
Troubleshooting Actifio Systems

Updated August 11, 2022



actifio

Actifio VDP 10.0

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Preface

This guide provides strategies and step-by-step instructions on how to troubleshoot your Actifio system. It assumes you have read **Getting Started with Actifio Copy Data Management** and have a good understanding of the concepts associated with an Actifio appliance.

The Documentation Library at docs.actifio.com contains detailed instructions on how to configure your Actifio environment. The following guides will be of particular interest:

- **Actifio Administrator's Survival Guide**
- **Network Administrator's Guide to Actifio Copy Data Management**
- **VMware Manager's Guide to Actifio VDP**

Actifio Appliances

Unless otherwise specified, all features and functions described in this document apply to all Actifio appliances.

The ActifioNOW Customer Portal

During the configuration and initialization of your Actifio appliance your Actifio representative provided you with a user name 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 user name 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 Introduction to Troubleshooting

Troubleshooting is an important, complex, and frequently frustrating activity. Here is a process to help you troubleshoot effectively and with as little frustration as possible.

1. If you have an Actifio error message, see: [Chapter 2, Using the Actifio Knowledge Base](#).
2. You can gain valuable context from your Actifio logs as detailed in: [Chapter 3, Using Actifio Logs](#).
3. If it's something else, start with: [Chapter 4, Issues Related to Networking and Permissions](#).
4. If the problem is more complex, then go to: [Chapter 5, Getting Help](#).

Many problems can be traced to fundamentals such as network issues and software permissions.

Sometimes a problem arises due to software that was software was added into the system or upgraded to an unsupported version. To check these, refer to the **Actifio Support Matrix** and to the **Release Notes** for your version. These are also available in ActifioNOW.

The Best Solution is Prevention

A system configured according to best practices is less likely to run into trouble. It is a good idea to make sure your system adheres as closely as possible to the best practices described in:

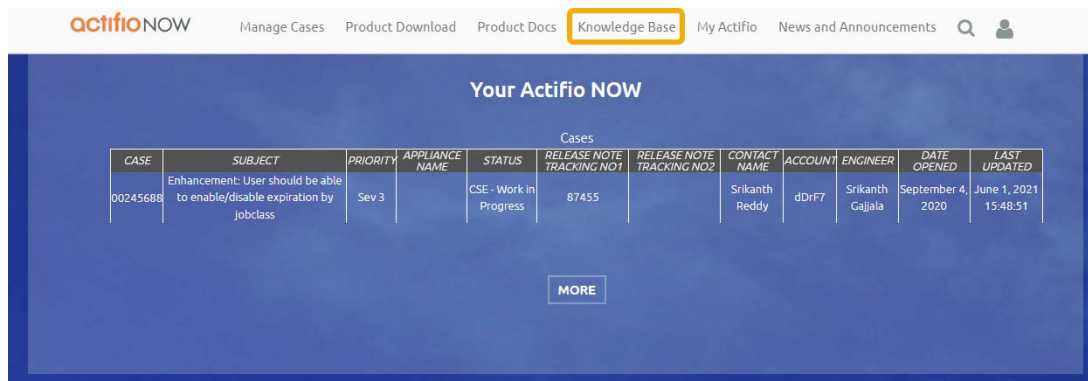
Table 1: Actifio Product Documentation Resources

Starting With	Documentation Resource
Proper Configuration	<i>Network Administrator's Guide to Actifio Copy Data Management</i>
	<i>VMware Manager's Guide to Actifio VDP</i>
Daily Tasks and Status	<i>Actifio Administrator's Survival Guide</i>
	<i>Using the Report Manager</i>
	<i>Troubleshooting Actifio Systems</i>
Whom You Rely On	<i>An Oracle DBA's Guide to Actifio Copy Data Management</i>
	<i>An SQL Server DBA's Guide to Actifio Copy Data Management</i>
	<i><Other Database> DBA's Guide to Actifio Copy Data Management</i>

2 Using the Actifio Knowledge Base

Your best tool for resolving events with error messages is the knowledge base on the ActifioNOW portal. To search the knowledge base:

1. Log into ActifioNOW at: <https://now.actifio.com>.
2. At the top of the screen, select **Knowledge Base**.



The screenshot shows the ActifioNOW portal interface. At the top, there is a navigation bar with the ActifioNOW logo and several menu items: Manage Cases, Product Download, Product Docs, Knowledge Base (highlighted with a yellow box), My Actifio, and News and Announcements. Below the navigation bar, there is a section titled "Your Actifio NOW" which contains a table of cases. The table has the following columns: CASE, SUBJECT, PRIORITY, APPLIANCE NAME, STATUS, RELEASE NOTE TRACKING NO1, RELEASE NOTE TRACKING NO2, CONTACT NAME, ACCOUNT, ENGINEER, DATE OPENED, and LAST UPDATED. A single row of data is visible in the table, and a "MORE" button is located below the table.

CASE	SUBJECT	PRIORITY	APPLIANCE NAME	STATUS	RELEASE NOTE TRACKING NO1	RELEASE NOTE TRACKING NO2	CONTACT NAME	ACCOUNT	ENGINEER	DATE OPENED	LAST UPDATED
00245688	Enhancement: User should be able to enable/disable expiration by Jobclass	Sev 3		CSE - Work in Progress	87455		Srikanth Reddy	dDrF7	Srikanth Gajjala	September 4, 2020	June 1, 2021 15:48:51

Accessing the Actifio Knowledge Base from ActifioNOW

3. Enter the Event ID in the **Search** field.
4. Under Articles, select the **Solution** filter, and under Product Family select **Any**, then click **Search**. The entry for the Event ID describes the problem and how to fix it or where to look for clues.

Title	errorcode 5249 message Actifio Connector: Failed to create LVM snapshot Duplicate PVs Not using lvmetad because duplicate PVs were found Cannot update volume group vg_hana with duplicate PV devices
Last Modified Date	8/31/2020 4:44 AM
Article Number	000045247
Summary	<div><p>Issue:</p><p>After upgrading the Linux kernel, HANA database snapshot backup jobs are failing with the following error</p><pre>errorcode 5249 message Actifio Connector: Failed to create LVM snapshot</pre><p>If we look in the Connector logs on the host:</p><pre>/var/act/logs/UDSAgent.log</pre><p>They also show the following. The Actifio Connector tries to create a snapshot but it fails with the highlighted error</p></div>

Error Code 5249 Knowledge Base Entry

5. If the knowledge base does not provide a solution, continue to [Chapter 3, Using Actifio Logs](#).

3 Using Actifio Logs

Logs can provide valuable context for an issue, if you know what to look for.

