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BUSINESS INTELLIGENCE

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Configuring Oracle Business Intelligence Enterprise Edition to Support Teradata Database Query Banding

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Introduction

All Oracle Business Intelligence users, by default, use the same database credentials when they login to the database. There are situations where it is beneficial to add user-specific or report-specific information to the query request to enable different priority or simplify debugging of query performance. One way to do so is to use the database feature called query banding. This paper will use the Teradata Database as the database handling the queries, but the principles are the same for any database that supports query banding functionality.

Step 1. Query Band Configuration for OBIEE

Start by adding a new execute before query item. Open the connection pool properties for the Teradata® Database.

Click on the "Connection Scripts" tab.

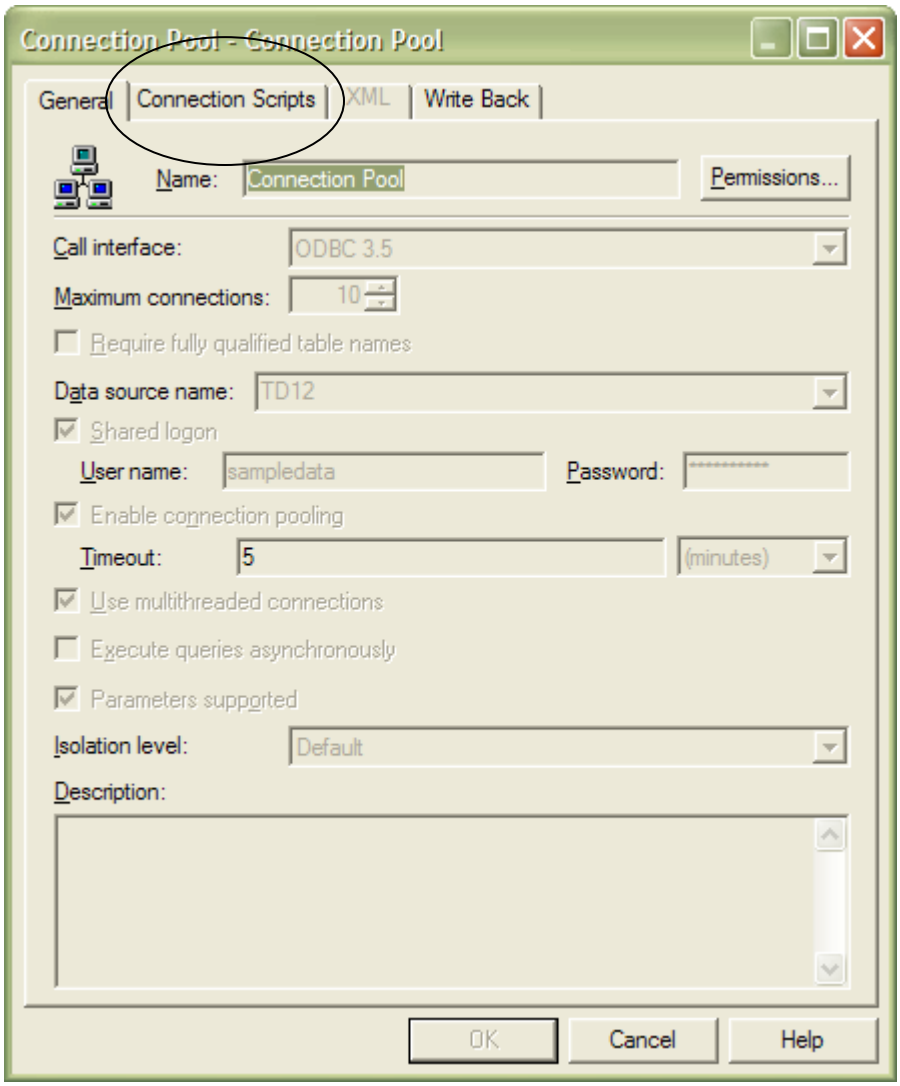


Figure 1

Expand the "Execute before query" section.

