
Actifio VDP 10.0.5 Release Notes

(CDS, CDX, and Sky Appliances)



actifio

Actifio VDP 10.0.5

Copyright, Trademarks, and other Legal Matter

Copyright © 2022 Google LLC. All rights reserved.

Actifio™, OnVault™, and VDP™ are trademarks of Google LLC.

All other brands, product names, goods and/or services mentioned herein are trademarks or property of their respective owners.

Contents

Preface	vii
The ActifioNOW Customer Portal	vii
Actifio Support Centers	vii
Chapter 1 – Actifio VDP 10.0.5 Release Notes	1
What’s New	1
Database Enhancements	1
Disaster Recovery Enhancements	2
Security Enhancements	2
Report Manager Enhancements	2
Other Enhancements	2
Expanded Support Matrix	2
Deprecated Features	3
Deprecated Platforms	3
Upgrade Paths	3
Resolved Issues	3
Functionality and Usability Fixes	3
Command Line Interface Fixes	12
Limitations and Restrictions	13
Chapter 2 – Actifio VDP 10.0.4 Release Notes	17
What’s New	17
SQL Server and SAP HANA Onboarding Wizard	17
Enhanced Resiliency Director Support for Databases	17
Highlights:	17
Expanded Support Matrix	18
Deprecated Platforms in 10.0.4	18
Deprecated Platforms planned for the future	18
Upgrade Paths	18
Resolved Issues	19
Functionality and Usability Fixes	19
Command Line Interface Fixes	32

Limitations and Restrictions	33
Chapter 3 – Actifio VDP 10.0.2 Release Notes	37
What's New	37
Streamlined support for PostgreSQL	37
Expanded support of External Snapshot Pools with all databases	37
Enhanced functionality and usability	38
Expanded Support Matrix	38
Deprecated Features	39
Upgrade Paths.....	39
Resolved Issues.....	40
Functionality and Usability Fixes.....	40
Command Line Interface Fixes	55
Limitations and Restrictions	56
Chapter 4 – Actifio VDP 10.0.1 Release Notes	59
What's New	59
Enhanced integration with SAP MaxDB database management	59
Test Data Management with Containers.....	60
Enhanced integration with SAP IQ database management.....	60
Expanded Support Matrix	60
Upgrade Paths.....	61
Resolved Issues.....	61
Functionality and Usability Fixes.....	61
Command Line Interface Fixes	72
Limitations and Restrictions	74
Chapter 5 – Actifio VDP 10.0 Release Notes	77
What's New	77
Cloud VM snapshots.....	77
CDX (in mainstream code, with NFS and other 9.0 functionality).....	77
Near-zero downtime recovery for SQL Server and file systems (Mount & Migrate)	78
OnVault to multiple targets.....	78
OnVault rehydration performance and incremental options	78
Streamlined support for SAP HANA, Db2, Sybase, MySQL.....	79
OnVault to Dell EMC Data Domain for long-term retention	79
Enhanced support for SQL Server Always-on Availability Groups.....	80
Fast replication of any snapshot image using StreamSnap.....	80
Sky 128TB Dedup pool.....	80
Dedup performance enhancements (GC).....	80

Enhanced Actifio Global Manager functionality and usability	80
Expanded support matrix	81
Changes in the Actifio Resource Center (ARC)	81
Changes in Mount Behavior on Windows	81
Upgrade Paths	81
Resolved Issues	81
Functionality and Usability Fixes	82
Command Line Interface Fixes	89
Limitations and Restrictions	90
Chapter 6 – Known Issues	93
Known Issues in Actifio VDP 10.0.5	93
Chapter 7 – Security and Vulnerability Issues	111
Security Fixes in Actifio VDP 10.0.5	111
CVEs Fixed in Actifio VDP 10.0.5	114
Fixed Kernel Vulnerabilities	119
Known Security and CVE Issues in Actifio VDP 10.0.5	120
Known Kernel Vulnerabilities	122

Preface

This document provides release notes for the Actifio VDP 10.0 release and its follow-on service packs.

New in This Release

The new features, changes, and enhancements in Actifio VDP 10.0.5 release are detailed in [What's New](#) on page 1.

The ActifioNOW Customer Portal

During the configuration and initialization of your Actifio appliance, your Actifio representative provides you with a username and password for the ActifioNow customer portal.

From the ActifioNow customer portal, you can obtain detailed reports about your Actifio appliance, access the Actifio product documentation, including release notes, and search the knowledge base for answers to specific questions.

To log into the ActifioNow customer portal:

1. Go to: <https://now.actifio.com>.
2. When prompted, enter the username and password provided by your Actifio representative.

Actifio Support Centers

To contact an Actifio support representative, you can:

- Send email to: support@actifio.com
- Call:
 - From anywhere:** +1.315.261.7501
 - US Toll-Free:** +1.855.392.6810
 - Australia:** 0011 800-16165656
 - Germany:** 00 800-16165656
 - New Zealand:** 00 800-16165656
 - UK:** 0 800-0155019

1 Actifio VDP 10.0.5 Release Notes

Actifio VDP 10.0.5 includes new features and various enhancements, security improvements, and bug fixes. To install or upgrade, please schedule a time with Actifio Support.

Topics:

- [What's New](#)
- [Upgrade Paths](#)
- [Resolved Issues](#)
- [Limitations and Restrictions](#)

What's New

The following are the new features, enhancements, and changes in Actifio VDP 10.0.5 release:

Database Enhancements

Highlights:

- MongoDB support for sharded clusters
- Parallel DB and Log backups
- Enhanced retention/expiration management for database logs, added the ability to hold database logs relevant to a database backup for as long as the backup is retained. Configuration is performed through the expiration management feature.
- Ability to provision extra storage for use in a mount of an Oracle database.

Benefits:

- Ability to protect and recover MongoDB sharded clusters
- Database log backups do not need to wait for database backups to complete, which results in an improved ability to meet the specified RPO.
- Point in time recoveries are now possible, even beyond the normal log retention period, when the database backup retention has been updated to indicate logs should be saved.
- Oracle database mounts used for test data management will no longer need to consume disk space on the Oracle server if extra space is needed, it can be provisioned as part of the mount operation

Disaster Recovery Enhancements

Highlights:

- All new conversion engine for VMware to GCE recoveries

Benefits:

- Recoveries are faster and more consistent
- The support/compatibility matrix for operating systems is broader, with a faster ability to add new support when needed

Security Enhancements

Highlights:

- New right to independently manage users authorized to prematurely expire backups

Benefits:

- Provides additional flexibility for separation of administrative roles
- Reduces risk of a rogue employee prematurely expiring backups that have not been flagged for “enforced retention”.

Report Manager Enhancements

Highlights:

- Stand-alone Report Manager (RM) is no longer supported beginning with 10.0.5. Report Manager will only be supported when running in the AGM+RM configuration going forward.
- Customer Success can help to merge your stand-alone RM into an AGM, while maintaining all historical data.

Benefits:

- RM will benefit from a centralized security model, integrated with AGM instead of a single appliance.
- Fewer virtual machines need to be run as part of the Actifio solution
- Simpler upgrade process going forward

Other Enhancements

- To avoid common issues that arise when time synchronization is missing, hourly alerts will now be generated if there is no valid NTP server configured for each backup appliance. To avoid these issues and prevent alerts, ensure a valid NTP server has been configured using the System and Network Management interface for each backup appliance.

Expanded Support Matrix

- RHEL 8.4, RHEL 8.5, and RHEL 8.6
Actifio connector is enhanced to support RHEL 8.4, RHEL 8.5, and RHEL 8.6 operating system version.
- OEL 8.6
Actifio connector is enhanced to support Oracle Enterprise Linux 8.6 operating system version.
- vSphere and vSAN 7.0 U3
Actifio appliances have been enhanced to support vSphere and vSAN 7.0 U3.

Deprecated Features

With the new conversion engine for VMware to Google Cloud Compute Engine (GCE) come the following reductions in features:

- Conversions of VMs into AWS and Azure are no longer supported
- Conversions are exclusively supported from VMware VMs
- Conversions from connector backups (systemstate applications) are no longer supported, including conversions from physical servers into VMware.

Deprecated Platforms

The following platforms are deprecated from Actifio 10.0.5 release:

- Oracle declared end of support for the 12c version effectively from July 31, 2022. Therefore, Oracle 12c is also deprecated in all Actifio product versions as of the same end of life date.

See the [Resolved Issues](#) section for a list of issues addressed in this release.

Upgrade Paths

The following are the upgrade paths for Actifio AGM/Sky/CDS/CDX/RD 10.0.5 systems:

- Before upgrading any managed Sky/CDS/CDX to 10.0.5, first upgrade the AGM to 10.0.5.

Note: If the “Catalog” feature is configured, there are special steps required for the AGM upgrade. Coordinate with Customer Success and have them work jointly with you to perform these extra steps.

- AGM/Sky/CDS/CDX running on 10.0.2 or higher can be upgraded to 10.0.5.
- AGM/Sky/CDS/CDX running versions older than 10.0.2 must be upgraded to 10.0.2 first, and then to 10.0.5. Refer to the release notes for 10.0.2 for details on the supported upgrade paths to those releases.
- For customers using Resiliency Director (RD), an upgrade to RD 10.0.5 will be required immediately after upgrading AGM and Sky/CDS/CDX to 10.0.5. See the Resiliency Director 10.0.5 release notes for details on the upgrade procedure and supported upgrade paths.

Resolved Issues

Fixes in this release fall into two distinct categories as follows:

- [Functionality and Usability Fixes](#)
- [Command Line Interface Fixes](#)

Functionality and Usability Fixes

The following table lists the issues that are addressed in Actifio VDP 10.0.5 release:

Table 1: Functionality and Usability Fixes in Actifio VDP 10.0.5

Issue	Fix	Tracking
When restoring a Compute engine instance, disk naming convention differs from source disk.	This issue is fixed and users can now restore the VMs with the same source disk names.	209620596
In the Actifio Sky appliance, the storage pool size is reported incorrectly.		209003494

Issue	Fix	Tracking
SmartCopy: Many hard link changes on Windows can cause jobs to fail.	Fixed an issue with Windows File System or System State apps that can cause the backup to fail if hard links on the protected disks are changed in specific patterns. This generally happens when a file has more than 512 hard links to it.	210702923
[Hyper-V] Restore a single VHDX file, restoring all the VHDX files that lie on the same drive.		209956006
Unmounting and remounting an image from the OnVault pool, might have the ability to introduce stale data to the host.		196846982
System State backups are failing on Ubuntu20.04.2 while performing the application discovery.	This issue is fixed by removing the namespace filesystem <code>"/run/snapd/ns/lxd.mnt "</code> .	208563962
Oracle backup jobs on AIX hosts are failing with error "Failed to create ASM staging disk group".		208542376
Backup of compute engine instances attached with regional PD disks are failing with the error "Failed to get volumes of the VM".	Added support for discovering, protecting and recovering regional PD disks.	206973829
Sometimes, System is generating a large number of MTU related alerts, even when MTU is correct and non-related errors may be occurring.		204924967
Upgrades sometimes fail with "Found 1 undead ifcfg files" error.		204221320
The expiration of OnVault images fails with large numbers of volumes.		199727141
Stream snap jobs are failing on restarting the replication job on the source system.		190582909
Streamsnap jobs fail Intermittently when replicating VMware's VMs with larger numbers of VMDK files.		206606993
Changing the SLA template from daily to weekly on a managed appliance throws an error.		206464381
Staging disk fails to resize automatically based on the used staging disk capacity.	Fixed this issue by resetting the log vDisk with 16TB value.	204649226
Oracle backups fails with the disk full when the same archive logs are backing up multiple times.	Fixed the timezone conversion issue for the archive logs "From" time.	204557948
Oracle 11g backups fail due to obsolete or duplicate files on the staging disks.		204459925
RHEL8 formatted XFS file system fails to mount on a RHEL 7 (or equivalent) host because of XFS incompatibility.		204430387
The incremental backup jobs on VMs with Japanese characters were turned into full backup jobs (low splash).		204317112

Issue	Fix	Tracking
The call home feature fails to work on Actifio appliance version 10.0.4 even though TLS is enabled.		190154619
Some files that cannot be read during backup are automatically excluded instead of the backup job failing.		203089991
Query (OBSOLETE='NO') of existing image copies may return no result leading incremental backup to fail.	This issue is fixed and the process of obsolete image copies has changes with removal (OBSOLETE='NO') from the script query and can occur with correct results. You can also refer to https://docs.actifio.com/static/10.0/PDFs/DBAOracle.pdf . for more details.	202391469
Enhancement: Added support to restore MaxDB to alternate locations.		202115225
[Sybase] When performing a CBT-based backup, the Actifio connector is unable to parse the output of the dumper2fs command.		202015392
Intermittent backup job failures for VMware's VMs that have some newer VM properties set.		201728356
System state backups are failing on Windows 2016.		201305017
During backup, if the staging disk is marked as dirty by the filesystem, the Actifio connector will try to repair the volume. If the volume is being used, the volume will force dismounted before trying to repair.		190968036
After SQL log staging disk is resized for an application with multiple databases, log replay fails during mount/clone/restore operations.		197941309
For large Linux application, with the current default 1 TB of staging disk granularity, creating a lots of disk (eg. for a 100 TB staging disk we will create 100 counts 1TB disks), and result in a lot of time spent in identifying the LUN during backup/restores.	This issue is fixed by adding a new configuration parameter maxstagingdiskcount that will be used when creating a >10TB staging disk. If maxstagingdiskcount is set to 8, then for the same 100 TB, it will not create 8 counts of 12TB disks.	210981498
If SQLInstance or SQLAvailabilityGroup has a large number of databases and underlying database files, the metadata can sometimes go beyond 10MB. This causes the system to crash.		231722472
Windows Connector crashes on a Hyper-V VM if WMI service fails to enumerate Win32_DiskDrive objects.		223820092
For hosts using iSCSI, Sky appliance maps a small 64K disk to the host when the iSCSI session is created. This disk is not initialized with any partitions. If the presence of uninitialized disk is of any concern to the user, they can set a configuration parameter "InitializeControlDevice" to "true" in connector.conf in the host and Connector will initialize the disk with MBR partition table.		196985999
Enhancement: Added an option to set the number of RMAN channels during RMAN restore from the GUI.		201068487

Issue	Fix	Tracking
Enhancement: Added policy option (Advanced option) for backup to throttle the IO (READ) for RMAN during database backup. When specified, the Actifio connector will honor the setting during RMAN's database backup.		201068403
Snapshot jobs on the HP-UX host fails with the error "Actifio Connector failed to find volume or filesystem on staging disks".		200911286
Upgrading to Sky appliance 10.0.x does not automatically cleanup obsoleted files in the directory /act//webapps/ROOT/.		200280614
The following region was not listed in the Add-credentials panel: northamerica-northeast2 (Toronto)	This region has now been added.	198987985
Oracle backups are failing due to timezone conversion error after upgrading from 8.1.2 to 10.0.2 version.		197047740
Expiring the orphan backup image throws the error "updating backup data object failed".		196464090
Occasionally ran multiple database backups when there should be a log backup and a database backup.		196350824 225002263
Incorrect SNMP event "Connection to 10.245.2.89 on 5106 should use SSL for communication" is displayed when the Actifio Connector is down or port is not reachable.		196064821
OnVault jobs are suspended due to a deadlock in the system library.		195439629
Oracle archive log backup fails when the Actifio connector is passing incorrect "from_time" during the backup.		194935682
Call home feature fails to work after upgrading Sky appliance from 10.0.2 to 10.0.4.		194714872
Oracle backups fail with the error "database or pluggable database not open: queries allowed on fixed".		194488159
Enhancement: Oracle database enhanced to handle special characters (@) in database user password during backup while connecting to primary node from standby node/database.		194363957
Oracle: Schema refresh fails with error ORA-02429: "cannot drop index used for enforcement of unique/primary key".		192572213
Backup of the Compute engine PD snapshot fails with the error "Null pointer Exception" when querying the disks.		240602368
Validating the configured username and password in Application Details and Settings page throws an error even though fields are not newly defined.		240553435

Issue	Fix	Tracking
<p>[SAP IQ] Discovery fail to find:</p> <ul style="list-style-type: none"> the running database if dblocate command does not list the databases. all the database files mount points if database files are on different mount points other than the catalog file location. 		240242181
<p>[Oracle file system] AppAware mount fails if there are data guard broker configuration file related parameters in the parameter file.</p>	<p>This issue is fixed by removing data guard broker configuration file related parameters from the parameter file during app aware mount.</p>	239219564
<p>During the SAP HANA LVM restore to alternate nodes, the alternate node causes the outage to the primary database.</p>	<p>This issue is fixed and SSFS keys will not be copied during restore on alternate hosts during HANA restore.</p>	189854673
<p>Cannot add a new flash system array to Sky appliance for Spectrum visualizer version 8.4.2 and above.</p>		236746076
<p>[CDX only]: Wrong path for java when sending failure alert emails.</p>		218236934
<p>Sky appliances show a lot of buffered IO trigger swap usage alerts.</p>		217464379
<p>[CDS only, iSCSI only] iSCSI target IP addresses configured on the second CDS node, may cause Snapshot jobs on ESX to fail with this error: "error 374: Failed to find Actifio mapped LUN on ESX server. Failed to do HBA/iSCSI rescan on ESX <ESX server ID> for mapped luns. Failed to map disks to <ESX server ID>".</p>	<p>This issue is fixed and we recommend not to change the configured target IP addresses on the fail over node.</p>	191714448
<p>[CDX only]: Unrecognized SSDs could not be used, including compatible devices supplied as hardware replacements.</p>	<p>This issue is fixed by adding a new option "Configure SSDs" to the front-panel menu displayed on the VGA or iDRAC console. This lists any unrecognized SSDs in the CDX node and enables them for use for cache if so advised by customer support executives.</p>	187999622
<p>[CDX only] CDX could sometimes fail to find storage over the fiber channel.</p>	<p>This issue is fixed by upgrading a driver for the stability improvement.</p>	187987952
<p>[CDX only] Reduce the number of reboots/failovers that occur due to timeouts.</p>	<p>This issue is fixed by improving cluster stability under heavy IO load by increasing the cluster token timeout. Cluster timeout now defaults to 8000ms.</p>	235892184
<p>[CDX only, fiber-channel front-end only] Frequent link-down/link-up events on the fiber-channel ports of the standby node are observed, even when no changes were being made to LUNs presented on the fabric.</p>	<p>This issue is fixed by reducing the frequency of fiber-channel reconfiguration events on standby nodes.</p>	234188959
<p>Sometimes, Windows connectors do not restart after Windows OS patch and reboot.</p>		235926961

Issue	Fix	Tracking
Intermittent failures with Streamsnap jobs when replicating VMware's VMs with larger numbers of VMDK files.		206606993
Sometimes, SQL Server Availability Group discovery fails when SQL Server PowerShell module fails to load.		202918358
AppAware mount takes longer time if the target database has more datafiles to process.		235806410
Changing the project ID field on the System state recovery page does not change the selected disk type.		233337918
Linux command "hostname <some string>" in the command ("udsinfo lsjobhistory Job_7661055") output (accidental copy paste on the customer appliance) was changing the Customer appliance hostname. And the issue is Linux "hostname" command should not be allowed to change the Customer Appliance hostname.	Created aliases for linux "hostname" command, alias would avoid the accidental execution of the "hostname" command by throwing error message (which has the information about the proper way to change hostname of appliance if required) when "#hostname <some string>" is executed.	232925490
Unmount operation of recovered GCE VM fails to remove SCST configuration file and causes mount operation of SQL to fail.		232888557
Enhancement: Added support for Linux version with CBT on SELinux-enabled hosts.		228065521
Unable to perform recoveries to GCE if more than 20 service accounts exist in the target project and the user selected one that is 21st or higher in the sequence.		227416136
New Compute Engine VMs created from compute engine Instance backups did not have the same Secure Boot, vTPM and Integrity Monitoring settings as the source VM.	This has been corrected. Note this will only apply to backups created after the application of this fix. Older backups will not preserve these settings.	216768751
The application discovery timeout setting set with the <code>max.to.discovery.timeout.seconds</code> parameter was not being honored.	If application discovery is still running after the configured timeout value has passed, then it will stop with a time-out message.	191500312
Certain types of failures may leave "temporary" jobs listed in the job monitor, which never get cleaned up.		224975999
Oracle AppAware mount fails if source backup image created from Oracle FileSystem database running on Solaris Non Global Zone.		223593765
Cancel of RMAN backup leaves RMAN processes without termination when a large number of channels are allocated.		222547464
Backup jobs fail with misleading errors even though the failure reason is unable to read from the volume.		220177766
OnVault job auto-cancels if a sub-job takes more than an hour to get OnVault object lock for data movement from source volume to target OnVault volume.		218858974

Issue	Fix	Tracking
Sky appliance displays "Out Of Memory" error even though there are no backup images or no applications in it.		218794022
Under some conditions, with several Sky appliances and ESXi hosts, ESXi may report that NFS datastore on Sky are in accessible, which can cause backups to fail and VMs on the ESXi host to temporarily stun during a backup.	This issue has been resolved and the erroneous "NFS datastore inaccessible" error will no longer occur and VMs will not be stunned.	217832981
SAP MaxDB database discovery might fail if the DBM server is not running for that database.		216592743
MaxDB database credentials are visible in the logs in the debug mode.		216081985
Compute engine instances display the same snapshot name for multiple backups.		213864940
Backups fail if the External Storage Pool (IBM Storwize) does not have a vDisk with id 0. The vDisks created during backup can be assigned ID 0, which causes failure.	This issue is fixed and treats ID 0 as a valid ID.	212779660
Actifio does not handle the ethernet interfaces above eth9 in the /etc/iproute2/rt_tables.	This issue is fixed to add the interfaces above eth9 in the routing table configuration file "/etc/iproute2/rt_tables". This is done in the actnet addr4 script which configures the interfaces on the Sky appliances.	211391031
If vDisk creation fails from a snapshot, the internal state of the object is shown as incorrect, causing subsequent failures for operations on that snapshot.		206772040
SAP HANA log backup begin "point in time" is changing set to the previous log end "point in time" and losing the range for recovery. This is further causing more time for the OnVault image.	This issue is fixed by adding a logic to move the begin "point in time" in some cases but not always to the previous log end "point in time".	205931992
In SAP HANA, if archive logs are not generated as part of a log backup, the end "point in time" is set to be the same as begin "point in time" which causes the recovery range to disappear for all the existing database backups.	This issue is fixed by adding a logic to use the same end "point in time" as previous log backup and also for log gap detection in the long term.	189853850
Terminal errors generate a hang while trying to write logs required for debugging.		205714312
PostgreSQL log truncation option is not purging the desired logs.		189788238
[CDX only]: The /var/lib/mlocate/mlocate.db file consuming large amounts of local storage.	This issue is fixed to remove and clean up the mlocate package.	191493950
Enhancement: Added a new provisioning option, "Obsolete Parameters", in the AppAware mount to enter the obsolete init parameters separated by "," by the user.		190400028

Issue	Fix	Tracking
Enhancement: Added a new option (RACHOSTNAMES) to allow Oracle ASM RAC mount to multiple nodes using alternate IP addresses.		187539765
When Oracle database uses bigfile tablespace, this large size datafile backup takes a long time during incremental merge, which slows down the database backup.	This issue is fixed and Actifio now enables multi-section for level 1 incremental merge backup.	189469949
For LVM CBT-backup applications, the staging disk size issues are observed when production volume size is increased.	Specify an exact size that is desired to the specified volumes instead of allocating all the available extents in the volume group to the staging volume.	189755598
Sky appliance was trying to connect to the ESXi server via VDDK, and received 503 error (Service Unavailable) from the ESXi server, but VDDK returned success to the appliance. Due to this, the appliance assumed connection to ESXi server to be successful and proceeded with the job causing the segmentation fault.	This issue is fixed and you can monitor the logs from VDDK and on encountering 503 errors in VDDK, consider it as connection failure irrespective of the return value from VDDK.	195114746
[Solaris shell] Oracle RMAN backup fails when sqlplus version check causes rmanShell.sh script issue when version is returned empty on oracle 10.2.0.4.	In the RMAN script, provided a default value for 'version' variable in the Solaris shell.	218871317
SAP HANA "previous log begin point in time" fails to update properly and causes very large sized log staging disk projection.	This issue is fixed by making the appropriate changes to update the "previous log begin point in time" correctly.	197399963
In some uncommon cases, based on specific software versions and sequences of disk size increases, it is possible to have a log backup failure due to an attempt to provision a smaller disk than was already used in earlier jobs.		215147998
Backups fail on Oracle BMS hosts when using LVM on staging disks.	This issue is fixed, Set connector config parameter "CreateMultipathDevice" to true for backups to succeed on Oracle BMS hosts when using LVM on staging disks.	200842302
Enhancement: Provided an option to copy HDB user store key to the target node on restore.		190492715 190193717
During snapshot jobs, lsof command might get hung in the kernel if run on hosts where mounted NFS file systems become inaccessible.	Upgrade the Linux connector to 10.0.5 to avoid this issue.	223130604
Mount job duration increases with the number of staging LUNS in the backup image.	Upgrading to 10.0.5 will reduce this time considerably while scanning those LUNS during mount.	219470270

Issue	Fix	Tracking
Log backups fail when the Actifio Connector power shell script is trying to change execution policy.		237361503
Remote Live Clone job is failing with the error "3: Caught signal. Empty Source".		237245847
In multi-node RAC environments, log backup failure with partial logs being backed up to staging disk could lead to missing logs.	This issue is fixed by adding a new script to update the archive logs "least time" correctly in case of multi-node RAC environment.	213326005
ASM switch recovery took a long time to complete due to the old archive log artifacts not cleaned up.	For the RMAN recovery cataloging file after multiple switches will only have the command from the last switch job.	214549979
Oracle backups fail when selected backups from ASM to Filesystem if the query which finds the db format fails.		214062765
Backup job fails when multiple hosts have the same IQN number.		183312951
Unable to perform mount and migrate of SQL AG database.		230753423
SSO to Sky appliance to navigate to the Appliance Configuration page is not working for SAML enabled AGM.		228091648
Enhancement: Provided an option to download third party open source licenses for the Sky appliance configuration and self-service networking.		228101417 228097678
Enhancement: LDAP authentication is enhanced with Lookup Current Password field to update the defined configuration.		195347639
System OS hotfixes named sf-CDSXXX.gpg fails to upload into AGM.	This issue is fixed by allowing AGM to upload newer sf- named files.	241845947
Excessive logging messages were filling /var/log/messages at a high rate making it difficult to troubleshoot other issues.	This issue is fixed and there are now fewer of these messages, so /var/log/messages is now easier to read for improved troubleshooting.	205639342
In the recovery system page the "Machine Type" field is grayed out and does not list the machine types.		193757388
Protected compute engine instances are listed in the onboarding wizard, when the "unmanaged" filter is applied.		227271113
Enhancement: The Compute Engine onboarding wizard is enhanced to display project IDs in alphabetical order.		219863927
Enhancement: Added a new option "Copy HBD User Store Key to Target Host" to restore SAP HANA cluster.		190193717

Issue	Fix	Tracking
The following regions were not listed in the Add-credentials panel: asia-south2. (New Delhi) asia-southeast2. (Jakarta), australia-southeast2. (Melbourne).	These regions have now been added.	190454905
When performing Compute instance mount, the VPC name appeared twice (the second time in brackets). The brackets were supposed to contain the project name. and the networks also were not sorted properly.	Both issues have been fixed.	227964284 227964466
During appliance setup, a cross-site scripting issue has been fixed.		216847419
Enhancement: The SetupCDXiSCSITimeouts.bat script included with the Windows connector is used to configure the Windows host for using iSCSI with a CDX. This script has been updated so that the script output is also written to C:\Program Files\Actifio\log\SetupCDXiSCSITimeouts.log in addition to printing on the console. The script is installed into C:\Program Files\Actifio\act_scripts by default.		215541432
Same event id 43948 is displayed for two different image preservation issues.	This issue is fixed by differentiating between preservation event generated for the first time for an app and a daily preservation state event.	200695861
Streamsnap replication permits some ciphers that do not use perfect forward secrecy (PFS). This is for backward compatibility and these ciphers are not used between recent versions of the Sky appliances.	This issue is fixed by permitting Only PFS ciphers streamsnap.	244657094
Enhancement: Managed Data License (MDL) calculation frequency is enhanced from 24 hours to one hour.		266665615

Command Line Interface Fixes

CLI additions and improvements for Actifio VDP 10.0.5 include deprecated commands, new arguments, and recommended usages in the latest version of the CLI, API, and SARG. Refer to the latest version of the following publications for more details:

- **Actifio CLI Reference**
- **RESTful API Reference**
- **SARG (Simple Report Generator) User Guide**

The following table lists CLI additions and improvements in Actifio VDP 10.0.5

Table 2: CLI Changes in Actifio VDP 10.0.5

Tracking Number	Description
203546020	Enhancement: From the Actifio command line interface (CLI), you can now set "ignorecbt" policy options on NAS directory's NFS and CIFS apps.

The following table lists SARG additions and improvements in Actifio VDP 10.0.5

Table 3: SARG Changes and Enhancements in Actifio VDP 10.0.5

Tracking Number	Description
209550269	The "reportnet" command fails to list ethernet interfaces - eth7 and eth8. This issue is fixed by creating a condition check in "reportnet" script based on the type of appliance and allowing to list the required ethernet interfaces.

