Oracle® NoSQL Database
Integration with SQL Developer

Release 20.2

ORACLE®

Oracle NoSQL Database Integration with SQL Developer, Release 20.2

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Contents

Preface

This document describes how to integrate Oracle NoSQL Database with Oracle SQL Developer.

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Introduction to Integrating Oracle NoSQL Database with Oracle SQL Developer

This chapter provides information on how to install and use Oracle SQL Developer to develop and view Oracle NoSQL Database stores and data.

Oracle SQL Developer is an integrated development environment designed to simplify the development and management of Oracle Database.

> **Note:**
>
> Oracle SQL Developer does not support Oracle NoSQL Database table and data creation, modification, and deletion.

> **See Also:**
>
> - "Oracle NoSQL Database"
> - "Prerequisites"
> - "Oracle SQL Developer Installation"
> - "Viewing Oracle NoSQL Database Using Oracle SQL Developer"
> - "Exploring Oracle NoSQL Database Store Using Oracle SQL Developer"

Prerequisites

Following are the prerequisites to install Oracle SQL Developer 4.2 in an Oracle Unix environment to use with Oracle NoSQL Database.

- Oracle Linux Operating System
- JDK 8 or above
- Oracle NoSQL Database
- Oracle SQL Developer 4.2 or greater

Oracle SQL Developer Installation

This section describes how to install Oracle SQL Developer.

To install Oracle SQL Developer and the `.jar` file necessary for it to connect to an Oracle NoSQL Database store, perform the following tasks:

1. Download and install JDK 8 to your Oracle Linux Operating System environment. For more information, see *Download Oracle SQL Developer and JDK 8*.

> **Note:**
>
> To test whether you already have JDK 8 installed, use:
>
> ```
> java -version
> ```

2. Install Oracle SQL Developer by following the steps below:

   a. *Download Oracle SQL Developer*.

   b. *Install Oracle SQL Developer*.

   c. *Start Oracle SQL Developer* to verify installation.

> **Note:**
>
> The details about client/server version can be found here at Oracle Technology Network.

> **See Also:**
>
> - "Download Oracle SQL Developer and JDK 8"
> - "Install Oracle SQL Developer"
> - "Start Oracle SQL Developer to Verify Installation"

2
Viewing Oracle NoSQL Database Using Oracle SQL Developer

To use Oracle SQL Developer, you must create a connection to the Oracle NoSQL Database store.

For information about security considerations for NoSQL data stores, see Installation Configuration Parameters in the *Administrator's Guide*.

To create a connection to the Oracle NoSQL Database, perform the following steps:

1. Confirm that a `kvstore` is up and running. In the examples below, `kvlite` is used. To start `kvlite`, enter the following command in a terminal:

    ```
    java -Xmx64m -Xms64m -jar $KVHOME/lib/kvstore.jar kvlite
    ```

    `KVHOME` refers to the directory where you have installed Oracle NoSQL Database. This command assumes that Oracle NoSQL Database is installed in the local machine.

2. A single node `kvstore` instance is created and opened using the default parameter values. Do not close this terminal as it shuts down `kvlite`.

3. To verify that `kvlite` is running, enter the following command in a new terminal:

    ```
     java -Xmx64m -Xms64m -jar $KVHOME/lib/kvstore.jar ping -host
    localhost -port 5000
    ```

4. The output shows that a `kvstore` is up and running successfully.
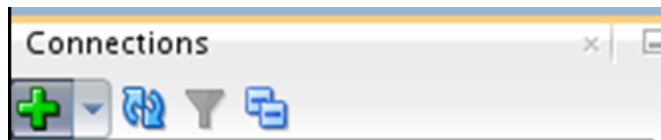
5. Open `SQL Developer`.

> ✎ **Note:**
>
> By default, Oracle NoSQL Database stores are installed with security being enabled, but you must check with your store's administrator to find out whether your store was installed with or without security.

