snapserver™
BY ADAPTEC

Snap Server Tape Backup

Data Protection Using BakBone NetVault For GuardianOS™

Introduction

Every day, IT administrators face the challenge of managing and safeguarding an increasingly diverse mix of data sets and the server and client platforms that support them. This growing complexity has created the need for simplified storage solutions that can quickly backup, restore, and fully secure all data types. Bakbone NetVault for GuardianOS™ by Adaptec delivers a simple solution with proven reliability.

Overview

Simple, Powerful Backup for GuardianOS Snap Servers

NetVault for GuardianOS brings together the leading data recovery solution with next-generation centralized data management. This powerful combination delivers enhanced data protection and enterprise-class functionality that scales to meet the demands of any size environment. Back up and restore data from Snap Server™ by Adaptec to locally attached tape drives or tape libraries (requires tape library license) with NetVault's unique feature set designed to meet current and future data protection needs.
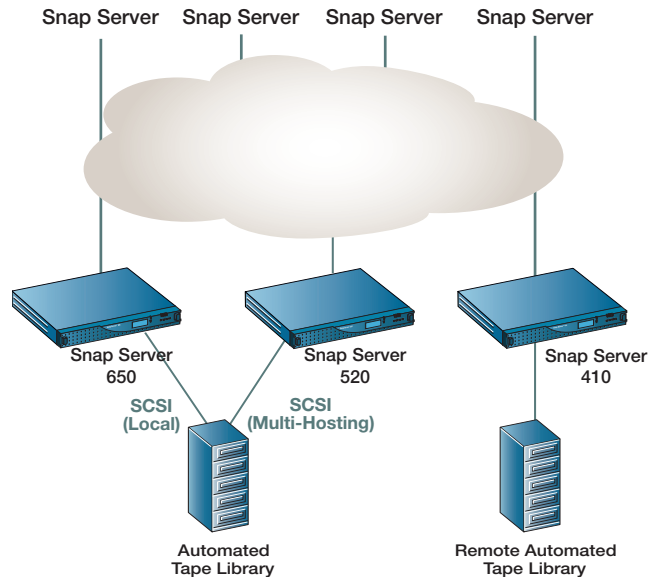
Key Features:

- **Policy Management —** Create job templates and easily apply them to a single client or an entire group of clients simultaneously. Once defined, policy-based administration allows a group of jobs to be monitored, managed, and edited as a single entity.

- **Reporting and Notification —** Schedule reports on NetVault in HTML, comma delimited, and other formats. Notification tools promote awareness of NetVault events and reduce potential data loss with an early warning system that improves support for automated, lights out operations.

- **Scalability —** Easily upgrade the scalable NetVault solution to NetVault DataCenter and Enterprise Editions to meet growing business needs.

- **Easy-to-Use Interface —** Simplify administration and reduce training requirements with NetVault's easy-to-use graphical user interface that presents the same look and feel on all supported Windows and UNIX operating platforms.

BakBone, NetVault Compatibility Chart

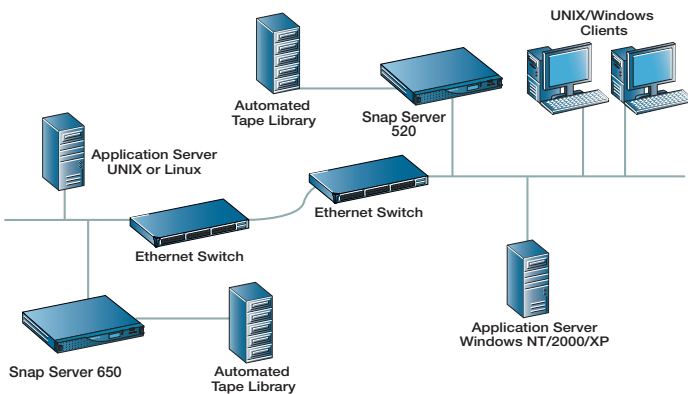| Storage Media		Tape Libraries	
4mm	LTO	ADIC	Plasmon
8mm	SLR	Alacritus	Qualstar
DDS-2, DDS-3, DDS-4	Viper 200/400	Breece-Hill	Quantum/ATL
AIT-1/2/3	9840/9940	Compaq	Seagate
Mammoth/2	Sony SDT/SDX/SDZ	Exabyte	Spectra Logic
DLT1	Magstar	HP	StorageTek
DLTvs80	IBM348X/349X/35XX	IBM	Sun
DLT(4/7/8/)000	VXA	MaxOptix	Sony
SDLT-320/600		Overland Data	Tanberg
		NEC	

