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A CommVault White Paper: CommVault Galaxy Backup & Recovery for Novell Open Enterprise Server and NetWare Environments

Abstract

The CommVault Galaxy™ Backup and Recovery product offers a powerful set of data and storage management tools to assist in the protection, restoration and management of critical NetWare information. Providing easier management of complex storage environments, the Galaxy software is designed to meet the changing data management needs facing every enterprise today.



YES
TESTED &
APPROVED

Novell®

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CommVault® Galaxy™ Backup & Recovery 7.0 for Novell Open Enterprise Server and NetWare Environments

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CommVault Galaxy Backup & Recovery 7.0 Novell Open Enterprise Server and NetWare Environments

Introduction

The Singular Information Management (SIM) platform, based on CommVault's Common Technology Engine, integrates Galaxy™ backup, recovery, active migration and archiving, email compliance, snapshot management and recovery, remote replication, storage resource management (SRM) and enterprise service-level management. The CommVault® SIM platform leverages the powerful features of Novell NetWare, and is certified with Novell as a “Yes Tested & Approved” solution. This document covers some of the features of CommVault Galaxy software and how they can protect data on Novell platforms and applications, including Novell NetWare file system, Novell Open Enterprise Server (OES) with SUSE Linux and .NET, GroupWise and Novell eDirectory.

CommVault Galaxy Backup & Recovery software is the only data management solution that protects all components of NetWare platforms that work together to support business operations based on NetWare and SUSE Linux Enterprise Server. The comprehensive approach dramatically improves management of NetWare platforms, saving time daily and ensuring recovery of data. CommVault Galaxy capabilities include unique applications-aware integration for NetWare services that provide better options for protecting NetWare data coherently. CommVault Galaxy also enables NetWare server-specific information protection and recovery, for rapid platform recovery when you need it.

In deployments where Novell clients run Windows and use NetWare services like GroupWise and Novell eDirectory, CommVault Galaxy software uniquely spans all systems to provide coordinated backup and recovery. CommVault Galaxy software also uniquely enables data migration and consolidation among NetWare and Windows systems for easy file sharing and server migration.

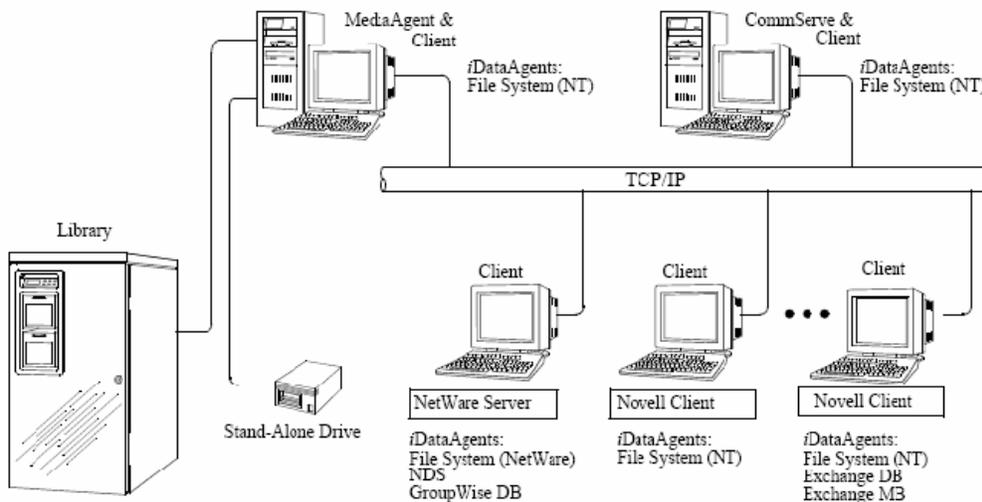


Figure 1. A Typical CommVault Galaxy Deployment for NetWare Platforms

CommVault Galaxy not only protects NetWare components, it enables you to run backup and recovery operations on the NetWare platform to further unify your environment and take better advantage of your available server systems. Note that the console manages NetWare backup and recovery from a Windows platform.