Connecting to a Secure Oracle NoSQL Database Store

To connect to a secure Oracle NoSQL Database store, follow the steps below:
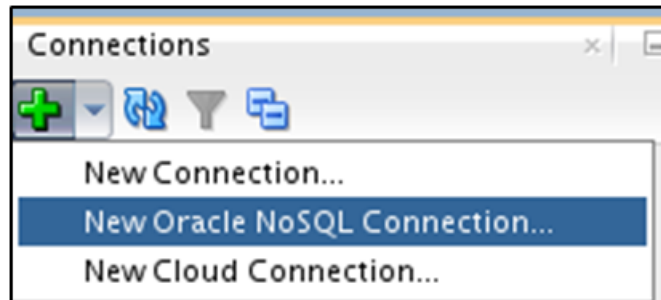
1. Obtain the SSL security files (`client.trust` and `client.security`) from your store's administrator that is used by an Oracle NoSQL Database client to connect to the store. This file was generated during the installation process of your secured store. Place these files on your local hard drive.

2. Open `SQL Developer` and click + in the `Connections` tab.
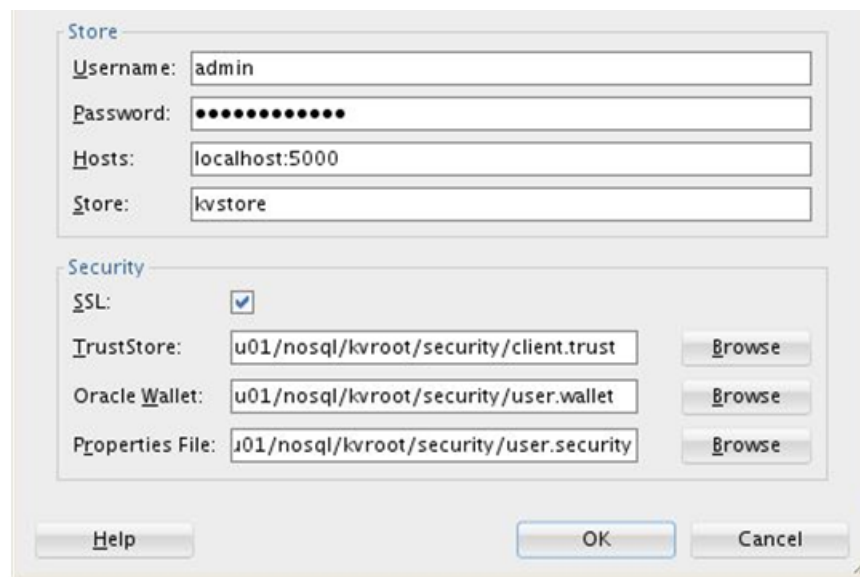
Figure 2-1   Connections Tab

3. Choose `New Oracle NoSQL Connection`.

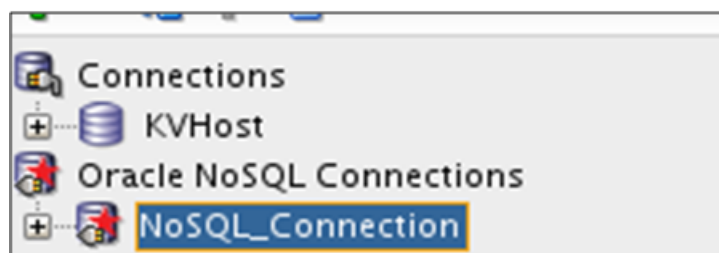**Figure 2-2   New Oracle NoSQL Connection**

4. Enter your `Connection Name`, for example *Oracle NoSQL Connection*, and also the `Username` and `Password` that you use to log in to the Oracle NoSQL Database store.

5. Select `SSL` in the `Security` section. Provide the paths to the `client.trust` and `client.security` files that you placed locally on your machine. Note that after configuring and starting the KVStore successfully, you can see that the `security` directory is created and the security files are available to use. To know more details about the security files and the installation, contact your Oracle NoSQL Database administrator. See Security Configuration in the *Security Guide*.

Figure 2-3   Security Installation

6. The new secured connection is now listed in the `Connections` tab.

Figure 2-4   Listed NoSQL Connection

Connecting to a Non-Secure Oracle NoSQL Database Store

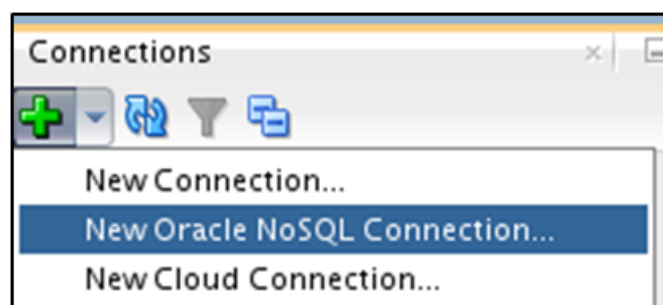To connect to a non-secure Oracle NoSQL Database store, perform the following steps:

