

The background of the image is a deep purple with a network of glowing, intersecting diagonal lines in shades of cyan and magenta, creating a diamond-shaped pattern. The text is centered in the middle of the image.

AVEVA WORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

AVEVA WORLD MILAN, MAY 2026

Accessing your AVEVA PI Server through OPC UA

AVEVA PI OPC UA Server

Alan Izar, Product Manager, AVEVA

AVEVA

AVEVA WORLD MILAN, MAY 2026

Agenda

Accessing your AVEVA PI Server
through OPC UA

Allianz MiCo
Milano

OPC UA and the modern industrial landscape

Implementing an OPC UA Server for AVEVA™ PI System™

Browsing your AVEVA PI System through OPC UA

Data subscription and historical data access

Writebacks

Questions

Alan Izar

Product Manager – Data Access to PI System

AVEVA

alan.izar@aveva.com

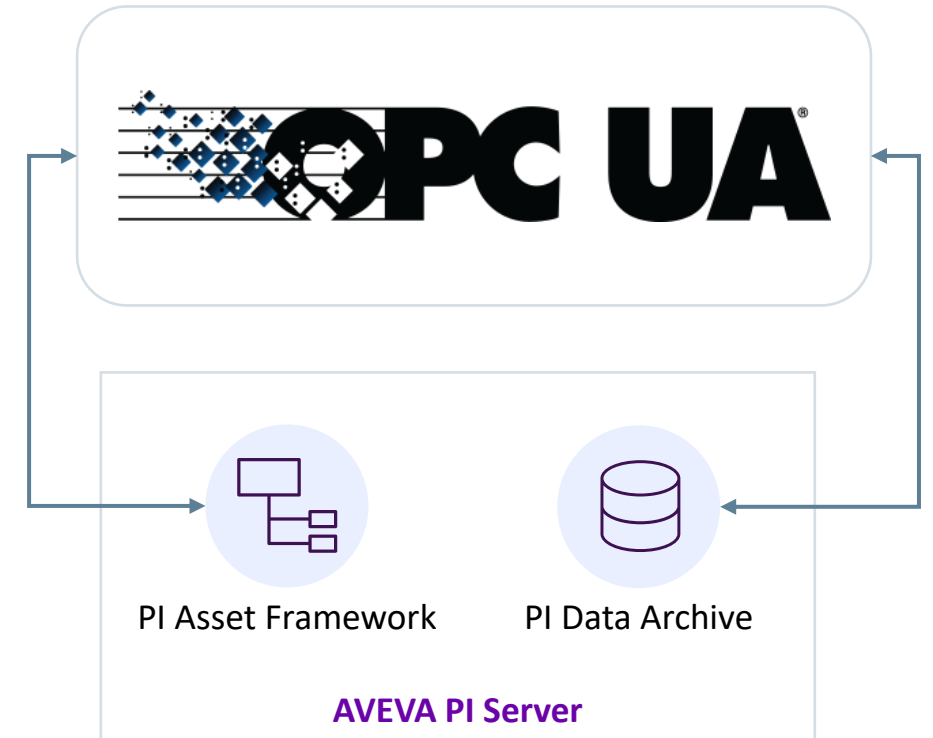


AVEVA

OPC UA and the modern industrial landscape

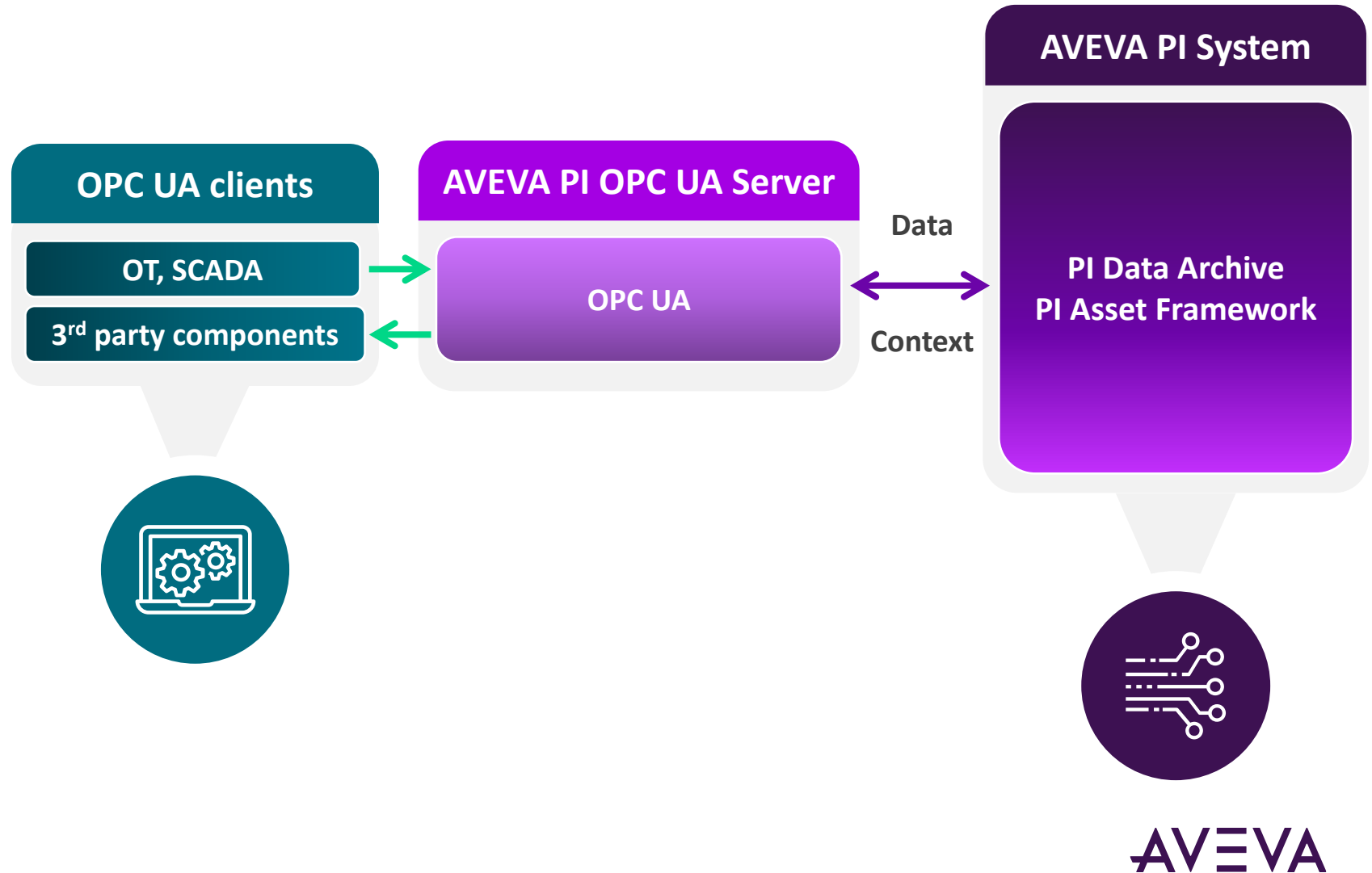
Context is everything!

