

OCTOBER 25, 2023

---

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

Presented by: Ashish Jain, Evan Greavu

**AVEVA**

---

# Agenda

## 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



Automation

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



Combine data from multiple silos



Monitor assets remotely

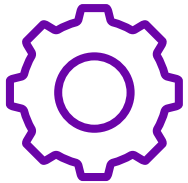
We have new assets deployed but we cannot monitor them

Too many outages!



There are too many outages, network or power-related!

# Current problems within the Industry



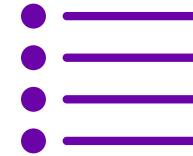
## Challenges

- 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

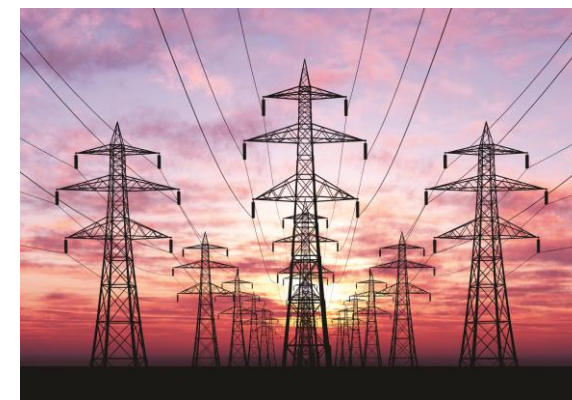


## Opportunities

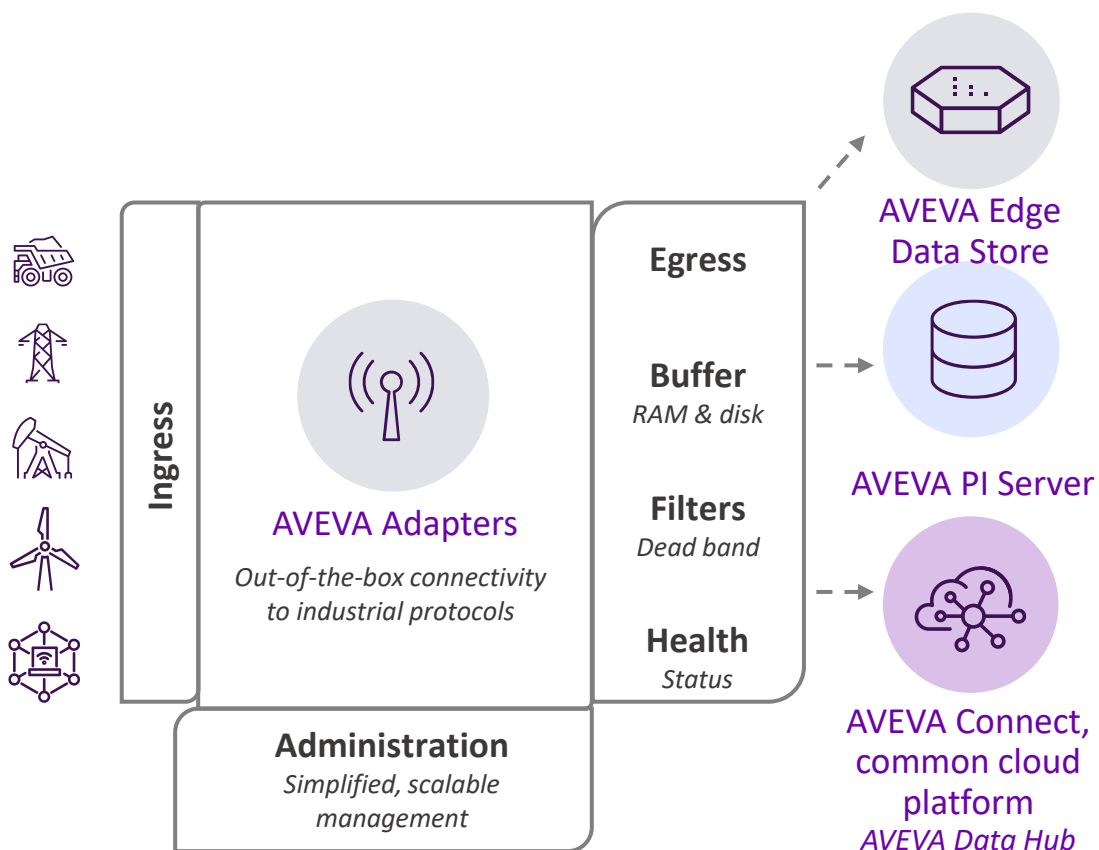
- Improve uptime and increase asset reliability
- Real-time awareness to drive operational insights
- Optimize operational efficiency when combining remote asset data with on-premises data for a complete view of operations