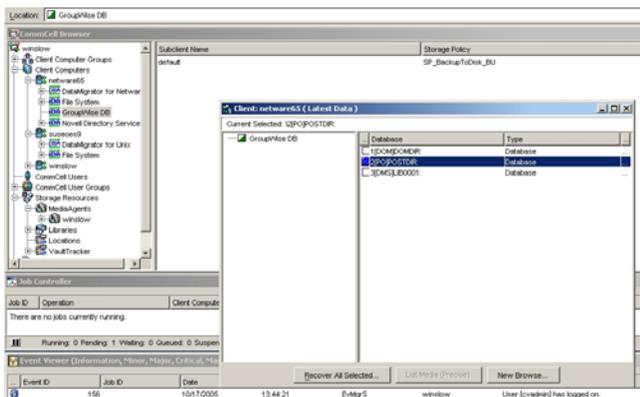
Coordinated Platform Protection Ensures Coherent, Rapid Recovery of Application Data

NetWare platforms and Open Enterprise Server provide a range of services to applications, which can also affect application data. Data protection operations must integrate with the entire platform to ensure coherent, rapid recovery of application data. Application-awareness also speeds and improves your configuration, by offering auto-discovery and easy selection of application components that must be protected. CommVault Galaxy data protection is unique in providing this level of integrated backup and recovery capability, and unique in providing this across key NetWare and Open Enterprise Server services and components. This saves your time and money, as well as your NetWare data.

Unique Application-Aware Integration for Novell GroupWise Messaging

CommVault offers a Galaxy iDataAgent (iDA) integrated with Novell GroupWise databases, to protect and recover the database data. This iDA protects GroupWise domains, post office and document store databases, and enables rapid and easy recovery. CommVault Galaxy software uniquely provides message-level restore options, with easy point-and-click selection for GroupWise end users right from the GroupWise client.

CommVault Galaxy supports out-of-place recovery as well as in-place recovery, to avoid overwriting changes made since the last backup. Once a GroupWise database is restored, GroupWise end users can browse and select from this database just as they would their regular mailbox. This ability to enable end users to recover their own files saves your time.

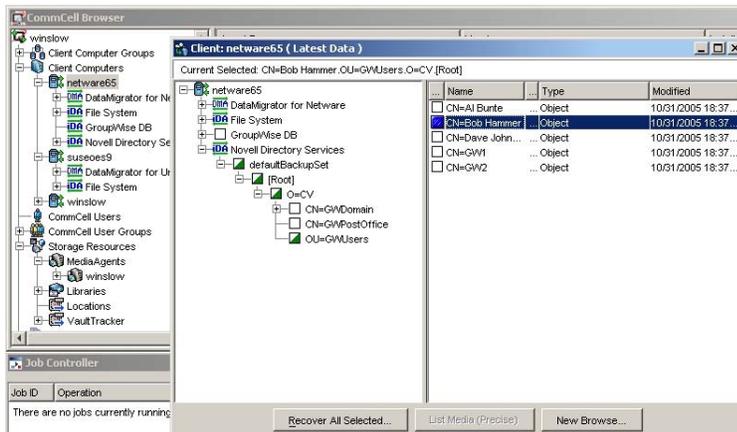


Fast, easy data recovery: *In this example, browse all data for the client system, NetWare65. Select from GroupWise domain, post office and document store databases. Recover by point-and-click selection—without having to locate media. Browse all of the data available for the entire client system at the same time. CommVault Galaxy software saves more of your time, by offering coordinated protection of GroupWise along with eDirectory—so that you can recover GroupWise message attributes without having to rebuild an entire NetWare environment.*

Unique Application-Aware Integration for eDirectory

CommVault offers a Galaxy iDataAgent (iDA) called NetWare Directory Services iDA, which is integrated with eDirectory. This iDA provides the only data protection that enables you to recover individual eDirectory objects, such as users, and eDirectory schema. CommVault Galaxy software saves your time, by enabling you to recover individual objects without having to restore the entire eDirectory tree. eDirectory protection is critical for ensuring complete protection of any NetWare application that stores object properties in eDirectory, such as GroupWise.

eDirectory provides directory services for NetWare, Windows NT and UNIX client systems, and demands a data protection solution, such as CommVault Galaxy Backup and Recovery, that can span these systems. The eDirectory directory represents each network resource, such as user, system or application, as an object with properties. For example, eDirectory defines user and print server objects, and defines over 80 properties for each user, such as name, login, password, department and title.



