

KEY BENEFITS

- Offloads backup operations from virtual machines to a VMware VCB proxy server or to a Microsoft Hyper-V server to reduce resource contention and eliminate backup agents on each virtual machine.
- Meets SLAs for protection and recovery by leveraging multiple backup and recovery options for protection and recovery of VMware or Microsoft Hyper-V virtualization platforms.
- Improves data management and protection of virtual machines by automatically discovering and adding them to default protection policies.
- Manages and retains more recovery copies on disk or tape while reducing storage footprint by using embedded deduplication, smarter management policies, powerful indexing and random disk access.
- Identifies and eliminates redundant data across backup and archive of physical and virtual environments running VMware or Microsoft Hyper-V by using embedded deduplication.
- Leverages a single solution that integrates backup, archive, replication and storage resource management across physical and virtual servers providing unlimited scalability and efficiencies through simplified management and better use of data and resources. All manageable from a single console.
- Ensures applications are protected and recoverable by leveraging seamless, consistent application protection and data mining tools to perform granular recovery of application objects from backup sets.
- Implements a cost-effective disaster recovery strategy for all environments, applications, locations and points-in-time. Replicate from P2V or V2P to recover data and applications and rebuild your backup environment on dissimilar equipment quickly and efficiently.
- Easily implements tiered storage by using automated data lifecycle management to retain current critical data on primary storage while archiving legacy and stale data to less expensive, secondary storage.

Managing Data More Effectively in Virtualized Environments with CommVault® Simpana® Universal Virtual Software Agent

Improves Data Availability, Reduces Complexity, Minimizes Cost and Risk

The Challenge

Many organizations are shifting to virtualization of servers to improve operational efficiency and reduce capital expenditures. Virtualization helps consolidate servers, improve hardware utilization and reduce the consumption of power and physical space in the data center. However, it also creates a whole new level of management complexity, presenting challenges across the enterprise in the areas of data protection, storage, and network consumption and manageability. As servers and workloads continue to consolidate into virtual stacks, effective data protection and recovery remain an ongoing challenge. There are several considerations for data protection in the virtual environment:

- **Physical server load and resource consumption:** As the ratio of virtual servers to physical servers continues to increase, there is severe resource contention among virtual entities vying for limited physical server and network resources. Traditional server-based data protection operations only increase this resource contention and system load.
- **Virtual machine sprawl:** As virtual servers become the default server policy, and with the ease of allocating new virtual machines, it is very easy to create a virtual machine sprawl. Automatic and simplified protection and recovery of data on these virtual machines using a consistent set of policies is necessary to manage this growth with limited administrator resources.
- **Different recovery needs:** It is necessary for any data protection operation to provide a single pass backup process yet allow multiple recovery options ranging from full virtual machine recovery for disaster recovery to granular single file recovery for data loss.
- **Backup storage optimization:** The unique nature of virtual machine data protection lends to a lot more backup storage consumption. A credible solution needs to have built-in capabilities to allow data and storage optimization not only at rest but also in transit.
- **Application protection:** As applications running in virtual machines become more mainstream, a data protection solution needs to provide a consistent set of recovery methods not just for the virtual machine but for applications running inside virtual machines as well.

The CommVault® Simpana® Software Solution

CommVault® Simpana® software's Universal Virtual Server Agent helps address the challenges in a virtual environment based on VMware Virtual Infrastructure, VMware Virtual Server, Microsoft Hyper-V server and Microsoft Virtual Server Environments. The agent resides on a proxy server outside the virtual machines and reaches into virtual servers for off-host backups. Local agents in the virtual machine are not required. This agent leverages tools built into the virtualization platforms (VMware Consolidated Backup (VCB) and Microsoft Virtual Snapshot (VSS) to perform block-level, incremental image backups, volume-level backups or file-level backups. Each backup type provides a wide array of recovery options, which spans from a full virtual machine restore to a granular single file restore. Cross platform restore is also available from VMware to Microsoft to support migration or for testing purposes.

Administrators have the ability to automatically discover virtual machines across the entire virtual environment and can assign groups of virtual machines to specific backup policies. Newly added machines can also be added automatically to default backup policies to enable automatic protection of new virtual machines.



