



**NetApp™**  
Go further, faster



Partner Solution

# NetApp and Siemens PLM Software

Partnership helps manufacturing organizations accelerate time to market while lowering cost

## KEY HIGHLIGHTS

### Customer challenges

- Time to market
- Enable team collaboration across multiple sites
- Maximize productivity and performance
- Provide safer protection for data
- Control costs yet support growth

### The solution

Siemens PLM Software's Teamcenter on NetApp® storage maximizes collaboration and accelerates time to market while lowering cost.

### Benefits

- Accelerate time to market
- Maximize collaboration during development
- Maximize productivity with increased performance and application availability
- Decrease management overhead and ownership costs

## PARTNER PROFILE

Siemens PLM Software, a business unit of the Siemens Industry Automation Division, is a leading global provider of product lifecycle management (PLM) software. PLM is the platform for turning more ideas into successful products. Because only PLM can provide the application depth and breadth needed to digitally author, validate, and manage the detailed product and process data necessary to support continuous innovation.

Teamcenter from Siemens PLM Software powers innovation and improves productivity by connecting your teams with the product and process knowledge they need to make good decisions throughout the product lifecycle. Teamcenter solutions enable your company to meet today's critical business challenges, whether your goal is greater product innovation, faster time to market, regulatory compliance, resource optimization, global collaboration, or all of the above.

## CHALLENGES IN PRODUCT DEVELOPMENT AND MANUFACTURING

Product design and development are getting more competitive every day. You are faced with increasing pressure to innovate, design, and deliver products more quickly than

ever before. Tighter collaboration among your developers and engineers is one of the keys to reducing time to market. But your development teams may be scattered across many locations or use different development platforms. Bringing it all together to increase productivity is a challenge.

Another factor affecting productivity is the performance of the underlying computing systems. Poor performance stalls development. Additionally, if systems fail, product development grinds to a halt.

An everyday byproduct of these rapid product development cycles is the accumulation of data on your systems. As developers and designers go through iteration after iteration of designs, data models, simulations, or code revisions, the files pile up on the storage systems. All this data takes time to manage and consumes valuable disk space.

More important, this data represents your most valuable assets. The backup and recovery of this critical engineering data in the event of system failure or data corruption ought to be a significant consideration for designing and evaluating your environment. In a worst-case scenario, intellectual property may be irretrievably lost.

“As a leading global provider of product lifecycle management (PLM) software and services, Siemens PLM Software relies on partnerships to create value for customers around the world. Our long-standing relationship with NetApp is built around our open solutions that help manufacturers turn more ideas into successful products.”

Rich Ramsey

VP of Partner & Component Marketing, Siemens PLM Software

Ensuring consistency between the backup of the centralized Teamcenter Oracle® Database and the globally distributed Teamcenter file vault is challenging. Globally dispersed product development teams need 24x7 access to the PLM repository. Traditional backup methods entail long backup windows during which time no changes can be made to the PLM data repository.

While PLM software helps pull together the varied phases of product development and delivery, if the underlying systems that run the PLM solution are not fully optimized for this purpose, the results can be less than effective. Creating and fully capitalizing on a sophisticated PLM solution requires a fresh look at the computing infrastructure that will be used; otherwise, much of the PLM advantage may be lost.

But how do you provide a competitive technology edge and still contain costs?

#### THE SOLUTION

NetApp provides Teamcenter customers proven storage solutions for increasing performance, utilization, and availability while reducing operating and management costs. NetApp solutions are the most flexible storage systems for implementing Teamcenter, allowing you a range of pro-

ductivity and performance options and an easy way to support a globally distributed heterogeneous environment.

Siemens has partnered with NetApp for many years in bringing cost-effective solutions to its worldwide base of manufacturing and engineering customers. In a joint effort, NetApp has successfully completed component-level and system-level benchmarks to optimize performance and scalability when Teamcenter is integrated with NetApp storage systems.

Some of the joint developments between the two companies include:

- Developing best practices for optimal deployment
- Maximizing space savings with deduplication
- Integrated backup solution to ensure consistency across the PLM file vault and associated database while dramatically shrinking backup windows

Siemens and NetApp work together to provide the best price/performance and most reliable PLM combination on the market. Joint customers include the top automotive, aerospace, high-tech, and consumer product companies in the world.

#### BENEFITS

Teamcenter customers using NetApp solutions experience real benefits for their businesses throughout the product lifecycle. These include:

##### **Accelerate time to market, maximize collaboration**

When your global development teams maximize collaboration through better data sharing and connectivity, they're more productive. Unify the work of your designers and engineers and connect distant teams with NetApp storage solutions. Remote engineering teams or designers will have secure, fast access to the data they need to get the job done. Workspace provisioning can be handled on the fly, and workers can easily share pooled data—even across operating systems.

- NetApp unified storage and multiprotocol support consolidate Linux®, UNIX®, and Windows® file systems into one high-performance data pool. Team members easily share files and experience reduced server bottlenecks.
- With the global multiprotocol connectivity of NetApp's data replication and mirroring solutions, teams stay in sync regardless of location.

