



AVEVA

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# eDNA Enterprise Data Management

Real-time enterprise data management platform

eDNA Enterprise Data Management is an enterprise real-time and historical data management software platform. It collects, stores, displays, analyzes, and reports on operational and asset health information to quickly transform real-time data into actionable insights.



## Background

The Industrial Internet of Things (IIoT), fueled by a rapidly increasing amount of sensors and smart devices, is leaving organizations with significant amounts of data from a variety of sources to manage and store. As the amount of data continues to grow, so does the opportunity to gain actionable insights for sound business decisions. Collecting, storing, analyzing and delivering real-time and historical data to the right people, in the right format, at the right time provides intelligence to improve both operational processes and asset health.

## Product Overview

eDNA Enterprise Data Management is a real-time data management platform used to collect, store, display, analyze and report on operational and asset health related data. With more than three trillion events archived by eDNA servers each week, organizations achieve significant productivity, efficiency and reliability improvements through advanced data analysis and visualization. The software platform is a highly scalable solution with an enterprise data historian to efficiently archive and quickly retrieve time series data. A lossless compression technology is used to minimize the required storage capacity while maintaining the original resolution of the data.

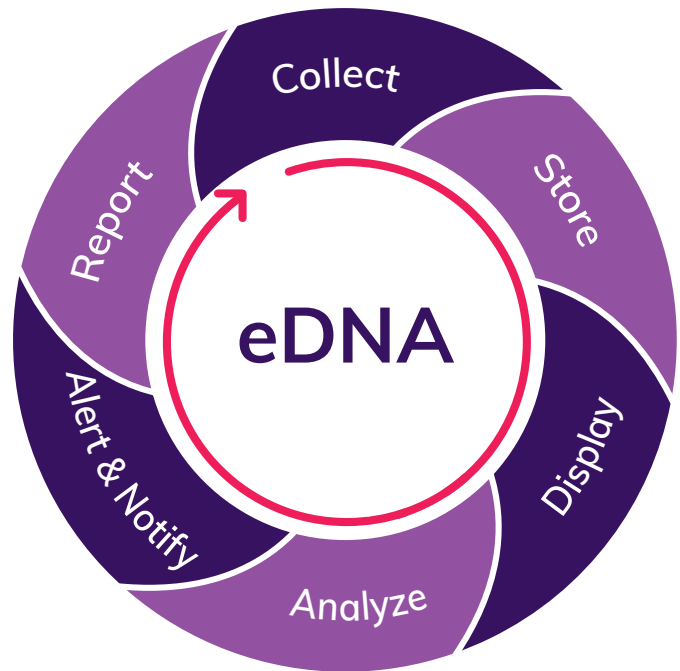
eDNA Enterprise Data Management easily integrates with hundreds of control, monitoring and enterprise business systems. eDNA data can be organized and accessed through an object / meta data model for easy navigation and data contextualization.

eDNA's advanced client tools, Application Programming Interfaces (APIs) and web platform enable real-time company-wide access to information for timely and informed decisions.

## Key Benefits

- **Bridge the IT / OT information gap**  
eDNA consolidates disparate data sources, bridging the gap between process control, operations, IT and other business systems.
- **Lossless data compression**  
Data accuracy is key to making sound business decisions; eDNA uses lossless data compression to ensure that the integrity of the information is maintained.
- **Transform data into actionable information**  
eDNA provides real-time access to critical data in the right format and at the right time, transforming raw data into insights for timely and informed decisions.
- **Secures data and access to data**  
Built-in security protects data and system access, ensuring the right data gets into the right hands and that complex security and compliance requirements are met.
- **Lower, more predictable cost of ownership**  
Get more value from your investment with highly competitive license costs, unlimited client licenses and API usage.
- **Delivers continuous return on investment**  
The eDNA Enterprise Data Management solution soon becomes an integral part of operations and delivers continuous value year after year as it scales to meet your growing data management needs.

