

# Symantec Enterprise Vault Integration With the Sun StorageTek™ 5320 NAS Appliance

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## Introduction

As the flow of information to and from businesses increases and both government and corporate regulations become part of everyday life, it becomes increasingly urgent to address the problem of data management. Electronic information is the norm, and storing and maintaining that data in a way that makes it easy to retrieve is critical to the overall functioning of the enterprise. In addition, the cost of keeping high quality, easily accessed archives of information can be prohibitive. The problem is exponentially increased when corporations are required to meet government and corporate regulations.

To address this requirement, the Symantec Enterprise Vault software and the Sun StorageTek 5320 NAS Appliance with Sun StorageTek NAS Compliance Archiving Software have been integrated into a solution to meet both corporate and government compliance requirements.

## What is the Sun StorageTek 5320 NAS Appliance?

### Technical Overview

The Sun StorageTek 5320 NAS Appliance is designed for multi-protocol IT environments, providing the ability to consolidate storage on UNIX, Macintosh and Microsoft Windows systems.

The Sun StorageTek 5320 NAS Appliance also supports:

- Compliance Volumes
- File System Journaling
- Checkpoints
- Remote Mirroring (Replication)
- Clustering

The Sun StorageTek 5320 NAS Appliance's architecture provides full system redundancy with 4Gb FC RAID arrays at the back-end, delivering very high levels of availability and performance in most open environments. It is easy to operate and effortless to manage, and installs in less than 15 minutes.

Designed to scale in capacity and performance, this powerful NAS appliance can be scaled to 168 TB of raw FC storage, and as much as 420 TB of SATA-based storage. A choice of FC or SATA drives inside the same appliance means that information that is frequently accessed can be placed on FC drives for exceptional performance, while archive data can be placed on higher-capacity, less expensive SATA disks. Tape backup is also supported.

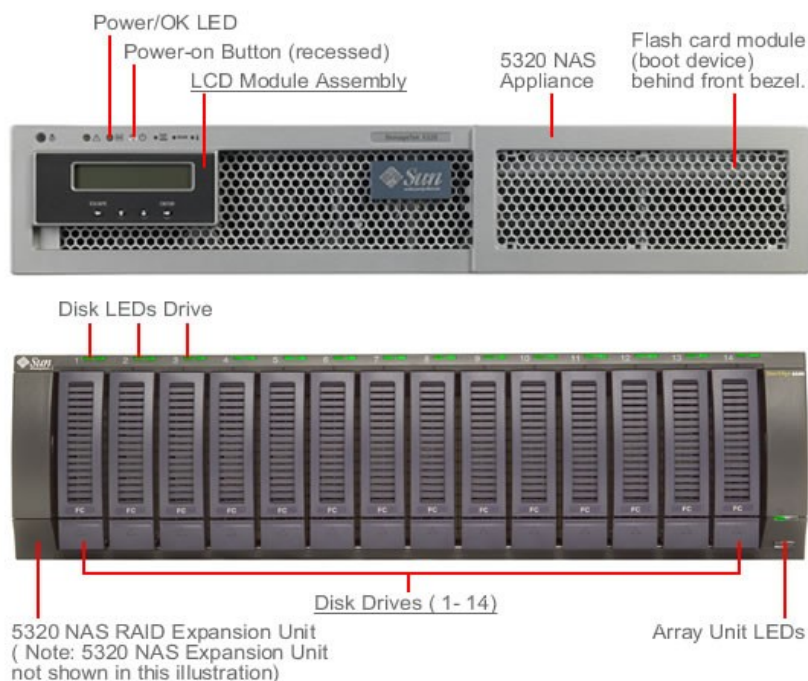


Figure 1: Sun StorageTek 5320 NAS Appliance

## Sun StorageTek Compliance Archiving Software

The Sun StorageTek NAS Compliance Archiving Software for the Sun StorageTek 5320 NAS Appliance adds the ability to create compliance volumes in which WORM (Write Once Read Many) files can be created. WORM files cannot be modified and they can only be removed after the retention period is met. The Sun StorageTek 5320 NAS Appliance, when coupled with the Sun StorageTek NAS Compliance Archiving Software, is collectively called the Sun StorageTek Compliance Archiving System, and meets stringent data retention and protection requirements such as those set forth by the US Securities Exchange Commission (SEC)'s rule 240.17a-4.

