

Troubleshooting Oracle BI EE Connections to Oracle OLAP

*Oracle BI EE 11.1.1.5, Oracle OLAP and
Oracle Database 11g*

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Introduction

This paper summarizes how Oracle BI EE connects to Oracle OLAP for both metadata administration and query. It then provides troubleshooting tips for common issues with those connections.

Overview

Oracle BI EE 11.1.1.5 offers new capabilities over an Oracle OLAP source. The Administration Tool is now able to import metadata from an analytic workspace using a simple wizard – automatically populating BI EE’s Physical Layer with dimensions, hierarchies, measures and calculations. The BI Server uses this metadata for optimal query execution – exploiting OLAP strengths such as analytic calculations (time-series, shares, financial functions, etc.), advanced hierarchies (skip, ragged, value-based, etc.) and complex aggregations (sum, last, hierarchical last, weighted averages, etc.). These new capabilities result in enhanced developer productivity and outstanding performance for complex analytic queries.

Figure 1 highlights the two key steps for metadata import: 1) connecting to the OLAP source and 2) selecting the metadata to import from the analytic workspace:

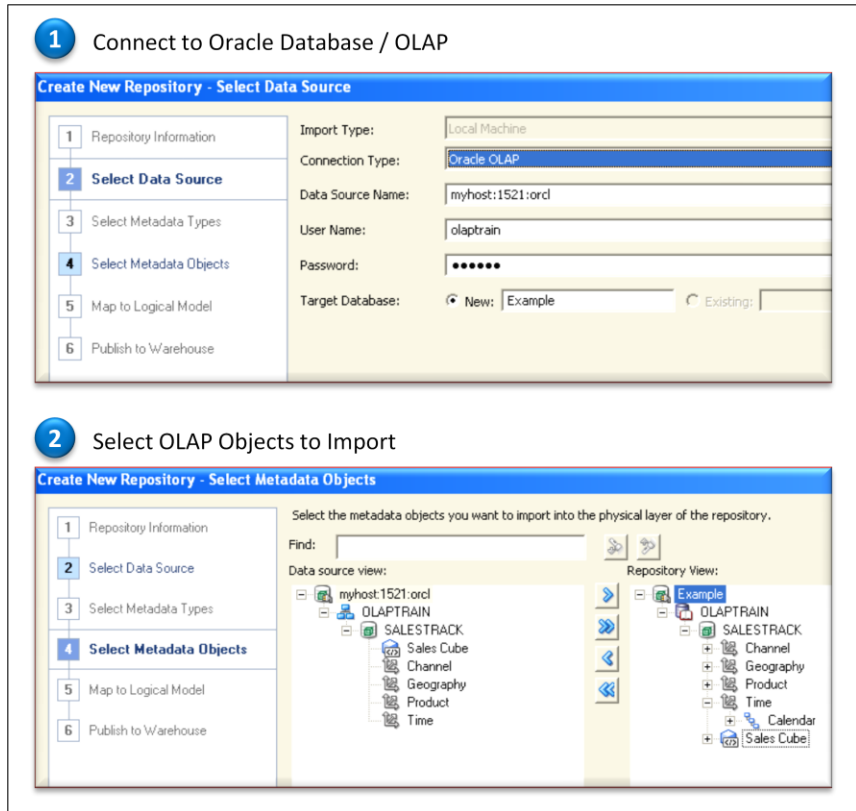


Figure 1: Administration Tool Import Wizard

Once imported, the creation of the Business Model and Presentation layer are greatly simplified. The Business Model is generally a direct reflection of the Physical Layer – few modifications are typically necessary.

Architecture

Figure 2 illustrates how Oracle BI EE connects to Oracle OLAP for both administration and query:

