

CommVault Galaxy® Data Protection 7.0 for IBM DB2 Database Systems

Simplified, Enterprise-Class Protection for Large-Scale Database and Associated Systems Deployments

Key Benefits

- ▶ Simplified operations with guided recovery
- ▶ Dramatic recovery performance improvements
- ▶ Object-level recovery extracted from a full database backup
- ▶ Low-impact, high-performance backups
- ▶ Comprehensive database protection including system and user databases, history files, and associated log files
- ▶ Easy add-on protection for DB2 applications files and file system data residing on DB2 systems—all managed from the same Unified Console
- ▶ Point-in-time recovery with point-and-click simplicity
- ▶ Dramatically reduced disk and tape use
- ▶ Improved media handling with built-in tape tracking and rotation management
- ▶ Benefit from CommVault® core competencies for database protection

Easily add capabilities for protection, archive, replication and snapshot recovery, all managed from the same Unified Console.

The Business Challenge

Ensuring access to vital information means more than just application availability. Research shows that almost 80% of data loss scenarios are due to human, application or soft errors. Traditional availability solutions like clustering, mirroring and replication cannot adequately address these situations. To ensure access to data—and data integrity—a comprehensive data protection strategy is required.

The CommVault® Solution

CommVault Galaxy® for DB2 is an enterprise-class, flexible solution that simplifies and automates many of the tasks associated with managing DB2 backup and recovery. DB2/UDB API integration and defined best practices based on CommVault® core competencies and database experience help to minimize and eliminate recovery failures, significantly speed backup and restore performance, and minimize reliance on scripting. The CommVault solution is designed for fast, easy deployment with your existing infrastructure—so your time-to-better-backup can be days and not months.

Increased Productivity

CommVault Galaxy software offers complete backup and recovery protection options for DB2, all selectable from within the easy-to-operate CommVault Unified Console interface. This interface enables point-and-click selection of full, incremental and delta backup options. This

interface also enables point-and-click selection of DB2 database files, including table spaces, history files and log files—and optionally prunes the log files after the backup job is complete as part of the process. Pruning the log files keeps them from growing too large.

Completing backup and recovery jobs is often the key challenge for backup administrators. Typically, much time can be wasted verifying that jobs have run—and completed—and then diagnosing the network, server or storage problem that disrupted operations.

CommVault Galaxy software provides advanced failover resume capabilities that help jobs to complete even when failures occur, along with comprehensive point-and-click reporting to make verification a snap.

More Jobs Complete with CommVault Galaxy® Failover Resume

In the event that a CommVault Galaxy backup node (called a Media Agent) fails, the backup and recovery jobs are automatically resumed on alternate nodes. Resume means that the job does not have to restart from the beginning, but is resumed from the point of failure. This can be critical for finishing long jobs, in particular. CommVault Galaxy software also resumes jobs using alternative network connections when networks drop. CommVault Galaxy software uses this same capability to switch backup jobs to alternative tape drives when drives fail. The

Key Capabilities

▶ Ultra-rapid deployment with existing infrastructure—

CommVault software is easy to install, configure and manage. Support for a wide range of UNIX, Linux and Windows platforms and DB2 versions makes it easier to maintain your DB2 environment.

▶ Web browser-based management—

Administrators and operators can manage DB2 data from virtually any location with web access.

▶ Fully configurable user-level security access levels—

Define and assign operational and management activities to different users and user groups.

▶ Simple-to-operate DB2 recovery—

Out-of-box simple, guided recovery using point-and-click GUI options for DB2 that makes it easy for operators to handle recovery tasks.

▶ Preserved use of your DB2 recovery scripts—

If you have years of time invested in fine-tuning complicated recovery scripts, you can keep them and use them immediately with CommVault Galaxy software. The CommVault Galaxy CLI “on demand” capability makes this easy and immediate.

▶ Automated archive log management—

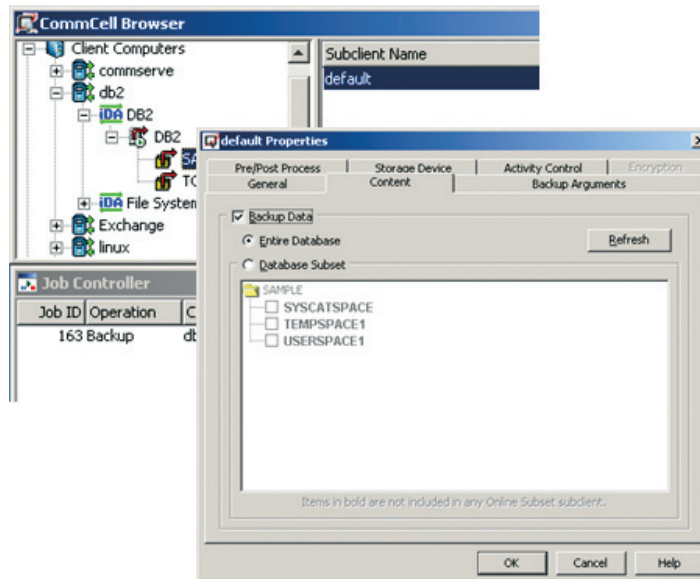
Automatically preserve and prune DB2 log files to save on disk space, as part of the backup operation. Provides easy archive log recovery and point-in-time replay options for easy log replay.

