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Phone a friend (at AVEVA)

When to use a “lifeline”

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AVEVA

Who am I?

- Product Support Engineer with AVEVA (formerly OSIsoft)
 - Began January 2018
 - Resolved well over 2,200 cases
 - Worked with approximately 600 distinct companies
- Education
 - Chemical Engineering (Stanford University, California)
 - Physics (Clarkson University, New York)



Who are you?*

- Many have over 10 years experience with industrial data management
- Various job titles, projects, and industries
- Skilled problem solvers
- Hands-on learning approach
- Incredibly gracious and calm under pressure

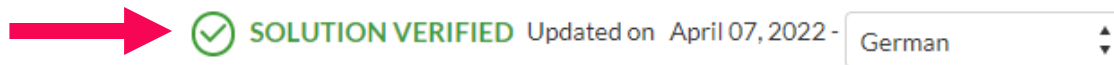
A “call” is not always a call

- Ultimately, when I say “call” I mean “take advantage of our support expertise”
- A great example of how to do this is using “validated” knowledgebase articles

Guideline for Troubleshooting Corrupted Buffer Queue Files

Applies to: PI Buffer Subsystem- 3.4.375, 3.4.375.84, 3.4.375.84.1, 3.4.375.84.1.1, 3.4.380.79, 4.3.0.28,

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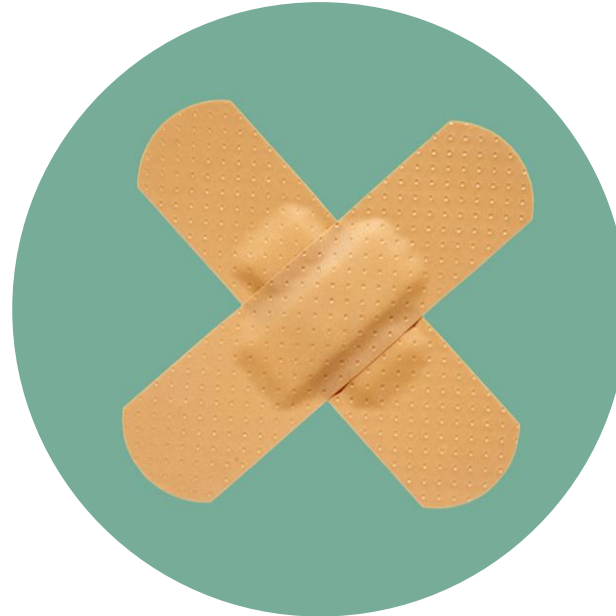


- Ensure that the documentation is appropriate for your situation
- User guides and release nodes

Anatomy of a call



Prevention
and detection



First aid
and stabilization



Emergency and
intensive care

The scope of technical support

- We are:
 - Specialized in responding to the unexpected
 - Familiar with available resources
 - Invested in your success
- We are not:
 - Sales
 - Enablement services

The scope of today's conversation

- Regardless of anything else I say today, **please call in whenever you need help**
 - No problem is too small
 - We offer 24/7 support in English
- We will be focusing largely on relatively recent software releases
- AVEVA™ PI System™ was made for “quiet enjoyment” and today's topics will be a distinctly biased sample of administrative tasks that require extra care

I just ASSUMED...

And other things no one wants to tell their boss

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You should consider calling before acting if...

- **A**rtificial intelligence (AI) tools and large-language models
- **S**ecurity and network access
- **S**caled/large operations
- **U**pgrades and installs
- **M**igrations and movements
- **E**dits and exits

Many issues involve more than one!



AI tools and large language models

- Many clever people are exploring the ways AI can shape the future of our work
- Many clever people find ways AI can make their day-to-day tasks easier
- Many clever people are misled by AI in ways that can be hard to detect and correct



AI tools and large language models

Examples:

- A large language model provided an accurate guide for performing network tracing
- A large language model provided a customer with incorrect and incomplete information on an AVEVA PI System migration