Limitations and Restrictions

The following are the limitations and restrictions in Actifio VDP 10.0.5:

- Deploying Actifio Sky Appliance OVA on VMware 6.7 u2 requires the SHA1 hashing algorithm to be converted to the SHA256 hashing algorithm using ovftool.exe provided by VMware. Get in touch with the Actifio services team for more information if you want to deploy a Sky Appliance on VMware 6.7 u2.
- Dynamic disks are not supported for staging disks.
- CDS Appliance cannot extend a staging volume if it contains flash copies. [40139]
Workaround: Create a larger staging disk to accommodate future application growth without requiring to resize.
- Backups created on RHEL 7.3 systems cannot be mounted to RHEL 6.8 systems. [47664]
- Hyper-V only: VM runs a full backup instead of a low splash backup when VMs storage is moved from one cloud service vendor to another. [24783]
- When StreamSnap and catalog jobs are run concurrently, StreamSnap jobs for some virtual machines take a long time before making any serious progress. [52701]
- ESXi hosts with the time that does not match with its VMware jobs fail. This is as designed by VMware. [39241]
- System State Recovery fails if there is any security software in the backup image which can block the execution of binaries during System State recovery. Consider exempting the target disk from the interfering software for the duration of the operation. [64152]
- Remote dedup jobs cannot record ingest, post-dedup, and post-compress stats on the remote side. [16938]
- Exchange virtual machines only: Snapshots with log truncation enabled occasionally fail with error:
5584: Actifio Connector failed to truncate log with unknown error.
Workaround: If any databases are in a bad state (such as Dismounted, Failed, and Suspended), Microsoft Exchange writer returns error VSS_E_WRITER_RETRYABLE during log truncation request. If all databases are in a good state, then only the log truncation job will succeed. This is as designed.
- StreamSnap job duration grows exponentially when there is a delay between two clusters. [26746]
- On VVOL-based setups, if the appliance determines that LAN-free mode is applicable, VMware backups fail (VVOL-based VMDKs cannot be accessed in SAN mode). [38252]
- Image clones do not provide a GUI option for a mount point or ASM disk group. [31786]

- Database re-provision fails when Oracle database authentication is changed from OS to DB. [27586]
Workaround: Create a new Application Aware mount database.
- (Linux Generic Applications only) The combined length of Logical Volume Name and Volume Group name hosting that Logical Volume should not exceed 108 characters. [26839]
- Rebooting a Linux host during a backup operation using the Actifio CBT driver may cause the next backup job to be a full backup rather than an incremental backup. [26880]
- Performing application aware mounts to multiple hosts in a single work-flow is not supported. [27174]
- Oracle 12c with PDB stored in File System format (not ASM) is only supported on Linux. Unix and Windows platforms are unsupported at this time. [23773]
- Reducing the disk group size is not supported due to the Oracle ASM limitation. [23925]
- AIX, iSCSI only: Only single node Oracle ASM RAC clusters are supported on AIX using iSCSI. [23401]
- The log backup frequency mentioned in minutes via Actifio Desktop SLA Architect is rounded to the nearest multiple of 5 minutes. [22901]
- If a NAS dataset consists of file streams, the backup job ignores these file streams and captures the rest of the data. [19262]
- Square brackets ([]) or forward-slash (/) in a VMware datastore name are not supported. [8872]
- Actifio Connector fails to auto-configure iSCSI ports of the third-party iSCSI initiator on Windows. [7784]
- HP-UX PV Links on 11.23 will only allow 8 paths per volume group. Due to this restriction, it is important that the SAN zoning is configured to have no more than 8 paths per staging LUN and/or in-band disks. For best results, have separate zones configured for the Host-to-VDP and VDP-to-Storage.

Example: Perform Application Aware mount on host A using SID db1, then Unmount the database. Remount the database to target host B using SID db2 while host B has a running database with the name db1. Then the Application Aware remount operation may shutdown the database db1 on host B.
- Installtrustedcertificate command works in CLI, but does not work with REST API: [64579]
Workaround: Log on to CLI, copy the cert.pem and key.pem to /home/admin/upload folders, and execute the following command:
`udstask installtrustedcertificate -certfile cert.pem -keyfile key.pem`
- Oracle backups fails if the Oracle instance process has a different owner than the ORACLE_HOME location. This issue occurs only on few hosts where SAP and Oracle co-exists.
Workaround: Discover the instance using Oracle OS user instead of SAP user.
- CDS Appliance iSCSI test for ESX fails when used directly after discovery.
Workaround: Perform a mount, backup a VM on the ESX, that later sets up the iSCSI session and allows the test to succeed.
- In certain environments, Sky Appliance continuously reboots due to a VMXNET3 driver.
Workaround: Update to ESXi 6.5 UI or later.
- CLI only: Command `udstask runworkflow` does not return on workflows that have an "On Demand" schedule type.
Workaround: Make a clone of the workflow, then run the cloned workflow. It is auto deleted after it is run.
 - a. Clone the workflow you want to run:

```
udstask cloneworkflow <workflow ID>
```

- b. To specify the source image to use when running this workflow, run:

```
udstask addflowproperty -name image -value <image name> <clone workflow ID>
```

- c. To run the cloned workflow and auto-delete it upon completion:

```
udstask runworkflow <clone work flow ID>
```

- SQL Server database names do not provide a suffix field in application-aware mounts workflow windows.
- The configured deduplicated acceleration cache is disabled when upgrading Actifio Sky appliance deployed on Hyper-V from 9.0.x to 10.0.x. [89630]

Limitation in LDAP usage with Actifio VDP 10.0.5:

- Support of referral by default feature is ignored. However, you can optionally turn on this feature by changing the "ldap.referral.support" parameter value to true.
- For Active Directory, the Domain Users group is not supported in this release. It does not appear in the list of mappings.

2 Actifio VDP 10.0.4 Release Notes

Actifio VDP 10.0.4 includes new features and various enhancements, security improvements, and bug fixes. To install or upgrade, please schedule a time with Actifio Support.

Topics:

- [What's New](#)
- [Upgrade Paths](#)
- [Resolved Issues](#)
- [Limitations and Restrictions](#)

What's New

The following are the new features, enhancements, and changes in Actifio VDP 10.0.4 release:

SQL Server and SAP HANA Onboarding Wizard

Highlights:

- New Onboarding wizards for a focused and efficient onboarding process
- Allows single step discovery and protection for SQL Server Instances and Availability Groups, and SAP HANA databases.

Benefits:

- Fewer steps for users to onboarding SQL Servers.
- More intuitive user experience.

Enhanced Resiliency Director Support for Databases

Highlights:

- Added support for orchestrated recovery of additional databases, including Db2, MariaDB, MaxDB, MySQL, Oracle (both file system format and ASM), PostgreSQL, SAP HANA, SAP ASE, SAP IQ.
- Enhanced the SQL Server integration to support the ability to specify individual database names instead of only prefixes and suffixes.

Benefits:

- Scripting is no longer required for orchestrated recovery of database servers for any of the database engines supported by Actifio.
- Reduced RTO for DR recoveries of database servers.

- Greater reliability and repeatability for DR recoveries of database servers.

Expanded Support Matrix

- CentOS 7.9 and CentOS 8.3
Actifio connector is enhanced to support CentOS 7.9 and CentOS 8.3 operating system version.
- RHEL 8.3
Actifio connector is enhanced to support RHEL 8.3 operating system version.
- SLES 15 SP2
Actifio connector is enhanced to support SLES 15 SP2 operating system version.
- OEL 7.9 and OEL 8.3
Actifio connector is enhanced to support Oracle Enterprise Linux 7.9 and 8.3 operating system version.
- vSphere and vSAN 7.0 UI
Actifio appliances have been enhanced to support vSphere and vSAN 7.0 UI.

Deprecated Platforms in 10.0.4

- No currently supported platforms have support deprecated in 10.0.4.

Deprecated Platforms planned for the future

- Internet Explorer 11 will no longer be a supported browser with Actifio products beginning with 10.0.5.
- vCenter 5.5 and 6.0.x will be deprecated beginning with 10.0.5.
- Oracle 11g will no longer be supported effective October 31, 2021.
- CentOS 6.x will no longer be supported effective October 31, 2021.

See the [Resolved Issues](#) section for a list of issues addressed in this release.

Upgrade Paths

Actifio AGM, CDS, CDX, and Sky systems running 10.0.2 can be upgraded to 10.0.4. Older versions need to be upgraded first to 10.0.2 before upgrading to 10.0.4.

Resolved Issues

Fixes in this release fall into two distinct categories as follows:

- [Functionality and Usability Fixes](#)
- [Command Line Interface Fixes](#)

Functionality and Usability Fixes

The following table lists the issues that are addressed in Actifio VDP 10.0.4 release:

Table 1: Functionality and Usability Fixes in Actifio VDP 10.0.4

Issue	Fix	Tracking
[Microsoft SQL Server Only] AppAware mount fails with “Duplicate application on the same host not allowed” error, if the child database name and host name is the same on two SQL instances.	This issue is now fixed by enabling mount to another instance if the pathnames are different on the same host.	90512
Cannot validate the user-specified IP addresses when using the comma-separated list.	This issue is now fixed by validating the comma-separated list of IP addresses.	91005
Enhancement: Database backup logs are now automatically excluded from the read-only mode databases.		90631
[Microsoft SQL Server Only] SQL database is not listed in Isapplication command, if the names of SQL database and SQL instance are the same.	This issue is now fixed.	91038
LDAP implementation using fastbind control (OID 1.2.840.113556.1.4.1781) is not supported by the Oracle Unified Directory LDAP server.	This issue occurs in a rare scenario. Fastbind control support may not be required for LDAP implementation.	89673
Actifio logs show a warning message (“Long-running command detected for: Job_XXX”) when the Connector sends a long-running command alert.	This issue is now fixed by using a customized Hotfix. Contact Support for more information.	90759
NFS exports protected with NAS-Director that has files with tabs or newlines in the file name may cause job failures.	This issue is now fixed; backups are succeeding now for a file names with tabs or new lines.	89713
Index scan jobs are interrupted due to VSS failures.	This issue is now fixed.	90636
Catalog File Recovery does not set the security descriptor on directories restored, whereas it sets for files.	This issue is now fixed by setting the security descriptor the same as the backed-up directory.	90740
Omd crash is noticed during snapshot due to an error in hs_compose_bitmap.	Crash in error condition is fixed, when bitmap does not have few members initialized.	90076

Issue	Fix	Tracking
Mount job fails to import the staging volume group when the staging volume group is already imported.	This issue is now fixed.	90298
The Actifio connector fails to detect the Windows cluster during reboot, which causes low-splash SQL backups.	This issue is now fixed by improving the Cluster detection.	90732
Enhancement: The NetApp hidden shares are also now listed during NAS dataset creation.		89653
[SQL Only] SQL migrate job fails with an error.	This issue is now fixed by skipping the query (8dot3name) or changing the target volume during migration.	88127
[SQL Only] SQL Clone job fails if the database files have a trailing space in the file name.	This issue is now fixed by proper map lookup and handling the stale applications.	89728
The getvdisk details job fails due to an OMD error while performing a VM backup.	This issue is now fixed.	89536
PostgreSQL discovery and the backup fails due to PostgreSQL socket directory and connectivity-related issues.	This issue is now fixed by making appropriate changes to the script.	88885
PostgreSQL generic app log backup fails if the database prompts for a password to log in.	This issue is now fixed.	89277
Clone job of PostgreSQL generic app fails for the non-default source database user.	This issue is now fixed.	89280
AppAware mount for CAF PostgreSQL fails to connect the database as source database user details are missing.	This issue is now fixed by capturing the source database metadata.	90431
Sweep tmp page gets filled due to small bucket size.	This issue is now fixed.	85923
Actifio connector may occasionally crash while rolling RMAN logs on Windows; this occurs if another process is holding the logs open.	This issue is now fixed by increasing the RMAN log size.	89748
Oracle ASM filesystem unable to extend when filesystem type properties in advance settings are not set properly.	This issue is now fixed by making the appropriate changes to the filesystem properties.	88461
Oracle catalog failures are not reported correctly.	This issue is now fixed by addressing the batch processing overridden issues.	90323
Upper-level hashes are missing due to dedup crash occasionally.	This issue is now fixed by making the appropriate changes to the Garbage collection/Sweep cycle script.	90030

Issue	Fix	Tracking
Certain cases involving dedup sweep prevents dedup acceleration and incorrect sweep consolidation.	This issue is now fixed.	90240
Duplicate data files are not deleted during AppAware mount for Oracle backup using non-ASM staging disks.	This issue is now fixed. Duplicate data files are deleted during AppAware mount.	89287
Windows applications on 2008r2 fail to format staging disk due to invalid block size.	This issue is now fixed by changing the block size value.	90021
The backup of Microsoft SharePoint for non-DB files is taking a long time.	This issue is now fixed by adding an exception of ignoring the low-splash for each file attachment.	90224
"No archive log" mode does not work properly for remount provisioning.	This issue is now fixed.	88789
OnVault image expiration incorrectly expires the local log backup images. This issue is specific to DB+LOG policy types.	This issue is now fixed.	89357
[CAF DB2] Dump restore fails to deactivate the database.	This issue is now fixed.	90315
[CAF DB2] Mount job succeeds even the relevant logs are missing.	This issue is now fixed.	90045
Oracle object-refresh script is missing in AIX, Solaris, and HP-UX platforms.	This issue is now fixed.	89819
When freeze operation fails, the database status is not changing from suspend to resume state while executing abort.	This issue is now fixed by changing the abort handling mechanism for generic applications.	89554
[CAF DB2] Dump restore job succeeds, but the logs are missing.	This issue is now fixed.	90490
[DB2] The Actifio connector uses a partially generated old DB2 XML file instead of generating a new DB2 XML file and marking the CustomApp backup as successful. This issue occurs only when the Actifio connector is restarted.	This issue is now fixed by replacing the newly generated DB2 XML file with the old DB2 xml file.	89705
The Actifio connector still uses the legacy 56789/TCP port instead of recommended 5106/TCP port.	This issue is now fixed by disabling the 56789/TCP port.	89572

Issue	Fix	Tracking
Incorrect Dedup status is displayed for the remote cluster, and a trap is generated about remote replication is configured off due to an incorrect cached Dedup status.	This issue is now fixed, and the Dedup status is now displayed correctly.	86668
Windows filesystem backup fails if the NTFS compressed file size is more than 50 GB.	This issue is now fixed as per the Microsoft NTFS compression guidelines.	89098
The appliance has multiple log images with overlapping Point-In-Time (PIT), and none of them are in an expiring state during mount.	This issue is now fixed by skipping the log file if the same filename has already been replayed.	88121
Remount fails on DAR image for SQL AAG with error: "Error (10018) Mount is unsuccessful due to invalid provisioning option: database name".	This issue is now fixed by considering a single database app class when a single database of SQL AAG is remounted.	88145
Enhancement: The 'reportdaily' command is now added with the 'mounts per day' column.		89839
AppAware mount takes a longer time due to "Recycle bin purging" in the OpenDB phase.	This issue is now fixed, and purge commands are excluded during the AppAware mount.	88912
Enhancement: The SuSE Linux 12 kernel modules are now externally supported by Actifio.		84190
Logical Volume Manager (LVM) backup fails if the user default database is not a 'master'.	This issue is now fixed by adding the 'use master' in the database query.	89380
The Actifio device links are not created before CRS or ASM gets initiated when the server reboots.	This issue is now fixed.	89544
[Solaris/AIX/HPUX]: The llock parameter is missing for mounts.	This issue is now fixed, and the llock parameter is shown for mounts.	89871
Block device removal takes a longer time to delete newly scanned devices.	This issue is now fixed by adding a delay after deleting block devices to ensure devices get deleted before buses are rescanned for new devices.	89697
Incorrect grain size shows for fetch_bitmap command.	This issue is now fixed, and fetch_bitmap passed arrayid to the flasher.	89750
An error occurs when protecting a cluster application that uses external arrays and verifies connectivity from the external array to the hosts.	This issue is now fixed, and the protection of SQL clustered and non clustered applications are successful with an external array profile.	89127
Added condition to catalog log backup based on the recovery time for ASM switch and restore.	This issue is now fixed by adding similar logic for restore in addition to ASM switch and re-balance.	80328

Issue	Fix	Tracking
SQL AppAware mount of child application fails if the SQL instance name is in lowercase.	This issue is now fixed by matching the case of the pathname of the child application with the master system database.	90846
Catalog file recovery fails for paths that longer than 260 characters. This issue occurs due to internal Windows limitations.	This issue is now fixed, and files with longer paths are recovered.	90730
[DB2 Only] DB2 mount and migrate fail while running multiple pvmove operations in parallel when there are multiple staging disks in the backup.	This issue is now fixed by sequencing one pvmove operation at a time.	91300
Occasionally, backups of Unix file systems fail with an error from smart copy while running into low disk space conditions.	This issue is now fixed, and the jobs complete successfully or fail with an error message indicating that the staging disk is full.	91142
Log backups fail to run during LVM migration	This issue is now fixed.	90643
Restore from NFS staging disk backup to a source ASM DB fails with NFS mount options.	This issue is now fixed.	89601
Failed to archive log backup with out-of-space error.	This issue is now fixed by not capturing the archives multiple times.	87643
SSH keys added to the primary node are not added to the secondary node causing the act_migrate to function incorrectly.	This issue is now fixed, and the same SSH keys are added to both the primary and secondary nodes.	90973
Enhancement: The 'reportmountedimages' command now displays the application size.		86059
Schedule workflow refresh fails as the image associated with the child image no longer exists.	This issue is now fixed.	89596
The password used for provisioning options is exposed in plain text in the audit log during API update and workflow creation.	This issue is now fixed by masking the password field in provisioning options.	91193
The job scheduling status message (No slots are available for this job type) is misleading for an On-demand job.	This issue is now fixed by providing the appropriate status message.	87480
NFS incremental backup fails with "Actifio Connector: SmartCopy failed with an internal error" while renaming the file and directory.	This issue is now fixed by handling renaming issues.	37697
Recovery of an ASM backup to the NFS datastore is not supported, and a pre-check is missing before proceeding with the recovery.	This issue is now fixed by adding required pre-checks before proceeding with the recovery.	90465

Issue	Fix	Tracking
DB2 freeze failures are not identified correctly, resulting incorrect backups.	This issue is now fixed by adding suspend errors in the script.	89540
[CDS only] For in-band AppAware mount, the time range used to find archive log backup to catalog is incorrect.	This issue is now fixed by changing the upper range parameter.	90706
Archive logs are not backed up when backup from time is incorrect.	This issue is now fixed by addressing the backup time in the script.	90116
An error occurs when the log switch fails on primary node and is not shown to users.	This issue is now fixed by providing an option to fail the backup if the switch from the standby node fails.	83555
Archivelog backup does not use the clause “not backed up one time”, leading to staging disk out of space error.	This issue is now fixed.	89184
The Backup job fails with the error “RMAN-20230: datafile copy not found in the repository” while deleting the obsolete files.	This issue is now fixed by addressing the obsolete file deletion.	88734
Oracle child restore fails when the “no recovery range” option is selected.	This issue is now fixed.	89971
Enhancement: Now, database and ASM compatibility settings are used as the source database during AppAware mount.		86174
ASM Restore switch is visible for ASM to File system backup image.	This issue is now fixed.	87355
ASM disk string is updated as part of backups and mounts to include the Actifio device paths. If this information does not persist across reboots, Actifio mounted disk groups do not automatically show up post-reboot.	This issue is now fixed by adding the Actifio disk path to the ASM disk string if it is not updated.	91089
[Oracle only] Recovery fails if the TNS_ADMIN variable is not set as the default value while configuring the wallet.	This issue is now fixed by configuring the wallet in non-default TNS_ADMIN location.	89579
Oracle DB user is automatically deleted from database users list during AppAware mount.	This issue is now fixed.	89860
Full backups are considered for subsequent backups instead of incremental backups after deleting level 0 backup.	This issue is now fixed.	79848
Ubuntu VM recovery without migration fails on Google Cloud with error “Failed to convert volumes to virtual disk” to install iSCSI.	This issue is now fixed.	88797

Issue	Fix	Tracking
Enhancement: Added Linux CBT support for Red Hat/CentOS 8.3 to activate CBT services.		90319
Enhancement: Added Linux CBT support for SLES 15 SP2 to activate CBT services.		90055
CHAP setup for iSCSI does not work properly after the upgrade.	This issue is now fixed by clearing the CHAP setup for the iSCSI loop-back.	90483
[CDX only] Due to synchronization issue between two nodes, data may accumulate and causes one of the process to restart every hour and may also disrupt the normal operations.	This issue is now fixed.	89505
Logs corresponding to the weekly snap policy are not run/captured outside the policy window.	This issue is now fixed.	89693
Auto tuning parameters (zfs_arc_max / zfs_arc_min) do not change dynamically.	This issue is now fixed by changing the parameter order dynamically.	89521
An error (Error 574) occurs when the Actifio CDS node reboots 'cleanly' using satask to delete tmp files.	This issue is now fixed.	88730
The resource center page display links to Actifio docs and Actifio Now.	This issue is now fixed.	89771
RMAN status (rmanStatus.sql) captures non-Actifio failures.	This issue is now fixed by configuring an id for every RMAN operation with the command "SET COMMAND ID TO ACT_Job_<id>".	89628
The data files related to pluggable database are included in <dbsid>_datafiles_readonly_catalog.conf in refresh mode.	This issue is now fixed.	87758
Fail to run the On-demand job in every partial iteration of the scheduler loop.	This issue is now fixed by protecting applications with SLA.	90721
The 'disablePreservedSafetyExpiration' parameter auto-expires the preserved images even when the vDisk count usage limits are reached.	This issue is now fixed.	90456
LUN mapping issue occurs intermittently due to parallel snapshot and unprotects cleanup job.	This issue is now fixed by making the snapshot job wait if any unprotected cleanup job is already running.	90067
Notifications are missing when the Actifio connector uses plain text instead of SSL.	This issue is now fixed by providing a notification when the Actifio connector uses plain text.	90953

Issue	Fix	Tracking
Actifio Sky appliance returns the system name as localhost instead of appliance name in SNMP command output.	This issue is now fixed and the system name is returning correctly in the SNMP command output.	77961
SystemState backup on SLES15 fails with the error "Conversion script found error: 4006- This OS is not supported for conversion."	This issue is now fixed by providing support for OS.	65650
The backup job fails, and multiple entries are added to the appclusterdata table when the discovery function is executed multiple times.	This issue is now fixed.	91341
Mount on Sybase fails with the error "ERROR MSG: Failed to recover database KKKK"	This issue is now fixed by using database history to calculate and store the end point-in-time.	90748
Log staging disk calculation for HANA does not handle all the cases of production log availability.	This issue is now fixed by retaining production log usage history in the Metadata and dynamically adapting HANA log staging disk size.	90218
MaxDB child restore fails with the error "ERROR MSG: fail to clear log area ERRORMSG: Fail to recover a database."	This issue is now fixed.	89550
Log staging disk calculation for HANA is high if the system has more than one-day logs.	This issue is now fixed by making necessary changes to the log staging calculation method.	88390
Enhancement: Added support for projectid during Iscloudvm and addvm (VM discovery), and projectid validation during create/update credentials (testcredential, mkcloudcredential, chcloudcredential).		90828
Actifio connectors allow TLSv1.2 to turn off.	This issue is now fixed. All Actifio connectors can no longer turn off TLSv1.2, and AIX uses TLS instead of plain text.	90909
On-Demand backup execution sometimes changes to Read timeout.	This issue is now fixed.	83478
[Sky only] Incorrect vDisk count is shown in the snappoolstat table, and the "lssnappoolstat" command does not provide vDisk information.	This issue is now fixed.	83379
The backup job may fail when the host search by alternate IP address does not consider full IP address match correctly.	This issue is now fixed by providing an exact IP search instead of all matching IPs.	90074
[SAP HANA] Database stop process fails during restore when the TINSTANCE parameter is not set.	This issue is now fixed.	78211

Issue	Fix	Tracking
An issue may occur with the Actifio connector if 0 byte files are copied during the LVM backup.	This issue is now fixed by excluding the *.LOC files during the LVM backup.	88997
The power PC connector link is missing in the resource center.	This issue is now fixed.	74707
[Windows only] Bitmap images may be deleted while upgrading the 10.x version of Windows connector to a later version due to string comparison.	This issue is now fixed.	91432
Actifio connector fails to prepare a VSS snapshot set as VHD files are mounted as volumes.	This issue is now fixed by skipping the virtual disk nested volumes.	89538
Oracle timezone lookup is incorrectly considering British Summer Time as America/Guyana timezone.	This issue is now fixed.	88861
File handle leakage may occur when the number of vDisks part of a job is more than 1024.	This issue is now fixed.	90843
[Solaris only] ASM database applications are not discovered from the Global zone when ASM instances are running parallel in global and non-global zones.	This issue is now fixed by filtering the zone processes.	88434
Enhancement: Actifio VDP Appliance now shows a warning message for fixes uploaded in CLI and UI that require a reboot.		91652
Unable to grep the full user name when the user name contains more than eight characters in the Postgres database.	This issue is now fixed.	87675
The remount of a child database may fail when the database timezone is set and the time stamp is empty.	This issue is now fixed by adding a check for \$tstamp before converting if the database timezone is set.	90680
Shallow discovery does not work for PostgreSQL as a simple discovery process is not called for PostgreSQL database.	This issue is now fixed.	89515
DB2 mount and migrate does not leave fstab entries in a clean state resulting in creating overlay mounts.	This issue is now fixed by making the script changes.	91020
[SAP HANA] LVM scale-out backups are running as low splash intermittently instead of incremental backups.	This issue is now fixed.	90911

Issue	Fix	Tracking
Though single DB is selected, recovery fails with the error “Missing Required Option: ConsistencyGroupName” due to support unavailability.	This issue is now fixed by providing support for AppAware mount of a single database with a database instance, or consistency group is extended to additional databases, such as MySQL, DB2, etc.	91513
Discovery of file systems mounted from Actifio through NFS gets the export name as mount point instead of the application name.	This issue is now fixed.	89589
Avoid parallel expirations of OnVault images of the same application.	This issue is now fixed by running one job at a time (either an expiration job or a backup job.)	89270
[NAS Director] OVA installation process adds two extra NICs.	This issue is now fixed.	79845
NetApp change list has a CREATE and MODIFY record for the same file leading to job failure.	This issue is now fixed.	91467
The recovered VM does not reboot automatically after a successful recovery.	This issue is now fixed by making the script level changes to avoid manual intervention.	91414
Enhancement: Log purge support in hours is extended for the DB2 database.		88963
Missing pre-checks for network tags leads to fail the jobs after running sometimes.	This issue is now fixed by providing a pre-check for network tags.	89746
Snap log job queued runs as a DB+log job instead of a log job due to a timing issue.	This issue is now fixed, a snap log job queued now runs as a snap log job only.	89274
Discovery fails on the global zone when the non-global zone has an Actifio connector running on it.	This issue is now fixed.	89798
The Windows connector service is started immediately even though the service state is in the initialization state.	This issue is now fixed, the connector service (Windows) does not report the service state until initialization is completed.	11011
[SQL Only] Finalize job fails when all databases are not part of the AAG group.	This issue is now fixed.	89994
Incorrect error message is shown for Actifio Power shell command failure when module import fails.	This issue is now fixed.	89773
[SQL Only] Finalize job fails when the database file logical name is having a string error in it.	This issue is now fixed.	89606
Enhancement: Added all SAPMS v28 orchestrator changes.		76021

Issue	Fix	Tracking
Actifio internal process leaves the socket connection open even after the job is completed.	This issue is now fixed.	90419
Dedup job starts failing when Perl "msgtool.pl getmorestats" fails to get a lock.	This issue is now fixed.	89496
[CDS Only] Actifio internal component sometimes dumps core when I/O count goes negative.	This issue is now fixed.	85981
Remote Dedup job fails if the source image itself is created from a remote Dedup job.	This issue is now fixed.	89354
The wallet_root parameter is not properly defined and causes ASM switch failure.	This issue is now fixed by configuring the wallet_root parameter.	91722
[SAP HANA] LVM scale out configuration support is not available for 2+2 cluster.	This issue is now fixed.	88280
Backup job fails on Linux hosts where multipath is not configured as per Actifio guidelines.	This issue is now fixed.	87618
[Security] cert files are write out for unauthorized connections	This issue is now fixed.	90797
Jobs are failing to Online Disk with error '0xffffffff error' if there are Dynamic disks on the host.	This issue is now fixed.	91462
Enhancement: Added all SAP v29 orchestrator changes.		80571
Enhancement: The LVM chunk size is now increased to 64k for Db2 hosts.		88570
Enhancement: Added script to collect diagnostic details for all CAF databases.		90647
Enhancement: Added a filesystem exclusion list for the Actifio connector to exclude SAP HANA files or applications from discovery.		75241
Enhancement: Changed NFS mount 'forcedirectio' option as user-configurable on HP-UX.		90387
Enhancement: Support is extended for the Sybase ASE orchestrator.		90655
Backup Job API fails with the "Read Time Out" issue while performing an on-demand backup job for NFS shared applications.	This issue is now fixed.	82990
Jobs not running due to an error in calculating the maximum number of jobs to run on the host	This issue is now fixed by making appropriate changes to ignore jobs that are not running.	91302

Issue	Fix	Tracking
Unable to mount a GCP instance in the southamerica-east1 region.	This issue is now fixed.	90509
[Oracle only] NFS Staging disk snapshot job fails with 'Failed to find logical volume in staging volume group' and mount job fails with 'Failed to verify fingerprint' post-reboot of the Sky.	This issue is now fixed.	90410
Script execution entries provided in /etc/rc.d/rc.local file are not preserved in recovered VM.	This issue is now fixed by preserving the entries.	91640
Physical to Virtual (P2V) migrations may fail to copy some volumes due to a timing issue between disks going offline and scanned.	This issue is now corrected, and failures do not occur due to the timing issue.	91799
[HPUX only] Unmount-delete jobs may fail to remove the mapped LUNs from the HPUX host.	This issue is now fixed using only Volume Group and its corresponding Physical Volume details while fetching volume group details on the HPUX host.	90763
[HPUX only] Snapshot jobs using NFS staging disk may fail with the error 'Failed to find NFS packages on the HPUX host.'	This issue is now fixed by using product listing to check for NFS packages on the HPUX host.	90373
[AIX only] Mount jobs of in-band filesystem configured with separate log device may fail to mount the filesystem from mapped disks.	This issue is now fixed by changing the mount-point entry in /etc/filesystems if present, with user-defined/default mount-point provided in the mount job.	90445
ZFS deadlock sometimes makes the system unusable	This issue is now fixed.	91252
Due to a timing issue, fingerprint error may occur while the system fails to create a new bitmap.	This issue is now fixed	91942
Sybase application recovery fails on a recovered VM if the database name is same as the source application name.	This issue is now fixed by making script changes to Actifio connector.	91770
Enhancement: New OnVault pool type "Cloud - Google Cloud Storage" is added.		91780
Enhancement: System recovery is now successful with the same IP of the backup host that was deleted.		81563
SAP HANA scale out application creates partial images leading to OnVault job failures.	This issue is now fixed by not marking the intermediate images as successful even if they are locked.	91374
DedupAsync job fails with error "Replication failed while copying data."	This issue is now fixed by addressing a fingerprint issue.	90821

Issue	Fix	Tracking
Hyper-V jobs are canceling automatically and failing with the error: "MESSAGE Actifio Connector: The VM has unmerged differencing disks. Set the SLA template advanced setting and/or system parameter 'Job Behavior When Target VM Needs Snapshot Consolidation' to control how to handle this situation"	This issue is now fixed by using the mdiskgrp name (of a pool) to match that of the targetpoolname in job data.	84314
Restore of SAP HANA 1+1 fails because cluster type and catalog backup path are not passed down to the recovery scripts.	This issue is now fixed.	91503
Job restarts during internal failure on freeze. During restart, the image expires and recreates. A new Host ID is used instead of the Host ID in the application data object during the recreation.	This issue is now fixed.	90753
An attempt to dereference a NULL pointer in 'vmw_write' function causes adhd to panic.	This issue is now fixed by adding a pre-check before de-referencing, if the write context is NULL.	90072
Backup jobs may fail when changing the setting to use Application Group preference from Policy overrides.	This issue is now fixed.	89474
If the same IQN is assigned to multiple hosts (IPs, it generates unwanted logs that fill the space in /var/log and may cause system errors.	This issue is now fixed for CDX and Sky Appliances by detecting the IQN from different IPs and preventing them from generating unwanted logs.	88111
Unable to perform restore operation using database image from On Vault as the Orchestrator template has a mandatory parameter for recovery range. Missing option to execute recovery without recovery range and log mount path.	This issue is now fixed by addressing a method argument mismatch issue.	78459
System Recovery UI page does provide Shared VPC Host Project ID.	This issue is now fixed.	90700
The configuration file becomes incorrect and none when setting the interface MTU using 'lsconfiguredinterface' command.	This issue is now fixed by making required changes to actnet configuration link.	89123
Unable to mount GCE Snapshots as new VM fails to interpret SSH keys of original VM.	This issue is now fixed.	91832
VM discovery does not list some VMs for which tag parsing fails with an exception.	This issue is now fixed.	91700

Command Line Interface Fixes

CLI additions and improvements for Actifio VDP 10.0.4 include deprecated commands, new arguments, and recommended usages in the latest version of the CLI, API, and SARG. Refer to the latest version of the following publications for more details:

- ***Actifio CLI Reference***
- ***RESTful API Reference***
- ***SARG (Simple Report Generator) User Guide***

The following table lists CLI additions and improvements in Actifio VDP 10.0.4

Table 2: CLI Changes in Actifio VDP 10.0.4

Tracking Number	Description
89106	The 'fetchconnectorlogs' command is enhanced by providing a connector configuration file.
91438	The 'mountimage - systemprops' command is accepting JSON instead of a comma-separated list.
90470	The 'chhost' command does not work for the Windows host with API calls, which is now fixed.

