Indusoft Connectors

Point of View Real-time values

This connector is used to get real time values from Point of View via the Point of View OPC server.

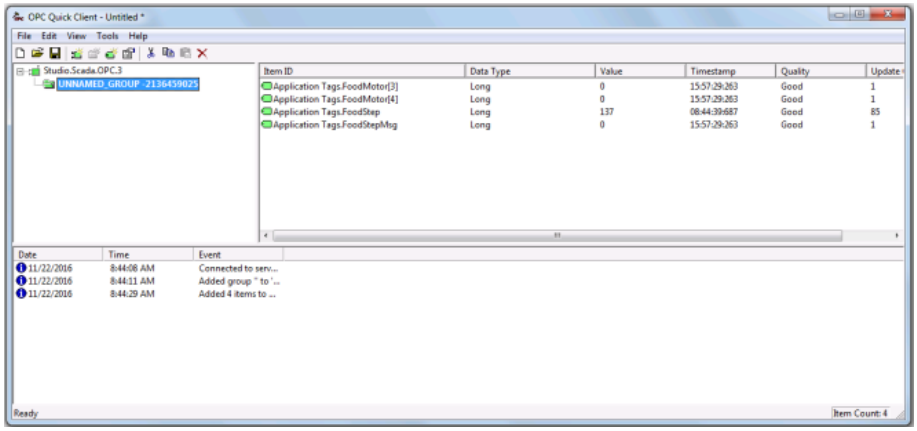
Prerequisites

Verify Communications

To verify communication from Point of View, a generic OPC test client is provided to test the OPC Server.

This client is available from the Tools folder of the **XLReporter** install CD and can be downloaded from **www.SyTech.com**.

To open, double-click **SampleClientDA.exe**. This opens the **OPC Quick Client** window.



To connect to an OPC server, select **Edit**, **New Server Connection** to open the **Server Properties** window. Select the Point of View OPC server and click **OK**.

Once the connection is made, select **Edit**, **New Group**. Specify **Name** and click **OK**.

Click on the group name created, and select **Edit**, **New Item**. This opens the **Add Items** window. Browse for tags and double click any to select. Once tag selection is complete click **OK** to return to the **OPC Quick Client** window.

All the selected tags appear along with their real time values, type, quality, and timestamp.

If at any point you experience an issue with this client, contact Indusoft technical support to troubleshoot and correct these issues.

Remote Communication

If XLReporter is not installed on the same machine as Point of View, the workstation must also have the OPC core components installed. To determine if the core components are installed verify the following file exists:

- C:\Windows\SysWow64\OPCEnum.exe (64-bit OS)
- C:\Windows\system32\OPCEnum.exe (32-bit OS)

If the components are not installed, then they are provided in the XLReporter installation folder under *_repairtools\OPC*. Alternatively, these can be downloaded from www.opcfoundation.org.

Server Settings

To connect to Point of View remotely both the machine where the server is running and the machine where the client is running must have matching Windows user accounts and the client must be logged in with a matching account.

In addition, on the machine with Point of View, certain DCOM settings must be enabled. For details on what DCOM settings to enable, see OPC and DCOM: 5 Things You Need to Know.

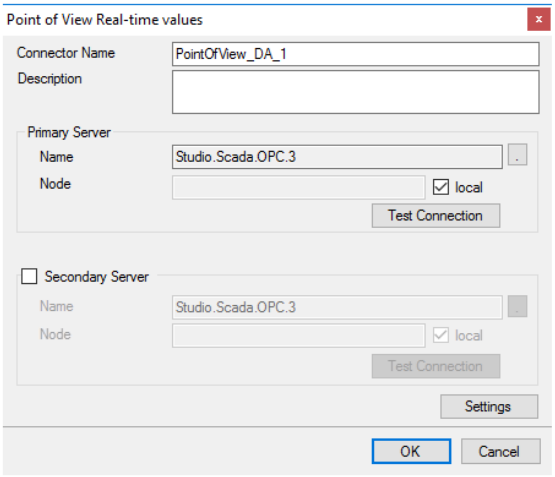
Windows Firewall

If the Windows Firewall is enabled on the machine where Point of View is running TCP Port *135* must be opened for remote clients to connect.

Connector

To configure the connector, from the **Project Explorer** select **Data, Connectors**.