This section describes the Actifio logs and their contents, as well as:

[What You Can Learn from Actifio Logs](#) on page 5

[Downloading Logs from the Actifio Appliance](#) on page 7

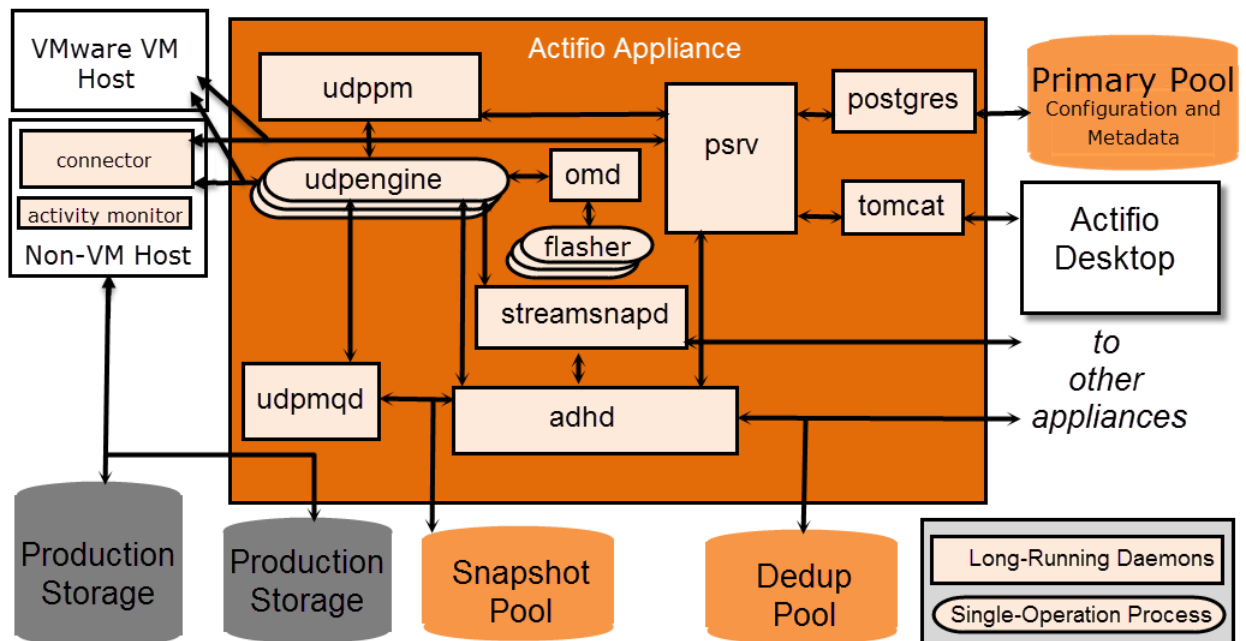
[Downloading Connector Logs from One of Your Hosts](#) on page 8

[Troubleshooting with Actifio Logs](#) on page 9

What You Can Learn from Actifio Logs

The Actifio services generate many logs, some of which are useful for troubleshooting. This section describes how all of the logs work together. You do not need to use all logs for troubleshooting; to see the most useful logs for troubleshooting, skip to [Troubleshooting with Actifio Logs](#) on page 9.

Each Actifio service has its own log. This is how the different services relate to each other.



Component and Log Relationships

Table 1: Downloadable Actifio Logs

Service	Log File Name	What the Logs Include
adhd	adhd.log adhd.log-<date> adhd.log-<date>.bz2	Local and remote deduplication, replication and communications with remote systems.
appliance	<HostID>.trc ethernet.<HostID>.trc node.trc and ntp.trc	Primary trace logs for reviewing failovers and node reboots, ethernet status, etc.
dds	dds.log	A set of counters for ongoing system processes.
database	postgresql-<Timestamp>.log	The Actifio internal PostGRES database
flasher	flasher.log	Creation of snapshots.
install	install.log	Events during the installation process.
omd	omd.log	Creation and deletion of VDisks before invoking the Flasher.
patch	autoupdatepatch-<Version>-update.log uds-patch.log uds-patch-<Timestamp>.log	Events during the patch update process.
psrv	psrv.log.0	Communications with Tomcat, Actifio database, VMware, CLI, system health, scheduling GC.
streamsnapd	streamsnapd.log	Disk to remote disk replication operations.
systemlog	command fusevdisk.error.log messages ssd-config.log	 /var/log/command – CLI command history Events relating the creation of VDisks. /var/log/messages – Can be used along with node.trc to correlate issues with the Linux kernel Events that occurred when configuring the SSD.
tomcat	catalina.log.<sequence>	Communications with the Actifio Desktop and the Actifio Resource Center. The sequence number increases as you go back in time.
udpmqd	udpmqd.log	Multiplexes udpengine access to snap storage.
udppm	udppm.log udppm.log-<Date> udppm.log-<Date>.bz2	Scheduling and operation of jobs.

Table 1: Downloadable Actifio Logs

Service	Log File Name	What the Logs Include
connector	A variety of logs depending upon the host, but always including UDSAgent.log.	The Actifio Connector log includes information such as host OS version/patch revision, HBA make/model/type, firmware revision, CPU/Memory utilization, connector logs, RMAN, syslog, etc.
openvpn	openvpn.log openvpn.log-<date> openvpn.log-<date>.bz2	Actifio SecureConnect communications.

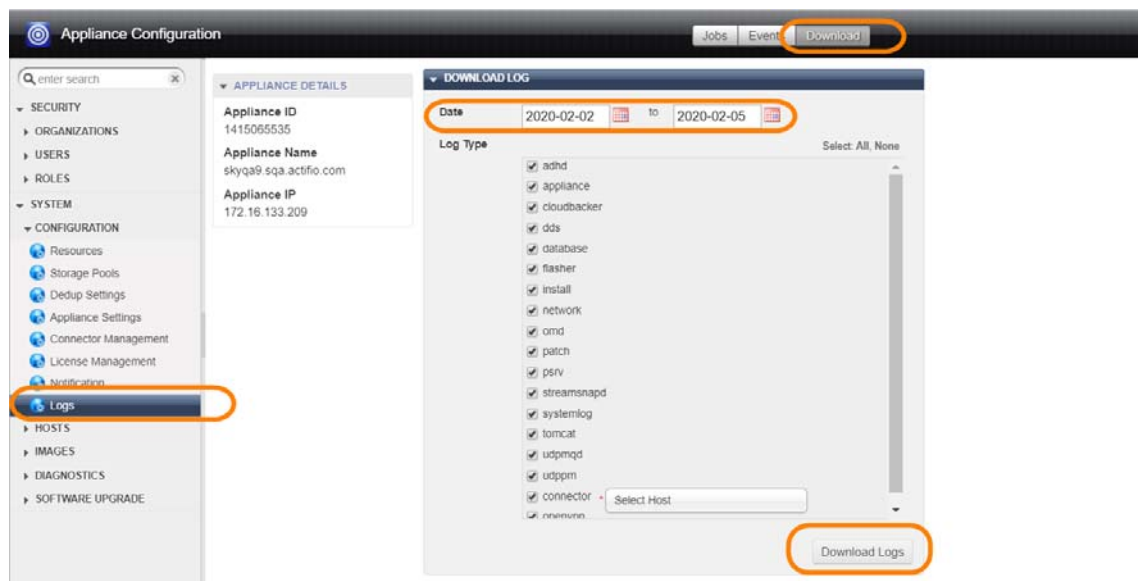
Downloading Logs from the Actifio Appliance

Log files are a great tool for troubleshooting. You can use the Downloads tab in the Logs section of the Domain Manager to download log files. Each downloaded log is bundled as a zip file in the target destination download folder. You can then unzip the downloaded log files and use a program such as Notepad to view the contents of each log.

To download logs from your Actifio Appliance:

1. Open the AGM to **Manage > Appliances**. Right-click the appliance and select **Configure Appliance**.
2. In the Appliance Configuration page, select **Logs** and click the **Download** tab to access the Download Log page.
3. By default, the Actifio appliance downloads logs from the past 3 days (starting with the current date).

