



AVEVA™ Data Hub on AVEVA™ Connect

Service Description



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# AVEVA Data Hub on AVEVA Connect

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## Document Purpose and Audience

This document describes the functional digital services of AVEVA Data Hub on AVEVA Connect, including its key features and limitations, as well as the operational parameters.

This document must be read in conjunction with the AVEVA Connect service description which describes the common services available for all functional digital services on AVEVA Connect. Any additions or exceptions to the common services are described in this document.

This document is neither an agreement, nor is a supporting document to the Product Schedules that outline the service commitment available on *the AVEVA site* <https://www.aveva.com/en/legal/>.

### Audience

The audience of this document are IT departments and business decision makers who are investigating whether to leverage AVEVA's software-as-a-service cloud offerings.

## About AVEVA Data Hub

AVEVA Data Hub on AVEVA Connect is a cloud-native platform for aggregating, storing, enriching, accessing, and analyzing real-time operations data from historians, edge devices, and more. AVEVA Data Hub makes it easy to aggregate and store data that resides in your process control networks and on devices outside of your corporate network, such as remote or urban assets.

AVEVA Data Hub provides:

- data scientists and business analysts with a central repository to query large, enriched datasets without disrupting the performance of historians used by local operators;
- engineers with live trends of real-time data for ad hoc investigations into assets;
- developers with a data platform that simplifies programmatically accessing operations data for custom applications;
- data stewards with secure mechanisms for sharing access to data with users outside of your corporate network.

### Key Features

- Native data collection from PI Servers, Edge Data Stores, and PI Adapters.
- Real-time trending of operations data.
- Rules that can be configured to automatically enrich streams information with metadata.
- Assets that provide additional context to operational data by grouping multiple related streams of data together, complemented with static information.
- Rules that can be used to automatically create assets from information provided by stream naming patterns.

- Ability to monitor assets in real time, view their status and current values, investigate issues with trending, and share trends with colleagues.
- Configurable datasets that curate operations data for use with machine learning algorithms and BI tools, with specific connectivity to Microsoft Power BI that is out of the box.
- Quick-and-secure mechanisms for companies to manage and control the data shared with their business partners.
- Open REST APIs and message format specification that simplify making custom applications.