- Click **Add**
- Select **Indusoft**, **Point of View Real-time values**
- Click **OK**



Primary Server

These settings define the **Name** and **Node** of the OPC DA server. Typically, the **Name** is defaulted correctly. If the Point of View server is on the local machine, leave **local** checked, otherwise uncheck, and specify either the name or IP address of the machine where Point of View is running.

Use the **Test Connection** button to verify a connection to the server.

Secondary Server

These settings define the (optional) secondary Point of View to connect to if a connection to the **Primary Server** fails.

Settings

For information on the specific settings, see the **DATA CONNECTIVITY, OPC** document.

Verify Data Communication

To verify communication to Point of View, open the **Project Explorer** and select the **Tools** tab. Launch the **System Check** application.

- Click **Add**
- Choose the *Point of View Real-time* connector from the dropdown list
- Click the pushbutton ([…]) next to **Items** to open the **Tag Browser** window
- Select one or more tags, click **OK**
- Click **Start** to verify the communication

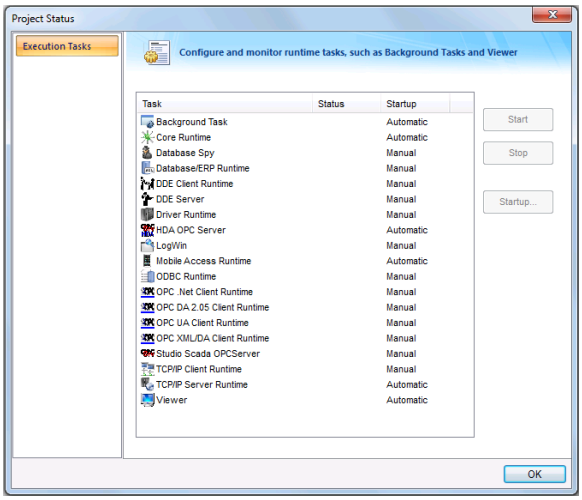
Point of View Historical values (OPCHDA)

This connector is used to get historical values from Point of View via the Point of View OPC HDA server.

Set up Point of View

Enable OPC HDA Server

To enable the Point of View OPC-HDA Server**,** open the project. Select the **Local Management**, **Tasks** from the **Home** tab.

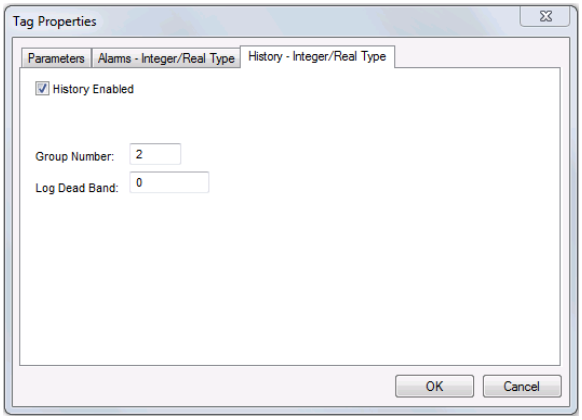


- Under the **Task** column, select **HDA OPC Server**.
- Set **Startup** to *Automatic*.

Enable Historical Logging

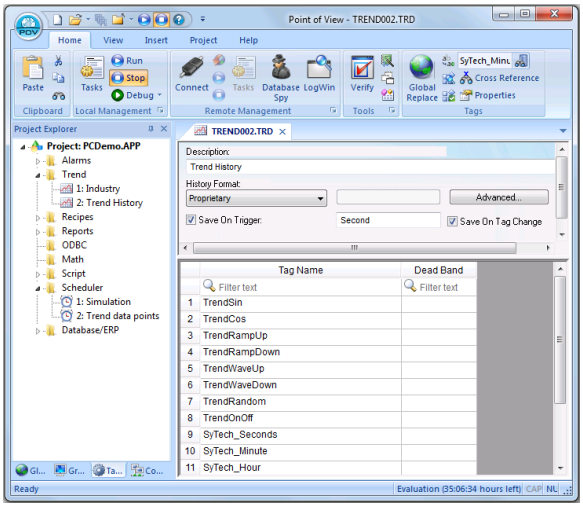
Each integer and real type tag in the tags database has several properties in addition to its actual value. You can set these properties by using the **Project Tags** datasheet, the **Properties** command on the ribbon, or the **Tags Database** functions.

