

5 STEPS TO APPLICATION-AWARE DATA PROTECTION

Many IT organizations have had the same data protection tools and practices for years, even decades, and see no need for that to change. But Application Owners need to know that they'll be able to recover their data at the application level when disaster strikes, and yesterday's solutions are simply not up to this job. It's time for modern, application-aware data protection - and here's how to get there.

“If data is lost at any point, as a result of insufficient, inconsistent, or missed backups, application recovery may take an extended amount of time, leading to higher costs and lost business opportunity.”

– ROBERT AMATRUDA,
“A MORE HOLISTIC APPROACH
TO PROTECTING, MANAGING AND
ACCESSING CRITICAL APPLICATION
DATA,” IDC, SEPTEMBER 2013.

STEP 1 Clearly Understand the New Protection Requirements

Back when corporate data was largely amorphous and stored on a small number of servers and locations, backup really was a pretty straightforward proposition. But businesses are now much more reliant on a growing number of mission-critical applications - applications whose data is specialized, growing exponentially, and distributed across many more servers and locations.

Oracle, SAP, IBM DB2 and Microsoft applications each have specialized data formats and application behaviors which data protection solutions must natively understand. It's not enough to simply back up and restore data in a vacuum. Solutions must understand the unique requirements of each application, control backup storage costs, and provide proper security for data, both in flight and at rest.

Modern data protection solutions must be able to access and restore from backups painlessly, with minimal IT help required. Cost, complexity, data storage challenges, management, and business continuity are all driving an interest in using cloud services.

STEP 2 Retire Old Point Backup Tools

As the types and locations of the data we protect has grown, so has the number of backup tools proliferated in the enterprise, each designed to address one particular type or class of data. These point products (or even homegrown scripts) have been cobbled together over time and are usually difficult for anyone other than the person who rolled them out to operate and are easily broken by new technology or configurations.

Modern data protection solutions, like CommVault® Simpana® software, provide all the features of individual backup point tools, but all on one platform, which makes it much simpler to license and manage. More importantly, that platform can back up and work with multiple specialized applications, including Exchange, SharePoint, SQL Server, Oracle, and Lotus Notes, and provide a unified interface for managing and recovering all of these applications. A modern solution has built-in data security, like encryption, both in flight and at rest. It also provides policy-based security so responsibility can be shared by a team rather than one individual. All of these features enable IT organizations to finally retire old backup tools.

STEP 3 Don't Get Backed Up on Backups

Many enterprise IT organizations today struggle to even finish backups at all. That is, the backup jobs are often not able to completely process full or even incremental file sets in the time window available. It's clear what's going on. The amount of data to be backed up is growing exponentially as applications grow more complex, while resources (storage, network, servers) devoted to backup are constrained. Besides the amount of data, the locations and types of data have become more complex with applications, cloud data and virtualized servers. Even if it were possible to throw more hardware at the problem, that would not solve it.

Modern data protection solutions do a much better job of getting all of your data backed up in far less time and requiring far fewer resources. One key is having knowledge of key enterprise applications in use today, both physical and virtual environments, to enable rapid, consistent protection of each type of data. Also important is modern storage array snapshot technology, which creates nearly instantaneous application-aware copies, greatly improving backup and recovery times. All of this means that backups actually get done and can truly be used for recovery, which after all is the reason to back up in the first place.

STEP 4 Get Smart about Deduplication and Snapshots

The truth is that legacy backup systems do not minimize data redundancy well, particularly when backing up application-specific data. Data is allowed to proliferate in multiple copies because it has traditionally been seen as safer and easier in terms of backup logistics. Deduplication is left to costly deduplication appliances that only remove redundant data after the application servers and network have already done the heavy lifting of moving the data to the target.

This leads to excessive demands on network, server and management resources, especially in the high data growth environment of applications today. Application-centric data storage management adds significantly to the cost and complexity of IT.

Modern data protection solutions enable much more intelligent handling of application-centric redundant data. The solution in a modern implementation is to eliminate redundant data at the source and never transmit it over the network. This significantly reduces backup time and stress on servers and network pipes. This is also part of the replication process, to further maximize efficiency and not have to rehydrate data to move it to other disk storage, tape, or the cloud. Intelligent snapshots also play a key part in capturing frequent, recent recovery points for an application.

- Source-side deduplication can eliminate up to 90% of the data copied over the network, and cut the time required in as much as half.
- Make application-aware recovery faster and less complex with Simpana IntelliSnap™, with point-in-time recovery of Microsoft Exchange Server, SharePoint, SQL Server, Oracle, SAP, DB2 and Lotus Notes.
- Achieve deeply-integrated protection for VMware and Hyper-V virtualization environments by eliminating the data management roadblocks to scaling out and virtualizing applications.

STEP 5 Retrieve, Recover and Manage - Simply

When multiple point solutions are used, staff need to learn the UIs and workflows of several different tools making recovery inherently time-consuming and laborious. Today's business users not only demand quicker file recovery, but common events like e-discovery requests put new pressure on using backed up data better.

Modern data protection solutions like CommVault Simpana software provide a single consistent user interface that makes accessing, managing and retrieving backed-up data operationally unified for a variety of key business applications. Whether it's rolling back a database table or granularly recovering a VM instance, recovery is easily handled even if the operator has no relevant application expertise. But on top of this Simpana software provides multiple, secure ways to access the data store, including via web portal, mobile app and native integration into applications like Outlook, VMware and Windows File Explorer. You can recover individual tables, files, databases or entire applications from the various familiar interfaces. Even more, you can simplify platform migrations and upgrades without dependence on Microsoft platform releases. Integrated reporting provides clear insights into application environments.

In migrating to a modern application-centric data protection solution, something unexpected is achieved: data storage, backup, and management is now a valuable additional capability that IT provides to the business, rather than a necessary, expensive, and often ineffective chore. Application-centric data may be the driver, but Application Owners are far from the only beneficiaries.

To learn more about modern application-aware data protection with Simpana software, please visit www.commvault.com.



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