ENOVIA Live Collaboration

ENOVIA® Live Collaboration is the underlying support for all ENOVIA products and other Dassault Systèmes products for Product Lifecycle Management (PLM), which include CATIA®, 3DLive®, SIMULIA®, and DELMIA®. ENOVIA Live Collaboration and its optional products, establish the necessary environment for end users to collaborate effectively during product development. ENOVIA Live Collaboration's rich business process services enable collaboration between all users regardless of functional roles and allow management to measure the effectiveness of the overall product development process.

Key Benefits
- Deploy PLM solutions to solve immediate business problems, and quickly scale to support large global deployments
- Collaborate with external partners, suppliers, and developers as early as possible in the development process
- Increase external collaboration through role-based access while maintaining network and information security
- Leverage the best practices developed in partnership with some of the world's most innovative companies while retaining your competitive advantage and adaptability
- Realize powerful business benefits and metrics through global collaboration

value in formation

Product Objective

ENOVIA Live Collaboration turns the collective product intellectual property (IP) of the extended enterprise into profitable innovation. The product includes the following components:

- End-user navigation of business objects with a client running on Windows® or UNIX® operating systems, or a Web browser
- Rich business process and system architecture capabilities to support distribution of data and federation to other ENOVIA or foreign systems
- Security with advanced Lightweight Directory Access Protocol (LDAP) integration ensures common authentication and administration
- Right to execute programs written with the ENOVIA® Studio Customization Toolkit
- Right to execute programs written with the ENOVIA® Studio Federation Toolkit
- A common data model that enables seamless process execution across all ENOVIA products
- Common collaboration tools for managing business processes that are leveraged by all standard ENOVIA products
- A comprehensive set of metrics-based reports for users and managers to create and define views of the company's product data as well as analyze historical data and trends in order to make better strategic decisions
- An interface to 3DLive in order for end users to visually collaborate on ENOVIA managed Computer-Aided-Design (CAD) model data and bill-of-material data

Product Overview

Pressure has never been greater for global enterprises to deliver innovative products to market quickly and profitably. To compete in this environment, companies need to increase top-line revenue growth by bringing innovative products and technologies to market and drive bottom-line profitability by driving efficiencies into new product development processes. In this increasingly outsourced environment, many companies accomplish non-core competencies outside their organization. The most successful are those companies that best manage and collaborate with their value chain in order to create a single virtual enterprise.

ENOVIA Live Collaboration provides companies with a single, secure environment that eliminates the barriers caused by geographically dispersed organizations and value chains. ENOVIA Live Collaboration enables the following standard capabilities:

- Standard-based world-class scalability, performance, and openness to support the largest, most complex deployments
- Rich interface experience common across all ENOVIA Web based products
- Virtual workspaces and process management to share product content securely for cross-functional collaboration of all product development content in repeatable workflow business process
- Metrics reporting to drive continuous business process improvements to using pre-built metrics reports
- Search and navigate PLM data such as parts, bills-of-material (BOM), documents, specifications and sourcing information

Product Highlights

ENOVIA Live Collaboration Scalability, Performance, and Openness

ENOVIA Live Collaboration supports global, enterprise-wide deployments and is equipped with the industry's highest level of performance and scalability. The software is an ideal platform to support the product development process in any enterprise or in any industry. Key features and capabilities include:

World-Class Scalability

ENOVIA Live Collaboration's scalable 64-bit architecture enables the addition of industry standard web application servers for load balancing and geographically dispersed deployments. All users can benefit from centralized file management to upload and download their document IP. Optional remote file collaboration servers can be deployed at work sites throughout the world. As a result, large files remain close to the users who access those files most frequently, while ensuring that all users worldwide have easy access as needed.

Secure Work Environment

ENOVIA Live Collaboration provides several levels of security: User Level Security, Policy Level Security, Object Level Security, and Attribute Level Security. Users must pass security requirements at each level to gain access to the data. Distinct access masks are available for granular access control — over 30 access masks are available like read, modify, delete, etc.

Rich Interface Experience

The intuitive and consistent user interface provides many capabilities to help end-users manage their work. Features such as printer-friendly views, user interface personalization and visual cues are common throughout the ENOVIA® interface.