For each tag, in **Tag Properties**, under the **History – Integer/Real Type** tab,



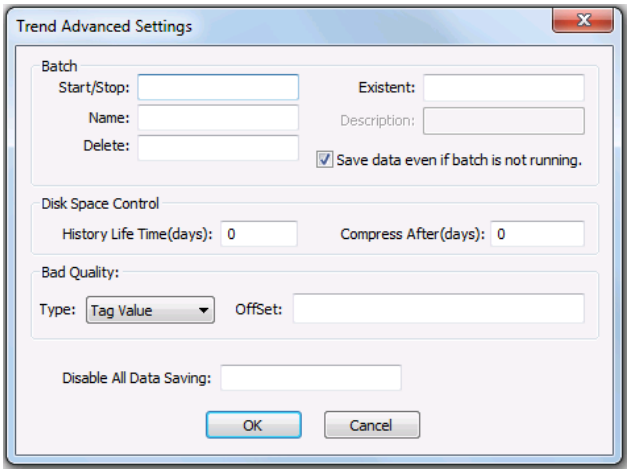
- Check **History Enabled**.
- The **Group Number** is the trend group to which the project tag is assigned to. Set this accordingly.

The trend folder enables which tags have the values stored. To create a new trend file, select **Tasks**, then right click **Trend** and select **Insert**.



Assign the tags.

Click the **Advanced…** option and set the **History Life Time (days)** option.



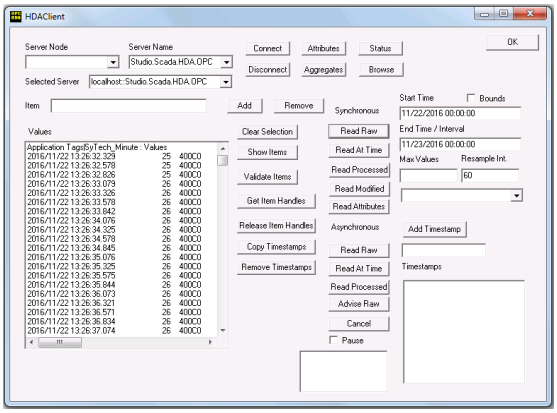
This determines how often Point of View deletes the trend files. Use *0* to keep all historical files.

Prerequisites

Verify Communication

Communication between the OPC server and an OPC client must be verified. **XLReporter** provides an independent OPC HDA client to verify connectivity and data retrieval from any OPC HDA server. This client is found on **XLReporter's** product CD under **Tools, OPC, OPC_HDA**. It can also be downloaded from www.SyTech.com.

To run, double-click **SampleClientHDA.exe**.



Set **Server Name** to Studio.Scada.HDA.OPC (the Point of View OPC HDA server) and click **Connect**.

Click **Browse** to open the **Browse Dialog** window.

The easiest way to get a list of tags is to set **OPCHDA_BROWSETYPE** to *OPCHDA_FLAT*. Choose each tag to test by selecting it and clicking **Add**. When complete, click **Done** to return to the **HDA Client** window.

Click **Show Items** to display the selected tags in the left pane window. Click **Validate Items** then **Get Item Handles** to register these tags with the server.

Enter the **Start Time** and **End Time** . Note this is in UTC(Universal Time Clock) and click **Read Raw**. The raw values for each selected tag will appear on the left along with a timestamp and quality.

To read processed data, click **Aggregates**, select the appropriate aggregate (e.g., maximum, minimum, etc.). and click **Read Processed**. One minute calculations between the start and end time should appear for each selected tag.

If the client does not respond as described contact Indusoft technical support to troubleshoot and correct these issues.

Remote Communication

If XLReporter is not installed on the same machine as Point of View, the workstation must also have the OPC core components installed. To determine if the core components are installed verify the following file exists:

- C:\Windows\SysWow64\OPCEnum.exe (64-bit OS)
- C:\Windows\system32\OPCEnum.exe (32-bit OS)

If the components are not installed, then they are provided in the XLReporter installation folder under *_repairtools\OPC*. Alternatively, these can be downloaded from www.opcfoundation.org.

Server Settings

To connect to Point of View remotely both the machine where the server is running and the machine where the client is running must have matching Windows user accounts and the client must be logged in with a matching account.

In addition, on the machine with Point of View, certain DCOM settings must be enabled. For details on what DCOM settings to enable, see OPC and DCOM: 5 Things You Need to Know.

