How to Achieve Efficient Data Protection in the Cloud Era

There was a time when IT professionals wondered what would become of their jobs as a result of the cloud. It was hard to imagine that the cloud’s promise to eliminate capital expenditures and reduce operational overhead wouldn’t also reduce the need for IT staff. But for the majority of companies with both cloud and legacy systems, nothing could be further from the truth. Protecting data in multiple cloud environments and on premises is complex and time consuming. IT organizations need solutions that enable efficiencies.

Data protection has never been easy. Even when traditional backups are automated to some extent, they still require manual intervention. At best, someone has to manage them. More often, though, someone has to actually work with backups due to limited application awareness or a lack of integration with storage hardware. Archiving often requires multiple point solutions – each of which must be managed. And, for IT organizations that can afford the expense, maintaining a disaster recovery site means maintaining two sets of hardware and systems.
THE CHALLENGES POSED BY TODAY’S IT ENVIRONMENT

The inefficiencies associated with legacy data protection solutions were bearable when all data was stored on premises. But now they are simply intolerable. Today’s IT environments introduce a host of new challenges that exponentially increase these inefficiencies.

To begin with, data has taken on greater importance as a competitive advantage and business enabler. As a result, the business’ tolerance of downtime is decreasing, along with Recovery Time Objectives and Recovery Point Objectives. The expectation is that data is available at any time, all the time. In addition, business units are quick to collect and acquire new and various types of data, resulting in 40-50% data growth annually.

Meanwhile, the environment is becoming increasingly complex as more data and workloads are moved to the cloud. In 2014, 69% of IT organizations surveyed by IDG reported having at least one application or a portion of their computing infrastructure in the cloud (for example, CRM, application development and testing, or disaster recovery). However, a whopping 56% are still identifying IT operations that are candidates for cloud hosting.1 That very likely means more data and workloads will be moving to the cloud. As they do, IT can expect more complexity and less efficiency as it faces the tasks of managing and protecting data in multiple environments – some of which it has little or no visibility or control over.

As data stores grow and the environment becomes more complex, backup windows are shrinking. Business hours are extending beyond the traditional 9-to-5 as users take advantage of mobile computing. IT is expected to manage and protect data, ensuring high availability and reliability with very little time with which to back it up. This simply can’t be done with the cumbersome tools and processes used in the past.

REQUIREMENTS FOR A NEW DATA PROTECTION SOLUTION

Today’s IT environments demand a new approach to data protection that leverages three ongoing trends in IT:

- **Automation** – Automating manual tasks both increases efficiency and reduces risk. Regardless of whether data resides on premises or in the cloud, all data protection tasks for backup, archive and disaster recovery should be automated, thereby eliminating any need for scripting or human intervention. A data management solution should be capable of orchestrating complex end-to-end processes with pre-built and custom workflow automation engines. This helps relieve IT of manual operations tasks while ensuring that data is available when and where it’s needed.

---

1 IDG Enterprise Cloud Computing Research, 2014
• **Convergence** – All backup, archive and reporting functionality should be converged into a single platform that protects data stored in the cloud and on premises. The solution must bring convergence to data management tasks, eliminating the need for multiple point solutions. This requires a common infrastructure through which tasks are performed in a single, efficient step across the entire IT environment, thus reducing operational overhead and IT investments. It also helps ensure that policies are implemented consistently, across all data regardless of where it resides.

• **Self service** – Thanks to the consumerization of IT, employees are more willing than ever to do for themselves. Any IT solution should take advantage of this trend to enable users to quickly meet their own needs and to lighten IT’s workload. Today’s data management solution must provide a web-based self-service management console via which users can manage their own cloud resources and access archived data. However, to prevent increased complexity, help desk strain and security concerns, the solution must also give IT the appropriate control, security and discovery capabilities.

• **Workload portability** – Applications in the cloud can “float” across resources that reside both on-premises and in the cloud. A data protection solution must support this agility through deep integration into the applications and platforms (cloud, virtual machine and physical), and native integration into both cloud storage and cloud compute environments. Efficiency is achieved by having a single repository for all data regardless of where it lives.

A data protection solution that leverages automation, convergence and self service and supports workload portability can improve IT’s efficiency above and beyond what could be achieved with legacy solutions. But improved efficiency isn’t the only benefit to be had. Even more importantly, such a solution can enable IT to meet critical recovery SLAs, ensuring that data is available when and where users need it. It can also enable IT to take advantage of the economics of the cloud for more cost-effective backup and archive.

Data management and protection have never been as important as they are in today’s heterogeneous, multi-cloud environments. These processes don’t have to be tedious or challenging, but they do necessitate a data protection solution that is designed for today’s multi-cloud environment.

---

69% of IT organizations report having at least one application or a portion of their computing infrastructure in the cloud.

56% are still identifying IT operations that are candidates for cloud hosting.

IDG ENTERPRISE
Cloud Computing Research, 2014
To learn more about how Commvault delivers cloud-enabled data protection, visit commvault.com/cloud.