Using AVEVA™ Adapters and AVEVA™ Edge Data Store with common protocols in your business

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Common problems within the industry

Common problems
Rise of the IIoT
Why remote monitoring?
AVEVA Adapters
AVEVA Edge Data Store

Solutions/capabilities
Deployment
Management
Health and diagnostics
Failover
Common issues

I rely on automation to make deployment and management easier

We have new assets deployed but we cannot monitor them

I need to get data from my oil rigs onshore and offshore

There are too many outages, network or power-related!
Current problems within the Industry

Challenges

• Remotely monitoring assets is costly (maintenance, less resources, need better planning, long drives)
• Unplanned downtimes and absence of real-time metrics

Evolving industries

• IIoT, harsh and rugged environments
• New protocols introduced
• Assets deployed in remote areas

Opportunities

• Improve uptime and increase asset reliability
• Real-time awareness to drive operational insights
• Optimize operational efficiency when combining remote asset data with on-premises data for a complete view of operations
Data sources and protocols

• Newer protocols introduced or have become a standard through technological advancements

• We hear you! Here are the most common protocols being used by our customers:
  o OPC UA
  o MQTT
  o Modbus TCP
  o DNP3
  o RDBMS
  o BACNet
  o Azure Event Hubs
  o Structured data files
What are AVEVA Adapters?

- The newest generation of data collection products
- Data collection solution that can be implemented in Linux or Windows
- Can send data to an on-premises AVEVA PI Server as well as AVEVA Edge Data Store and AVEVA™ Data Hub
- Deployable on rugged devices to monitor remote assets (ex: oil rigs, cargo ships, power generators in remote areas, mining, etc.)
What is AVEVA Edge Data Store?

- Allows you to collect, store, and access operations data from sensors and assets beyond your primary control network
- Built-in OpcUa and Modbus TCP components
- Stores data locally and can use 3rd party visualization and analytics tools
- Built for the edge of the industrial network
- Egress data to the on-premise AVEVA PI Server and AVEVA Data Hub
- Self-healing
Why use an AVEVA Adapter? Or AVEVA Edge Data Store?

- Automatic discovery and creation of PI Points
- Linux and Windows compatible
- Lightweight application, low CPU, and low RAM usage
- Extending data collection to remote asset monitoring
- Different options to deploy
- Management of devices
- Health and diagnostics
- Architecture
- Failover
Deployment options

- Install on local device
- Deployable in a docker container, but not a requirement
- Easy to script for mass deployment
- Deployable on resource-constrained, rugged devices to monitor remote assets
Manage software deployments at scale with AVEVA™ Edge Management

- Easily deploy AVEVA Edge Data Store and AVEVA Adapters from the cloud
- Manage device and installation status and apply software and configuration updates
Remote software monitoring and configuration with AVEVA Data Hub

- Monitor the health and diagnostics of AVEVA Edge Data Store, AVEVA Adapters, and the edge device from the cloud
- Author and update AVEVA Edge Data Store and AVEVA Adapter configuration
AVEVA Edge Data Store architecture
AVEVA Adapter typical architecture
AVEVA Adapter failover

Client-side and server-side failover for AVEVA PI Server and AVEVA Data Hub

Client and server failover modes:
- Hot
- Warm
- Cold
Basics steps to configure an AVEVA Adapter

1. Create an adapter component
2. Configure a data source
3. Configure egress to the data endpoint (AVEVA PI System, AVEVA Edge Data Store, and AVEVA Data Hub)
4. (optional) Configure health endpoints (AVEVA PI System, AVEVA Edge Data Store, and AVEVA Data Hub)
5. (optional) Configure data filtering
6. (optional) Discover data items
7. Configure data selection
8. Confirm data flow
What about AVEVA PI Interfaces and AVEVA PI Connectors?

• We will always support the AVEVA PI Interfaces and AVEVA PI Connectors

• Why might one still use AVEVA PI Interfaces/AVEVA PI connectors?
  o Legacy software/technology on the vendor side
  o Vendors may not want to upgrade their software/compatible OS
  o GUI based
  o Configuration is done with the GUI tool
  o Not all protocols are available
Final remarks

- AVEVA Adapters are the newest generation in data collection, designed for data collection on remote assets
- AVEVA Edge Data Store collects, stores, and allows access to data on these remote devices
- Automatic discovery and creation of data streams
- Both are easy to script and deploy
- Both are lightweight applications that run on low-cost, low-resource devices
- Both can run on Windows or Linux Operating Systems
- AVEVA Edge Data Store allows the egress of data to AVEVA Data Hub and/or AVEVA PI System
More presentations to come

• Please join us for the following presentations on AVEVA Adapters and/or AVEVA Edge Data Store:

1. AVEVA Adapter performance, failover, and best practices (Wednesday @ 11A.M.)

2. AVEVA Adapters and AVEVA Edge Data Store IIoT configuration workshop (Thursday @ 10:45A.M.)
Poll: Which protocol do you need connectivity for?
About us

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How can you influence the AVEVA data collection roadmap?

https://feedback.aveva.com

Let us know your product feedback!
Questions?

Please wait for the microphone. State your name and company.

Please remember to...

Navigate to this session in the mobile app to complete the survey.

Thank you!
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