The following table lists SARG additions and improvements in Actifio VDP 10.0.4

Table 3: SARG Changes and Enhancements in Actifio VDP 10.0.4

Tracking Number	Description
89942	Specific reports are enhanced by adding consistency date and expiration date columns.
87735	The reportjobs and reporfailedjobs commands are enhanced by adding a capture type column using the same logic as reportsnaps and new options -E and -S to filter the output.
87960	The 'reportslaoptions' command is enhanced to show LowSplashCaptureNext and DisableOnVaultReplicate options.
89622	The 'reportimages option -y' command to show images past their expiration date has been enhanced to show more information about why they have not expired.
88950	The 'reportclones' and 'reportrestores' commands are enhanced with more tracking options.

Limitations and Restrictions

The following are the limitations and restrictions in Actifio VDP 10.0.4:

- Deploying Actifio Sky Appliance OVA on VMware 6.7 u2 requires the SHA1 hashing algorithm to be converted to the SHA256 hashing algorithm using ovftool.exe provided by VMware. Get in touch with the Actifio services team for more information if you want to deploy a Sky Appliance on VMware 6.7 u2.
- Dynamic disks are not supported for staging disks.
- CDS Appliance cannot extend a staging volume if it contains flash copies. [40139]
Workaround: Create a larger staging disk to accommodate future application growth without requiring to resize.
- Backups created on RHEL 7.3 systems cannot be mounted to RHEL 6.8 systems. [47664]
- Hyper-V only: VM runs a full backup instead of a low splash backup when VMs storage is moved from one cloud service vendor to another. [24783]
- When StreamSnap and catalog jobs are run concurrently, StreamSnap jobs for some virtual machines take a long time before making any serious progress. [52701]
- ESXi hosts with the time that does not match with its VMware jobs fail. This is as designed by VMware. [39241]
- System State Recovery fails if there is any security software in the backup image which can block the execution of binaries during System State recovery. Consider exempting the target disk from the interfering software for the duration of the operation. [64152]
- Remote dedup jobs cannot record ingest, post-dedup, and post-compress stats on the remote side. [16938]
- Exchange virtual machines only: Snapshots with log truncation enabled occasionally fail with error:
5584: Actifio Connector failed to truncate log with unknown error.
Workaround: If any databases are in a bad state (such as Dismounted, Failed, and Suspended), Microsoft Exchange writer returns error VSS_E_WRITER_RETRYABLE during log truncation request. If all databases are in a good state, then only the log truncation job will succeed. This is as designed.
- StreamSnap job duration grows exponentially when there is a delay between two clusters. [26746]
- On VVOL-based setups, if the appliance determines that LAN-free mode is applicable, VMware backups fail (VVOL-based VMDKs cannot be accessed in SAN mode). [38252]
- Image clones do not provide a GUI option for a mount point or ASM disk group. [31786]
- Database re-provision fails when Oracle database authentication is changed from OS to DB. [27586]
Workaround: Create a new Application Aware mount database.
- (Linux Generic Applications only) The combined length of Logical Volume Name and Volume Group name hosting that Logical Volume should not exceed 108 characters. [26839]
- Rebooting a Linux host during a backup operation using the Actifio CBT driver may cause the next backup job to be a full backup rather than an incremental backup. [26880]
- Performing application aware mounts to multiple hosts in a single work-flow is not supported. [27174]
- Oracle 12c with PDB stored in File System format (not ASM) is only supported on Linux. Unix and Windows platforms are unsupported at this time. [23773]
- Reducing the disk group size is not supported due to the Oracle ASM limitation. [23925]
- AIX, iSCSI only: Only single node Oracle ASM RAC clusters are supported on AIX using iSCSI. [23401]

- The log backup frequency mentioned in minutes via Actifio Desktop SLA Architect is rounded to the nearest multiple of 5 minutes. [22901]
- If a NAS dataset consists of file streams, the backup job ignores these file streams and captures the rest of the data. [19262]
- Square brackets ([]) or forward-slash (/) in a VMware datastore name are not supported. [8872]
- Actifio Connector fails to auto-configure iSCSI ports of the third-party iSCSI initiator on Windows. [7784]
- HP-UX PV Links on 11.23 will only allow 8 paths per volume group. Due to this restriction, it is important that the SAN zoning is configured to have no more than 8 paths per staging LUN and/or in-band disks. For best results, have separate zones configured for the Host-to-VDP and VDP-to-Storage.

Example: Perform Application Aware mount on host A using SID db1, then Unmount the database. Remount the database to target host B using SID db2 while host B has a running database with the name db1. Then the Application Aware remount operation may shutdown the database db1 on host B.

- Installtrustedcertificate command works in CLI, but does not work with REST API: [64579]

Workaround: Log on to CLI, copy the cert.pem and key.pem to /home/admin/upload folders, and execute the following command:

```
udstask installtrustedcertificate -certfile cert.pem -keyfile key.pem
```

- Oracle backups fails if the Oracle instance process has a different owner than the ORACLE_HOME location. This issue occurs only on few hosts where SAP and Oracle co-exists.

Workaround: Discover the instance using Oracle OS user instead of SAP user.

- CDS Appliance iSCSI test for ESX fails when used directly after discovery.

Workaround: Perform a mount, backup a VM on the ESX, that later sets up the iSCSI session and allows the test to succeed.

- In certain environments, Sky Appliance continuously reboots due to a VMXNET3 driver.

Workaround: Update to ESXi 6.5 UI or later.

- CLI only: Command udstask runworkflow does not return on workflows that have an "On Demand" schedule type.

Workaround: Make a clone of the workflow, then run the cloned workflow. It is auto deleted after it is run.

- Clone the workflow you want to run:

```
udstask cloneworkflow <workflow ID>
```

- To specify the source image to use when running this workflow, run:

```
udstask addflowproperty -name image -value <image name> <clone workflow ID>
```

- To run the cloned workflow and auto-delete it upon completion:

```
udstask runworkflow <clone work flow ID>
```

- SQL Server database names do not provide a suffix field in application-aware mounts workflow windows.
- The configured deduplicated acceleration cache is disabled when upgrading Actifio Sky appliance deployed on Hyper-V from 9.0.x to 10.0.x. [89630]

Limitation in LDAP usage with Actifio VDP 10.0.4:

- Support of referral by default feature is ignored. However, you can optionally turn on this feature by changing the "ldap.referral.support" parameter value to true.

- For Active Directory, the Domain Users group is not supported in this release. It does not appear in the list of mappings.

3 Actifio VDP 10.0.2 Release Notes

Actifio VDP 10.0.2 includes new features as well as assorted performance enhancements, security improvements, and bug fixes. To install or upgrade, please schedule a time with Actifio Support.

Topics:

- [What's New](#)
- [Upgrade Paths](#)
- [Resolved Issues](#)
- [Limitations and Restrictions](#)

What's New

The following are the new features, enhancements, and changes in Actifio VDP 10.0.2 release:

Streamlined support for PostgreSQL

Highlights:

Actifio enhanced its out-of-the-box support for PostgreSQL. Databases are discovered automatically, transaction logs are managed as part of the SLA associated with the databases, and recovery to any point in time and creation of virtual clones are done entirely from the UI, either on-demand or as part of automated workflows.

Benefits

- Faster deployment and operational simplicity.
- Automated discovery, backup/capture, and recovery of all these databases.
- Log roll forward option to recover databases to any point in time.
- Automated deployment of virtual clones (application aware mount) for TDM use cases.
- No need for using customized scripts - support is out-of-the-box.

Expanded support of External Snapshot Pools with all databases

Highlights

- Customers can now use External Snapshot Pools (ESP) with all supported databases, in addition to Oracle and SQL Server, which were already supported. Customers can leverage their storage arrays' performance, connectivity, and availability by using the array native snapshots for Actifio's snapshot pool.

- Supported databases include Db2 (on Linux and AIX), SAP HANA, ASE, IQ and MaxDB, MySQL, MariaDB, and PostgreSQL.

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 database backups (data moves directly from array to array, without going through an Actifio appliance).
- Incremental-Only capture for databases 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 (Actifio 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.

Enhanced functionality and usability

Highlights

- Revamped UI for cloud mobility (recovering systems into cloud environments).
- Option to maintain original disk layout during cloud mobility recovery into AWS and GCP.
- Option to map mounted volumes to two ESX hosts, in addition to existing options to mount to one or all ESX hosts in a cluster. This new option provides a faster mount and reduces server volume counts in busy environments.
- Users can now replicate on-demand any snapshot to any remote appliance using StreamSnap incremental replication.
- Additional wizards for Onboarding various databases.
- Enhanced Oracle integration on AppAware mount (TNS listener support, maintain the layout of undo/redo/temp tablespaces).
- Support for managing in-band applications in AGM (this is relevant only for CDS appliances).

Benefits

- AGM provides a single, simple to use interface to manage the entire Actifio environment.
- Enhanced application integration to support a wide variety of customer configuration and use cases.

Expanded Support Matrix

- RHEL 8.2
Actifio connector is enhanced to support RHEL 8.2 operating system version.

Note: Cloud mobility (System state) functionality is not supported.

- RHEL 7.9
Actifio connector is enhanced to support RHEL 7.9 operating system version.

Note: Cloud mobility (System state) functionality is not supported.

- CentOS 8.2
Actifio connector is enhanced to support CentOS 8.2 operating system version.

Note: Cloud mobility (System state) functionality is not supported.

- OEL 8.2
Actifio connector is enhanced to support Oracle Enterprise Linux 8.2 operating system version.

Note: Cloud mobility (System state) functionality is not supported.

- OEL 7.8
Actifio connector is enhanced to support Oracle Enterprise Linux 7.8 operating system version.

Note: Cloud mobility (System state) functionality is not supported.

Deprecated Features

The following platforms are deprecated from Actifio VDP 10.0.2 release:

- VMware vSphere 5.0 & 5.1
- Microsoft Windows 2003 & 2008 R2
- RHEL, CentOS, OEL 4.x & 5.x
- SLES 10.x
- IBM AIX 6.1
- Microsoft SQL Server 2008 & 2008 R2
- Microsoft Exchange, Microsoft SharePoint 2003, 2007, & 2010
- Oracle 10g

See the [Resolved Issues](#) section for a list of issues addressed in this release.

Upgrade Paths

Actifio CDS and Sky systems running 8.x or 9.x can be upgraded to 10.0.2. Older versions need to be upgraded first to one of these releases.

- CDS systems running versions prior to 8.1.3 will require a double hop through 8.1.5 (then to 10.0.2).
- Sky systems running versions 8.1.1 & 8.1.2 will require the latest HF to avoid a double hop through 8.1.5.
- Sky systems running versions prior to 8.1.1 will require a double hop through 8.1.5 (then to 10.0.2).

CDS firmware upgrade to 7.8 is required with 10.0, and is supported on CDS generations 3 and above. The older 7.3 and 7.5 firmware versions are not supported with 10.0.2.

CDX systems running 8.1.2 version first needs to be upgraded to CDX 8.1.2.973 version (or above) before upgrading to 10.0.2.

CDX systems running the 10.0.0 version need to apply HF 2323 before upgrading to 10.0.2.

Resolved Issues

Fixes in this release fall into two distinct categories as follows:

- [Functionality and Usability Fixes](#)
- [Command Line Interface Fixes](#)

Functionality and Usability Fixes

The following table lists the issues that are addressed in Actifio VDP 10.0.2 release:

Table 1: Functionality and Usability Fixes in Actifio VDP 10.0.2

Issue	Fix	Tracking
DB2 workflow creation fails as it considers all databases as system databases for DB2 instances.	This issue is now fixed by making appropriate changes in the discovery script.	84661
Duplicate disks are found when adding ASM disk to ASM Group using Raw Devices on Linux.	This issue is now fixed by removing duplicate ASM links created by multiple stale paths.	83180
Oracle backups from FS to ASM fail with mixed case diskgroup name.	This issue is now fixed by using the standard upper case diskgroup name for newly created ASM staging disk groups.	83114
“Use buffered block copy” option is missing for SAP IQ, in advanced setting for all LVM CBT applications.	This issue is now fixed by adding a bufferedblockcopy option for SAP IQ.	84012
Enhancement: Improved DB2 discovery performance.		69529
Enhancement: Provided a configuration option to allow nested mounts to be automatically unmounted during restore operations and mounted back after restore. This enhancement is to fix the DB2, and Sybase restore failures when there are nested non-participating file systems.		84594
Recovery with PIT needs to handle the DB2 database and host in different timezones. Currently, the host timezone is used in scripts, also leading to incorrect recovery time for DB2 databases configured with different time zones from the host.	This issue is now fixed by sending the timezone in UTC during recovery for DB2 and honor the same.	84596
Enhancement: Provided Online datafile migration support for Oracle restore.		83470
Enhancement: Temp files are now matched to the source database for Oracle.		80854
[SAP HANA] Scale-Out application is discovered as a standalone HANA application.	This issue is now fixed.	87000
Enhancement: Added CAF support for the PostgreSQL database.		79619
[Oracle only Enhancement]: Added more flexibility to configure RMAN multi-section backup in advanced settings.		84865

Issue	Fix	Tracking
Jobs are not approximately scheduled if the HTTP is used to send call home data, and the customer name contains special characters.	This issue is now fixed.	83085
Child Application backups are converted to log backups.	This issue is now fixed by making required changes in the policy option to differentiate between child app with logsmart and child app without logsmart.	86767
Generic app AIX mount from Desktop does not honor user defined mount-points.	This issue is now fixed.	86514
Backups of CIFS shares may fail if any of the open source files are deleted.	This issue is now fixed.	86400
Catalog recovery fails with missing scanfs.txt for remote streamsnap images.	This issue is now fixed.	84756
[CAF MySQL Enhancement] AppAware mount now handles the slave parameters.		85679
AppAware remount fails to bring Online the database, but the job shows a successful status code even though the target DB did NOT come Online.	This issue is now fixed.	81915
Discover of multiple instances fails when one of the instances does not have a configured log backup path.	This issue is now fixed by making the appropriate changes. Now, discover continue to run for the next available instance if log backup is not set for any instance.	86576
Oracle backups are running as full backups intermittently after upgrade due to incorrect app size check.	This issue is now fixed by avoiding conservative staging disk calculation.	86742
[SQL only] Mount jobs fail to revert VSS snapshot.	This issue is now fixed.	84690
Log replication is always low-splash based replication instead of incremental.	This issue is now fixed.	85639
[CAF MySQL Enhancement] Startup state in a loop is verified now during the AppAware mount.		85683
AppAware mount fails as one of the MySQL parameters (slow_query_log_file) is pointing to an incorrect location, which is not part of the backup.	This issue is now fixed, disabled the default option during the AppAware mount.	85675
[Sybase and DB2 Enhancement] Archive log file systems are unmounted during restore and migrated back to the source automatically after restore.		83981

Issue	Fix	Tracking
Actifio Desktop does not send partial properties to underlying layers if only one volume is selected from two or more available volumes.	This issue is now fixed.	84302
Enhancement: Now, forgetvaultimages are allowed even when the vault pool does not exist.		79717
Oracle: Full backups are taken instead of incremental backup on version 12.1.	This issue is now fixed.	86835
Unable to upload rollup through GUI.	This is now fixed to allow rollup to be uploaded and installed.	84711
AppAware mount fails for in-band applications when db_name and db_unique_name are different.	This issue is now fixed by using the correct field.	86130
AppAware mount fails if the password contains special characters when the source database uses DB authentication.	This issue is now fixed by keeping the password in double quotes when setting the environment variable for the AppAware mount.	86043
Enhancement: Improved error message when a VSS runs out of space during backup failures.		86591
System Monitor shows incorrect information for log smart job type.	This issue is now fixed.	85562
Unable to run an expiration job for two different job types concurrently.	This issue is now fixed. Expiration of multiple backups with the same application is now allowed concurrently.	83321
Enhancement: Partial success is now reported when one or more tenant DB backups fail.		80404
Sybase restore fails when a user and system databases use different volumes.	This issue is now fixed, all volumes corresponding to custom application system databases to the host during restore/mount jobs even if they are selected or not.	86746
Sybase discovery fails due to incorrect handling of the password expiration message.	This issue is now fixed.	83278
Enhancement: TLS encryption is now supported in the database connection string.		87138
[NAS Director] NAS dataset creation fails due to duplicate NAS server host entry created in the hostagentdata table.	This issue is now fixed by making the appropriate IP address changes.	85046
Enhancement: Users are now allowed to provide encryption option for system state recoveries in AWS from AGM.		86653

Issue	Fix	Tracking
Log job fails after multipath reload triggered by a DB job on the same host.	This issue is now fixed by running multipath -r in the case where the host has multipath running.	83296
Images are not cleaned properly when the system state recovery job fails.	This issue is now fixed.	85942
Appliance API returns an incorrect vDisk count.	This issue is now fixed by correcting the vDisk count on the system.	86934
Missing node failure alerts and traps for CDX.	This issue is now fixed.	84253
Enhancement: Added support for clusterless SQL AG protection.		80891
Backup job fails after upgrading the Sky appliance from 9.0.6 to 10.0.1.	This issue is now fixed by disabling the Metadata as false.	85849
AppAware mount fails using backup from source db with READ-ONLY data files after resetlogs.	This issue is now fixed to detect if there are different incarnations among datafile headers during level-0 backup.	82896
[MS SQL only] Fails to restore target database user login after database restore.	This issue is now fixed.	85812
Enhancement: Accelerated network support packages are now installed as part of fresh install and upgrade.		86499
Sometimes SLA analysis runs very slow.	This issue is now fixed by verifying out of compliance for every minute instead of 15 minutes.	85299
[SAP HANA]: The m_backup_size_estimations view not available in HANA 1.0 SPI2.	This issue is now fixed by making the appropriate script changes.	85983
CAF databases report the actual size of the disk partition as application size.	This issue is now fixed by making appropriate changes to Actifio Connector for size calculation.	81022
Mount and migrate does not handle remote backup images properly, resulting in application not found error.	This issue is now fixed.	85659
[SAP HANA]: Incremental backup fails when providing dumpschedule=FDDDDDD.	This issue is now fixed.	86844
Child (created from vault image) backup fails with error: "Failed to create LVM snapshot."	This issue is now fixed.	82172
CAF log backups are using many staging disks as the default last log staging disk size is set to 10 GB.	This issue is now fixed by increase the default value to be same as staging disk granularity.	88098

Issue	Fix	Tracking
Enhancement: Added a new option in the AppAware mount screen to include listener entries in tnsnames . ora file.		82930
Actifio Connector sets the RMAN retention window to 0 on the source database after backup.	This issue is now fixed.	84562
Dedup TLO reuse incorrectly manages region counters.	This issue is now fixed.	84906
A trap is sent before it is retired when catalog jobs fail.	This issue is now fixed, now the trap is sent when the job is retried.	83935
Actifio appliance does not honor default log retention.	This issue is now fixed by addressing the missing computation.	83904
[SAP HANA]: Discovery fails to discover as a 1+1 replication cluster when log-mode is other than log replay.	This issue is now fixed.	83619
[SAP HANA]: Mount and migrate fails if VG name for data and log are same.	This issue is now fixed.	84525
NFS shares might report large sizes and break MDL intermittently.	This issue is now fixed.	84099
Incorrect case used, for instance, when registering a database with CRS during restore.	This issue is now fixed.	81014
Enhancement: When adding SSD to the system, need to make sure that the device is not used anywhere.		84743
AppAware mount fails when the wallet location is configured with DB UNIQUE NAME.	This issue is now fixed by adding the DB UNIQUE NAME parameter in AppAware mount scripts.	88063
AppAware mount fails with error: ORA-07446: sdnfy: bad value for parameter user_dump_dest.	This issue is now fixed by adding space between user_dump_dest and = in the init.ora file.	88228
Enhancement: Added support for JSON formatted credentials file for Google object storage.		85030
Oracle failed mount does not clean up ASM links on the secondary node.	This issue is now fixed by addressing the order and relaxing the checks to ignore failures.	84979
Enhancement: New job alerts are now triggered when an incremental jobs turn into full jobs.		84673
Enhancement: Improved performance on database discovery by fetching minimum details of an instance.		84354

Issue	Fix	Tracking
[SAP HANA] Dump recovery fails on HANA 1.0 non MDC environment.	This issue is now fixed.	85535
Object Manager Daemon (OMD) fails to create bitmaps if any of the previous snapshot is missing.	This issue is now fixed by handling missing flash copies appropriately while building bitmaps files.	84336
Partial mount of SQL In-band app fails if one volume is not selected for mount, then the whole volume set is not marked for restore.	This issue is now fixed by marking the volume set for restore, even if one volume is selected.	83582
Missing option from AGM for “None, Sysdba, Sysbackup” user roles settings.	This issue is now fixed by adding the “Role None” option for Oracle application settings.	85806
Jobs fail with staging disk full error. Additional check for staging partition identification during SystemState backup.	This issue is now fixed by adding a check to skip FAT32 volume as an EFI partition.	86608
Oracle wallet location configuration directory collects all the files rather than collecting selected extension files as part of the backup.	Appropriate changes are made to collect only selected extension files in the Oracle wallet location.	81398
Enhancement: Now, customers are allowed to choose their own IPs while performing System Recovery in AWS.		56362
Mount from SystemState image does not work properly, and the job fails with the error “No valid objects selected for mount.”	This issue is now fixed by adding volume in Meta-data.	83785
[NAS Director] If CIFS shares protected by NAS-Director contain files that have colons in the name, backup jobs may fail if the file with a colon in the name is deleted.	This issue is now fixed.	84239
Failed to get ASM user and group details if the user name contains more than 8 characters in Oracle Database.	This issue is now fixed by relaxing the number of characters in the database name.	88039
User login fails to RM after data migration from standalone.	This issue is now fixed.	87044
Remount of child database fails when the restore point is set in the child database.	This issue is now fixed.	84807
Backup from standby does not backup logs if primary is behind standby. This occurs when the time zone is set differently on the primary and standby data guard.	This issue is now fixed.	80102
Enhancement: When the ESP pool is used as a 0remote target pool for streamsnap, use low-splash writes to target disks when the data being written is zero byte block.		84201

Issue	Fix	Tracking
Default log purge value does not honor during the log backup for MAX DB and Sybase IQ databases.	This issue is now fixed.	82986
StreamSnap job fails even though it is not canceled due to a timing issue between two threads.	This issue is now fixed by making the progress callback handlers not to wait indefinitely to deliver the event notification.	79617
Unable to protect Unity ESP mounted applications that are protected with different Unity ESP in the same array.	This issue is now fixed.	82970
Backup and Mount jobs may fail when jobs are running in parallel on the AIX host.	This issue is now fixed.	84257
MySQL AppAware mount job fails due to insufficient directory permissions on the host.	This issue is now fixed.	83339
The ResourceState.txt file gets corrupted during system reboot.	The corrupted entries are now properly ignored and removed.	83891
Oracle provider crashes during reboot-remount, when appAware="false" and provisionOption is empty.	This issue is now fixed by adding a check at the appropriate path.	81672
Requests sent by AGM will be logged as RM IP requests in the appliance audit records when an appliance is managed by AGM and RM instances. This behavior is limited to requests representing the AGM server. Operations initiated by end-users are not affected.	This issue is now fixed.	84267
SQL Availability Group (AG) backup fails if database names are in different case on Primary and Secondary replica.	This issue is now fixed by adding a check to identify the AG database replication state as case insensitive.	83943
[NAS-Director] the /var/log file filled up due to fp.log.	This issue is now fixed.	82514
[NAS-Director] Snapshot directory is not visible while backing up a CIFS share from a NetApp SVM, then the job fails with a mount error.	This issue is now fixed.	83972
NAS Director on-boarding flag is inconsistent.	This issue is now fixed.	84236
DB2 CAF scripts are not catching simple errors and allowing the scripts to continue when they are supposed to abort.	This issue is now fixed.	81709
[RHEL 5.11] Backup job fails with the error "Failed to Created SystemState Metadata."	This issue is now fixed.	88319

Issue	Fix	Tracking
The auto discovery does not proceed further in discovering the hosts if the connector of a host is down.	This issue is now fixed.	86480
[SAP HANA]: Backup fails at the pre-dump stage when USERSTORE KEY is configured with lowercase.	This issue is now fixed.	84934
Adding a new disk may not resolve the backup failures when the log fails with out of space error.	This issue is now fixed.	85077
On-Vault statistics are incorrectly shown in Actifio Appliance.	This issue is now fixed.	86198
Flash bitmap chunk size is too small.	This issue is now fixed by increasing the size.	86737
Global lock noticed while creating a snapshot.	This issue is now fixed.	85219
Enhancement: Changed the timeout/retries for a multipath device to show up as configurable options.		86418
Freeze option does not work properly on the filesystem for NFS staging disk in-band backups.	This issue is now fixed, freeze and unfreeze of filesystem performed properly during NFS staging disk In-band backup.	87990
Enhancement: Automatically re-run some NAS jobs without a change list.		86797
Incorrect OnVault consumption: OnVault statistics frequently shows as "0", even though they have valid images.	This issue is now fixed by returning the bytes ingested for Metadata volume.	87335
AppAware mount script fails to update the parameters if there is a space between parameter name and the "=" sign.	This issue is now fixed.	88459
[Solaris only] AppAware mount fails with error: "ORA-00828: specified value of shared_pool_reserved_size inconsistent with internal settings".	This issue is now fixed.	88437
[Solaris only] ASM disk string causing ASM crash with duplicate devices.	This issue is now fixed by changing the permissions of mapped devices.	88427
Enhancement: CDX-VX also treated as CDX during the Actifio appliance installation.		84724
Failed to perform volume group free space checks after deleting stray LVM snapshots.	This issue is now fixed by freeing up all previous failure reserved space.	86744