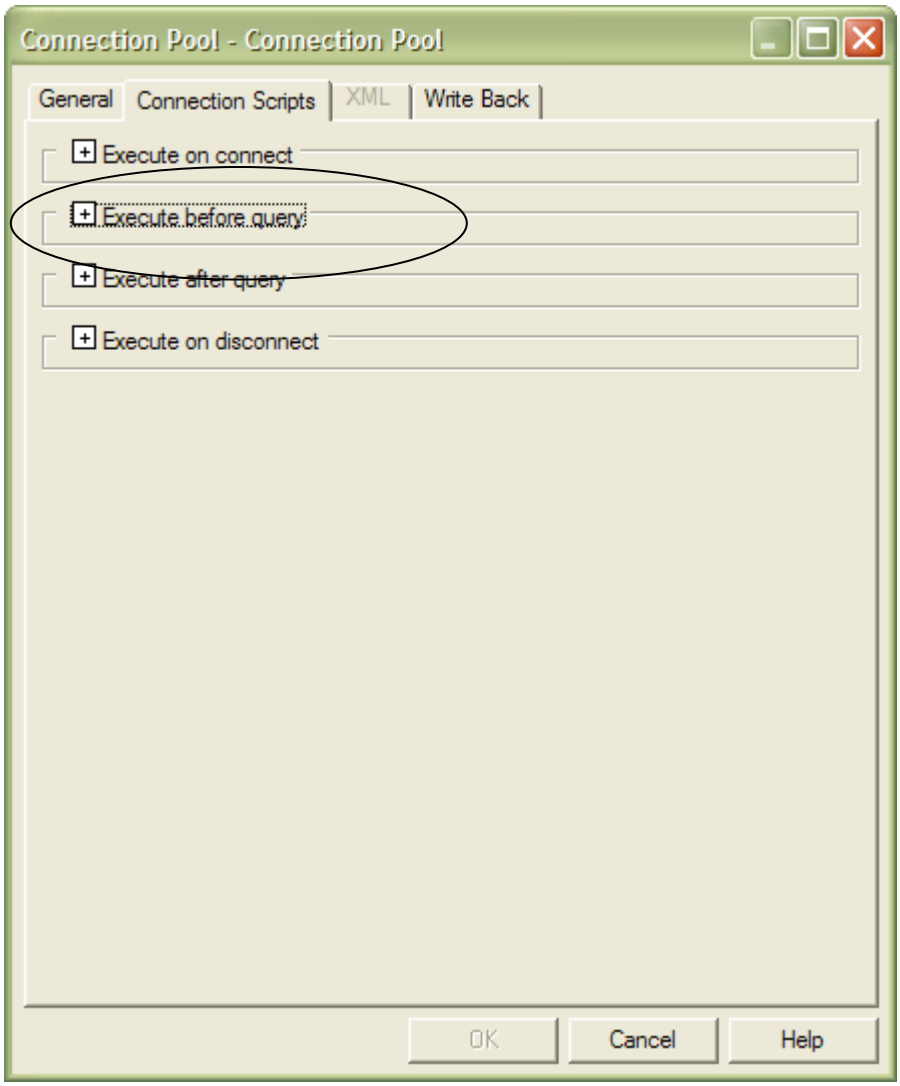


Figure 2

Click on the "New" button.