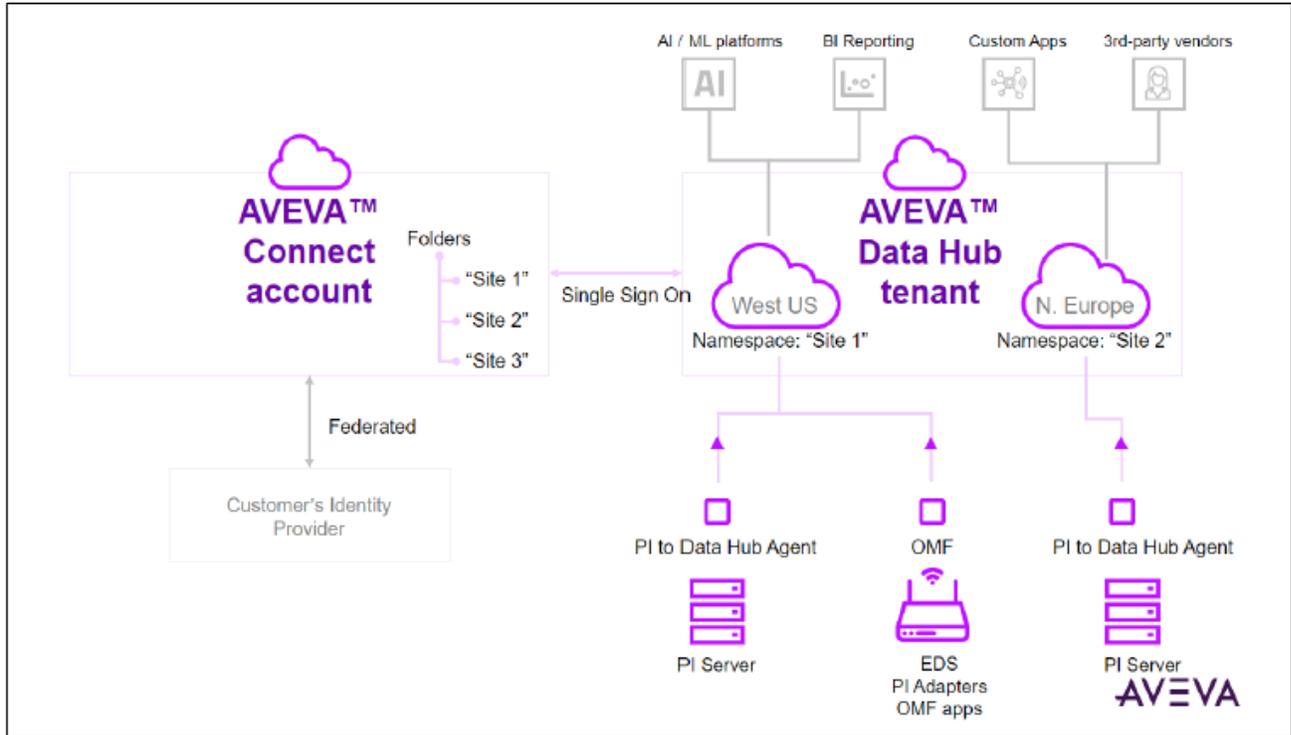
### Key Benefits

- **Save time on collecting data:** Leverage a portfolio of data collection products that connect to a large catalogue of protocols and do not require you to write any code.
- **No need to architect, assemble, and manage micro-services in the cloud:** Use self-service data management built for Operations that is IT-ready.
- **No more managing multiple VPNs or emailing large spreadsheets:** Provide secure access internally and externally for colleagues, business partners, or client applications to specific data streams in your account.
- **Enable data science experiments and BI reporting without impacting your process control network:** Allow users to query large datasets without needing your process control network or historian to support movement of large volumes of data.

### Architecture

AVEVA Data Hub on AVEVA Connect is a multi-tenant cloud architecture with network protection, including mechanisms to mitigate denial-of-service attacks. A combination of logical and physical segmentation architecture enforces isolation between AVEVA Data Hub tenants. AVEVA Data Hub organizes multiple tenants on dedicated cluster instances of AVEVA Data Hub. AVEVA Data Hub is highly reliable and available with automatic failover capabilities.

AVEVA Data Hub has native connectivity to PI Servers (via the PI to Data Hub agent), to Edge Data Store (EDS), and to PI Adapters. This native connectivity provides data collection capabilities to hundreds of data source protocols. For data source protocols where there are no compatible AVEVA products, AVEVA Data Hub also accepts OMF messages (a message specification) from any client that has a secure and valid connection, and appropriate authority. For viewing, analyzing, or sharing data outside of AVEVA Data Hub, REST APIs are available that can be queried with a secure and authorized connection(s). All communication channels into and out of AVEVA Data Hub are encrypted.



## Service Overview

AVEVA Data Hub is a multi-tenant, cloud-native offering built on top of components from the Microsoft Azure platform and natively integrated with AVEVA Connect, which provides the identity management and authentication mechanism for AVEVA Data Hub. Client applications, on the other hand, are directly authenticated via AVEVA Data Hub. Whether it's granting permissions for AVEVA Connect users and groups or client applications, this is managed via role-based access control within AVEVA Data Hub.

- **Tenancy**

- An AVEVA Connect account can be tied to only one AVEVA Data Hub tenant. Within an AVEVA Data Hub tenant, data-related resources are encapsulated within a namespace, which is located in a specific geographical region.
- The namespace's region is determined by the region of the AVEVA Connect folder, in which AVEVA Data Hub is enabled. This means selection of a region for the AVEVA Connect folder determines what region AVEVA Data Hub namespace will be deployed in when the service is turned "on" in that AVEVA Connect folder. If the AVEVA Connect folder's region is not supported by AVEVA Data Hub, the namespace can be deployed in a different region.

- **User Management**

- The integration with AVEVA Connect extends to user management. All users and user groups available for role assignments in AVEVA Data Hub originate from AVEVA Connect.
- Within AVEVA Data Hub, multiple roles are supported. Some roles have pre-defined permissions while other roles are created and customized by the customer. The permissions you assign to customized roles can change over time. Within AVEVA Data Hub, AVEVA Connect users and groups can be assigned one or more roles, and you can change these assignments over time as role permissions are edited and roles are added to and removed from AVEVA Data Hub.
- For authenticating clients that don't interact with AVEVA Connect or the AVEVA Data Hub user portal (for example custom web applications), AVEVA Data Hub provides several ways to securely authenticate a client, including issuing client IDs and secrets, and supporting authorization code flow.

For more information, see the AVEVA Data Hub documentation.

## Service Limitations

AVEVA Data Hub has the following limitations:

- The default maximum for number of namespaces per AVEVA Data Hub tenant is limited to **five (5)**. To increase this maximum for a particular tenant, customers must communicate this request to AVEVA.
- The AVEVA Data Hub portal only supports the English language.