1. Open `SQL Developer` and click + in the `Connections` tab.

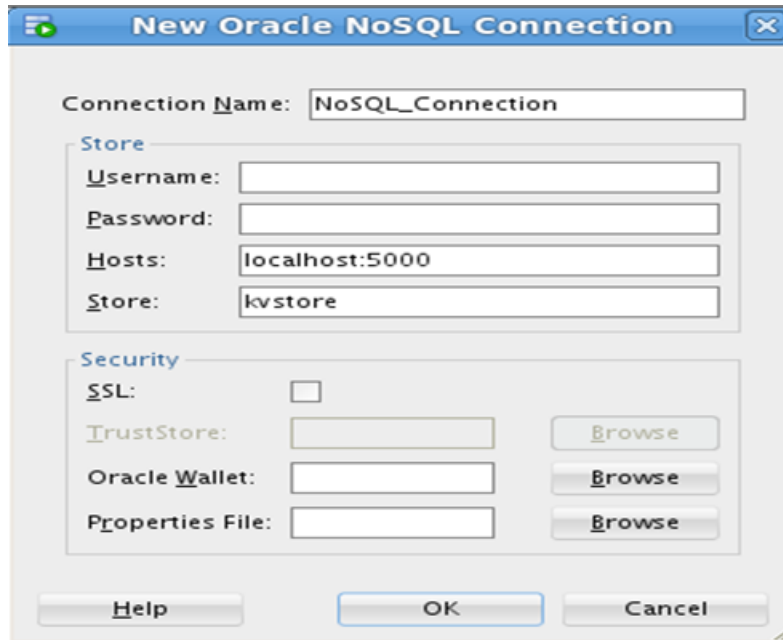**Figure 2-5   Connections Tab**

2. Choose `New Oracle NoSQL Connection`.

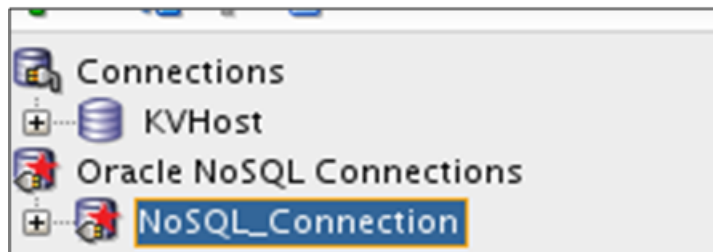**Figure 2-6   New Oracle NoSQL Connection**

3. Provide a name for the new connection. Key in the values for `Hosts` and `Store`, and click `OK`.

Figure 2-7 Provide Name and Enter Values for New Connection

4. The new connection is now listed in the `Connections` tab.

Figure 2-8 Listed NoSQL Connection

3

Exploring Oracle NoSQL Database Store Using Oracle SQL Developer

Oracle SQL Developer provides a read-only interface to Oracle NoSQL Database stores. It does not currently support table creation, data creation, modification, or deletion.
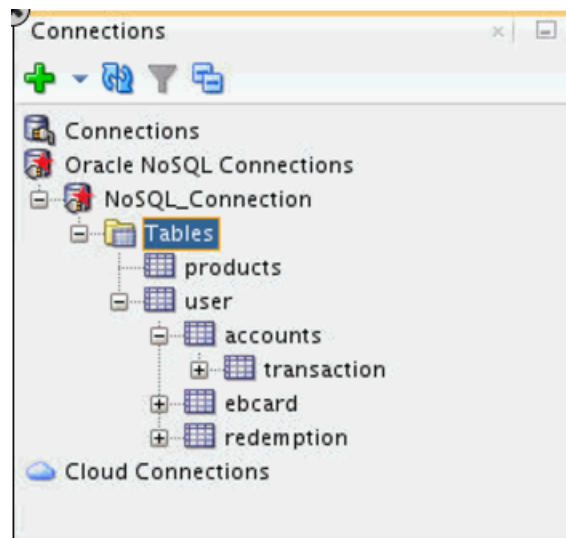
See the following:

- To create, modify, or delete tables, execute the appropriate DDL statements against the store, see Table Management in the *SQL Reference Guide*.