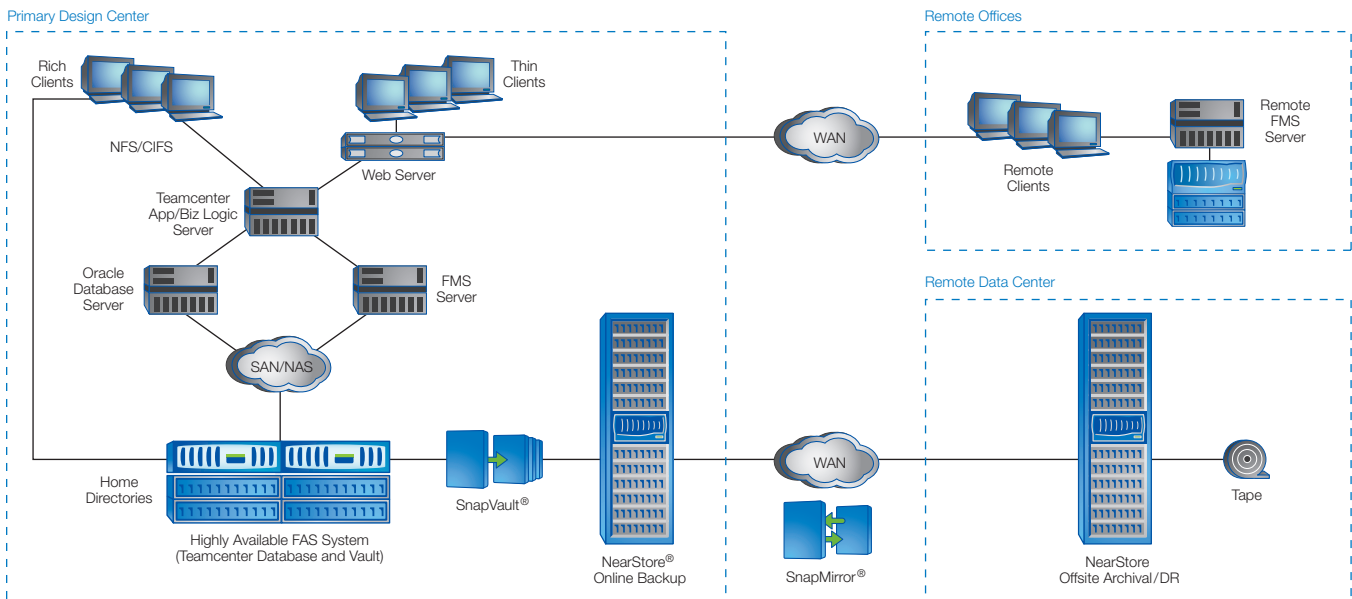


Figure 1) NetApp storage solutions integrate seamlessly with Teamcenter in a collaborative, global PLM environment.

**Increase performance, reliability, and availability**

A storage system can become an I/O bottleneck when the number of users accessing data grows significantly, hampering productivity. NetApp's high-performance caching solutions mean faster access to data.

- With NetApp FlexCache® you can deploy caching storage systems between your central storage repository and your remote clients to reduce network bandwidth requirements and accelerate remote access.
- NetApp Performance Acceleration Module (PAM) can improve the performance of your storage system by providing an intelligent, extended read cache in the storage controller. PAM can improve Teamcenter read response times by as much as 55%<sup>1</sup>.

Downtime caused by crashed systems or lost data can ruin your product development timelines. Backing up or mirroring data shouldn't take more and more of your time or resources. NetApp's robust high-availability

features and fast, reliable data protection enable critical data to be protected and available 24x7.

- You can provide uninterrupted Teamcenter data availability with NetApp active-active controller configurations, delivering up to 99.999% data availability.
- Thin replication allows you to vault product milestones to remote locations at a fraction of the cost of other replication services. The system is a fast, affordable solution to disaster recovery.
- Snapshot™ captures near-instant backups of production files for reduced backup windows and associated database lock periods—from several hours to less than a minute.
- Integrated, consistent backups of Oracle Database and Teamcenter file vault using SnapManager® for Oracle and SnapDrive® software enable data that is backed up to be easily recovered.

**Decrease management and ownership costs**

NetApp solutions can save you nearly 50% in operating costs over other storage solutions by reducing power consumption, rack space, and management costs. With NetApp you can consolidate server storage, provide instant snapshots of critical data, and automate your disaster recovery operations. And by doing more with the storage you already own, you save both time and money. For example, in tests performed using a Teamcenter data repository, we found that 57% of the storage space was recovered using NetApp deduplication<sup>2</sup>.

- NetApp FlexVol® increases space utilization by 33% or more while streamlining the allocation process.
- NetApp deduplication works on primary, secondary, and archival storage, freeing up disk space in workspaces, on the central repository, and in the product archives.

1. You can read more about deploying PAM in a Teamcenter environment in chapter 6 of NetApp technical report 3658, *Siemens PLM Software Teamcenter on NetApp Storage over NFS: Reference Architecture* (<http://media.netapp.com/documents/tr-3658.pdf>).

2. You can read more about deduplication tests with Teamcenter in chapter 7 of NetApp technical report 3658, *Siemens PLM Software Teamcenter on NetApp Storage over NFS: Reference Architecture* (<http://media.netapp.com/documents/tr-3658.pdf>).

### **NetApp saves you money**

Regardless of the complexity of your Teamcenter deployment, NetApp delivers value to other IT components in your enterprise as well. According to an independent cost-of-ownership report by Mercer and Oliver Wyman, an international consulting group, NetApp saves you additional money in the following ways:

- NetApp lowers the cost of all file services by 44%.
- Oracle storage costs are typically 42% lower using NetApp.
- Archiving costs can be cut as much as 35%.

As data centers “go green” and seek to cut energy and space requirements, NetApp solutions use 52% less power while generating 51% less heat, drastically cutting your electricity and air conditioning costs in the data center. You can also store more data in less space—NetApp storage systems require 50% less rack space than other solutions.

Learn more about how NetApp improves nearly every aspect of your Teamcenter environment.

NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at [www.netapp.com](http://www.netapp.com).



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