# 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:
  - OPC UA
  - MQTT
  - Modbus TCP
  - DNP3
  - RDBMS
  - BACNet
  - Azure Event Hubs
  - Structured data files

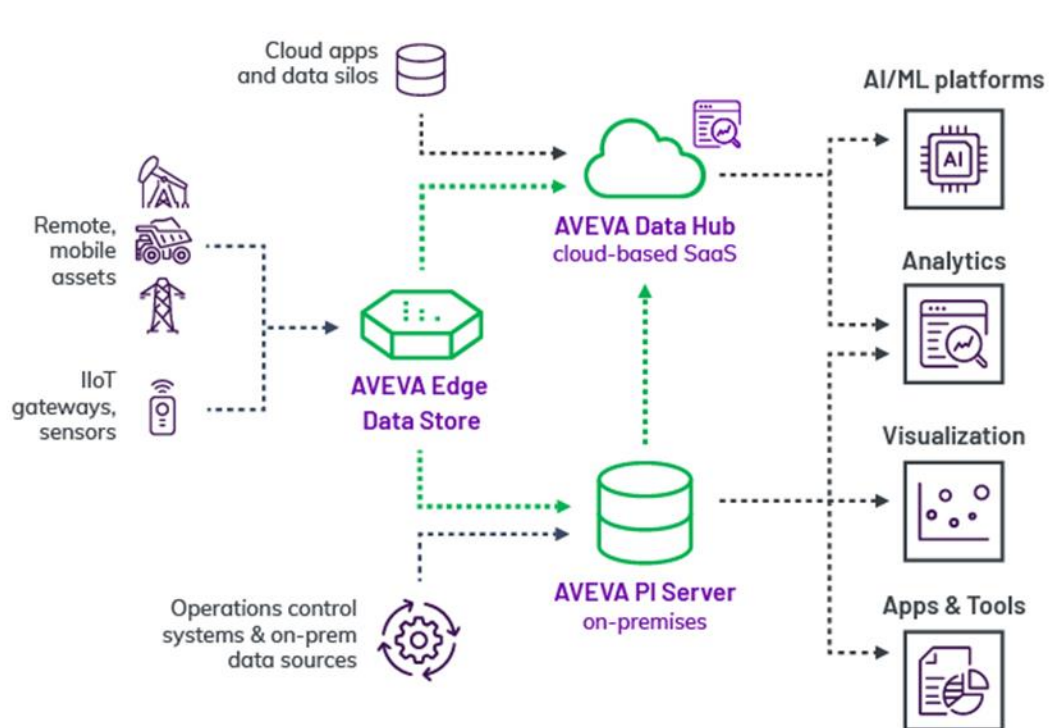


# What are AVEVA Adapters?



- 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 3<sup>rd</sup> 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