- **Collect:** Connect with hundreds of control, monitoring, smart devices and other business systems using a variety of standard interfaces.
- **Store:** Compress, store and organize collected information securely in an online, enterprise database.
- **Display:** Present real-time and historical data through advanced client tools.
- **Analyze:** Create user defined calculations and expressions with a predefined library of functions. Integrated clients interpret the data, document results and diagnose events.
- **Report:** Access raw and aggregated information in a specified format or through ad-hoc queries.
- **Alert and Notify:** Send an email or text message to a computer or mobile device with alarm information. Example: "Unit 1 generator is experiencing high bearing temperature. Inform operator."

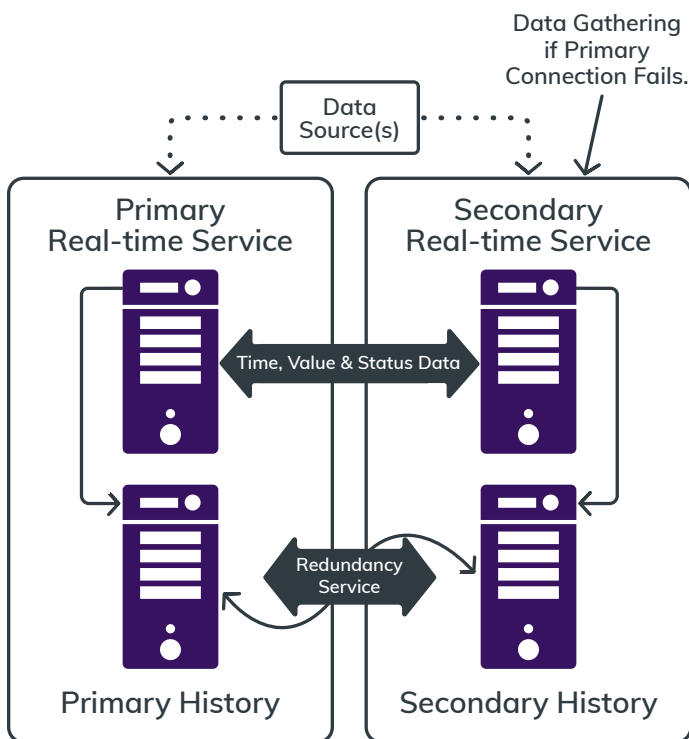
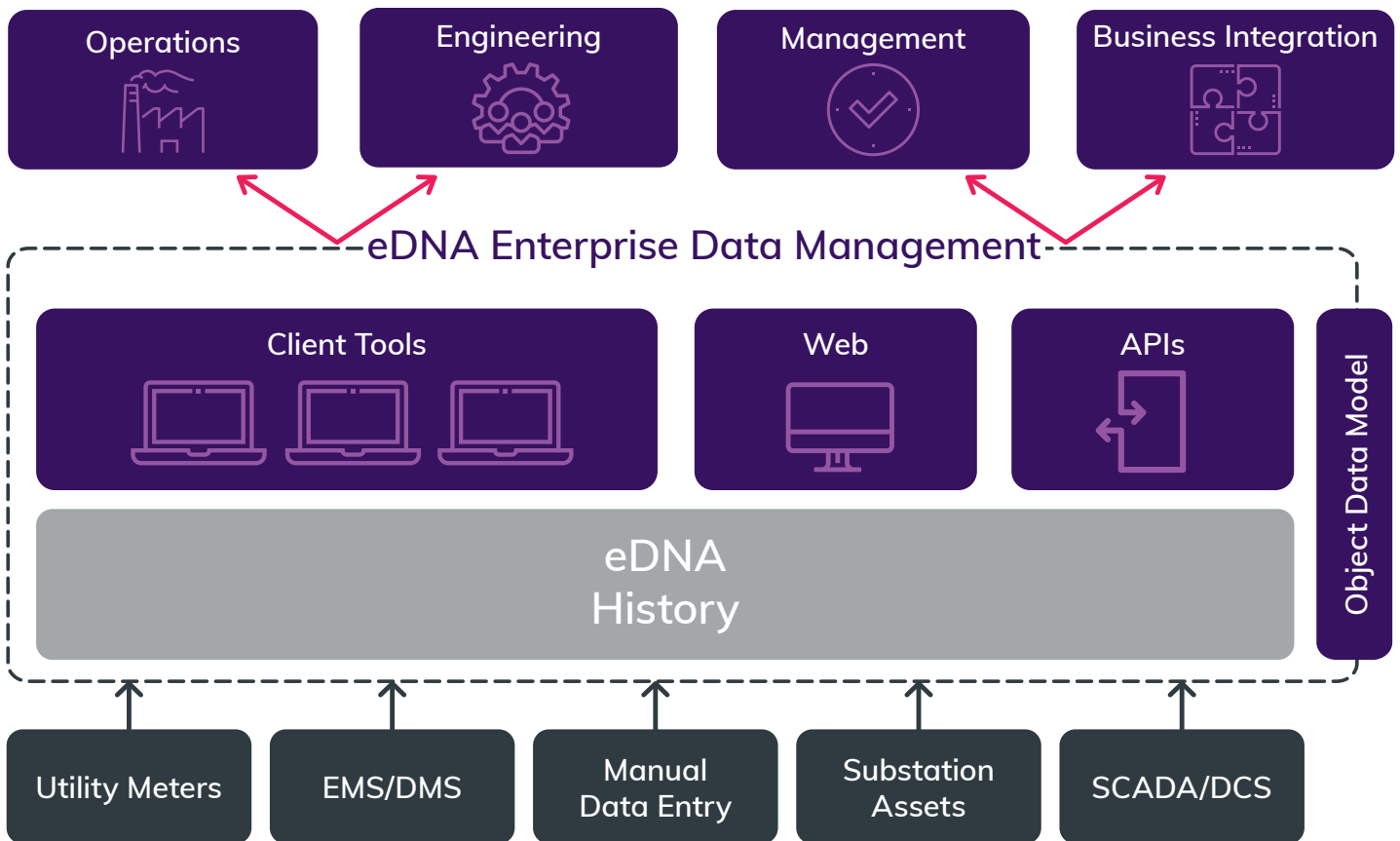