- A major Industry 4.0 protocol
- Moving away from OPC DA and DCOM
- Not just for raw data, but also **context**
- Fast, modern, and more importantly, **secure**
- Built-in encryption, authentication, and authorization



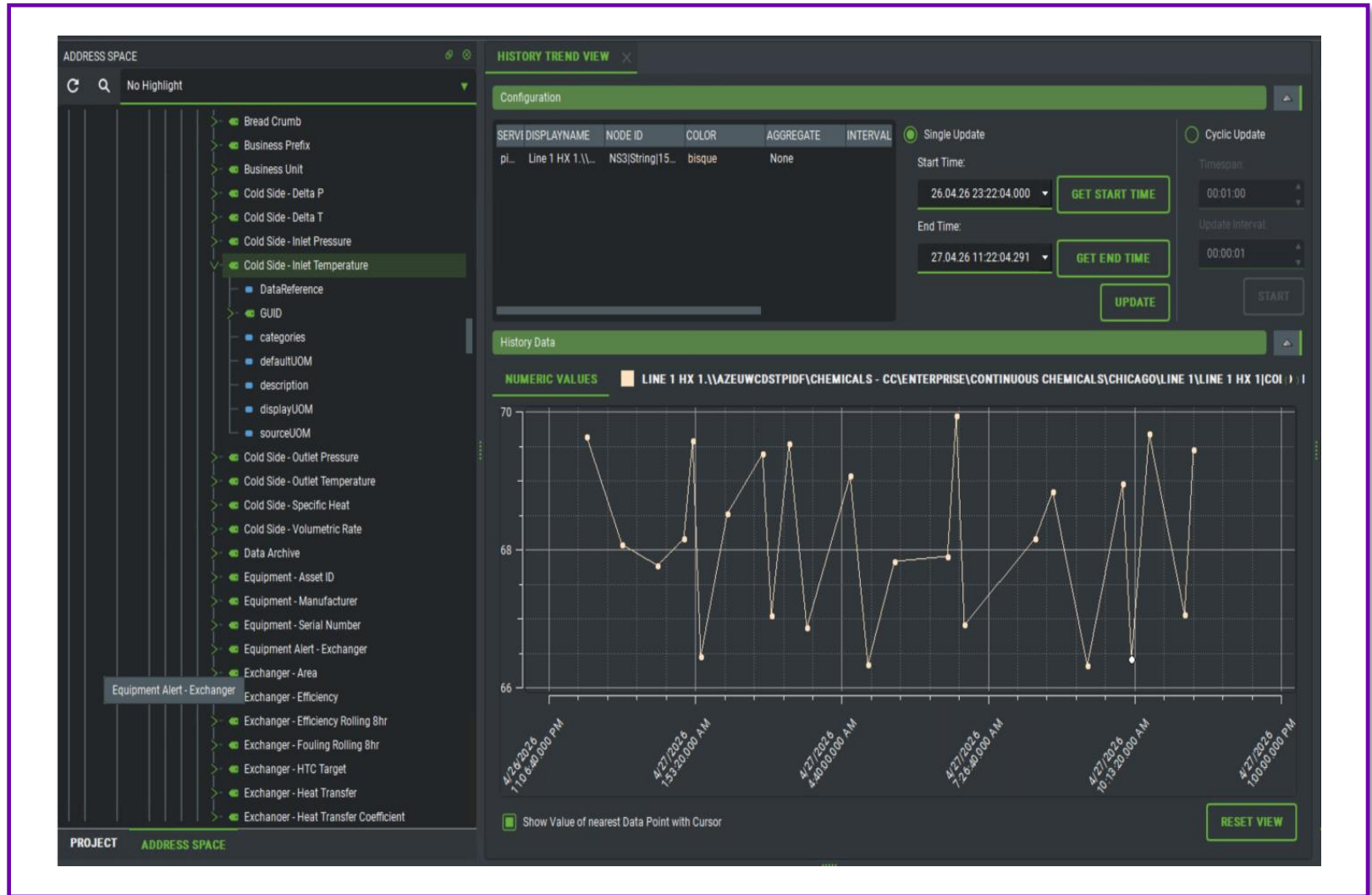
Implementing an OPC UA Server for AVEVA PI System

- OPC UA v1.04
- AF SDK .NET
- PI Server, core and hybrid
- X.509 Authentication between OPC UA components
- Windows Integrated Security or Open ID Connect (OIDC) between AVEVA components



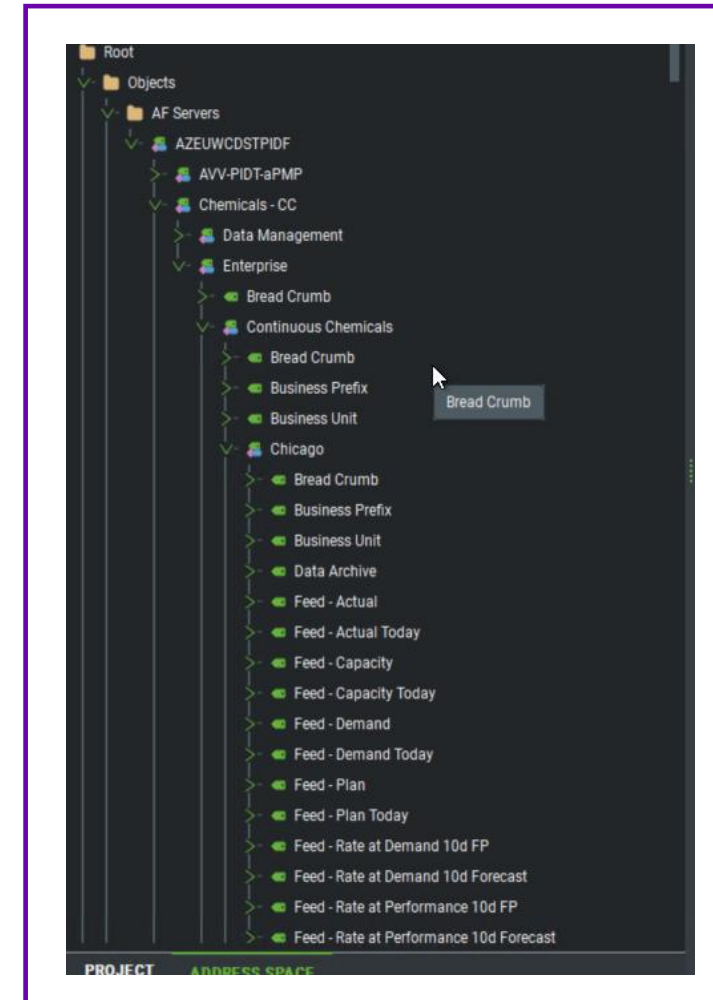
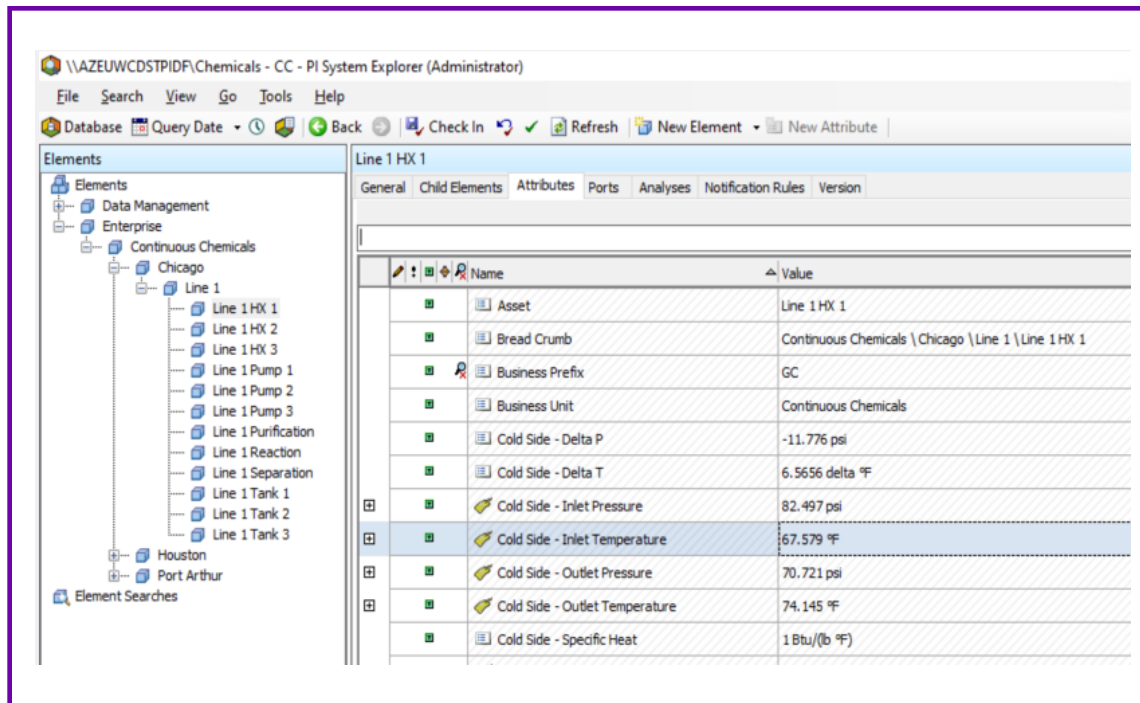
Browsing your AVEVA PI System through OPC UA

