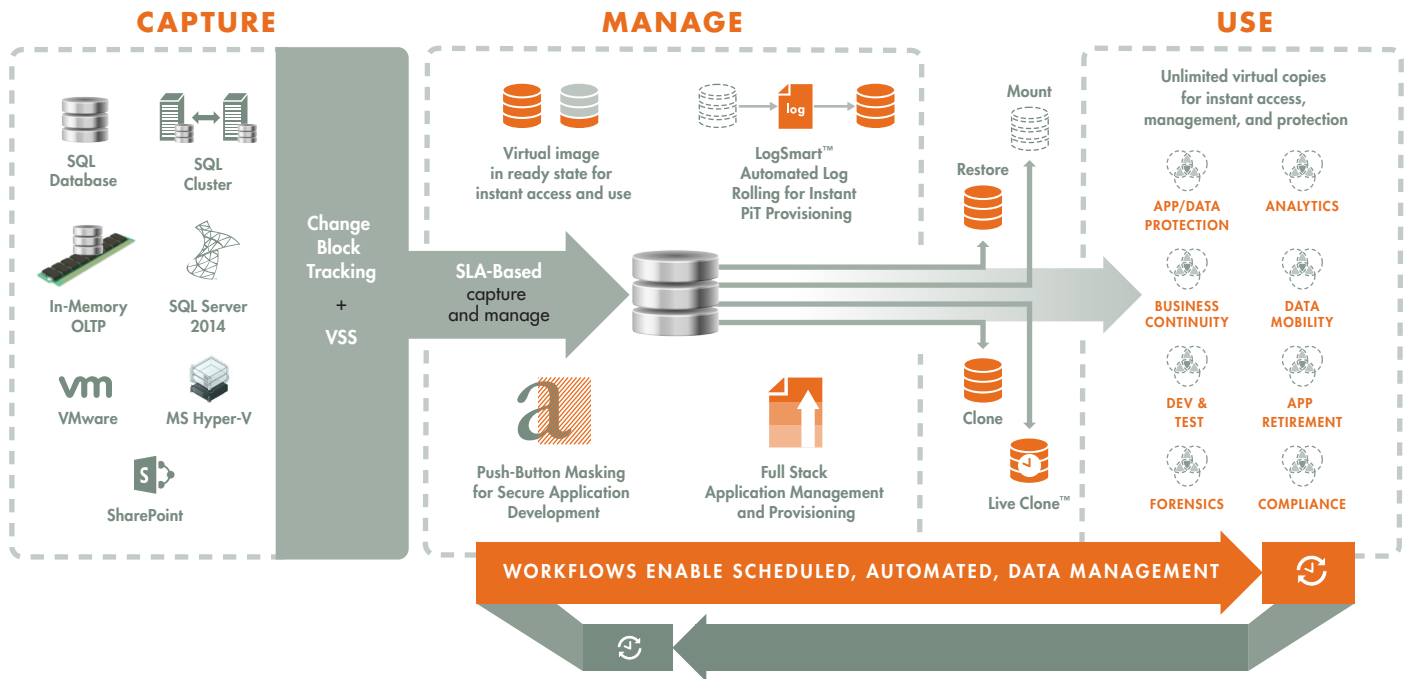


actifio

Extending the Value of Microsoft SQL
through Copy Data Virtualization

Actifio Extends the Value of Microsoft SQL Through Copy Data Virtualization



Actifio brings a single solution for application development, testing, data management, and protection for Microsoft SQL.

THE DATA MANAGEMENT CHALLENGE

IDC estimates that in 2013, businesses spent \$44 billion to store multiple, unnecessary copies of their data. Organizations are experiencing an explosion of data due to the creation of separate copies of production data in order to protect and run the business. Backup, disaster recovery, test & development, compliance, and analytic data are all business operations that compound the copy data growth problem. The vast majority of IT organizations deploy separate tools to perform the same basic four operations; copy, store, move and optimize data. The result can range from 13 to 120 duplicate copies of data that cost the business as much as five times more for additional infrastructure and management than it costs for production data.

ACTIFIO SOLUTION FOR COPY DATA MANAGEMENT

Actifio Virtual Data Pipeline™ (VDP) technology delivers an application-centric, SLA-driven solution that decouples the management of data from storage, network and server infrastructure. The result is a single, radically simple solution—efficiently virtualizing all copies of production data for instant backup, disaster recovery, application test and development, and more.

Traditional Microsoft SQL Data Management Challenges

SQL Server forms the core of many companies' business information systems. Protecting this data and making it accessible whenever and wherever needed has traditionally been complex and expensive. Legacy SQL database management approaches deploy complex, expensive

infrastructure silos built with point tools for backup, disaster recovery, business continuity, test & development, analytics, compliance or other applications—resulting in far too many redundant copies of data.