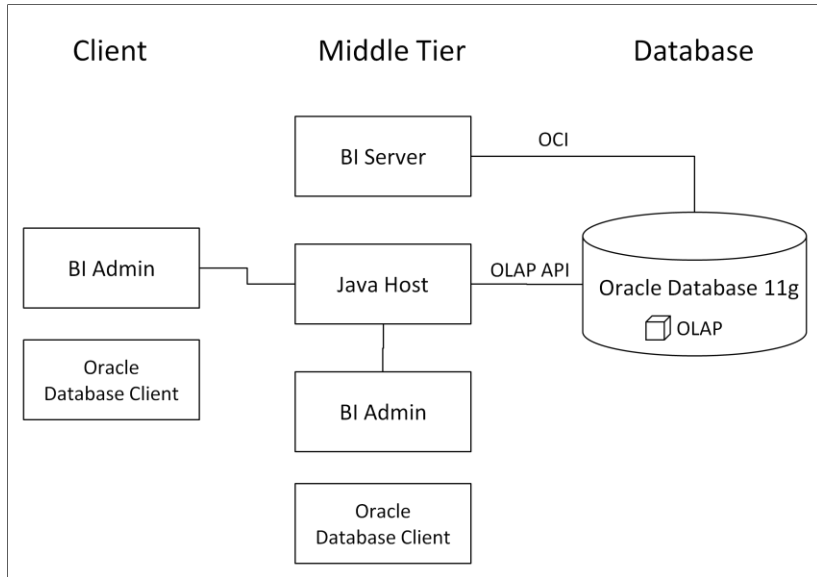


Figure 2: Components required for OLAP access by BI EE

In order to import OLAP metadata, BI EE utilizes the OLAP Java API (the OLAP API libraries are installed with the BI middle tier). This requires the Administration Tool to invoke the middle tier Java Host to access OLAP metadata.

Once the metadata is defined, the BI Server queries OLAP cubes and dimensions using SQL. Query access requires a standard OCI connection to the Oracle Database – similar to any other Oracle Database source.

Key Configuration Checklist

Consult the following checklist to ensure your system is configured to allow connections between BI EE and Oracle OLAP:

- Install the Oracle Database Client (use the Administrator or Runtime client install option). The Oracle Database Client must be in sync with the BI Administration Tool (i.e. both tools must be 32-bit or 64-bit. You cannot mix versions).
- The Java Host must be running on the middle tier.
- The Data Source in the Administration Tool’s Metadata Import wizard must use the host:port:sid connection string format. Note, the Java Host on the middle tier must be able to make a connection to the Oracle Database using this connection string.

- After importing the metadata for your OLAP cubes, update the Data Source Name in the Connection Pool to use an Oracle Database Network Alias (i.e. a valid TNS entry).
- Specify the Java Host connection details in NQSCONFIG.INI when running a stand-alone Administration Tool that connects to a remote Java Host:
 - On the Administration Tool client machine, edit the NQSCONFIG.INI file in folder [bi_home]\oraclebi\orainst\config\OracleBIServerComponent\co reapplication
 - Update the [JAVAHOST] section with the appropriate connection details. For example, if your Java Host is running on server “mybihost” and is configured for port “9810”, the section should read as follows (ignoring the text wrapping):


```
JAVAHOST_HOSTNAME_OR_IP_ADDRESSES =
"mybihost:9810";
```

Troubleshooting Connections

This section provides solutions to common connection issues. Below you will find a list of error messages with links to the problem’s resolution.

Administration Tool Import Error Messages:

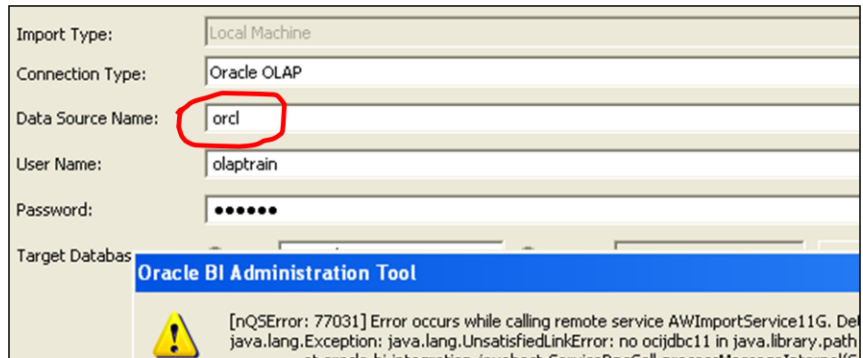
1. [\[nQSError: 77031\] Error occurs calling remote service AWImportService11g. Details: Error sending result for service ... no ocjdbc11 in java.library.path](#)
2. [\[nQSError: 77021\] Could not load SAW RPC library sawrpcapi.dll](#)
3. [Error attempting to load oracore11.dll and the oranls11.dll](#)
4. [Step 4 of the Import Wizard displays no OLAP cubes or dimensions](#)
5. [\[nQSError: 60001\] Connection failed for: Remote Service-JavaHostImportService... Java Host is not available inside the function AWImportService11g of SAW RPC](#)