To specify a particular date range from which you want to download logs, use the Date fields.



4. Select the types of logs to download from **Log Type**. By default, all log types are selected. If you wish to choose the logs to download, click **None** to deselect all logs and then click the check boxes to select the logs to download. Click **All** if you want to select all logs.

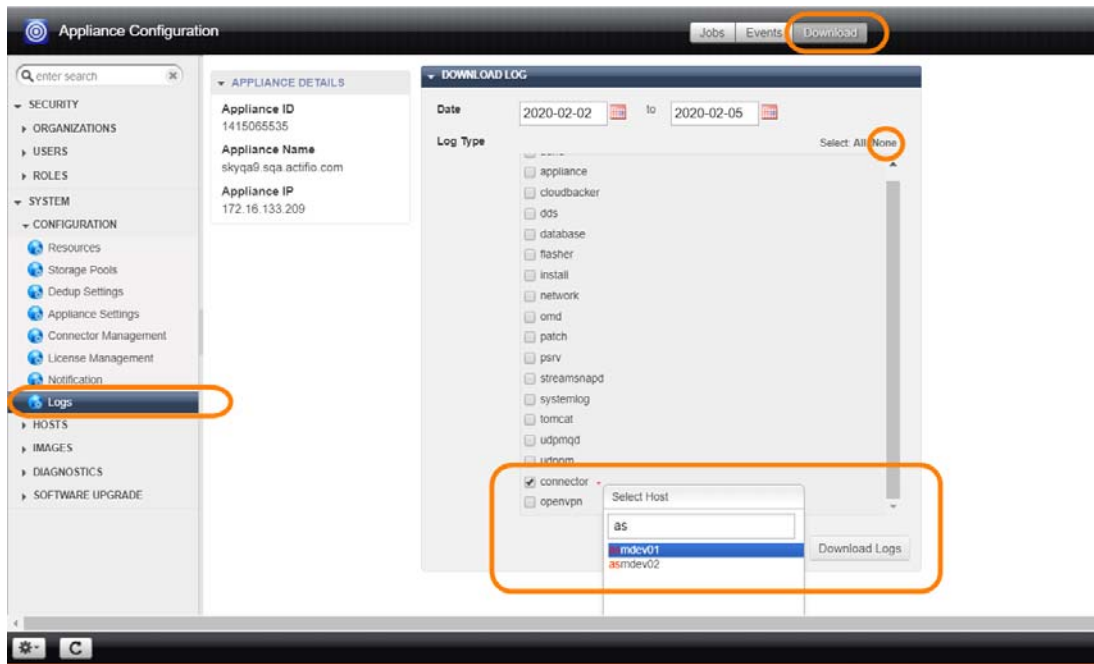
Log types are detailed in [What You Can Learn from Actifio Logs](#) on page 5.

Downloading Connector Logs from One of Your Hosts

Connector logs are a great tool for troubleshooting. You can use the procedure in [Downloading Logs from the Actifio Appliance](#) on page 7 to download log files. Each downloaded log is a zip file in the target destination download folder.

To download logs from a host connected to an Actifio Appliance with an Actifio Connector:

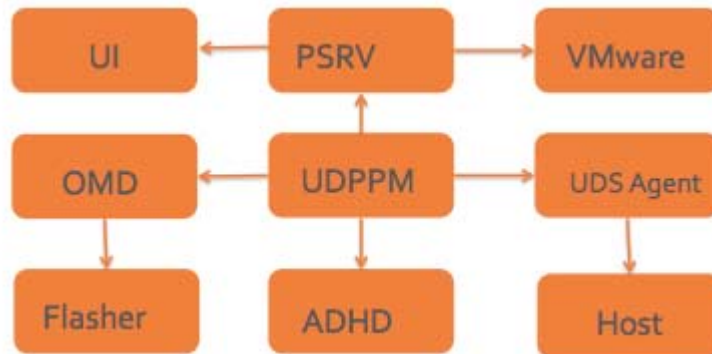
1. Follow the procedure in [Downloading Logs from the Actifio Appliance](#) on page 7 to [Step 4](#).
2. Click **None** to deselect all logs, then select **Connector** at the bottom of the **Log Type** list.



3. To download logs from the Actifio Connector installed on a specific host, click the **Select Hosts** drop-down and choose from the list of available hosts. You can use the Select Host search field to make it easier to find a specific host.

Troubleshooting with Actifio Logs

Each service has its own log, but many of them have little value for troubleshooting. This is a simpler view of how the critical components relate to each other.



Simplified Component Relationships Diagram for Troubleshooting

Here is an abbreviated version of the comprehensive list of logs, showing the most useful ones for troubleshooting.

Table 2: Useful Actifio Logs for Troubleshooting

Service	Log File Name	What the Logs Include
adhd	adhd.log adhd.log-<date> adhd.log-<date>.bz2	Local and remote deduplication, replication and communications with remote systems.
flasher	flasher.log	Creation of snapshots.
omd	omd.log	Creation and deletion of VDisks before invoking the Flasher.
psrv	psrv.log.0	Communications with Tomcat, Actifio database, VMware, CLI, system health, scheduling GC.
GUI/tomcat	catalina.log.<Sequence>	Communications with the GUI and the Actifio Resource Center. The Sequence number increases as you go back in time.
udppm	udppm.log udppm.log-<Date> udppm.log-<Date>.bz2	Scheduling and operation of jobs.
host/ connector	A variety of different logs depending upon the host, but always including UDSAgent.log.	The Actifio Connector log includes information such as host OS version/patch revision, HBA make/model/type, firmware revision, CPU/Memory utilization, connector logs, RMAN, syslog, etc.

4 Issues Related to Networking and Permissions

To isolate a tricky problem, first rule out networking issues and issues relating to permissions on VMs.

- The first place to look for best practices for Fibre Channel zoning and multipathing, for iSCSI networking, and for required network ports is ***Network Administrator's Guide to Actifio VDP***.
- vCenter networking and required permissions are detailed in ***A VMware vCenter Administrator's Guide to Actifio Copy Data Management***.
- For Oracle databases, be sure to review ***An Oracle DBA's Guide to Actifio Copy Data Management***.
- For Microsoft SQL Server, see ***An SQL Server DBA's Guide to Actifio Copy Data Management***.
- If you have changed your network, then you will want to be sure that any changes are compatible with the ***Actifio Support Matrix*** for your version of Actifio.

If the network and permissions are good, then check the system architecture against the tables in [Reference Architectures for Actifio Appliances](#), below. If the architecture is good, then go to [Chapter 5, Getting Help](#).

Reference Architectures for Actifio Appliances

Actifio appliances can be configured for different levels of security and high availability depending on available network resources. For best results, appliances should be configured according to the following tables:

[Table 1: Actifio Sky Reference Architectures](#) on page 12

[Table 2: Actifio CDX Appliance Reference Architecture](#) on page 12

[Table 3: Actifio CDS Generation-3 Reference Architectures](#) on page 13

[Table 4: Actifio CDS Generation-4 Reference Architectures](#) on page 14

[Table 5: Actifio CDS Generation-5 Reference Architectures](#) on page 15

Actifio Sky Appliances

Table 1: Actifio Sky Reference Architectures

Sky	Using	Network	Security	High Availability
Sky-1	Eth0 (1G) for all traffic	1G only virtual network	Low	The Sky appliance uses the hypervisor's High Availability features.
Sky-2	Eth0 (1G) for management Eth1 (1/10G) for backup/restore/replication	1/10G mixed virtual network	Medium	
Sky-4	Eth0 (1G) for management Eth1 (10G) for backup Eth2 (1/10G) for replication More Eth* for backups only if required.	1/10G mixed virtual network	High	

Actifio CDX Appliances

Table 2: Actifio CDX Appliance Reference Architecture

CDX	Using	Network	Security	High Availability
CDX-1	eth0, eth1 for management eth2, eth3 for backup	10G only 10G only	High	Ports bonded for HA

Actifio CDS Generation-3 Appliances

The Actifio CDS Generation-3 appliance includes the two nodes in the middle and the batteries above and below.