Fast, easy data recovery:

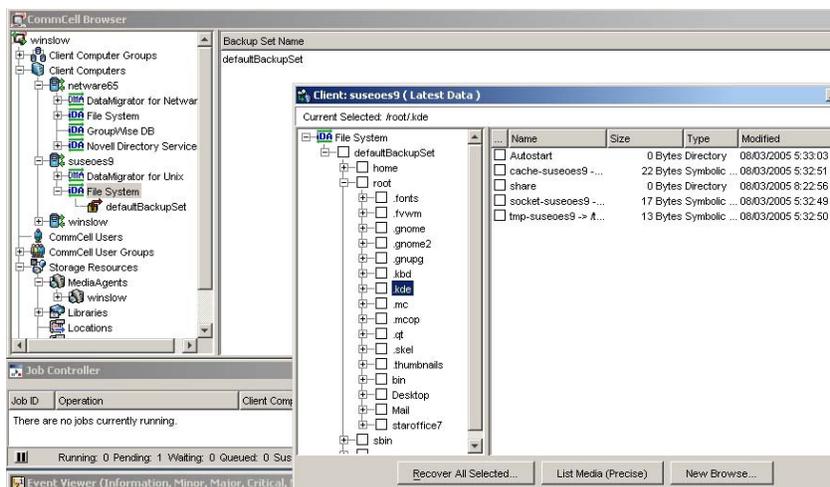
In this example, recover the eDirectory properties for user object Bob Hammer using point-and-click selection. You do not need to recover the entire eDirectory tree to recover a single user. For best efficiency, deploy the CommVault Galaxy NDS iDA for eDirectory on a NetWare server containing a full replica of eDirectory.

Comprehensive Protection for Novell File Systems Enabling Easy Recovery Upgrades and Consolidation

CommVault offers Galaxy iDataAgents (iDAs) that are integrated with Novell file systems, which are NetWare and also Open Enterprise Server running SUSE Linux Enterprise Server.

Unique Protection for NetWare File Systems

CommVault Galaxy iDA for NetWare provides rapid backup and easy recovery of NetWare files, including traditional volumes, NetWare server system (NSS) volumes and all types of namespaces, including Long, DOS, MAC and NFS. Content-sensitive file management makes it possible to find and manage files easily using file type extensions. Browsing with wildcard search support makes it easier to rapidly locate a file for recovery. Right-click on the file to see all of the versions backed up, and easily select any and all for recovery.



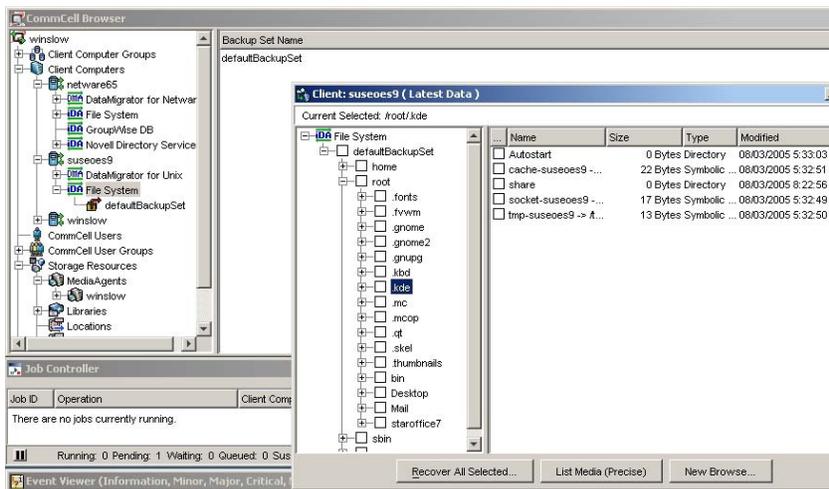
CommVault Galaxy software enables you to restore file system data across different namespaces, as long as the filenames fit where the data will be restored. You have the option to restore trustees, data with no trustees, or trustees and data. Restoring user space restrictions is also supported.