- To load data into your table(s), modify it, or delete the data, see Data Row Management in the *SQL Reference Guide*.

  Alternatively, you can use the Oracle NoSQL Database Admin Command Line Interface (CLI) to load your table data using the `put table` command. See Introduction to the SQL Shell in the *SQL Beginner's Guide*.

Follow the steps below to view the tables and table data in your store:

1. Click the + under `Oracle NoSQL Connection` to view the tables currently available in the store.

2. Click each table to view its child tables, if any have been created for it.

3. Expand the `accounts` table. You should see a nested table listed for this table.

Figure 3-1   Accounts Table

4. To view the schema definition for a table, double-click the `products` table.

Figure 3-2   Products Table

5. Click `Columns` to view `Column Name`, `Data Type`, and value specification.

Figure 3-3   Columns Tab

6. Click `Data` to view table data.

Figure 3-4   View Table Data

7. Click `Child Tables` to view the child tables available for the corresponding parent table.

Figure 3-5   View Child Tables

> **Note:**
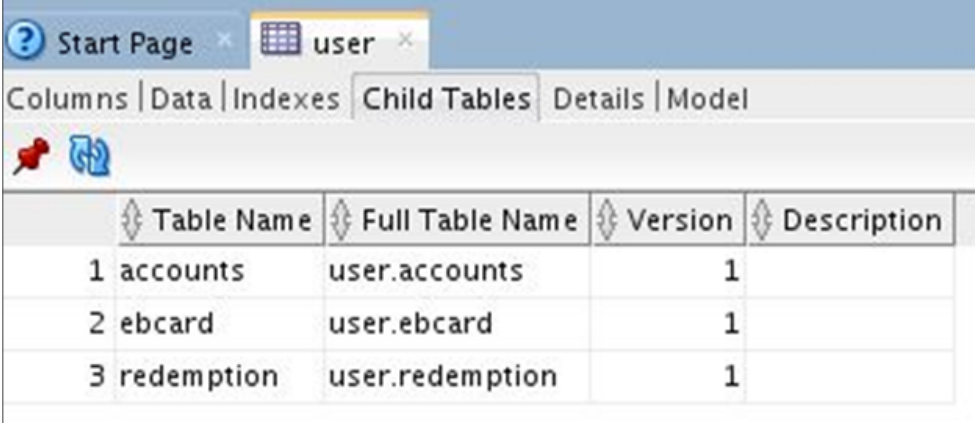>
> - You can query (read) Oracle NoSQL Database data while simultaneously accessing an Oracle Database.
> - If your Oracle SQL Developer is of a version earlier than 4.2, and you receive incompatibility issues due to discrepancy in different version numbers across NoSQL client and NoSQL server, ensure to import the supporting Oracle NoSQL JAR files to the Oracle SQL Developer library to view the Oracle NoSQL Database tables and the corresponding data successfully.

> **See Also:**
>
> - "Table Data Definition Language Overview"
> - "Getting Started with Oracle NoSQL Database Tables"
> - "Admin Command Line Reference (CLI) - put table"
> - "Introduction to Integrating Oracle NoSQL Database with Oracle SQL Developer"
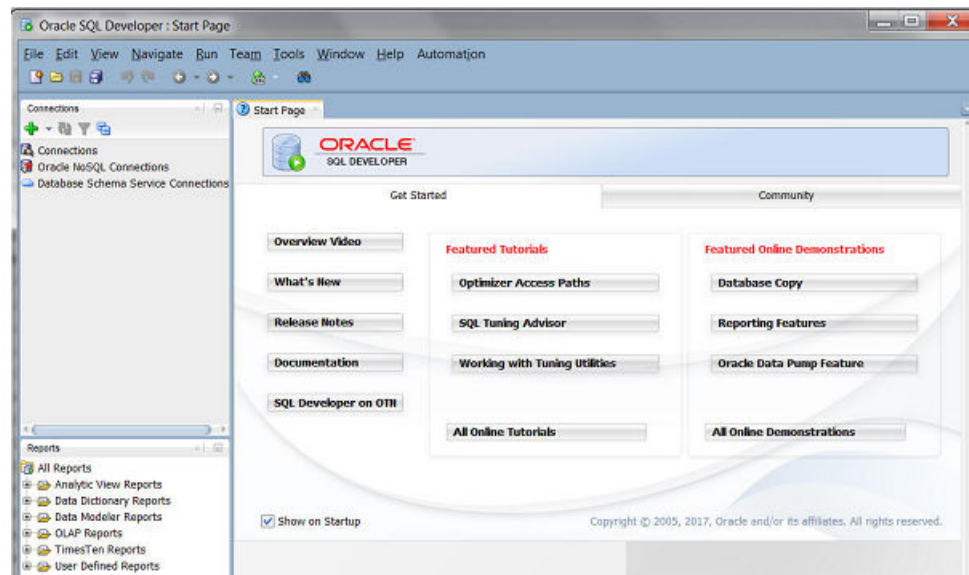
4