**AVEVA**



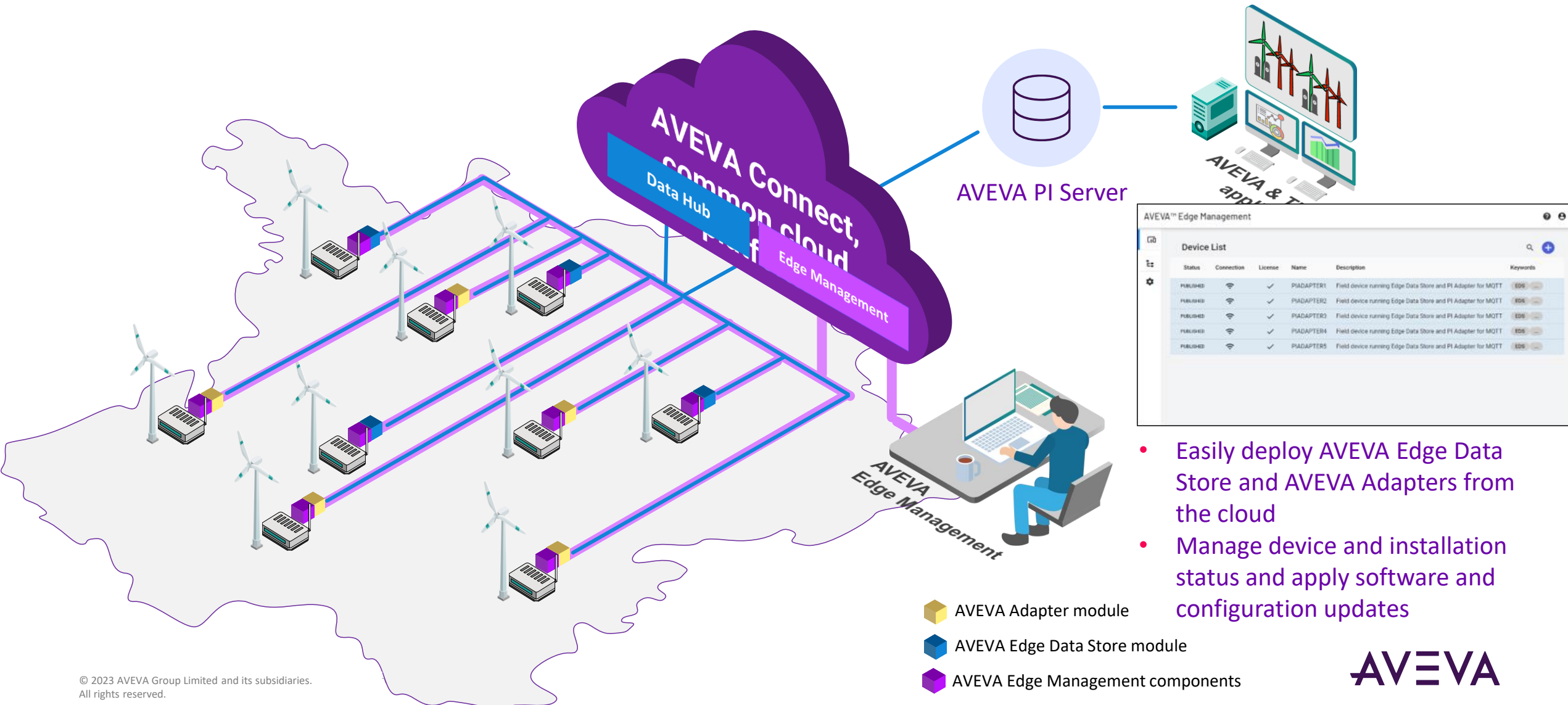
---

# 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

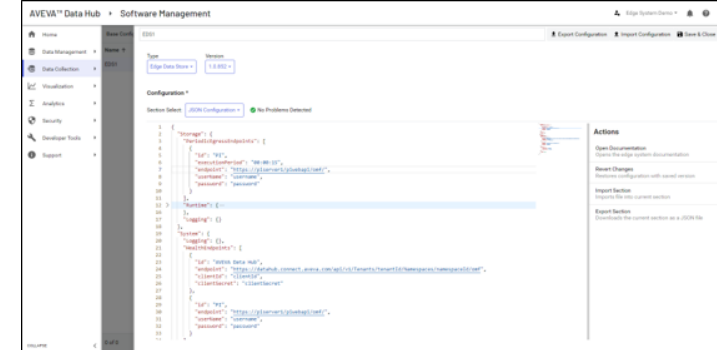
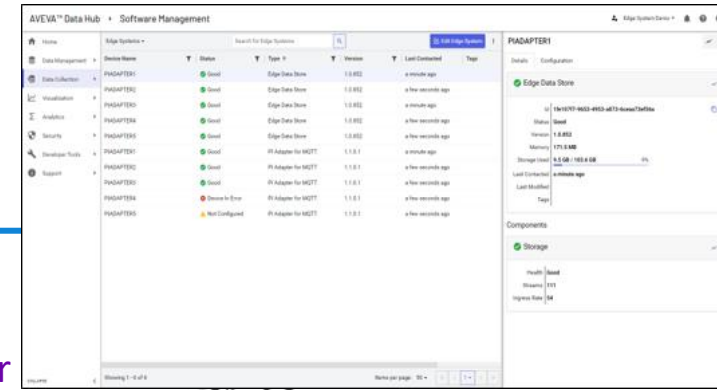
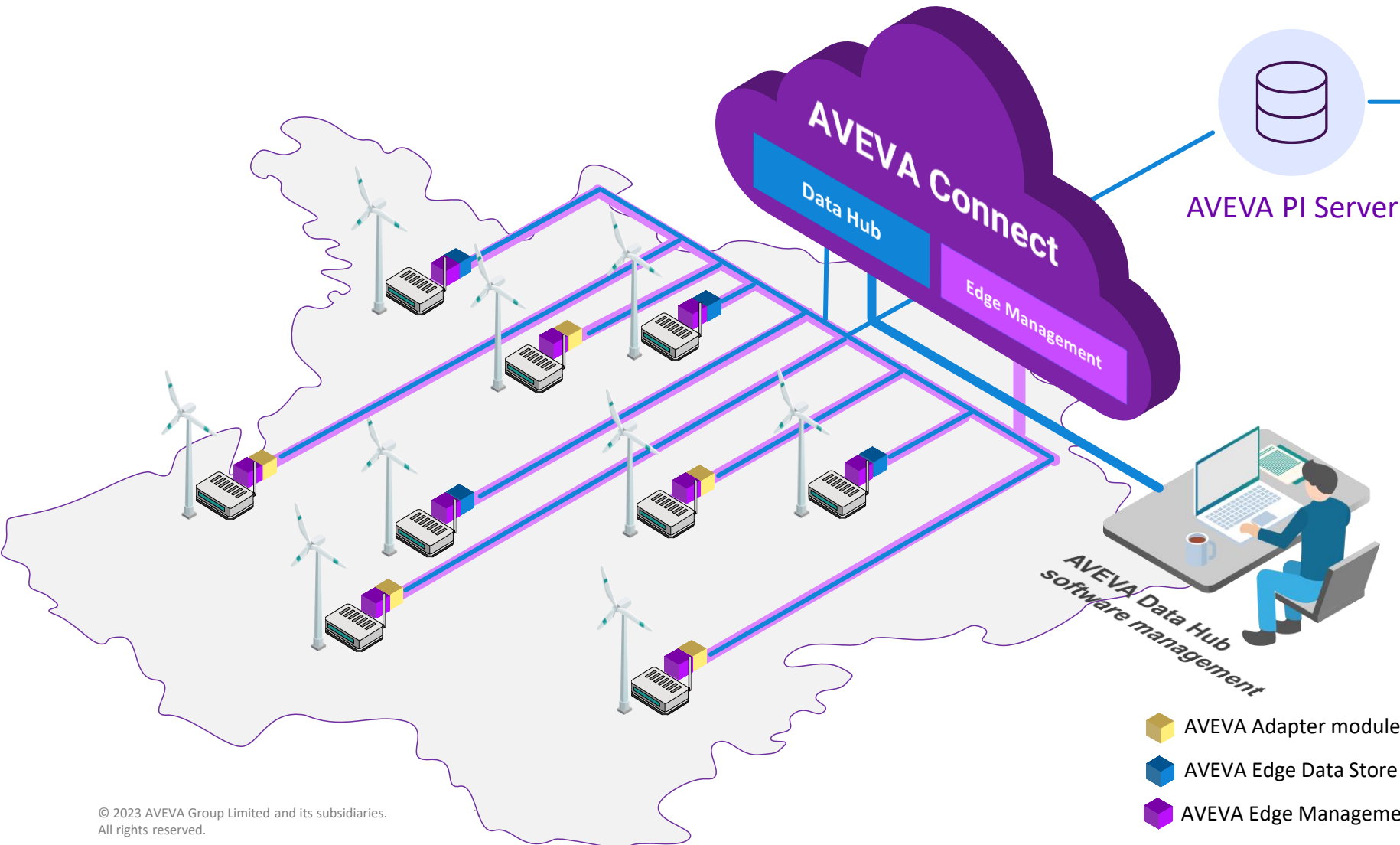


AVEVA™ Edge Management

Status	Connection	License	Name	Description	Keywords
PUBLISHED	📶	✓	PIADAPTER1	Field device running Edge Data Store and PI Adapter for MQTT	EDGE
PUBLISHED	📶	✓	PIADAPTER2	Field device running Edge Data Store and PI Adapter for MQTT	EDGE
PUBLISHED	📶	✓	PIADAPTER3	Field device running Edge Data Store and PI Adapter for MQTT	EDGE
PUBLISHED	📶	✓	PIADAPTER4	Field device running Edge Data Store and PI Adapter for MQTT	EDGE
PUBLISHED	📶	✓	PIADAPTER5	Field device running Edge Data Store and PI Adapter for MQTT	EDGE

