

Actifio: Protection and Availability Storage

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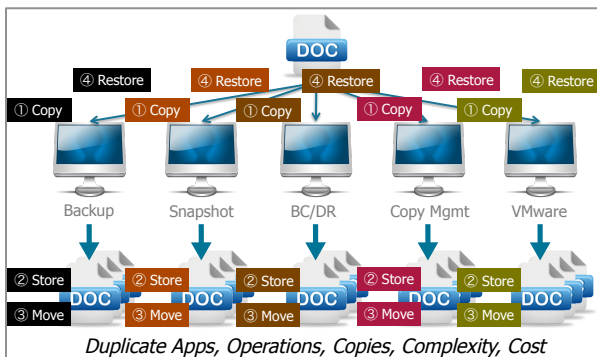
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Actifio is introducing a radical new approach to data protection and management that virtualizes data and deals out instant virtual copies of data to their data protection, disaster recovery and business continuity applications. The Actifio system, termed Protection and Availability Storage, is indeed unique, being the first data protection solution that reduces the number of copies of data made to support an organization's infrastructure.

Recent studies have shown that enterprise primary data storage requirements are growing at an annual rate of 35% to 65%. Even more dramatic is the growth of secondary and tertiary data -- also known as copy data. Copies of data are made and retained for multiple purposes, including restoration of deleted or corrupted files, recovery of entire systems in cases of system failure and off-site storage for disaster recovery and business continuity. Copies of data are made to support applications such as CRM, ERP and business intelligence. Copies of data are produced for testing and development, archiving and compliance. All this copy data multiplies like rabbits, creating havoc for those attempting to manage the data explosion. In fact, it is not uncommon for the cost of managing and maintaining copy data to be three to five times the cost of managing and maintaining primary data.

The effect of storage growth on the business

In all but the most homogeneous environments these multiple types of data copies are kept in separate and distinct data silos, at least logically if not physically. They are created and managed by different applications, with separate silos for backup, snapshots, virtual machine images and archival storage. In addition to the additional system and software costs to manage these multiple storage silos, each system requires IT staff time – you will see database admins, application administrators, server admins and storage specialists all managing the data within their domain and doing so at an overwhelming cost to their organization.



All applications for copy data management have four things in common – they all copy, store, move and restore data in some form. In addition, each application makes an independent copy

of data, stores that data in its own defined location and then retains the data for a defined period of time or until it is manually deleted.

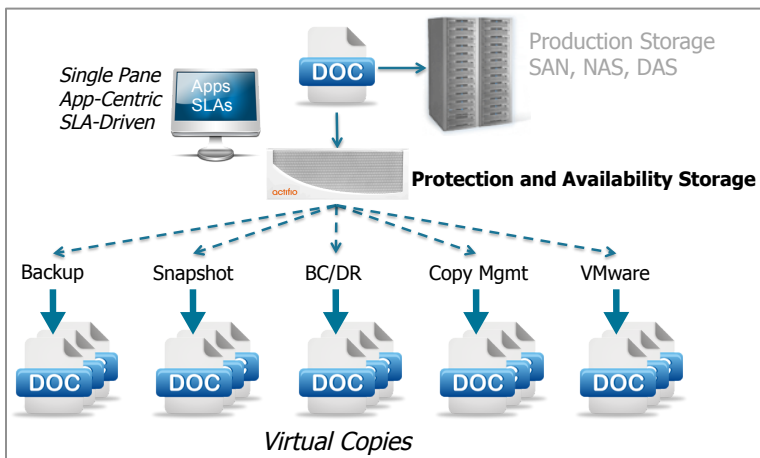
Actifio's answer

Actifio's approach is to combine these multiple data silos and the functions of multiple data protection systems to deliver protection for all data using a single application. With a single data silo, the company addresses data protection, disaster recovery, business continuity, archiving and other copy data requirements for all protected systems and applications.

The Actifio approach uses the Actifio Protection and Availability Storage (PAS) platform, that optimizes the management of copies of production data for multiple data management requirements like data protection, disaster recovery, business continuity, test and development, compliance or analytics. PAS provides an order of magnitude reduction in total cost of ownership (TCO), resulting from elimination of multiple software licenses, up to 90% reduction in storage expenditures and 70% reduction in network bandwidth costs. In addition, Actifio's PAS enhances business availability by eliminating or significantly reducing backup and restore windows. PAS can provide instant virtual copies of data and systems, including virtual machines. PAS combines the functions of backup, snapshots, cloning, replication compression and deduplication in a single appliance that is working on one set of data.