Easy Upgrades: CommVault Galaxy software offers the unique capability to assist and accelerate upgrades by migrating file system data easily among NetWare versions, and from NetWare to SUSE Linux Enterprise Server running in Open Enterprise Server environments. CommVault Galaxy migration keeps you within compliance requirements, because Galaxy can always restore files from older file systems. CommVault Galaxy's unique capability to protect and enable management of NetWare trustees ensures secure data through migration. Use Galaxy to simplify data migration from

older NetWare versions and from NetWare to Linux, to speed migration and more quickly reuse your legacy hardware to save money.

Easy Consolidation: If you are consolidating your servers, CommVault Galaxy software can also assist you by migrating file system data easily among NetWare, Windows, Linux or UNIX. The software can restore any file system data to any platform, thereby enabling cross-platform data management and migration.

Easy, Expanded Data Management: As part of the CommVault Simpana™ suite, Galaxy software can be expanded easily to include archive, migration and compliance capabilities—all managed within the same unified console to make it easy to learn and rapid to deploy. Consider data migration (archive) to lower your cost of storage and to speed backup operations. For more details, see the datasheet for Data Archiver.



Unique Protection for Novell Open Enterprise Server (OES) Environments

Novell Open Enterprise Server is a secure, highly available suite of services that provide file, print and application services by combining NetWare and SUSE Linux Enterprise Server. Open Enterprise Server uniquely enables combinations of NetWare and SUSE Linux Enterprise Server systems to

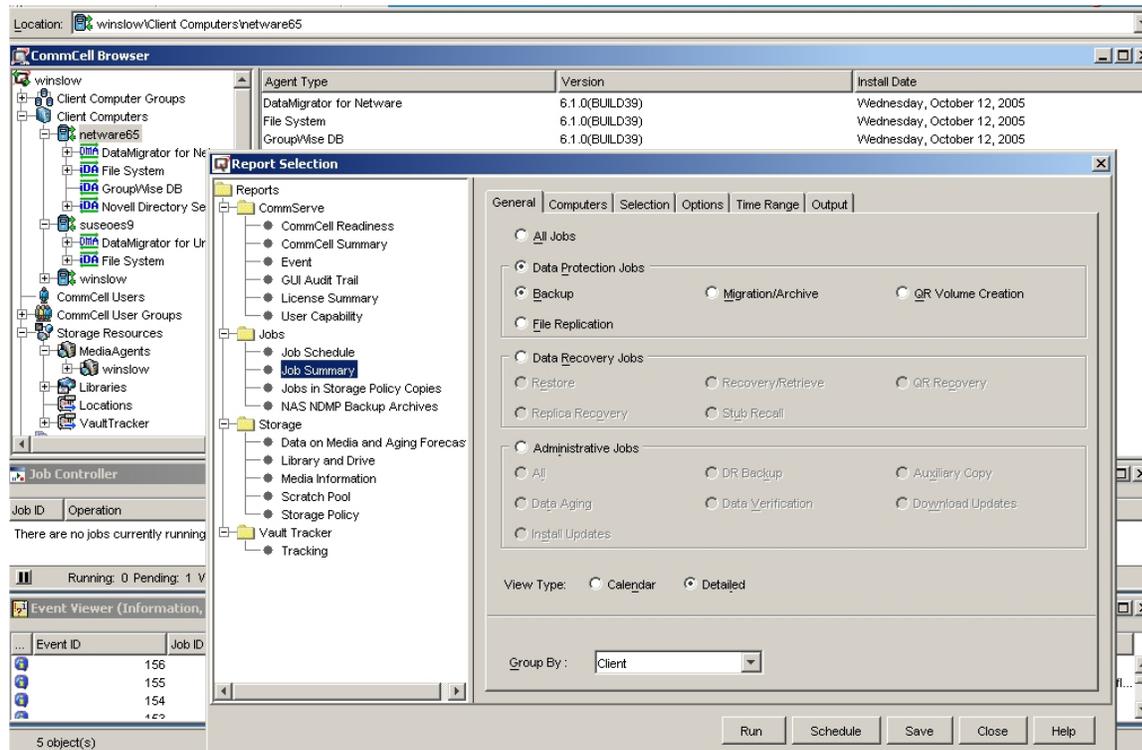
work together to fail over to each other, and demands data protection that can span these environments to deliver coordinated, simple protection and data coherency.