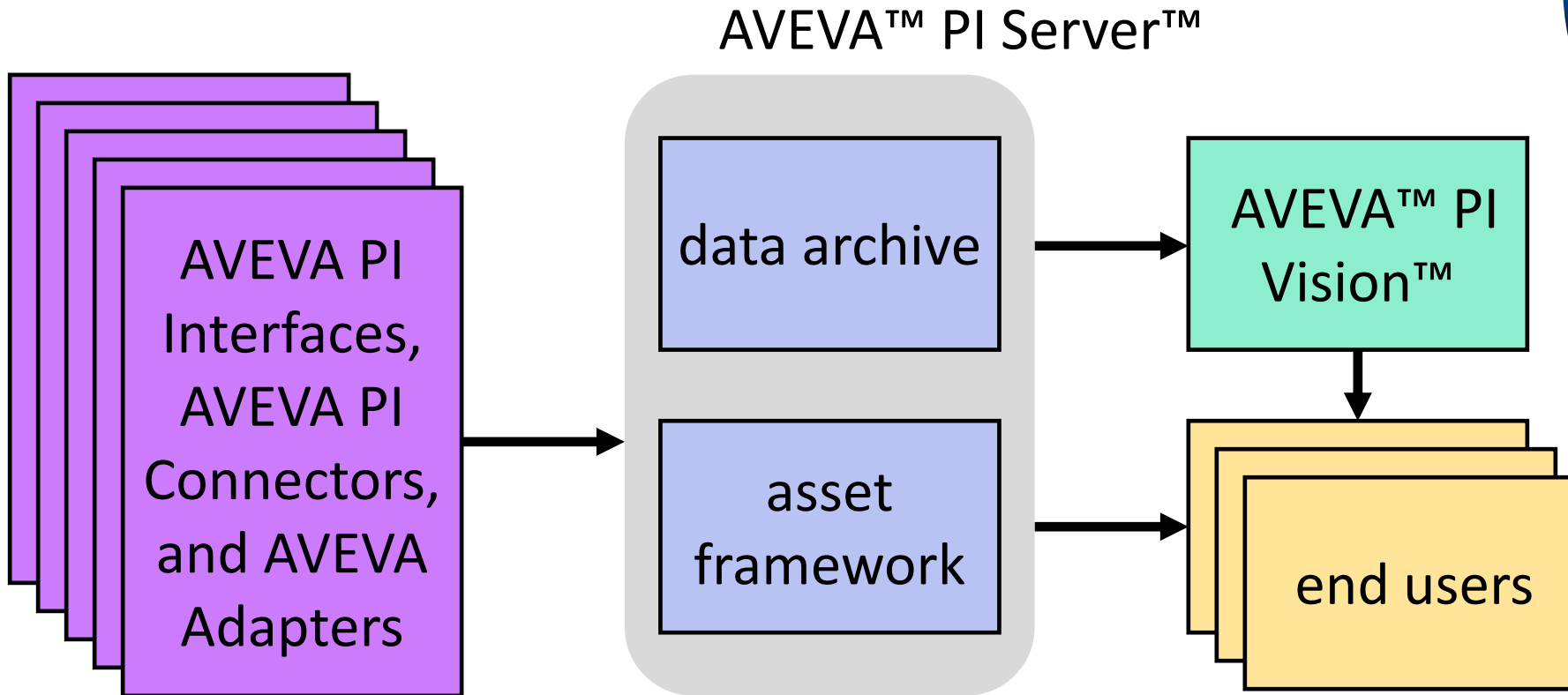
Security and network access

- Organizations are taking cyber-security increasingly seriously
- Protocols and processes face scrutiny (encryption, TLS, etc.)
- AVEVA recommends using a least permissions model
- Some users know “enough to be dangerous”
- An AVEVA PI System almost always contains more than one host, often more than one network, and sometimes more than one domain