Upgrading Oracle NoSQL Database Support via Check for Updates

You can upgrade the NoSQL Server by using the SQL Developer `Check for Updates` feature.

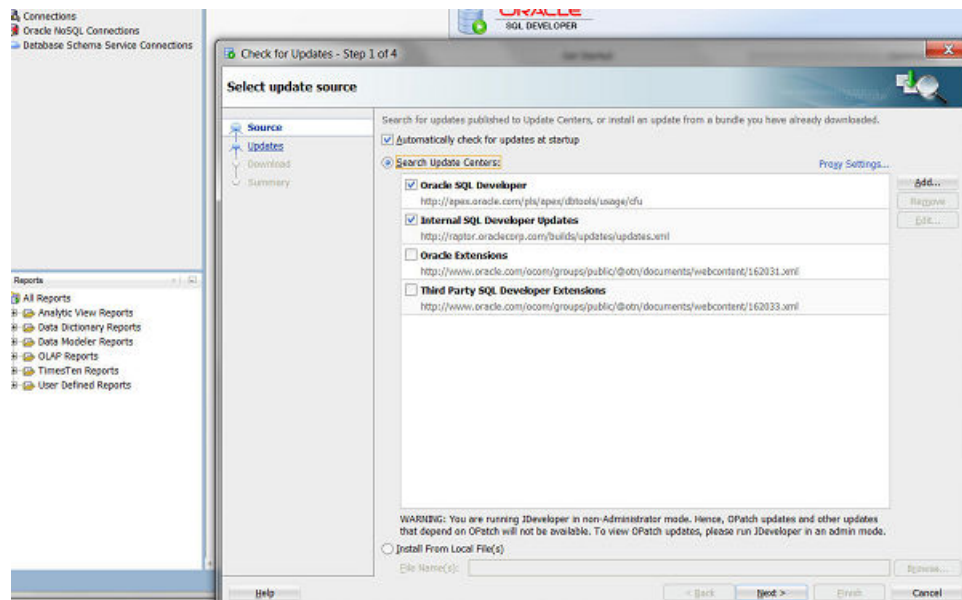1. Ensure that you have installed Oracle SQL Developer. See Oracle SQL Developer Installation.

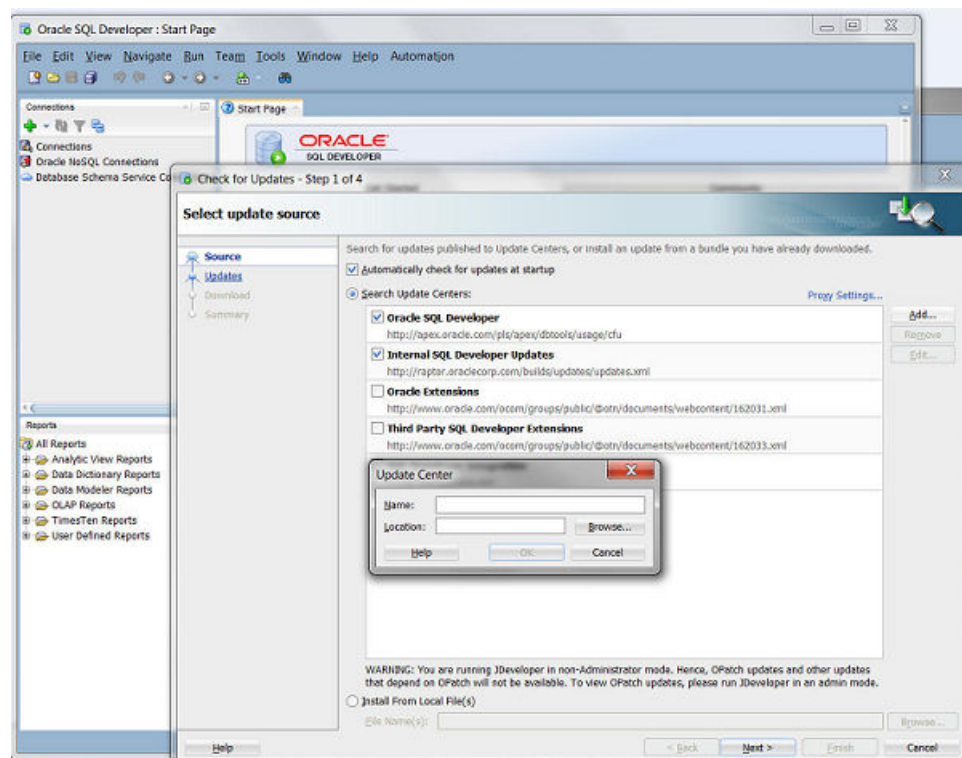   The following screen is displayed.