The Sun StorageTek Compliance Archiving System can be configured such that its disk volumes are either compliance volumes or regular (non-compliance) volumes. The compliance volumes themselves can be either "mandatory enforcement" or "advisory enforcement" inside the same Compliance Archiving System, resulting in maximum flexibility.

Retention periods may be extended for legal hold situations or change in fiduciary responsibilities. They may only be decreased on "advisory enforcement" volumes. This allows a file to be removed and is required to satisfy some countries' privacy rules. The action is captured in the audit log. A new retention-period may be assigned to a file whose previous retention period has expired.

For more on the Sun StorageTek NAS Compliance Archiving Software see references (i) and (iv).

# What is Symantec Enterprise Vault?

## Overview

Enterprise Vault is designed to be a long-term, highly-scalable store for items of unstructured information. Now in its seventh version, Enterprise Vault delivers not only a robust storage system but also provides a wide choice of implementation scenarios addressing cost reduction and compliance retention.

Enterprise Vault can be populated by multiple information sources (Microsoft Exchange, Lotus Notes, Microsoft SharePoint, file systems, or customer applications) and, through the Enterprise Vault Business Accelerators, provides seamless interaction for both organization and user exploitation of archived information. Enterprise Vault enables a secondary, and optionally tertiary, tier of storage to be used behind the primary information source and applies information lifecycle principles to these applications.

The situations that Enterprise Vault is commonly employed to solve include:

- **Application Storage Management:** Enterprise Vault acts as an online archive for items that are moved from primary application storage according to customer-defined policies for access. This enables the store size to be controlled and so allows applications, for example Exchange, to focus on their strengths, namely the dynamic handling of incoming information and accessing more recent and more frequently accessed items.
- **Regulatory Retention and Discovery:** Many organizations are required to keep all electronic information for long periods of time for legal or regulatory reasons. This typically includes email, files share content, SharePoint content, and instant messages. Enterprise Vault can be used in conjunction with Exchange journaling to act as a secure repository for items that need to be retained for defined periods of time.
- **Upgrade, Migration and Consolidation:** Reducing Exchange, Lotus Notes or file server storage requirements means that more users can be housed or supported on each server, thus allowing server consolidation. For example, controlling mailbox size leads to improved Exchange system consolidation benefits. In addition to this, Enterprise Vault can also be used to minimize the pain of a migration or upgrade by first slimming down the primary store and housing the bulk of the data in Enterprise Vault during the migration. The import and elimination of PST files is the strongest example of a migration and consolidation exercise that can be undertaken with Enterprise Vault.
- **Knowledge Exploitation:** Enterprise Vault also acts as an "information warehouse" for personal and corporate data, which can then be mined as a knowledge resource, using the in-built index and search technology. Special purpose products such as Enterprise Vault Compliance and Discovery Accelerators then offer solutions to specific problems such as regulatory surveillance and legal discovery.
- **Operational Excellence:** A good example of Enterprise Vault being able to increase the operational excellence of any primary application is a Service Level Agreement (SLA) for backup. Many organizations are finding that, because applications such as Exchange are growing so large, they are no longer able to meet their SLA for restore operations. With a majority of data being moved out of the Exchange stores, these SLAs can be planned and achieved. In addition, end users can service their own requests for old and "lost" information without consuming help desk or administration resources.

## A Platform for Archiving

Enterprise Vault is most well known for archiving email from Microsoft Exchange but this is not the only source of content for Enterprise Vault. Enterprise Vault can also accept Instant Message content, Lotus Notes content, and content from SMTP-based mail systems. Enterprise Vault is also able to accept content from file systems and Microsoft SharePoint Portal Server. Using the Enterprise Vault SDK, many partners are also adding content to Enterprise Vault, for example, SAP.

