

Troubleshooting AVEVA Historian Connections

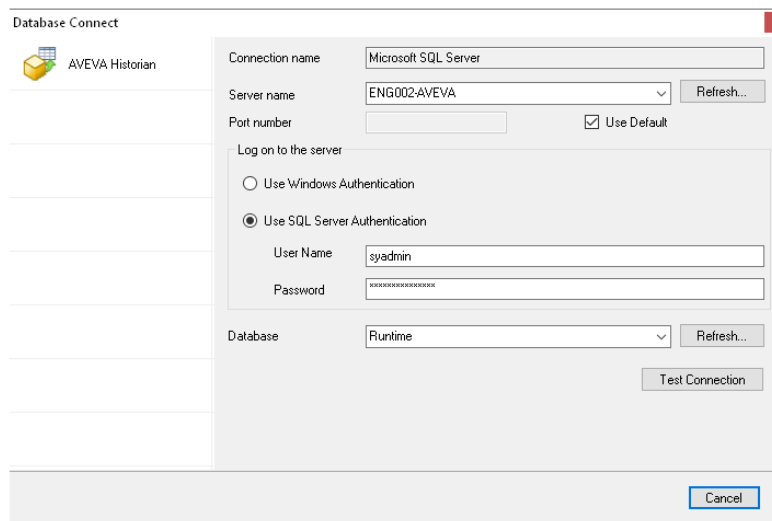
Overview

XLReporter supports connections to retrieve data from the AVEVA Historian. The following document details some of the common issues that can come about when utilizing this interface with XLReporter.

Common Issues

Failing to Connect when creating the Connector:

When configuring a connection to the AVEVA Historian you are prompted to connect to the Microsoft SQL Server Instance where the Historian is configured.



If, when clicking the **Test Connection** button, an error is reported there can be many reasons why. To best troubleshoot this, refer to the [How to Configure Microsoft SQL Server for SQL Server](#) document available on SyTech's website.

No Data Reported for one or more Tags:

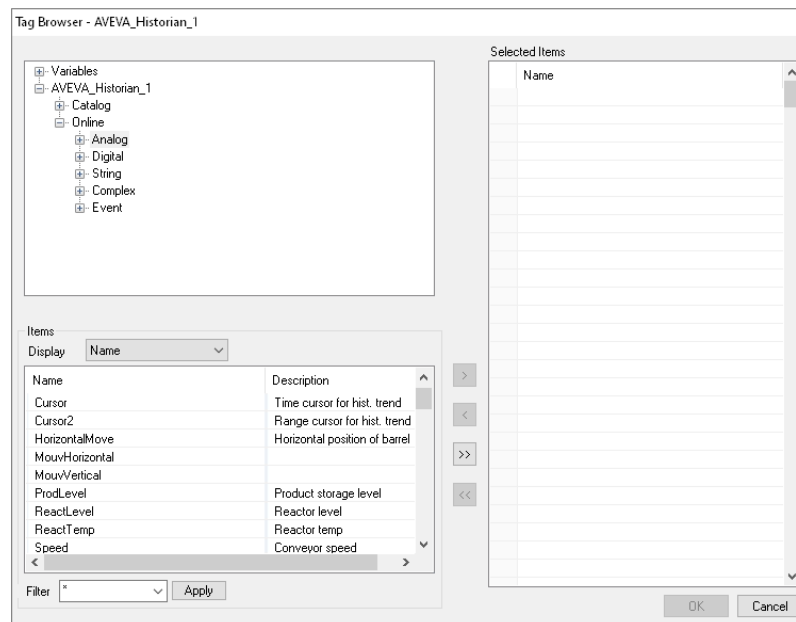
In the report, if one or more tags are shown with no values, the first step is to validate the tag name with the AVEVA Historian.

To do so, open the template used to generate the reports. From the menu in the **Design Studio** select **Data, Connect** to access the connections for the template.

From the list on the right-side, select the connection configured for the **History Data Group** with missing data. Double-click the row to open the **History Data Group**.

Name	Calculation	Scaling	Heading
* Batch%Conc	minimum		Batch%ConcMinimum
Batch%Conc	maximum		Maximum
Batch%Conc	average		Average
ProdLevel	minimum		ProdLevelMinimum
ProdLevel	maximum		Maximum
ProdLevel	average		Average
ReactLevel	minimum		ReactLevelMinimum
ReactLevel	maximum		Maximum
ReactLevel	average		Average
ReactTemp	minimum		ReactTempMinimum
ReactTemp	maximum		Maximum
ReactTemp	average		Average
Speed	minimum		SpeedMinimum
Speed	maximum		Maximum
Speed	average		Average
Vitesse	minimum		VitesseMinimum
Vitesse	maximum		Maximum

Select the row with a tag with no data reported and click the browse pushbutton (...) to open the **Tag Browser**.



