Oracle® Data Miner

Release Notes

Release 4.1

E58243-02

April 2015

This document provides late-breaking information and information that is not yet part of the formal documentation.

This document contains the following sections:

1 Changes in this Release

This Release Note contains the following information:

1.1 New Oracle Data Miner Features in SQL Developer 4.1

The new features in Oracle Data Miner 4.1 include:

- JSON data support for Oracle Database 12.1.0.2 patch release.

  Note: To avail support for JSON data, contact Oracle Support at `https://support.oracle.com` for the specific Oracle Database 12.1.0.2 patch release.

  In response to the growing popularity of JSON data and its use in big data configurations, Oracle Data Miner now provides an easy-to-use JSON Query node. The JSON Query node enables you to select and aggregate JSON data without entering any SQL commands. The JSON Query node uses all of the existing Oracle Data Miner features with JSON data. The enhancements include:

  - Data Source Node
    * Automatically identifies columns containing JSON data by identifying those with the `IS_JSON` constraint

        * Generates a JSON schema for any selected column that contain JSON data
        * Imports a JSON schema for a given column
        * Provides the JSON schema viewer
    - Create Table or View node
        * Ability to select a column to be typed as JSON
        * Generates JSON schema in the same manner as the Data Source node
    - JSON data type
        * Columns can be specifically typed as JSON data
    - JSON Query Node
        * Ability to use any of the selection and aggregation features without entering SQL statements
        * Ability to select data from a graphical layout of the JSON schema, making data selection as easy as it is with scalar relational data columns
        * Ability to partially select JSON data as standard relational scalar data while leaving other parts of the same JSON document as JSON data
        * Ability to aggregate JSON data in combination with relational data. Includes the Sub-Group By option, that is used to generate nested data that can be passed into mining Model Build nodes
- New PL/SQL APIs for managing Oracle Data Miner projects and workflows
    - The PL/SQL APIs handle the following for a workflow:
        * Runs a workflow
        * Cancels a running workflow
        * Renames a workflow
        * Deletes a workflow
        * Imports a workflow
        * Exports a workflow
    - The APIs handle the following for a project:
        * Creates a project
        * Deletes one or more projects
        * Renames a project
- Repository views

  Repository views are available to:
    - Query project and workflow information
    - Monitor workflow status
    - Query generated results

    Note: The views for the generated results are available only for Oracle Database 11.2.0.4 and later.

- The Transformation Nodes have been enhanced with the following:
  - In the **Add Transform** dialog box, the **Transform NULL's** check box has been added. This is applicable for:
    * Transform Type—Binning, Custom
    * Bin Labels—Number, Range
  - The Binning Intervals are displayed in a different format. For example,

```
<  101126.0

101126.0  -  < 102251.0

102251.0  -  < 103375.0

>= 103375.0
```

  - New UI element has been added to the Transform node **Properties,** to define settings for all transformation. The UI elements are:
    * Null Values Label
    * Other Value Label
  - For Custom binning, the option to rename Bin Label and Bin Value is provided in the **Edit Transform** dialog box.

1.2 General Enhancements in Oracle Data Miner 4.1

The general improvements in Oracle Data Miner include:

- Improved database session management resulting in fewer database sessions being generated and a more responsive user interface.
- Filter Columns node
  - Combined primary Editor and associated advanced panel to improve usability.
- Explore Data node
  - Allows multiple row selection to provide group chart display.
- Classification Build node
  - Automatically filters out rows where the Target column contains Null values or all spaces. Also, issues a warning to the user but continues with Model build node.
- Workflow
  - Enhanced workflows to ensure that the loading, reloading, stopping, saving operations no longer block the UI.
- Online Help
  - Revised the Online Help to adhere to topic-based framework.

2 Bug Fixes

The following bugs have been fixed in Oracle Data Miner 4.1:

- GLM Model Algorithm Settings: Added GLM feature identification sampling option (Oracle Database 12.1 and later).

- Filter Rows Node: Custom Expression Editor not showing all possible available columns.
- WebEx display issues: Fixed problems affecting the display of the Oracle Data Miner UI through WebEx conferencing.

3 Supported Platforms

For details on supported platforms, see *Oracle SQL Developer Installation Guide*.