## Regional Cloud Availability

AVEVA Data Hub is accessed via the public Internet using HTTPS/TLS (a secure transport mechanism). The web applications can be accessed via any modern web browser.

AVEVA Data Hub is available for deployment in public cloud regions located in:

- Northern Europe (Ireland)
- West US (California)
- East Australia (New South Wales)

## Data Ownership

With AVEVA Data Hub, AVEVA has designed capabilities that demonstrate value at scale and complement the way customers collect, use, and manage their operational data. The data a customer collects and generates in AVEVA Data Hub is exclusively the customer's responsibility to manage and share. It is simple for a customer to manage the selection of data, and the communities to share the data with such as colleagues, partners and vendors.

Simply stated, AVEVA Data Hub is built with this core principle in mind: **Our customers own their data.** Customers exclusively own the data uploaded, collected and created as a computational result through features and functions in AVEVA Data Hub.

## Data Privacy

AVEVA is committed to the privacy of your data and does not examine, manipulate or share customer data. Our primary goal is to provide you with a secure platform you can operate, while giving you the freedom and confidence to do so without our examination or intervention. Customers maintain their data privacy as we are data neutral and data unaware.

It must be noted that while AVEVA provides software services to customers that eases control of and streamlines providing access to their data, AVEVA does not enable or enforce the data sharing policies agreed to between corporate entities.

Specific AVEVA devops roles have controlled access to backend servers and logs to view some metadata in AVEVA Data Hub as required to operate the service. AVEVA enforces strict personnel surety, procedural, and technical controls over privileged devops access to customer data in production systems.

## Hardware Requirements and Supported Browsers

As AVEVA Data Hub is provisioned on AVEVA Connect, a supported browser is the only requirement to use it.

Component	Minimum/Recommended
Web browser	HTML5 compatible browser, including the latest versions of Google Chrome, Mozilla Firefox, and Microsoft Edge.

## High Availability, Business Continuity, and Data Protection

To ensure high availability, business continuity, and data protection, AVEVA Data Hub follows the timeline given below.

- **Database Storage**

Different backup mechanisms are used depending upon the nature of data stored:

- For sequential and asset data, customized Azure Blob Storage mechanisms use blob snapshots for incremental backups that occur every **24 hours**. Full backups of this data occur every **seven days**.
- For configuration data (for example data views, asset rules, data collection configurations), Azure SQL Point in Time Restore is used.

All backup data is stored in the same cloud region as the cloud service. All data is replicated across multiple data centers within the same region.

All backup data is retained for **90 days**. After this retention period, AVEVA will delete the data. This retention policy is not practiced for free trials and evaluation licenses.

- **Disaster Recovery**

In the event of a service failure, AVEVA initiates a recovery process in accordance with RPO and RTO objectives detailed below.

Cloud Service	Recovery Point Objective (RPO)
AVEVA Data Hub	24 hours

Cloud Service	Recovery Time Objective (RTO)
AVEVA Data Hub	24 hours

- **Redundancy**

AVEVA Data Hub is a highly reliable and available multi-tenant cloud architecture that implements Microsoft Azure Service Fabric automatic failover capabilities. AVEVA Data Hub redundancy mechanisms provided by Microsoft Azure Service Fabric are regularly exercised. For example, AVEVA Data Hub clusters exercise failover during automatic weekly updates.

## Service Level Commitment

AVEVA Cloud Services are governed by the Cloud Service Agreement available on the AVEVA Legal site *AVEVA Cloud Services Agreement* <https://www.aveva.com/en/legal/cloud-services/>.

The *Service Level Commitment for AVEVA Cloud Services* <https://www.aveva.com/en/legal/trust/servicelevel/> is a supporting document that describes the service level commitment for all available AVEVA Cloud Services.

## Decommission of the Service

Upon request and confirmation from the customer, the AVEVA Data Hub services instances and the data stored within will be deleted. A backup of the data store may be provided (for an additional fee) upon request from the customer within **60 days** of the request. If the customer's subscription to AVEVA Data Hub has expired or has been terminated, the request for a backup of the data store must be delivered to AVEVA within 60 days of the expiration or termination.

## Additional Services

AVEVA offers an extensive collection of Customer Success Accelerators, well-defined, outcome-based services that are designed to ensure you realize the maximum benefit from your investment in our software through all the lifecycle stages of your software application.

For more details, visit the *Customer Success Accelerators site* <https://www.aveva.com/en/support/customer-first/success-accelerators/>.