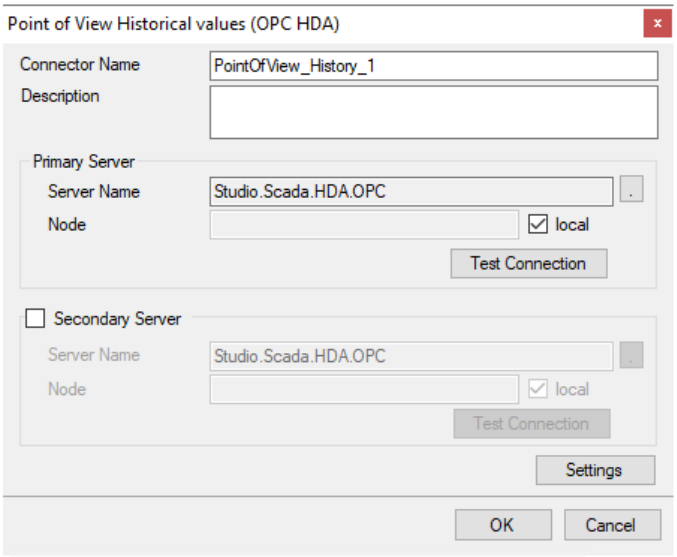
Windows Firewall

If the Windows Firewall is enabled on the machine where Point of View is running TCP Port *135* must be opened for remote clients to connect.

Connector

To configure the connector, from the **Project Explorer** select **Data, Connectors**.

- Click **Add**
- Select **Indusoft**, **Point of View Historical Values (OPC HDA)**
- Click **OK**



Primary Server

These settings define the **Name** and **Node** of the OPC HDA server. Typically, the **Name** is defaulted correctly. If the server is on the local machine, leave **local** checked, otherwise uncheck, and specify either the name or IP address of the machine where server is running.

Use the **Test Connection** button to verify a connection to the server.

Secondary Server

These settings define the (optional) secondary historian to connect to if a connection to the **Primary Server** fails.

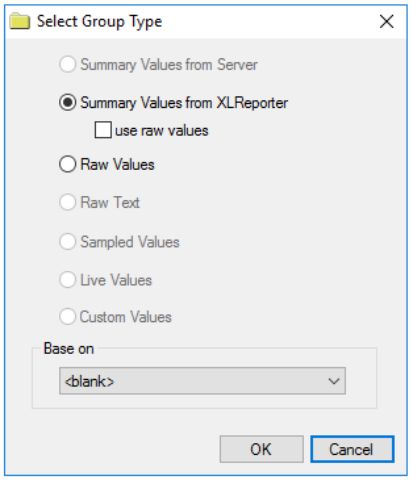
Settings

For information on the specific settings, see the **DATA CONNECTIVITY, OPC** document.

Data Group

The following describes the historical data group settings specific to the **Point of View Historical Values** connector.

Group Types



The following group types are available:

Summary Values from XLReporter

This group type retrieves sampled values from the historian and performs calculations on those samples for reporting.

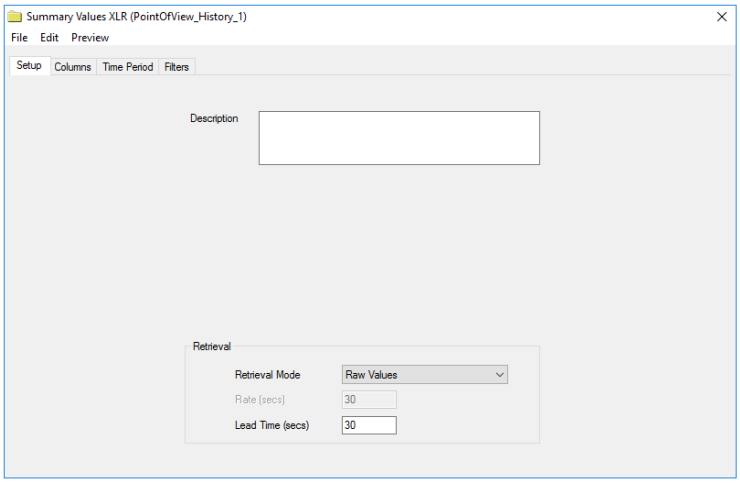
By default, summary values are calculated time weighted, and values are propagated based on the last known value. However, to change this so that summary values are calculated strictly on the data returned check **use raw values**.

Raw Values

This group retrieves values logged to the historian between the start and end time specified.

Group Settings

Setup Tab (Summary Values for XLReporter)



The **Retrieval** settings define how data is retrieved for the calculations selected for the group. The following settings are available:

- **Retrieval Mode**
  This setting defines how data is retrieved from the historian. *Raw Values* are available.
- **Lead Time**
  The amount of time (in seconds) to retrieve data before the start time.