An Actifio CDS Generation-3 Appliance

These are the most reliable network architectures for a CDS Generation-3 appliance:

Table 3: Actifio CDS Generation-3 Reference Architectures

Type	Using	Network	Security	High Availability
3CDS-1	Eth0 (1G) for all traffic	1G only	Low	No
3CDS-2	Eth0 (1G) for management Eth1 (1G) for backup/restore/replication	1G only	Medium	No
3CDS-3	Eth0 (1G) for management Eth2 (10G) for backup/restore/replication	1/10G mixed	Medium	No
3CDS-4	Eth0 (1G) for management Eth2 (10G) for backup Eth3 (10G) replication	1/10G mixed	High	No
3CDS-5	Eth0 (1G) for management Eth1 (1G) for replication Eth2/3 (10G & HA) for backup	1/10G mixed	High	Yes

Actifio CDS Generation-4 Appliances

The Actifio CDS Generation-4 appliance looks like this:



These are the most reliable network architectures for a CDS Generation-4 appliance:

Table 4: Actifio CDS Generation-4 Reference Architectures

Type	Using	Network	Security	High Availability
4CDS-1	Eth0 (1G) for all traffic	1G only	Low	No
4CDS-2	Eth0 (1G) for management Eth1 (1G) for backup/restore/replication	1G only	Medium	No
4CDS-3	Eth0 (1G) for management Eth1 (1G) for backup/restore Eth2 (1G) for replication	1G only	Medium	No
4CDS-4	Eth0 (1G) for management Eth2 (10G) for backup/restore/replication	1/10G mixed	Medium	No
4CDS-5	Eth0 (1G) for management Eth3 (10G) for backup Eth5 (10G) replication	1/10G mixed	High	No
4CDS-6	Eth0 (1G) for management Eth1 (1G) for replication Eth3/4 (10G & HA) for backup	1/10G mixed	High	Yes
4CDS-7	Eth0 (1G) for management Eth3/4 (10G & HA) for backup Eth5 (10G) for replication	1/10G mixed	High	Yes
4CDS-8	Eth0 (1G) for management Eth3/4 (10G & HA) for backup Eth5/6 (10G & HA) for replication	1/10G mixed	High	Yes

Actifio CDS Generation-5 Appliances

The Actifio CDS Generation-5 appliance looks like this:



These are the most reliable network architectures for a CDS Generation-5 appliance:

Table 5: Actifio CDS Generation-5 Reference Architectures

Type	Using	Network	Security	High Availability
5CDS-1	Eth0 (1G) for all traffic	1G only	Low	No
5CDS-2	Eth0 (1G) for management Eth1 (1G) for backup/restore/replication	1G only	Medium	No
5CDS-3	Eth0 (1G) for management Eth1 (1G) for backup/restore Eth2 (1G) for replication	1G only	Medium	No
5CDS-4	Eth0 (1G) for management Eth2 (10G) for backup/restore/ replication	1/10G mixed	Medium	No
5CDS-5	Eth0 (1G) for management Eth3 (10G) for backup Eth5 (10G) replication	1/10G mixed	High	No
5CDS-6	Eth0 (1G) for management Eth1 (1G) for replication Eth3/4 (10G & HA) for backup	1/10G mixed	High	Yes
5CDS-7	Eth0 (1G) for management Eth3/4 (10G & HA) for backup Eth5 (10G) for replication	1/10G mixed	High	Yes
5CDS-8	Eth0 (1G) for management Eth3/4 (10G & HA) for backup Eth5/6 (10G & HA) for replication	1/10G mixed	High	Yes

5 Getting Help

If you are unable to resolve the problem with the information that you have learned, then open a Support Case. This section describes:

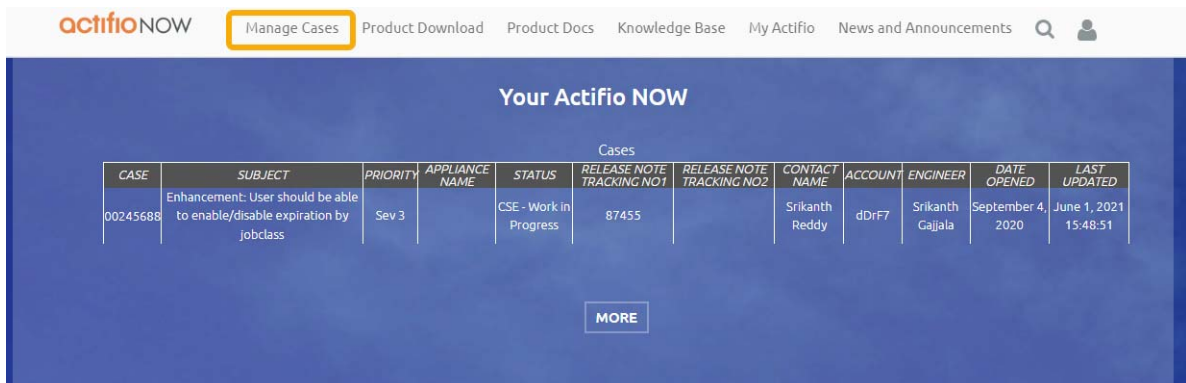
[Creating a Support Case](#) on page 17

[Managing Open Cases](#) on page 18

Creating a Support Case

To create a case:

1. Log into ActifioNOW at: <https://now.actifio.com>.

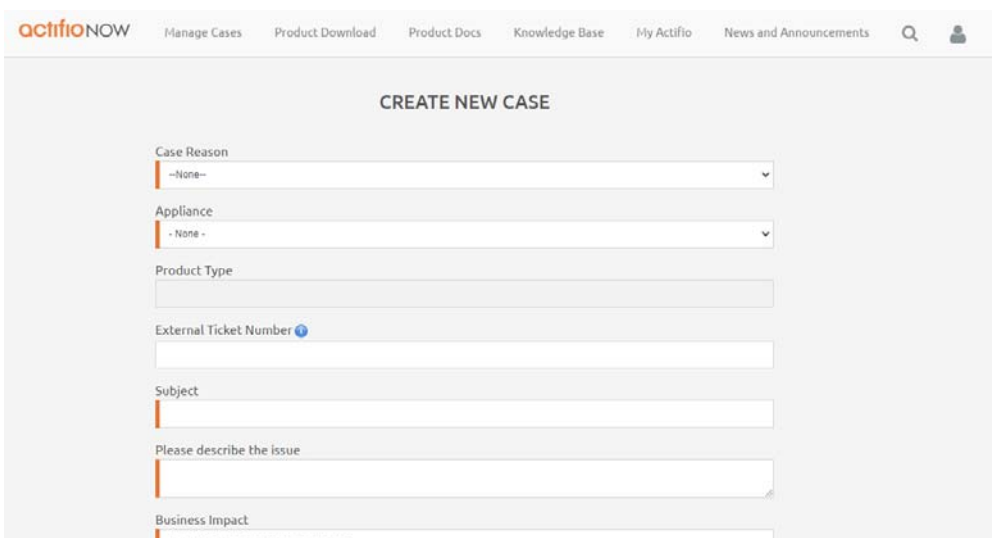


The screenshot shows the 'Your Actifio NOW' dashboard. At the top, there is a navigation bar with 'actifioNOW' logo and several menu items: 'Manage Cases' (highlighted with a yellow box), 'Product Download', 'Product Docs', 'Knowledge Base', 'My Actifio', and 'News and Announcements'. Below the navigation bar, the main content area is titled 'Your Actifio NOW' and contains a table of cases. The table has the following columns: CASE, SUBJECT, PRIORITY, APPLIANCE NAME, STATUS, RELEASE NOTE TRACKING NO1, RELEASE NOTE TRACKING NO2, CONTACT NAME, ACCOUNT, ENGINEER, DATE OPENED, and LAST UPDATED. A single row of data is visible in the table. Below the table, there is a 'MORE' button.

CASE	SUBJECT	PRIORITY	APPLIANCE NAME	STATUS	RELEASE NOTE TRACKING NO1	RELEASE NOTE TRACKING NO2	CONTACT NAME	ACCOUNT	ENGINEER	DATE OPENED	LAST UPDATED
00245688	Enhancement: User should be able to enable/disable expiration by jobclass	Sev 3		CSE - Work in Progress	87455		Srikanth Reddy	dDrF7	Srikanth Gajjala	September 4, 2020	June 1, 2021 15:48:51

Your Support Cases in ActifioNOW

2. Select the **Manage Cases** tab and then select **Create New Case**. Fill in the form as needed and click **Submit Case**.

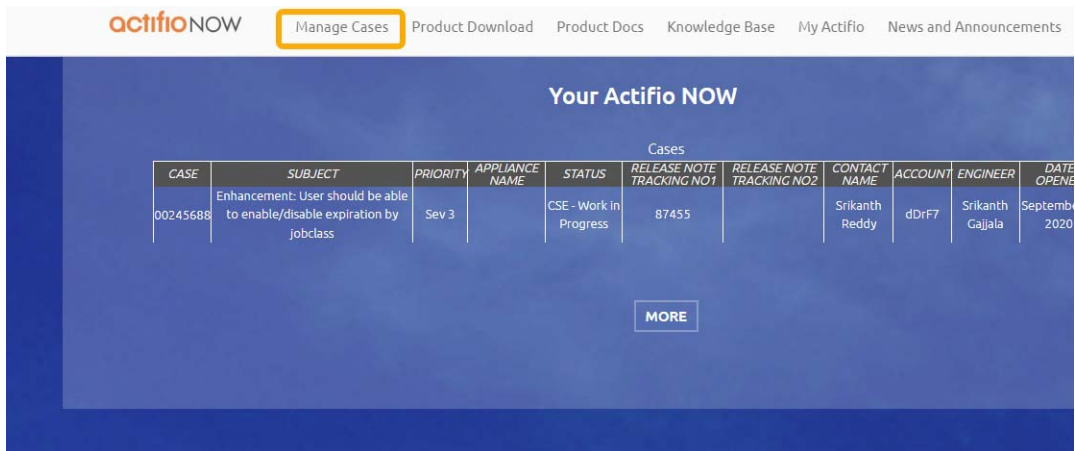


The screenshot shows the 'CREATE NEW CASE' form. The form has a title 'CREATE NEW CASE' and several input fields: 'Case Reason' (dropdown menu with '-None-' selected), 'Appliance' (dropdown menu with '- None -' selected), 'Product Type' (text input field), 'External Ticket Number' (text input field with a help icon), 'Subject' (text input field), 'Please describe the issue' (text area), and 'Business Impact' (text input field).

Managing Open Cases

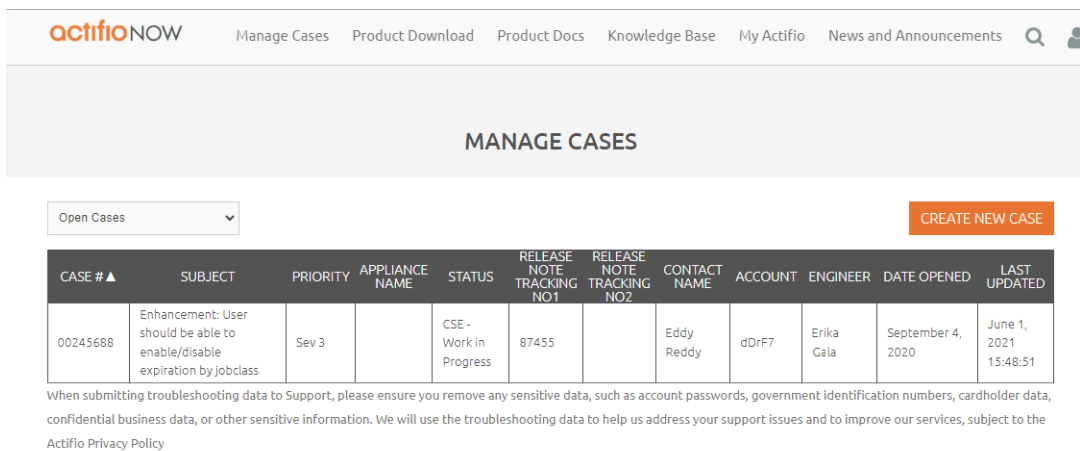
To create a case:

1. Log into ActifioNOW at: <https://now.actifio.com>.



Accessing an Open Support Case in ActifioNOW

2. Select **Manage Cases**. Review information about your open cases. Your current cases are visible under the Open Cases heading.



Managing a Case

6 Most Common Events and Errors in Actifio VDP

The number of errors and warnings encountered by an Actifio appliance are displayed in the upper right-hand corner of the Actifio Dashboard. Click on the number to display a list of the events in the System Monitor service.

This is a list of the most common Event IDs that you may see. You can find detailed solutions for these error codes are in ActifioNOW at: https://actifio.force.com/community/articles/Top_Solution/EventID-TopSolution

Job failures can be caused by many errors. Each 43901 event message includes an error code and an error message. See the corresponding Error Code in [Table 2: Most Common Errors that Cause Events, Actifio VDP](#) on page 24.

Table 1: Most Common Error and Warning Events, Actifio VDP

Event ID	Event Message	What To Do
10019	System resource low	The Actifio snapshot pool is running out of space. See the AGM online help for a wealth of information on optimizing your storage pool usage and on optimizing image capture.
10034	snapshot memory low	Snapshots consume pool capacity and bitmap space memory. This issue relates to bitmap space memory. The Snapshot Pool requires 1MB of bitmap space memory for every 2TB of source VDisk in snapshot relationships. You can review the usage and set the limit in Manage > Appliances > Configure Appliance: <ul style="list-style-type: none">• Bitmap space memory: System > Configuration > sResources• Storage pool usage: System > Configuration > Storage Pools For example, a 2TB VDisk with one snapshot needs 1MB snapshot bitmap space; the same VDisk with three snapshots needs 3MB snapshot bitmap space, and a 4TB VDisk with three snapshots needs 6MB snapshot bitmap space. The maximum bitmap memory is 512MB for Snapshot Pool. For an example, see Event 10034 Example Problem and Resolution on page 34.