### Case Study

#### Southern California Edison

Southern California Edison (SCE) is one of the largest electric utilities in North America powering homes, businesses and communities in Southern, Coastal and Central California. The 125-year-old utility serves a population of close to 14 million, in a 50,000 square mile area. Reliable delivery of power requires the continuous monitoring of their large geographical territory. Since 1993, eDNA Enterprise Data Management has been used throughout SCE to provide near real-time data capture, archiving and analysis. Today, eDNA is the enterprise data management platform with feeds from SCE's grid control systems and substation assets. Their eDNA Enterprise Data Management system receives data in varying frequency and transforms it into information for operations, planning, power engineers and other personnel. For example, operations uses the information for comparing the current power load to that of a historically similar day, while maintenance engineers use the information to determine why a particular area is experiencing an outage.

**A single eDNA customer archives 3 billion events per day.**



Equipment and manufacturer agnostic, eDNA Enterprise Data Management's library of standard interfaces provide links to hundreds of business, control and automation systems. eDNA's distributed services architecture processes information on a single server or enables distribution on multiple servers throughout a series of networks, allowing unlimited scalability.

With eDNA's native data-bridging capabilities, data can be easily replicated across the network from a plant-level data management system to an enterprise-level data management platform. eDNA Enterprise Data Management is also able to seamlessly integrate with ERP, CMMS and other business systems.



## Redundancy

eDNA Enterprise Data Management Redundancy replicates all real-time services within the eDNA product suite to allow high availability, providing fault-tolerant 24x7 data access and collection. This redundancy feature is native to eDNA, eliminating expensive and complex third-party redundancy services.

## Security

eDNA Enterprise Data Management's security service helps meet security and compliance requirements by assuring that data gets into the right hands. Security can be defined on a point-by-point basis, and access control is initiated through the enterprise directory service, eliminating the need to have separate and unique controls. Security groups can be defined within eDNA Web, allowing or denying access for groups of users to Trends, Reports, or even data related to an entire group of assets.

## Client and Web Applications

eDNA Enterprise Data Management has a suite of advanced client applications for accessing, analyzing and presenting data in the format desired. The client suite includes eDNA View, eDNA Trend, eDNA Excel Add-in, eDNA Report Manager and APIs. With a single click of the mouse, eDNA data can be presented in a dashboard, ad hoc report, Excel spreadsheet or trend. All client applications are licensed for unlimited distribution, providing all users with the ability to access the company's real-time and historical information.