- Access to:
 - PI Data Archive
 - PI Asset Framework
- Current data access
 - Polling
 - Subscriptions
- Historical data access
 - Read raw historical values
 - Read a range of aggregates
- Writebacks
 - Supported



Browsing your AVEVA PI System through OPC UA

Browsing the address space



Elements

- Elements
 - Data Management
 - Enterprise
 - Continuous Chemicals
 - Chicago
 - Line 1
 - Line 1 HX 1
 - Line 1 HX 2
 - Line 1 HX 3
 - Line 1 Pump 1
 - Line 1 Pump 2
 - Line 1 Pump 3
 - Line 1 Purification
 - Line 1 Reaction
 - Line 1 Separation
 - Line 1 Tank 1
 - Line 1 Tank 2
 - Line 1 Tank 3
 - Houston
 - Port Arthur
- Element Searches

Elements

Event Frames

Library

Unit of Measure

Contacts

Line 1 HX 1

General Child Elements Attributes Ports Analyses Notification Rules Version

Group by: ☐ Category ☐ Template

Filter

	Name	Value
	Asset	Line 1 HX 1
	Bread Crumb	Continuous Chemicals \ Chicago \ Line 1 \ Line 1 HX 1
	Business Prefix	GC
	Business Unit	Continuous Chemicals
	Cold Side - Delta P	-11.776 psi
	Cold Side - Delta T	6.5656 delta °F
	Cold Side - Inlet Pressure	82.497 psi
	Cold Side - Inlet Temperature	67.579 °F
	Cold Side - Outlet Pressure	70.721 psi
	Cold Side - Outlet Temperature	74.145 °F
	Cold Side - Specific Heat	1 Btu/(lb °F)
	Cold Side - Volumetric Rate	73.282 US gal/min
	Data Archive	AZEJWCDSPTIDA
	Equipment - Asset ID	CHHX1001
	Equipment - Manufacturer	Mason
	Equipment - Serial Number	SN385336
	Equipment Alert - Exchanger	0
	Exchanger - Area	50 ft2
	Exchanger - Efficiency	85.373 %
	Exchanger - Efficiency Rolling 8hr	75.9 %
	Exchanger - Fouling Rolling 8hr	24.123 %
	Exchanger - Heat Transfer	1.8014E+06 Btu/h
	Exchanger - Heat Transfer Coefficient	262.99
	Exchanger - Heat Transfer Target	2.11E+06 Btu/h
	Exchanger - HTC Target	316
	Exchanger - LMTD	136.99
	Exchanger - Overall U Hourly Rolling	179.13
	Exchanger - Percent Fouling	16.776 %
	Exchanger Type	CounterCurrent
	Hot Side - Delta P	-20.017 psi
	Hot Side - Delta T	-41.962 delta °F
	Hot Side - Inlet Pressure	60.044 psi

Server(s): AZE

Name

Drag PI Points to Attributes and Attribute

Cold Side - Inlet Temperature



C:/Program Files/UnifiedAutomation/UaExpert/bin/aic-awc.uap

piopcuaserver@AIZAR-AWC

- UaExpert Manual
- First Steps - create own certificate
- Connect - discover, connect and authenticate
- Plugins - explore more features of UaExpert

- UaGateway - aggregate, map and link data points, OPC classic and UA
- UaGDS - manage security, certificates and revocation
- UaModeler - create information models and companion specifications
- UaSDK - build your own UA applications with SDK/toolkit

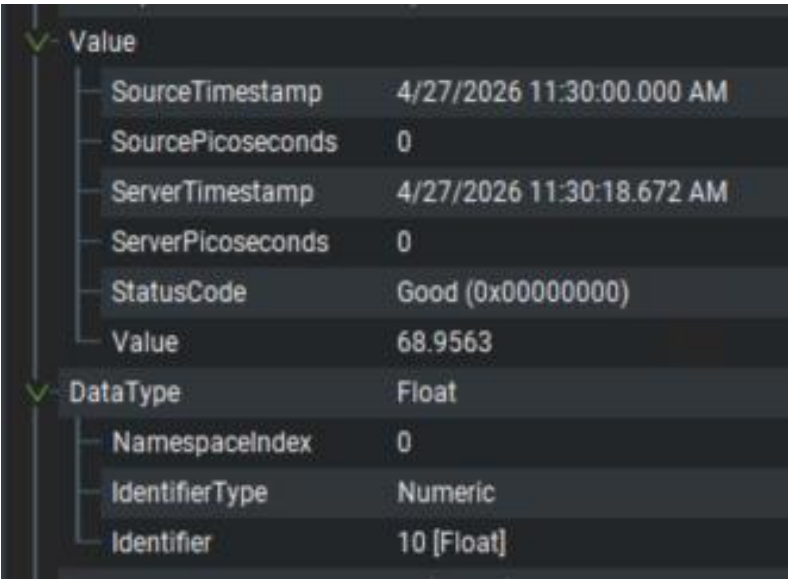
ATTRIBUTE	VALUE
-----------	-------

ATTRIBUTES REFERENCES

TIMESTAMP	SOURCE	SERVER	MESSAGE
4/28/2026 10:45:51.710 AM	UaExpert		Loaded File Transfer Plugin (Static Plugin)
4/28/2026 10:45:51.711 AM	UaExpert		Loaded XML Nodeset Export Plugin (Static Plugin)
4/28/2026 10:45:51.711 AM	UaExpert		Loaded PubSub Config Plugin (Static Plugin)
4/28/2026 10:45:51.711 AM	UaExpert		Loaded OPC UA FX Config Plugin (Static Plugin)
4/28/2026 10:45:51.711 AM	UaExpert		Loaded Trend View Plugin (Static Plugin)
4/28/2026 10:45:51.861 AM	CertificateMan...		Create CertificateManager managed by GDS
4/28/2026 10:45:51.906 AM	UaExpert		Loaded UaExpert's certificate.
4/28/2026 10:45:52.036 AM	UaExpert		UaExpert is ready to use.
4/28/2026 10:45:52.159 AM	DiscoveryWidget		Discovery FindServers on opc.tcp://localhost:4840 failed (BadTimeout)

Browsing your AVEVA PI System through OPC UA

Polling and subscriptions



A screenshot of an OPC UA client interface showing a tree view of data. The 'Value' node is expanded, revealing a table of metadata and the current value. Below it, the 'DataType' node is also expanded, showing its properties.

SourceTimestamp	4/27/2026 11:30:00.000 AM
SourcePicoseconds	0
ServerTimestamp	4/27/2026 11:30:18.672 AM
ServerPicoseconds	0
StatusCode	Good (0x00000000)
Value	68.9563
▼ DataType Float	
NamespaceIndex	0
IdentifierType	Numeric
Identifier	10 [Float]



A screenshot of a window titled 'DATA ACCESS VIEW-1' containing a table with data from the OPC UA server.