Limitations

The server does not provide any server calculations and can only return 32,000 records for any one request.

Verify the Data Connector

From the **XLReporter Project Explorer** select**, Tools, Connector Groups.**

Select the *Point of View* historical connector and then select **Add.**

- Set the **Type** *Raw Values* and click **OK**

On the **Columns** tab of the group, select the tag **Name**(s).

Select **Preview,** pick a *Start* date and click **Refresh.**

Point of View Historical values (OLEDB/ODBC)

This connector is used to get historical values from Point of View logged as a trend to a relational database.

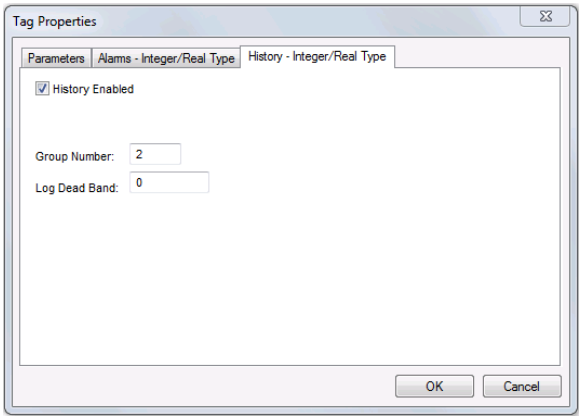
Note that each trend must be configured as its own connector.

Set up Point of View

Enable Historical Logging

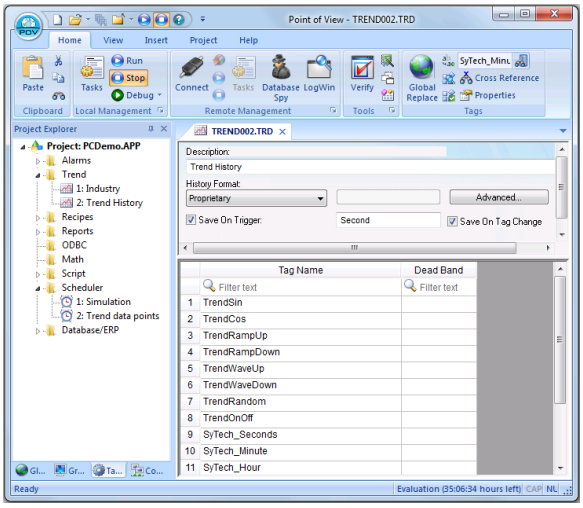
Each integer and real type tag in the tags database has several properties in addition to its actual value. You can set these properties by using the **Project Tags** datasheet, the **Properties** command on the ribbon, or the **Tags Database** functions.

For each tag, in **Tag Properties**, under the **History – Integer/Real Type** tab,



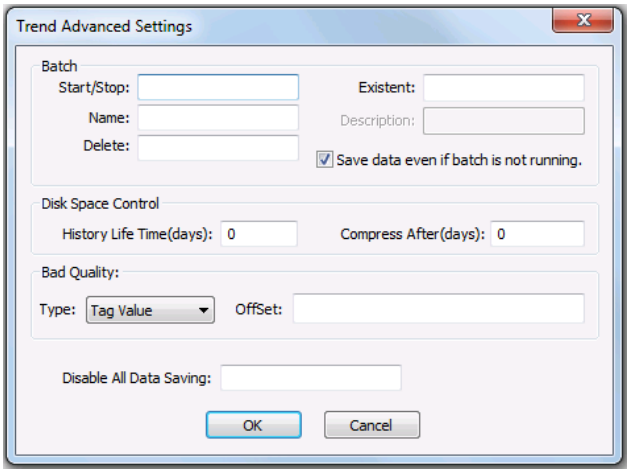
- Check **History Enabled**.
- The **Group Number** is the trend group to which the project tag is assigned to. Set this accordingly.

The trend folder enables which tags have the values stored. To create a new trend file, select **Tasks**, then right click **Trend** and select **Insert**.



Assign the tags.

Click the **Advanced…** option and set the **History Life Time (days)** option.