Single Sign-On (SSO)

Many companies consolidate their application access using a single login for centrally managing user access and privileges. ENOVIA Live Collaboration provides advanced LDAP / SSO integration to ensure common authentication and administration based on the company's standard identity management solution. Note that SSO configuration and authentication is supported for the web-based ENOVIA applications only.

Full-Text and 3D Search

ENOVIA Live Collaboration provides a unique user experience for searching structured metadata and file data. The full-text search capabilities leverage Exalead Cloudview, the industry's top enterprise search platform designed for information discovery and retrieval. The search solution provides fast, sub-seconds response information access using a simple, intuitive interface, allowing end-users to find, and analyze data more clearly and accurately. In addition, ENOVIA Live Collaboration provides the basis for 3D search within ENOVIA 3DLive. The ENOVIA® VPM 3D Indexing Configuration component within ENOVIA Live Collaboration, together with ENOVIA 3DLive, enables users to search CATIA® V6 models and product structures and retrieve 3D information in real time.

The embedded full-text search solution does require additional infrastructure and setup requirements. If a customer does not wish to use full-text search, a toggle mode to enable/disable full-text search is provided in favor of traditional ENOVIA database searching.

Case Sensitive/Insensitive Databases

The deployment of the ENOVIA system can be based on a number of databases such as Oracle, DB2, SQL Server and MySQL. With the exception of DB2 which is always case insensitive, all other deployments can be configured as case sensitive or insensitive. While most deployments are case sensitive, some implementations prefer a case insensitive database so that all user searches are case insensitive by default without having to specify it per search criteria.

Distributed File Store Management

Distributed file storage ensures optimal performance for remote users. Files are copied and placed at various remote file servers positioned close to the end-user for best file transfer times. To establish new remote file stores, administrators can leverage tools provided to clone existing file locations and pre-populate the remote sites with file data; otherwise, data is replicated on-demand as files are accessed by remote users. As disk storage runs low, administrators can purge files that are least-accessed while the master copy is still maintained at a different site. Note that an ENOVIA® File Collaboration Server product license is required for each remote site requiring distributed file store management.

Diagnostics and Monitoring

ENOVIA provides monitoring tools to enable administrators to track and ensure proper operation of the ENOVIA system. The monitoring tool provides standard logging capabilities using standard IBM CBE (Common Base Event) monitoring log format. With the use of 3rd party monitoring tools from IBM, Microsoft and others, the monitoring information can be collected to provide instant alerts and notifications to recover system failure and downtime.

Access to PLM Content

Read only access to key data elements is provided by ENOVIA Live Collaboration. All users can read and search V6 engineering work-in-progress status, parts, bills-of-material, documents, specifications, and sourcing information. All users can participate in change processes and approvals for this data with processes such as the Engineering Change Order (ECO) and Engineering Change Request (ECR).

Standards-based Open Environment

ENOVIA Live Collaboration's standards-based open environment enables organizations to implement a PLM strategy quickly and easily across diverse environments, applications and platforms. In addition, with Adaplets®, customers can extend standard ENOVIA product capabilities to create a PLM federation with other enterprise systems. Adaplets are an ENOVIA® proprietary technology to communicate with other data sources and represent this data as if it is native to the ENOVIA system. ENOVIA Live Collaboration provides run-time access to Adaplets. To develop a custom Adaplet, a customer must license ENOVIA® Studio Federation Toolkit.

ENOVIA Live Collaboration Virtual Workspaces and Process Management

Virtual teams are essential in order to compete in today's environment of outsourced product design and manufacturing, compressed product lifecycles, and custom product configurations. These teams require a robust set of collaborative services to increase the innovation, speed, and effectiveness dramatically of core processes (product development, program management, trategic sourcing and supplier management, etc.).

Key features and capabilities include:

Profile Management

ENOVIA Live Collaboration provides self-service profile management capabilities so end users with added responsibilities can add new users to the system or modify an existing user's definition. Profile management capabilities include specifying a user's email address, mailing address, physical location which can be used for optional file replication, and assigned roles and organizations. In addition, users are assigned to specific products in order to pass license key checks.

Conversion of Currency and Unit of Measure

Currency or unit of measure values may be displayed as entered, or converted to the preferred format automatically. This allows a user to see all values in their local or other preferred denomination. In addition, multiple currency exchange rate conversions may be defined for an organization, each with a different effective date for the conversion. This allows a company to provide accurate exchange rate conversions for different parts of the year as the exchange rate fluctuates.