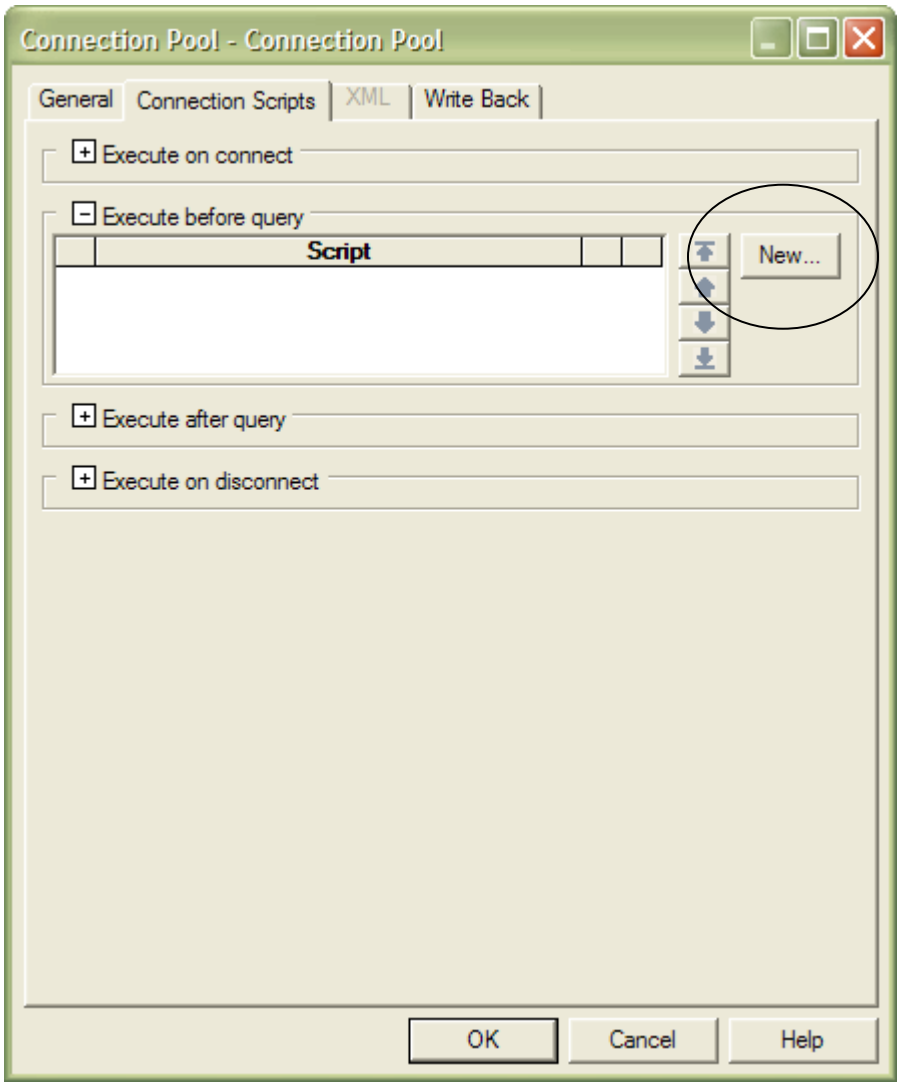


Figure 3

Now you need to decide what kind of information you want to add. You can add things that Oracle BI EE Server calls 'request scope' variables. Read the Oracle BI documentation to determine which 'request scope' variables are available for your versions.

In this example we will add a user identifier.

Add the following SQL to the Physical SQL section:

```
set query_band =
'ApplicationName=OBIEE;ClientUser=valueof(NQ_SESSION.USER);' for
session;
```

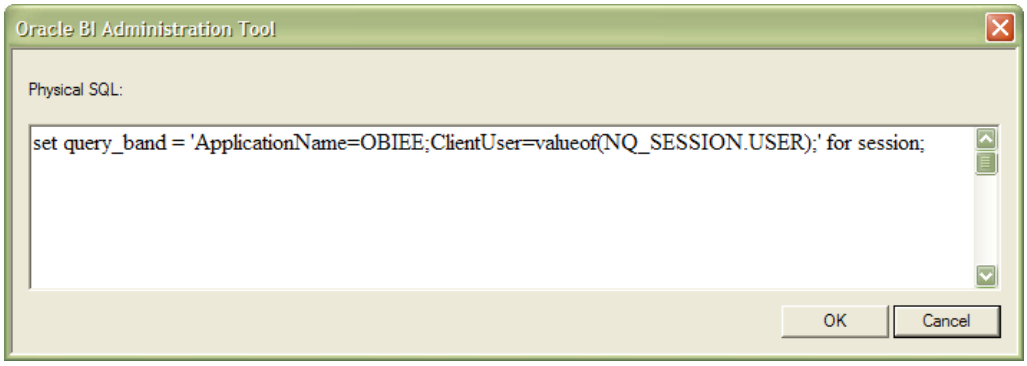


Figure 4

Click "OK", and then click "OK" again.