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

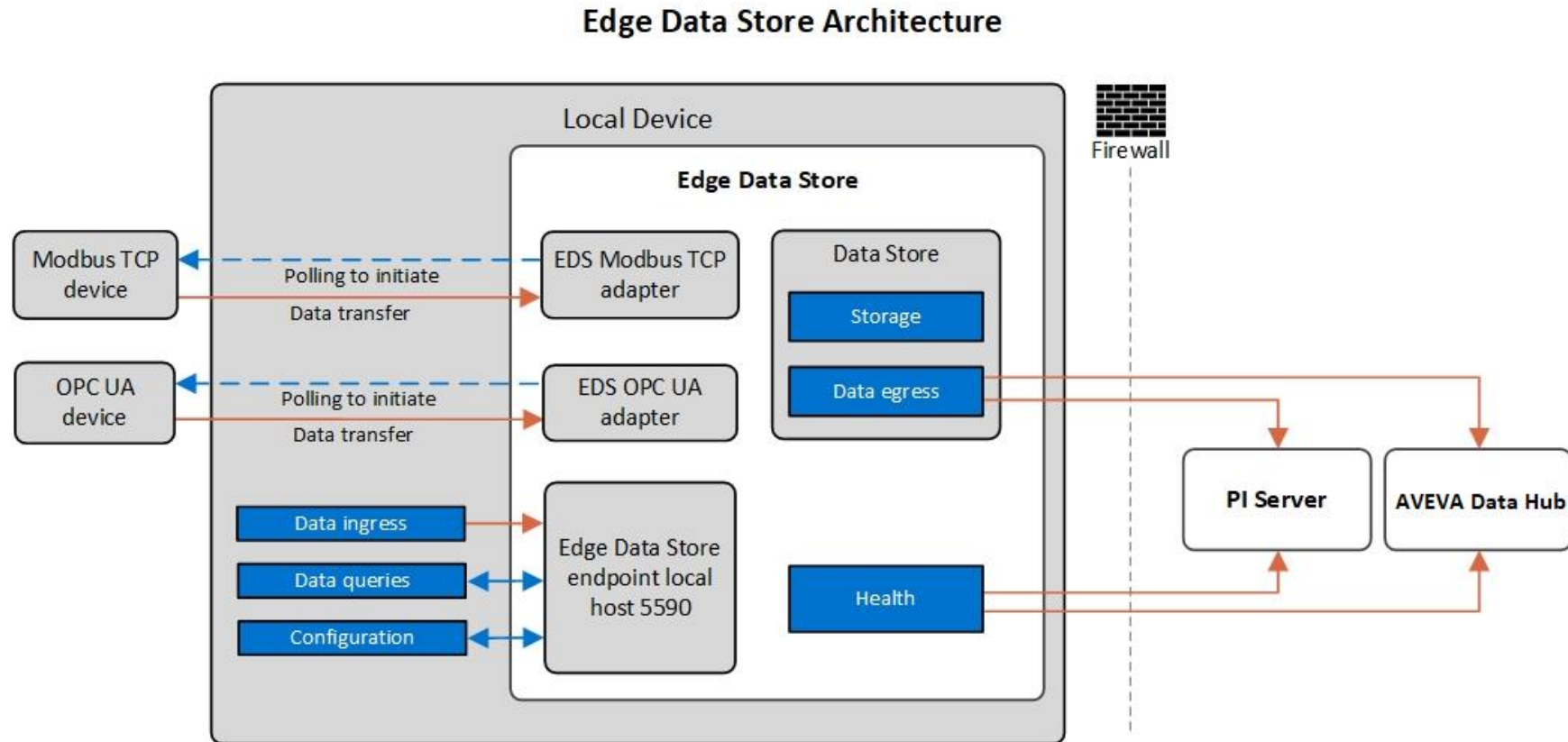
# Remote software monitoring and configuration with AVEVA Data Hub software management