Issue	Fix	Tracking
The daily resource checking job generates an invalid SNMP alert with the message "CDS error 20019 - Insufficient CPU / Memory.Inconsistent Dedup size in license".	This issue is now fixed.	86498
Enhancement: Added an option 'Map to two ESX hosts' and the ability to select two specific ESX hosts out of all available ESX hosts while performing mount.		30540
Enhancement: NAS Director now uses a backup error threshold of 1000 if the backup threshold is not specified while performing incremental backups.		86917
Cluster node validation on the failover environment does not work properly on Windows.	This issue is now fixed.	86561
[Oracle only] AppAware mount database PIT recovery is not able to apply all the required archive logs to reach to desired timestamps.	This issue is now fixed by addressing the missing archive logs in the catalog file list	87263
Enhancement: Added more flexibility to choose DB names while mounting/cloning multiple SQL databases.		80022
Enhancement: AppAware mount option now includes a list of triggers that needed to be disabled.		84005
AIX generic volume mount for jfs2 with log device fails to use a log device.	This issue is now fixed.	83937
Enhancement: StreamSnap and OnVault performance is improved.		84623
Some temporary jobs stay in a queued state for a long time due to an error.	This issue is now fixed.	83292
Cloudbacker generatebitmap does not clean up cached indexes on disk, and fills up /dumps.	This issue is now fixed.	87657
Windows CIFS backups may hit a condition that causes job failure if a file shrinks while backed up.	This issue is now fixed.	80069
DB2 database migrate hangs at "pvcreate" command and does not proceed further.	This issue is now fixed.	85440
High priority restore jobs may take a long time to complete due to the least priority rehydration jobs.	This issue is now fixed.	85927
SLES 15 backups with ext4 staging filesystem fail for large file systems.	This issue is now fixed by extending the support to all available SLES versions.	88395
Work-flow refresh does not honor mount point for log disk.	This issue is now fixed.	88551

Issue	Fix	Tracking
Issue with GCP instance, rendering mount screen, and perform mount.	This issue is now fixed.	86896
VMware not setting over disk.enableUUID as TRUE for Oracle.	This issue is now fixed.	84294
An issue during startup may cause a threshold check for GC to erroneously miss the scheduled GC.	This issue is now fixed.	85134
Enhancement: Performance improvements in expiring OnVault jobs in parallel.		84558
Mount may generate duplicated ASM RAC node lists in restore options.	This issue is now fixed by removing the previously set option, which has an empty value.	84025
The <code>lsbackup</code> command throws an exception for LiveClone when there is a scrub-mount image.	This issue is now fixed.	85223
OnVault jobs may run full instead of incremental and skip a copy of snaps to OnVault.	This issue is now fixed.	84758
AppAware mount fails due to missing definition of IFILE in the pfile.	This issue is now fixed.	88457
Fail Hyper-V VM backup if the VHD parent chain is broken and RCT should backup all avhd/vhd in parent chain of mounted VM.	This issue is now fixed by populating avhd/vhd of VMs if the parent chain is broken and creating a log and failing the job.	86602
[SAP HANA] When the stop HANA command is issued, only the green status of the HANA processes are verified to confirm whether HANA is stopped. In the grep command, yellow status was ignored.	This issue is now fixed by making appropriate script changes during pre-restore steps.	83464
[SAP HANA] Noticed dumps core when none of the HANA nodes are selected for backup.	This issue is now fixed; now backup fails with error: 'Failed to validate cluster member nodes error.'	87862
Incorrect SLA violation is noticed for the Dedup policy.	This issue is now fixed.	87069
ESXi server lost its NFS option value resulting in the deletion of hosts and job failures.	This issue is now fixed by making appropriate changes to delete only stale ESX hosts.	85726
VM backup fails as it is unable to find build and version information for the ESXi host.	This issue is now fixed.	88630

Issue	Fix	Tracking
Deletion of vault pool should not be allowed if it's used in vaultpool2, vaultpool3, or vaultpool4 in SLP.	This issue is now fixed by preventing the deletion of vault pool if it is used in vaultpool2, vaultpool3, or vaultpool4 in SLP.	86148
[SAP HANA] Log backups may miss log files to copy to the staging disk. This causes a broken chain of logs and unable to do a point in time recovery.	This issue is now fixed.	84917
Some CIFS shares may have backup failures due to an unexpected response to a file allocation range query.	This unexpected response is now handled properly.	83920
Ignore compression attribute for files on CIFS shares.	Fixed an issue where NTFS compression is used on the staging disk when source files have the compressed attribute set, when this attribute should be ignored on CIFS sources.	87569
VMware's VM RDM is not removed during snapshot if the job fails during the freeze.	This issue is now fixed.	85915
Re-provision job does not use NFS datastore, if the previous re-provision fails after the unmount and before the new mount.	This issue is now fixed.	86996
On some Windows backups, Metadata on some files is updated on every backup even if it is not changed.	This issue is now fixed and Metadata is not updated if not necessary.	87389
When using in-band backups with the DisableActVssProv setting enabled, there may be left over bitmaps from previous versions of the connector, which erroneously tracked files.	This issue is now fixed and files are now be removed from tracking.	84653
Actifio Connector may crash before the end of the job and for future jobs if the MS-SQL file shrinks from 1GB to below 1GB.	This issue is now fixed.	88392
Some NetApp servers are finding ACL copy failures due to STATUS_CONNECTION_DISCONNECTED and STATUS_INVALID_NETWORK_RESPONSE errors.	This issue is now fixed and errors are now properly retried before causing a failure.	84868
For CIFS NAS Director jobs, when multiple files cannot be accessed due to lack of directory access, only the directory is reported as failed instead of all files within it.	This issue is now fixed.	86922
[Windows only] Bus rescans take more than expected if the system has hundreds of disks attached.	Minimized the bus rescans time, and improved the disk enumeration performance.	84637

Issue	Fix	Tracking
[MS SQL only] Slow performance noticed with thousands of tracked files when handling the large tracked-file list via CBT.	This issue is now fixed and performance in this case has been improved.	84641
Staging disks using GPT instead of MBR is no longer use diskpart to partition the staging disk as disk-part internally uses VDS, which should be avoided.	This issue is now fixed by changing to use IOCTLS to create GPT partitions instead of diskpart.	84645
Windows connector unable to resolve disk ID collision automatically.	Actifio Connector handles the disk ID collisions.	84649
When scanning for a mapped disk on Windows, use DiskScanTimeout from connector.conf instead of a fixed value of 150 seconds.	This issue is now fixed.	86330
Refresh workflow fails with error: "specified target already exists" after child application restore.	This issue is now fixed.	88249
Workflow refresh replaying transaction logs twice.	This issue is now fixed.	88725
Duplicate data files are not deleted during Oracle backup.	This issue is now fixed.	88501
[DB2 Only] Mount and migrate fails and log backup timing issue, causing the connector to crash.	This issue is now fixed.	88575
[Oracle Only] Level 0 backup of Oracle 12.1 fails as multi-section backup is not supported.	This issue is now fixed.	86979
Solaris 10 rmanShe11.sh does not take Oracle home argument properly.	This issue is now fixed.	85511
[Oracle Only] AppAware mount PIT recovery does not work properly.	This issue is now fixed.	87273
Unable to discover VMs using the VM Discovery function when the extra configuration is null.	This issue is now fixed.	88728
Unable to backup MSSQL user logins using the Actifio Connector (10.0.1) and fails with error: "5268 Failed to backup userlogins of the application."	This issue is now fixed.	88604
Enhancement: Now, target mount-points are derived based on the prod mountpoint and mountpointperimage while mounting Epic applications.		88274

Issue	Fix	Tracking
Staging disk filesystem type does not honor CAF dump backups. Currently, the staging disk filesystem type is picked from the root file system by default.	This issue is now fixed.	88104
The modify date is not updated when the Hyper-V is discovered, which affects the sync process to AGM.	This issue is now fixed.	88198
The following warning is displayed after archive logs backup. "RMAN-08138: warning: archived log not deleted."	This issue is now fixed.	84952
Garbage Collection (GC) sweep restart can lose resurrected data from the index.	This issue is now fixed.	88753
StreamSnap+log jobs are moved to job history as backup+streamsnap jobs.	This issue is now fixed.	87790
The maximum transmission unit (MTU) checker does not use new MTU when running checks resulting in continuous event notifications.	This issue is now fixed by correcting the logic used to locate the interface for the target IP address.	85345
Force dismount of backup diskgroup, causing errors in database logs.	This issue is now fixed by skipping the force option of diskgroup while performing diskgroup backup.	84613
OnVault replication with Direct to OnVault (d2ov) policy may corrupt target replication.	This issue is now fixed by running a nobitmap ingest for each corrupted application.	87872
Direct mount from Dedup volumes larger than 8774618181632 bytes with snapshot may create errors.	This issue is now fixed.	86384
Backward compatibility issue: Prior 10.0.x, iSCSI auto-config uses a different algorithm when there are multiple interfaces configured for iSCSI. In 10.0.x and above, this algorithm is changed. This change broke the behavior in appliances upgraded to 10.0.x.	Appliances upgraded to 10.0.x now uses the old algorithm to maintain backward compatibility.	88055
Collected scripts hold open staging disks on NAS Director.	This issue is now fixed. If /opt/act/var/log/stats does not exist, the collect-collecd.sh fails with appropriate error message.	84207
Oracle AppAware mount fails on Solaris while processing the osid.	This issue is now fixed.	86319
Sideband backup from Fujitsu ETERNUS fails due to the UUID calculation issue.	This issue is now fixed.	88153

Issue	Fix	Tracking
Log purge does not work properly for DB2 and Sybase IQ databases.	This issue is now fixed.	82870
NFS data stores are not mounted automatically when Actifio appliance reboots.	This issue is now fixed.	85480
Slow performance noticed for NFS datastore in Actifio Appliance version 10.0.0.	This issue is now fixed.	88026
Kernel crash dump events may be erroneously generated when there are multiple kernel dump files exist in the Actifio appliance.	This issue is now fixed by using the timestamps appended to the dump files.	85233
[Oracle only] Log backups are not triggered as per schedule for child databases that are protected with Log smart policy.	This issue is now fixed.	88600
[For 10.0.x Appliances only] The product revision number for the iSCSI device is erroneously set to 812 instead of 1000.	This issue is now fixed by correcting the version information.	87819
[CDS only] The <code>ssd-mgmt.py</code> tool scans for subdirectories under <code>"/sys/class/enclosure/"</code> , and if does not find a subdirectory, an invalid array reference is pointed when the appliance uses the 3PAR array.	This issue is now fixed.	84020
Routing rules and tables are lost, upgrading the Sky appliance from 9.0.4 to 10.0.1.	This issue is now fixed by making the appropriate changes and retaining existing route details.	86440
[Solaris and AIX Only] All the available IP addresses are not displayed for NFS export.	This issue is now fixed by showing all the alternate IP addresses.	84110
SystemState backup fails with error: "The target volume is not writable."	This issue is now fixed by clearing the vector at the start of the loop.	88924
Backup fails with error "Actifio Connector failed identifying the volume and disk/LUN extent details for the application component."	This issue is now fixed.	88856
[AIX only]: Actifio connector unable to load on older versions [AIX 6.1].	This issue is now fixed.	88756
Enhancement: Added the ability to set enforce retention for OnVault objects in parallel.		88744
[Oracle only]: The <code>addUnnamed</code> SQL script is not defined correctly in AppAware mount scripts for Oracle on AIX, HPUX, and Solaris connectors.	This issue is now fixed.	88573
LiveClone backup image fails to show the required pool list for selection.	This issue is now fixed.	88625

Issue	Fix	Tracking
[CDX] Network packet loss is observed when switch fault occurs on the active path of the bonded interfaces.	This issue is now fixed.	83578
Dedup does not come Online after the Sky appliance is upgraded to 10.0.2.	This issue is now fixed.	84092
The onSubminuteCallback peer node replication does not timeout when the node is offline.	This issue is now fixed by making the appropriate changes to remote calls.	86971
CAF DB2 backup fails due to an invalid db2home environment path.	This issue is now fixed.	88868
ASM 10g version backup fails while retrieving ASM disk string as it uses the non-existent dsget parameter.	This issue is now fixed.	88262
Enhancement: Added support for Http port(80) communication between NAS-Director and NAS servers.		89234
An error occurs when protecting a cluster application that uses external arrays and verification of connectivity from external array to the hosts did not consider the cluster that the application resides on.	This issue is now fixed.	89127
If re-sync/migrate operation fails after performing mount and migration for OnVault backup image, the OnVault mounted volumes will unmount, leaving the mounted application in a bad state.	This issue is now fixed.	89052
Oracle AppAware mount and unmount-delete operations on unity ESP array fail with an error.	This issue is now fixed.	84749
Windows filesystem backup fails when files with NTFS compression are more than 50GB.	This issue is now fixed.	89098
Archivelog backup does not use the clause "not backed up 1 times", which leads to staging disk out of space error.	This issue is now fixed.	89184
OnVault image expiration incorrectly expires the local log backup images. This issue is specific to DB+LOG policy types.	This issue is now fixed.	89357
[CDX only] Due to synchronization issue between two nodes, data may accumulate and causes one of the process to restart every hour and may also disrupt the normal operations.	This issue is now fixed.	89505

Command Line Interface Fixes

CLI additions and improvements for Actifio VDP 10.0.2 include deprecated commands, new arguments, and recommended usages in the latest version of the CLI, API, and SARG. Refer to the latest version of the following publications for more details:

- ***Actifio CLI Reference***
- ***RESTful API Reference***
- ***SARG (Simple Report Generator) User Guide***

The following table lists CLI additions and improvements in Actifio VDP 10.0.2

Table 2: CLI Changes in Actifio VDP 10.0.2

Tracking Number	Description
88160	The <code>testcredential</code> command is updated with Azure related information in CLI help.
84988	The <code>lsssd</code> command reports all the used disks as available disks.
87180	The <code>lsbackup</code> command output is enhanced to display DST details in addition to the host timezone.

The following table lists SARG additions and improvements in Actifio VDP 10.0.2

Table 3: SARG Changes and Enhancements in Actifio VDP 10.0.2

Tracking Number	Description
88488	The “ <code>reportstreamsnap</code> ” command is enhanced to show the full & incremental backups status.
82636	All SARG commands except <code>reportiostats</code> and <code>reportperfstats</code> are enhanced with double quotes when printed in CSV outputs. Refer to the knowledge base article (KB 000045390) for details on how to handle the change in scripts, which can be implemented before upgrading to 10.0.2.
84677	The <code>reportfailedjobs</code> command is enhanced with the <code>-C</code> option to show the canceled jobs.
85768	The <code>reportimages</code> command is enhanced with <code>-M</code> option to replicate snapshot images.
85998	The <code>reportpools</code> command is enhanced to show the OnVault compression ratio and Dedup pool ratio.
86156	The <code>reportonvaults</code> command is enhanced with a new option <code>-r</code> , which allows us to review the ongoing compression ratio per app using OnVault. You can compare full and incremental using <code>-f</code> and <code>-F</code> options.
85375	The <code>reportonvaults</code> command is enhanced to show uncompressed data value prior to compression. This allows you to better analyze the compression ratios being achieved.
82527	All report commands issued via REST API will now display help information when <code>h=true</code> is specified. Prior to this, help over REST API commands was not supported.

Tracking Number	Description
88508	The reportunprotected command did not show the correct protection status of file systems when system state apps were protecting them. This has been corrected.
86458	The reporthealth command is now enhanced to show CPU and Memory details.
85765	The reportfabric command on CDX now uses fixed node names in column headers instead of host names.
87187	The reportapps command with -f option now shows all affected applications.
88342	When reportimages -a0- is used, it does not show log backup date or restorable objects. To see either of these, use a specific app ID.

Limitations and Restrictions

The following are the limitations and restrictions in Actifio VDP 10.0.2:

- Deploying Actifio Sky Appliance OVA on VMware 6.7 u2 requires the SHA1 hashing algorithm to be converted to the SHA256 hashing algorithm using ovftool.exe provided by VMware. Get in touch with the Actifio services team for more information if you want to deploy a Sky Appliance on VMware 6.7 u2.
- Dynamic disks are not supported for staging disks.
- CDS Appliance cannot extend a staging volume if it contains flash copies. [40139]
Workaround: Create a larger staging disk to accommodate future application growth without requiring to resize.
- Backups created on RHEL 7.3 systems cannot be mounted to RHEL 6.8 systems. [47664]
- Hyper-V only: VM runs a full backup instead of a low splash backup when VMs storage is moved from one cloud service vendor to another. [24783]
- When StreamSnap and catalog jobs are run concurrently, StreamSnap jobs for some virtual machines take a long time before making any serious progress. [52701]
- ESXi hosts with the time that does not match with its VMware jobs fail. This is as designed by VMware. [39241]
- System State Recovery fails if there is any security software in the backup image which can block the execution of binaries during System State recovery. Consider exempting the target disk from the interfering software for the duration of the operation. [64152]
- Remote dedup jobs cannot record ingest, post-dedup, and post-compress stats on the remote side. [16938]
- Exchange virtual machines only: Snapshots with log truncation enabled occasionally fail with error:
5584: Actifio Connector failed to truncate log with unknown error.
Workaround: If any databases are in a bad state (such as Dismounted, Failed, and Suspended), Microsoft Exchange writer returns error VSS_E_WRITER_RETRYABLE during log truncation request. If all databases are in a good state, then only the log truncation job will succeed. This is as designed.
- StreamSnap job duration grows exponentially when there is a delay between two clusters. [26746]
- On VVOL-based setups, if the appliance determines that LAN-free mode is applicable, VMware backups fail (VVOL-based VMDKs cannot be accessed in SAN mode). [38252]

- Image clones do not provide a GUI option for a mount point or ASM disk group. [31786]
- Database re-provision fails when Oracle database authentication is changed from OS to DB. [27586]

Workaround: Create a new Application Aware mount database.

- (Linux Generic Applications only) The combined length of Logical Volume Name and Volume Group name hosting that Logical Volume should not exceed 108 characters. [26839]
- Rebooting a Linux host during a backup operation using the Actifio CBT driver may cause the next backup job to be a full backup rather than an incremental backup. [26880]
- Performing application aware mounts to multiple hosts in a single work-flow is not supported. [27174]
- Oracle 12c with PDB stored in File System format (not ASM) is only supported on Linux. Unix and Windows platforms are unsupported at this time. [23773]
- Reducing the disk group size is not supported due to the Oracle ASM limitation. [23925]
- AIX, iSCSI only: Only single node Oracle ASM RAC clusters are supported on AIX using iSCSI. [23401]
- The log backup frequency mentioned in minutes via Actifio Desktop SLA Architect is rounded to the nearest multiple of 5 minutes. [22901]
- If a NAS dataset consists of file streams, the backup job ignores these file streams and captures the rest of the data. [19262]
- Square brackets ([]) or forward-slash (/) in a VMware datastore name are not supported. [8872]
- Actifio Connector fails to auto-configure iSCSI ports of the third-party iSCSI initiator on Windows. [7784]
- HP-UX PV Links on 11.23 will only allow 8 paths per volume group. Due to this restriction, it is important that the SAN zoning is configured to have no more than 8 paths per staging LUN and/or in-band disks. For best results, have separate zones configured for the Host-to-VDP and VDP-to-Storage.

Example: Perform Application Aware mount on host A using SID db1, then Unmount the database. Remount the database to target host B using SID db2 while host B has a running database with the name db1. Then the Application Aware remount operation may shutdown the database db1 on host B.

- Installtrustedcertificate command works in CLI, but does not work with REST API: [64579]

Workaround: Log on to CLI, copy the cert.pem and key.pem to /home/admin/upload folders, and execute the following command:

```
udtask installtrustedcertificate -certfile cert.pem -keyfile key.pem
```

- Oracle backups fails if the Oracle instance process has a different owner than the ORACLE_HOME location. This issue occurs only on few hosts where SAP and Oracle co-exists.

Workaround: Discover the instance using Oracle OS user instead of SAP user.

- CDS Appliance iSCSI test for ESX fails when used directly after discovery.

Workaround: Perform a mount, backup a VM on the ESX, that later sets up the iSCSI session and allows the test to succeed.

- In certain environments, Sky Appliance continuously reboots due to a VMXNET3 driver.

Workaround: Update to ESXi 6.5 UI or later.

- CLI only: Command `udtask runworkflow` does not return on workflows that have an "On Demand" schedule type.

Workaround: Make a clone of the workflow, then run the cloned workflow. It is auto deleted after it is run.

- a. Clone the workflow you want to run:
`udstask cloneworkflow <workflow ID>`
 - b. To specify the source image to use when running this workflow, run:
`udstask addflowproperty -name image -value <image name> <clone workflow ID>`
 - c. To run the cloned workflow and auto-delete it upon completion:
`udstask runworkflow <clone work flow ID>`
- SQL Server database names do not provide a suffix field in application-aware mounts workflow windows.
 - The configured deduplicated acceleration cache is disabled when upgrading Actifio Sky appliance deployed on Hyper-V from 9.0.x to 10.0.x. [89630]

Limitation in LDAP usage with Actifio VDP 10.0.2:

- Support of referral by default feature is ignored. However, you can optionally turn on this feature by changing the “ldap.referral.support” parameter value to true.
- For Active Directory, the Domain Users group is not supported in this release. It does not appear in the list of mappings.
- When performing a state recovery of a Linux OS, the targeted VM needs at least 4 GB RAM. If a VM with less memory is used, then the recovery job will fail, as the VM will not be able to boot.

4 Actifio VDP 10.0.1 Release Notes

Actifio VDP 10.0.1 includes new features as well as assorted performance enhancements, security improvements, and bug fixes. To install or upgrade, please schedule a time with Actifio Support.

Topics:

- [What's New](#)
- [Upgrade Paths](#)
- [Resolved Issues](#)
- [Limitations and Restrictions](#)

What's New

The following are the new features, enhancements and changes in Actifio VDP 10.0.1 release:

Enhanced integration with SAP MaxDB database management

Actifio enhanced its out-of-the-box support for SAP MaxDB. Databases are discovered automatically, transaction logs are managed as part of the SLA associated with the databases, recovery to any point in time, and creation of virtual clones are done entirely from the UI, either on-demand or as part of automated workflows.

The following data capture methods and operating systems are supported:

- MaxDB on Linux can be captured at the volume level in an incremental-forever fashion with instant access and virtual clone creation for TDM. This leverages Linux LVM and Actifio's Changed Block Tracking capabilities and is the recommended alternative.
- For customers not using LVM or who cannot use volume level capture, MaxDB on Linux can alternatively be captured using full+incremental backup. This uses the databases' traditional "dump" based backup, typically run as a weekly full and daily incrementals. Recovery involves reconstructing the incrementals on top of the latest full backup.

Benefits

- Automated discovery, backup/capture, and recovery of MaxDB databases.
- Log roll forward option to recover databases to any point in time.
- Automated deployment of virtual clones (application aware mount) for TDM use cases.
- No need for using customized scripts - support is out-of-the-box.

Test Data Management with Containers

Highlights

Actifio has the ability to make application data accessible from within a container environment. Actifio Virtual Data Pipeline (VDP) technology leverages Kubernetes NFS volumes to make application data available as NFS shares to one or more containers.

Benefits

- Integrating production data into the CI/CD pipeline.
- Data masking.
- Cross-cloud portability.
- Use in on-premise to cloud or cloud to on-premise migration.
- Ability to move application data to another cluster if you exceed your resource capacity.
- Un-mounting and deleting a point-in-time application image when it is not needed.

Enhanced integration with SAP IQ database management

Actifio enhanced its out-of-the-box support for SAP IQ to support incremental-forever captures with instant access and virtual clone creation for TDM. This leverages Linux LVM and Actifio's Changed Block Tracking capabilities and is the recommended alternative.

Expanded Support Matrix

- RHEL 7.8

Actifio connector is enhanced to support RHEL 7.8 operating system version.

Note: *Cloud mobility (System state) functionality is not supported.*

- IBM zLinux

Actifio connector is enhanced to support IBM zLinux (RHEL 7.5-7.5) operating system version.

Note: *CBT and Cloud mobility (System state) functionality is not supported.*

- NFS support for IBM AIX
- SLES 15 SP1 (PPC)

Actifio connector is enhanced to support SLES 15 SP1 operating system version on PowerPC.

Note: *Cloud mobility (System state) functionality is not supported.*

Note: *If you are protecting any Generic Applications on RHEL 8.0-8.1 or CentOS 8.0-8.1, then you are potentially exposed to a Red Hat issue where the LVM snapshot command causes the VDP backup job to hang. Actifio recommends that you upgrade the Linux kernel to the latest available one on RHEL/CentOS 8.1 release. For more information, refer to the VDP KB article 000045287.*

See the [Resolved Issues](#) section for list of issues addressed in this release.

Upgrade Paths

Actifio CDS and Sky systems running 8.x or 9.x can be upgraded to 10.0.1. Older versions need to be upgraded first to one of these releases.

- CDS systems running versions prior to 8.1.3 will require double hop through 8.1.5 (then to 10.0.1).
- Sky systems running versions 8.1.1 & 8.1.2 will require the latest HF to avoid a double hop through 8.1.5.
- Sky systems running versions prior to 8.1.1 will require double hop through 8.1.5 (then to 10.0.1).

CDS firmware upgrade to 7.8 is required with 10.0, and is supported on CDS generations 3 and above. The older 7.3 and 7.5 firmware versions are not supported with 10.0.1.

CDX systems running 8.1.2 version first needs to be upgraded to CDX 8.1.2.973 version (or above) before upgrading to 10.0.1.

CDX systems running 10.0.0 version need to apply HF 2323 before upgrading to 10.0.1.