#	SERVER	DISPLAY NAME	NODE ID	SOURCE TIMESTAMP	VALUE
1	piopcuaserver@AIZAR-AWC	Cold Side - Inle...	NS3 String 15...	11:30:00.000 AM	68.95631

DATA ACCESS VIEW

DISPLAY NAME	SOURCE TIMESTAMP	VALUE	NODE ID	NODE PATH	DATATYPE	SERVER TIMESTAMP	STATUSCODE
--------------	------------------	-------	---------	-----------	----------	------------------	------------

ATTRIBUTE	VALUE
NodeId	ns=3;s=15775321424694895263:Line 1 HX 1.\\AZ
NamespaceIndex	3
IdentifierType	String
Identifier	15775321424694895263:Line 1 HX 1.\\AZEUCW
NodeClass	Variable
BrowseName	3,'Line 1 HX 1.\\AZEUCDSTPIDF\\Chemicals - CC
DisplayName	","Line 1 HX 1.\\AZEUCDSTPIDF\\Chemicals - CC
Description	","
Value	
SourceTimestamp	4/28/2026 11:10:00.000 AM
SourcePicoseconds	0
ServerTimestamp	4/28/2026 11:16:48.219 AM
ServerPicoseconds	0
StatusCode	Good (0x00000000)
Value	68.5918
DataType	Float
NamespaceIndex	0
IdentifierType	Numeric
Identifier	10 [Float]
ValueRank	-1 (Scalar)
ArrayDimensions	BadAttributeInvalid (0x80350000)
AccessLevel	CurrentRead, CurrentWrite, HistoryRead
UserAccessLevel	CurrentRead, CurrentWrite, HistoryRead
AccessLevelEx	BadAttributeInvalid (0x80350000)

ATTRIBUTES

TIMESTAMP	SOURCE	SERVER	MESSAGE
4/28/2026 10:55:15.000 AM	AddressSpace...	piopcuaerver...	Browse on node 'ns=3;s=10104304000900047303:Enterprise' succeeded.
4/28/2026 10:55:17.640 AM	AddressSpace...	piopcuaerver...	Browse on node 'ns=3;s=14716513632713653259:Continuous Chemicals' succeeded.
4/28/2026 10:55:20.301 AM	AddressSpace...	piopcuaerver...	Browse on node 'ns=3;s=12099471984271776123:Chicago' succeeded.
4/28/2026 10:55:26.311 AM	AddressSpace...	piopcuaerver...	Browse on node 'ns=3;s=13609564549823965482:Line 1' succeeded.
4/28/2026 10:55:33.921 AM	AddressSpace...	piopcuaerver...	Browse on node 'ns=3;s=15775321424694895263:Line 1 HX 1' succeeded.
4/28/2026 10:55:36.978 AM	Reference Plugin	piopcuaerver...	Browse succeeded.
4/28/2026 10:55:37.141 AM	Attribute Plugin	piopcuaerver...	Read attributes of node 'NS3[String]15775321424694895263:Line 1 HX 1.\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature' succeeded [ret = Good].
4/28/2026 11:15:22.363 AM	Attribute Plugin	piopcuaerver...	Read attributes of node 'NS3[String]15775321424694895263:Line 1 HX 1.\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature' succeeded [ret = Good].
4/28/2026 11:16:48.219 AM	Attribute Plugin	piopcuaerver...	Read attributes of node 'NS3[String]15775321424694895263:Line 1 HX 1.\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature' succeeded [ret = Good].

Browsing your AVEVA PI System through OPC UA

Browsing your PI Data Archive

Tag Name	Server	Collective	Timestamp	Value	Er
ChemCC-HX05.ColdInT	AZEUWCDSTPIDA		4/27/2026 11:40:00 AM	66.791	

BrowseName	4, "ChemCC.\\AZEUWCDSTPIDA\\ChemCC-HX05.ColdInT"
DisplayName	"", "ChemCC.\\AZEUWCDSTPIDA\\ChemCC-HX05.ColdInT"
Description	"", ""
Value	SourceTimestamp 4/27/2026 11:40:00.000 AM SourcePicoseconds 0 ServerTimestamp 4/27/2026 11:45:14.494 AM ServerPicoseconds 0 StatusCode Good (0x00000000) Value 66.7909
DataType	Float
NamespaceIndex	0
IdentifierType	Numeric
Identifier	10 [Float]

DATA ACCESS VIEW

- Asset
- Bread Crumb
- Business Prefix
- Business Unit
- Cold Side - Delta P
- Cold Side - Delta T
- Cold Side - Inlet Pressure
- Cold Side - Inlet Temperature
- Cold Side - Outlet Pressure
- Cold Side - Outlet Temperature
- Cold Side - Specific Heat
- Cold Side - Volumetric Rate
- Data Archive
- Equipment - Asset ID
- Equipment - Manufacturer
- Equipment - Serial Number
- Equipment Alert - Exchanger
- Exchanger - Area
- Exchanger - Efficiency
- Exchanger - Efficiency Rolling 8hr
- Exchanger - Fouling Rolling 8hr
- Exchanger - HTC Target
- Exchanger - Heat Transfer

