

AVEVA NET Gateways

Bring accessibility, meaning and context to your information assets

AVEVA NET Gateways™ form the vital links between a company's information sources and the AVEVA NET™ family of products. They provide the core functionality of AVEVA NET that enables comprehensive, enterprise-wide access to all types of engineering, design, project or business data, without the need for multiple costly authoring applications or specialist user training.

AVEVA NET Gateways are a large and growing collection of software modules that process the many disparate types of information used by shipbuilders, EPCs and plant operators, from documents to complex 3D model data. Advanced technology automatically creates intelligent associations between information, hotspotting tags and delivering realistic and navigable screen renders of all information types, from any source software. Using the appropriate Gateways, an AVEVA NET deployment can be readily configured and extended to support the changing needs of an evolving business.

AVEVA NET Gateways are delivered as a part of an AVEVA NET implementation and AVEVA regularly develops new Gateways in consultation with our customers to meet their exact business needs.



Business Benefits

AVEVA NET Gateways unlock the full potential of an AVEVA NET deployment. The improved collaboration and data discovery enables:

For plant Owner Operators

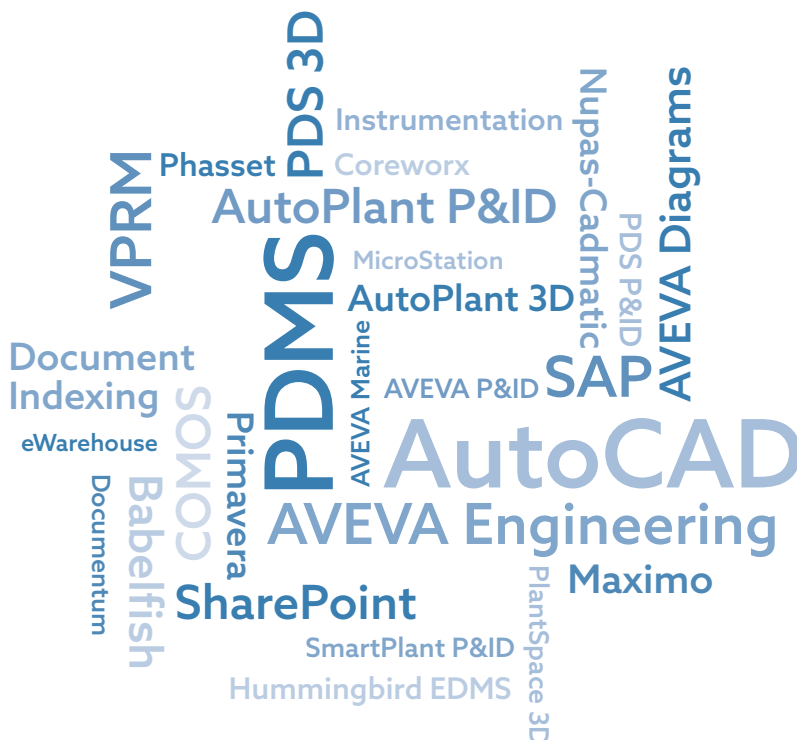
- Faster handover, resulting in more rapid commissioning to full production
- Improved safety and operational efficiency
- Reduced software licensing, maintenance and training costs
- Enhanced regulatory compliance, including auditability

For plant Engineering Contractors (EPCs)

- More efficient access to project information
- More efficient collaborative projects
- Reduced handover and commissioning costs and time

For shipbuilders

- Simple, non-disruptive access to complete and integrated project data across all shipyard disciplines
- Secure and controlled read-only access to the 3D model and engineering data for shipbuilding partners
- Progressive, accurate documentation of the as-built vessel
- More efficient information handover to the ship-owner



AVEVA NET Gateways provide support for a vast array of common applications and information formats.

Gateways Capabilities

3D model data is a key element of the design and engineering process ahead of handover and commissioning, and can be a powerful means of navigating asset information for operations tasks.

3D data Gateways handle data sources such as:

- SmartPlant 3D, PDS 3D, AutoPlant 3D, AVEVA PDMS™, AVEVA Marine™, Tribon M3, etc.
- Neutral, ISO 15926-compliant 3D data formats
- 3D laser survey data from any leading scanning system.

The 3D CAD Gateways allow AVEVA NET users to interact intuitively with the converted models. Notably, the AVEVA NET Gateway for PDS 3D™ uses advanced technology for converting PDS 3D models into an application-neutral format based on the ISO 15926 standard. It also contains a powerful mapping engine which enables:

- Tagging and classification based on object type
- The extraction and manipulation of tagged attributes
- The manipulation of a model's colours.