Resolved Issues

Fixes in this release fall into two distinct categories as follows:

- [Functionality and Usability Fixes](#)
- [Command Line Interface Fixes](#)

Functionality and Usability Fixes

The following table lists issues that have been addressed in Actifio VDP 10.0.1 release:

Table 1: Functionality and Usability Fixes in Actifio VDP 10.0.1

Issue	Fix	Tracking
Grandchild AppAware mount fails with ORA-19691 using child db backup which was created using LiveClone.	This issue is now fixed by expiring the old backup and create a new backup and use the new backup to perform a mount.	81506
[Oracle] Provided an options to run customized script after PDB refresh.	Added options to run customer scripts if required based on the configuration files.	79758
Added condition to catalog log backup based on the recovery time for ASM switch and restore.	This issue is now fixed by adding similar logic for restore in addition to ASM switch and re-balance.	80328
Remount with create controlfile fails for In-band ASM child databases.	This issue is now fixed by changing the logic to update the new configuration file whenever AppAware mount modifies the contents.	78826
Backup on Oracle 19c standby node fails as the date format is too long for internal buffer.	This issue is now fixed, date format is no longer reproducible.	79338
[Oracle] ASM switch failed on Standalone instance.	This issue is now fixed.	80151
Power-factor value is being ignored for Oracle migrateimage operation	This issue is now fixed by passing the user specified value during Oracle re-balance.	80412
Enhancement: Added shared secret authentication to Actifio Connector.		79408

Issue	Fix	Tracking
In 4 node RAC cluster, when disk group is mounted on only 2 nodes, CRS keeps flooding error messages "Diskgroup does not exist" on other 2 nodes.	This issue is now fixed by adding a condition to stop and disable diskgroup on other nodes of RAC.	77074
Actifio Connector goes into restart loop when crs_dependency_track file has unexpected data.	This issue is now fixed, Actifio Connector now validates the contents of the file before using them.	78996
Enhancement: Allowed the user to terminate Oracle processes holding on to Actifio disk groups after unmount job.		78529
AppAware mount fails due to duplicate files.	This issue is now fixed by performing case insensitive search while locating obsolete files to avoid this.	82434
Database backup on data guard standby node fails when archive logs shipping delayed from primary to standby.	This issue is now fixed by allowing DB backup to succeed with log shipping delayed.	79632
Oracle database backup and AppAware may fail on Oracle 19c multi-node RAC.	This issue is now fixed.	79628
When Tomcat self-signed cert is automatically replaced, it breaks AGM appliance communication.	This issue is now fixed.	82421
Unable to login AGM/Actifio Desktop using the LDAP credentials after upgrading from 9.0.4, error: "Application is currently not available."	This issue is now fixed, LDAP user able to login.	80189
Deletion tracking on Appliance might be reported as false by accident, causing AGM replication issues. This issue is now fixed by enabling deletion tracking unless user explicitly disable it.	This issue is now fixed, deletion tracking is enabled unless set to false explicitly.	80500
Refresh LiveClone is copying the entire disk again and takes the longer time than LiveClone as it fail to find the relevant bitmaps to use.	This issue is now fixed.	79244
[SAPHANA] Restore of an image that was created by running a first db+log backup fails for HANA dump based backups.	Tis issue is now fixed.	82744
Mounting a standalone Oracle child database backup to a RAC node fails.	Mounting a standalone Oracle child backup image to a RAC cluster is fixed.	79966
Sybase compression advanced setting and description for some Sybase provision option use the word Sybase instead of SAP ASE.	This issue is now fixed by replacing Sybase and Sybase IQ with SAP ASE and SAP IQ in option labels and description.	80351

Issue	Fix	Tracking
Database backup on Data guard standby node fails when archive log shipping delayed from primary to standby.	This issue is now fixed by adding a place holder for delayed log shipping from primary to standby.	80183
[SAPHANA]: Log backups fails when the volume sync is unable to copy temporary files created while new logs are being written.	This issue is now fixed, log backups are successful and log purge is successful.	80947
Staging disk not resized if first log backup fails with disk full error.	This issue is now fixed, If first log backup itself fail, attempt the job with double the log disk size.	79104
Improved error message when Actifio Connector fails to find VSS snapshot volume.	Proper error message with error code is displayed now.	79109
Workflow re-provision fails due to partial selection.	This issue is now fixed, refresh work-flow is successful without any issues.	79206
Canceled restore from Dedup is not clearing the restore state of SQL databases.	Fixed to defer setting the flag to the time and send restore request to Actifio connector.	79445
Job cancellation is not sending cancel request to connector in some cases.	This issue is now fixed, job cancel request is sent successfully.	77995
Incorrect log entry is noticed in jobhistorydata for DB+Log jobs.	Now the system does not run mark Log job as succeed when that is not run as part of DB+Log job.	80474
Older operating system (RHEL 5.10) do not support udev scripts in the connector for CDX.	This issue is now fixed, the errors are no longer seen.	77977
Enhancement: No longer catalog each image copy as level0 when previous backup is uncatalogued at the end of the job, for 12c or higher.		81221
An error 'The application could not be installed because the installer file is damaged. Try obtaining a new installer file from the application author.' occurred while trying to install Actifio.air file in Windows server.	This issue is now fixed, and expected while upgrading from CDS/Sky version 9.0.6.	82539
Index processing in search is slow, due to excessive Elastic search status checking.	This issue is now fixed. When Catalog the initial backup, which is a full. The job may take a long time due to excessive checks with Elastic search. This can lead to long running jobs interfering with other catalog jobs. This is cut drastically to speed up the catalog jobs.	82792
[SAPHANA] backup succeeding even though TENANT DB USER STORE KEY passing incorrect.	This issue is now fixed.	81501

Issue	Fix	Tracking
[SAPHANA] Log backup fails when log file starts with ".log_backup"	This issue is now fixed, and the issue is not SAP specific, and any customer using SAP HANA with high I/O may hit this.	80858
[SAPHANA] Unmounting log staging disk sometimes hangs or takes longer time while trying to flush the data.	As the log staging disk is explicitly unmounted on job completion, there is no need to attempt to flush the log staging disk, this is now fixed.	83028
Backing up files using NTFS-compression on a staging disk over 16TB causes backup job failures.	This has been corrected and NTFS compression will not be used on staging disks over 16TB as Windows does not support it.	59844
Change Data Capture flag is not enabled in AppAware mounted SQL DB.	Missing computation issue is now fixed.	28197
AG backup fails if all the database of a secondary are removed from AG.	This issue is now fixed by skipping the non-syncing secondaries during cluster node validation and backup.	81895
Clone job fails with error: "Actifio Connector failed to prepare applications for mount/clone/mount and migration."	This issue is now fixed by changing the logic for clone jobs.	81898
Mount job may fail when Actifio Sky appliance tries to map the disk on incorrect LUN number.	This issue is now fixed by not using the stale LUN while mapping the disk to host.	79321
ASM backups are failing when ASM is not configured to use SPFILE.	Changes made to set disk-string using parameter to resolve ASM backup failures when SPFILE is not configured.	78753
Child application mount fails with "No valid object selected for restore" error if child is created with Mount-point with default drive letter.	Changes made to match the volume UUID field along with mount-point.	80421
SQL Server mount does not allow the special character ["."] in database name.	This issue is now fixed by allowing all the valid special characters.	79890
Failed clone job in Actifio Connector deleting empty production mount point.	Added a check to skip system files/folder and mount-point while performing cleanup.	81620
Actifio Desktop unable to retain mount mode selection while navigating through next and back buttons.	This issue is now fixed.	80322
Labels are not being applied when user running workflows.	This issue is now fixed.	80026
Actifio Connector port is not honored when host has an application accepting request at Actifio reserved port 5106.	This issue is now fixed, the connector port set for a host is always honored.	80645

Issue	Fix	Tracking
[Oracle] Restore with recovery flag is not honored in non RAC AppAware mount scripts, especially when AppAware mount is performed with only recovery.	Added condition to honor restore recovery parameter,	79913
Intermittent backup fails with multiple staging disks due to LUN scan issue. This issue is found with Linux Connector.	Fixed it now to clear cache after rescanning block devices as device mapping could change on rescan.	78993
[Oracle] AppAware mount on AIX fails due to some error in AppAware mount scripts.	This issue is now fixed by removing extra spaces in EOF command.	80251
[PostgreSQL] Backup fails if OS user login throws warning message (Warning: your password will expire in).	This issue is now fixed and the backup is successful even though the password is configured with the Warning Message	79590
Oracle RMAN restore failed with until time set incorrectly when only database backup was used.	This issue is now fixed, restore on DB only image without PITR is now successful.	80233
Improve support for connector based jobs in VMs with 3rd party snapshot activity.	This issue is now fixed.	80378
Db2 on AIX backup is a full backup every time as Db2 on AIX does not support incremental backup.	This issue is now fixed, customers can take a JFS2 snapshot and run a file system copy based backup.	80860
Memory leak caused by nfs-utils is observed on Actifio appliance occasionally.	Resolved a memory leak in mountd on Sky that may affect appliances using NFS staging disks.	77558
Consistency group backup fails with error "Actifio Connector: SmartCopy failed with an unknown error code".	Fixed a race condition that might caused backup of C: to fail with "Actifio Connector: SmartCopy failed with an unknown error code" and Windows error code ERROR_SHARING_VIOLATION in UDSAgent.log	80293
Enhancement: Support added for Linux CBT on RHEL 8.1, CentOS 8.0, CentOS 8.1 and SLES 12.5		79004
Actifio connector power shell scripts attempt to evict the database from AAG prior to restoring the database	This issue is now fixed.	83127
CAF: Multiple FULL database dumps with RPO < 24 hours	This issue is now fixed by running only one full backup and run rest of the jobs as incremental backups	80491
[Oracle] Oracle staging disk calculation is set incorrectly for retried jobs resulting in backup failure.	This issue is now fixed, staging disk size now calculated correctly.	77177
Subsequent Archive Log backups fail with Oracle Error ORA-19504	DNFS incremental backups are now fixed.	80536

Issue	Fix	Tracking
Enhancement: Added a new system parameter and policy option to set staging disk size to be at least as large as granularity.		80856
Current staging disk size calculation and MDL calculation does not include temp, redo, and controlfile space consumption.	This issue is now fixed. The max DB size is calculated with 1.5x of sum of datafile if staging disk is more than 200 GB. The max DB size is calculated with default 50 GB if staging disk is less than 200 GB	80839
Upgrade from CDX 8.1.2 to 10.0.0 fails.	This issue is now fixed, upgrade from 8.1.2 to 10.0.0 is successful.	69885
Enhancement: Only required archive logs are now presented to the target host during AppAware mount and they are cleaned up from the host after AppAware mount job is complete.		81522
Db2 AppAware mount fails due to incorrect directory permission.	This issue is now fixed by changing the permissions to be owned by the DB user.	79610
[DB2]: After restore, backups are failing with error: "Protected volume group has insufficient space to hold logical volume snapshot data."	The pre-check validation issue is fixed, and backups are successful now.	82158
Dump schedule validation is not considering force full backup case correctly and failing always for multi-tenant applications.	This issue is now fixed, forceful backups are now successful.	82426
FORCE FULL FILESYSTEM BACKUP option is not applicable for MySQL and Maria as Actifio always take a full dump backup for these applications.	This issue is now fixed, forceful backup option is disabled.	82499
If log replay is not performed during mount, archive logs are sent to the host even during remount irrespective of whether recovery range is selected or not.	This issue is now fixed, remount is successful.	82713
Import of OnVault image fails on Data Domain.	This issue is now fixed.	82243
[SAPHANA] Tenant backup fails with no space on disk error.	This issue is now fixed, Actifio connector now consider the size of the incremental backups.	76369
AG restore fails, if the file path is different on primary and secondary nodes.	This issue is now fixed.	79123
Db2: AppAware mount fails if storage path contains any additional files.	This issue is now fixed.	79381
SystemState Linux recovery fails on GCP if RAM specified is less than 3 GB.	This issue is now fixed, SystemState Linux recovery in successful on GCP on CentOS-8 even if source RAM specified is less than 3 GB.	82982

Issue	Fix	Tracking
DB2 dump script does not return size correctly leading to backup failures.	All custom application databases now calculate the staging disk size and handle deletion of old files in staging disk similar to SAPHANA.	77077
Enhancement: Added collect script to support REFS on Windows Data Volumes.		69560
Sybase discovery process command output fails if there are more than DEFAULT number of characters in output.	This issue is now fixed by setting COLUMNS to a larger value in init script and also by updating the Actifio Connector scripts.	79336
[Db2 Only] Some archive logs generated during log backup are not included in the log staging disk though they exists in the log archive location on the Host.	This issue is now fixed by flushing the prior archive logs properly.	80921
[CDS + External Storage Pool] Backup job may fail when the underline storage device is rebooted.	This issue is now fixed.	80505
System State backup fails on Windows 2012 host when the host has un-initialized disk.	This issue is now fixed.	45989
Creating a pool while Dedup is not running may cause the pool state to not checked properly when running jobs and an error "Getting pool state not supported for pool" is thrown repeatedly in the logs.	This issue is now fixed by handling the Dedup logic differently.	80033
Unable to send the SNMP traps from the Appliance if Object Id exceeds short value (1610624438).	This issue is now fixed by changing the change object ID from short to integer.	78923
ESP: Snaps fail if vdisk creation is accompanied by warning "CMMVC6372W".	This issue is now fixed.	79639
System Recovery fails for 4TB disk from VMware to azure.	This issue is now fixed. System recovery for 4TB disk from VMware to Azure is successful.	80089
The actAGMDB.pl backup does not honor backup label parameter	This issue is now fixed., This is optional parameter. This value is to provide a label for on demand backup.	82317
Unable to determine in advance about the base image is being used for recovery.	This issue is now fixed, and able to see the base image details that is being used for the recovery through CLI command.	77924
Remote Dedup replication extracts the data from remote side even though no DAR is requested.	This issue is now fixed.	81353

Issue	Fix	Tracking
Schedule work-flow fails after renaming the database, and the next re-provision job failed.	This issue is now fixed.	81748
Enhancement: Corrected the Hypervisor list in the Sky Installation page.		80285
[SAPHANA]: DB Incremental backup size is not calculated. As of now only full db size is being calculated.	This issue is now fixed by calculating incremental backup size.	81227
[Oracle] Child database creation fails in Standalone ASM DB.	This issue is now fixed.	82465
Oracle backup jobs are failing with "Oracle: Failed level 0 backup".	Workaround is to unset db_create_file_dest during backup until a patch is created.	82984
Showing incorrect selection mode in host page.	This issue is now fixed.	81636
Enhancement: Added SLT name and SLP name in the current SNMP Trap error message when a job fails. Currently job failure Trap error message text contains job ID, application name, host, error #.		80154
Enhancement: Provided the ability to choose target snapshot pool for replication through a config parameter, this behavior will be same for streamsnap/Dedup-Async/log replication.		62985
CentOS 6 FC server lost data paths to CDX mounted LUN after CDX node reboots during CDX fail-over.	This issue is now fixed by adding additional parameter "fast_io_fail_tmo 5" in multipath.conf for CDX LUNS connected over FC.	79550
On CDX, occasionally a scheduled task to tweak the system configuration can hang, resulting in the monitoring the running of system to stop.	This issue is now fixed.	81683
Discovery fails to find right config file for MariaDB because config file not specified in server.	This issue is now fixed.	80763
Discovery fails to find the MySQL instance socket file, when MySQL process (mysqld) is running without socket file argument and socket file is not at default location.	This issue is now fixed.	82038
Enhancement: [RHEL 8.0] Added support to recover SystemState backup recovery to AWS.		77313
Re-provision jobs are failing on Sybase IQ.	This issue is now fixed.	82940
Unity array does not support multiple pools.	This issue is now fixed, Multiple pools can be adopted by the appliance, as long as they are empty.	79710

Issue	Fix	Tracking
Enhancement: Upgraded jQuery version from 3.4.1 to 3.5.1 in the Actifio Appliance.		82483
Unable to collect Meta-data on RHEL 7.6 with LVM 2.02.180. for SystemState Backup.	This issue is now fixed.	82909
Memory leaks are observed when mounting a large SQL instance with several databases.	This issue is now fixed.	82522
Enhancement: Dedup recovery now uses directory relative path rather than absolute path for verifying jobs in progress.		80335
[Oracle] AppAware mount fails on SunOS 5.10 due to the following error at the "tr" command: "failed with "Bad strings" at "tr" command, and job failed due to control file creation failure". This error is specific to Japanese language selection on SunOS 5.10 version.	The "tr" command error for Japanese language has been now fixed.	82642
Log backups are skipped when DB backups are running.	This issue is now fixed, the default log retention is used for logs and not the DB retention.	83587
Backup jobs are failing when you register Actifio VSS provider and at the same time the config parameter (DisableActVssProv) is set to true.	This issue is now fixed.	83527
CBT based backups uses new staging disk for both DUMP and LVM based backup after setting the (stagingdiskgrainasminsize) parameter to true.	This issue is now fixed, new staging disk is not created for both DUMP and LVM based backups.	83716
Images not preserved and skipped for preservation and eventually fails to catchup due to incorrect timezone set at RPO.	This issue is now fixed and image now preserves.	82071
AppAware mount of a Sybase instance to a different host fails with error: "Actifio Connector: Internal connector database script returned non-zero error".	This issue is now fixed, special character check in target database name works properly on SuSE shells.	83638
[AGM only] Index expiration is unnecessarily slow due to excessive elastic search status checking. The job is slow due to unnecessary checks.	This issue is now fixed by avoiding unnecessary check while performing bulk delete.	83426
Availability Groups (AG) not discovered if there exists a same name database as Application type comparison is not performed.	This issue is now fixed by matching the Application name and Application type.	83799
DB2 CAF scripts not catching simple errors, and allowing the scripts to continue when they are supposed to abort.	This issue is now fixed.	81709

Issue	Fix	Tracking
Garbage collection does not free up the FC bitmaps referenced by the OnVault images.	This issue is now fixed, the vdiskReferenceInfo now returns only the flashcopy vdisk used by the most recent OnVault Image.	83533
XFS file system corruption is noticed during mount for Network File System (NFS) staging disk.	This issue is now fixed.	81346
Detect Amazon Linux on versions where OS-release does not indicate Amazon.	This issue is now fixed.	82579
Enhancement: Swap disk size is now changed as twice the RAM size if backup image is a VMware backup.		83560
VMware snapshots require a pool on the Unity named "Unity Pool".	This issue is now fixed, now you can select already existing pools on unity array on their Sky appliance as ESP pool.	79558
Snapshots created in performance pools other than per_pool_001 do not clean up their /dev/zd devices after fingerprinting.	This issue is now fixed.	81088
When two hosts have the same instance name and databases are attached to an instance on one of the hosts where the instance is not discovered, target membership is wrongly created to use existing instance.	This issue is now fixed.	82729
CHAP credentials are lost in Sky for Host after sky upgrade in 9.0.5.	This issue is now fixed, all CHAP credentials are intact on the sky appliance.	83438
Enhancement: Added retry functionality for cloud APIs in recovery process for all the clouds.		80721
Hostname changes to placeholder after performing a recovery to VMware.	This issue is now fixed, hostname is the same as the source's hostname.	79511
Windows2012 R2 Japanese fails to install VMware tool in phase 2 and also fails the job with static IP.	This issue is now fixed, recovery is successful and able to show VM tools.	79515
Misleading error message is returned when multipathd not installed on a CentOS 7 host: "Actifio Connector: Failed to change UUID of LVM volumes".	This issue is now fixed, shows the proper message.	62593
Enhancement: Proper error message is now displayed if firewall rules are blocked/disabled for one of the ports.		61709
Enhancement: Fetch connector logs to include windows system and windows core files necessary for debugging connector crash.		81297

Issue	Fix	Tracking
The /etc/hosts.allow file is not configured properly on Actifio SKY/CDX 10.0 fresh install.	This issue is now fixed by adding appropriate parameters.	80097
Latest Sky instances are updated with new target workers for all clouds.		78182
RHEL recovery fails due to incorrect repos URL.	This issue is now fixed.	82674
Cleanup job of a partial OnVault image conflicts with retried OnVault job and then expires re-used OnVault objects while they are being used by the retried OnVault job.	This issue is now fixed by loading the OnVault backup image from the database before expiring the OnVault objects.	81678
NFS datastore creation may fail on the Actifio appliance while creating the filesystem.	This issue is now fixed by adding retry logic for the filesystem creation.	75925
On Actifio CDS and CDX Appliance few log files are generated under the root directory and do not get rotated which results in root partition being full on the appliance.	This issue is now fixed by moving the logs to /var/log location and adding the rotation logic.	43065
Remote Dedup job may fail if there is any network error occurs during data transfer.	This issue is now fixed by adding additional logic to resume the same job after a network error.	80934
Failed OnVault job due to source read error does not report a correct failure message.	This issue is now fixed by correcting the error message.	81099
Snapshot or mount job may fail sometime as the appliance tries to use the incorrect device.	This issue is now fixed by enhancing the logic to pick the correct device for Snapshot/Mount job.	82327
Actifio Sky appliance may hang due to an issue with the underline filesystem.	This issue is now fixed by applying the required patch for the filesystem.	70304
Enhancement: New text input fields are added for GCP project ID for system.		79669
Latest Sky instances are updated with new target workers for all clouds.	This issue is now fixed.	78132
CentOS 7+ guests on VMware ESX with fibre-channel transport to CDX. is not supported.	This issue is now fixed.	79896
VRDM mount fails with the error: "Failure to communicate with kernel device-mapper driver".	This issue is now fixed.	83855
Incorrect vdiskcount shows in systemstat table.	This issue is now fixed.	83182
Enhancement: When ESP pool is used as remote target pool for streamsnap, use low-splash writes to target disks when the data being written is zero byte block.		84201

Issue	Fix	Tracking
Object Manager Daemon (OMD) failed to create bitmaps if one of the previous snapshots is missing.	This issue is now fixed and missing flash copies are handled correctly.	84336
VMware tools gets removed after upgrading the VDP appliance to version 10.0.0.	This issue is now fixed.	84425

Command Line Interface Fixes

CLI additions and improvements for Actifio VDP 10.0.1 include deprecated commands, new arguments, and recommended usages in the latest version of the CLI, API, and SARG. Refer to the latest version of the following publications for more details:

- ***Actifio CLI Reference***
- ***RESTful API Reference***
- ***SARG (Simple Report Generator) User Guide***

The following table lists CLI additions and improvements in Actifio VDP 10.0.1

Table 2: CLI Changes in Actifio VDP 10.0.1

Tracking Number	Description
80263	For udsinfo getudpscheduler command, the scheduler entry for vaultreplications is disabled by default in 10c. This issue is now fixed by enabling the vault replications by default"
80295	Removing the CLI access for admin inadvertently removes the admin user account, This issue is now fixed by preventing user from disabling CLI access for admin.
81165	Transport property is set to empty when it is not passed for chhost command.
83039	The parameter 'supportunity' default to 'true' now. for the udstask mkarray command. User no longer needs to set supportunity system parameter, the value set is ignored.
80426	Any CLI command using a filter on the jobclass field, such as "udsinfo lsbackup -filtervalue jobclass=<xxxx>", was incorrectly performing a case-sensitive match with the specified jobclass, where previous versions were case-insensitive. The issue is now fixed by changing the jobclass to case-insensitive.

The following table lists SARG additions and improvements in Actifio VDP 10.0.1

Table 3: SARG Changes and Enhancements in Actifio VDP 10.0.1

Tracking Number	Description
81437	<p>The following reports will now show the username that ran this job by default: reportclones and reportmounts and reportrestores.</p> <p>Username will be shown in reportjobs if the -o flag is used. Username will be shown in reportmountedimages if the -c flag is used.</p> <p>For all reports, if the User was an AGM User, it will show as 'AGMUser', not mouser (although that term may be seen in the output of other commands).</p>
81494	<p>The reportjobs, reportonvaults,reportstats, and reportrunningjobs reports will now show OnVault (log) jobs.</p>
81150	<p>The reportmounts, reportimages, reportpools, reporthealth, and reportmountedimages reports are now enhanced to handle cloud snapshots.</p>
81618	<p>The reporthealth report now shows the cloud region if used with the -p option.</p>
82955	<p>The reportmounts and reportmountedimages reports were updated to show mount to containers.</p>
80718	<p>Updated the reportfailedjobs report with -f option to show the app if log jobs are succeeding but DB jobs are not. Also the -f option will always use the -x output method, where repeat errors are shown in a single line.</p>
80994	<p>The reportsnaps report now shows all transport options.</p>
80416	<p>The reportfabric report is enhanced with -p option to support cloud network interfaces.</p>
80518	<p>The reportnet report is enhanced to run in limited manner when used by powershell or REST API.</p>
80715	<p>The reportjobs report is now added with -b option to show DB and Log+DB jobs.</p>

Limitations and Restrictions

The following are the limitations and restrictions in Actifio VDP 10.0.1:

- Deploying Actifio Sky Appliance OVA on VMware 6.7 u2 requires SHA1 hashing algorithm to be converted to SHA256 hashing algorithm using `ovftool.exe` provided by VMware. Get in touch with Actifio services team for more information if you want to deploy a Sky Appliance on VMware 6.7 u2.
- Dynamic disks are not supported for staging disks.
- CDS Appliance cannot extend a staging volume if it contains flash copies. [40139]
Workaround: Create larger staging disk to accommodate future application growth without requiring resize.
- Backups created on RHEL 7.3 systems cannot be mounted to RHEL 6.8 systems. [47664]
- Hyper-V only: VM runs a full backup instead of a low splash backup when VMs storage is moved from one cloud service vendor to another. [24783]
- When StreamSnap and catalog jobs are run concurrently, StreamSnap jobs for some virtual machines take a long time before making any serious progress. [52701]
- ESXi hosts with time that does not match with its VMware jobs fail. This is as designed by VMware. [39241]
- System State Recovery fails if there are any security software in the backup image which can block execution of binaries during System State recovery. Consider exempting the target disk from the interfering software for the duration of the operation. [64152]
- Remote dedup jobs cannot record ingest, post-dedup, and post-compress stats on remote side. [16938]
- Exchange virtual machines only: Snapshots with log truncation enabled occasionally fail with error:
5584: Actifio Connector failed to truncate log with unknown error.
Workaround: If any databases are in a bad state (such as Dismounted, Failed and Suspended) Microsoft Exchange writer returns error `VSS_E_WRITER_RETRYABLE` during log truncation request. If all databases are in good state, then only the log truncation job will succeed. This is as designed.
- StreamSnap job duration grows exponentially when there is a delay between two clusters. [26746]
- On VVOL-based setups, if the appliance determines that LAN-free mode is applicable, VMware backups fail (VVOL-based VMDKs cannot be accessed in SAN mode). [38252]
- Image clones do not provide a GUI option for a mount point or ASM disk group. [31786]
- Database re-provision fails when Oracle database authentication is changed from OS to DB. [27586]
Workaround: Create a new Application Aware mount database.
- (Linux Generic Applications only) The combined length of Logical Volume Name and Volume Group name hosting that Logical Volume should not exceed 108 characters. [26839]
- Rebooting a Linux host during a backup operation using Actifio CBT driver may cause the next backup job to be a full backup rather than an incremental backup. [26880]
- Performing application aware mounts to multiple hosts in a single work-flow is not supported. [27174]
- Oracle 12c with PDB stored in File System format (not ASM) is only supported on Linux. Unix and Windows platforms are unsupported at this time. [23773]
- Reducing the disk group size is not supported due to Oracle ASM limitation. [23925]
- AIX, iSCSI only: Only single node Oracle ASM RAC clusters are supported on AIX using iSCSI. [23401]

- The log backup frequency mentioned in minutes via Actifio Desktop SLA Architect is rounded to the nearest multiple of 5 minutes. [22901]
- If a NAS dataset consists of file streams, the backup job ignores these file streams and captures the rest of the data. [19262]
- Square brackets ([]) or forward slash (/) in a VMware datastore name are not supported. [8872]
- Actifio Connector fails to auto-configure iSCSI ports of the third party iSCSI initiator on Windows. [7784]
- HP-UX PV Links on 11.23 will only allow 8 paths per volume group. Due to this restriction, it is important that the SAN zoning is configured to have no more than 8 paths per staging LUN and/or in-band disks. For best results, have separate zones configured for the Host-to-VDP and VDP-to-Storage.

Example: Perform Application Aware mount on host A using SID db1, then Unmount the database. Remount the database to target host B using SID db2 while host B has a running database with name db1. Then the Application Aware remount operation may shutdown the database db1 on host B.

- `installtrustedcertificate` command works in CLI, but does not work with REST API: [64579]
Workaround: Log on to CLI, copy the `cert.pem` and `key.pem` to `/home/admin/upload` folders, and execute the following command:
`udstask installtrustedcertificate -certfile cert.pem -keyfile key.pem`
- In certain environments, Oracle backups fail if the instance have a different own for its process and its `ORACLE_HOME` location.
Workaround: Discover the instance while using an Oracle OS user instead of a SAP user
- CDS Appliance iSCSI test for ESX fails when used directly after discovery.
Workaround: Perform a mount, backup a VM on the ESX, that later sets up the iSCSI session and allows the test to succeed.
- In certain environments, Sky Appliance continuously reboots due to a VMXNET3 driver.
Workaround: Update to ESXi 6.5 UI or later.
- CLI only: Command `udstask runworkflow` does not return on workflows that have an “On Demand” schedule type.
Workaround: Make a clone of the workflow, then run the cloned workflow. It is auto deleted after it is run.
 - Clone the workflow you want to run:
`udstask cloneworkflow <workflow ID>`
 - To specify the source image to use when running this workflow, run:
`udstask addflowproperty -name image -value <image name> <clone workflow ID>`
 - To run the cloned workflow and auto-delete it upon completion:
`udstask runworkflow <clone work flow ID>`
- SQL Server database names do not provide a suffix field in application-aware mounts workflow windows.

Limitation in LDAP usage with Actifio VDP 10.0.1:

- Support of referral by default feature is ignored. However, you can optionally turn on this feature by changing the “`ldap.referral.support`” parameter value to true.
- For Active Directory, the Domain Users group is not supported in this release. It does not appear in the list of mappings.

5 Actifio VDP 10.0 Release Notes

Actifio VDP 10.0 includes new features as well as assorted performance enhancements, security improvements, and bug fixes. To install or upgrade, please schedule a time with Actifio Support.

Topics:

- [What's New](#)
- [Upgrade Paths](#)
- [Resolved Issues](#)
- [Limitations and Restrictions](#)

What's New

The following are the new features, enhancements and changes in Actifio VDP 10.0 release:

Cloud VM snapshots

Highlights:

- Customers can leverage native cloud snapshots to protect their AWS and GCP cloud instances. Operationally, the same SLA-based simplicity that customers have come to expect from Actifio is provided, in combination with using native cloud snapshots for easy and fast recovery. Customers can recover disks into existing instances as well as clone or restore the entire instance. No Actifio Connector is required for these operations.

Benefits:

- Simple protection of cloud instances, without needing to install a connector.
- Fast recoveries, as snapshots are available immediately for reads.

CDX (in mainstream code, with NFS and other 9.0 functionality)

Highlights:

- CDX 10.0 is on the same code stream as Sky and CDS, meaning it has substantially all the functionality of 10.0 (and 9.0, since the previous CDX release was 8.1.2). This includes NFS support, external snapshot pools, multi-target OnVault, and the rest of the 10.0 features listed in this document.

Note: Data mounted over NFS does not remain available upon CDX node failure.

Benefits:

- All the previous benefits of CDX, including high availability, FC support, performance, etc.

Near-zero downtime recovery for SQL Server and file systems (Mount & Migrate)

Highlights:

- Further enhancing Actifio's leadership in recovery speed, customers can now recover SQL Server and file system data instantly using Actifio's existing capabilities and in addition migrate the data in real-time to production storage, while the application is up and running.

Actifio customers have always benefited from the ability to instantly mount their backups, regardless of data set size, and be able to get their applications up and running. However, if they needed to move recovered data into some other storage (local server or SAN storage), that required some downtime for the data migration period. The new capability in 10.0 eliminates that need and migrates the data while the applications are up and running, thereby allowing completion of the full recovery process with almost no downtime. Recovery can be back to the original location or to another server. This gives DBAs and backup admin the same capability that VMware admins have had for years by using Storage vMotion to move a mounted VM from Actifio to their production storage while the VM is running.

Benefits:

- Provide a near-zero RTO for data recovery back to the final storage destination.
- Shorten downtime for server and storage migrations.

OnVault to multiple targets

Highlights:

- Application data can now be sent to multiple OnVault targets, on-premise or in the cloud.
- Each OnVault target is controlled by separate policies so frequency of update and retentions can be different (e.g., frequent local updates with short retention, together with less frequent updates to cloud with long-term retention).
- Multi-target OnVault is supported with all application types, including Direct-to-OnVault with VMware VMs. In the latter case, the data is written directly to the first OnVault pool, bypassing the snapshot pool, and then read from the first OnVault pool and sent to the others.