▶ Fine-tuned archive log control—

Backup and delete a range of archive log files by date or Log Sequence Number (LSN).

▶ Out-of-Place and Cross-Platform Restores—

Easily recover DB2 data on new systems when equipment is damaged, and across OS versions to assist in forward migration.



advanced design of the software preserves easy, one-step recovery even when backup copies span tapes.

Point-and-Click Reporting

Reports that verify that backup jobs ran—and completed—along with recovery job history, tape tracking and rotation, operator and administrator audit tracking and other key reports are available with easy point-and-click access right from the CommVault Unified Console. Reports can be saved, exported and attached to email for easy distribution. In the same point-and-click interface, reports can also be scheduled to be created and sent on email—without the administrator’s assistance.

Reporting which includes analysis of the use of primary storage by DB2 and secondary storage for DB2 backup copies, is also available as an easy add-on to the CommVault Galaxy solution.

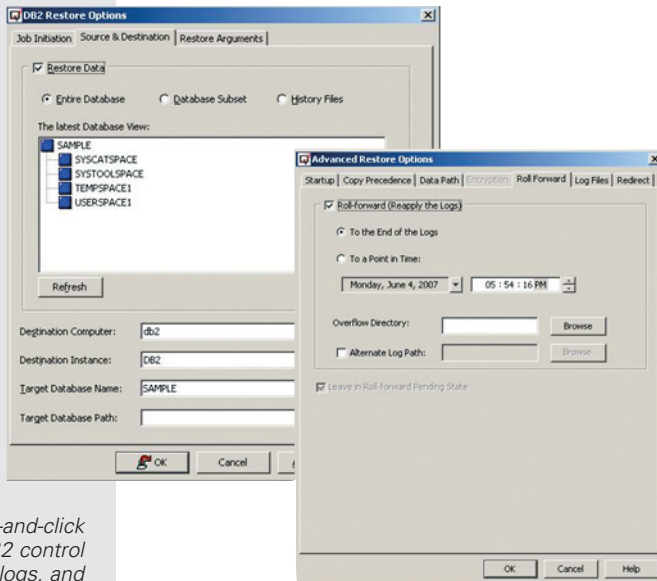
Simplified, Guided Recovery

DB2 database recovery is not usually a simple process, but requires DBAs to understand the source of the problem, find the appropriate backup copies with the files that fix the problem, and typically also involve a multi-step recovery process of staging the restored files before applying them to the DB2 database to affect the fix. The DB2 logs may also need to be reset, which requires additional expertise to determine and then perform.

CommVault Galaxy for DB2 software makes it easy by providing a guided recovery process with one-step restore. The built-in recovery process automates these steps:

- ▶ Presents a simplified, point-and-click interface that enables easy selection of any DB2 object for recovery
- ▶ Provides push-button recovery initiation, with a one-step process that issues all DB2 commands required to enable the files to be restored back to the production DB2 environment without being staged
- ▶ Enables easy selection of point-in-time recovery by replaying the log files
- ▶ Brings the DB2 database back online after the restore process is complete

This simplified and guided process makes it easy for operators to handle day-to-day, object-level recovery operations for DB2 databases. The process of extracting objects from the full database backup is automated. Selecting to re-direct recoveries to alternate DB2 nodes is included in this easy process, with simple point-and-click dialog box options.



Simplified, point-and-click selection of DB2 control files, archive logs, and history files enables easy restore. Log files can also be replayed to specific points-in-time, also selected through the interface for easy operation.

Integration with UDB APIs enables backup and recovery with production database systems.

Faster Backup with Superior Disk-to-Disk Data Management

CommVault Galaxy software is designed for disk-based data protection, with capabilities for managing data retention across tiers of disk built right in. Each backup Storage Policy defines when and how secondary Auxiliary Copies of the original backup copy are made, and automatically prunes the original copy from disk for efficient space management. Auxiliary Copies can also move data onto tape efficiently and automatically as part of this process.