Table 1: Most Common Error and Warning Events, Actifio VDP

Event ID	Event Message	What To Do
10038	about to exceed VDisk warning limit	<p>To immediately reduce VDisk consumption:</p> <ul style="list-style-type: none"> • Ensure expirations are enabled, both at the global and individual application level. • Group databases from a single host together into a Consistency Group. For example, if a host has 9 databases, create one Consistency Group for all 9 databases, then protect that consistency group rather than the individual databases. • Reduce the number of snapshots kept for an application by changing the policy template used by an SLA. • Delete unneeded mounts, clones, and live-clones • Move VMware VMs from a snapshot SLA to a Direct-to-OnVault SLA. You will need to expire all snapshots to release the VDIs used by the staging disks. This will only lower the VDisk count for VMware VMs, as other application types, including Hyper-V VMs, still use VDIs when protected by a direct-to-OnVault policy. • Change VMware VMDKs that do not need to be protected to Independent mode as these cannot be protected by VMware snapshots <p>If this alert repeats daily but the appliance does not reach the maximum VDIs, modify the policies as above to reduce the number of VDIs used, or increase the alert threshold. During a daily snapshot window the VDisk count can fluctuate while new VDIs are created for snapshots before the old VDIs are removed as a part of snapshot expirations. The daily fluctuations will vary depending on the number of applications protected.</p>
10039	network error reaching storage device	<p>A heartbeat ping to monitored storage has failed due to hardware failure or network issue.</p> <p>Action: Check the storage controller and array for issues, and check the network for issues.</p>

Table 1: Most Common Error and Warning Events, Actifio VDP

Event ID	Event Message	What To Do
10043	An SLA violation has been detected	<p>Review the SLA best practices in the AGM online help and optimize your policies. These are common causes for SLA violations.</p> <ol style="list-style-type: none"> <p>Job Scheduler is not enabled: The Job Scheduler may have been disabled for maintenance.</p> <p>Action: Enable it Manage > Appliances, Configure Appliance > Appliance Settings > Control Panel.</p> <p>The first jobs for new applications can often take a long time: Long job times can occur during the first snapshot job for an application. On-ramp settings can be used to prevent ingest jobs from locking up slots and locking out ingested applications.</p> <p>Action: See <i>Setting Priorities for First Ingestion of New Applications</i> in the AGM online help.</p> <p>Applications are inaccessible due to network issues</p> <p>Action: Ensure that all applications and hosts are accessible.</p> <p>Policy windows are too small or job run times are too long: While you cannot control how long each job takes to run, you can control the schedule time for applications that are running. Jobs that run for many hours occupy job slots that could be used by other applications.</p> <p>Action: Review SLAs and adjust policies according to the best practices in the AGM online help.</p> <p>Replication process sending data to a remote Sky</p> <p>Action: Ensure that the bandwidth & utilization of your replication link is not saturated.</p>
10046	Performance Pool exceeded safe threshold	<p>To reduce consumption of the performance/snapshot pool:</p> <ul style="list-style-type: none"> Move VMware VMs from a snapshot SLA to a Direct-to-OnVault SLA. Then expire all snapshots to release the space used by the staging disks and last snap. This only works for VMware VMs; other application types still use some snapshot pool space if protected by a Direct-to-OnVault policy. Reduce the number of snaps kept for an application by changing the policy template. Applications that have high change rates create larger snapshots, so this has the highest benefit for high change-rate applications. Delete mounts, clones, and live-clones if they are not needed <p>The Actifio Report Manager includes several useful reports relating to snapshot pool consumption.</p>

Table 1: Most Common Error and Warning Events, Actifio VDP

Event ID	Event Message	What To Do
10055	Unable to check remote protection	<p>Each Actifio Appliance checks the remote appliance hourly for possible remote protection issues. A trap is raised when an Actifio Appliance cannot communicate with the remote appliance.</p> <p>The platform server communication could fail due to:</p> <ul style="list-style-type: none"> network error (temporary or permanent), temporary network error does not mean job will fail; jobs are retried, but the hourly check is not adhd is down certificate error <p>Examine the adhd.log to find the reason for the failure. To fix the issue that caused the failure:</p> <ul style="list-style-type: none"> If the network error is temporary, you can ignore it. To resolve an adhd issue, look for the “open for business” message in adhd log. For a certificate error, you may need to re-exchange certificates.
10070	udppm scheduler is off for more than 30 minutes	<p>The scheduler is off. This may have been set for maintenance. If the maintenance is complete, you can re-enable the scheduler:</p> <ol style="list-style-type: none"> From the AGM, open Manage to Appliances. Right-click the appliance and select Configure Appliance. Select System > Configuration > Appliance Settings. Click the Control Panel tab. The Appliance Control Panel page shows the status of the scheduler under the Policy Manager/Enable Schedules.
20025	Swap Usage Exceeded	<p>Swap usage is exceeding the configured threshold limit set for the Actifio appliance.</p>
43901	Job Failure	<p>Job failures can be caused by many errors. Each 43901 event message includes an error code and an error message. See Table 2: Most Common Errors that Cause Events, Actifio VDP on page 24.</p>
43903	Failed expire job	<p>An expiration may fail because an image is in use at the time of the expiration. This could be due to this image being in use by another Actifio process or operation, such as a mount, clone, or restore.</p> <p>The expiration job will likely complete successfully on the second attempt. Actifio does not report the successful completion of this second attempt. If you get only one error for an image, it is safe to conclude that a second attempt to expire this image was successful.</p> <p>If there is a legitimate reason why this image cannot be expired, you will get multiple errors related to this image. If you receive more than one error, contact Actifio Support.</p>

Table 1: Most Common Error and Warning Events, Actifio VDP

Event ID	Event Message	What To Do
43905	Failed mount job	There are many ways a mount job can fail. The error code that accompanies the event will help to identify the root cause.
43912	Failed remote-copy job	<p>Review the network configuration and Appliance configuration to confirm that the source Appliance can reach the target Appliance. Check the following:</p> <ul style="list-style-type: none"> • Target appliance IP is correct • Remote appliance is online and available <p>If after confirming that the above are in order, and the capture jobs still fail, open a case with Actifio Customer Success.</p>
43941	Disk space usage on datastore has grown beyond the critical threshold	<p>This message appears when the remaining space on the datastore is less than the critical threshold. If more storage is not made available soon, then jobs will start to fail when the remaining space is inadequate to store them.</p> <p>This alert is created to help you take action to prevent ESX datastores from filling with snapshot data. Increase available space by expanding the datastore, migrating some VMs, or deleting old data on the datastore.</p> <p>Snapshots grow as more change data is added. If a datastore fills up due to a growing snapshot, VMs may be taken offline automatically by VMware to protect the data.</p>
43948	The number of images not expired awaiting further processing [#] images [jobclass] from [#] unique applications	This is generated when an application begins halting expirations as a part of Actifio Image Preservation. Image Preservation preserves snapshot and local images beyond their expiration dates to ensure that those images are processed by the Actifio appliance.
43954	Failed OnVault job.	<p>During a mount job, the Actifio Appliance is unable to connect to the vault pool. This could happen because:</p> <ul style="list-style-type: none"> • No bucket name is specified for the vault pool • Invalid credentials; accessid or accesskey not specified or wrong id/key for the vault pool • Credentials key file not found for the vault pool • Permission to bucket is denied in the vault pool • Invalid bucket in the vault pool • General authentication issues for the vault pool • DNS server in cluster's /etc/resolv.conf is either different or the forward and reverse DNS zones files were changed.
43956	Failed StreamSnap Job	There are many different reasons why a StreamSnap job can fail. The most common are errors 61001, 61002, 61003, 61004, 61006, 61007, 61008, and 61020. These are documented in the knowledge base at ActifioNOW.