Benefits:

- Flexibility for multiple use cases. For example, customers can protect the data locally, keep it for long retention remotely in one cloud, and send data to another cloud for TDM purposes. Customers can also send the data to multiple clouds to avoid reliance on one cloud vendor.

OnVault rehydration performance and incremental options

Highlights:

- The performance of a mount from OnVault has been enhanced by using any blocks that are currently available in the snapshot pool instead of reading them from object storage. This is similar to the incremental rehydration with Dedup where only blocks that are not in the snapshot pool get rehydrated from Dedup.
- When performing a mount from OnVault the user will have options to control how much they want to optimize for performance vs. storage consumption, by selecting from the following:
 - o Storage-optimized - only keep writes in local snapshot pool (writes are always kept locally).
 - o Balanced - blocks that are read (from object storage) or written (to local snapshot pool) are kept in the snapshot pool, to serve as a "cache" for future reads.

- o Performance-optimized - bring the entire image to the local snapshot pool, in the background. This means that reads will become faster as more of the image is available locally.
- o Max performance - The entire image is rehydrated into the snapshot pool first, prior to the mount. This means that the host always works against local storage only.

Benefits:

- Enhanced performance from object storage, enabling the use of applications that can benefit from, or require higher performance similar to that of local storage.

Streamlined support for SAP HANA, Db2, Sybase, MySQL

Highlights:

- Actifio enhanced its out-of-the-box support for SAP HANA, IBM Db2, SAP ASE (formerly Sybase ASE), SAP IQ (formerly Sybase IQ), MySQL, and Maria DB. Databases are discovered automatically, transaction logs are managed as part of the SLA associated with the databases, and recovery to any point in time and creation of virtual clones are done entirely from the UI, either on-demand or as part of automated workflows.

Note: Instant access and virtual clone creation is not supported for SAP IQ as it only supports dump based capture.

Benefits:

- Faster deployment and operational simplicity.
- Automated discovery, backup/capture, and recovery of all these databases.
- Log roll forward option to recover databases to any point in time.
- Automated deployment of virtual clones (application aware mount) for TDM use cases.
- No need for using customized scripts - support is out-of-the-box.

OnVault to Dell EMC Data Domain for long-term retention

Highlights:

- Customers can use their Dell EMC Data Domain infrastructure as OnVault targets for long-term retention. User defines an OnVault pool with a Data Domain target and all other OnVault functionality is as usual.
- Direct to OnVault is supported (for VMware VMs) as well as OnVault replication (from one pool to another).
- Customer can set Data Domain to replicate to another Data Domain system. This is not controlled from Actifio, but image on the replication target system can be imported into an Actifio Appliance, similarly to how it would be done with a regular OnVault pool.
- DD Boost technology is used to minimize the data sent from the Actifio Appliance to Data Domain.

Benefits:

- Customers can leverage their investment in Data Domain infrastructure, combined with all Actifio's capabilities.

Enhanced support for SQL Server Always-on Availability Groups

Highlights:

- User can specify dynamic rules for handling databases within the AAG, similar to existing functionality for SQL Server Instances (all, system, user, include/exclude specific databases).
- User can further control and define rules for the selection of AAG node to be used for backup (primary, secondary, etc.).

Benefits:

- Enhanced automation and usability requires less admin work.

Fast replication of any snapshot image using StreamSnap

Highlights:

- In addition to the existing StreamSnap policy that can replicate snapshot images according to a pre-defined SLA, user can now replicate on demand any snapshot image between two Actifio appliances. Replication is done from the local snapshot pool to the remote snapshot pool in an incremental fashion, relative to the latest dated remote snapshot image.

Benefits:

- Enhanced data portability on demand.

Sky 128TB Dedup pool

Highlights:

- A Sky model is now available with a Dedup pool capacity of 128TB.

Dedup performance enhancements (GC)

Highlights:

- The Dedup pool garbage collection process has been improved to run in the background with minimal impact on Dedup throughput.

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:
 - o Revamped, consolidated menu structure to make it easier for users to carry out main tasks such as backup and recovery as well as TDM capture and access.
 - o An interactive “guided tour” to acquaint users with the main UI sections.
 - o Wizards for application on boarding and data recovery.
 - o Streamlined support for databases such as SAP HANA, Db2, Sybase, and MySQL.
 - o Integrated Report Manager as part of AGM deployment – one VM to deploy, ease of launching RM from AGM, and synchronized users, organizations, and appliances to reduce redundant configurations.
 - o Complete support for managing Hyper-V VMs.
 - o Enhanced handling of logical groups and organizations.
 - o Ability to clone SLA templates.

Benefits:

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

Expanded support matrix

Highlights:

- Support for RHEL 8.0
- NFS support for Oracle and File system applications on HP-UX
- Support for Linux on Power servers, including generic applications (e.g., SAP HANA & Db2)
- OnVault mounts with NFS (introduced in 9.0.2).

Changes in the Actifio Resource Center (ARC)

The links to the Actifio Desktop and its associated Adobe Air executable have been removed from the ARC. The Actifio Desktop is still available for users who need it. To get the Desktop, download the `actifio.air` binary from `https://<Appliance IP>/actifio.air`. When you open it, enter the URL of any Actifio Appliance.

Changes Includes:

- The Actifio logo link has been removed.
- The Documentation Library link now includes non-Desktop docs, plus the Desktop docs as a zip file.
- The Documentation Library now includes the desktop documentation in a `LegacyDesktopDoc` zipped folder.

Changes in Mount Behavior on Windows

The default for the system parameter “`truepathdefaultdriveletter`” is changed from 1 to 0. As a result, the new installations of CDS, Sky, and CDX will not assign drive letters to mounts on Windows servers if a mount point is specified by the user. Drive letters will still be assigned if no mount point is specified. Prior to this, both the mount point and a drive letter would be assigned to the mounted disks unless this parameter is manually changed from 1 to 0 at some time after the original installation.

See the [Resolved Issues](#) section for list of issues addressed in this release.

Upgrade Paths

Actifio CDS and Sky systems running 8.x or 9.x can be upgraded to 10.0.0 Older versions need to be upgraded first to one of these releases.

- CDS systems running versions prior to 8.1.3 will require double hop through 8.1.5 (then to 10.0.0).
- Sky systems running versions 8.1.1 & 8.1.2 will require the latest HF to avoid a double hop through 8.1.5.
- Sky systems running versions prior to 8.1.1 will require double hop through 8.1.5 (then to 10.0.0).

CDX systems running 8.1.x can be upgraded to 10.0.1 (10.0 SP1). Older versions need to be upgraded first to 8.1.2. New CDX installations are supported with 10.0.0.

CDS firmware upgrade to 7.8 is required with 10.0, and is supported on CDS generations 3 and above. The older 7.3 and 7.5 firmware versions are not supported with 10.0.0.

Resolved Issues

Fixes in this release fall into two distinct categories as follows:

- [Functionality and Usability Fixes](#)
- [Command Line Interface Fixes](#)

Functionality and Usability Fixes

The following table lists issues that have been addressed in Actifio VDP 10.0 release:

Table 1: Functionality and Usability Fixes in Actifio VDP 10.0

Issue	Fix	Tracking
Logical Volume Manage (LVM) based mount fails with error "Failed to change Physical volume ID for LVM". This occurs when there is no loop-back iSCSI session in Sky.	Now mount jobs are successful even there is no loop-back iSCSI sessions in Sky.	35465
SQL DB+ Log backup job fails when Actifio Connector uses non-default Log On and the same user account is used in Advanced Settings option of the SQL application.	This issue has been fixed by skipping the login if they are same.	42173
Sometimes, remote mount job fails as one of the sub-jobs causes crash and Dedup object resulting in a dangling state.	This issue has been fixed by correcting the object state.	45974
Enhancement: Support added for Hyper-V backup from replica VM.		43622
Hyper-V VM backups fails with staging disk full error when VMs have checkpoints.	This issue has been fixed by calculating the disk size with checkpoints.	62727
Full backups are initiating on Exchange Databases when multiple passive copies are available.	This issue has been fixed by identifying the last Exchange Database backup from the eligible passive node list.	68724
Application's icon color is not changed when SQL server DB application is set as ignored.	Now the color of the SQL Server DB application icon is set to blue when it is set as ignored.	50938
Actifio is trying to map disks to the ineligible cluster nodes while performing AppAware mounts to Windows Cluster.	This issue has been fixed by properly identifying the valid SQL cluster nodes during AppAware mounts.	63223
Enhancement: Workflow name is appended to the failed job event.		67519
Database is not detached while running a workflow with a non administrator user as the user does not have required permissions to create the database detach script inside Windows temp directory(C:\Windows\Temp).	Actifio Connector now creates runtime scripts within the Actifio install directory [C:\Program Files\Actifio\tmpdata\Job_XXXXX\]	68651
[Oracle only] The db_unique_name parameter is not updated if the database type is File System, this occurs while performing LiveClone Workflow.	This issue has been fixed by updating the db_unique_name parameter.	62085
[Oracle only Enhancement]: Now the standalone database is registered in the Cluster Resource Service (CRS) configuration.		73693

Issue	Fix	Tracking
[Oracle - Windows] AppAware mount fails when database name (SID) length is greater than 8 characters in Windows.	This issue has been fixed by implementing a preflight check and restricting the database name SID to 8 characters.	61638
[Oracle only] Remount job fails for standalone databases if the diagnostic_dest parameter location does not exist in the directory.	This issue is now fixed by creating the diagnostic_dest parameter location.	70558
[Enhancement] The SQL instance naming order is properly sorted now in Actifio Desktop for accessing multiple database/VMware.		52259
[Oracle version 10G only] AppAware mount job fails when "diagnostic_dest" is specified in provisioning options for Oracle version 10G.	This issue has been fixed now by relaxing the "diagnostic_dest" provisioning options for Oracle version 10G.	68143
[Oracle only- Enhancement] While creating grandchild, if db image is used (without recovery point-in-time), connector uses all available log to roll forward which may lead to failure. This is now resolved by always selecting the db+log backup in the child application.		68556
[Oracle only] Multiple jobs may fail as wallet tries to copy all the files if Oracle database is configured with a wallet.	This issue has been fixed now by removing all the old wallet config files.	74564
[Oracle only - Enhancement] Added a provision in Actifio UI to customize the inMemory options during the AppAware mount.		70090
[Oracle only] Remount jobs may cause the existing database to shut down if the database name specified for previous mount matches with existing database name.	This issue has been fixed now by adding a preflight check.	68150
[Oracle Windows] AppAware mount fails if Oracle OS user type equals to Virtual user.	This issue has been fixed by adding required permissions on corresponding Oracle data directories.	67972
[Oracle only] Backup may take longer time (approximately 10 hours) during every DB+Log backup.	This issue has been fixed by setting the optimizer parameter during backup.	62628
[Oracle only] Backup job cancellation may leave the command "sqlplus" running in background and may cause some memory issue on the host.	This issue has been fixed by terminating the "sqlplus" command in the background.	65591
[Oracle only] RAC database backup (DB/Log backup) fails if snapshot control file is not specified in shared location.	This issue has been fixed by adding the preflight check during DB/Log backup.	70306
[Oracle only] Automatic Storage Management (ASM) switch job may fail due to insufficient storage on diskgroup.	This issue has been fixed by increasing the default diskgroup size from 50GB to 100GB.	74624

Issue	Fix	Tracking
[Oracle only] Automatic Storage Management (ASM) user details are incorrectly captured in case of duplicate processes with +ASM substring exists.	This issue has been fixed by making the appropriate changes to application discovery mechanism.	75871
vCenter credentials check fail from the UI, test shows the status "OK" even there are some network issues.	This issue has been fixed by correcting the status, now the status shows as "Failure" if there are some network issues.	66426
[Enhancement]: Due to slot constraint, some jobs are unable to run, this moves their queued on-vault jobs into "Not Run" state once the schedule window is end. This has been resolved, jobs are in queue until successive schedule kick in new job since this is not daily windowed policy.		53828
The job duration shows 00:00 even though the job ran for a duration, this issue has been noticed when a job is canceled forcefully, and the end date is not specified.	This issue has been fixed by setting the end date for the job even if the job is canceled forcefully.	76864
[Enhancement]: iSCSI test should use connect2actip if the host is configured with connect2actip. When performing iSCSI test using "udtask iscsitest" command, the iSCSI test adds all the portals for setting up communication. Appliance now only uses the IP which is configured for connect2actip for iSCSI communication and also remove after iSCSI test.		71806
Session timeout functionality does not working properly in Actifio Desktop when it is inactive for longer duration.	This issue has been fixed now and Desktop session will be timed out as per the configured value in the setparameter command.	76443
Backup jobs may miss the schedule due to slow scheduler loop.	This issue has been fixed by changing the scheduler loop logic to reconnect when it is stuck in slow loop.	62665
A specific service (smbd) on NAS Director host generating cores and filling up the system.	This issue has been fixed by setting the core limits on the NAS Director host.	67108
Restore of an LGA application fails if it protected with a catalog enabled snapshot policies, and causes an error "Actifio Connector: Invalid arguments to SmartCopy, check Connector Settings".	This issue has been fixed by setting a variable on "RawLvmRestoreVolumeSyncer" indicating it as a restore.	67975
Switching of job type (mount job starts as restore and then switch to mount) creates the confusion while job is in progress.	This issue has been fixed, Scheduler now uses JOBCLASS_MOUNT for mount jobs.	68052
[NAS Director]: Backup fails if the CIFS files on the share contains untranslatable characters.	This issue has been fixed by skipping the file name with untranslatable characters.	69887
[NAS Director] Some backups may fail copying directories with ENOTDIR error.	This issue has been fixed by ignoring the ENOTDIR error.	69954

Issue	Fix	Tracking
[NAS Director] Retrying a directory that failed to copy ACLs causes job failure.	This issue has been fixed, now the retry jobs do not attempt to create the directory and copy the ACLs only.	71164
[Enhancement] Added an option (cleanupstaledevices command) to cleanup the stale devices on the host before the backup starts.		75164
When performing a CIFS Mount and export of a NAS Director CIFS application, Mount and Export jobs fails to allow all IPs of the hosts.	This issue has been fixed by allowing more than one IP if it exists while performing the mount and export job.	75266
[NAS Director]: Backup fails on host with NFS staging disks is set.	This issue has been fixed by checking for LV List before accessing it.	76441
NFS snapshot and streamsnap job fails with error "Fail to discover VG on staging disks".	This issue has been fixed now.	77183
Subsequent work-flow fails if the image is already unmounted but not deleted.	This issue has been fixed by deleting the already unmounted application and performing re-provisioning operation.	70947
Dedup garbage collection job may fail sometime due to page loss.	This issue has been fixed by changing the unwanted code block deletion logic.	51371
[Enhancement] Connector Management now provides a mechanism to force removal of host from connector management even if the connector is actively running.		30074
[Enhancement] Added log the disk capacity and free space in the log message while connector logs the list of local disks during discovery and backup. This will help in cases where VSS has issues with free space, as it includes the data in a convenient location.		54440
[Enhancement] More diagnostic information is included now in the logs while it does not have enough VG space for snapshots.		54510
Two copy jobs are getting queued at the same time during catchup mode.	This issue is now fixed.	54578
Streamsnap DB+Log and Snapshot job takes long time and at the end of the hour it goes into NOT RUN state.	This issue has been fixed by detecting the snapshot portion of the streamsnap job completion, and then immediately creates the successful job history entry for the snapshot job.	55301
[Enhancement] Accidentally adding storage devices to act_pri_pool000 is disallowed now.		56681
Plexer receive thread fails to exit and job hangs if the final data message receive happened in combination with peer reboot detection.	This issue has been fixed by terminating data receive thread with error is peer reboot detected.	57046

Issue	Fix	Tracking
SystemState backup fails if docker volumes are found.	This issue has been fixed by adding "overlay" to non protectable file system.	57388
AIX connector to use lscfg and fcstat commands to collect both active/passive FC ports.	This issue is now fixed.	60327
Canceled jobs are completed as "failed" instead of "Canceled" during direct Dedup job transfer.	This issue is now fixed.	61315
VM Applications in the Actifio Connector are deleted while deleting the mounted image.	This issue is now fixed.	61669
The replication protocol might reject requests if the total number of jobs (sub-jobs) exceeds the connections limit. This issue is noticed when multiple source cluster replicating data to the single target.	This issue has been fixed by increasing the SSL connections limit.	62111
Application name changes made in the source Appliance are not reflected in the target Appliance.	This issue is now fixed by updating the target Appliance's application data table.	62502
AppAware mount to clustered instance fails if the host discovers multiple paths.	This issue has been fixed by adding a new flag "alternatehost=true" in scanlun request to SQL passive nodes.	63490
[Enhancement] Added CBT backup and restore support for SUSE Linux Enterprise Server (SLES) 12.4.		64619
Remote Dedup job fails with an error "248 creating backup object failed". The reason for the error was that the first call had succeeded in creating the object before the connection was lost, but the reply had not been received. Reconnect and retry resulted in an attempt to create an object that already existed.	This issue is now fixed.	65173
Enhancement: The enhanced Actifio CLI search functionality is now allows the user to perform a case-sensitive name search.		65206
Actifio Connector discovery fails after VMDiscovery while performing a workflow to a VMware VM with vRDM selected.	The issue has been fixed by making the appropriate changes to the OS selection logic.	65303
All the SystemState and Snapshot jobs are failing with error "Disk full detected, failing SmartCopy job".	This issue has been fixed by properly identifying the boot volumes.	65450
Mount from a Dedup backup fails as the -layer not honoring the option -> 'mountpool=act_per_pool002.	This issue is now fixed by making the appropriate changes to the omd layer.	65826

Issue	Fix	Tracking
Retry disk resource online after moving to SQL group.		66405
API to fetch data based on date alone can fail when user timezone and system timezone are different.	The timezone issue with respect to different operators are fixed now.	66641
DirectOnVault job dose not auto discover a VM during backup resulting in stale VM name if it is updated at VMware level.	This issue is now fixed by making the appropriate changes to auto discover backup functionality.	66585
SQL AppAware mount fails to find the instance If hostname is longer than 15 characters, this is due to the default instance name is truncated to first 15 characters but actual hostname (without truncating) is used in the background, resulting in mismatch of instance names.	The issue has been fixed now by using the truncated instance name in the background process.	67613
[Oracle] Some asmcmd processes are running from many days and using 100% CPU. When they are invoked with --nocp option, this behavior is not observed.	Modified the scripts to make sure all invocations of asmcmd use this option from 12c.	67853
Disk space usage on datastore check performed holding the VMDK that is not selected for snapshot.	This issue has been fixed by checking the threshold for the datastore selected for the backup.	67892
Parallel jobs running to ESX fail when one job does logout of iSCSI while other job running with the same session is in progress.	This issue has been fixed by holding the first job when other job running with the same session is in progress.	68059
[Enhancement] Allow the ability to run noparent job for Dedup backups from UI.		68133
Removal of unmapped LUNs message to the host is not invoked if EsxHostHandler:removeDetachedLuns fails. This results in the Linux connector deadlocking.	This issue is now fixed.	68220
Backup may fail for various applications, when underlying physical volume is resized.	This issue is now fixed.	74254
[Enhancement] Changed the error message to 'No new job is triggered.		69203
Full backup is not purging the staging disk after a differential backup.	This issue has been fixed and observed the log purging on staging disk is working as expected.	69688
[Enhancement] Support is extended for OS-level deletion of catalog and log files from the log directory.		71651
[Enhancement] Provided an option to overwrite the DB with the same name if it exists on the target server as part of SQL DB clone to server operations.		76089

Issue	Fix	Tracking
Unable to login to the Actifio Desktop using the cluster name, if the name contains "_".	This issue has been fixed by adding validation for cluster name when it is updated through CLI command, whitespace and underscore are not allowed for the cluster name.	77611
[Enhancement] Delete database instance is not allowed now when database within is still protected.		77329
[Enhancement] Provided an option to remove cloned image for a file system from Desktop.		77130
Error recovery path attempting to get volume size.	This issue is now fixed.	77079
Cloudbacker get ownership fails after retry.	This issue is now fixed.	77044
Timeout issue is observed for Workflow jobs.	This issue has been fixed by increasing the timeout of 32 hours for daily and hourly jobs, 5 days for weekly, monthly and on demand jobs.	75873
If OnVault job fails with vault connectivity issues, the job class is changed to 53.	This issue has been fixed by resetting the readiness check flag before queuing job.	72289
[Enhancement-SAP HANA] Support is added to download the backup list file along with other meta-data files for the HANA backup image to the appliance.		73490
Red Hat Enterprise Linux (RHEL) 7.7 conversion is fails with error message "Failed to convert volumes to virtual disk".	This issue is now fixed.	74165
[SAP HANA] Backup fails with error "4321: only secure connections are allowed SQLSTATE".	This issue is now fixed.	75337
When Dedup job is canceled, the status is shown as a failed job.	This issue has been fixed and the status now shows as canceled.	75630
ParentAPPID is not populated for children of Consistency Groups or SQL instance.	This issue is now fixed.	75419
Boot volume VM backup checking all LUNs for Sideband.	This issue is fixed by taking backup of Boot volume only that resides on the Sideband.	75687
When performing iSCSI test using the command <code>udstask iscsitest Portal</code> which being added to host are not getting removed.	This issue is fixed by adding <code>initiatports</code> based on configured <code>connect2Actip</code> value.	71804
Default ZFS configuration settings with no Dedup is not set properly.	This issue is fixed by configuring ZFS settings dynamically based on available memory.	73632

Issue	Fix	Tracking
Actifio Connector defers creating a new staging disk until it gets an error from the freeze phase of backup, If the connector is requesting a staging disk larger than the current one.	This issue is now fixed and the job succeeded without any space issue.	74006
The application lost its zfs_arc_max and zfs_arc_meta_limit values after reboot.	This issue is now fixed, the values are no longer lost after reboot as the settings are now dynamically determined at run-time.	74155
During post upgrade checks found that 'command not found at Checking for illegal gateway specifications.	This issue is now fixed.	74236
[Enhancement] Job status does not change now, if the retry job is running.		74696
Appliance core component crashes when application with LVM backed File System is increased.	This issue is fixed by handling the condition properly.	74254
Backup could fail wen multiple hosts has same entries for unique properties.	This issue is now fixed by performing pre-check before host properties are inserted to avoid duplicates.	74781

Command Line Interface Fixes

CLI additions and improvements for Actifio VDP 10.0 include deprecated commands, new arguments, and recommended usages in the latest version of the CLI, API, and SARG. Refer to the latest version of the following publications for more details:

- **Actifio CLI Reference**
- **RESTful API Reference**
- **SARG (Simple Report Generator) User Guide**

The following table lists CLI additions and improvements in Actifio VDP 10.0.

Table 2: CLI Changes in Actifio VDP 10.0

Tracking Number	Description
60344	The mkuser command does not honor specified organization, this issue is now fixed.

The following table lists SARG additions and improvements in Actifio VDP 10.0.

Table 3: SARG Changes and Enhancements in 10.0

Tracking Number	Description
64300	The reportconsumption command is now showing the consumption details for Dedup orphan images.

Tracking Number	Description
74395	The reportcloneconsumption command consumes huge amounts of memory causing SVC node failover.

Limitations and Restrictions

The following are the limitations and restrictions in Actifio VDP 10.0:

- Deploying Actifio Sky Appliance OVA on VMware 6.7 u2 requires SHA1 hashing algorithm to be converted to SHA256 hashing algorithm using ovftool.exe provided by VMware. Get in touch with Actifio services team for more information if you want to deploy a Sky Appliance on VMware 6.7 u2.
- Dynamic disks are not supported for staging disks.
- CDS Appliance cannot extend a staging volume if it contains flash copies. [40139]
Workaround: Create larger staging disk to accommodate future application growth without requiring resize.
- Backups created on RHEL 7.3 systems cannot be mounted to RHEL 6.8 systems. [47664]
- Hyper-V only: VM runs a full backup instead of a low splash backup when VMs storage is moved from one cloud service vendor to another. [24783]
- When StreamSnap and catalog jobs are run concurrently, StreamSnap jobs for some virtual machines take a long time before making any serious progress. [52701]
- ESXi hosts with time that does not match with its VMware jobs fail. This is as designed by VMware. [39241]
- System State Recovery fails if there are any security software in the backup image which can block execution of binaries during System State recovery. Consider exempting the target disk from the interfering software for the duration of the operation. [64152]
- Remote dedup jobs cannot record ingest, post-dedup, and post-compress stats on remote side. [16938]
- Exchange virtual machines only: Snapshots with log truncation enabled occasionally fail with error:
5584: Actifio Connector failed to truncate log with unknown error.
Workaround: If any databases are in a bad state (such as Dismounted, Failed and Suspended) Microsoft Exchange writer returns error VSS_E_WRITER_RETRYABLE during log truncation request. If all databases are in good state, then only the log truncation job will succeed. This is as designed.
- StreamSnap job duration grows exponentially when there is a delay between two clusters. [26746]
- On VVOL-based setups, if the appliance determines that LAN-free mode is applicable, VMware backups fail (VVOL-based VMDKs cannot be accessed in SAN mode). [38252]
- Image clones do not provide a GUI option for a mount point or ASM disk group. [31786]
- Database re-provision fails when Oracle database authentication is changed from OS to DB. [27586]
Workaround: Create a new Application Aware mount database.
- (Linux Generic Applications only) The combined length of Logical Volume Name and Volume Group name hosting that Logical Volume should not exceed 108 characters. [26839]
- Rebooting a Linux host during a backup operation using Actifio CBT driver may cause the next backup job to be a full backup rather than an incremental backup. [26880]

- Performing application aware mounts to multiple hosts in a single work-flow is not supported. [27174]
- Oracle 12c with PDB stored in File System format (not ASM) is only supported on Linux. Unix and Windows platforms are unsupported at this time. [23773]
- Reducing the disk group size is not supported due to Oracle ASM limitation. [23925]
- AIX, iSCSI only: Only single node Oracle ASM RAC clusters are supported on AIX using iSCSI. [23401]
- The log backup frequency mentioned in minutes via Actifio Desktop SLA Architect is rounded to the nearest multiple of 5 minutes. [22901]
- If a NAS dataset consists of file streams, the backup job ignores these file streams and captures the rest of the data. [19262]
- Square brackets ([]) or forward slash (/) in a VMware datastore name are not supported. [8872]
- Actifio Connector fails to auto-configure iSCSI ports of the third party iSCSI initiator on Windows. [7784]
- HP-UX PV Links on 11.23 will only allow 8 paths per volume group. Due to this restriction, it is important that the SAN zoning is configured to have no more than 8 paths per staging LUN and/or in-band disks. For best results, have separate zones configured for the Host-to-VDP and VDP-to-Storage.

Example: Perform Application Aware mount on host A using SID db1, then Unmount the database. Remount the database to target host B using SID db2 while host B has a running database with name db1. Then the Application Aware remount operation may shutdown the database db1 on host B.

- `installtrustedcertificate` command works in CLI, but does not work with REST API: [64579]
Workaround: Log on to CLI, copy the `cert.pem` and `key.pem` to `/home/admin/upload` folders, and execute the following command:
`udstask installtrustedcertificate -certfile cert.pem -keyfile key.pem`
- In certain environments, Oracle backups fail if the instance have a different own for its process and its `ORACLE_HOME` location.
Workaround: Discover the instance while using an Oracle OS user instead of a SAP user
- CDS Appliance iSCSI test for ESX fails when used directly after discovery.
Workaround: Perform a mount, backup a VM on the ESX, that later sets up the iSCSI session and allows the test to succeed.
- In certain environments, Sky Appliance continuously reboots due to a VMXNET3 driver.
Workaround: Update to ESXi 6.5 UI or later.
- CLI only: Command `udstask runworkflow` does not return on workflows that have an “On Demand” schedule type.
Workaround: Make a clone of the workflow, then run the cloned workflow. It is auto deleted after it is run.
 - Clone the workflow you want to run:
`udstask cloneworkflow <workflow ID>`
 - To specify the source image to use when running this workflow, run:
`udstask addflowproperty -name image -value <image name> <clone workflow ID>`
 - To run the cloned workflow and auto-delete it upon completion:
`udstask runworkflow <clone work flow ID>`
- SQL Server database names do not provide a suffix field in application-aware mounts work-flow windows.

Limitation in LDAP usage with Actifio VDP 10.0:

- Support of referral by default feature is ignored. However, you can optionally turn on this feature by changing the “ldap.referral.support” parameter value to true.
- For Active Directory, the Domain Users group is not supported in this release. It does not appear in the list of mappings.

6 Known Issues

This section describes the known issues in the Actifio VDP 10.0.5 release.