Attempt to locate the tag(s) in the browser. If they are not found, this is the issue. If they are found, see the next section.

Questionable Data Reported for one or more Tags:

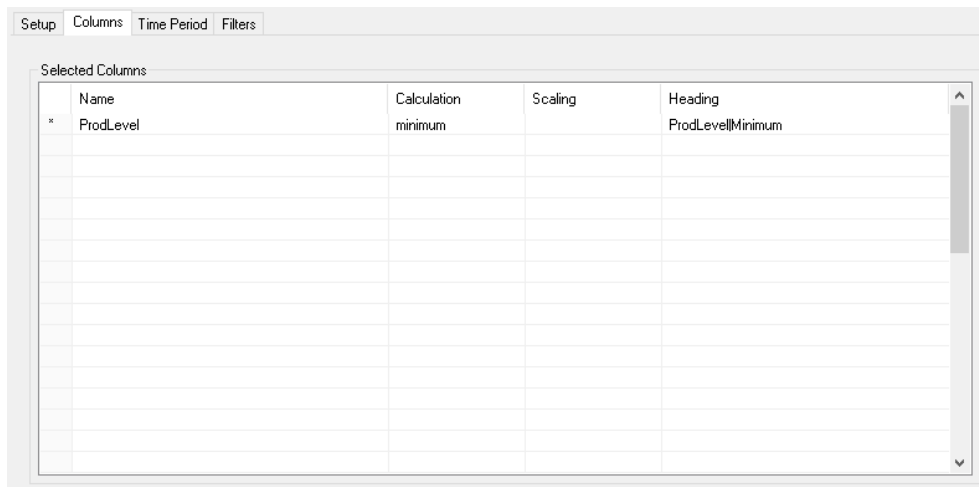
If the report contains data that you question as valid (or if data from valid tags are reported as empty), you can verify data from the server.

To do so, open the template used to generate the reports. From the menu in the **Design Studio** select **Data, Connect** to access the connections for the template.

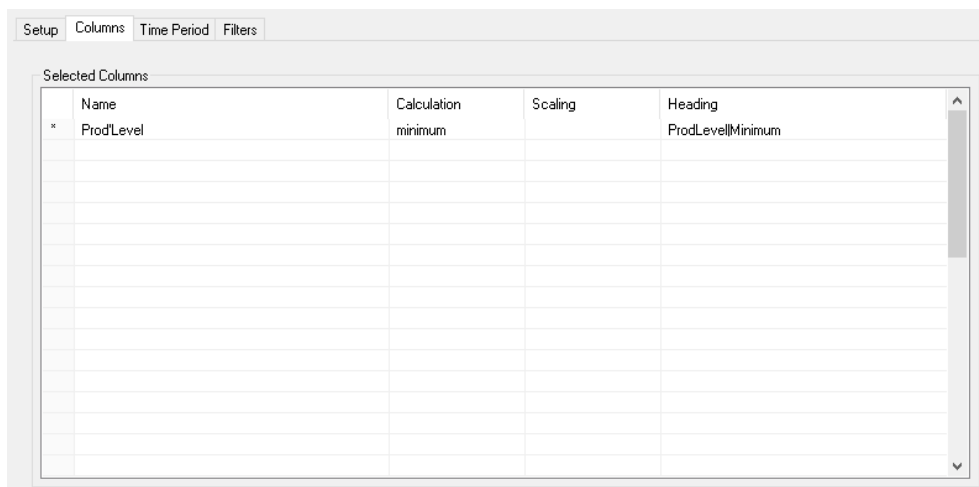
From the list on the right-side, select the connection configured for the **History Data Group** with missing data. Double-click the row to open the **History Data Group**.

To make this a more manageable group and home in on the tag(s) that are questionable, first save this group with a new name so as not to damage the original query. To do so, select **File, Save As** and specify a new name (something temporary that you can easily identify and delete later on).

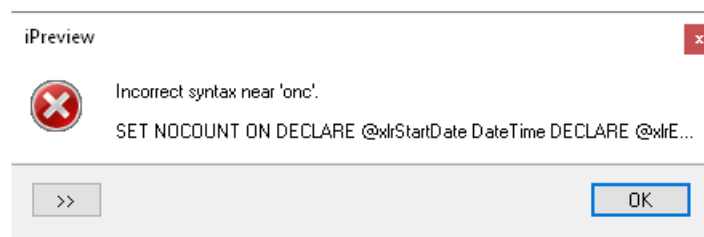
Now, under the **Columns** tab, remove rows so that all that remains are questionable tags. To do so, click to the left of the tag name and either press the **Delete** key or right-click and select **Delete**.