Figure 4-1   Start Page

2. Choose `Help`-> `Check for Updates`.
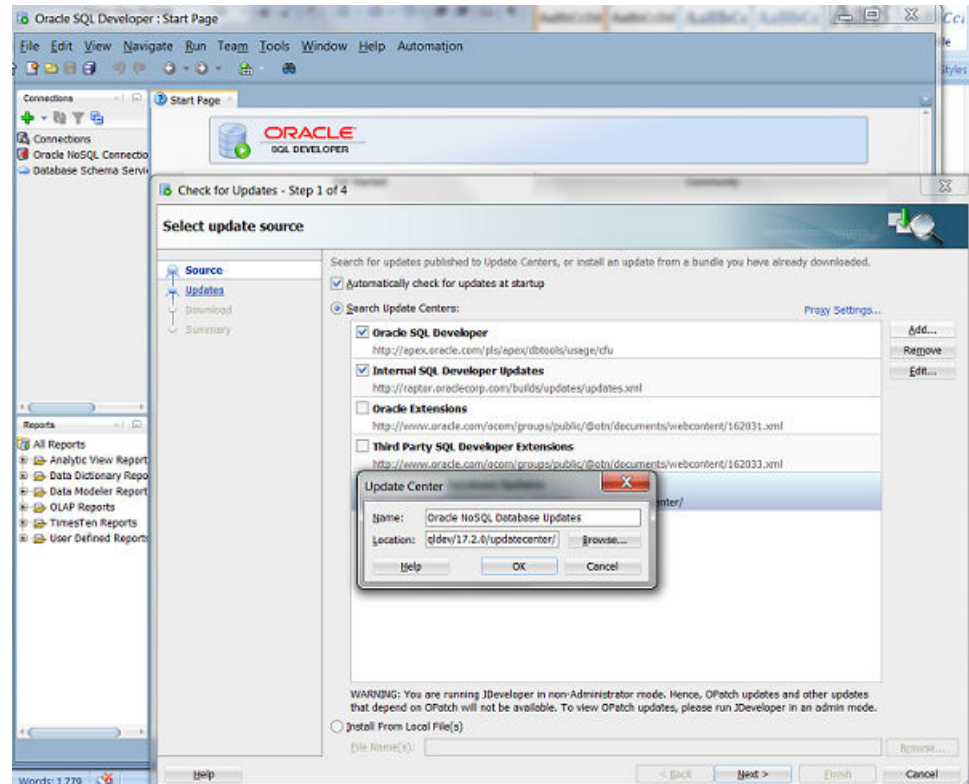
Figure 4-2   Check for Updates

3. Choose `Add`. The `Update Center` window is displayed.

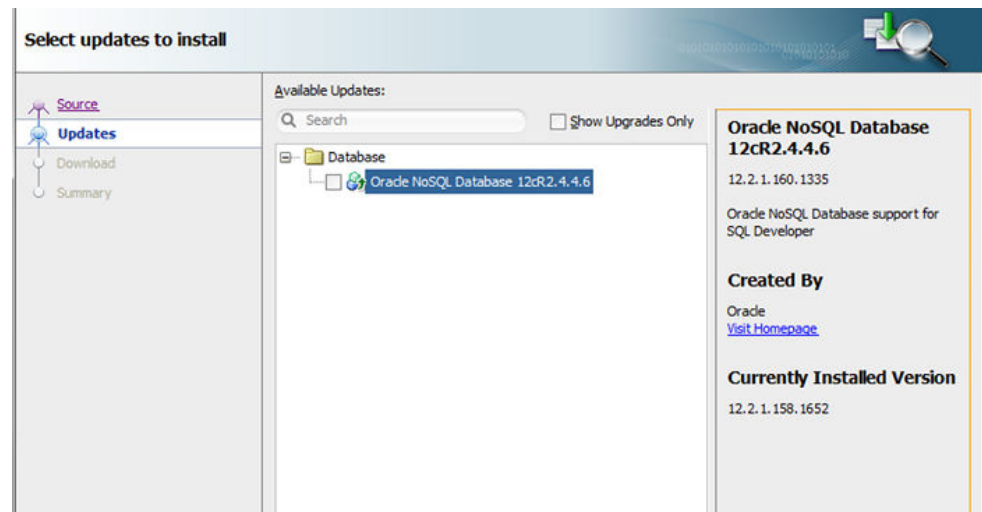**Figure 4-3   Update Center Window**

4. Enter a `Name`, for example `Oracle NoSQL Updates`, and browse to the `update.xml` file. To navigate to the `updates.xml` file, go to *Oracle NoSQL Database* in Oracle Technology Network, and choose the *Downloads* tab in the *Download SQLDeveloper update.xml* section.

Figure 4-4   Enter Details of the Update Center