CommVault Galaxy iDataAgent for Linux on Open Enterprise Server provides all of the same protection described for NetWare file systems, including Netware Server System volumes and all types of namespaces. In addition, it provides protection for Unix File System (UFS) data including:

- CD-ROM File System (cdfs)
- Extent 2 File System (ext2)
- Extent 3 File System (ext3)
- Reiser File System (reiserfs)
- Sestina File System GFS 5.2
- 'X' File System (XFS)

Comprehensive NetWare Protection Options

There is no need to sacrifice your data protection options on NetWare platforms. CommVault Galaxy software fully supports using NetWare systems to run data backup and recovery operations and to manage library devices, including disk, tape and optical. This enables you to take full advantage of NetWare systems to carry protection loads and to further simplify your environment by eliminating the need to use other types of systems. For more details on the server systems supported, see “System Requirements” and consult the CommVault literature on MediaAgents™.



CommVault Galaxy requires a minimum of one Windows system to run the unified console, which manages its backup and recovery operations. It also provides comprehensive, point-and-click reporting on NetWare protection, including all NetWare and Open Enterprise Server operations.

Key Features and Benefits for Novell Platforms

Key Feature	Benefit
Easy, fast recovery of file system, database and application data using object-level recovery capability	Fast data recovery and business resumption. Save significant time using integrated recovery options: object-level recovery of individual NetWare and SUSE Linux Enterprise Server files; out-of-place GroupWise database recovery to enable end-users to browse and select individual mail messages on their own; recover individual eDirectory objects and their properties without having to restore an entire tree.
Easy right-click selection among multiple file versions	See multiple versions of the same file, and easily select all, some or one to recover the exact version that your business user requires.
Recovery redirect options, including in-place, out-of-place, cross-platform and cross-application restores	Enables easy recovery of data among and between systems for system rebuilds and upgrades, including assisting with migration to new versions of GroupWise and among NetWare and SUSE Linux versions.
Round-robin load balancing of backup loads using available systems, including NetWare and SUSE Linux Enterprise Server	Perform backups more quickly and fit into smaller windows, by dividing backup loads among NetWare systems as well as among available UNIX, Linux, NetWare and Windows systems.
Dynamic and static disk sharing from NetWare and SUSE Linux Enterprise Server	Increase ROI from expensive disk storage, by sharing access to disk with static and dynamic configurations—all supported from NetWare and SUSE Linux environments.
Span disk mount points from NetWare and SUSE Linux Enterprise Server	Configurable to “spill and fill” or “fill and spill” according to your requirements, reduces problems with disk management by enabling CommVault Galaxy Backup and Recovery to work across multiple mount points and treat them as a single disk device—all supported from NetWare and SUSE Linux Enterprise Server environments.
Shared library management among NetWare, Linux, UNIX and Windows systems	Increased ROI on expensive library equipment, by providing shared access to libraries and built-in robot management from multiple backup servers. Because library sharing is built into Galaxy software, it is easier to deploy, manage and maintain than with other backup offerings.
Shared drive management among NetWare, Linux, UNIX and Windows systems	Append data and fill removable media such as tape, rather than wasting tape and increases your costs if tapes are not filled when you need to rotate them off-site.

See it For Yourself

To find out more about how CommVault Galaxy Backup & Recovery along with other parts of CommVault's Singular Information Management suite can save your time and money along with your data, contact CommVault. Ask to attend an interactive CommVault webinar, speak with a Galaxy expert, or try it for yourself by registering to receive a trial version of the software.

Find out for yourself how Galaxy Backup & Recovery saves your time and money as well as your data.

Learn more about Simpana and the benefits of Singular Information Management.

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