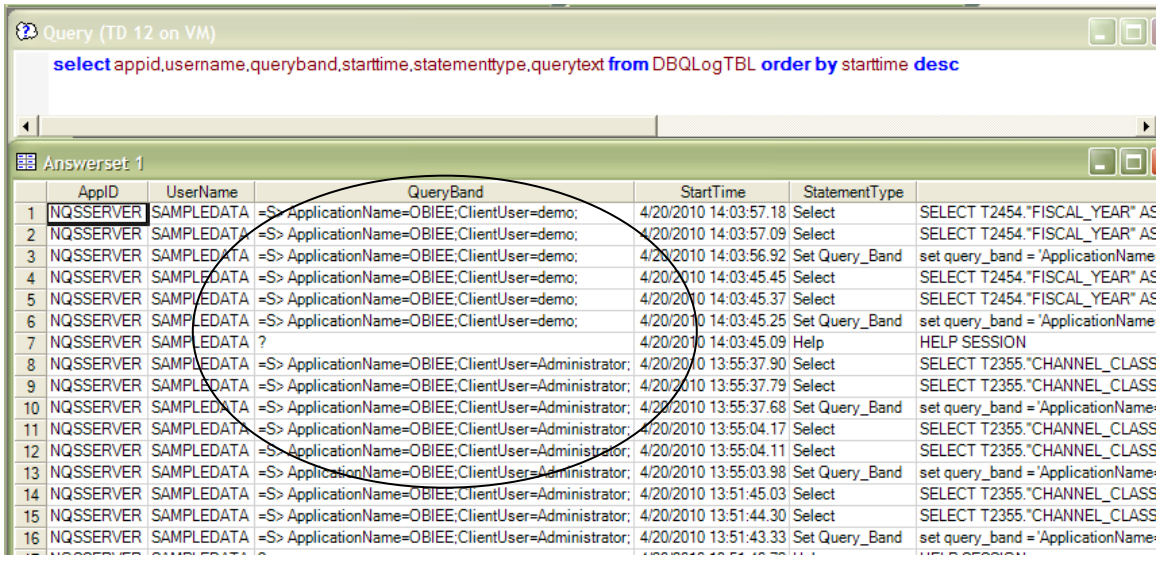
Check in the changes if you are working on-line, and save the repository. Reload the metadata for the server via the Answers link or by restarting the OBIEE server.

Step 2. Testing Query Band Configuration

Make sure that you have reloaded the metadata for the server via the Answers link or by restarting the OBIEE server.

Use Oracle BI or SQL Assistant to query the Teradata system and check the Teradata DBQL table.

The DBQL tables should reflect the OBIEE user executing the query.



	AppID	UserName	QueryBand	StartTime	StatementType	
1	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:57.18	Select	SELECT T2454."FISCAL_YEAR" AS
2	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:57.09	Select	SELECT T2454."FISCAL_YEAR" AS
3	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:56.92	Set Query_Band	set query_band = 'ApplicationName
4	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:45.45	Select	SELECT T2454."FISCAL_YEAR" AS
5	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:45.37	Select	SELECT T2454."FISCAL_YEAR" AS
6	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=demo;	4/20/2010 14:03:45.25	Set Query_Band	set query_band = 'ApplicationName
7	NQSSERVER	SAMPLEDATA	?	4/20/2010 14:03:45.09	Help	HELP SESSION
8	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:37.90	Select	SELECT T2355."CHANNEL_CLASS
9	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:37.79	Select	SELECT T2355."CHANNEL_CLASS
10	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:37.68	Set Query_Band	set query_band = 'ApplicationName
11	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:04.17	Select	SELECT T2355."CHANNEL_CLASS
12	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:04.11	Select	SELECT T2355."CHANNEL_CLASS
13	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:55:03.98	Set Query_Band	set query_band = 'ApplicationName
14	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:51:45.03	Select	SELECT T2355."CHANNEL_CLASS
15	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:51:44.30	Select	SELECT T2355."CHANNEL_CLASS
16	NQSSERVER	SAMPLEDATA	=S> ApplicationName=OBIEE;ClientUser=Administrator;	4/20/2010 13:51:43.33	Set Query_Band	set query_band = 'ApplicationName

Figure 5

In Figure 5, the results of the DBQL query show that the OBIEE server logs into the Teradata Database with the user called sample-data. Each OBIEE end-user is then identified with the query that they ran via the query band. The DBQL results show two end users who ran OBIEE answer reports: demo and Administrator.

The query banding must be set for the session. Setting for transaction won't work due to the way that OBIEE sends the SQL to the Teradata Database. Other arguments may be added to the query band.

For more information about Query Banding in the Teradata Database, see the Teradata Orange Books "Using Query Banding in Teradata" and "Reserved QueryBand Names." There are versions of each available for the different versions of the Teradata Database.

Conclusion

Using query banding can help database administrators investigate query performance issues, prioritize important queries, and more. It is not difficult or time consuming to configure Oracle BI EE server to use query banding.

Configuring Oracle BI EE Server to Support Teradata Database Query Branding
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Author: Stephen Kamyszek, Teradata Corporation
Contributing Authors:
Matt Bedin, Oracle
Alan Fuller, Oracle
Ragnar Edholm, Oracle

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200

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