- [Known Issues in Actifio VDP 10.0.5](#) on page 93

Known Issues in Actifio VDP 10.0.5

The following list summarizes the known defects in Actifio VDP 10.0.5:

Known Issues

Issue	Workaround	Tracking
SystemState recovery for Linux fails on Azure cloud due to temporary storage usage.	By default, the Network service is disabled for CentOS 5.x and 6.x. Always ensure to enable the Network service.	91900
System state recovery job does not honor configured maxondemand slots and maxdataaccess slots.	No known workaround. Issue will be fixed in a future release.	92020
PostgreSQL recovery fails with the error "fail to start PostgreSQLWARNINGMSG: Fail to get alert-log content."	No known workaround. Issue will be fixed in a future release.	91742
Multiple DB2 recovery fails with the error "Configuration file /act/touch/AMAZON_Job_0231774_params is not created!"	No known workaround. Issue will be fixed in a future release.	91744
DB2 recovery fails with the error "Target Database AMAZON is already registered with instance!. Please check!."	No known workaround. Issue will be fixed in a future release.	91672
Sybase application recovery fails on a recovered VM if the database name is the same as the source.	No known workaround. Issue will be fixed in a future release.	91770
Recovered VM's hostname changes with the MTU number instead of a name.	No known workaround. Issue will be fixed in a future release.	91819

Known Issues

Issue	Workaround	Tracking
Sybase ASE- Post recovery scheduled log backups may sometimes fail expecting a dump database before log backup.	No known workaround. Issue will be fixed in a future release.	91750
Workflow refresh fails if the workflow name contains special characters.	Do not use special characters in workflow names.	89569
Need to provide support for Google Cloud Storage (GCS) Standard and Archive tiers that requires a new pool type.	No known workaround. Support may be provided in a future release.	91780
Spike in CPU and Memory usage makes Sky unstable and crash.	No known workaround. Issue will be fixed in a future release.	91460
System Recovery is failing with "message 718: The host failed to login to the Actifio iSCSI target. Failed to map disks to test." on CHAP enabled setup.	No known workaround. Issue will be fixed in a future release.	81380
Need to update manifest file for 9.1.	No known workaround. Issue will be fixed in a future release.	71953
ISE issues occur with custom PAM module implementation.	No known workaround. Issue will be fixed in a future release.	91189
When the CDS is upgraded from v9 to v10, CDS loses/ excludes actnet default outbound policy.	No known workaround. Issue will be fixed in a future release.	91448
AppAware mount on child database DAR image fails with error "Failed to find SCSI device with matching lun details."	No known workaround. Issue will be fixed in a future release.	91817
Windows oracle 18c: AppAware mount fails.	No known workaround. Issue will be fixed in a future release.	91748
/var/log/command does not show the executed commands on CDS.	No known workaround. Issue will be fixed in a future release.	72518
Need to update version of OpenSSL packages.	No known workaround. Issue will be fixed in a future release.	91778
Parameter wallet_root is not set properly, and it is using the \$ values.	No known workaround. Issue will be fixed in a future release.	91722
Hyper-V only: Actifio Sky Appliance installation may fail due to duplicate by-path identities of volumes.	Create a dummy disk in the SCSI controller as LUN0, and all other disks are attached to one SCSI controller using other LUN numbers.	39703

Known Issues

Issue	Workaround	Tracking
[CLI only] If you run restore-preflight without including a value for local-target, then the restore operation fails because verify target disk group fails silently.	Use the AGM UI for Oracle Online migration.	83969
Mount job takes more time than expected when the VM backup image is mounted back to the same host.	No known workaround. Issue will be fixed in a future release.	65437
VM mount fails on the SAS controller with mount mode as vRDM or NFS to Hypervisor.	No known workaround. Issue will be fixed in a future release.	41748
[HP-UX only] Remount of the unmounted image with different Oracle SID fails while creating the audit file destination.	No known workaround. Issue will be fixed in a future release.	68069
Restore System recovery from any Linux to GCP may change the hostname to a fully qualified name after the recovery.	Update the GCP instance meta-data for a custom hostname.	79220
The Backup/Mount job could fail on Linux when Actifio Connector tries to scan and remove LUNs in parallel.	No known workaround. Issue will be fixed in a future release.	56767
In rare cases, a job takes more slots than needed, thus preventing OnVault jobs to run their sub-jobs.	No known workaround. Issue will be fixed in a future release.	64052
In rare cases, Oracle fails to release Actifio staging disks on AIX hosts even after dismounting the disk group leading to permanent failures.	No known workaround. Issue will be fixed in a future release.	63150
The "udstask importvaultbackup" command fails with the NullPointerException error.	No known workaround. Issue will be fixed in a future release.	65456
AppAware fails if <i>sqlplus</i> output contains "\t \n" characters at the end.	No known workaround. Issue will be fixed in a future release.	61251
In the MS-SQL Clone window, when the target host is changed after selecting a database, we might see prefix and suffix options for the SQL Server Database Name instead of SQL Server Database Name.	In the regular workflow, this is not an issue. It only happens if we change the target host after selecting only one database, the workaround is to de-select the database and select again or use AGM UI.	60539
[NFS Datastore only] DAR mount job is failing with the error "Actifio Connector failed to mount the logical volumes present on the LUN mapped from Actifio."	No known workaround. Issue will be fixed in a future release.	62367
The job fails with the error "terminated with signal 11, segmentation fault" when the Actifio appliance fails to send configuration files to Actifio Connector.	No known workaround. Issue will be fixed in a future release.	60665

Known Issues

Issue	Workaround	Tracking
[CDS only] Oracle In-band consistency group workflows for direct mount and live clone fails.	No known workaround. Issue will be fixed in a future release.	62175
[SQL only] Issue in filtering child applications from the Actifio Desktop; it displays duplicate entries in eligible members.	No known workaround. Issue will be fixed in a future release.	62013
System State conversion on Oracle Enterprise Linux 6.4 fails with the error "Failed to convert volumes to the virtual disk."	No known workaround. Issue will be fixed in a future release.	62192
[Oracle only] Backups and mount jobs not working properly for ASM RAC on VMs in clustered ESX hosts.	No known workaround. Issue will be fixed in a future release.	26456
Remote protection check does not alert if there is no response from the remote cluster.	No known workaround. Issue will be fixed in a future release.	54523
Encrypted values should be handled differently when the appliances are in the shared mode as the values from the master appliances are replicated to slaves.	No known workaround. Issue will be fixed in a future release.	58175
Enhancement: On-demand snapshot job should trigger downstream jobs like Dedup and OnVault.	No known workaround. Issue will be fixed in a future release.	55956
Mount job may fail for SQL database while mounting the database back to the original server, using the original name.	No known workaround. Issue will be fixed in a future release.	42654
Catalog-enabled devices only: IndexScan jobs fail intermittently due to CDS failing to speak with VMware tools on VM when trying to communicate with Connector with the following error: 1204: Actifio VM scan job failed. java.util.concurrent.ExecutionException: com.actifio.share.common.ActException: Action failed because there was a problem with VMware tools on the guest VM. Check that it is running an up-to-date.	Do not make any changes, and behavior returns to normal after several retries.	41743
Mount jobs to an OpenVMS host does not contain the UDID disks already mapped.	No known workaround. Issue will be fixed in a future release.	34795
Hyper-V VMs only: Some disks go offline for mounted and cloned VMs. Mounts fail with the following error: Error Message: 5024: Actifio Connector: Failed to create VSS snapshot for backup. The writer experienced a non-transient error. If the backup process is retried, the error is likely to reoccur.	Find if there are offline disks and volumes on the VM, and bring those disks/volumes online.	50142

Known Issues

Issue	Workaround	Tracking
VMs with Japanese names do not permit incremental backups.	No known workaround. Issue will be fixed in a future release.	49599
RHEL 7.2 only: In Red Hat Enterprise Linux 7.2, a bug exists in the caching daemon that causes LVM commands to hang.	Update to RHEL 7.3 or later.	29461
Solid-state drives cannot be changed or re-assigned from ZFS Index Log (ZIL) to Dedup index functions in the Actifio Desktop.	<p>The ZIL SSD will have the status “act_ded_pool1000”. You can perform this in the CLI using these commands:</p> <ul style="list-style-type: none"> • <code>udsinfo lsssd</code> • <code>udstask rmssd - diskpool <id><wwid></code> • <code>udstask addssd - diskpool <id><wwid></code> <p>For details on these commands, refer to the CLI Reference.</p>	25073
If the system user is not used as a backup user, then application-aware mount sets a default password for the system user.	The default password (identical to Oracle default password) is: change_on_install	31734
After switching to a temporary ASM disk group and trying to use a different ASM disk group, an unmount +delete must occur in order for the operation to succeed. This unmounts and drops the temporary ASM disk group before you can proceed with a switch to the new ASM disk group.	To perform this unmount +delete, use the CLI command: <code>udstask unmountimage - image <mounted image> - delete</code>	31278
Work-flows with stale images are not cleaned during GC automatically.	Stale images must be cleaned manually.	30680
Vault to Azure only: When setting up an Azure instance, a short-lived storage drive is available. This device can show up when editing or adding pools. As this drive is only short-lived, it doesn't stay added to the pools across reboots, and there might be data corruption when it comes to data in all the zpools like Dedup and performance.	Do not use the default short-lived storage drive.	29648
After performing a restore operation on the MS-SQL Always On Availability Group (AAG) database, the database might be in a restoring state on the secondary node of the group.	Manually bring the database in sync state by purging the database on the secondary node and re-initiating the replication.	27512

Known Issues

Issue	Workaround	Tracking
<p>Post configuration of a Sky Appliance instance on a Hyper-V server, the Hyper-V server cannot get the IP address of Sky Appliance on Hyper-V manager's Networking tab.</p>	<p>Open the console for the VM by double-clicking the VM name and get the IP address from the command line at the Sky Appliance.</p>	<p>26353</p>
<p>Actifio Sky only: Changing the IP address of the primary NIC using the configuration panel does not change the Cluster IP address and the Operative IP address.</p>	<p>Use the CLI command <code>udstask chcluster</code> to modify the cluster and operative IP address.</p>	<p>24431</p>
<p>Modified ACLs on folders are not copied during incremental CIFS backup on Isilon NAS storage. ACLs of files within the folders are correctly captured and updated.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>21097</p>
<p>Snapshot and clone jobs fail after changing the Actifio Sky Appliance instance IP address.</p>	<p>Reboot the Sky Appliance instance after changing the IP address.</p>	<p>20759</p>
<p>Under certain circumstances, an expiration job may fail with the following error message: <code>Omd: vdisk has dependent flash copies.</code> This happens only when the following criteria are all true:</p> <ul style="list-style-type: none"> • The image being expired is the last snapshot image. • Backups have been taken from multiple nodes in the cluster. • One or more nodes previously used for backups are offline. 	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>20041</p>
<p>If an Oracle host is rebooted while database mounts exist, those mounted databases will be offline after the reboot.</p>	<p>After host reboot, manually mount the needed file systems and start the child database instance.</p>	<p>19378</p>
<p>If Actifio Appliances are forcefully unjoined, protected applications configured to replicate between the appliances may not correctly show the selected template and profile.</p>	<p>Do not un-join appliances forcefully when they are associated with SLAs.</p>	<p>16995</p>
<p>Specifying mount points is not currently supported for in-band Oracle ASM databases.</p>	<p>When performing a mount operation on an in-band Oracle ASM database, leave the Mount Point field empty and proceed with the mount operation.</p>	<p>16534</p>

Known Issues

Issue	Workaround	Tracking
Live Clone of a DedupAsync image fails with the error <i>'When attaching a live clone, the parent must be a flash copy'</i> , when a Live Clone operation is performed after a failback operation.	Wait until a successful DedupAsync job completes and performs a Live Clone operation.	16355
During out-of-band file system restoration, the backup data replaces the same production data but new data since the backup is ignored.	No known workaround. Issue will be fixed in a future release.	10298
When performing a Microsoft Exchange database restore, the restore operation is successful, but some log error messages are noticed in the event viewer; these are warning messages. You may safely ignore these messages.	No known workaround. Issue will be fixed in a future release.	9948
Microsoft SQL database has double-byte characters in the name are not supported.	Rename databases without double-byte characters.	8761
Windows only: Improper shutdown of Actifio Desktop sessions using the cross (X) button may result in running the desktop service in the background. Due to this user may not be able to start a new Actifio Desktop session again.	Kill the Actifio Desktop process from the Task Manager and try again. To avoid this issue, close each session using the Desktop menu.	6592
Due to a known bug in RHEL 5.8 and earlier and 6.0, out-of-band application backups may intermittently result in a kernel panic.	Upgrade RHEL version to 5.9 or 6.1 or higher. Additionally, out-of-band applications should be configured to "Keep staging disks mapped between jobs."	5253
SAP HANA: Database restore fails if iSCSI is not configured on the scale-out nodes.	No known workaround. Issue will be fixed in a future release.	69183
VMware Virtual Disk Development Kit (VDDK) 6.7 library panic observed on Actifio Appliance. This issue is related to VMware's VixDiskLib library.	No known workaround. Issue will be fixed in a future release.	68537
MDL for Linux/Oracle application of size more than 100TB on ESP is shown incorrectly.	No known workaround. Issue will be fixed in a future release.	71043
In some cases, settings configured at the policy level are not overridden with the values defined at the application level.	No known workaround. Issue will be fixed in a future release.	70667

Known Issues

Issue	Workaround	Tracking
<p>Using the unmount and delete option from Actifio Desktop leaves duplicate application entries and throws the following error while performing re-provision work-flow of Oracle applications from AGM.</p> <p>“Error mounting backup image on host: Cannot find AppAware data for application <app id> on host <host id> when re-provisioning work-flow of Oracle applications from AGM.”</p>	<p>Use the unmount and delete option from AGM instead of Actifio Desktop.</p>	<p>71909</p>
<p>Red Hat Enterprise Linux (RHEL) 7.2 conversion to AWS/GCP fails with an error “Failed to convert volumes to virtual disk.”</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>68083</p>
<p>Red Hat Enterprise Linux (RHEL) 5.11, CentOS 5.11 System State conversion to GCP fails with the error “Could not connect to the backup host. Failed to connect to connector on VM after power ON (after conversion)”.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71985</p>
<p>Red Hat Enterprise Linux (RHEL) 5.3 System State conversion to AWS fails with an error “Could not connect to backup host. Failed to connect to connector on VM after power ON (after conversion)”.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71969</p>
<p>CentOS 7.0 System State conversion to AWS/GCP fails with an error “Failed to convert volumes to virtual disk.”</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71971</p>
<p>Sles11sp4 and Sles12sp4 System State backup conversions to AWS fail with an error “Actifio Connector: Failed to mount file system.”</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71979</p>
<p>System Recovery fails on the AWS target for Windows 2012 R2 Server.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71905</p>
<p>CentOS 7.6 recovery to AWS failed with an error “Failed to re-config and reboot VM used for conversion. VM bootup has timed out.”</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71911</p>
<p>Unable to connect to the GCP target host on Windows 2008 R2 Server after conversion.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71913</p>
<p>System Recovery fails on Azure target for Windows 2016 Server.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>71947</p>
<p>System State backup fails for VM with thin provisioned logical volumes configuration.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>72179</p>
<p>Red Hat Enterprise Linux (RHEL) 7.0 System Recovery migration failed on Azure.</p>	<p>No known workaround. Issue will be fixed in a future release.</p>	<p>72291</p>

Known Issues

Issue	Workaround	Tracking
Red Hat Enterprise Linux (RHEL) 5.2 System Recovery and Migration failed on Azure.	No known workaround. Issue will be fixed in a future release.	72296
CentOS 7.3 System Recovery fails on Azure.	No known workaround. Issue will be fixed in a future release.	72300
OEL 6.4 System Recovery failed on Azure.	No known workaround. Issue will be fixed in a future release.	72304
Retries of cloudbacker operations may exceed the request signing time limit, resulting in a 403 error during retries.	No known workaround. Issue will be fixed in a future release.	74001
Unable to run the scheduled workflow once the previous workflow fails.	No known workaround. Issue will be fixed in a future release.	72670
AppAware mount may sometimes fail due to missing logs in an archive log backup.	No known workaround. Issue will be fixed in a future release.	74898
Dedup may sometimes fail when multiple jobs concurrently access the same object.	No known workaround. Issue will be fixed in a future release.	63254
The IMM firmware currently qualified for use on M4 is version 5.6. This needs to be updated to version 7.2 to address security and other fixes.	No known workaround. Issue will be fixed in a future release.	65655
Failed to set Static IP in Phase 2 recovery to VMware.	No known workaround. Issue will be fixed in a future release.	74048
Backup and mount may hang or take more time on Windows 2012 or higher due to the Windows VDS API issue.	No known workaround. Issue will be fixed in a future release.	76002
[ORACLE] Purge of production archive log may fail when crosscheck for backup of archivelog is enabled.	No known workaround. Issue will be fixed in a future release.	73847
NAS Director backup with NetApp may fail due to an exception in NetApp snapshot API.	No known workaround. Issue will be fixed in a future release.	77276
Backup may fail for various applications when the underlying physical volume is resized.	No known workaround. Issue will be fixed in a future release.	74254
Job cancellation may not work properly for various databases like SAP HANA, Sybase, etc. as the underline scripts on the backup host are not killed.	No known workaround. Issue will be fixed in a future release.	76169
VM backup conversion to GCP is failing for Red Hat Enterprise Linux (RHEL) 7.1.	No known workaround. Issue will be fixed in a future release.	77675

Known Issues

Issue	Workaround	Tracking
[Oracle] AppAware mount and recovery fail when the "Loge Purge retention period" is set to 0 in application advanced settings.	No known workaround. Issue will be fixed in a future release.	77525
Sky only: Tomcat self-signed web certificate is valid only for one year when the Sky upgrade path includes 9.0.2 or 9.0.3.	No known workaround. Issue will be fixed in a future release.	77963
HDB fails at the beginning of the migration activity as the basepath_datavolumes and basepath_logvolumes are set to non-existent paths global.ini during migration. It also causes a subsequent log backup job to throw an exception and restart the connector.	No known workaround. Issue will be fixed in a future release.	69195
Failed to perform AppAware mount to the source.	No known workaround. Issue will be fixed in a future release.	72317
Multiple checksum (checksum-email-zed.sh) notifications are generated for one problem.	No known workaround. Issue will be fixed in a future release.	72399
vvdiskinfo.c:673:vv_snap_to_pool_allowed() Cannot perform volume operation between these two pools.	No known workaround. Issue will be fixed in a future release.	78157
SystemState recovery fails in phase- 1 if the backup image contains 24 volumes.	No known workaround. Issue will be fixed in a future release.	62357
Configured CHAP for iSCSI OOB VM SQL backups with Connector fails with error 690:"Host doesn't have any SAN or iSCSI ports defined.	No known workaround. Issue will be fixed in a future release.	72905
Cloudbacker getting into an infinite loop while trying to unmount an OnVault image and perform the cleanup.	No known workaround. Issue will be fixed in a future release.	69715
Infinite looping is noticed in remote replication.	No known workaround. Issue will be fixed in a future release.	6619
Dedup crashes on the target appliance if two on-demand replicate image jobs are submitted at the same time for the same application and same target appliance.	No known workaround. Issue will be fixed in a future release.	30859
Mount fails when trying an AppAware mount and entering credentials on the mount screen. The error says, "A required privilege is not held by the client [ERROR_PRIVILEGE_NOT_HELD]," and the mount fails while checking for an existing database with the same name.	No known workaround. Issue will be fixed in a future release.	75260
[Oracle Windows] SQL commands showing username/ password in the task manager.	No known workaround. Issue will be fixed in a future release.	68665

Known Issues

Issue	Workaround	Tracking
Callhome message is sent while the upgrade is in progress.	No known workaround. Issue will be fixed in a future release.	77036
Multiple loopback iSCSI sessions are generated during mount operation.	No known workaround. Issue will be fixed in a future release.	66372
User-defined mount points are not honored during the remount in the Consistency Group application.	No known workaround. Issue will be fixed in a future release.	78367
OnVault job does a full ingest when the source application size is increased in terabytes.	No known workaround. Issue will be fixed in a future release.	68078
Oracle backups fail with non-descriptive error messages when some of the PDBs are not opened in READ WRITE mode.	No known workaround. Issue will be fixed in a future release.	70308
A large number of remote backups can cause one of the services to restart, and backup details are not fetched.	No known workaround. Issue will be fixed in a future release.	65356
Actifio Appliance upgrade fails when var/log partition is full due to excessing logging scst/scsi messages.	No known workaround. Issue will be fixed in a future release.	57464
Backup images are not preserved when image policy and downstream policies start and end time is not aligned.	Align the snap and underlying policies to use the same start/end time.	72278
OnVaultaccess/OnVaultutility does not support the s3 compatible storage with the base URL option.	No known workaround. Issue will be fixed in a future release.	75543
Assigning roles to a user is not allowed if LDAP group mapping exists and when the login method is set to the database.	No known workaround. Issue will be fixed in a future release.	64770
CDX installer GUI shows the two SSD disks (sda and sdb) as available disks for CDX storage pools as they are reserved for special usage.	No known workaround. Issue will be fixed in a future release.	74297
Backup jobs may hang due to space constraints on the primary pool.	No known workaround. Issue will be fixed in a future release.	77516
Mount job fails with the below error message if the workflow is modified. "Actifio Connector: Internal connector database script returned non-zero error. ERRORMSG: Failed to bringup the MySQL server".	No known workaround. Issue will be fixed in a future release.	72661
Direct Mount from Dedup on CDX does not work across a failover.	No known workaround. Issue will be fixed in a future release.	64001

Known Issues

Issue	Workaround	Tracking
Failed to protect Oracle Windows grandchild. Found offline applications: Oracle application pjjbpbERROR: ORA-12154.	No known workaround. Issue will be fixed in a future release.	73808
[PostgreSQL] Backup fails if OS user login throws warning message (Warning: your password will expire in).	No known workaround. Issue will be fixed in a future release.	79590
Backups are failing due to some stale disks left after Sky reboot.	No known workaround. Issue will be fixed in a future release.	77128
The command output gets the instance name instead of the database name while executing the command "getAllMapDetailsFromDB."	No known workaround. Issue will be fixed in a future release.	79145
Canceled restore from Dedup is not clearing the restore state of SQL databases.	No known workaround. Issue will be fixed in a future release.	79445
Unable to upgrade Actifio Desktop automatically when using the Actifio Appliance (10.0.x) with the lower version of Desktop.	Actifio recommends you to use Actifio Global Manager, or you can download the Actifio Desktop 10.0.x manually from the ActifioNOW portal.	82774 88079
Child database restores from Out-of-band backup fails due to missing pfile under DBMount\datafile.	No known workaround. Issue will be fixed in a future release.	79046
Cloudbacker gets ownership fails after retry.	No known workaround. Issue will be fixed in a future release.	81233
Partial mount of SQL In-band applications are failing with an unclassified error.	No known workaround. Issue will be fixed in a future release.	83582
Unable to protect Unity ESP mounted applications that are protected with different Unity ESP in the same array.	No known workaround. Issue will be fixed in a future release.	82970
[Oracle] Incremental backup is failing with error ORA-65250 if a value is set for db_create_file_dest in a PDB.	Remove the parameter db_create_file_dest prior to the backup and then reset after backup is completed.	82707
Oracle database reports negative MDL.	No known workaround. Issue will be fixed in a future release.	83697
Log replay fails with an error after resizing the log disk.	No known workaround. Issue will be fixed in a future release.	83200
Cloud Mobility doc does not show the TAGS parameter on the Recoverability of a System State image for GCP.	Issue will be fixed in a future release.	80353

Known Issues

Issue	Workaround	Tracking
AppAware remount job fails to bring Online the DB and shows a successful status even though the target DB did not come online	No known workaround. Issue will be fixed in a future release.	81915
Duplicate oratab entries are added during the AppAware mount.	No known workaround. Issue will be fixed in a future release.	82129
SAP HANA Guide does not include how to handle multi-tenant DB restores using Workflows.	Issue will be fixed in a future release.	81929
Performance pool name in SLP is limited to 32 characters, while disk pool name can be up to 64 characters.	No known workaround. Issue will be fixed in a future release.	83774
Oracle backup fails with error: "Oracle: Failed level 0 backup."	No known workaround. Issue will be fixed in a future release.	80745
Remount job fails when the user provides a different mount point than what is used during the previous mount. Also, the Remount job does not auto-populate all the required parameters provided during the last mount job.	Provide the same mount point during the mount and remount job.	81910
OnVault pool creation does not report an error when RL is not enabled at the Data Domain storage unit.	No known workaround. Issue will be fixed in a future release.	81101
Log backup default retention value is not honored.	No known workaround. Issue will be fixed in a future release.	83904
NFS or CIFS shares report large values in excess of the real space and break MDL.	No known workaround. Issue will be fixed in a future release.	84099
"Use buffered block copy" advanced setting option for LVM CBT applications is missing for SAP IQ to the list of applicable application types.	No known workaround. Issue will be fixed in a future release.	84012
[CDX only] Upgrade fails with error: "ACTERR-010080 Upgrade attempted on a passive cluster node and is not allowed" if CDX host name contains upper case character. This issue is noticed while upgrading the Actifio Appliance from 8.1.2 to 10.0.1.	Change the node declarations from upper case to lower case character by editing the crm config file.	83950
SLP's modifydate does not update when one of the pool name column changes due to diskpool change.	No known workaround. Issue will be fixed in a future release.	84536
Oracle AppAware mount fails with error: "Object manager: prepare copy failed."	No known workaround. Issue will be fixed in a future release.	88738
Backup fails with error: "RMAN-20230: datafile copy not found in the repository" while deleting the outdated files.	No known workaround. Issue will be fixed in a future release.	88734

Known Issues

Issue	Workaround	Tracking
CDX failover fails when the active node loses all ports of management network.	No known workaround. Issue will be fixed in a future release.	79507
No archive log mode setting does not work properly for remount operation.	No known workaround. Issue will be fixed in a future release.	88789
Dedup mount operation fails with error: "Actifio Connector failed to mount the logical volumes present on the LUN mapped from Actifio."	No known workaround. Issue will be fixed in a future release.	88902
Mount jobs with container option fail with an error: "Failed to generate XFS UUID."	No known workaround. Issue will be fixed in a future release.	83345
OnVault image mount operation fails for SQL Virtual Cluster host.	No known workaround. Issue will be fixed in a future release.	88205
Oracle Inband AppAware script fails to set the db_recovery_file_dest_size parameter.	No known workaround. Issue will be fixed in a future release.	84482
SLA violations are noticed when policies are changed.	No known workaround. Issue will be fixed in a future release.	38708
Missing archive logs in the backup image sometimes causes job failures.	No known workaround. Issue will be fixed in a future release.	88260
Tomcat server fails to deploy Actifio.war file during the upgrade.	No known workaround. Issue will be fixed in a future release.	85734
Unmount and delete jobs run into the loop when ASM service is restarted.	No known workaround. Issue will be fixed in a future release.	88774
Actifio connector shows incorrect iSCSI login status in the logs.	No known workaround. Issue will be fixed in a future release.	88677
The backup command fails with "Policy not found" error.	No known workaround. Issue will be fixed in a future release.	88695
HTTPS call home does not work with transparent proxy with a self-signed certificate.	No known workaround. Issue will be fixed in a future release.	80743
Mount from Inband consistency group backup image may fail when the logical volume is spanned across multiple disks.	No known workaround. Issue will be fixed in a future release.	88210
SLA violations reported when the Recovery Point Objective (RPO) is updated to 24000000 from AGM.	No known workaround. Issue will be fixed in a future release.	86300
Disk UUIDS does not preserve when VM is recovered using testfailover/create a new VM option.	No known workaround. Issue will be fixed in a future release.	87147

Known Issues

Issue	Workaround	Tracking
Remount job fails when the user provides a new mount point.	No known workaround. Issue will be fixed in a future release.	81910
NFS application discovery shows the trailing slash present in the share name.	No known workaround. Issue will be fixed in a future release.	88969
Stale devices are not cleaned up during a failed mount job.	No known workaround. Issue will be fixed in a future release.	85005
Critical events are not logged if the scheduler fails to run properly.	No known workaround. Issue will be fixed in a future release.	86220
CIFS incremental backup fails when new volumes are added.	No known workaround. Issue will be fixed in a future release.	88723
AGM displays red cluster connectivity after the CDX failover.	No known workaround. Issue will be fixed in a future release.	83925
Expiration jobs fail when Data Domain reaches to 100%.	Do not fill the data domain to 100% when the restricted option of Data Domain is used for the OnVault target.	80268
Backup job fails when multiple hosts have the same IQN number.	No known workaround. Issue will be fixed in a future release.	88111
SAP HANA 1.0 MDC: Catalog backup for tenant is stored at the systemDB location.	No known workaround. Issue will be fixed in a future release.	89079
The Configure Appliance option from Manage > Appliances page shows "HTTP Status 404 – Not Found" error. This issue is specific to Sky appliances.	Log on to the Sky appliance using CLI and apply the following workaround: <ol style="list-style-type: none"> 1. <code>monit stop tomcat</code> 2. <code>rm -rf /act/tomcat/webapps/appliancesetup/</code> 3. <code>monit start tomcat.</code> 	89625
Systemstate recovery on VMware for few operating systems fails with the error: "Failed to convert volumes to virtual disk."	No known workaround. Issue will be fixed in a future release.	83906
Mount jobs of Inband disks with GPT partition fails with the error "Actifio Connector failed to mount the logical volumes present on the LUN mapped from Actifio".	No known workaround. Issue will be fixed in a future release.	91402

Known Issues

Issue	Workaround	Tracking
Backup of MariaDB database fails with the error “Failed to create BTRFS snapshot”.	No known workaround. Issue will be fixed in a future release.	91408
The database backups older than log retention show incorrect recovery range covering the entire duration even though the logs are not available.	No known workaround. Issue will be fixed in a future release.	91938
Ubuntu 14 System state recovery with/without migration fails on Standard_A2 Instance.	No known workaround. Issue will be fixed in a future release.	91321
Unable to use unmount with -force option after upgrading the Actifio Appliance to version 10.0.5	Restart the Actifio Appliance to clear the reference.	91394
Database diagnostics and serviceability issues. Need to enhance the context sensitive error messages and collect more diagnostic details for debugging purpose.	No known workaround. Issue will be fixed in a future release.	91351
The Actifio connector code needs to be enhanced to pass in the backup type that is determined in the backup-start phase to the “pre” script,	No known workaround. Issue will be fixed in a future release.	91310
From Actifio VDP 10.0.5, Snapshot(log) backups will now be reported as “LogBackup” jobs.	No known workaround. Issue will be fixed in a future release.	241244991
SAP HANA backup fails if the “HANA DB User store key” is not defined.	On SAP HANA application, click Details & Settings and provide the mandatory setting “HANA DB USER STORE KEY” for the backup jobs to succeed.	242082005
Sky Appliance reboot takes longer time, additional 10 minutes before the appliance becoming functional.	No known workaround. Issue will be fixed in a future release.	243903632
All Actifio based backups were app consistency for SQL Server, even though VMware tools were uninstalled.	No known workaround. Issue will be fixed in a future release.	195802408
If filesystems are specified in /etc/fstab by their device name, conversions to run in GCE may fail. This is because the disk devices are not guaranteed to get the same device name when hardware changes.	To ensure successful conversion, specify disks by their filesystem UUID, label, or dev-mapper name, which are guaranteed to remain the same.	240244589
Recoveries from VMware to GCE for VMs running SuSE 12.5 will sometimes fail to start the google-osconfig service, and therefore the recovered VM cannot be logged-into.	If you encounter this issue, you may ssh into the VM using the serial console and manually start the service.	244293976

Known Issues

Issue	Workaround	Tracking
System state conversion is failing with error "Failed to run OS adaptation for volumes recovered from OnVault".	No known workaround. Issue will be fixed in a future release.	242284395
When recovering a VMware VM into Google Cloud, the guest OS hostname is being set equal to the recovered VM name, and this may result in databases and applications inside the VM failing to start if it is different than it was in the source environment.	When recovering a VMware VM into Google Cloud, specify to use the original hostname as the new VM name.	248981679
Delete test or unmount-delete of recovered VMs does not delete the host.	Manually delete the host.	253168113
<p>When mounting a backup image as new VM:</p> <ul style="list-style-type: none"> • If you do not provide a Service Account for the target VM, then the newly created VM is not associated with any Service Account. • If you provide a Service Account for the target VM, then mount job fails with error - "One or more of the service account scopes are invalid." <p>When restoring a backup image when the backup VM is not present, the newly restored VM is not associated with any Service Account.</p>	<p>While mounting the backup image as a new VM, leave the Service Account field as blank. Once mount job succeeds, edit the newly mounted instance directly on GCP Pantheon UI and specify desired Service Account.</p> <p>While restoring a image, leave the Service Account field as blank. Once the restore job succeeds, edit the restored instance directly on GCP Pantheon UI and specify desired Service Account.</p>	255916616
For Oracle database backup with log, Oracle Appaware mount back to the source is disabled as Appaware mount with roll forward of log back to source may overwrite the data file in the source database when a newly added datafile is captured in the log backup.	<p>Oracle Appaware mount back to the source can be enabled by setting a new connector configuration parameter "AllowOracleAppAwareMountToSource" to true (AllowOracleAppAwareMountToSource = true) in /act/config/connector.conf.</p> <p>Before enabling this feature make sure there are no new data files being captured as part of log backup.</p>	262351569

7 Security and Vulnerability Issues

This section lists security and vulnerability fixes for common names for vulnerabilities and exposures (CVEs) resolved as of this release. It includes the following topics:

- [Security Fixes in Actifio VDP 10.0.5](#) on page 111
- [CVEs Fixed in Actifio VDP 10.0.5](#) on page 114
- [Known Security and CVE Issues in Actifio VDP 10.0.5](#) on page 120

Security Fixes in Actifio VDP 10.0.5

Security and Vulnerability fixes in Actifio VDP 10.0.5 includes the common names for vulnerabilities and exposures (CVEs), Actifio platform issues, and database liabilities resolved as of this release.

