The case for cloud-based data backup

IBM SmartCloud Managed Backup offers significant improvement over traditional data backup methods

IBM

Intelligent data backup solutions have never been more important. Companies now expect these solutions to not just protect data, but to play a key role in supporting insightful business decisions. How? Intelligent data backup solutions make it easier for a company to quickly access the information it needs, even in the wake of a service disruption, system outage or disaster. In doing so, they can help engender stakeholder confidence, strengthen the organization's position in the marketplace and enhance its brand reputation.

IBM SmartCloud Managed Backup has been designed to both protect data and give organizations a competitive edge. This service helps provide clients with end-to-end, cloud-based protection for organizational data while helping to reduce the total cost of ownership of a comprehensive data backup system.

This document will discuss:

1. The problems with using tape backup alone, and how IBM SmartCloud Managed Backup can help organizations conquer them
2. How SmartCloud Managed Backup can help meet the special backup needs presented by a virtualized environment; and
3. How organizations can start to navigate a path toward more intelligent backup solutions by teaming with IBM for a data protection analysis

Beyond tape

Tape is the traditional organizational medium for backing up and storing information. While tape continues to be appropriate for long-term storage of data, its use for day-to-day backup is becoming increasingly problematic. First, tape backup requires significant human intervention. This intervention consumes IT resource hours that could be spent on projects that bring strategic value to the business. This intervention also leaves backups vulnerable to human error or malice: employees may misplace, damage or even steal tapes. A second challenge arises in the area of reliability. Since in-house IT experts may not be backup experts, tape-based backup failure rates can be significant. In addition, the medium itself can be unreliable: tapes can stretch and their magnetic elements can fail, thereby threatening the data stored. The third problem is cost. Companies relying on tapes for data backup incur costs for the media itself, for offsite facilities in which to store the media, for shipping costs and for associated heating and cooling costs.

Many organizations may find these tape problems to be troublesome, but surmountable. However, these same organizations often realize that tape simply can not meet two additional backup challenges facing companies today: those of backup efficiency and of backing up data stored in virtualized environments.

In many cases, tape may not be an efficient method for backing up the ever-increasing amounts of data organizations are expected to back up. Tape solutions lack scalability. They often can not meet the recovery point objectives desired in today's marketplace. They may not be able to help an organization restore information quickly enough to provide the information a company needs to be able to continue operating in the wake of service disruption, system outage or disaster.

Relying solely on tape for a backup solution that both protects data and improves business becomes increasingly difficult as more and more data is generated in a virtualized environment. In today's data centers, virtual servers are consolidated onto physical machines. This means that organizations have more servers running than ever before: they may be virtual servers, but they're still servers, and the information contained within them needs to be backed up. This means that backup software will need to be installed onto every virtual machine—a process that is complex, time-consuming, and, assuming backup software is licensed on a per-machine basis, costly.

The nature of virtual machine backups further strains tape's capabilities. Unlike data stored in traditional physical environments, data stored on virtual machines can be a challenge to back up file-by-file. Rather, in order to back up the data stored on a virtual machine, IT generally backs up the entire machine itself. Conversely, to restore data, IT often needs to restore the entire virtual machine. When using tape, this process can be cumbersome, and can consume too much computing power and bandwidth—thereby jeopardizing the organization's recovery time and recovery point objectives.

Smart Cloud Managed Backup: an intelligent choice

IBM SmartCloud Managed Backup offers public, private and hybrid cloud-based data protection solutions for clients who want to achieve cross-enterprise information resiliency and data recovery for both physical and virtual server environments. With these services, IBM helps you to choose and implement a plan tailored to your backup priorities, retention and retrieval goals, and needs for infrastructure flexibility and scalability.

IBM SmartCloud Managed Backup improves upon tape-only backup in several ways. First, it does not require significant manual work. IBM SmartCloud Managed Backup is designed to help you to simplify backup with automated and standardized tools and processes that consolidate dispersed information onto a centralized infrastructure. Second, SmartCloud Managed Backup solutions are security rich and highly scalable. Third, the SmartCloud Managed Backup infrastructure gives you virtually anywhere, anytime access to data, offered through a web portal installed in your environment. This portal gives organizations a "single pane of glass" view of the information stored within the cloud. It also gives you a single management point. Fourth, our pay-as you go pricing structure allows you to replace long term architectural investments and capital expenditures with an operating expense. Finally, our services deliver a backup success rate of up to 99.8 percent, and may lower the overall cost of your backup solution.