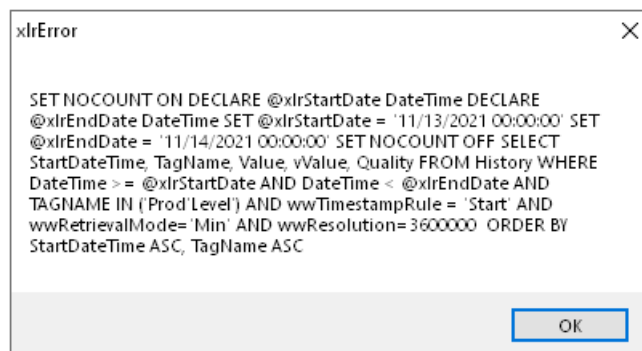
To get the query that **XLReporter** is submitting to the AVEVA Historian, something must be added to the group to produce an invalid query. The easiest way to do this is to add a single quote (') in the middle of one of the tag names.



Now, select **Preview** from the top, specify the information to produce the same results seen in the report and click **Refresh**.



An error appears as a popup with the query underneath. Click where the query is displayed, and another popup window is opened displaying the full query.



Click on this window and then press *Ctrl+C* to copy the query to the clipboard. Close out of the error, **Preview**, and **Group**.

Open **Notepad** and paste the query in.

```
-----  
xlrError  
-----  
SET NOCOUNT ON DECLARE @xlrStartDate DateTime DECLARE @xlrEndDate DateTime SET @xlrStartDate  
-----  
OK  
-----
```

Clean up the query to remove all the text before and after the actual statement. Also, remove the single quote added to the tag name so that the query is valid again. Optionally, you can add new lines in to make it easier to read.

```
SET NOCOUNT ON  
DECLARE @xlrStartDate DateTime  
DECLARE @xlrEndDate DateTime  
SET @xlrStartDate = '11/13/2021 00:00:00'  
SET @xlrEndDate = '11/14/2021 00:00:00'  
SET NOCOUNT OFF  
SELECT StartDateTime, TagName, Value, vValue, Quality  
FROM History  
WHERE DateTime >= @xlrStartDate  
AND DateTime < @xlrEndDate  
AND TAGNAME IN ('ProdLevel')  
AND wwTimestampRule = 'Start'  
AND wwRetrievalMode='Min'  
AND wwResolution=3600000  
ORDER BY StartDateTime ASC, TagName ASC
```

Now, open the **Microsoft SQL Server Management Studio**. Connect to the SQL Server instance for AVEVA Historian.

On the left side, locate the **Runtime** database, right-click and select *New Query*. In the **Query** window, paste in the cleaned-up query from **Notepad** and click **Execute**.

The screenshot shows the Microsoft SQL Server Management Studio interface. The top window displays the following SQL query:

```
SET NOCOUNT ON  
DECLARE @xlrStartDate DateTime  
DECLARE @xlrEndDate DateTime  
SET @xlrStartDate = '11/13/2021 00:00:00'  
SET @xlrEndDate = '11/14/2021 00:00:00'  
SET NOCOUNT OFF  
SELECT StartDateTime, TagName, Value, vValue, Quality  
FROM History  
WHERE DateTime >= @xlrStartDate  
AND DateTime < @xlrEndDate  
AND TAGNAME IN ('ProdLevel')  
AND wwTimestampRule = 'Start'  
AND wwRetrievalMode='Min'  
AND wwResolution=3600000  
ORDER BY StartDateTime ASC, TagName ASC
```

Below the query window, the Results pane shows a table with the following data:

	StartDateTime	TagName	Value	vValue	Quality
2	2021-11-13 00:00:00.0000000	ProdLevel	4927	4927	0
3	2021-11-13 01:00:00.0000000	ProdLevel	4914	4914	0
4	2021-11-13 02:00:00.0000000	ProdLevel	4914	4914	0
5	2021-11-13 03:00:00.0000000	ProdLevel	4914	4914	0
6	2021-11-13 04:00:00.0000000	ProdLevel	4914	4914	0
7	2021-11-13 05:00:00.0000000	ProdLevel	4914	4914	0
8	2021-11-13 06:00:00.0000000	ProdLevel	4914	4914	0
9	2021-11-13 07:00:00.0000000	ProdLevel	4914	4914	0
10	2021-11-13 08:00:00.0000000	ProdLevel	4914	4914	0
11	2021-11-13 09:00:00.0000000	ProdLevel	4914	4914	0
12	2021-11-13 10:00:00.0000000	ProdLevel	4914	4914	0
13	2021-11-13 11:00:00.0000000	ProdLevel	4914	4914	0

Results appear at the bottom. Compare those to what you see in the report. If they match, then this is why the report is showing what it is.

Please note that with some calculations like minimum and maximum an extra row is returned for the interval before the start time. This row can be ignored.