KEY CAPABILITIES

- **Agent-less Backup of Virtual Machines**—Offload backup operations from virtual machines to a VMware VCB proxy server or to a Microsoft Hyper-V server-eliminating resource contention on the physical host and the need for costly backup agents on each virtual machine.
- **Flexible Backup and Recovery Options for VMware and Microsoft Virtual Platforms**—Leverage multiple backup options to balance SLAs for protection and recovery of virtual machines on VMware or Microsoft virtualization platforms. Recover individual files, even from an image-level backup, without having to recover the entire image first. Perform volume-level backup and recovery for VMware environments. Other options include the ability to perform incremental delta-block, image-level backup to expedite backup operations, reduce storage utilization, and enable single-pass, full virtual machine recovery.
- **Consistent Application Protection**—Ensure applications are consistently protected and recoverable across physical or virtual servers by creating a consistent copy of a virtual machine's application data for fast recovery using VCB snapshots. Leverage data mining tools to perform granular recovery of application objects from backup sets.
- **Optimized Storage and Network Utilization with Global Data Deduplication**—Manage and retain more recovery copies on disk or tape without increasing storage requirements. Leverage smarter management policies, powerful indexing, embedded global data deduplication, and random disk access capabilities. Share storage for backup and archiving across physical and virtual servers; archive stale data; eliminate duplicate files, e-mails and messages across the backup and archive tier of physical or virtual environments.
- **Unified Platform for Simplified Administration**—Consolidate data management for physical and virtual servers including backup & recovery, archiving, replication and storage resource management. All integrated to deliver centralized management for virtual servers, physical servers and storage from a single unified console without learning new technologies or installing new infrastructure. Standardizes tools and best practices across the enterprise; automates data lifecycle management across storage tiers and physical or virtual environments; centralizes logging, reporting and auditing.
- **Automated Discovery and Set up of Virtual Machines**—Manage virtual machine sprawl by automatically discovering virtual machines and adding them to default protection policies—simplifying set up and guaranteeing immediate protection.
- **Replication from Physical to Virtual (P2V), Virtual to Virtual (V2V), or Virtual to Physical (V2P) Servers**—Deploy fast, cost-effective disaster recovery by replicating data directly from physical servers (remote or data center) to virtual environments and vice versa. Rebuild your backup environment on dissimilar equipment quickly and efficiently. Easily set up virtual machines at a DR site that mirror physical production site servers. Leverage virtualization tools to rapidly provision resources for disaster recovery.

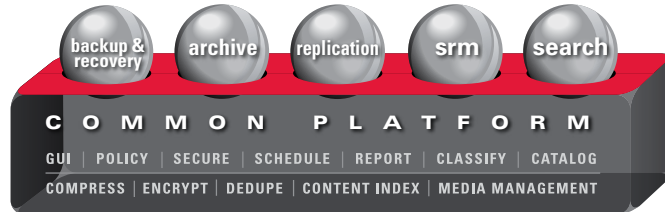
SIMPANA

software

CommVault® Simpana® Backup & Recovery, Archive, Replication, Resource Management and Search software is designed to work together seamlessly from the ground up, sharing a single code and common function set. This exclusive single-platform architecture enables unparalleled software efficiency, performance and reliability for unprecedented control over data growth, costs and risk.

Together these features relieve the administrator from having to selectively balance backup policies to make them work more effectively with existing approaches such as VCB. They ensure data transfers are efficient and not wasteful as in the case of daily VCB Full-Image backups. Furthermore, these features enable the broadest set of recovery options to reduce additional steps in the restore process.

With its unified architecture and broad range of backup and granular recovery options, CommVault® Simpana® software enables enterprise customers to reduce the risk of data loss and service disruption, optimize storage and network utilization, simplify the management of physical and virtual servers, and implement a cost-effective disaster recovery strategy.



*CommVault® Simpana® Software's
Singular Information Management® Architecture*

CommVault® software solutions are built on a single technology platform that offers the flexibility to expand from backup to replication to archiving to storage resource management, without learning new technologies or installing new infrastructure. All these capabilities are integrated into a single, efficient, scalable product that delivers centralized management for physical servers, virtual servers and storage from a single unified console. Comprising an expandable range of application modules, Simpana® software provides multiple backup and recovery options, a flexible IT infrastructure for data protection, and disaster recovery to ensure business continuity.

Conclusion

CommVault® Simpana® Software's Universal Virtual Server Agent makes it possible for enterprises to overcome the complex data management challenges created by exponential data growth and sprawling virtualized environments. By leveraging tools built within the virtual environment, the Universal Virtual Server Agent enables superior data protection and granular recovery for virtual environments. Embedded deduplication and automated data lifecycle management for physical and virtual servers further optimize the benefits of virtualization and reduce costs.

About CommVault

A singular vision—a belief in a better way to address current and future data management needs—guides CommVault in the development of Singular Information Management® solutions for high-performance data protection, universal availability and simplified management of data on complex storage networks.

CommVault's exclusive single-platform architecture gives companies unprecedented control over data growth, costs and risk. CommVault's Simpana® software suite of products was designed to work seamlessly from the ground up, sharing a single code and common function set, to deliver superlative backup and recovery, archive, replication, search and storage resource management capabilities. More companies every day join those who have discovered the unparalleled efficiency, performance, reliability, and control only CommVault can offer. Information about CommVault is available at www.commvault.com. CommVault's corporate headquarters is located in Oceanport, New Jersey in the United States.

For More Information on CommVault solutions for virtualized environments:

www.commvault.com/solutions-virtualization.html



commvault
solving forward®

www.commvault.com ■ 888.746.3849 ■ E-mail: info@commvault.com

CommVault Worldwide Headquarters ■ 2 Crescent Place ■ Oceanport, NJ 07757 ■ 888-746-3849 ■ Fax: 732-870-4525

CommVault Regional Offices: United States ■ Europe ■ Middle East & Africa ■ Asia-Pacific ■ Latin America & Caribbean ■ Canada ■ India ■ Oceania

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