Note: Tape Library License can be purchased from BakBone directly. For a full list of supported libraries and devices, please visit: www.bakbone.com

- **Virtual Tape Libraries (VTLs)** — Improve backup and recovery performance by sending backups directly to Snap Servers. VTL staging acts as a buffer, facilitates device streaming, and minimizes the network impact of copying staged data from the Snap Server to tape.

- **LAN-Free Backup** — Speed backups directly from servers and clients to tape drives across a backup network with NetVault's advanced architecture. Share all library tape drives among multiple Snap Servers. NetVault also allows LAN-free backups by controlling the backup and restoring data flow on a secondary Ethernet backup network.

- **Device Configuration** — BakBone NetVault for GuardianOS supports a number of storage media and tape libraries.

- **Consolidated File System Backup** — Take any number of incremental backups and build a new, full file system backup based on the last incremental and last consolidated backups. NetVault's consolidated file system backup feature creates a full backup from incremental backups.

- **Plugin Modules** — Use BakBone's plugin module architecture to upgrade to enhanced features such as: application data protection, disaster recovery, and open-file protection.

- **Topology Configuration Options** — Attach backup devices to a single Snap Server or backup multiple Snap Servers in different locations. Each of these Snap Servers comes with a five-client NetVault license.

Administer any data protection task (back up, restore, monitoring, reporting, etc.) from any TCP/IP-networked client machine — the BakBone NetVault management user interface (U.I.) is loaded on the system of choice, enabling centralized control of all backup functions from anywhere on the network.

