Moving From Reactive to Proactive Storage Management with an On-demand Cloud Solution
The Ever-Present Storage Management Conundrum

In the modern IT landscape, the storage management conundrum is as familiar as it is constantly evolving and growing. Ever-expanding amounts of digital data – from gigabytes to terabytes to petabytes – are pushing storage systems to the edge of their capabilities and rapidly exhausting available storage. As a result, IT teams are always racing to add capacity and keep up with the latest business demands.

At the same time, there is a larger trend in which IT teams are being asked to improve collaboration with the lines of business (LOBs) and work together to achieve strategic goals and initiatives. As this transition occurs, IT teams must be seen as innovators that not only maintain technology, but also provide cutting-edge solutions that drive business value. This is important because when IT cannot provide the level of innovation and service business users demand, they will acquire solutions on their own, creating “shadow IT” resources that can cause significant risk for the business.

For IT groups, the first step in positioning themselves as innovators is to research, evaluate and acquire reliable, easy-to-implement storage solutions that accelerate their ability to deliver business services. The problem is, too many IT teams still get caught up in a reactive storage acquisition loop that prioritizes hardware over innovation and value.

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The Reactive Storage Acquisition Loop

Most organizations that have an annual agreement with a storage vendor plan and acquire new capacity based on growth projections for the coming year.

It sounds like a simple process, and it is, that is until an unforeseen event – maybe a merger or acquisition or an expansion into a new LOB – creates an immediate need for additional capacity. And because this is happening outside of the traditional acquisition cycle, IT has to scramble to find budget for it, plan for floor space and placement, calculate power availability and run cables.

If such a scenario were the exception rather than the rule, the reactive approach wouldn’t be so bad – but ever-increasing data growth and constantly changing business requirements mean the storage acquisition loop never ends.

Today’s enterprises have two options for how to address this never-ending loop:

1. **Continue acquiring new hardware** on a reactive basis, and risk buckling under the weight of initial and ongoing costs and demands on IT resources.

2. **Break the cycle by partnering** with a trusted vendor that can provide on-demand access to capacity in the cloud for proactive data storage, access, retrieval and recovery.
The Need for a More Proactive Approach

The reactive storage acquisition loop creates numerous challenges for IT teams when it comes to cost, flexibility and complexity:

**Cost:** The cost of traditional storage solutions always extends beyond initial provisioning costs to include installation, management, maintenance and support.

**Flexibility:** When IT has to spend much of its time and resources on such things as floor plans, power and cabling, it lacks the flexibility to quickly deploy new, nonintrusive storage solutions as the business requires.

**Complexity:** Adding storage hardware on an ongoing, just-in-time basis creates a highly disparate environment that is exceedingly difficult to integrate and even more challenging to maintain.

In light of these challenges, it is clear that a more proactive approach to storage acquisition and management is needed – especially in System z shops, which according to IBM, still run about 90 percent of the world’s critical applications and 65 percent of its information in 2014. An on-demand cloud storage solution can help enterprises overcome these challenges by:

- Reducing costs by shifting from a CapEx to OpEx model and decreasing the physical storage footprint and required data center space and power
- Streamlining and simplifying the storage acquisition process to accelerate achievement of business goals
- Simplifying the process of moving mainframe data into the cloud
Common Use Cases for On-demand Cloud Storage Solutions

One of the side effects of being stuck in the reactive storage acquisition loop is that IT teams have blinders on to the many possibilities afforded by on-demand cloud storage solutions. The following pages explore some common use cases and how innovative cloud storage technologies can bring new thinking and value to each one.

- Low-cost, offsite backup and recovery
- Tiered storage management
- Dynamic allocation of storage for critical applications
Low-cost, Offsite Backup and Recovery

**The Traditional Approach**
Companies must perform regular backups of application and system data to ensure recoverability and business continuance. They do this via daily (before and after batch processing), weekly incremental or monthly volume backups to disk and/or tape media.

