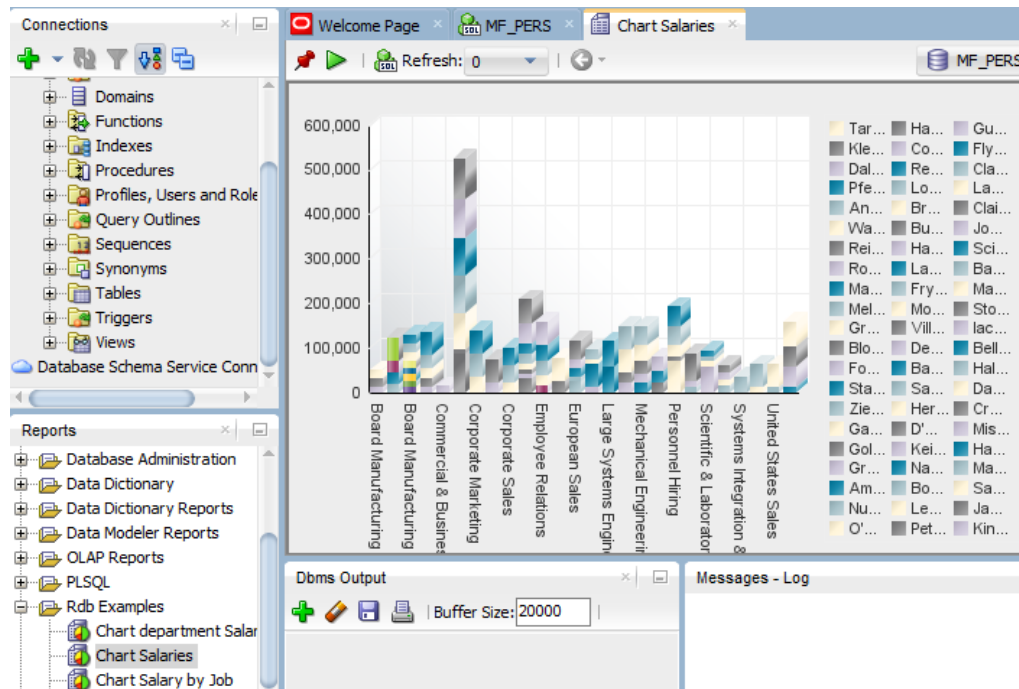
If this tab is not visible, select View and then Reports.

Individual reports are displayed in tabbed panes on the right side of the window; and for each report, you can select (in a drop-down control) the database connection for which to display the report.

Rdb Examples and **Rdb System Reports** folders are available within the **All Reports** tree:



The **Rdb Examples** folder contains several sample reports that may be run against the standard Rdb MF_PERSONNEL database. They show how easy it is to create graphic and text reports on information within your database.



The **Rdb System Reports** folder contains a number of reports that provide information about your database.

The reports included in this folder are a sample of the types of reports you can create to help manage your Rdb databases.

The SQL Developer user's guide provides information on how you can create your own reports and share them with colleagues and the greater Rdb community.

The Rdb System reports are grouped under the following categories:

- [About Your Database reports](#)
- [Database Administration reports](#)
- [Server Administration reports](#)
- [Information Tables](#)
- [Temporary Tables](#)
- [User Tables](#)
- [User Views](#)

Bind Variables for Reports

For some reports, you are prompted for bind variables before the report is generated. These bind variables enable you to further restrict the output. The default value for all bind variables is null, which implies no further restrictions.

To specify a bind variable, select the variable name and type an entry in the Value field.

Any bind variable values that you enter are case insensitive, all matches are returned where the value string appears anywhere in the name of the relevant object type.

5.1 About Your Database reports

The **About Your Database** reports list release information about the database associated with the selected connection. The reports include Version Banner (database settings) and National Language Support Parameters values (for globalization support).

5.2 Administration reports

Administration reports list information about system resources and allow access to certain RMU functions on the connected database.

These reports are grouped into two groups, Database Administration reports and Server Administration reports.

5.2.1 Database Administration reports

Database Administration reports list usage information about system resources. This information can help you to manage storage, user accounts, and other aspects of your database efficiently.

All Information Tables: Provide details of information tables held in your database.

All System Tables: Provide information about system tables.

All Temporary Tables: Provide information about temporary tables created by all users.

All User Tables: Provide information about user tables created by all users.

All User Views: Provide information about views created by all users.

Database Information: Provide reports on some database storage and setup information.

RMU: Provide the ability to use RMU remotely on your database to extract database storage and execution information.

5.2.2 Server Administration reports

Provide information on Oracle JDBC for Rdb Thin server usage.

5.2.3 Information Tables

Provide details of information tables held in your database that have been created by the User you have connected to the database as.

5.2.4 Temporary Tables

Provide information about temporary tables created by the User you have connected to the database as.

5.2.5 User Tables

Provide information about normal database tables created by the User you have connected to the database as.

5.2.6 User Views

Provide information about views created by the User you have connected to the database as.