

ENOVIA V5 supports large-scale product development



Highlights

- *Enables clients to extract maximum value from their CATIA V5 investments by managing and exploiting the powerful Dassault Systèmes V5 data model*
- *Seamlessly connects design and manufacturing while managing numerous product configurations*
- *Maintains the high number of relationships between a product and its related design knowledge*
- *Continually handles demanding requests while managing the complex information and geometric relationships within the product definition*
- *Delivers large amounts of data to a globally distributed user community.*

Designing and developing complex products

Large aerospace and automotive manufacturers rely on ENOVIA to manage huge amounts of product knowledge and connect it with all the supporting information required to design, develop and manufacture complex products. Through its support of high transaction volumes that deliver considerable amounts of product data, ENOVIA V5 meets the product development needs of globally distributed user communities.

Meeting changing business needs

Today's large-scale manufacturers need robust system architecture for performance and scalability. ENOVIA V5 provides the flexibility to scale up and out to meet the demands of your constantly-changing business environment.

- **Performance** – the time and system resources required to complete a set of scenarios. This indicates system speed and reliability, two aspects of the system critical to obtaining user acceptance. Improved software performance means less time waiting and more time innovating.

- **Scalability** – the ability to add proportional amounts of workload and resources while maintaining performance. Demonstrated predictability allows you to anticipate how much computing power will be required to support an increasing user population. Software with predictable scalability reduces risk and allows robust capacity planning for deployment.
- **Capacity** – the number of concurrent users supported by a given hardware configuration. Knowing your system capacity level is critical to maintaining performance and planning system upgrades. Greater software capacity means lower total cost of ownership and budget predictability.

Flexible and scalable architecture

ENOVIA V5 delivers an architecture that deploys on either single or multiple application servers across single or multiple sites. Load balancing capabilities ensure optimum utilisation of system resources.

Flexible multi-site capabilities provide several deployment configurations – ranging from remote vault caching to decentralised multi-site replication – for handling a wide variety of operational scenarios.

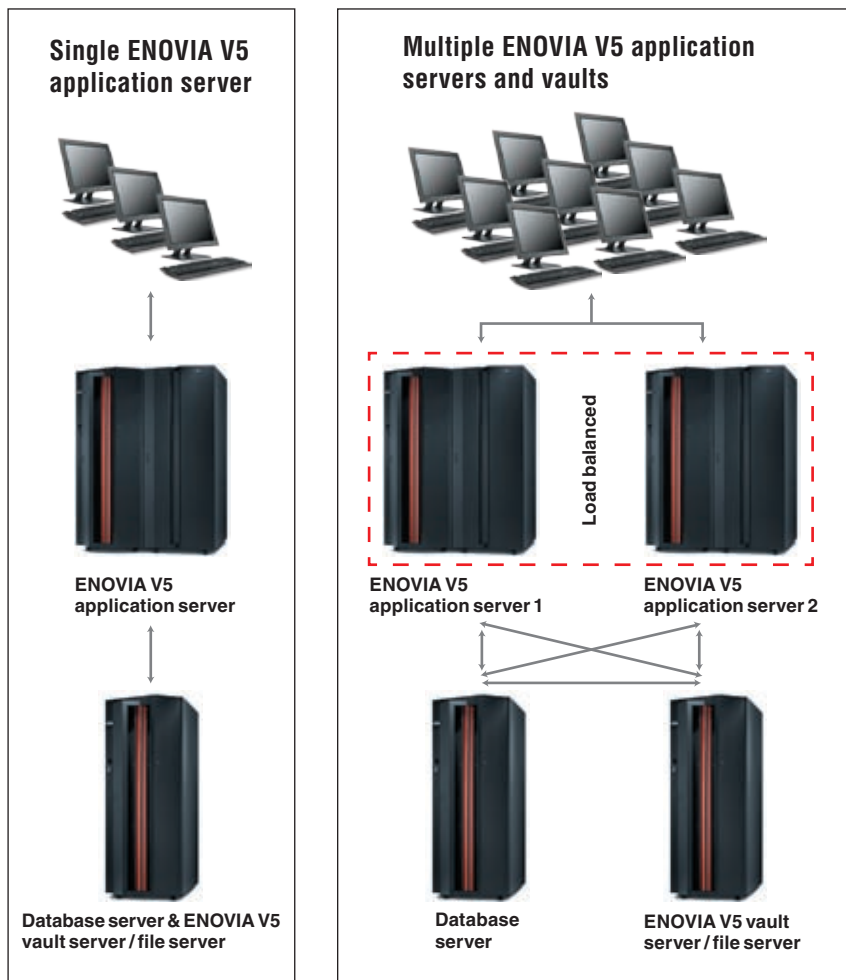


Figure 1 illustrates ENOVIA V5 scalable architecture.

