NetApp™

Go further, faster

Systems

NetApp V-Series for Heterogeneous Storage Environments

Reduce costs and simplify management of your heterogeneous storage environments with our virtualization solution

THE CHALLENGE

Maximizing storage utilization and access
As your company evolved its storage environment from direct-attached to networked storage, you probably made significant investments in multiple storage architectures—DAS, SAN, and NAS—to support the different access methods required by your varied storage solutions. As a result, you may have an inefficient and underutilized storage environment. Now, while continuing to support a variety of storage systems, you're also being pressed to maximize the efficiency of current storage capacity and improve your company's return on investment (ROI).

To resolve this dilemma, you can invest more in new storage systems that incorporate advanced data management. But this means replacing your existing storage arrays, something you may be reluctant to do. If your company already has a number of extensive SAN storage arrays, how can you broaden your use of your current infrastructure? How can you simplify your data management and lower your total cost of ownership?

THE SOLUTION

Implement NetApp's V-Series storage virtualization solutions
With the NetApp® V-Series product line, you can consolidate your mission-critical data across your enterprise no matter how big your company is or how many different storage platforms you have. Once you consolidate, you can more efficiently protect and recover your mission-critical data across your enterprise.

With our Data ONTAP® 7G software, you can support an expanded set of business applications. Our software makes this possible by dynamically virtualizing storage throughout your existing Fibre Channel SAN infrastructure. We unify all your block and file storage networking paradigms under a common architecture. We also give you a complete suite of advanced tools to manage your consolidated data.

We build the V-Series with scalability in mind, so you can expand the system as your business grows. You get industry-leading performance, with many terabytes of managed capacity. You can configure your system for simultaneous active-active access with secure failover across two independent controllers in a storage system.

Consolidate heterogeneous storage

You can improve your business efficiency while reducing complexity by consolidating your storage and using a single data management architecture. Our V-Series, in conjunction with our Data ONTAP 7G software family, allows you to place a variety of storage arrays in SAN environments under one umbrella system.

The NetApp V-Series product line supports a broad range of storage arrays, including:

- IBM Enterprise Storage Server (ESS)
- IBM DS 4000 Midrange Storage
- HP StorageWorks
- HDS USP
- HDS Lightning
- HDS Thunder
- HDS SANRISE
- EMC Symmetrix
- EMC Clariion
- Fujitsu ETERNUS
- 3PAR InServ

GET UP AND RUNNING QUICKLY

Our Professional Services can help get you up and running quickly with our V-Series implementation to enable that your new storage system is fully configured to immediately begin storing your mission-critical data. We're ready to help you tackle every aspect of planning the configuration, including solution testing and knowledge transfer. We provide you with complete documentation every step of the way.

V-Series implementation includes planning the back-end setup tasks necessary to integrate your V-Series system with your existing storage array, including:

- Cabling
- Zoning
- Host groups
- LUN creation and setup
- RAID group setup

We can also help you test and verify that implementation is complete, and we'll leave you with a record of how we configured your system.

INCREASE FLEXIBILITY

Your V-Series storage system opens the door to new business solutions that require NAS or SAN access to make use of SAN storage. Out of this consolidation, you get improved utilization as well as increased flexibility when planning storage growth.

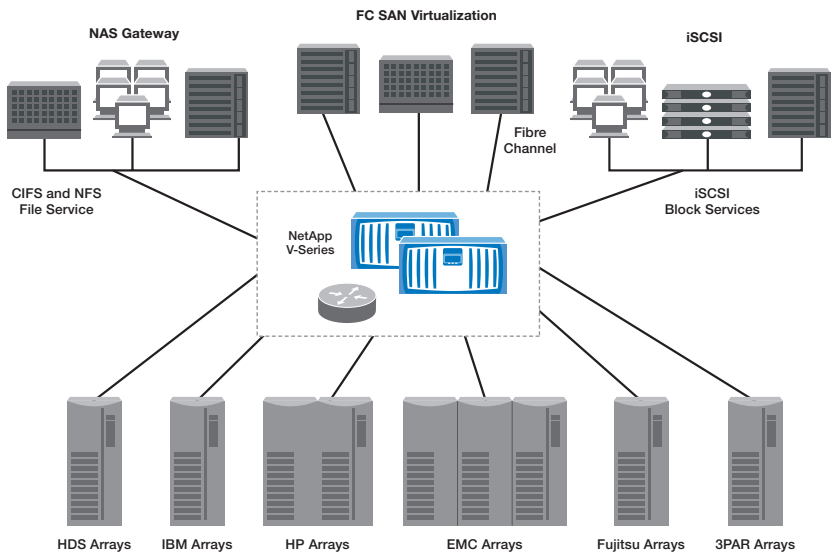You now have the flexibility to select and easily provision the optimum data access approach for your storage needs. Your V-Series solution also facilitates file sharing by enabling simultaneous access among heterogeneous clients and servers throughout your enterprise while consolidating your servers by eliminating the need for standalone or SAN-attached file servers.