The following table lists Security and Vulnerability fixes in Actifio VDP 10.0.5.

Table 1: Fixed Security and Vulnerabilities in Actifio VDP 10.0.5

Description	CESA #
CentOS update for minizip . centos7	CESA-2022:2213
CentOS update for java-11-openjdk centos7	CESA-2021:2784
CentOS update for minizip centos7	CESA-2022:2213
CentOS update for freetype centos7	CVE-2020-15999
CentOS update for wpa_supplicant centos7	CESA-2021:0808
During appliance setup, a cross-site scripting issue has been fixed.	216847419
CentOS: security advisory for httpd	CESA-2022:0143, CESA-2022:1045, CESA-2021:3856
CentOS: security advisory for nss	CESA-2020:4076, CESA-2021:4904
CentOS: security advisory for python	CESA-2022:5235, CESA-2020:5009
CentOS update for nss-softokn centos7	CESA-2019:4190

Description	CESA #
CentOS update for nss-util centos7	CESA-2019:4190
CentOS: security advisory for bpftool	CESA-2020:0374, CESA-2020:0375, CESA-2020:0839, CESA-2021:3801, CESA-2021:0856, CESA-2021:1071, CESA-2021:2314, CESA-2021:2725, CESA-2021:3438, CESA-2021:4777, CESA-2022:4642, CESA-2020:5437, CESA-2022:0620, CESA-2020:3220, CESA-2021:3327, CESA-2020:5023, CESA-2022:0063, CESA-2020:2664
CentOS: security advisory for bind	CESA-2020:2344, CESA-2021:0671, CESA-2020:5011, CESA-2021:1469
CentOS: security advisory for perl	CESA-2021:0343
CentOS: security advisory for binutils	CESA-2021:4033
CentOS: security advisory for curl	CESA-2020:5002
CentOS: security advisory for glib2	CESA-2021:2147
CentOS: security advisory for openldap	CESA-2022:0621
CentOS: security advisory for openssl	CESA-2021:3798, CESA-2022:1066, CESA-2020:5566
CentOS: security advisory for openssh	CESA-2021:4782
CentOS: security advisory for rpm	CESA-2021:4785
CentOS: security advisory for java	CESA-2022:0306, CESA-2022:1487, CESA-2022:5698
CentOS: security advisory for gzip	CESA-2022:2191
CentOS: security advisory for xz	CESA-2022:5052
CentOS: security advisory for dnsmasq	CESA-2021:0153
CentOS: security advisory for ctdb	CESA-2020:5439, CESA-2022:0328
CentOS update for wget centos7	CESA-2019:1228
CentOS: security advisory for libxml2	CESA-2021:3810
CentOS: security advisory for ppp	CESA-2020:0630
CentOS: security advisory for screen	CESA-2021:0742
CentOS: security advisory for cyrus-sasl	CESA-2022:0666
CentOS: security advisory for expat	CESA-2022:1069

Description	CESA #
CentOS: security advisory for icu	CESA-2020:0897
CentOS: security advisory for iwll000-firmware	CESA-2021:0339
CentOS: security advisory for lemon	CESA-2020:0227
CentOS: security advisory for microcode_ctl	CESA-2021:3028
CentOS: security advisory for grub2	CESA-2020:3217
CentOS: security advisory for ctdb	CESA-2021:5192
CentOS: security advisory for nettle	CESA-2021:1145
CentOS: security advisory for aide	CESA-2022:0473
CentOS: security advisory for polkit	CESA-2022:0274
CentOS: security advisory for bsdcpio	CESA-2020:0203
CentOS: security advisory for ldb-tools	CESA-2021:1072
CentOS: security advisory for libxml2	CESA-2020:3996
CentOS: security advisory for python3	CESA-2020:5010
CentOS: security advisory for dhclient	CESA-2021:2357
CentOS: security advisory for ntp	CESA-2020:2663
CentOS: security advisory for ctdb	CESA-2021:2313
CentOS: security advisory for dbus	CESA-2020:2894
CentOS: security advisory for microcode_ctl	CESA-2020:2432
CentOS: security advisory for microcode_ctl	ESA-2020:5083

CVEs Fixed in Actifio VDP 10.0.5

The following Common Vulnerabilities and Exposures (CVEs) were fixed in Actifio VDP 10.0.5:

Resolved CVEs

Description	CVE#
org.apache.http.conn.ssl.AbstractVerifier in Apache HttpComponents HttpClient before 4.3.5 and HttpAsyncClient before 4.0.2 does not properly verify that the server hostname matches a domain name in the subject's Common Name (CN) or subjectAltName field of the X.509 certificate, which allows man-in-the-middle attackers to spoof SSL servers via a "CN=" string in a field in the distinguished name (DN) of a certificate, as demonstrated by the "foo,CN=www.apache.org" string in the O field.	CVE-2014-3577
DHCP packages in Red Hat Enterprise Linux 6 and 7, Fedora 28, and earlier are vulnerable to a command injection flaw in the NetworkManager integration script included in the DHCP client. A malicious DHCP server, or an attacker on the local network able to spoof DHCP responses, could use this flaw to execute arbitrary commands with root privileges on systems using NetworkManager and configured to obtain network configuration using the DHCP protocol.	CVE-2018-1111
Cross-site scripting (XSS) vulnerability in jQuery UI before 1.12.0 might allow remote attackers to inject arbitrary web script or HTML via the closeText parameter of the dialog function.	CVE-2016-7103
It was discovered that PostgreSQL versions before 10.5, 9.6.10, 9.5.14, 9.4.19, and 9.3.24 failed to properly check authorization on certain statements involved with "INSERT ... ON CONFLICT DO UPDATE". An attacker with "CREATE TABLE" privileges could exploit this to read arbitrary bytes server memory. If the attacker also had certain "INSERT" and limited "UPDATE" privileges to a particular table, they could exploit this to update other columns in the same table.	CVE-2018-10925
jackson-databind before 2.13.0 allows a Java StackOverflow exception and denial of service via a large depth of nested objects.	CVE-2020-36518
A temp directory creation vulnerability exists in all versions of Guava, allowing an attacker with access to the machine to potentially access data in a temporary directory created by the Guava API com.google.common.io.Files.createTempDir(). By default, on unix-like systems, the created directory is world-readable (readable by an attacker with access to the system). The method in question has been marked @Deprecated in versions 30.0 and later and should not be used. For Android developers, we recommend choosing a temporary directory API provided by Android, such as context.getCacheDir(). For other Java developers, we recommend migrating to the Java 7 API java.nio.file.Files.createTempDirectory() which explicitly configures permissions of 700, or configuring the Java runtime's java.io.tmpdir system property to point to a location whose permissions are appropriately configured.	CVE-2020-8908

Resolved CVEs

Description	CVE#
When using Apache Tomcat versions 10.0.0-M1 to 10.0.0-M4, 9.0.0.M1 to 9.0.34, 8.5.0 to 8.5.54 and 7.0.0 to 7.0.103 if a) an attacker is able to control the contents and name of a file on the server; and b) the server is configured to use the PersistenceManager with a FileStore; and c) the PersistenceManager is configured with sessionAttributeValueClassNameFilter="null" (the default unless a SecurityManager is used) or a sufficiently lax filter to allow the attacker provided object to be deserialized; and d) the attacker knows the relative file path from the storage location used by FileStore to the file the attacker has control over; then, using a specifically crafted request, the attacker will be able to trigger remote code execution via deserialization of the file under their control. Note that all of conditions a) to d) must be true for the attack to succeed.	CVE-2020-9484
Apache HttpClient versions prior to version 4.5.13 and 5.0.3 can misinterpret malformed authority components in request URIs passed to the library as java.net.URI objects and pick the wrong target host for request execution.	CVE-2020-13956
In jQuery versions greater than or equal to 1.0.3 and before 3.5.0, passing HTML containing <option> elements from untrusted sources - even after sanitizing it - to one of jQuery's DOM manipulation methods (i.e. .html(), .append(), and others) may execute untrusted code. This problem is patched in jQuery 3.5.0.	CVE-2020-11023
In versions of Greenplum database prior to 5.28.14 and 6.17.0, certain statements execution led to the storage of sensitive(credential) information in the logs of the database. A malicious user with access to logs can read sensitive(credential) information about users.	CVE-2021-22030
The vulnerability is that IDToken verifier does not verify if token is properly signed. Signature verification makes sure that the token's payload comes from valid provider, not from someone else. An attacker can provide a compromised token with custom payload. The token will pass the validation on the client side. We recommend upgrading to version 1.33.3 or above.	CVE-2021-22573
The package algoliasearch-helper before 3.6.2 are vulnerable to Prototype Pollution due to use of the merge function in src/SearchParameters/index.jsSearchParameters._parseNumbers without any protection against prototype properties. Note that this vulnerability is only exploitable if the implementation allows users to define arbitrary search patterns.	CVE-2021-23433
A vulnerability in the JNDI Realm of Apache Tomcat allows an attacker to authenticate using variations of a valid user name and/or to bypass some of the protection provided by the LockOut Realm. This issue affects Apache Tomcat 10.0.0-M1 to 10.0.5; 9.0.0.M1 to 9.0.45; 8.5.0 to 8.5.65.	CVE-2021-30640
A flaw was found in postgresql in versions before 13.3, before 12.7, before 11.12, before 10.17 and before 9.6.22. While modifying certain SQL array values, missing bounds checks let authenticated database users write arbitrary bytes to a wide area of server memory. The highest threat from this vulnerability is to data confidentiality and integrity as well as system availability.	CVE-2021-32027

Resolved CVEs

Description	CVE#
A flaw was found in postgresql. Using an INSERT ... ON CONFLICT ... DO UPDATE command on a purpose-crafted table, an authenticated database user could read arbitrary bytes of server memory. The highest threat from this vulnerability is to data confidentiality.	CVE-2021-32028
Apache Tomcat 10.0.0-M1 to 10.0.6, 9.0.0.M1 to 9.0.46 and 8.5.0 to 8.5.66 did not correctly parse the HTTP transfer-encoding request header in some circumstances leading to the possibility to request smuggling when used with a reverse proxy. Specifically: - Tomcat incorrectly ignored the transfer encoding header if the client declared it would only accept an HTTP/1.0 response; - Tomcat honoured the identify encoding; and - Tomcat did not ensure that, if present, the chunked encoding was the final encoding.	CVE-2021-33037
An XXE issue in SAXBuilder in JDOM through 2.0.6 allows attackers to cause a denial of service via a crafted HTTP request.	CVE-2021-33813
Apache Tomcat 8.5.0 to 8.5.63, 9.0.0-M1 to 9.0.43 and 10.0.0-M1 to 10.0.2 did not properly validate incoming TLS packets. When Tomcat was configured to use NIO+OpenSSL or NIO2+OpenSSL for TLS, a specially crafted packet could be used to trigger an infinite loop resulting in a denial of service.	CVE-2021-41079
jQuery-UI is the official jQuery user interface library. Prior to version 1.13.0, accepting the value of the `altField` option of the Datepicker widget from untrusted sources may execute untrusted code. The issue is fixed in jQuery UI 1.13.0. Any string value passed to the `altField` option is now treated as a CSS selector. A workaround is to not accept the value of the `altField` option from untrusted sources.	CVE-2021-41182
jQuery-UI is the official jQuery user interface library. Prior to version 1.13.0, accepting the value of various `*Text` options of the Datepicker widget from untrusted sources may execute untrusted code. The issue is fixed in jQuery UI 1.13.0. The values passed to various `*Text` options are now always treated as pure text, not HTML. A workaround is to not accept the value of the `*Text` options from untrusted sources.	CVE-2021-41183
jQuery-UI is the official jQuery user interface library. Prior to version 1.13.0, accepting the value of the `of` option of the `position()` util from untrusted sources may execute untrusted code. The issue is fixed in jQuery UI 1.13.0. Any string value passed to the `of` option is now treated as a CSS selector. A workaround is to not accept the value of the `of` option from untrusted sources.	CVE-2021-41184
The fix for bug 63362 present in Apache Tomcat 10.1.0-M1 to 10.1.0-M5, 10.0.0-M1 to 10.0.11, 9.0.40 to 9.0.53 and 8.5.60 to 8.5.71 introduced a memory leak. The object introduced to collect metrics for HTTP upgrade connections was not released for WebSocket connections once the connection was closed. This created a memory leak that, over time, could lead to a denial of service via an OutOfMemoryError.	CVE-2021-42340
The simplified implementation of blocking reads and writes introduced in Tomcat 10 and back-ported to Tomcat 9.0.47 onwards exposed a long standing (but extremely hard to trigger) concurrency bug in Apache Tomcat 10.1.0 to 10.1.0-M12, 10.0.0-M1 to 10.0.18, 9.0.0-M1 to 9.0.60 and 8.5.0 to 8.5.77 that could cause client connections to share an Http11Processor instance resulting in responses, or part responses, to be received by the wrong client.	CVE-2021-43980

Resolved CVEs

Description	CVE#
NSS (Network Security Services) versions prior to 3.73 or 3.68.1 ESR are vulnerable to a heap overflow when handling DER-encoded DSA or RSA-PSS signatures. Applications using NSS for handling signatures encoded within CMS, S/MIME, PKCS #7, or PKCS #12 are likely to be impacted. Applications using NSS for certificate validation or other TLS, X.509, OCSP or CRL functionality may be impacted, depending on how they configure NSS. *Note: This vulnerability does NOT impact Mozilla Firefox.* However, email clients and PDF viewers that use NSS for signature verification, such as Thunderbird, LibreOffice, Evolution and Evince are believed to be impacted. This vulnerability affects NSS < 3.73 and NSS < 3.68.1.	CVE-2021-43527
Apache Log4j2 2.0-beta9 through 2.15.0 (excluding security releases 2.12.2, 2.12.3, and 2.3.1) JNDI features used in configuration, log messages, and parameters do not protect against attacker controlled LDAP and other JNDI related endpoints. An attacker who can control log messages or log message parameters can execute arbitrary code loaded from LDAP servers when message lookup substitution is enabled. From log4j 2.15.0, this behavior has been disabled by default. From version 2.16.0 (along with 2.12.2, 2.12.3, and 2.3.1), this functionality has been completely removed. Note that this vulnerability is specific to log4j-core and does not affect log4net, log4cxx, or other Apache Logging Services projects.	CVE-2021-44228
Apache Log4j2 versions 2.0-beta7 through 2.17.0 (excluding security fix releases 2.3.2 and 2.12.4) are vulnerable to a remote code execution (RCE) attack when a configuration uses a JDBC Appender with a JNDI LDAP data source URI when an attacker has control of the target LDAP server. This issue is fixed by limiting JNDI data source names to the java protocol in Log4j2 versions 2.17.1, 2.12.4, and 2.3.2.	CVE-2021-44832
pgjdbc is the official PostgreSQL JDBC Driver. A security hole was found in the jdbc driver for postgresql database while doing security research. The system using the postgresql library will be attacked when attacker control the jdbc url or properties. pgjdbc instantiates plugin instances based on class names provided via `authenticationPluginClassName`, `sslhostnameverifier`, `socketFactory`, `sslfactory`, `sslpasswordcallback` connection properties. However, the driver did not verify if the class implements the expected interface before instantiating the class. This can lead to code execution loaded via arbitrary classes. Users using plugins are advised to upgrade. There are no known workarounds for this issue.	CVE-2022-21724
The fix for bug CVE-2020-9484 introduced a time of check, time of use vulnerability into Apache Tomcat 10.1.0-M1 to 10.1.0-M8, 10.0.0-M5 to 10.0.14, 9.0.35 to 9.0.56 and 8.5.55 to 8.5.73 that allowed a local attacker to perform actions with the privileges of the user that the Tomcat process is using. This issue is only exploitable when Tomcat is configured to persist sessions using the FileStore.	CVE-2022-23181
There's a vulnerability within the Apache Xerces Java (XercesJ) XML parser when handling specially crafted XML document payloads. This causes, the XercesJ XML parser to wait in an infinite loop, which may sometimes consume system resources for prolonged duration. This vulnerability is present within XercesJ version 2.12.1 and the previous versions.	CVE-2022-23437

Resolved CVEs

Description	CVE#
<p>If a web application sends a WebSocket message concurrently with the WebSocket connection closing when running on Apache Tomcat 8.5.0 to 8.5.75 or Apache Tomcat 9.0.0.M1 to 9.0.20, it is possible that the application will continue to use the socket after it has been closed. The error handling triggered in this case could cause the a pooled object to be placed in the pool twice. This could result in subsequent connections using the same object concurrently which could result in data being returned to the wrong use and/or other errors.</p>	CVE-2022-25762
<p>The package org.yaml:snakeyaml from 0 and before 1.31 are vulnerable to Denial of Service (DoS) due missing to nested depth limitation for collections.</p>	CVE-2022-25857
<p>In pgjdbc before 42.3.3, an attacker (who controls the jdbc URL or properties) can call java.util.logging.FileHandler to write to arbitrary files through the loggerFile and loggerLevel connection properties. An example situation is that an attacker could create an executable JSP file under a Tomcat web root. NOTE: the vendor's position is that there is no pgjdbc vulnerability; instead, it is a vulnerability for any application to use the pgjdbc driver with untrusted connection properties.</p>	CVE-2022-26520
<p>jQuery UI is a curated set of user interface interactions, effects, widgets, and themes built on top of jQuery. Versions prior to 1.13.2 are potentially vulnerable to cross-site scripting. Initializing a checkboxradio widget on an input enclosed within a label makes that parent label contents considered as the input label. Calling <code>checkboxradio("refresh")</code> on such a widget and the initial HTML contained encoded HTML entities will make them erroneously get decoded. This can lead to potentially executing JavaScript code. The bug has been patched in jQuery UI 1.13.2. To remediate the issue, someone who can change the initial HTML can wrap all the non-input contents of the <code>label</code> in a <code>span</code>.</p>	CVE-2022-31160
<p>PostgreSQL JDBC Driver (PgJDBC for short) allows Java programs to connect to a PostgreSQL database using standard, database independent Java code. The PGJDBC implementation of the <code>java.sql.ResultRow.refreshRow()</code> method is not performing escaping of column names so a malicious column name that contains a statement terminator, e.g. <code>`;</code>, could lead to SQL injection. This could lead to executing additional SQL commands as the application's JDBC user. User applications that do not invoke the <code>ResultSet.refreshRow()</code> method are not impacted. User application that do invoke that method are impacted if the underlying database that they are querying via their JDBC application may be under the control of an attacker. The attack requires the attacker to trick the user into executing SQL against a table name who's column names would contain the malicious SQL and subsequently invoke the <code>refreshRow()</code> method on the <code>ResultSet</code>. Note that the application's JDBC user and the schema owner need not be the same. A JDBC application that executes as a privileged user querying database schemas owned by potentially malicious less-privileged users would be vulnerable. In that situation it may be possible for the malicious user to craft a schema that causes the application to execute commands as the privileged user. Patched versions will be released as <code>42.2.26</code> and <code>42.4.1</code>. Users are advised to upgrade. There are no known workarounds for this issue.</p>	CVE-2022-31197
<p>Using snakeYAML to parse untrusted YAML files may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by stackoverflow.</p>	CVE-2022-38749

Resolved CVEs

Description	CVE#
Using snakeYAML to parse untrusted YAML files may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by stackoverflow.	CVE-2022-38750
Using snakeYAML to parse untrusted YAML files may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by stackoverflow.	CVE-2022-38751
Using snakeYAML to parse untrusted YAML files may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by stack-overflow.	CVE-2022-38752
Those using Jettison to parse untrusted XML or JSON data may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by stackoverflow. This effect may support a denial of service attack.	CVE-2022-40149
Those using Jettison to parse untrusted XML or JSON data may be vulnerable to Denial of Service attacks (DOS). If the parser is running on user supplied input, an attacker may supply content that causes the parser to crash by Out of memory. This effect may support a denial of service attack.	CVE-2022-40150
In iaxxx_core_sensor_change_state of iaxxx-module.c, there is a possible out of bounds write due to a missing bounds check. This could lead to local escalation of privilege with System execution privileges needed. User interaction is not needed for exploitation.Product: AndroidVersions: Android kernelAndroid ID: A-175124074.	WS-2021-0461
In ape extractor, there is a possible out of bounds read due to a heap buffer overflow. This could lead to local information disclosure with no additional execution privileges needed. User interaction is not needed for exploitation. Patch ID: ALPS05561389; Issue ID: ALPS05561389.	WS-2021-0616
mruby is vulnerable to Heap-based Buffer Overflow	WS-2022-0080

Fixed Kernel Vulnerabilities

The following are the kernel vulnerabilities fixed in Actifio VDP 10.0.5 release:

- Missing Linux Kernel mitigations for 'iTLB multihit' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'MDS - Microarchitectural Data Sampling' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Meltdown' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Spectre variant 2' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Processor MMIO Stale Data' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'SSB - Speculative Store Bypass' hardware vulnerabilities

Known Security and CVE Issues in Actifio VDP 10.0.5

The following table lists known CESA issues in Actifio VDP 10.0.5 release.

Known Security Defects

Description	CESA # CESA # or Bug Tracking ID
CentOS: security advisory for java	CESA-2021:2845, CESA-2022:1487, CESA-2022:0306, CESA-2021:1298, CESA-2022:5698, CESA-2020:2968
CentOS: security advisory for tcpdump centos 7	CESA-2019:3976
CentOS: security advisory for bind	CESA-2021:3325
CentOS: security advisory for krb5-devel	CESA-2021:4788
CentOS update for glibc	CESA-2021:0348
CentOS: security advisory for bpftool	CESA-2022:5937, CESA-2022:5232
CentOS: security advisory for open-vm-tools	CESA-2022:6381
CentOS: security advisory for rsync	CESA-2022:6170
Need to update the protobuf-java-XXX.jar to the latest version. It will be addressed in a following release.	253747387

The following table lists known Common Vulnerabilities and Exposures (CVEs) in Actifio VDP 10.0.5 release.

Known Security Defects

Description	CVE #
<p>OpenSSL before 0.9.8l, and 0.9.8m through 1.x, does not properly restrict client-initiated renegotiation within the SSL and TLS protocols, which might make it easier for remote attackers to cause a denial of service (CPU consumption) by performing many renegotiations within a single connection, a different vulnerability than CVE-2011-5094. NOTE: it can also be argued that it is the responsibility of server deployments, not a security library, to prevent or limit renegotiation when it is inappropriate within a specific environment.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2011-1473

Known Security Defects

Description	CVE #
<p>Mozilla Network Security Services (NSS) 3.x, with certain settings of the SSL_ENABLE_RENEGOTIATION option, does not properly restrict client-initiated renegotiation within the SSL and TLS protocols, which might make it easier for remote attackers to cause a denial of service (CPU consumption) by performing many renegotiations within a single connection, a different vulnerability than CVE-2011-1473. NOTE: it can also be argued that it is the responsibility of server deployments, not a security library, to prevent or limit renegotiation when it is inappropriate within a specific environment.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2011-5094
<p>A parsing issue with binary data in protobuf-java core and lite versions prior to 3.21.7, 3.20.3, 3.19.6 and 3.16.3 can lead to a denial of service attack. Inputs containing multiple instances of non-repeated embedded messages with repeated or unknown fields causes objects to be converted back-n-forth between mutable and immutable forms, resulting in potentially long garbage collection pauses. We recommend updating to the versions mentioned above.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2022-3171
<p>jQuery UI is a curated set of user interface interactions, effects, widgets, and themes built on top of jQuery. Versions prior to 1.13.2 are potentially vulnerable to cross-site scripting. Initializing a checkboxradio widget on an input enclosed within a label makes that parent label contents considered as the input label. Calling <code>checkboxradio("refresh")</code> on such a widget and the initial HTML contained encoded HTML entities will make them erroneously get decoded. This can lead to potentially executing JavaScript code. The bug has been patched in jQuery UI 1.13.2. To remediate the issue, someone who can change the initial HTML can wrap all the non-input contents of the <code>label</code> in a <code>span</code>.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2022-31160
<p>In FasterXML jackson-databind before 2.14.0-rc1, resource exhaustion can occur because of a lack of a check in primitive value deserializers to avoid deep wrapper array nesting, when the UNWRAP_SINGLE_VALUE_ARRAYS feature is enabled. Additional fix version in 2.13.4.1 and 2.12.17.1</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2022-42003
<p>In FasterXML jackson-databind before 2.13.4, resource exhaustion can occur because of a lack of a check in BeanDeserializer._deserializeFromArray to prevent use of deeply nested arrays. An application is vulnerable only with certain customized choices for deserialization.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2022-42004

Known Security Defects

Description	CVE #
<p>A flaw was found in all resteasy 3.x.x versions prior to 3.12.0.Final and all resteasy 4.x.x versions prior to 4.6.0.Final, where an improper input validation results in returning an illegal header that integrates into the server's response. This flaw may result in an injection, which leads to unexpected behavior when the HTTP response is constructed.</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2017-7561 CVE-2020-1695
<p>In FasterXML jackson-databind before 2.14.0-rc1, resource exhaustion can occur because of a lack of a check in primitive value deserializers to avoid deep wrapper array nesting, when the UNWRAP_SINGLE_VALUE_ARRAYS feature is enabled. Additional fix version in 2.13.4.1 and 2.12.17.1</p> <p>Note: This vulnerability is not exploitable because no user input is used in the validation rules, and it will be addressed in a following release.</p>	CVE-2022-42003

Known Kernel Vulnerabilities

The following are the known kernel vulnerabilities in Actifio VDP 10.0.5 release.:

- Missing Linux Kernel mitigations for 'iTLB multihit' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Meltdown' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'MDS - Microarchitectural Data Sampling' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Spectre variant 2' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'Processor MMIO Stale Data' hardware vulnerabilities
- Missing Linux Kernel mitigations for 'SSB - Speculative Store Bypass' hardware vulnerabilities