



SUCCESS STORIES

DASSAULT SYSTÈMES STANDARDIZES ON NETAPP SOLUTIONS TO SYNCHRONIZE WORLDWIDE DEVELOPMENT SITES

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NATHALIE IRVINE Chief Information Officer, Dassault Systèmes

KEY HIGHLIGHTS

Location Paris, France

Industry High-tech

The Challenge

- Support massive testing workload
- Support heterogeneous environment
- Maintain 24x7 data accessibility

The Solution

- NetApp clustered FAS systems
- NetApp NearStore® systems
- NetApp SnapVault® software

Benefits

- Capacity to consolidate 15 sites
- Performance for 1.5M tests nightly
- Seamless support for five OS environments
- Reliability for overnight validations
- Rapid access to online versions

THE CUSTOMER

As a world leader in product lifecycle management (PLM) solutions, the Dassault Systèmes (www.3ds.com) group brings value to more than 70,000 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 by providing a 3D vision of the entire lifecycle of products, from conception to retirement. The company posted FY2003 revenues of €754.8 million.

The heart of Dassault Systèmes business is the development of six software product lines utilized by the most recognized names in the aeronautics, automotive, and mechanical engineering industries. Several thousand engineers around the world are dedicated to ongoing development of the Dassault Systèmes CATIA, DELMIA, ENOVIA, SMARTEAM, SolidWorks, and SPACE products.

THE CHALLENGE:

Consolidate 15 Development Sites and Complete 1.5 Million Validation Tests Overnight

Dassault Systèmes needed a central repository for the massive volumes of development data generated over the course of each day. In addition to over 2,000 engineers working on six product lines simultaneously, the company maintains multiple releases of the current

software version running on ClearCase Multisite for each product in order to meet customer configuration requirements. With five different operating systems, the volume of data transmitted per day and between sites over a high-speed satellite connection is substantial.

Additionally, Dassault Systèmes must ensure that its infrastructure can support nightly validation testing processes. Reliability and performance are critical, because these processes must be completed between 9:00 p.m. and 9:00 a.m. to enable the distribution of the new, validated information by morning. At all times the systems must remain accessible for all the developers to allow transfer and exchanges of development data.

“Completing this daily process on schedule is fundamental to meeting our product development calendar, which requires two releases annually published simultaneously for all of our product lines,” points out Nathalie Irvine, chief information officer at Dassault Systèmes. “Our test systems start each night and automatically run 1.5 million tests to completion, so we had to choose a system that is particularly effective in terms of access performance as well as storage capacity. The system also had to be able to support five different operating systems today and to be permanently accessible 24x7 by all of our sites, including 15 development sites worldwide.”

THE SOLUTION:

Global Deployment of Network Appliance FAS and NearStore Solutions

Dassault Systèmes first deployed Network Appliance storage in early 2000. The success of the initial project led to deployment of additional fabric-attached storage (FAS) systems and economical NearStore systems to support exponential growth at development sites in California, Michigan, and North Carolina in the United States and at sites in Israel, Canada, Germany, and India.

Today, 12 NetApp FAS systems distributed across three sites support the nightly collection, testing, and redistribution of the complete versions of the six software product lines. Once a software revision is validated, Dassault Systèmes creates a Snapshot™ copy and leverages NetApp SnapVault software to replicate the source code to a NetApp NearStore system for online archiving. All of the NetApp systems use SnapVault to send data to a second NearStore system as part of a business continuance plan.

Irvine explains that the selection of Network Appliance was based on unambiguous differentiators. "At the time we chose NetApp, it was the only vendor able to support our heterogeneous UNIX® and Windows® environment. But beyond this criterion, we also measured another unique capability—that is, the ability of the NetApp solution to handle the heavy data access loads of our system of tests."

THE BENEFITS:

Deployment Simplicity, Reliability for 24x7 Accessibility, and Heavy Load-Handling Performance

"Network Appliance storage delivers a unique combination of simplicity and reliability to support our goal of implementing a single, standardized solution to meet the needs of R&D on a global basis," says Irvine.

"In 2003, our relationship with Network Appliance became a formal partnership, and we have standardized on NetApp solutions everywhere in the world. We now have the assurance not only that each site equipped is able to receive and process massive quantities of data in a minimum amount of time, but also that implementations will be both simple and rapid."

The simplicity, reliability, and performance of the NetApp systems have helped Dassault Systèmes better address the economic and time-to-market pressures of the highly competitive software development field. "The requests to which the NetApp systems are subjected are enormous. Reliability is, of course, in such a context, a critical requirement, and NetApp delivers. No other software editor in the world can integrate multiple versions of multiple product lines on an international scale as quickly as we can. Network Appliance solutions play a major role in this capability."

The multiplicity of products, versions, and platforms that Dassault Systèmes supports makes NetApp Snapshot technology particularly useful for protecting both data and productivity in the R&D department. Irvine notes, "We maintain several versions of each software product to mark the progress of development and levels in maintenance. Maintaining multiple Snapshot images is essential. This gives our engineers the capability to access a large number of unit releases online. Snapshot technology also allows us to preserve the last stable version of each product, allowing rapid rollback to working copies in the event of failed processes. We leverage this approach at our head office in Suresnes and at each one of our international sites." Dassault Systèmes maintains a maximum of five levels of releases.

NetApp NearStore systems and NetApp SnapVault software enable Dassault Systèmes to optimally allocate storage capacity (that is, capacity on high-performance FAS systems or economical near-line storage) based on performance, access, and budget requirements. The NearStore systems enable automatic safeguarding of critical engineering data, while ensuring rapid restoration of the data as needed. Infrequently accessed files can be economically stored on the NearStore system and yet remain transparently accessible to developers anywhere on the network.

Irvine concludes, "Our positive experiences have led us to serve as a reference to the load- and request-handling capabilities of the NetApp system. Today, we have more than 25 NetApp storage and NetCache® systems and expect to continue to evolve the infrastructure to support our development needs. The experience of working through four years and several generations of solutions has led to a relationship of total confidence between our companies. We are mutual beneficiaries of close cooperation on all levels, from technical to commercial to strategic."

ABOUT NETWORK APPLIANCE

Network Appliance is a world leader in unified storage solutions for today's data-intensive enterprise. Since its inception in 1992, Network Appliance has delivered technology, product, and partner firsts that simplify data management. Information about Network Appliance™ solutions and services is available at www.netapp.com.