- **eDNA View**

eDNA View displays information to depict the current condition of equipment and systems, through customizable screens. A complete library of symbols and gauges is included for advanced visualization and displays can be linked to trends or additional views for immediate drilldown. This helps users quickly identify and take action on operational or equipment issues.

- **eDNA Trend**

eDNA Trend is a trending and analysis tool used to display real-time or historical data. The trending tool provides access to data records through an intuitive user interface and helps users turn data into actionable insights.

- **eDNA Excel Add-in**

eDNA Excel Add-in extends eDNA data directly into a Microsoft Excel spreadsheet for ad hoc reporting and analysis.

- **eDNA Manual Data Logger**

The eDNA Manual Data Logger enables users to manually enter information that isn't automatically collected so that it can be stored in the system and accessed via the eDNA client tools.

- **eDNA Web**

eDNA Web is a real-time decision support platform enabling users to make informed business and operational decisions through access to real-time, historical and relational data sources. eDNA Web comes configured with a series of advanced analysis tools that allow users to simplify decision making and focus on the key performance indicators that lead to optimized system performance and profitability. Secure access is provided through the internet, intranet, LAN or WAN, and it uses a standard web browser as an intuitive interface, enabling and optimizing collaboration across the enterprise.

- **Class Hierarchy Database (CHaD)**

eDNA CHaD provides the ability to organize information from eDNA and a variety of other enterprise data sources using a meta or object based organization and representation of the data. CHaD organizes and contextually represents information in a way that even casual users of the software can easily comprehend. eDNA's client applications and programming interfaces are integrated with CHaD so that users can develop sustainable applications and interfaces that are based on the data model.

- **eDNA Event Manager**

eDNA Event Manager supports the creation of user-defined events for notification and sends information to the right people, at the right time to diagnose and take corrective action on any potential problem.

- **eDNA Business Connector (EBC)**

EBC is an Open Database Connectivity driver that provides access to eDNA real-time and historical data. EBC is installed on the end-user computer and connects to the eDNA server to fulfil data retrieval requests. EBC enables access to eDNA data through third-party tools. EBC is especially useful for applications that combine eDNA data with data from other relational databases, such as ERP systems or Laboratory Information Management Systems.

**Sample Use Cases:**

- |   |                           |
|---|---------------------------|
| • Operational data warehouse                | • Performance monitoring  |
| • Centralized Remedial Action Scheme (CRAS) | • Asset health monitoring |
| • Commissioning                             | • Energy management       |
| • Root cause analysis                       | • Situational awareness   |
|   | • Condition monitoring    |



## Additional Products Available

AVEVA offers additional solutions that provide added features and functionality to your enterprise infrastructure, including integration with business systems/ERP, asset management systems/EAM, Microsoft® SharePoint Web Parts, advanced analytics, high speed data management, energy management, enterprise utility billing and reporting, and asset health monitoring.

- **Predictive Asset Analytics Software**

**Predictive Asset Analytics** is a predictive asset analytics solution that can provide early warning notification and diagnosis of equipment problems days, weeks or months before failure. Predictive Asset Analytics helps asset-intensive organizations reduce equipment downtime, increase reliability and improve performance.

- **Mobile Data Access**

Leverage **Insight** to monitor your critical information, KPIs, and alerts on-the-go from any mobile smartphone or tablet.

- **Workflow Management**

**Workflow Management solution** offers advanced workflow solutions and a complete set of tools for creating, executing, and optimizing business processes. The software documents all workflows including task sequencing, dependencies and outcomes, and measures process performance for analyses and process optimization.

- **Operational Intelligence**

**Intelligence** software automates the job of creating Key Performance Indicators derived from multiple sources, and calculates a history of operations metrics, which are continuously updated in a near real-time resolution. User-friendly analytics and dashboard-based monitoring of metrics empower workers and decision makers across the organization to make informed assessments.

For more information,

visit [sw.aveva.com/monitor-and-control/industrial-information-management/enterprise-historian](http://sw.aveva.com/monitor-and-control/industrial-information-management/enterprise-historian) or contact us at [instepinfo@aveva.com](mailto:instepinfo@aveva.com)



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