

# Actifio Tech Brief

## What's New in the 9.0 Release

This document introduces the new features in Actifio 9.0. Upgrading to the latest software version is strongly recommended to benefit from the new features, enhancements and fixes. Contact your Actifio Support representative for assistance in upgrading the software on your Actifio appliances.

### Expanded Cloud Mobility for Migration and DR

#### Highlights

- When using cloud mobility to recover physical and virtual systems into a cloud environment (AWS, Google Cloud Platform, Microsoft Azure), users can request to copy the volume data into native cloud block storage (SSD or magnetic tiers). The result will be a new independent VM that does not rely on any volumes presented from an Actifio appliance.

#### Benefits

- Easily migrate VMs and physical servers from on-prem to cloud environment, or between cloud platforms.
- When using cloud as a DR environment, customers can decide at time of DR failover whether to run VMs from an Actifio Sky using instant-mount or copy the data to cloud native storage and run directly from that.

### External Snapshot Pools with IBM Storwize/SVC and Pure FlashStorage

#### Highlights

- Actifio has extended its Virtual Data Pipeline to use and manage external snapshot pools with Sky appliances. Customers can leverage their storage arrays' performance, connectivity, and availability by using the array native snapshots for Actifio's snapshot pool.
- Applications data can be captured in an incremental-only fashion by snapping the production LUNs in-place (using them as the base), or they can capture data in a full+incremental fashion (aka out-of-band) into an external snapshot pool in a different array, to create a full copy of the data set first and then copy incremental changes.
- While capture methods differ, array snapshots are leveraged in both cases and can be mounted directly to hosts, thereby leveraging the arrays' connectivity (FC or iSCSI), high-availability, and performance.
- Once data is captured into the external snapshot pool, it can still flow into the Virtual Data Pipeline in an incremental-forever manner to leverage VDP capabilities, including OnVault, dedup, remote dedup, StreamSnap, and Dedup-Async replication.

## Benefits

- Better performance on mounted images. Activity on virtual clones does not go through the Actifio appliance but rather directly between the host and storage array. This is especially important in test/dev environments.
- Better performance and RTO for DR, when using external snapshot pools on the DR side. Data is updated and available in its intended target storage so there is no need to copy it elsewhere.
- Better performance on SmartCopy backups (data moves directly from array to array, without going through an Actifio appliance).
- Incremental-Only capture for apps that already reside on the array, resulting in faster capture (near-instant) and less storage (no need for a first full copy).
- Highly available mounts from the storage array, coordinated by VDP.
- FC host connectivity with Sky (Sky to array connection is iSCSI).
- Better scalability of Actifio infrastructure - fewer appliances will be needed, typically.
- Wider support matrix - interop according to the array's connectivity.

## NFS Datastore Support with VMware (alternative to iSCSI)

### Highlights

- Users of Actifio Sky can leverage NFS protocol, in addition to iSCSI or as an alternative, when recovering VMs and applications in a VMware environment.
- VMs are captured over the network using VMware VADP and can now be mounted back to an ESX host using NFS protocol.
- In addition, staging disks and recovered applications mounted into a VM (using a connector) can also be mounted to the ESX host over NFS and then presented as block devices (VMDK) to the VM. This applies to Windows and Linux and all supported applications, including SQL Server, Oracle, Linux-based databases captured with the CBT driver, and file systems.

### Benefits

- More flexibility to capture and access data over NFS protocol.
- NFS can be easier to configure than block protocols in some environments.

## Expanded Support Matrix

### Highlights

- Added support for Oracle 18c.
- Added support for Oracle and file system capture on Ubuntu systems. This does not include support for other applications using the change-block tracking driver.

## NFS Mount to RAC

### Highlights

- Oracle ASM databases captured into a file system staging disk over NFS can now be mounted into a RAC environment. This allows the creation of virtual clones in a test/dev environment with RAC, without having to restore the data back into an ASM database.

### Benefits

- More flexibility to capture and access data over NFS protocol.

- Short RTO when accessing virtual clones (mounts) since data does not need to be restored from a file system image into an ASM format.

### MDL Calculation for VSAN

#### Highlights

- The calculation of Managed Data License has been enhanced to accurately reflect usage in a VMware VSAN environment.

### Enhanced Actifio Global Manager Functionality and Usability

#### Highlights

Actifio is transitioning to Actifio Global Manager for all appliance and data management. This version adds the following functionality and usability enhancements to AGM:

- Support for databases and other generic applications on Linux using the change-block tracking driver.
- Ability to export the content displayed in various grids (application list, host list, etc.) to CSV or PDF files.
- Streamlined display and management of application details & settings, including showing defaults and easily restoring defaults.
- User can easily look up job failure errors in ActifioNOW knowledgebase, directly from System Monitor job details.
- All table displays use a consistent grid component with standard, rich functionality.
- Easy "short-cut" application list to move between applications when looking at an application page (e.g. Manage SLA, Access).

#### Benefits

- AGM provides a single interface to manage the entire Actifio environment.

### Clone SQL Server to Another Server

#### Highlights

- Allow user to recover SQL Server databases by copying the data to another server. The original database configuration is maintained. This is different from a mount: the data is copied to another storage rather than being presented from an Actifio appliance. Full support from AGM.

#### Benefits

- Recover SQL Server databases back to a point in time, copying data into production storage using original database configuration.

### Enhanced Cyber-Resiliency Leveraging IBM COS Retention Capabilities

#### Highlights

- Users can designate backups as immutable by setting an option in a template policy. When this is set, no Actifio user can expire an image before its policy-driven expiration date, not even an administrator (this was available in 8.1).
- Customers who use Actifio with IBM Cloud Object Storage can now leverage its retention capabilities to add another layer of protection at the storage level in addition to the Actifio level.

#### Benefits

- Increase resiliency of data by protecting it from rogue users or malware/ransomware.

## Enhanced Call-Home Functionality

### Highlights

- Appliance call-home can now leverage HTTPS protocol in addition to email.

### Benefits

- Simpler setup and enhanced security.

## Upgrade Paths

Actifio CDS and Sky systems running 7.x or 8.0.x can be upgraded directly to 9.0.0. Older versions (<7.x) should be upgraded first to one of these releases (7.x or 8.0.x).

CDS firmware upgrade to 7.5.0.9 or 7.8 is required with 9.0. The older 7.3 firmware is not supported with 9.0.

See the Actifio 9.0 release notes for list of issues addressed in this release.