Assemble Virtual Teams

Users can create a collaborative digital workplace of global team members, called a workspace. A workspace can be used by geographically distributed team members who offer expertise from various disciplines such as e-design, engineering, manufacturing, procurement, and finance. Within the secure workspace, members can create folders; organize, view, review, mark-up and approve documents and other product data, subscribe to event notifications, and schedule meetings.

Secure Access

The software allows workspace leads to set a default access for each member in the workplace, and folder structures. This access controls the user's visibility for the workspace, the folder hierarchy and the content managed within the folders.

Manage Documents and Content

Users can manage and organize shared documents and structured product data—such as parts and requests for quote (RFQs)—in multilevel folder and sub-folder structures. Users can also revise and checkin/check-out documents and review history and comments.

Meetings

With online meeting management support, users are able to track decisions being made during the product development cycle and take control of every meeting from beginning to end. Capabilities exist to plan, announce, manage and track the results of all meetings. Meeting participants and non-participants are able to access up-to-date meeting information, actions and deliverables at any time. Meetings can be tracked against any ENOVIA object.

Decisions

Users can keep track of and record the decision-making process. With ENOVIA Live Collaboration's "decision" capabilities, users across multiple organizations can stay informed of pertinent product decisions being made during the product development cycle. Decisions can be associated with meetings as well as any other ENOVIA object.

Issue Management

In order to facilitate change and formally raise and track product gaps and concerns, issues can be identified against any ENOVIA object. Users can raise an issue for analysis and resolution. Issues are classified in order for an "issue manager" to be assigned to manage its lifecycle and determine its validity and resolution. Note that that ENOVIA Live Collaboration's issue management capabilities are often used to initiate the formal change process offered by other ENOVIA products such as ENOVIA® Engineering Central™.

Business Process Workflows

Companies can use workflow management capabilities to model repeatable business processes for creating business objects in the ENOVIA® system, based on an organization's standard operating procedures. Workflows are created based on administrator-defined process templates that define a network of activities that must be completed. These activities are linked together with conditional expressions so that different activity sequences may be pursued or to repeat activities. The workflow activities can be performed by ENOVIA system users or they can launch programs to perform the required tasks automatically.

Manage Lifecycle and Approvals

Each ENOVIA business object goes through a lifecycle that captures the steps (or states) of its creation, review, release, and/or obsolescence. ENOVIA products come with predefined lifecycles for each object type managed, but these lifecycles are configurable using the ENOVIA® Studio Modeling Platform. A single object type can have multiple lifecycles depending on the business need. In order to go from one state of a lifecycle to another, electronic signature approvals are needed often. Signatures are either part of the lifecycle definition or supplemented by end-users as part of defining the approval process for a given object. Dynamic signatures defined by end-users are done using routes. A route contains several steps of approval that must occur. Each step can contain one or more signatures for specific individuals or roles. The route must be completed before the business object is promoted to its next lifecycle state. To simplify the approval process and facilitate a repeatable approval process, standard route templates can be leveraged also.

Automatic Notifications

The product enables users to use subscriptions for proactive notification when product data changes of interest occur. Users can either subscribe to any data element or administrators can subscribe them with "pushed" subscriptions automatically.

Create Discussion Threads

Users stay up-to-date with the latest information by monitoring discussion threads of interest. Users have the ability to subscribe to individual threaded discussions along with monitoring actively discussed topics throughout the system. Appending a reply to a discussion is easy by responding to an email message received as a subscription.

PDF Rendering with Adlib Express

PDF rendering functionality and configurable watermarks extend the ENOVIA user interface by providing a standard, read-only format for sharing data with non-ENOVIA users and/or archiving. The PDF rendering of UI forms requires Adlib Express Server which is licensed separately from Adlib Software.

3D Visualization

All ENOVIA products can take advantage of the Dassault Systèmes 3DVIA® Viewer to view and markup 3D formats such as CGR and 3D XML files that are vaulted in the ENOVIA database. Many 2D file formats are also supported such as BMP, CAL, PNG, RAS, TIF, TIFF, JPEG, JPG, RGB, HPGL, PS, SVG and many others. Capabilities include 2D & 3D viewing and navigation (zoom, rotate, etc.), print, redlining and measure. For a more robust visualization experience that includes object data structure (BOM) navigation, ENOVIA 3DLive can be licensed to replace the standard 3DVIA Viewer.