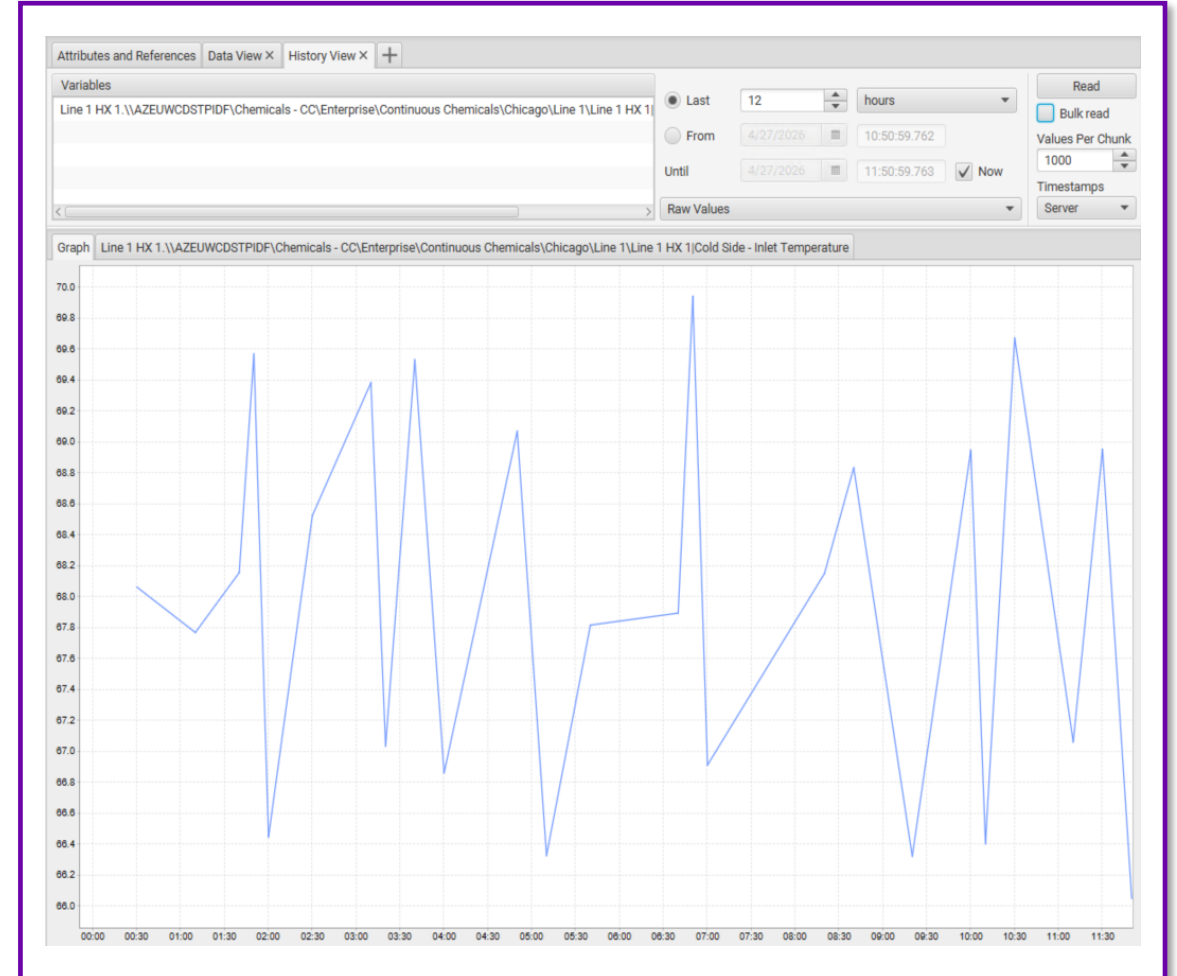
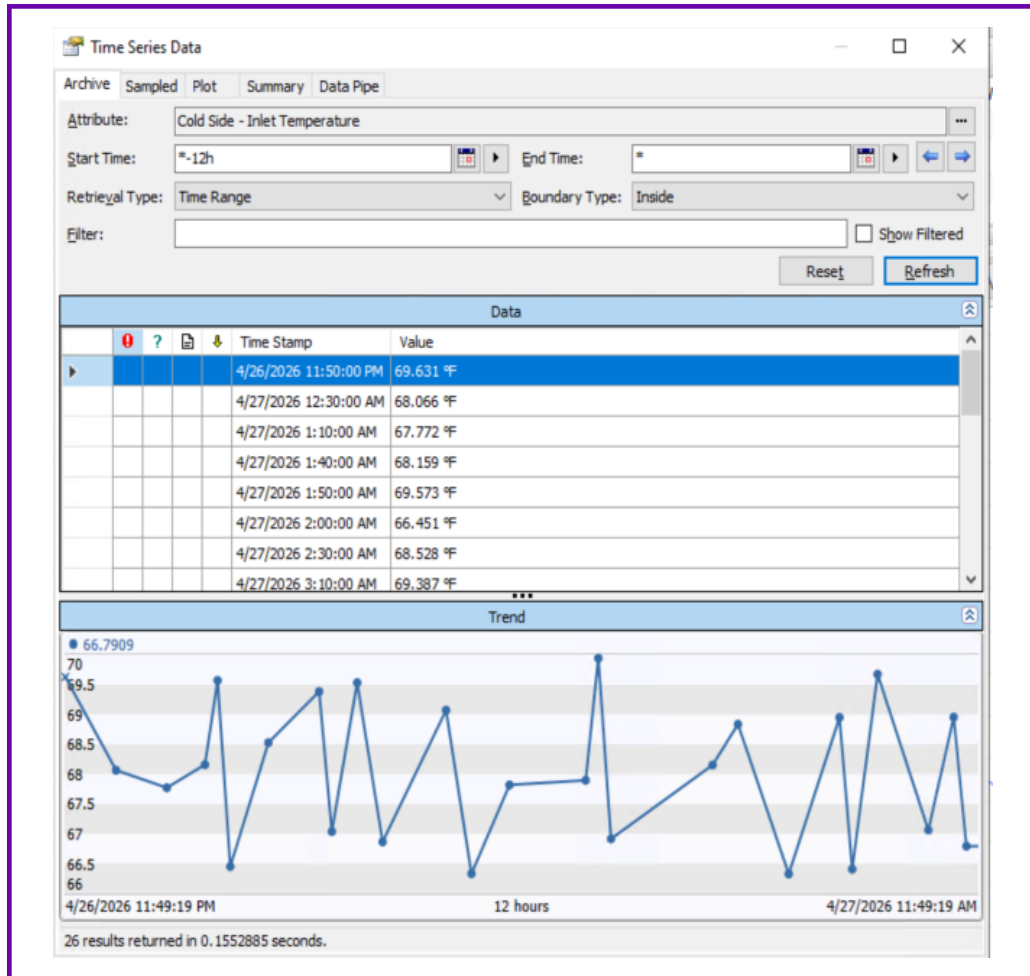
ATTRIBUTE	VALUE
NodeId	ns=3;s=15775321424694895263:Line 1 HX 1.\\AZ
NamespaceIndex	3
IdentifierType	String
Identifier	15775321424694895263:Line 1 HX 1.\\AZEUCWD
NodeClass	Variable
BrowseName	3, 'Line 1 HX 1.\\AZEUCWDSTPIDF\\Chemicals - CC
DisplayName	", 'Line 1 HX 1.\\AZEUCWDSTPIDF\\Chemicals - CC
Description	", "
Value	
SourceTimestamp	4/28/2026 11:20:00.000 AM
SourcePicoSeconds	0
ServerTimestamp	4/28/2026 11:27:44.607 AM
ServerPicoSeconds	0
StatusCode	Good (0x00000000)
Value	66.8626
DataType	Float
NamespaceIndex	0
IdentifierType	Numeric
Identifier	10 [Float]
ValueRank	-1 (Scalar)
ArrayDimensions	BadAttributeIdInvalid (0x80350000)
AccessLevel	CurrentRead, CurrentWrite, HistoryRead
UserAccessLevel	CurrentRead, CurrentWrite, HistoryRead
AccessLevelEx	BadAttributeIdInvalid (0x80350000)

ATTRIBUTES REFERENCES

TIMESTAMP	SOURCE	SERVER	MESSAGE
4/28/2026 11:20:19.234 AM	DA Plugin	piopcuaserver...	Found existing subscription for server 0
4/28/2026 11:26:19.294 AM	DA Plugin	piopcuaserver...	Item [NS4 String 5424341920855646535:ChemCC\\AZEUWCDSTPIDA\ChemCC-HX05.ColdInT]: SamplingInterval=250, QueueSize=1, DiscardOldest=1, ClientHandle=3
4/28/2026 11:26:19.767 AM	DA Plugin	piopcuaserver...	CreateMonitoredItems succeeded [ret = Good]
4/28/2026 11:26:19.767 AM	DA Plugin	piopcuaserver...	Item [NS4 String 5424341920855646535:ChemCC\\AZEUWCDSTPIDA\ChemCC-HX05.ColdInT] succeeded : RevisedSamplingInterval=250, RevisedQueueSize=1, MonitoredItemId=26 [ret = Good]
4/28/2026 11:26:50.027 AM	DA Plugin	piopcuaserver...	DeleteMonitoredItems succeeded [ret = Good]
4/28/2026 11:26:50.027 AM	DA Plugin	piopcuaserver...	Item 'NS4 String 5424341920855646535:ChemCC\\AZEUWCDSTPIDA\ChemCC-HX05.ColdInT' succeeded [ret = Good]
4/28/2026 11:27:09.117 AM	Reference Plugin	piopcuaserver...	Browse succeeded.
4/28/2026 11:27:09.275 AM	Attribute Plugin	piopcuaserver...	Read attributes of node 'NS3 String 15775321424694895263:Line 1 HX 1\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature' succeeded [ret = Good].
4/28/2026 11:27:44.606 AM	Attribute Plugin	piopcuaserver...	Read attributes of node 'NS3 String 15775321424694895263:Line 1 HX 1\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature' succeeded [ret = Good].

Historical data access

Retrieving both raw values





▼ Connecting to a Server

1. Type the server address to the address bar at the top of the window or choose one of the addresses in Quick Links on the right.

