

Reference Guide

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OpenEnterprise Data Query Monitoring Configuration Reference Guide (V2.83)

Remote Automation Solutions

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1 Data Query Monitoring Config

The Query Monitoring Configuration Tool allows the user to enable active query monitoring on virtually any table in the ObjectServer database.

1.1 What is Query Monitoring?

Active query monitoring enables active queries initiated by client applications to be monitored.

Client applications that need to display the most recent data use what are known as active queries. Active queries automatically update the client when values change. There are two types of active query that are used to satisfy clients - SQL (Structured Query Language) and object queries. An SQL query may request data for one or more database objects, but object queries only request data for a single object. For instance, the ObjectServer Alarm and Event OPC Server uses a single SQL query to retrieve the entire current alarm list from the database. On the other hand, the ObjectServer OPC Data Access Server uses a separate object query for each unique tag registered by 3rd party OPC Clients.

Query monitoring enables any table to be monitored for either or both types of active query.

1.1.1 The Query Monitoring Tables

Query monitoring is implemented through two tables:-

- DataQueryMonitor
- DataQuery

The DataQueryMonitor table defines what source tables will be monitored for active query activity, and the type of query that should be monitored (SQL, object or both). The database then creates entries in the DataQuery table for each active query made by clients on those defined source tables. An active query on a table derived-from or inherited-from a configured source table will also be recorded in the DataQuery table. Active queries on a view on a source table will also be recorded.

1.2 Query Monitoring and the 'Active Poll List Builder'

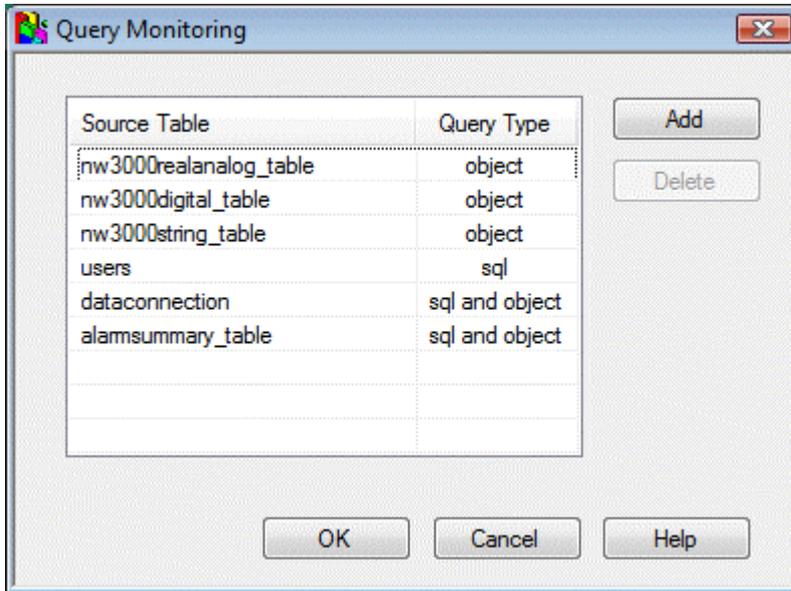
The 'Active Poll List Builder' is a server component that uses active query monitoring to create 'Active' data collection templates when OPC clients request OPC data for Bristol RTUs. Active query monitoring enables the 'Active Poll List Builder' to detect when the ObjectServer OPC Data Access Server is running active object queries, so it can create the 'Active' templates in a timely fashion. These 'Active' templates provide the user with more frequent updates for the data they are viewing.

In order to set up query monitoring of the ObjectServer OPC Data Access Server on all Bristol signal types, entries need to be inserted into the DataQueryMonitor table for the nw3000realanalog, nw3000digital and nw3000string tables, requesting object query monitoring. The ObjectServer installation creates these entries automatically.

Other tables can also be enabled for active query monitoring using the Query Monitoring configuration tool.

1.3 Main Dialog

The Query Monitoring Configuration Tool's main dialog displays a list of the source tables that have already been configured for active query monitoring, and the types of query that are being monitored. It also enables users to add new tables to the list and delete existing tables.

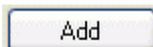


1.3.1 Source Table List

Source Table	Query Type
nw3000realanalog_table	object
nw3000digital_table	object
nw3000string_table	object
users	sql
dataconnection	sql and object
alamssummary_table	sql and object

This is a list of the source tables and query types that have been selected for active query monitoring.