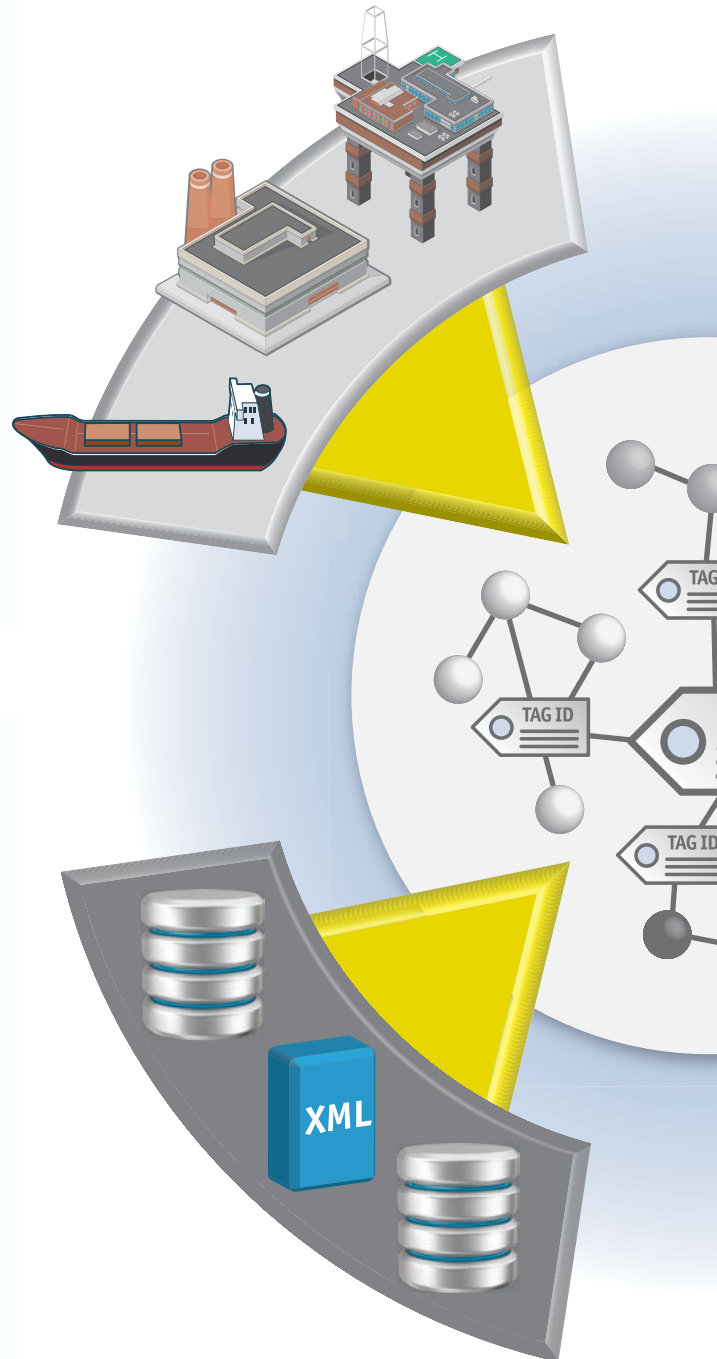
Both in project work and asset operations, many mission-critical business systems are structured database systems which store information in a form which reflects the purpose of the system itself. Aggregating this information into a unified data model is essential to gain a holistic view of the entire project or asset.

Gateways for structured data can handle such source data as:

- Proprietary business data formats, including SAP, Primavera and MS Project
- Neutral data formats like XML
- AVEVA Engineering™ data
- Real-time and historical instrumentation data.

This category of Gateways provides a configurable toolkit for accessing sources of structured data. Together with other appropriate Gateways, this enables AVEVA NET to be a single point of access for all engineering and design information, for example, making procurement and engineering data available to globally dispersed fabrication locations. These Gateways also enable AVEVA NET to be optimally configured for enterprise asset management (EAM) purposes.

3D Model Data



Structured Data

2D Data



Unstructured Data

Throughout a project lifecycle a vast number of drawings can be created in many different formats and types. They form the basis of a great deal of engineering information, are an essential deliverable of many project tasks, and are a key reference for asset operations.

2D data Gateways handle sources such as:

- Leading proprietary 2D CAD data formats, including AutoCAD, MicroStation, SmartPlant P&ID, INTools, AVEVA P&ID™ and AVEVA Diagrams™
- Neutral, ISO 15926-compliant 2D data formats
- Photographic formats, such as JPG and PNG.

These 2D CAD Gateways can construct intelligence where none exists in the source diagrams, through the use of advanced data manipulation algorithms. For example, P&IDs created in AutoCAD are interrogated by the Gateway to ascertain the meaning of the lines, polygons and text within the drawing, allowing it to identify tags and attributes of engineering objects. This automated process adds considerable value to the original content, extracting more context and meaning from the source information.

It is estimated that in a major capital project over 80% of the information handed over to operations is made up of unstructured data. Valuable tag information can often be trapped in the narrative of these documents.

Gateways for unstructured data can handle a variety of non-intelligent data, such as:

- Document formats, including Word, Excel, PDF and PowerPoint
- Documents held within Documentum or SharePoint.

2D Gateways can distinguish between two types of documents, 'intelligent' and 'unintelligent'.