2. Press → to connect to the server.

3. Select Security Mode and Policy.

4. Login with your user credentials or anonymously.

▶ Subscribing to an MQTT broker (PubSub)

▶ Subscribing to an OPC UA UDP address (PubSub)

Quick Links

- ✓ piopcua-server@AIZAR-AWC

urn:AIZAR-AWC
opc.tcp://aizar-awc.aveva.com:48032

🔒

→

☆

✕
- ✓ SimulationServer

urn:UADEMO:OPCUA:SimulationServer
opc.tcp://uademo.prosysopc.com:53530/OPCUA/SimulationServer

→

☆

✕
- ✗ SimulationServer

urn:aizar-awc.aveva.com:OPCUA:SimulationServer
opc.tcp://aizar-awc.aveva.com:53530/OPCUA/SimulationServer

→

☆

✕
- ← Reverse Connection

inv+opc.tcp://aizar-awc.aveva.com:61610

←

☆

✕

Historical data access

Retrieving aggregates

Attributes and ReferencesData View XHistory View X +

Variables

Line 1 HX 1.\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature

Last6hours

From4/28/202608:59:30.652

Until4/28/202609:59:30.652

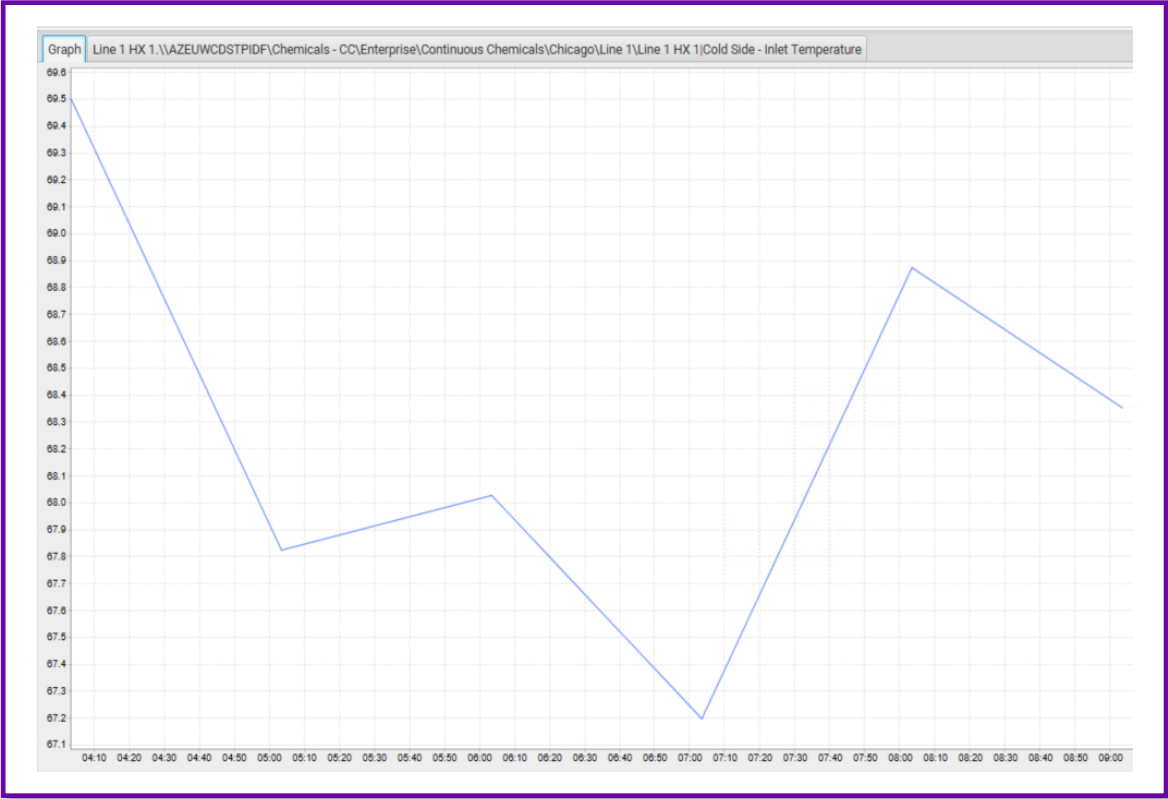
Now

Standard Ag...Every1hours

ReadBulk readValues Per Chunk1000TimestampsServer

GraphLine 1 HX 1.\\AZEUWCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature

Time	Value	Status Code
04/28/26 04:03:20.6690000 PDT	69.50096893310547	GOOD (0x00000000) "The operation succeeded."
04/28/26 05:03:20.6690000 PDT	67.82623291015625	GOOD (0x00000000) "The operation succeeded."
04/28/26 06:03:20.6690000 PDT	68.0294303894043	GOOD (0x00000000) "The operation succeeded."
04/28/26 07:03:20.6690000 PDT	67.19957224527995	GOOD (0x00000000) "The operation succeeded."
04/28/26 08:03:20.6690000 PDT	68.87580108642578	GOOD (0x00000000) "The operation succeeded."
04/28/26 09:03:20.6690000 PDT	68.3555908203125	GOOD (0x00000000) "The operation succeeded."



KPI - Quality 24h

Time Series Data

Archive Sampled Plot Summary Data Pipe

Attribute: Cold Side - Inlet Temperature

Start Time: -6h End Time: *

Retrieval Type: Time Range Boundary Type: Inside

Filter: Show Filtered

Reset Refresh

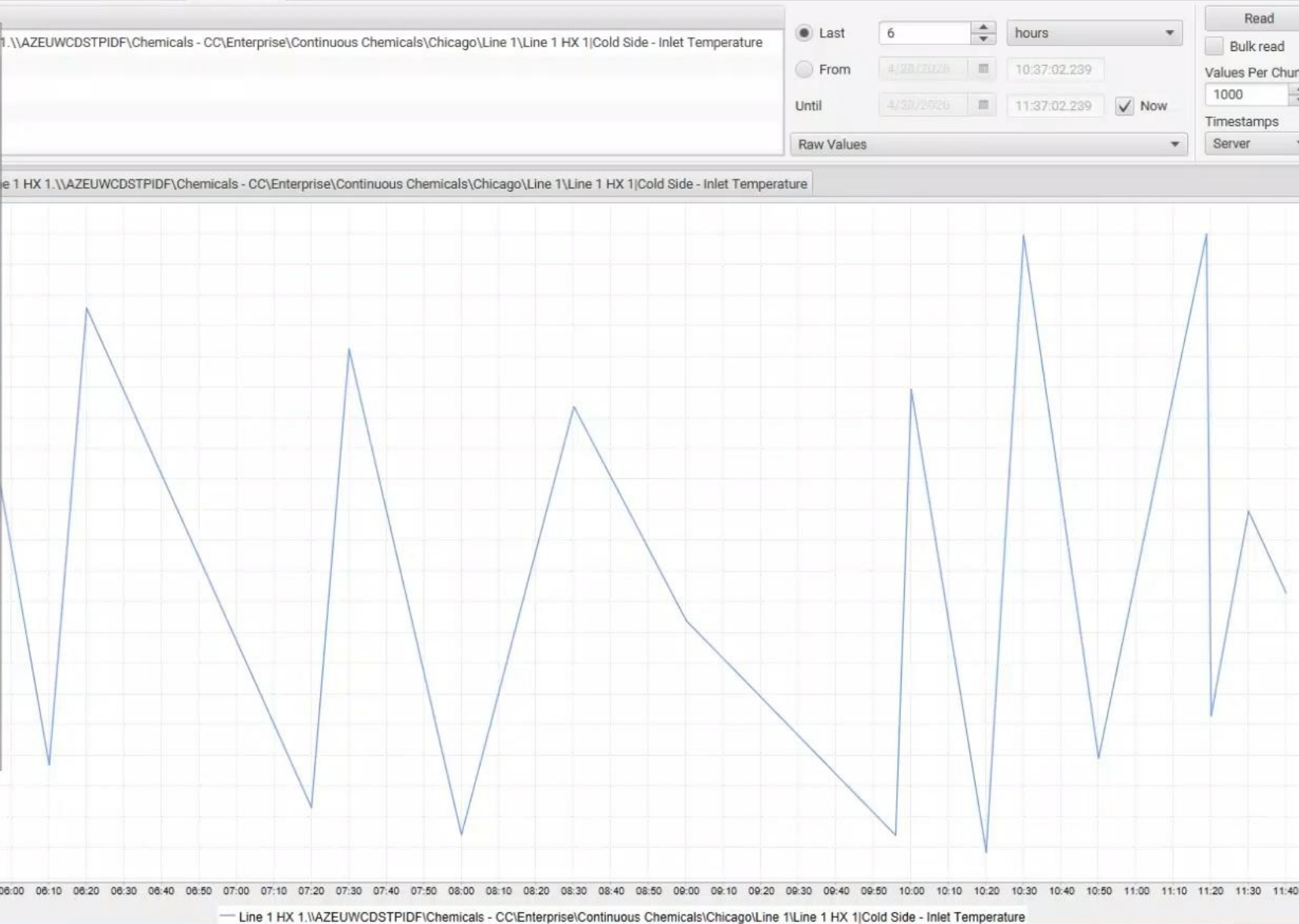
	Time Stamp	Value
	4/28/2026 5:50:00 AM	69.348 °F
	4/28/2026 6:10:00 AM	66.542 °F
	4/28/2026 6:20:00 AM	69.517 °F
	4/28/2026 7:20:00 AM	66.262 °F
	4/28/2026 7:30:00 AM	69.251 °F
	4/28/2026 8:00:00 AM	66.085 °F
	4/28/2026 8:30:00 AM	68.876 °F
	4/28/2026 9:00:00 AM	67.48 °F

Trend

4/28/2026 5:48:15 AM 6 hours 4/28/2026 11:48:15 AM

17 results returned in 0.1687549 seconds.