1.3.2 Add



Selecting this button opens the 'Select Table Dialog', which enables the user to select a source table and query type for query monitoring.

1.3.3 Delete

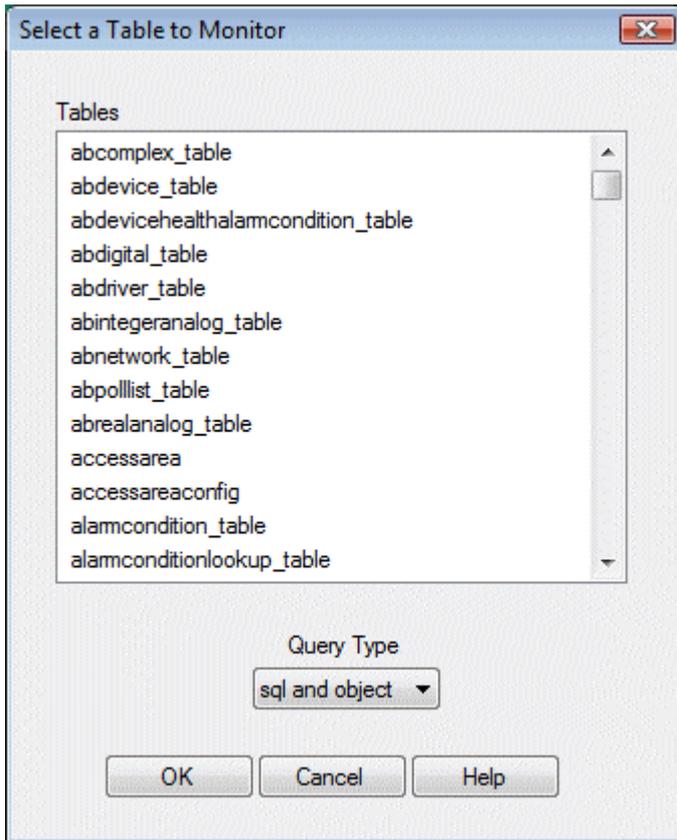


When enabled, selection of this button deletes the currently selected source table from the list of monitored tables. The user will be asked to confirm the deletion before it takes place.

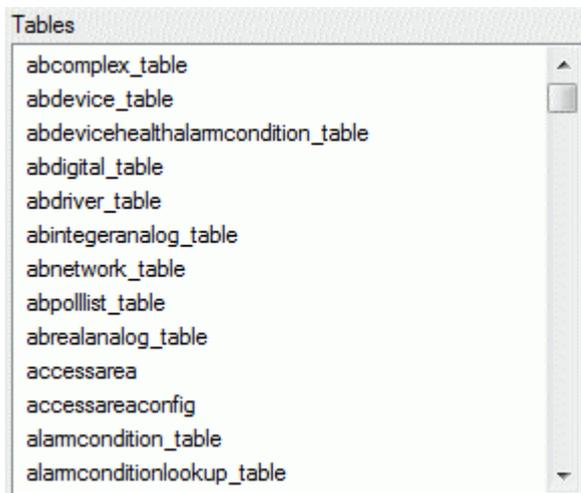
The button is disabled until a table has been selected from the 'Source Table List'.

1.4 Select Table Dialog

This dialog enables the selection of a table for active query monitoring. The query type must also be selected.

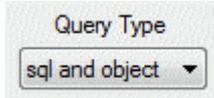


1.4.1 Table List



This list displays the tables which may be selected for query monitoring. The user can scroll up or down to select the required table.

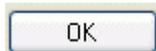
1.4.2 Query Type



A query type option must be selected from this drop-down list. If a query type is not selected when the [OK] button is clicked, the user is prompted to make a query type selection. The options are:-

- **sql** - the rtrdb will monitor the selected table for active sql queries.
- **object** - the rtrdb will monitor the selected table for active object queries.
- **sql and object** - the rtrdb will monitor the selected table for active sql and object queries.

1.4.3 OK



When this button is selected, the selected table and query type are inserted into the QueryMonitor table. The selected table will be added to the 'Source Table List' on the main dialog. From that point, the rtrdb will be monitoring the selected table for active queries of the selected type.

For SQL queries, a single entry will be placed into the DataQuery table for any active SQL query initiated by a client on the selected table.

For object queries, each object queried from the selected table will be inserted into the DataQuery table for the duration of the active query.

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