Reduced Tape Use with Unique Spanning and Appending Capabilities

Reduce the amount of tape required for the same amount of DB2 backup copies. Reduce the administrative overhead of tape management, by reducing their number significantly.

Typically, CommVault customers gain significant immediate reduction in tape using full backup copies. Customers then see additional gains when they add the use of incremental or delta backups.

Eliminate the added cost of third-party tape tracking software. Manage backup-to-tape, tape rotation, and restore all from the same CommVault Unified Console. Manage data retention and tape rotation policies with the same Storage Policy automation.

Key Features and Benefits

Features

Benefits

Span DR configurations with a single index

Prevent index corruption and management challenges associated with trying to maintain two indexes across two “master” servers in a backup deployment. The unified CommVault approach applies a single, self-managing index that spans both sides of the DR deployment.

Simple-to-operate DB2 recovery

Out-of-box simple recovery for DB2 that makes it easy for operators to handle. Point-and-click options built into the Unified Console GUI eliminate the need for scripting.

Increase backup and restore performance

Using the same infrastructure, reduce the time required to backup your DB2 data—without multiplexing. Dramatically speed recovery of DB2 databases from disk and tape.

Multiplexing is still supported, if you choose to use it. When multiplexing is used to backup DB2 on UNIX, then restores streams are automatically multiplexed to deliver optimal performance.

DB2 archive log management

Automatically preserve and prune DB2 log files to save on disk space, as part of the backup operation. CommVault is integrated with UDB APIs to ensure that the log file is preserved before the log file is removed from disk.

Policy-driven data retention management

With a single Storage Policy, manage the retention of DB2 full and incremental backup copies on disk and tape. Automated pruning of disk copies when secondary disk and/or tape copies are made.

Multi-node failover built into the backup node operations Multi-node failover built into the backup node operations

In the event that a CommVault Galaxy backup node (called a Media Agent) fails, the backup and recovery jobs are resumed on alternate nodes. Resume means that the job does not restart from the beginning, but resumed from the point of failure. This can be critical for finishing long jobs, in particular.

Alternate data path failover built in

In the event that a network goes down, CommVault Galaxy backup and recovery jobs are resumed on alternate data paths.

Out-of-place restore: Restore DB2 database on alternate node

CommVault Galaxy software is integrated with UDB APIs to enable backup copies to be restored to an alternate DB2 database node. This is useful when the original DB2 system is damaged and needs to be rebuilt, such as when site disasters occur.

Easy migration to new versions of the operating system environment

Restore data from DB2 backup copies made on older operating systems, to DB2 running on newer operating system versions. This assists in moving your DB2 environment forward to newer Windows, UNIX and Linux versions as required.

Faster restores using reservation of resources

Reserve drive and media in advance, to ensure fastest performance of Oracle restores.

On Unix, improved restore from multiplexed backups

Faster restore from multiplexed backup by automatically multiplexing data streams used during restore.

Automatic validation of backup & recovery for DB2

Validate backup and restore jobs by running a simulation beforehand to verify the availability of media and integrity of data needed to perform the backup or restore.

Automatic preview of DB2 scripts before backup and restore

Preview the backup and restore scripts that will be submitted to UDB to back up or restore data on a client. Previewing the script before running a backup or restore is useful for identifying whether the current subclient configuration or selected restore options will yield the desired result in the script.

The script text can be previewed from the Subclient Properties and Restore Options dialogs, and provides the capability for you to copy the text from the display window for manual submission using UDB, if desired.

Additional Solutions for IBM DB2

CommVault® offers a *Singular* suite of data management software built on the same software platform so that all capabilities work together. This makes it easy to add capabilities when and how you need them. For DB2 systems, consider adding:

► **CommVault Galaxy® Backup & Recovery for File Systems**

Adds backup and restore protection for DB2 applications files and file system data residing on DB2 systems

Aids in rapid restore of the entire system, to speed DB2 recovery when systems fail and must be rebuilt

► **Resource Management**

Monitor and anticipate primary storage growth requirements

Monitor and anticipate secondary storage growth requirements

System Requirements

DB2 | Universal Database (UDB) 8.1, 8.2, 9.1

Platforms | AIX, Solaris, Microsoft Windows, Red Hat Linux

Clustering options are supported

Note: System Requirements are subject to change. For up-to-date System Requirements including 32- and 64-bit systems support, please refer to product documentation on the CommVault website at <http://www.commvault.com>

SIMPANA™
software suite

CommVault's Simpana™ suite of Data Protection, 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.

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