MAXIMIZE YOUR INVESTMENTS

With our V-Series systems, you gain the advantages of enterprise Fibre Channel storage connectivity without the costs of physically connecting each host to your SAN infrastructure. You save money by optimizing storage while preserving future scalability. We make this possible by building our systems to seamlessly integrate into your mission-critical SAN infrastructures, allowing you to deliver NAS as well as block solutions.

REDUCE TCO

To reduce your total cost of ownership (TCO), the V-Series uses our Data ONTAP software, a highly optimized, scalable, and flexible operating system. Data ONTAP integrates seamlessly into UNIX®, Windows®, and Web environments to give you proven multiprotocol access, scalable performance, and flexible data management capabilities.

Figure 1) NetApp V-Series solution
Our industry-proven data access and management capabilities improve consolidation of your data by extending SAN functionality

INCREASE STORAGE UTILIZATION

You get dramatic improvements in your storage utilization using the built-in thin provisioning and end-to-end deduplication in our V-Series systems. With our FlexVol® technology, you are able to focus on management of your data rather than the underlying physical hardware. NetApp's deduplication technology lets you to achieve huge savings in storage space not only for backups but for primary and archival data as well. The bottom line: we can help you reduce storage space, power, and cooling requirements in your data center.

Consolidate tiered storage
With our MultiStore® software, you can consolidate multidomain server and data storage by using simplified tiered management to logically partition your network and its V-Series storage resources.

Optimize system throughput
Your system suffers minimal or no user disruption when you use our SnapMover® software to accomplish no-copy data migration for workload distribution among V-Series systems sharing a RAID array.

Optimize resource utilization
Our FlexClone® software cuts the cost and time required for application and database development and predeployment testing.

It allows you to create test versions of databases in minutes instead of hours. FlexClone accomplishes this by creating cloned LUNs or volumes that only require additional storage when data is modified.

ENHANCE DATA AVAILABILITY

Access data continuously
You're protected against planned and unplanned system outages with our V-Series active-active failover software. You have continuous access to your data because the system automatically fails over to an additional V-Series controller—without any data loss.

Protect against component failure
Our SyncMirror® software provides you with increased protection against multiple storage component failures by synchronously replicating mission-critical data in your local data center environment. You can quickly resume mission-critical operation at a remote site in a campus or metro area—with no data loss and minimal downtime—using our MetroCluster software.

IMPROVE DATA PROTECTION

Back up with little overhead
Our Snapshot™ technology saves you time and money by allowing your V-Series system to create near-instantaneous file-level or full

data set recovery with very little storage and performance overhead. With our Snapshot technology, you can back up your production data. NetApp Snapshot creates up to 255 data-in-place, point-in-time images per LUN or file system.

Recover data in minutes
Now you can recover terabytes in minutes rather than hours with our SnapRestore® technology. It allows any system to revert to a specified point in time for instant file system or file recovery.

Create remote, heterogeneous disk copies
You can quickly and efficiently mirror data for distribution, disaster recovery, backup, or testing with our SnapMirror® software. With our transport-independent synchronous, semi-synchronous, and asynchronous capabilities, you can create remote heterogeneous disk copies at high speed over any type of network, including:

- LAN
- WAN
- MAN
- SAN

Back up quickly and cost-effectively
You get quick, cost-effective, tapeless backups with our SnapVault® software. Your protection is enhanced by frequently backing up changed data from multiple NetApp storage systems or other storage platforms to a common Snapshot file on a central online repository.

Enable compliance
With SnapLock® enterprise software, you can be confident that your company's data complies with government records retention and best practices for keeping business records. With SnapLock, you get nonrewritable data permanence storage.

SIMPLIFY DATA MANAGEMENT

Simplify SAN management
With our SnapDrive® software, your SAN management is simplified through host-based provisioning, Snapshot consistency, and dynamic volume management.

Recover applications in minutes
With our SnapManager®, you get application-level recovery in minutes with consistent backup images. SnapManager integrates Snapshot management with:

- Microsoft® Exchange
- SQL Server™
- SAP® applications

Recover a single mailbox
With our Single Mailbox Recovery functionality and SnapManager for Exchange, you get near-instantaneous, accurate, cost-effective backups at your choice of granularity, including:

- Single messages
- Single mailboxes
- Folders
- Databases
- Storage groups

Deploy more easily
You can deploy our V-Series more easily and without having to learn a new naming or authentication system. We use standard conventions, so you can seamlessly integrate V-Series with your existing UNIX and Windows environments. We include native support for Microsoft Active Directory® and Kerberos authentication.

Simplify administration
With our FilerView® feature, your staff is able to use Web browsers to access a consistent, easy-to-use graphical user interface for everyday administrative tasks in today's open storage networks. The SecureAdmin™ software option allows you to apply a new level of security by providing strong encryption for command-line and HTTP-based administration and management sessions.

Simplify management
You can easily manage and optimize storage in distributed, multiprotocol environments with our VFM® (Virtual File Manager™), which provides a highly scalable, highly available file virtualization solution. You can even reduce your training costs by using specialized ApplianceWatch™ plug-ins, which support leading systems management frameworks, including Tivoli Enterprise and HP OpenView.

NetApp creates innovative storage and data management solutions that help you accelerate business breakthroughs and achieve outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at NetApp.com.

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