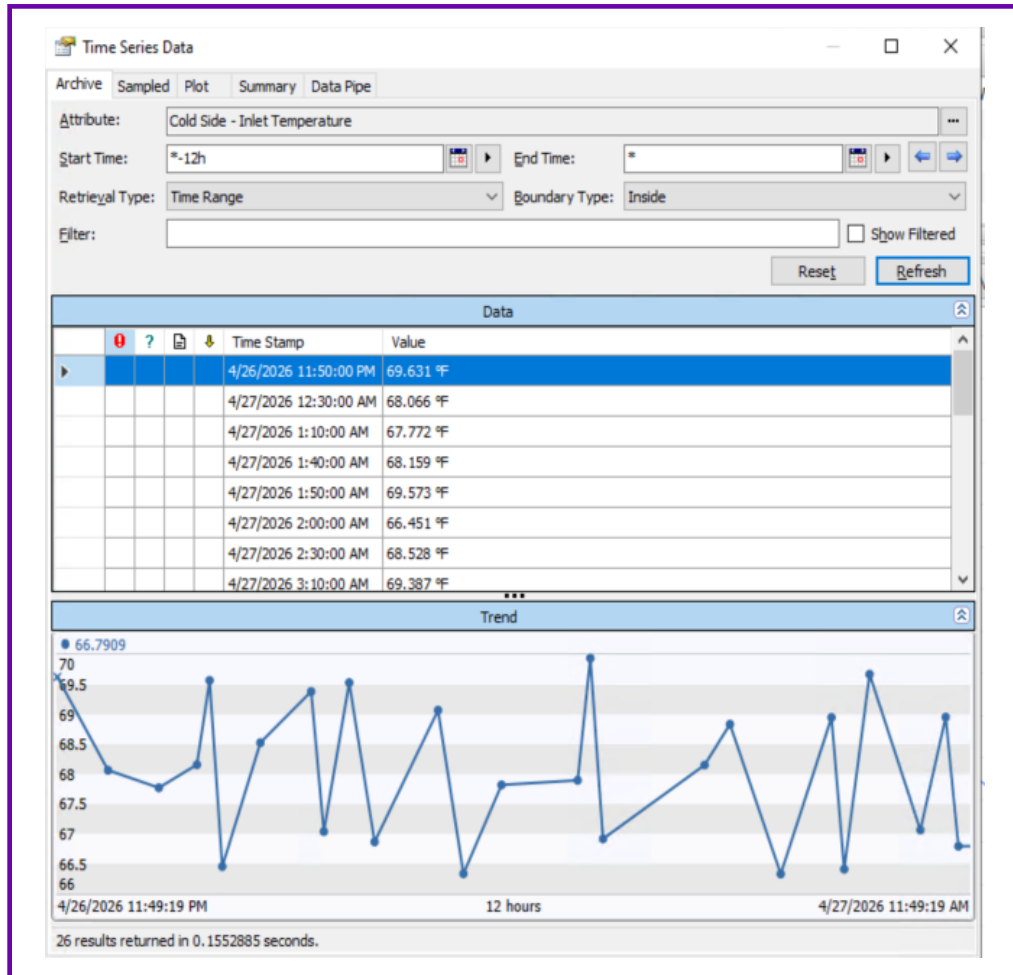
Close



- Exchanger - Heat Transfer Target
- Exchanger - HTC Target
- Exchanger - LMTD
- Exchanger - Overall U Hourly Rolling
- Exchanger - Percent Fouling
- Exchanger Type
- Hot Side - Delta P

Writeback access

Writing back to AVEVA PI System through OPC UA Server



Attribute	Value
NodeId	ns=3;s=15775321424694895263:Line 1 HX 1.\...
NodeClass	Variable
BrowseName	3:Line 1 HX 1.\AZEUCDSTPIDF\Chemicals - ...
DisplayName	Line 1 HX 1.\AZEUCDSTPIDF\Chemicals - C...
Description	
WriteMask	[ValueForVariableType]
UserWriteMask	Bad_AttributeIdInvalid (0x80350000) "The attri...
Value	68.985 °F
DataType	Float
ValueRank	Scalar
ArrayDimensions	Bad_AttributeIdInvalid (0x80350000) "The attri...
AccessLevel	[CurrentAccessLevel]
UserAccessLevel	[CurrentAccessLevel]
MinimumSamplingInterval	0.0
Historizing	true
RolePermissions	Bad_AttributeIdInvalid (0x80350000) "The attri...
UserRolePermissions	Bad_AttributeIdInvalid (0x80350000) "The attri...
AccessRestrictions	Bad_AttributeIdInvalid (0x80350000) "The attri...
AccessLevelEx	Bad_AttributeIdInvalid (0x80350000) "The attri...

Copy

Copy Values

Select All

Write Value...

Copy Value as JSON using...

Ctrl+C

Ctrl+Shift+C

Ctrl+A

Enterprise

Continuous Chemicals

Chicago

Line 1

Line 1 HX 1

Line 1 HX 2

Line 1 HX 3

Line 1 Pump 1

Line 1 Pump 2

Line 1 Pump 3

Line 1 Purification

Line 1 Reaction

Line 1 Separation

Line 1 Tank 1

Line 1 Tank 2

Line 1 Tank 3

Houston

Port Arthur

Element Searches

55 Attributes

Exchanger - Fouling Rolling 8hr

Exchanger - Heat Transfer

Exchanger - Heat Transfer Coefficient

Exchanger - Heat Transfer Target

Exchanger - HTC Target

Exchanger - LMTD

Exchanger - Overall U Hourly Rolling

Exchanger - Percent Fouling

Exchanger Type

Hot Side - Delta P

Line 1 HX 1

Asset

Bread Crumb

Business Prefix

Business Unit

Cold Side - Delta P

Cold Side - Delta T

Cold Side - Inlet Pressure

Cold Side - Inlet Temperature

Cold Side - Outlet Pressure

Cold Side - Outlet Temperature

Cold Side - Specific Heat

Cold Side - Volumetric Rate

Data Archive

Equipment - Asset ID

Equipment - Manufacturer

Equipment - Serial Number

Equipment Alert - Exchanger

Exchanger - Area

Exchanger - Efficiency

Exchanger - Efficiency Rolling 8hr

Exchanger - Fouling Rolling 8hr

ns=3;s=15775321424694895263:Line 1 HX 1.\\AZEUCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Col... Variable

3:Line 1 HX 1.\\AZEUCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature

Line 1 HX 1.\\AZEUCDSTPIDF\Chemicals - CC\Enterprise\Continuous Chemicals\Chicago\Line 1\Line 1 HX 1\Cold Side - Inlet Temperature

[ValueForVariableType]

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

66.8765

Float

Scalar

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

[CurrentRead, CurrentWrite, HistoryRead]

[CurrentRead, CurrentWrite, HistoryRead]

0.0

true

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

Bad_AttributeIdInvalid (0x80350000) "The attribute is not supported for the specified Node."

HasTypeDef... BaseDataVaria...