ENOVIA Live Collaboration Business Metrics

Companies are constantly looking for ways to differentiate in an increasingly competitive market. While most of the attention is focused on improving products and services, more companies are differentiating themselves by how they do business. ENOVIA Live Collaboration provides reporting capabilities focused on metrics and statistics to better assess the performance of an organization. Key features and capabilities include:

Pre-Built Reports Provide Answers to Key Questions in The Shortest Time

ENOVIA Live Collaboration provides several reports for improving the decision-making process. These reports are based on ad hoc queries that can be executed in real-time in order to monitor the organization's performance. Users and business managers personalize these to keep track of the metrics most important to them on a daily basis. All report data can be presented graphically and/or in a table, that calculates changes from period to period. In addition, the data can be exported to spreadsheet for further analysis.

Streamline Business Processes by Eliminating Non-Value-Add Activities

Organizations can streamline the business process by analyzing process steps and eliminating non-value added activities. Users can run a "Lifecycle Duration" report to analyze the cycle time it takes to complete the development process. Analysis of this information can indicate bottlenecks in the process, which could lead to workflow process changes or new initiatives, (training programs or allocation of additional staff for continuous monitoring or process improvement). This report provides answers for:

- What state in the lifecycle is a bottleneck to overall performance?
- How much time does an object spend in its preliminary review versus its cross-functional review?
- How have past process improvements impacted the time spent at each step in the process?

Track Performance Indicators to Understand the Affect on Performance

There are several standard reports for measuring current activities, workloads, trends, and throughput. These reports enable organizations to focus on the business process and related activities as a mechanism for reacting quickly to business changes. With relevant and timely information of the business operations, users can make better decisions.

- Object Count Report – this report focuses on reporting current activity or trends based on a user-specified query and then summarizing and grouping the results graphically or textually. For example, the report could answer how many incidents are currently open and who they are assigned to.
- Object Count over Time Report – this report can be more generalized by allowing the user to filter the data on any criteria and grouping by any date-based field. For example, the report could determine the number of open issues by priority.
- Object Count in State Report – this report assesses the throughput of the organization by graphically depicting the number of business objects of a given business type that have reached a given state. For example, the report could answer how summer and holiday vacations impact the number of parts that are released.

Configure Pre-Built Metrics Reports to Suit Your Precise Business Requirements

Users can easily configure any of the pre-built metrics reports to suit the organization's precise business requirements. The standard reports are generic and can accept user input for establishing the data set for the report. Business administrators can predefine the reports for execution without user input.

Personalized Dashboard to Suit a User's Unique Reporting Needs

End users can define their own personalized dashboards with the reports that best suit their needs. The dashboard provides a single version of the truth that connects goals to reality, helping users confront pressing business issues and execute more effectively.

Crystal Reports Interface

Companies can take advantage of Business Objects Crystal Reports, which offer a high degree of flexibility and control over how data is presented and formatted. Administrators can create an interactive enduse experience for any report using formulas, cross-tabs, conditional formatting, summary/drill-down, and sub-reports. The Crystal Reports interface extracts ENOVIA data through standard APIs and passes it to Crystal Reports for formatting and output. The supported products, which are licensed separately, include Crystal Reports Professional XI R2 and Business Objects Enterprise XI R2.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA Live Collaboration supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values: global collaboration innovation, single PLM platform for intellectual property (IP) management, online creation and collaboration, ready to use PLM business processes, and lower cost of ownership.

DS ENOVIA

Six Brands, Six Promises

CATIA
Virtual Product Design

DELMIA
Virtual Production

ENOVIA
Global Collaborative Innovation

SIMULIA
Realistic Simulation

3DVIA
Online 3D Lifelike Experiences

SolidWorks
3D for Professionals

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 100,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product—SolidWorks for 3D mechanical design—DELMIA for virtual production—SIMULIA for virtual testing—ENOVIA for global collaborative lifecycle management, and 3DVIA for online 3D lifelike experiences. For additional information, contact us at: Dassault Systèmes ENOVIA Corp., 900 Chelmsford Street, Lowell, MA, USA 01851, +1 978 442 2500

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