All content that is stored in the Enterprise Vault platform shares the benefits of long term management, reduced cost of storage and full text indexing.

Archiving is not just about putting content in the box; it is more about accessing the content as and when it's needed. To that end, e-discovery is a key reason why people will want to use Enterprise Vault and Symantec's Discovery Accelerator will allow rapid searching of all content, not only email.

For an overview of the architecture of Symantec Enterprise Vault, see reference (ii).

## The Integrated Solution

### Certification

The Sun StorageTek 5320 NAS Appliance has been certified with Symantec Enterprise Vault. The certification includes support for the Sun StorageTek NAS Compliance Archiving Software. See reference (iii) for supported software levels.

Other Sun StorageTek products certified with Symantec Enterprise Vault are the Sun StorageTek 5220 NAS Appliance and the Sun StorageTek Storage Archive Manager software, also known as SAM-FS.

Enterprise Vault requires Microsoft Windows, according to the compatibility table in reference (iii). Many of Sun's x64 range of servers are certified for Microsoft Windows, as shown in <http://www.sun.com/software/windows>, and make an optimal platform for Symantec Enterprise Vault.

### Solution Description

A typical Enterprise Vault deployment has one or more Vault servers and a separate database server running an instance of Microsoft SQL Server. Vault servers run the Enterprise Vault software. The database server stores Enterprise Vault metadata, including information about policies and schedules, and databases for e-discovery, if implemented.

The database server requires fast storage for database table spaces, logs, indexes and so on. Each Vault server requires fast storage for the full text indexes that are compiled as data is archived and for temporary files, but can store the archived data on the Sun StorageTek NAS Appliance.

In this solution, the Vault server(s) are configured to store archived data onto Windows CIFS shares of the Sun StorageTek 5320 NAS Appliance. The Sun StorageTek NAS Compliance Archiving Software can be licensed to allow Enterprise Vault to make files WORM where required.

### Sizing

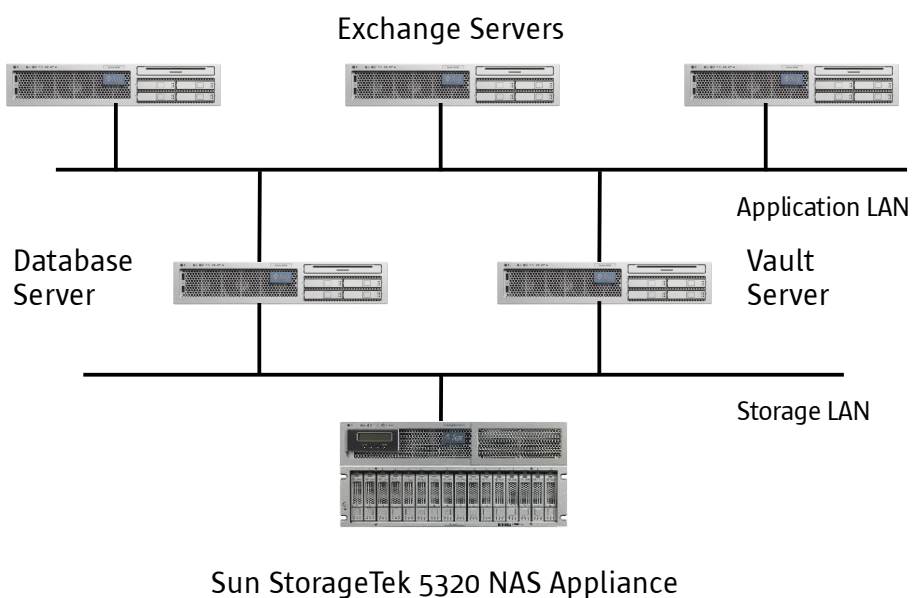
Accurate sizing of this requires a large number of variables to be considered:

- The number of Vault Servers required depends on the number of Exchange servers being accessed, the number of mailboxes being archived, and the Enterprise Vault archiving features being used.
- The number of Database Servers required depends on the number of Vault Servers deployed and will be affected by how extensively e-discovery is used.
- The amount of space required for archived data depends not only on the volume of email stored on the Exchange servers but also the type of archiving being performed and how aggressive the archiving policies are.