A well-designed, distributed architecture gives BakBone NetVault for GuardianOS the flexibility to exploit advanced data management technologies, including Network Attached Storage (NAS). Some possible topology configurations:
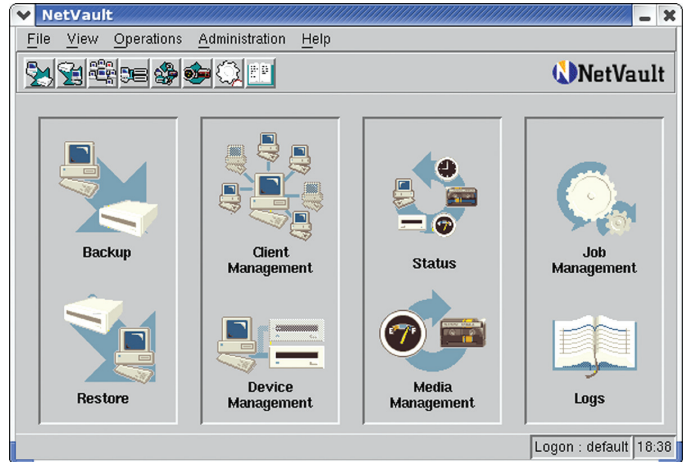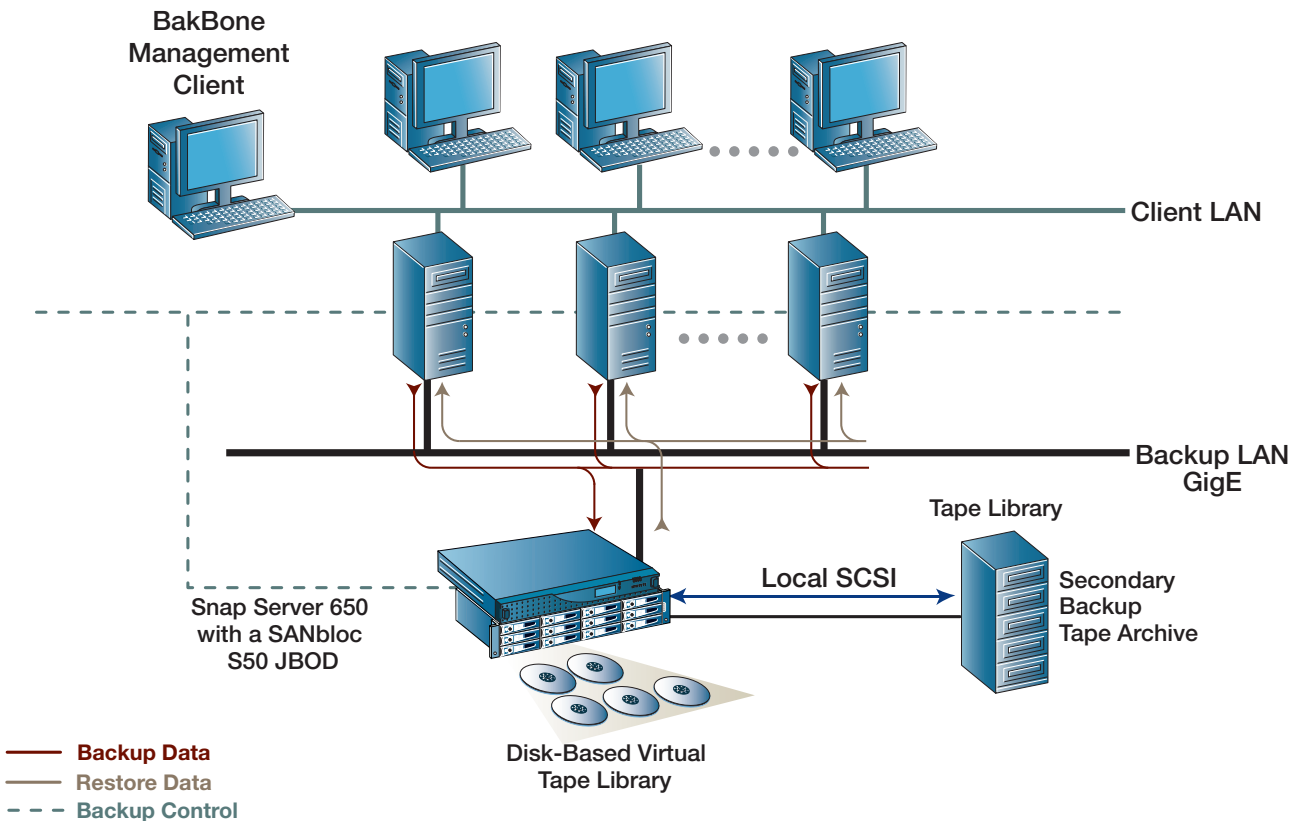
- **Local Backup** — Data is streamed from the Snap Server to the attached tape device.

- **Remote Backup** — When multiple GuardianOS-powered Snap Servers are installed, data from up to five Snap Servers can be streamed over the IP network to a tape device that is locally attached to a single Snap Server.

- **Multi-Hosting of Tape Libraries** — In multi-server configurations with a single, multi-drive tape library, BakBone NetVault for GuardianOS supports multi-hosting of the tape library. Up to five Snap Servers can be directly connected to the individual drives in the tape library.

- **Powerful Performance** — BakBone NetVault for GuardianOS enables outstanding data protection performance.

- **Enhances Backup and Restore Performance** — Local backup over SCSI provides faster backup and restore performance than backing up over the network.