Errors That Cause Events

Some events, particularly the 43900 series, can be caused by many errors. Each 43900 event message includes an error code and an error message. See the corresponding Error Code below:

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
15	couldn't connect to backup host. Make sure Connector is running on <host> and network port <port> is open	<p>To initiate an out of band backup, the Actifio Connector service must be reachable by the Actifio Appliance. When the required ports are not open, the incorrect host IP is configured, the Connector service not running, or the host is out of physical resources this error occurs.</p> <ol style="list-style-type: none"> 1. Ensure that the port in use between the host and Actifio Appliance and Connector service is open. The Actifio Connector uses port 5106 by default for bidirectional communication from the Actifio appliance. You can also use the legacy port 56789 optionally for the same purposes. Make sure your firewall permits bidirectional communication through this port. 2. Confirm the correct IP is configured for the host in Domain Manager. For more details see Network Administrator's Guide to Actifio VDP. 3. Confirm that the Connector service is running on the target host and restart if necessary. <ul style="list-style-type: none"> o On Windows, find the Actifio UDS Host Agent service in services.msc and click Restart o On Linux, run <code>/etc/init.d/udsagent restart</code> 4. Confirm the host is not maxed on CPU and memory. For the target host to reply to the Actifio Appliance it must have available physical resources. 5. Retry the backup.
29	snapshot creation of VM failed. Error: VM task failed An error occurred while saving the snapshot: Failed to quiesce the virtual machine	<p>VM snapshot might fail because the ESX server is unable to quiesce the virtual machine - either because of too much I/O, or because VMware tools cannot quiesce the application using VSS in time. Check the event logs on the host and check the VM's ESX log (vmware.log).</p> <p>Crash-consistent snapshots and connector-based backups show this behavior less often. For more information, see these VMware knowledge base articles:</p> <ul style="list-style-type: none"> • http://vmw.re/lz3XDKS • http://vmw.re/IC9L86Q
151	couldn't add RawDeviceMappings to Virtual machine. Error: VM task failed A general system error occurred: The system returned an error.	<p>Adding a raw device mapping to a VM "stuns" the VM until ESX has had a chance to add the new resource. To find out why the raw device mapping could not be added, look at the ESX logs for the VM in question (vmware.log).</p> <p>Make sure VMware tools are updated and the ESX has been patched to the latest available service pack. For more information, see this VMware knowledgebase article: http://vmw.re/WhWq6E</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
155 (First of four)	Error: VM task failed. An error occurred while saving the snapshot: Failed to quiesce the virtual machine	<p>Note: This is a VMware issue; for additional information, refer to VMware KB article: https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1015180</p> <p>Virtual machine quiesce issues are dependent on the OS type. Additional investigation, further VMware KBA searches and / or contacting VMware Support may be needed to resolve this.</p>
155 (Second of four)	Error: VM task failed. Device scsi3 could not be hot-added	<p>This usually means that the SCSI device you are trying to add to the VM is already in use by another VM. Please refer to the following KB for more information:</p> <p>https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2001217</p>
155 (Third of four)	Error: VM task failed. The virtual disk is either corrupted or not a supported format	<p>The VM's CTK files may be locked, unreadable, or are being committed. Remove and re-create these CTK files. To do this:</p> <ol style="list-style-type: none"> 1. Power off the VM 2. Create a new folder inside the VM folder for that vm (in this case, test-w246, according to the example error message shown above). Move all of these CTK files into that newly created folder. 3. Right click on the VM, and select "Snapshot" then Snapshot Manage to trigger a consolidation for this virtual machine 4. Click Delete All and then Close. <p>Note: This is a VMware issue; the steps above were taken from the VMware KB article:</p> <p>https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2013520</p>
155 (Fourth of four)	Error: VM task failed. The operation is not allowed in the current state of the datastore." progress ="I" status="running"	<p>There are two options for formatting a VMware datastore: NFS and VMFS. With NFS, there are some limitations like not being able to do RDM (Raw Disk Mapping). This means that you cannot mount from the Actifio Appliance to an NFS datastore. Please refer to the following KB article for additional information:</p> <p>https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1001856</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
175	UDSAGENT socket connection got terminated abnormally; while waiting for the response from agent	<p>The Actifio Connector stops responding between the appliance and a host with Actifio Connector installed.</p> <ol style="list-style-type: none"> Restart the UDSAGENT (Actifio Connector) service on the specified host. Telnet to tcp port 5106 (UDSAGENT communication port) <ul style="list-style-type: none"> # telnet <Host IP> 5106 Expected output: <ul style="list-style-type: none"> Trying 10.50.100.67... Connected to dresx2.accu.local. Escape character is '^]'. Connection closed by foreign host. Verify network connectivity between appliance and host doesn't drop. If the problem persists, network analysis will be required.
374	Failed to find Actifio mapped LUN on ESX server	<p>The ESX server has failed to find any Actifio mapped LUN, usually due to an issue with SAN connectivity between ESX and Sky.</p> <p>Address potential connectivity issue:</p> <ol style="list-style-type: none"> Check for connectivity problems between ESX and Sky. The steps for each type are explained below. <ul style="list-style-type: none"> Check the iSCSI connection <ul style="list-style-type: none"> For iSCSI connections verify the ESX host has discovered the Actifio Appliance. For configuring iSCSI on an ESX host, refer to the VMware KB article https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKc&externalId=1008083 Ensure Actifio has the correct target port configured. Refer to the Network Administrator's Guide. <ul style="list-style-type: none"> After configuring the ports, an iSCSI test can also be run, which will map a test disk and rescan the ESX host to find it. Once the disk is displayed as available on the ESX host, unmap it and proceed with the backup..
604	Failed to verify fingerprint	This occurs when an inconsistency is found between the source and target data.
690	Host doesn't have any SAN or iSCSI ports defined	<p>The Actifio Appliance is not configured with any iSCSI connections to the target host.</p> <p>Ensure that the network ports are open for iSCSI and the target host has discovered the Actifio Appliance.</p>
693	No host SAN ports are provided on Actifio	<p>The Actifio Connector is unable to discover iSCSI host ports.</p> <p>Check if the backup host or mounted host has iSCSI connectivity.</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
698	ESX host is not accessible for NBD mode data movement	<p>The Actifio appliance is unable to reach the ESX host over the network or resolve the ESX host name using DNS.</p> <p>There may be a mismatch between the vCenter ESX name and its name as known by the appliance, and it might not be resolved by the DNS server.</p> <p>DNS Issues</p> <p>Make sure DNS on the appliance is correctly set. On the Sky appliance, run: # cat /etc/resolv.conf and edit it to have the correct DNS server IP address.</p> <p>TCP Port Issues</p> <p>Make sure tcp port 902 is open between the Sky appliance and the ESX host: # telnet <esx hostname> 902</p> <p>Expected output:</p> <pre>Trying 10.50.100.67... Connected to dresx2.accu.local. Escape character is '^]'. Connection closed by foreign host.</pre> <p>Name Mismatches</p> <p>Read about Name Mismatches at Error 698 About Name Mismatches on page 35.</p>
