

# 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.

Database Connect				>
AVEVA Historian	Connection name	Microsoft SQL Server		
	Server name	ENG002-AVEVA	~	Refresh
	Port number		🗹 Use Default	
	Log on to the server			
	O Use Windows A	uthentication		
	Use SQL Serve	r Authentication		
	User Name	syadmin		
	Password	**********		
	Database	Runtime	~	Refresh
			Te	st Connection
				or connection
				Cancel

If, when clicking the **Test Connection** button, an error is reported there can be many reasons why. To best troubleshoot this, refer to the <u>How to Configure Microsoft SQL Server for SQL Server</u> document.

### 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. Doubleclick the row to open the **History Data Group**.

Selected Columns				
Name	Calculation	Scaling	Heading	
* Batch%Conc	minimum		Batch%Conc Minimum	
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		Speed Minimum	
Speed	maximum		Maximum	
Speed	average		Average	
Vitesse	minimum		Vitesse Minimum	
Vitesse	maximum		Maximum	

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

			Selected Items	
• Variables			Name	
- AVEVA_Historian_1				
🐵 - Catalog				
😑 Online				
Analog				
ter String				
Eucont				
et - E veni				
tems				
Display Name	~		_	
Name	Description	^	>	
Cursor	Time cursor for hist, trend			
Cursor2	Range cursor for hist, trend	1   I	<	
HorizontalMove	Horizontal position of barre			
MouvHorizontal		3	>>	
MouvVertical				
ProdLevel	Product storage level		<<	
ReactLevel	Reactor level			
ReactTemp	Reactor temp			
	Conveyor speed	~		
Speed				
Speed <	>	·		

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. Doubleclick 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**.

Mana	Colordation	Cashaa	Li e e dine e	
Name	Calculation	scaing		
* ProdLevel	minimum		ProdLevel Minimum	

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.

Name	Calculation	Scaling Heading	^
* Prod'Level	minimum	ProdLevellMinimum	
			_

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 @xlrEndDate = '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**.

SQLQu	and and E AVEVALA density (				
	iery i sqi - EAveva\Admin (s	95))* -¤ ×			
- F	SET NOCOUNT ON				
	DECLARE @x1rStartDate [	JateTime			
	SET @vlrStartDate - '11	Lelime	aa.aa.	00'	
	SET @x1rEndDate = '11/1	4/2021 00	.00.00		
	SET NOCOUNT OFF				
	SELECT StartDateTime, 1	FagName, V	alue,	vValue,	Quality
	FROM History	•			
	WHERE DateTime >= @xlr9	StartDate			
	AND DateTime < @xlrEndD	Date			
1	AND LAGNAME IN ('ProdLe	evel:)			
	AND www.imestampkule = AND wwRetrievalMode='Mi	Start n'			
	AND wwResolution=360000	00			
	ORDER BY StartDateTime	ASC, TagN	ame AS	с	
		. 0			
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100 %	esults I Messages StartDateTime	TagName	Value 4007	VValue	Quality
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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.