**Exposures of this Approach**
- Backup data resides on expensive, proprietary media and hardware
- Backup media can get lost when moved to an offsite vault for safe keeping
- Companies tend to retain data for extremely long periods of time, creating new costs, risks and compliance challenges for IT

**The Innovative Approach with On-demand Cloud Storage**
Cloud storage enablement simplifies the backup process and reduces overall less risk. Tape mounts are intercepted and redirected to less expensive cloud storage resources.

**Benefits of this Approach**
- A reduction in the amount of backup media and hardware IT has to manage, which also lowers TCO
- Recoverability of data is shortened from hours or days to minutes
- Data is stored securely off-site, reducing data-center risk and supporting adherence to regulatory guidelines for long-term data retention
Tiered Storage Management

The Traditional Approach
While it makes sense for frequently accessed data, or data in motion, to reside on expensive, proprietary media and hardware, it can be extremely costly for organizations to store less active or archive data on the same systems.

Exposures of this Approach
— Primary storage costs increase, which lowers overall TCO of the storage environment
— Manually assigning data to particular media can be an ongoing and complex activity that takes IT staff away from more strategic activities
— Existing media capacity may not be fully utilized or optimized, creating demand for costly, new resources

The Innovative Approach with On-demand Cloud Storage
While mission-critical data that is frequently accessed and/or changed should be kept on higher-end primary storage systems, data that is less critical (but still important to the business) could be sent to less expensive cloud storage media.

Benefits of this Approach
— Data is delegated to appropriate devices based on its importance to the business and compliance requirements
— By taking advantage of the efficiencies cloud offers, overall storage costs and resource requirements are reduced
— Moving expired data off production systems enables organizations to better utilize their storage capacity and scale to accommodate data growth
Dynamic Allocation of Storage for Critical Applications

The Traditional Approach

Hardware vendors typically offer storage subsystems with a “free” maintenance period. When that expires, financial incentives are offered to replace storage subsystems with new models that provide increased capacity and performance.

Exposures of this Approach

— Over-allocation of storage means empty media is always available, but for no actual purpose

— Under-allocation of storage means IT teams are constantly scrambling to offload data to make space available for processing critical applications

— Companies tend to retain data for extremely long periods of time, creating new costs, risks and compliance challenges for IT

The Innovative Approach with On-demand Cloud Storage

Using a secure cloud storage service accessed via a dependable gateway or “on-ramp” appliance and wide area network facility, organizations can simplify and streamline the deployment, allocation and provisioning of storage to applications supporting mission-critical business processes.

Benefits of this Approach

— Organizations can eliminate expensive hardware purchases and avoid the accompanying hardware vendor lock-in and costly warranty and maintenance renewal processes, reducing overall TCO of the storage infrastructure

— Cloud storage services would dramatically reduce energy consumption at the data center, and improve direct and indirect access to data
CA Cloud Storage for System z simplifies the process to move mainframe data storage into the cloud. It is designed to help organizations reduce their dependency on expensive, proprietary hardware solutions and reduce the Total Cost of Ownership (TCO) for storing and managing their z/OS data. When used with certain cloud storage providers and appliances*, CA Cloud Storage for System z is designed to help you store, access, retrieve and recover z/OS data more quickly and easily to improve your delivery of business services. The combined technologies help you avoid investing in underutilized storage capacity for future growth by tapping into the cloud to provide fast and flexible access to endless capacity when you need it.

*CA Cloud Storage for System z currently works with cloud storage offerings from Amazon Web Services and Microsoft Azure and cloud storage appliances from NetApp, and EMC Data Domain.

CA Cloud Storage for System z helps enterprises:

- **Reduce Costs:** Maximize ROI by leveraging cloud technology to eliminate and defray hardware purchases and related environmental costs.
- **Increase Flexibility:** Enable greater productivity to more quickly deploy and manage efficient data-storage solutions.
- **Reduce Complexity:** Reduce the time and effort required to manage and optimize growing data-storage environments.
In order to drive innovation and grow the business, today’s organizations must transform the role of System z in today’s application economy. For more information on how CA Technologies can help IT groups move from reactive to proactive storage management with an on-demand cloud solution, contact us today.

ca.com/cloudstorage