- **'Intelligent' documents** – Such documents - schematic diagrams for example - contain an understanding of the engineering meaning of objects, enabling them to be tagged within AVEVA NET. These documents can be imported into a staging area for further processing before being loaded into AVEVA NET.
- **'Unintelligent' documents** – These have no understanding of the engineering meaning of the objects and are just a series of lines, polygons or text; Word documents for example. These do not require importing for processing, but will be retrieved dynamically when requested from AVEVA NET.

Key Features

AVEVA NET Gateways do more than just connecting to, and rendering, a wide variety of information types; they are also intelligent and can compile tag-related information from source data.

Common to all the Gateways

■ Configurable tag identification

This enables the analysis, tagging, manipulation and extraction of information to send to AVEVA NET. It employs sophisticated text-matching algorithms which identify and compile complete tag definitions in accordance with defined naming conventions.

■ Attribute handling

This enables tag definitions to be compiled from partial tag data and associated object attributes. Missing or inconsistent tag elements are highlighted for resolution.

■ Associativity

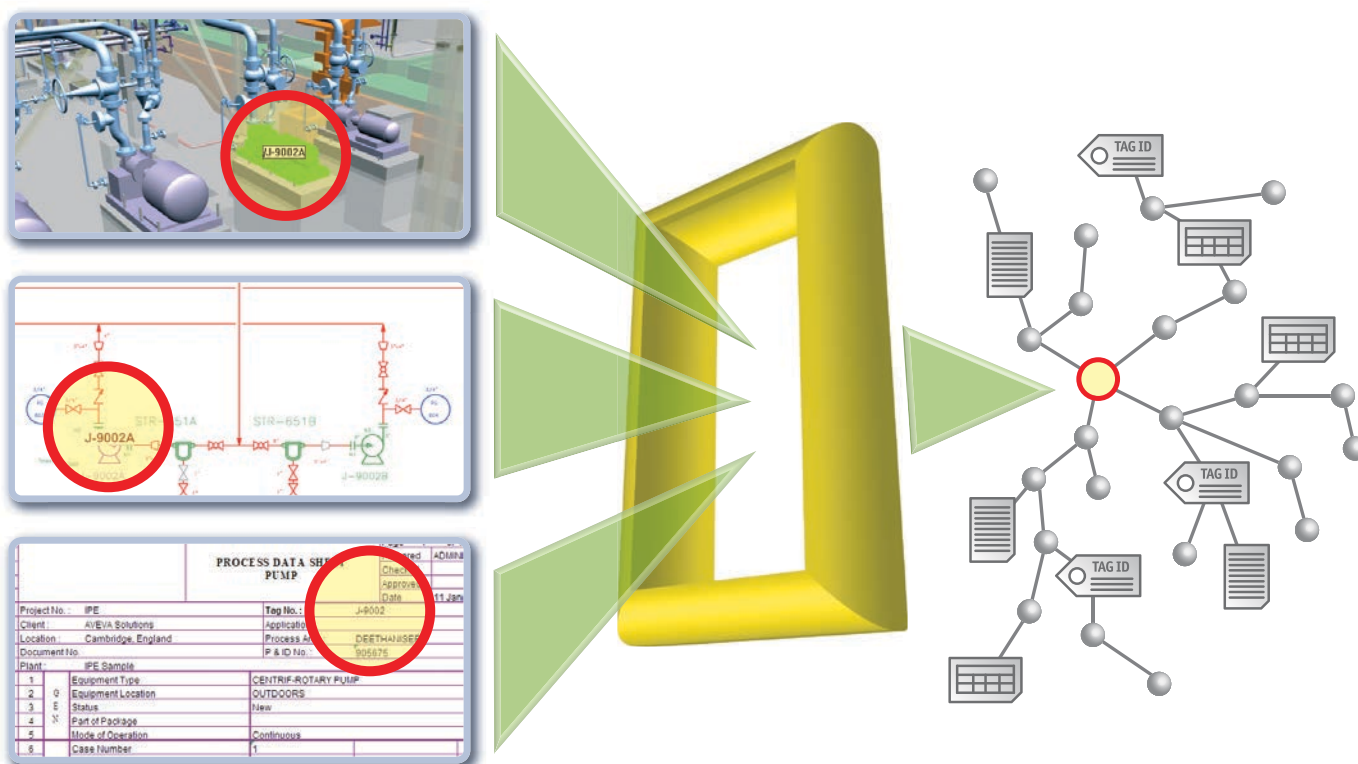
Gateways examine data across all connected sources and automatically cross-reference related tags and attributes between them. This is the key to AVEVA NET's ability to provide easy navigation through an integrated and complex information asset.

■ Accurate rendering of source information

All 3D models and 2D drawings are automatically rendered into a form which can be displayed through a web browser, enabling any user to view any type of data in its original form without the need for its source software.

■ Flexible configuration

The AVEVA NET Gateways are configured and operated using the AVEVA NET Gateway Controller™ application. To update the information published to AVEVA NET, Gateways are scheduled to run at a frequency to suit business needs. This process ensures that the project or asset teams are always accessing the latest information without interfering with their normal work.



AVEVA NET Gateways bring together multiple tag references about a single object.

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