How Actifio's PAS Works

The PAS system runs on the Actifio appliance. The appliance is an industry-standard x86 server configured in a scale-out configuration, starting from one server and scaling up to eight servers supporting a total of 8PB of capacity. Actifio appliances can also be installed in a redundant, fault-tolerant configuration. PAS uses Actifio's Virtual Data Pipeline™ (VDP) technology and vendor-independent physical- and/or cloud-based storage devices to manage the data lifecycle for each protected system or application. The storage devices are virtualized into private, public or hybrid storage clouds by Actifio's integrated storage virtualization engine, which delivers virtual volumes.



By virtualizing storage, PAS provides a policy-driven data protection solution that decouples the management of copy data from the storage, network and server infrastructures. PAS provides both data compression and deduplication for data retained for long term. Actifio's DeDup Async™ technology eliminates the transfer of all duplicate data, driving down network bandwidth utilization by as much as 70%.

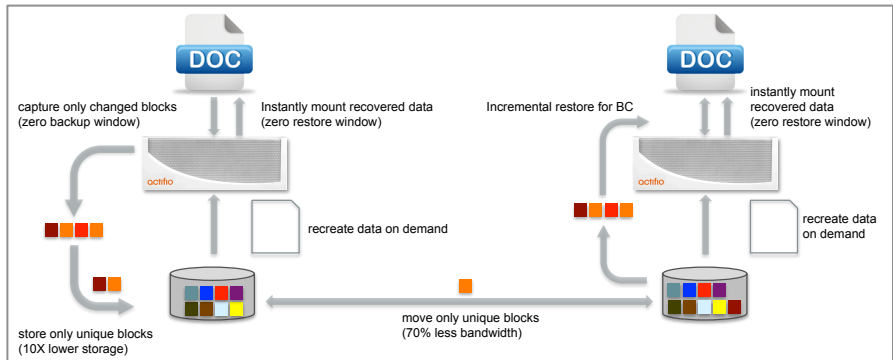
Actifio provides a single console for all data protection functions. Using the console, the administrator defines a service level agreement (SLA) for each protected system or application

based on data protection requirements and business policies.

Based on the SLA for each specific application or system, recovery options can include recovery to a virtual volume, a clone or recovery to primary storage. Virtual volume clones can quickly be created for functions such as apps testing and development, quality assurance, performance analysis or simply to provide a point-in-time copy of the data.

Actifio eliminates traditional "backup window" by instantly capturing only the changed blocks as a snapshot and stores these blocks in multiple formats on virtualized storage, based on the SLA. By instantly creating application-aware formatted virtual volumes which are mounted directly by the application server, Actifio also eliminates the "restore window", significantly increasing business availability.

System and application support falls into two categories -- fully automated application integration and application and OS integration via the command line interface. Actifio currently provides fully automated support for VMware, Windows Server and Microsoft SQL Server. Command line support is provided for most major operating systems, including AIX, Solaris, Linux and VMS, major cloud gateways and Microsoft's Hyper-V virtualization platform. Support is also provided for major storage systems and SAN switches. A complete list is available on Actifio's Web site (www.actifio.com).



What This Means`

Actifio's PAS solution not only provides significant savings in storage infrastructure and software licensing costs, it can also greatly reduce the staff time required for managing secondary data. By using a single management console, a single data silo and SLAs for all applications and systems, complexity is reduced not only in the process of backing up, replicating and copying data, but more importantly, during those critical moments when data needs to be restored, reducing the likelihood of error. Restoring data is quick and easy and in most cases only requires a few mouse clicks.

SSG-NOW Assessment

Explosive growth of enterprise data has overwhelmed many IT departments. Numerous point products exist to backup, snapshot or clone primary data. Another whole category of products exists to reduce the amount of redundant secondary data stored by those systems. And, even more products exist to support disaster recovery and business continuity. There is some overlap, of course, since many of these products perform functions in both categories. Most enterprises, however, have to implement multiple systems to protect their data, not only increasing data protection costs, but increasing complexity as well.

Actifio's PAS is a big leap forward in data protection and availability. With support for most major operating systems and applications, support for virtual environments and seamless integration of cloud storage with local storage, PAS offers customers a single data protection system, with a single management console, to manage and maintain all copy data. Although a collection of many products provide functions similar to those provided by PAS, no other current product provides them all in a single package with a simplified interface and SLA-based management. In our opinion Actifio has created a product that will have a major impact on data protection.

Costs for Actifio's PAS solutions are priced on a sliding scale based on the amount of data protected.

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