HasChild GUID

HasProperty categories

HasProperty DataReference

HasProperty defaultUOM

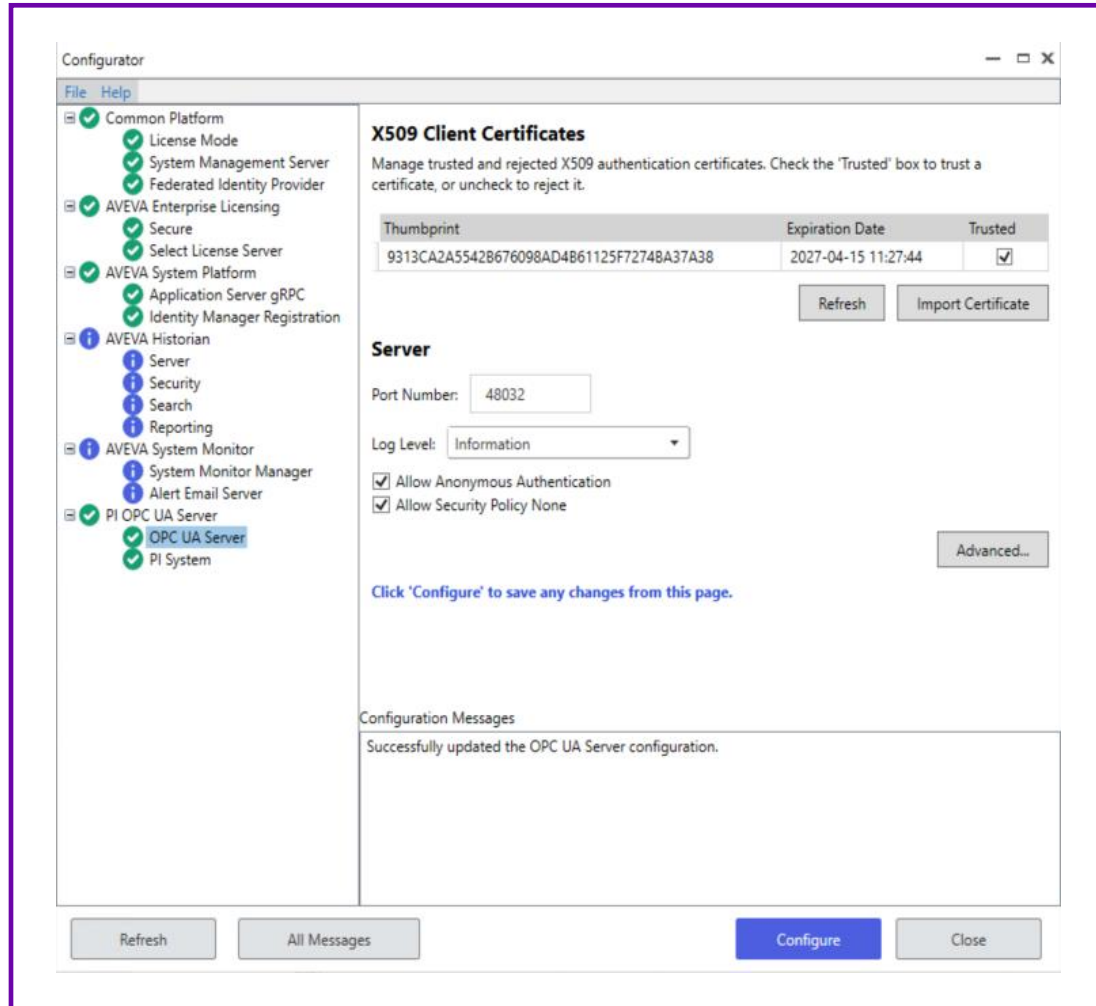
HasProperty description

HasProperty displayUOM

HasProperty sourceUOM

Configuring the server

AVEVA PI OPC UA Server configuration



- Client certificates
- Logging level
- Port number
- Anonymous authentication
- Advanced configuration
 - Timeouts
 - Log duration
 - Certificate thumbprint for CA-authored certificates

Configuring the server

AVEVA PI System configuration

- Known Servers Table
- Authentication to PI Servers
 - Windows Integrated Security
 - OIDC
- Writeback permissions

The screenshot shows the 'Configurator' application window. On the left is a tree view with components like 'Common Platform', 'AVEVA Enterprise Licensing', 'AVEVA System Platform', 'AVEVA Historian', 'AVEVA System Monitor', 'PI OPC UA Server', 'OPC UA Server', and 'PI System'. The 'PI System' component is selected. The main area is divided into sections: 'Available Systems' with a table of servers, 'Authentication' with radio buttons for 'Windows Integrated Security' and 'OpenID Connect (OIDC)', and 'OPC UA Access' with radio buttons for 'Read Only' and 'Read and Write'. A 'Refresh' button is next to the table. At the bottom, there are buttons for 'Refresh', 'All Messages', 'Configure', and 'Close'. A 'Configuration Messages' section at the bottom right shows two success messages.

Configurator

File Help

Available Systems

☐ All Servers in Known Servers Table
☒ Selected Servers Only

Name	System Type	Selected
AZEUWCDSTPIDA	DA	☒
DFPIServerPrd.osisoft.text	DA	☐
AZEUWCDSTPIDF	AF	☒

Refresh

Authentication

☒ Windows Integrated Security
☐ OpenID Connect (OIDC)

Client ID:

Add

OPC UA Access

☐ Read Only
☒ Read and Write

[Click 'Configure' to save any changes from this page.](#)

Configuration Messages

Successfully updated the OPC UA Server configuration.
Successfully updated the PI System configuration.

Refresh All Messages Configure Close

Resources

AVEVA PI System Feedback Portal

AVEVA

Welcome to our feedback site

We created this site to hear your enhance the PI System. To start, take a look at the ideas in the suggestion. Please note that your ideas are not guaranteed to be implemented. This page is for feedback specifically for the PI System.

IDEAS

RESOURCES

POLLS

+ ADD A NEW IDEA

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Welcome to the AVEVA™ PI OPC UA Server

Mar 30, 2026

2 minute read

Summarize

PI System

PI OPC UA Server 1.0

Developer

The AVEVA PI OPC UA Server provides structured data access leveraging the Open Platform Communications Unified Architecture (OPC UA) with the ability to:

Read data

Write data

Subscribe to data

The PI OPC UA Server adheres to the IEC 62541 OPC UA specification, which defines a platform-independent framework for secure and reliable data exchange between industrial systems. The server is compliant with version 1.04 of the specification.

Any OPC UA client that also supports the IEC 62541 standard can connect to the PI OPC UA Server.

Additionally, multiple PI Systems, when defined in the Known Servers Table (KST), can connect to the PI OPC UA Server.

Note: While it is possible to install PI OPC UA service on the same computer as the Data Archive, AVEVA does not recommend this because it might lead to resource contention between PI OPC UA Server and the Data Archive. This can negatively affect the performance of both systems.

OPC UA Features

Current Data Access

Clients can access current PI System values using OPC UA read and write operations. The server supports the following access patterns:

Polling – Clients request data from the server.

In This Topic

OPC UA Features

Unsupported OPC UA services

Authentication

Related Links

PI OPC UA Server Quick Start

Questions?



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State your name and company.

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mobile app to complete the survey.

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Transform real-time data into actionable information with AVEVA PI Server

AVEVA PI Data Infrastructure

AVEVA PI Server

Visualize your operations data with AVEVA PI Vision

AVEVA PI Data Infrastructure

AVEVA PI Vision

OT + IT data connectivity, securely between on-premises and cloud systems

Connectivity

Enterprise data integration

Databricks, Snowflake



Sessions of Interest – Day 3, May 21st

Standards for asset modeling with AVEVA™ PI Data Infrastructure

AVEVA PI Vision deep-dive

@ 9:00 am

Spotlight Theatre - Level 0

User-friendly AVEVA Adapter configuration

AVEVA Adapters

@ 9:30 am

Spotlight Theatre - Level 0

Accessing your AVEVA PI Server through OPC UA

AVEVA PI OPC UA Server

@ 10:30 am

Brown 3 - Level 2

Supporting expanding needs with AVEVA™ PI Vision™ 2025

Session topics

@ 5:00 pm

Brown 3 - Level 2



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