4 Prerequisites

Before you can use Oracle Data Miner, ensure the following:

1. Install SQL Developer 4.1 on your system.
2. Secure access to an Oracle Database:
   - Minimum version: Oracle Database 11*g* Release 2 (11.2.0.1) Enterprise Edition, with the Data Mining option.
   - Preferred version: Oracle Database 12*c* Release 1 (12.1.0.1) Enterprise Edition.
3. Create a database user account for data mining.
4. Create a database connection within SQL Developer for the Oracle Data Miner user.
5. Install the Oracle Data Miner repository.

> **Note:** The JSON data support feature is available only for Oracle Database 12.1.0.2 release.

5 Known Problems and Limitations

The known problems and limitations in this release include:

- Association Model Build node cannot consume data coming directly from JSON Query node.
  Users need to persist the data coming out of the JSON Query node through Create Table node, and then use the persisted data as input to the Associate Model Build node.
- Classification nodes and Regression Model Build nodes are unable to consume data directly coming from JSON Query node if **JSON aggregations (with Sub Group By)** are defined.
  Users need to persist the data coming out of the JSON Query node through Create Table node, and then use the persisted data as input to these Build nodes.

  > **Note:** Build nodes can consume data directly coming from JSON Query nodes if JSON Aggregations **(without Sub Group By)** are not defined.

- Setting Parallel Query for a node that queries JSON data can result in a workflow runtime error. JSON queries will fail if they are run with the database Parallel

Query set to ON. The following error message is displayed *ORA-12805: Parallel Query server died unexpectedly.*

Parallel Query can be configured through Oracle Data Miner at the node level:

- The Node context menu has the option to set Parallel Query. Click **Parallel Query** and select the nodes to configure the parallel settings.
- The **View Data** viewer provides the option to set Parallel Query to ON when querying the selected Data Nodes.

In both the cases, the error occurs and the same error message is displayed.

- Oracle Data Miner 4.1 is certified on Oracle Database 11.2.0.1 through Oracle Database 12.1. Oracle Data Miner is not certified on Oracle Database 12.2 and higher. Therefore, it cannot be installed on Oracle Database 12.2 and higher.

  Note: If you have installed Oracle Data Miner 4.1 on a certified Oracle Database and have upgraded the database to version 12.2 or higher, then you must upgrade to a newer version of Oracle Data Miner that supports the upgraded Oracle Database version.

- Multi byte character data is not supported in Oracle Data Miner with Oracle Database 12.1 because of database issues. To address the multibyte issue, apply the Oracle Database 12.1.0.2 patch. It is also recommended to use the AL32UTF8 character set.

  Note: Request the Oracle Database 12.1.0.2 patch through Oracle Support. See "Documentation Accessibility" for information about how to access Oracle Support.

- Oracle SQL Developer LDAP connections utilizing a proxy or target user protocol, can generate an SQL run time error when running the SQL Query Node. If you encounter the `Invalid name pattern` error when running a query as a proxy user, then perform the following configuration workaround. The workaround is to set the JVM property `oracle.jdbc.createDescriptorUseCurrentSchemaForSchemaName` to `true`.

  To set the JVM property, open Oracle SQL Developer and run the following from the command prompt:

  ```
  C:\devroot\4_1\ide\sqldeveloper\bin>sqldeveloper.exe
  -J-Doracle.jdbc.createDescriptorUseCurrentSchemaForSchemaName=true
  ```

  To make a permanent change, update the `sqldeveloper.conf` file and include the property definition, as follows:

  1. Shut down Oracle SQL Developer.
  2. Open the `sqldeveloper.conf` file and update it with the property definition:

     ```
     C:\devroot\4_1\ide\sqldeveloper\bin>sqldeveloper.exe
     -J-Doracle.jdbc.createDescriptorUseCurrentSchemaForSchemaName=true
     ```

  3. Save the `sqldeveloper.conf` file to `<sql_dev_install_dir>\sqldeveloper\bin\sqldeveloper.conf`. This overwrites the existing file.

With the updated `sqldeveloper.conf` file, you do not have to start Oracle SQL Developer from the command line.

The top of the `sqldeveloper.conf` file is shown below with the new text in bold:

```
IncludeConfFile ../../ide/bin/ide.conf

SetJavaHome ../../jdk
```

#Workaround for LDAP Proxy failure

AddVMOption
-Doracle.jdbc.createDescriptorUseCurrentSchemaForSchemaName=true

6 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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.

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