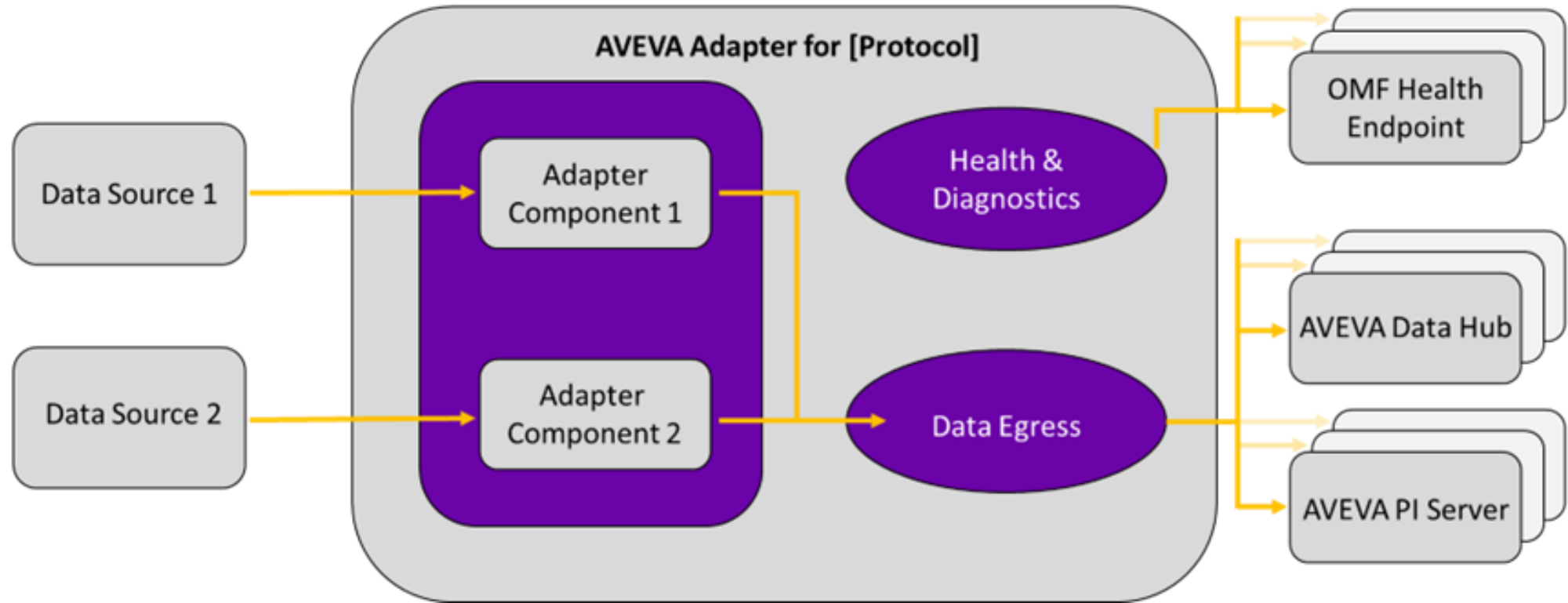
- Monitor the health and diagnostics of AVEVA Edge Data Store, AVEVA Adapters, and the edge device from the cloud
- Author and update AVEVA Edge Data Store and AVEVA Adapter configuration