5. Choose `Next` (it checks for `Internal SQL Developer Updates`).
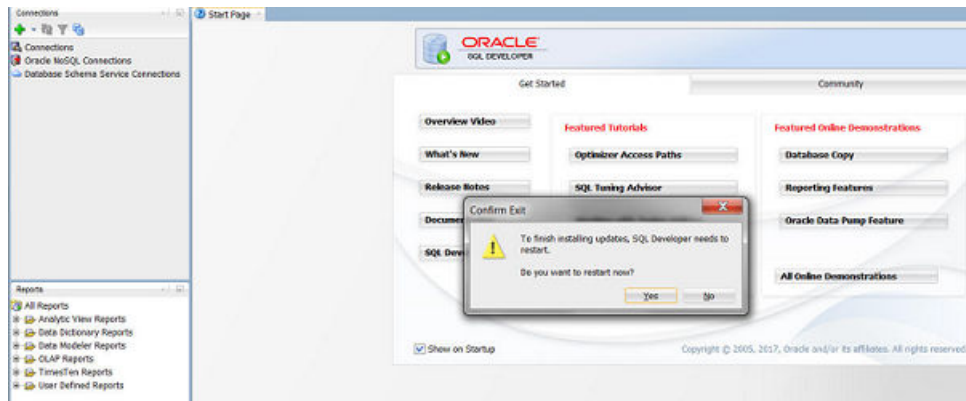6. Select `Oracle NoSQL Database` and choose `Next`.

Figure 4-5   Select Updates to Install

7. Select the `I Agree` option in the `License Agreement` screen. You see that `Oracle NoSQL Database` is installed under `Upgrades`. Choose `Finish`.
8. Choose `Yes` to the window prompt, which asks for a restart of SQL Developer, to complete the installation steps.
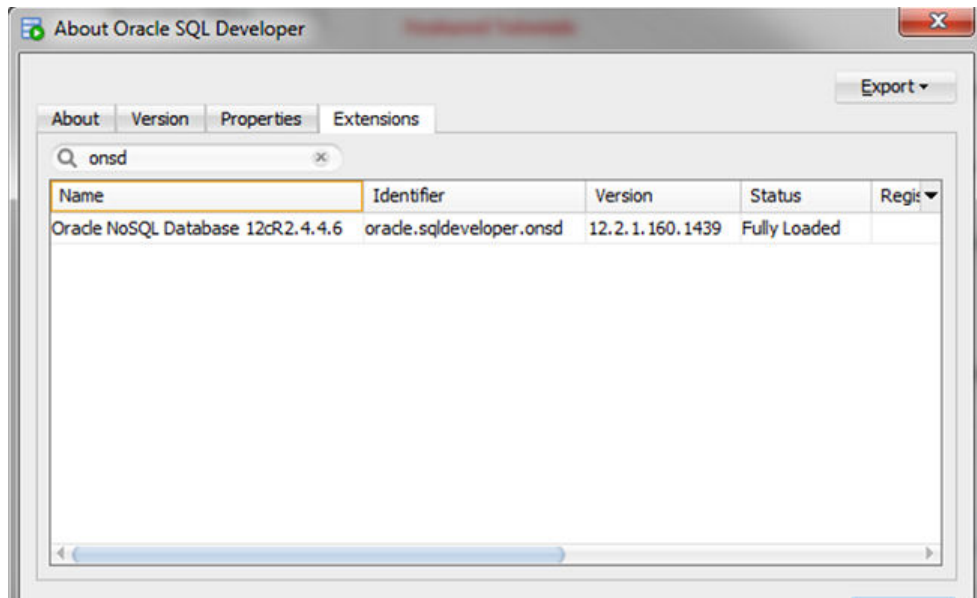
This step completes the installation process.