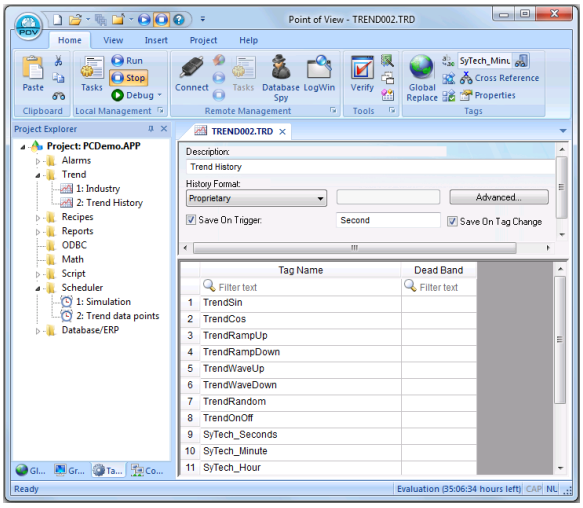


This determines how often Point of View deletes the trend files. Use *0* to keep all historical files.

Enable Historical Database Log

To retrieve historical data via trends logged to a relational database, create a new trend file.

Select **Tasks**, then right click **Trend** and select **Insert**.



Assign the tags.

The trend file can be logged to an external database. Change the **History Format** to *Database*. The default name of the **Table** created is the name of the Trend file.

For example, the trend file name above is *TREND002.TRD*.

The table name created is *TREND002*. User can change the table name.

This table is setup with each tag as its own column. The timestamp column is *Time_Stamp* and it is stored in local time.

Prerequisites

Verify Database

To verify the database, open the tool provided by the database vendor that allows access to tables. If data is logged to SQL Server or SQL Server Express, this is the **Microsoft SQL Server Management Studio.**

Open **SQL Server Management Studio** and connect to the SQL Server or SQL Server Express instance set up for history data from Point of View.

Expand **Database** and then the database configured and expand **Tables**. Right-click table configured and choose **Select Top 1000 Rows**.

If no data is returned contact Indusoft technical support and correct these issues.

Connector

To configure the connector, from the **Project Explorer** select **Data, Connectors**.

- Click **Add**
- Select **Indusoft**, **Point of View Historical Values (OLE DB/ODBC)**
- Click **OK**

Primary Database

This setting defines the connection to the database where Point of View is configured to log to. Use the browse button […] to define the database connection.

Table/Column

Once the **Primary Database** is configured, set **Table** to the table containing the trend data. The Date column should always be **Time_Stamp** with **Date includes Time** checked.

Settings

The **Settings** button opens the **Settings** dialog that defines characteristics of the database that are used to retrieve data.

Typically, these settings are defaulted correctly for the **Primary Database**.

If queries timeout, increase the **Client Wait Time**.

The delimiter and timestamp settings are typically filled in automatically for the database and can be modified for other databases.

The **Date/Time Storage** settings define how timestamps are stored in the database. Using this setting the timestamps are manipulated when data is retrieved so that local timestamps are submitted in and returned.

Many databases require the Date format to be **YYYY-MM-DD** so that no interpretation needs to occur based on the Region settings of the Windows Operating System. It is recommended to always have this option checked.

Data Group

The following describes the historical data group settings specific to the **Point of View Historical Values** connector.

Group Types

The following group types are available:

Summary Values from XLReporter

This group type retrieves sampled values from the database and performs calculations on those samples for reporting.

By default, summary values are calculated time weighted, and values are propagated based on the last known value. However, to change this so that summary values are calculated strictly on the data returned check **use raw values**.

Raw Values

This group retrieves every value logged to the database between the start and end time specified.

Custom Values

This option opens the Database Group builder where a query can be configured to retrieve data from any table in the database.

Group Settings

Setup Tab (Summary Values for XLReporter)

The **Retrieval** settings define how data is retrieved for the calculations selected for the group. The following settings are available:

- **Retrieval Mode**
  This setting defines how data is retrieved from the historian. *Raw Values* are available.
- **Lead Time**
  The amount of time (in seconds) to retrieve data before the start time.

Filters Tab

If the **Perform by Server** option is checked, any filter configured in this tab is put into the *WHERE* clause of the query sent to the database to retrieve data for the group. Otherwise, the configured filtering is performed by the reporting engine after the values are returned. It is recommended to leave this setting checked as the performance is much better.

Verify the Data Connector

From the **XLReporter Project Explorer** select**, Tools, Connector Groups.**

Select the *Point of View* historical connector and then select **Add.**

- Set the **Type** *Raw Values* and click **OK**

On the **Columns** tab of the group, select the tag **Name**(s).

Select **Preview,** pick a *Start* date and click **Refresh.**