Radically Simple Copy Data Virtualization

Actifio VDP virtualizes SQL data, allowing IT administrators to provide data protection, test & development, analytics, as well as disaster recovery and business continuity all through a single storage platform, from only one golden copy of your production data. Actifio allows IT administrators to access a single, any point-in-time copy of your primary data, through a mount, clone, LiveClone™, or restore operation. The approach to properly *Capture, Manage, and Use* data is **Radically Simple**.

CAPTURE

Actifio VDP performs a deep discovery of applications, databases, volumes and file systems. Actifio uses snapshots with changed-block-tracking technology to instantly capture application-consistent copies of data. This technology is the industry's fastest, most efficient and scalable method of data capture, eliminating the traditional "backup window" while delivering data protection efficiency previously impossible using traditional technology.

VDP is incremental-forever architecture. An application consistent "golden image" will be created and maintained and only changed blocks will be sent to Actifio VDP based on administrator defined Service Level Agreements (SLAs). VDP will hold the virtual image in its native format for efficient usability.

MANAGE

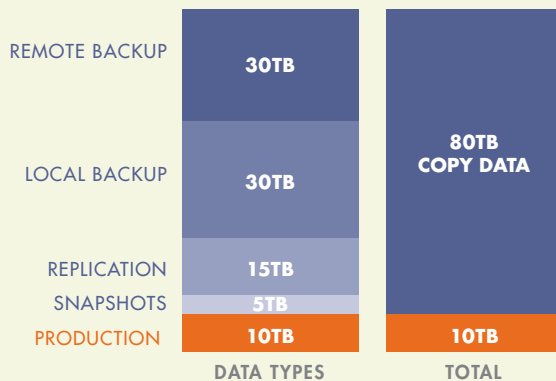
Once a golden image is captured, this image can be placed into a ready-state for immediate use, de-duplicated for long term retention, or sent to a remote location for disaster recovery purposes. By consolidating the silos of data management services, managing the data becomes simple, consistent, efficient, and removes business risk.

Consistency groups and Actifio LogSmart™ gives you the ability to completely manage your applications. Not only do you achieve full stack application management and provisioning, VDP also delivers automated log rolling for instant point-in-time recovery and/or provisioning.

CASE STUDY

To illustrate the inefficiencies of the legacy approach, let's examine a case study for a SQL environment with 10 TB of production storage and the following business requirements:

- Database backups daily, retaining daily backups for 1 month and weekly backups for 2 months
- All backups are replicated to a remote site for Disaster RecoveryPoint in time copies are created for rapid test and development
- Database replication to a remote site for Business Continuity



In this typical scenario, a 10 TB database environment requires 80TB of copy data storage, making the cost of managing the copy data well over 5 times the cost of the production environment. Time is also a factor when responding to business change requests. Attaining a **single copy** for development or database refresh cycles can take weeks from the change management request, provisioning, masking, etc.

USE

Actifio VDP delivers the unique capability of enabling applications to directly use point-in-time copy data, without the need for a traditional "restore" operation. Application data from any point-in-time copy can be accessed on any system for recovery, development, testing, analytics or dozens of other common use cases. Actifio VDP offers vast flexibility when accessing data with options for secure, roles-based control of data management for multi-tenancy, virtual images from any point-in-time, and various image types including:

- **Mount**—Snapshots can instantly be mounted to any authorized system in the environment using efficient block-level iSCSI and Fibre Channel protocol.
- **Restore**—The restore function will effectively revert the production data to look exactly as it did at the time of the data collection point. This function is typically used to recover an entire server or application to a valid state after a massive data corruption or array failure.
- **Clone**—The clone function is used to create an independent copy of a data set for any number of use cases. Applications and application consistent data sets can be copied from any point in the system to a separate location anywhere in the environment.
- **LiveClone™** — The LiveClone function is used in a similar fashion to clone. However, when copies of the data need to be updated and available on a regular basis, LiveClone allows an independent copy of a data set to be mounted, but then allows a fresh copy of the data to be maintained as the data in the primary data is refreshed.

WORKFLOW

Using Actifio VDP Workflows allows the administrator to schedule and automate the complete data flow. Actifio RESTful APIs, allows integration with masking software to protect sensitive data. Administrators can configure workflow that automates capture based on an SLA, mask the data, leverage existing custom pre- and/or post-process scripts and LiveClone operations for a powerful, automated, and complete copy data lifecycle.

USE CASES

- Application Protection
- Data Protection
- Business Continuity
- Application Dev & Test
- Pre-Production Testing
- Analytics
- Compliance
- Data Mobility/Migration
- Application Retirement

ACTIFIO CAPTURES

APPLICATION CONSISTENT SQL DATA

- SQL Databases
- From Hyper-V or VMware
- SQL Clusters
- SQL Applications
- SharePoint

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