- **Optimal Use of Resources** – Optimizes resources by backing up and restoring concurrently between a single node and multiple devices, multiple nodes and a single device, or multiple nodes and multiple devices.

- **Minimizes Network Congestion** — Optimizes performance for a large application server by sending its data to a SCSI-attached tape library for fast backups and restores with minimal network overhead.

- **Eliminates I/O Bottlenecks** — Distribute backup processing by attaching a Snap Server directly to a drive or tape library to maximize performance and reduce network traffic.

- **Improves Security and Reliability —** Quickly and easily protect/restore sensitive data off the corporate network by directly connecting a SCSI-attached tape library to any GuardianOS-based Snap Server platform.

- **Ensures Scalability —** Allows critical backup systems to grow as the enterprise grows.

- **Better Catalog Features —** Scheduled catalog maintenance optimizes catalog searches and minimizes disk space usage.

- **TurboVault —** This performance enhancement allows users to allocate the amount of memory shared between the Snap Server's CPU and the native NetVault application according to available memory and native speed of the backup tape device.

Ease-of-Use and Administration

- An intuitive user interface, which is the same across different operating system platforms, makes BakBone NetVault for GuardianOS easy to use.

- Point-and-click simplicity in all operating environments.

- Management of backup resources for an enterprise network or for one local site.

- Easy viewing, navigation, and drag/drop between screens and views.

- Automation of backup and restore jobs.

- Real-time monitoring of individual backup and restore job status.

- User Level Access defines users with a specific set of privileges on an individual or group basis. This is ideal for extending a subset of NetVault's features to other members of the IT staff as well as end users.

Disk-Based Virtual Tape Library

- ── **Backup Data**
- ── **Restore Data**
- ─ ─ ─ **Backup Control**

Improved Backup Performance Through Virtual Disk Management Intuitive Disk-to-Disk-to-Tape Backup Implementation

The unique BakBone NetVault for GuardianOS Virtual Tape Library (VTL) creates a virtual tape library, a virtual "pool" of tape storage, inside the Snap Server's file system, whether or not a physical tape drive or library exists. Define the number of virtual tape drives, tape slots and size of each tape, and in minutes the right size VTL is constructed for backup volume and workload capacity. Significantly improve backup performance by creating any number of concurrent backups. VTL takes advantage of Snap Server's low-cost, high-performance random access disk to shorten backup windows and enable backup with or without the presence of a physical tape storage device. Minimize restore times by keeping the most recent set of backups online in a VTL and migrating older backup sets to tape for off-site offline storage. Snap Servers integrate a 500GB NetVault VTL license.

Advanced Options and Upgrades

BakBone NetVault's modular architecture accommodates many functionality upgrades and Application Plugin Modules (APMs). Add a license key to upgrade the NetVault WorkGroup edition (shipped with Snap Servers) to BakBone's DataCenter or Enterprise capabilities. BakBone for GuardianOS can also accommodate several BakBone-specific application plugin modules that add unique functionality to the backup environment, such as support for open file applications and specific options, including DB2, Informix, Lotus Notes/Domino, Microsoft Exchange, Microsoft SQL Server, MySQL, Oracle Online/RMAN, PostgreSQL, SAP, Sybase ASE, Teradata, NetWare Thin Client/Smart-Client, Disaster Recovery, VaultDR Online/Offline, and Encryption Plugin. Refer to the BakBone web site for detailed descriptions of these options and APMs.

Summary

BakBone NetVault for GuardianOS is a flexible, powerful, intuitive, and scalable solution for the protection of business-critical data from user files to application server — data covering the workgroup to the enterprise.

Its intuitive management interface, superb performance, wide array of hardware and media support, and "any-point control" in either centralized or distributed computing makes it an ideal backup solution to deploy in almost any environment. Furthermore, its scalable design and optional support for tape libraries provides the peace of mind that BakBone NetVault for GuardianOS can be easily deployed today and scaled to meet changing data protection needs.

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