Answers Error Message

6. [Query Failed: \[nQSError: 17001\] Oracle Error code: 12545, message: ORA-12545: Connect failed because target host](#)

[or object does not exist at OCI call OCI Server Attach.](#)
[\[nQSError: 17014\] Could not connect to Oracle database.](#)
[\(HY000\)](#)

1. [nQSError: 77031] Error occurs calling remote service AWImportService11g. Details: Error sending result for service ... no ocijdbc11 in java.library.path



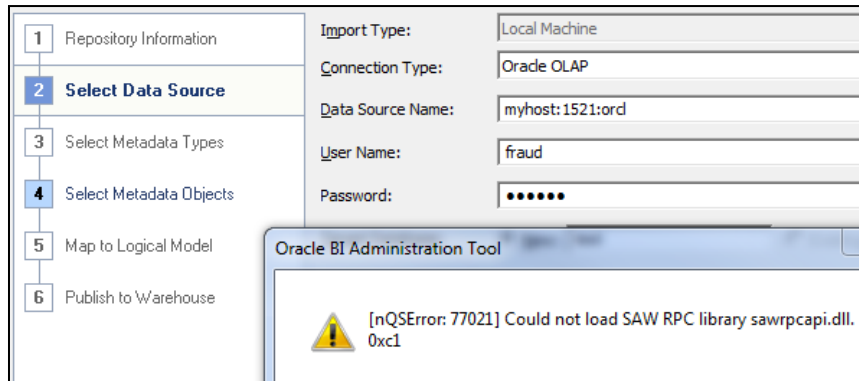
Issue

TNS alias names are not supported for metadata import.

Resolution

The Data Source Name must use a host:port:sid connection string. Note, the Java Host will make the connection to OLAP on behalf of the Administration Tool. This means that the middle tier must be able to make the database connection using the specified connection string.

2. [nQSError: 77021] Could not load SAW RPC library sawrpcapi.dll



Issue

There is a mismatch between the BI Administration Tool and the Oracle Database Client installed on the client machine.

Resolution

The BI Administration Tool and Oracle Database Client must both be either 32-bit or 64-bit.

3. Error attempting to load oracore11.dll and the oranls11.dll

Issue

The incorrect type (InstantClient) of Oracle Database Client was installed on the client machine.

Resolution

You must install one of the following types of Oracle Database Clients: 1) Administrator or 2) Runtime.

4. Step 4 of the Import Wizard displays no OLAP cubes or dimensions

Issue

The import was able to successfully connect to OLAP – but no metadata is available.

Resolution

The OLAP API jars on the middle tier need to be updated to version 11.2.x. The OLAP API libraries are found in your Oracle Database home: [oracledb home]\product\11.2.0\dbhome_1\olap\api\lib. BI EE provides an 11.1.x version of these files in [obiee home]\Oracle_BI1\bifoundation\javahost\lib\obisintegration\aw\11g. Backup the BI EE version of the OLAP API jars and replace them with the version provided by the database.

5. [nQSError: 60001] Connection failed for: Remote Service-JavaHostImportService... Java Host is not available inside the function AWImportService11g of SAW RPC

Issue

The import was unable to successfully connect to OLAP using the Java Host.

Resolution

Ensure the Java Host is running and that the NQSCONFIG.INI file on the client machine is set up to make a connection to that Java Host.

6. Query Failed: [nQSError: 17001] Oracle Error code: 12545, message: ORA-12545: Connect failed because target host or object does not exist at OCI call OCIServerAttach. [nQSError: 17014] Could not connect to Oracle database. (HY000)

Issue

After importing metadata from OLAP, the Data Source Name in the Connection Pool is using host:port:sid. It must be changed to use OCI.

Connection Pool - Connection Pool

General | Connection Scripts | XML | Write Back | Miscellaneous

Name: Connection Pool

Call interface: OCI 10g/11g

Maximum connections: 10

Require fully qualified table names

Data source name: myhost:1521:orcl

Must be changed to a valid TNS entry

Resolution

Edit the Connection Pool object and specify a valid TNS entry for the Data Source Name.



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