Enterprise Vault is a mature product and sizing conventions have been developed. When engaging with a Certified Sun/Symantec Partner, these conventions will be used to provide an initial sizing which will be then refined as the customers' environment is better understood.

## Example: Exchange Archiving

Enterprise Vault can be used to archive data from Microsoft Exchange, Lotus Notes, Microsoft SharePoint Portal Server, file systems, and customer or third-party applications (via APIs). The most popular application of Enterprise Vault is Exchange archiving, and this is used as an example in Figure 2. The servers and storage are all connected via Ethernet. To archive email from Microsoft Exchange, no software needs to be installed on the Exchange server. Instead, the server is accessed via MAPI. When it is archiving, Enterprise Vault appears as a busy user to the Exchange server.



*Figure 2: Exchange Archiving with Symantec Enterprise Vault and the Sun StorageTek 5320 NAS Appliance*

## Configuring the Sun StorageTek NAS Compliance Archiving Software for Symantec Enterprise Vault

The Sun StorageTek NAS Compliance Archiving Software must be configured to work with Enterprise Vault's compliance features.

- Out of the box, the Sun StorageTek NAS Compliance Archiving Software supports data retention requests from NFS clients. Enterprise Vault servers use the Windows Common Internet File System (CIFS). To enable these CIFS clients to get access to the features of the Sun StorageTek NAS Compliance Archiving Software, the software's `fsctl compliance wte on` command must be issued. The procedure is on page 195 of reference (v).
- For compliance volumes to work correctly, the software's compliance mode must be set to "emulation" as per page 8 of reference (iv).

The referenced documents for Sun StorageTek 5320 NAS Appliance are for Version 4.21, the most recent level of Sun's NAS OS certified with Enterprise Vault.

### Summary

The Symantec Enterprise Vault software, combined with the Sun StorageTek 5320 NAS Appliance and the Sun StorageTek NAS Compliance Archiving Software, offer an integrated, scalable archiving platform.

Although the Symantec Enterprise Vault software works with any storage presented as NTFS, the scalability of the Sun StorageTek 5320 NAS Appliance and the ability to share storage among multiple servers makes it a popular choice. If support for WORM files is required, the Sun StorageTek 5320 NAS Appliance is the simplest option.

### References

- i. Sun StorageTek NAS Compliance Archiving Software  
[http://www.sun.com/storagetek/management\\_software/data\\_protection/compliance\\_archiving/compliance\\_archiving\\_datasheet.pdf](http://www.sun.com/storagetek/management_software/data_protection/compliance_archiving/compliance_archiving_datasheet.pdf)
- ii. Symantec Enterprise Vault Technical Overview  
[http://www.symantec.com/enterprise/products/overview.jsp?pcid=1018&pvid=322\\_1](http://www.symantec.com/enterprise/products/overview.jsp?pcid=1018&pvid=322_1)
- iii. Symantec Enterprise Vault Compatibility Matrix  
<http://support.veritas.com/docs/276547>
- iv. Sun StorageTek Compliance Archiving System Policy and Procedures Guide  
<http://docs.sun.com/app/docs/doc/819-4196-13>
- v. Sun StorageTek NAS OS Administration Guide, Version 4.21  
<http://docs.sun.com/app/docs/doc/819-4284-11>

## For More Information

- Symantec's solutions: <http://www.symantec.com>
- Sun StorageTek 5320 NAS Appliance: <http://www.sun.com/storagetek/nas/5320>
- Training in Storage and Information Life Cycle Management: <http://www.sun.com/training>
- Sun Product Documentation: <http://docs.sun.com>
- Sun Wikis: <http://wikis.sun.com>
  - BigAdmin wiki
  - Storage Administration wiki
- Support:
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  - Support Information From SunSolve: <http://sunsolve.sun.com>

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