For those customers who do want to utilize tape, either for primary backups or for long-term retention, SmartCloud Managed Backup offers a variety of tape solutions. This may include a primary backup to disk and a secondary backup to tape which can in turn be stored in a secured location offsite to the data center. Being able to store a secondary copy of data to tape offsite gives the client extra security in case there is a problem with the primary backup at the customer datacenter.

IBM also offers benefits to clients who need to back up data in virtualized environments. SmartCloud Managed Backup is designed to integrate the latest virtualized software features, typically resulting in enhanced flexibility in how virtualized servers are recovered. This can reduce the amount of time in-house IT administrators need to set up and prepare virtual systems for efficient recovery scenarios.

IBM's wide-ranging management and reporting capabilities can provide further peace of mind. IBM services employees proactively monitor backup performance 24x7 via a virtual private network set up in the client environment. This monitoring helps limit the prospect of business loss due to backup failure. Should something go wrong, the service response process is to analyze the problem and, if necessary, alert you of any actions that need to be taken. Regular reports available on the SmartCloud Managed Backup Storage Portal or sent to the client summarize monthly usage information; offer detailed service availability, capacity, allocation and configuration information; and identify assets that are being underutilized. Finally, if you ever need help, English-language support is available 24 hour a day. Additional support for French, Italian, German, Spanish, Japanese and Chinese speakers is also available.

IBM SmartCloud helps investment firm improve backup, save money

A private global investment firm with 1900 people working in 20 countries serves customers such as pension funds, financial institutions, endowments and foundations. New mandates from federal regulators required the firm to back up and store greater volumes of business-critical data. As a result, the data storage and retrieval fees charged by the firm's three existing regional data management vendors dramatically increased. Worse, the firm felt that the backup services being performed were neither flexible nor scalable enough to meet its strategic, operational and disaster-recovery needs.

To correct these problems, the firm turned to IBM SmartCloud Managed Backup. The IBM SmartCloud Managed Backup solution provided the firm automatic server backups that included onsite appliances for expedited backup and restore instances, as well as onsite turnkey tape and disk backup services with disk replication and tape vaulting. This reliable, security-rich automated solution provided the firm with scalability options while creating auditable logs to help the firm document its compliance with regulatory requirements. Its backup success rates of up to 99.8 percent have made the firm feel comfortable about its ability to maintain needed information in wake of a disaster. Concurrently, the firm is enjoying a cost saving of 50 percent over its previous backup solution.

Getting started with a data protection analysis

After reading this paper, you may be wondering whether your traditional backup is sufficient to meet your company's needs to both protect data and improve business. If your organization could benefit from a critical view of its current backup operations before determining how to proceed, the IBM SmartCloud Managed Backup team offers a data protection analysis. This analysis can help identify gaps in your data resiliency plan by offering a baseline view of your data backup environment and pinpointing the areas that could compromise data security and availability. This analysis can help you better understand your organization's vulnerability to risk, and help determine how to achieve potential improvement in backup and recovery performance with IBM SmartCloud Managed Backup services.

The IBM difference

IBM SmartCloud Managed Backup helps organizations free themselves from the inefficiencies, cost, and suboptimal restore points and times of traditional backup. Our services have been designed to offer:

- Simplified backup with automated and standardized tools and processes that consolidate backups onto a single infrastructure
- Advanced service architecture design, automation. and delivery methodologies that provide backup success rates of up to 99.8 percent
- Managed backup-as-a-service that is highly scalable to help meet growing needs without additional capital investments
- More optimized utilization rates, since you pay only for what you back up
- The ability to set backup standards in accordance with internal and external compliance policies
- Options such as encryption and data de-duplication
- The ability to reallocate resource time to important IT projects

Finally, IBM offers additional cloud-based services that can help you address other resilience and compliance challenges. IBM SmartCloud Content Management services provide cloud protection for and organization of infrequently accessed information that nonetheless needs to be retained for regulatory, legal or compliance purposes. IBM SmartCloud Virtualized Server Recovery offers application continuity for both physical and virtual server protection, while IBM SmartCloud Email Management Express offers email continuity, recovery and archiving. Combined with IBM SmartCloud Managed Backup, these services can help organizations deploy a business resilience solution that will help them to continue operating even under the most challenging conditions—which in turn can help improve competitive capabilities and bolster reputations in an aggressive marketplace.

For more information

Want to learn more about cloud-based data backup in general or how to choose a cloud provider in particular? Read an interview with an IBM cloud backup expert and our data backup buyers guide. For more information, call 1-800 IBM-7080 or visit the following website:
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