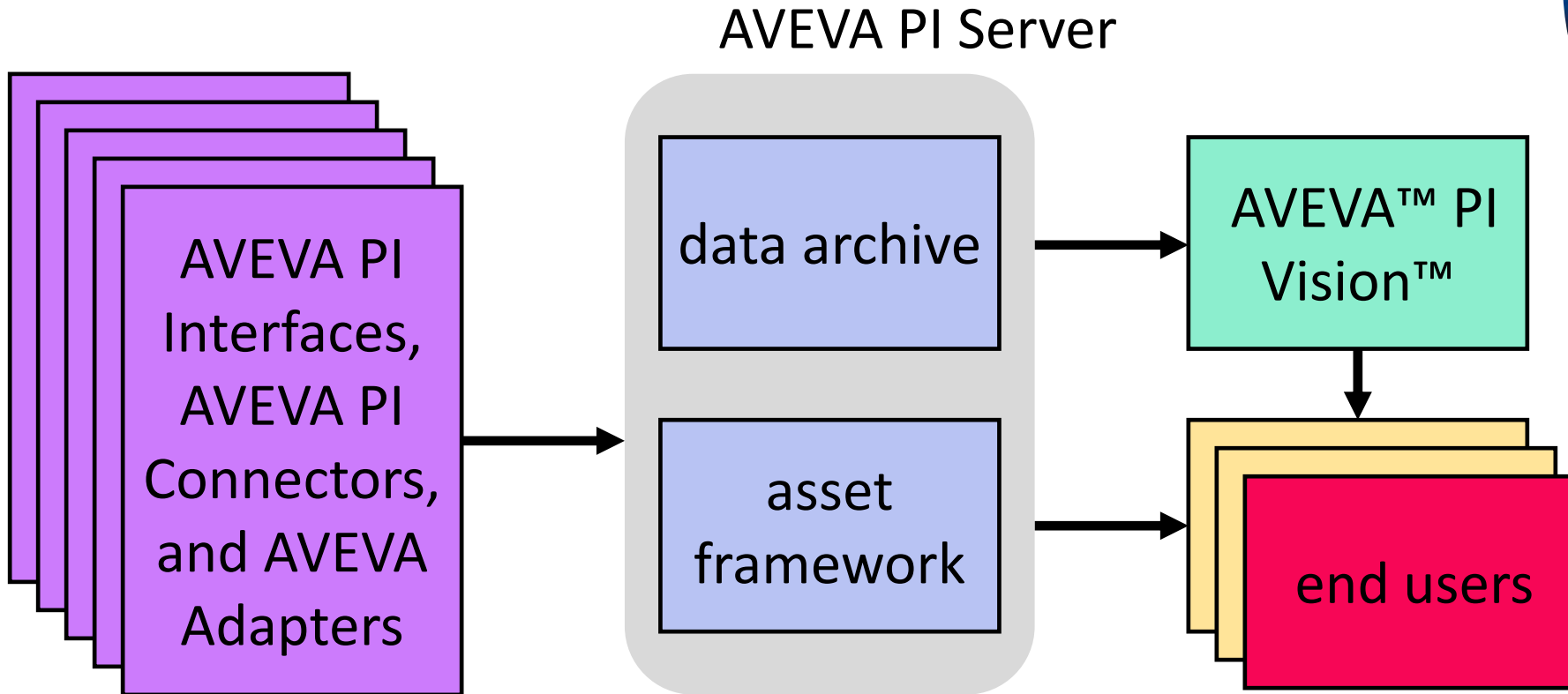
Security and network access

Examples:



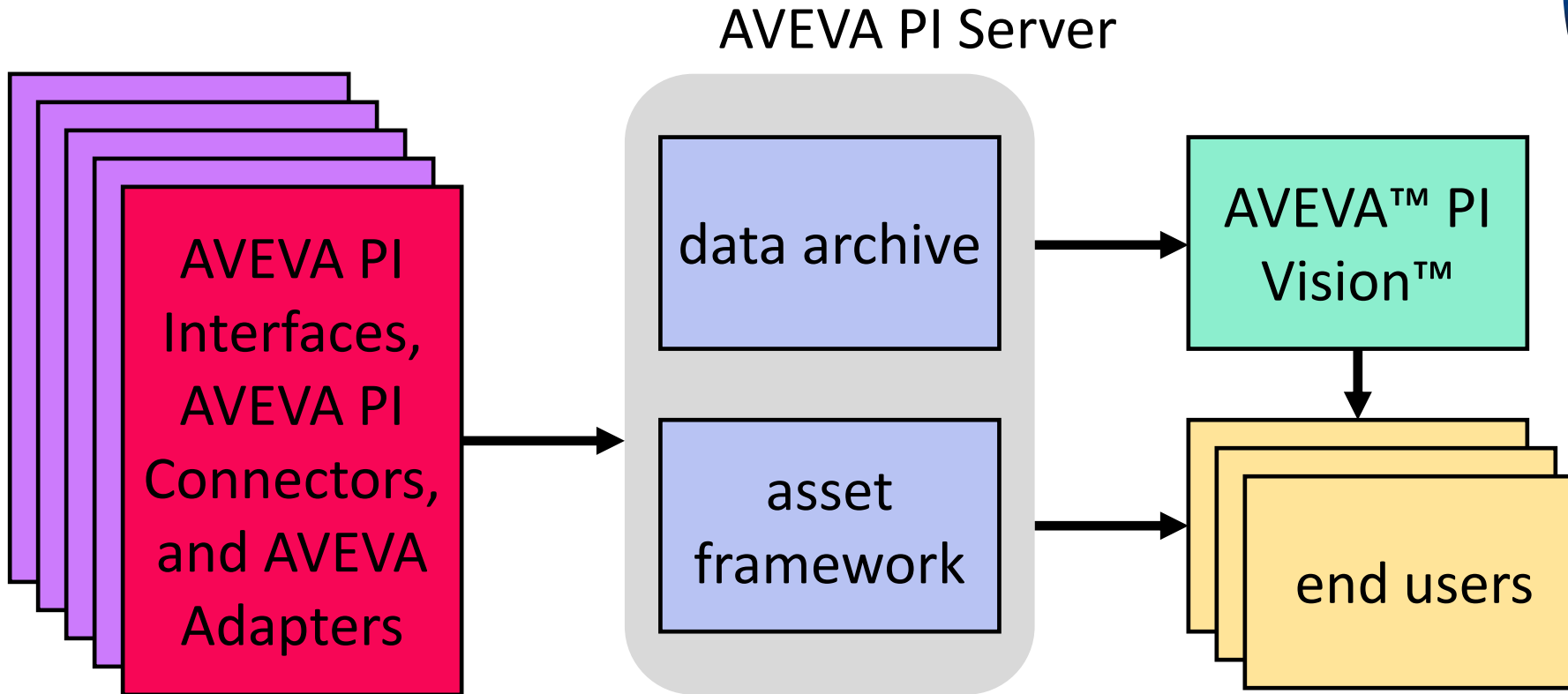
Security and Network Access

Examples:



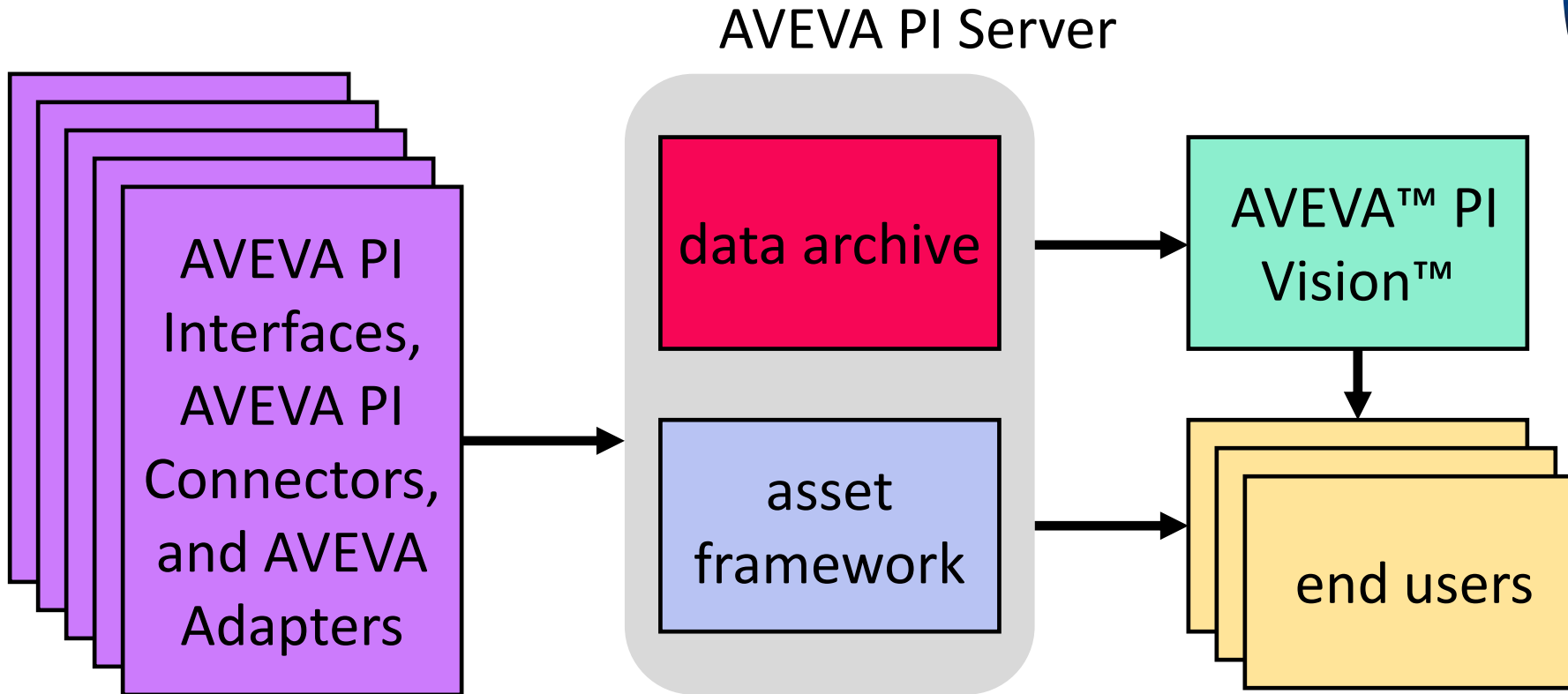
Security and Network Access

Examples:



Security and Network Access

Examples:



Scaled operations

- Some things that are entirely benign at small scale can be formidable as they get (much) larger
- “Big data” operations require us to consider processing power, network latency, and disk space in a way we often overlook
- There is also a separate challenge in “big administration” for organizations with large geographical or logistical footprints



Scaled operations

Examples

- Backfilling and history recovery can add arbitrarily high demand to the data archive, causing congestion
- Tools like PI Builder (Excel) allow an arbitrary number of arbitrary edits to PI Tags and objects in the asset framework
- PI Administrator time is limited, so management should allow abstractions (DNS Aliases, PI Identities, Silent Installations, ...)



Upgrades and installations

- Our **most recent products** are our **best products** in terms of features, security, and bug fixes
- Some versions introduce changes to operational principles and should be performed mindfully
- “Downgrades” are **not generally supported**
- New software installs should be optimized for your architecture



Upgrades and installations

Examples

- AVEVA PI Vision 2023 no longer supports PI ProcessBook display import (display migration is required)
- Reverting an AVEVA PI Vision upgrade requires restoring a backup of the AVEVA PI Vision SQL Database taken **before the upgrade**
- When adding AVEVA PI Vision to an existing AVEVA PI System, where should it be installed? Does it require a separate VM?



Migrations and movements

- Every AVEVA PI System grows, machines are retired, operations are re-organized, and corporate sites are bought and sold
- AVEVA PI System offers flexibility to adapt to these changes, but these responses to disruption must be carefully planned
- We may be interested in moving **only some files** rather than distinct software components



Migrations and movements

Examples

- **Please call for all data archive and asset framework mergers and divisions, providing ample lead time**
- One-to-one (“routine”) migrations are often a great time to refer to validated articles in our knowledge base
- Transferring specific files implicitly assumes expertise (What do they contain and how is that information interpreted?)



Edits and exits

- Configuration information may be stored in files, the asset framework, or dedicated SQL databases
- **Some** configurations may be manually modified based on support guidance or official documentation
- Software and configuration may outlast the engineers who design industrial systems



Edits and exits

Examples

- **Stick to supported access and edit methods**
- Configuration changes may have extensive impacts (e.g. creating a second set of tags using an AVEVA PI Connector)
- We have control over server-level functionality (memory, threads, timeouts) which may drastically impact performance
- Support can help assess risks related to decommissions





Key takeaways

- AVEVA technical support is here to help
- Getting us involved sooner may prevent headaches later
- Acronyms are hard

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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.

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