Figure 4-6   Restart SQL Developer

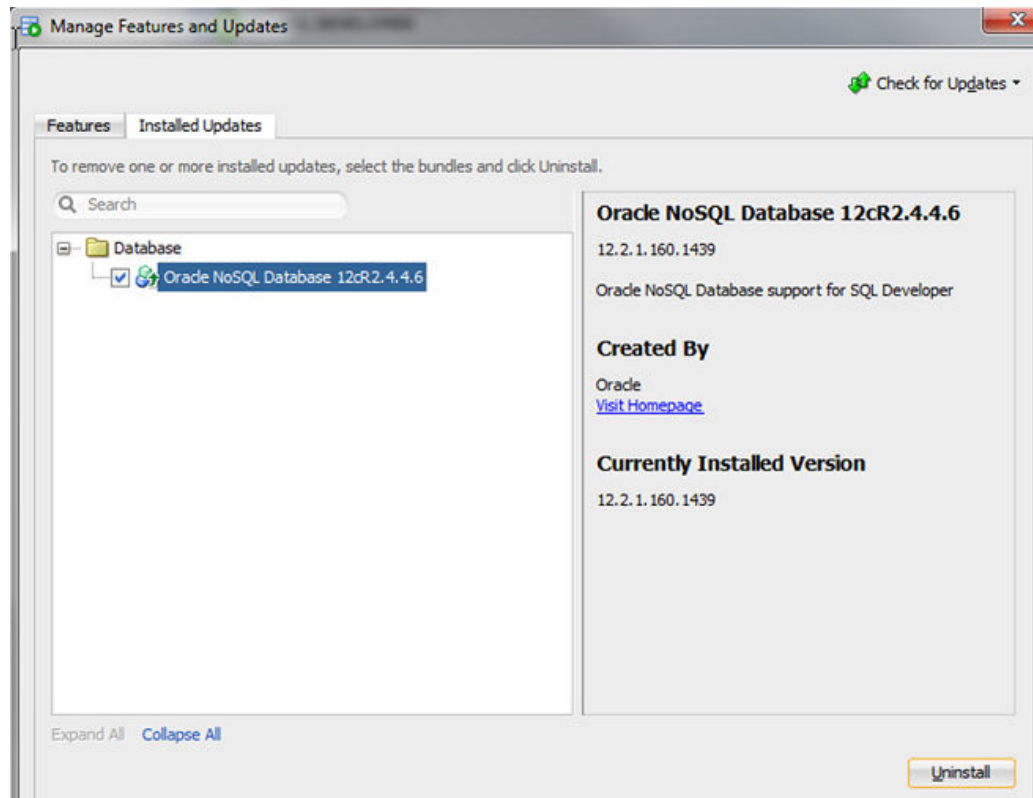9. Choose `Help` -> `About` and then choose the `Extensions` tab to see the installed `Oracle NoSQL Database`.

Figure 4-7   Extensions

Uninstalling Updates
To uninstall the updates for `Oracle NoSQL Database`, choose `Tools` -> `Features`. Go to the `Installed Updates` tab and select `Oracle NoSQL Database` and choose `Uninstall`. This uninstalls the updates.

Figure 4-8   Uninstall Update

> **Note:**
>
> This will only uninstall the Oracle NoSQL Database extension that was added and not the base version that comes with SQL Developer.