# AVEVA Edge Data Store architecture

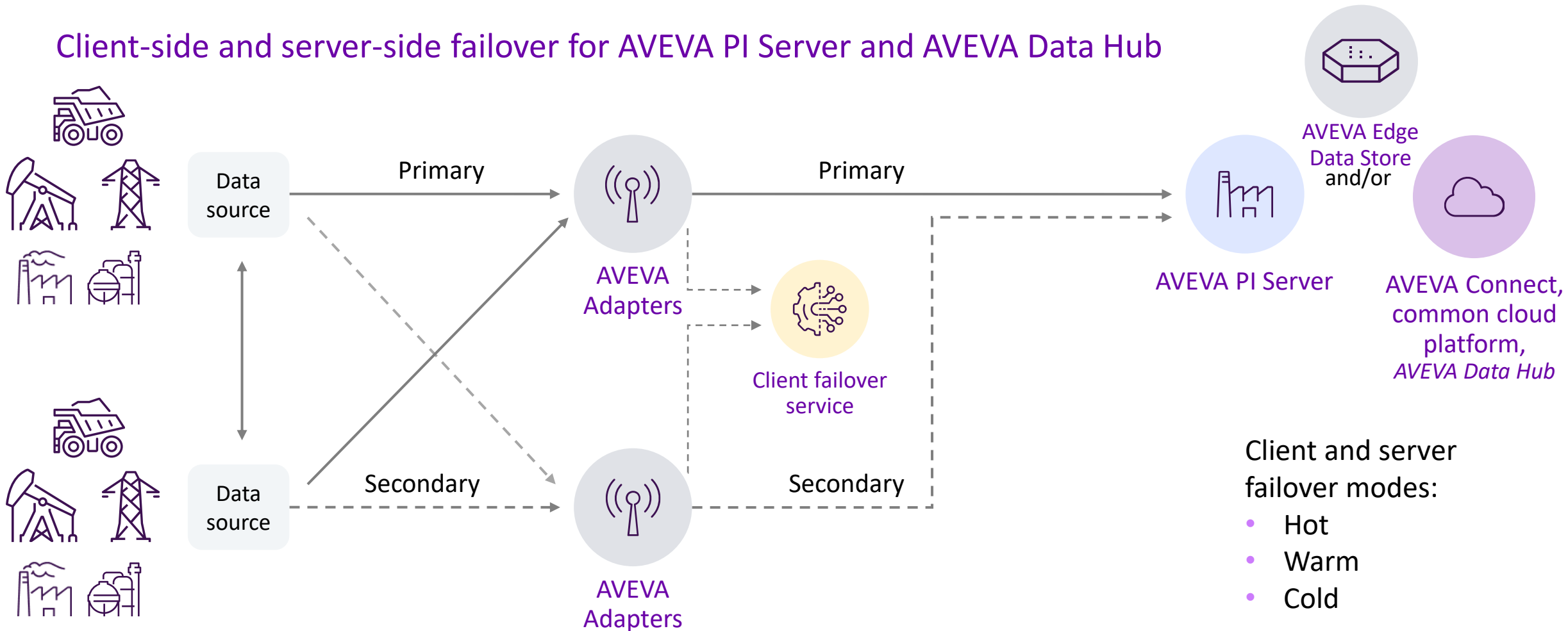


# AVEVA Adapter typical architecture



# 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?
  - Legacy software/technology on the vendor side
  - Vendors may not want to upgrade their software/compatible OS
  - GUI based
  - Configuration is done with the GUI tool
  - 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?

AVEVA

---

# About us



## Ashish Jain

Senior Tech Support Engineer

Escalation team for AVEVA PI Interfaces, Connectors, and Adapters



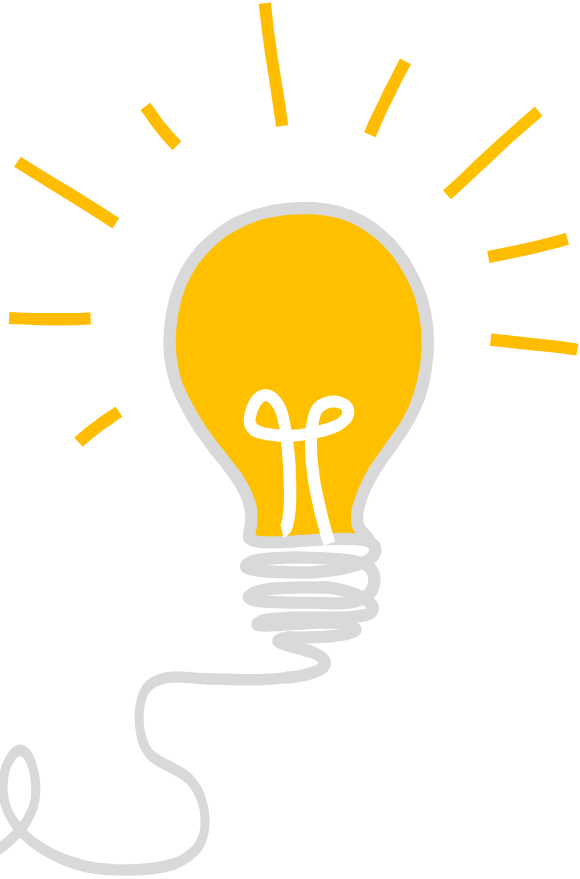
## Evan Greavu

Senior Tech Support Engineer

Escalation team for AVEVA PI Interfaces, Connectors, and Adapters



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!

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.

 [linkedin.com/company/aveva](https://www.linkedin.com/company/aveva)

 [@avevagroup](https://twitter.com/avevagroup)

#### ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at [www.aveva.com](https://www.aveva.com)