The vault server provides enhanced scalability and performance by allowing multi-threaded access to vault data and support of virtualised file systems in which a single vault can be defined across several logical and physical media. High-availability features are also included to facilitate scheduled or unplanned vault downtime.

ENOVIA V5 solutions leverage the latest Internet standards – SOAP, WSDL, XML, HTTP and HTML – to protect your investment.

Tested for Performance, Capacity and Scalability (PCS)

ENOVIA V5's levels of capacity and scalability have been verified at the IBM and Dassault Systèmes International Competency Centre (IDSICC)¹. This involved simulating typical multi-user workloads and the roles of 3,000 users against a 12 million part-instance database. The weighting and definition of the tasks performed by the various roles has been defined in conjunction with a number of large automotive and aerospace companies. The simulated workload represents the activities performed on a daily basis in many large design organisations.

A single ENOVIA V5 application server running on an IBM @server pSeries p595 with 32 processors and 512GB of memory was used for the PCS testing. The database server and ENOVIA V5 vault server were implemented on a single IBM pSeries p570 with 16 processors and 128GB of memory. IBM DB2 Version 8.2 – the Dassault Systèmes preferred database for ENOVIA solutions – was the relational database management system used during testing. Figure 2 illustrates the results of this testing.

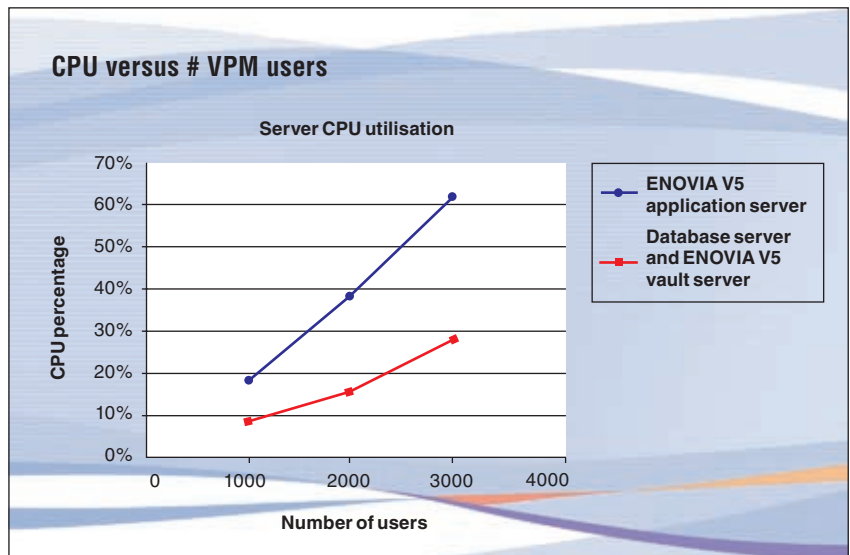


Figure 2 illustrates the PCS test results. The single ENOVIA V5 Release 16 application server effectively supported 3000 ENOVIA V5 VPM concurrent users in a mixed workload environment – of which 80 percent were design engineer roles.

Unique capabilities of ENOVIA V5

Major industry-leading manufacturers are currently benefiting from ENOVIA V5's unique capabilities. Companies such as Boeing, Volvo Truck, Northrop Grumman, Bombardier and Sikorsky use ENOVIA V5 to manage the intellectual property of their leading-edge products.

With its flexible architecture and ability to scale, ENOVIA meets the demanding business requirements of today's global design and manufacturing organisations. It streamlines the development of complex products and connects large numbers of engineers to manage the total product innovation and creation process.

Implement ENOVIA V5

The flexible and scalable architecture of ENOVIA V5 is designed to meet your operational business needs. For further information, please contact your local IBM/Dassault Systèmes representative or visit:

ibm.com/software/applications/plm

¹ In 1999, IBM and Dassault Systèmes formed an International Competency Centre (IDSICC). The role of this IDSICC is to support the integration and optimisation of IBM technologies in Dassault Systèmes projects and products. One of the key aspects of this support is to perform PCS testing of ENOVIA V5 by simulating typical multi-user roles and workloads.



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