702	Backup was aborted because there are too many extra files in the home directory of the VM	<p>This is an alert condition generated by Actifio and is caused by leftover delta files in the VM's datastore. Normally, the delta files would be removed after Actifio snapshot consolidation. In some instances these can be left behind by the VMware consolidation, and Actifio begins failing jobs to prevent exacerbating the issue.</p> <p>This issue is caused by VMware; it cannot be resolved within Actifio. The following knowledge base articles from VMware provide more information:</p> <p>Consolidating snapshots in vSphere 6.0: https://kb.vmware.com/s/article/2003638</p> <p>Committing snapshots when there are no snapshot entries in the Snapshot Manager: https://kb.vmware.com/s/article/1002310</p>
755	Failed to open VMDK volume; check connectivity to ESX server	<p>This happens when the ESX server cannot be reached by the controller, usually because of a physical connection or DNS problem.</p> <p>Ensure port 902 is open between the Sky and ESX host.</p> <p>Check the current DNS server and ensure it is current and valid.</p> <p>If the vCenter is virtualized, attempt a backup after migrating the vCenter to a different ESX host.</p> <p>Ensure SSL Required is set to True on the ESX host in Advanced Settings.</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
833	Failed to login to vCenter Server	<p>The VM may have been removed from the vCenter: Check whether the VM has been recently removed from the vCenter.</p> <p>The Actifio appliance may have lost connection to the vCenter, or the vCenter password may have expired. Test connectivity and credentials: in the Actifio Desktop, select the vCenter in the Domain Manager under System > Configuration > Hosts. Click Test to test if the user has the permissions to access the vCenter. If test fails, check the credentials.</p>
844	Invalid size vmrk detected for the VM	<p>There are two possible solutions for this situation:</p> <ul style="list-style-type: none"> • If consolidation is required for some disks on VM, size is reported as zero. Creating and deleting a snapshot of the VM should fix this. • See if the VMDK can be restored from a backup image.
873 VMware	Disk space usage on datastore has grown beyond the critical threshold	<p>This message appears when the remaining space on the datastore is less than the critical threshold. If more storage is not made available soon, then jobs will start to fail when the remaining space is inadequate to store them.</p> <p>For more information, see VMware knowledgebase article: https://kb.vmware.com/s/article/1003412</p>
933	Failed to find VM with matching BIOS UUID	<p>The VM's UUID may have been modified: Rediscover this VM. Check if it was discovered as a new UUID. Confirm this in the AGM by comparing the UUID of the newly discovered VM and that of the previously discovered VM. If the UUIDs do not match, the VM may have been cloned.</p> <p>You can also see this error if a large number of Actifio-managed VMs were removed from the vCenter. See knowledge base article 45377.</p>
5011 (First of two solutions)	Application discovery failed. Check whether it is configured and running correctly	<p>The Connector is sometimes unable to discover SQL cluster details</p> <p>The UDSAgent.log will log WBEM_E_INVALID_CLASS (0x80041010) errors similar to the below:</p> <pre><timestamp> INFO Worker_Thread_14368 Connect to namespace root\mscluster succeed <timestamp> DEBUG Worker_Thread_14368 Failed to retrieve next object from enumerator: Unknown error code [0x80041010]</pre> <p>If this is only occurring on one node in the cluster, this can be confirmed on the host machines by using WMI Explorer and connecting to the mscluster namespace. Compare the "classes" that start with the string "mscluster" on all nodes. There should be no discrepancies.</p> <p>For more, see Microsoft Technet at: https://blogs.technet.microsoft.com/askperf/2014/08/11/wmi-missing-or-failing-wmi-providers-or-invalid-wmi-cl</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
<p>5011 (Second of two solutions)</p>	<p>Application discovery failed. Check whether it is configured and running correctly</p>	<p>The Connector sometimes cannot find a database or file system at the time of backup.</p> <ol style="list-style-type: none"> 1. Check if all the applications or file systems for the backup or Consistency Group are online and available. They may have been disabled or removed. If any one or more of them are offline, bring them up online and try to run the original backup again. If they have been removed, the application can be removed from Actifio protection. If the applications or file systems are online, conduct further troubleshooting: 2. Look for the UDSAgent.log from the host (located in /var/act/log/). To identify which database or filesystem could not be discovered by the UDSAgent, look for the words not protectable in the log (example below): <pre>Mon Oct 7 2013 14:54:44.872000 DEBUG Worker_Thread_Job_0426872 VssBackupService::isProtectableApp: appname ActifioTEST is not protectable by VSS connector.</pre> <p>In this example, ActifioTEST is not being discovered.</p> <p>Once identified, check that the application specific services are running and are not in a failed state, using the two vssadmin commands below. in a command prompt on the Windows host to view a list of application specific services. Check that the Actifio Software Shadow Copy Provider is listed, and that all writers are in state Stable with No Error:</p> <pre>vssadmin list providers vssadmin list writers</pre>
<p>5022</p>	<p>Actifio Connector: Failed preparing VSS snapshotset</p>	<p>Windows could not create a VSS snapshot. This can have several causes. To learn more:</p> <ul style="list-style-type: none"> • Check the UDSAgent.log for more detailed messages. • Check disk space on the protected volumes. 300MB may not be enough. • Check Windows Event Logs for VSS related errors. • vssadmin list writers may show writers in a bad state. <p>Usually these errors are accompanied by VSS errors reported in the logs such as:</p> <pre>VSS_E_VOLUME_NOT_SUPPORTED_BY_PROVIDER VSS_E_UNEXPECTED_PROVIDER_ERROR</pre> <p>First check if all the VSS writers are in a stable state by going to the command line and issuing the command as below</p> <pre># vssadmin list writers</pre> <p>Check output to confirm that all the writers are in a stable state.</p> <p>Restart VSS service and check if the writers are stable. If not you may have to reboot the machine.</p> <p>For more information, see this Microsoft article: http://bit.ly/13kPcIM</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
5024	Actifio Connector: Failed to create VSS snapshot for backup. Insufficient storage available to create either the shadow copy storage file or other shadow copy data	<p>Usually this is due to not enough disk space to process a snapshot.</p> <ol style="list-style-type: none"> 1. Ensure the drive being backed up is not full. 2. Check if all the VSS writers are in a stable state From the Windows command line, run: <pre>vssadmin list providers vssadmin list writers</pre> 3. If these services are not running, start them and re-run the job. If the writer's State is Not Stable, restart the VSS service. If the problem continues after restarting the service, reboot the host. <p>Sometimes the message appears when internal VSS errors occur.</p> <p>Check the Windows Event Logs for VSS related errors. For errors related to VSS, search for related Microsoft patches. Additional VSS troubleshooting details can be found on Microsoft TechNet.</p> <p>Microsoft recommends at least 320MB on devices specified for saving the created VSS snapshot, plus change data that is stored there.</p> <p>Actifio recommends the shadow storage space be set to unbounded (unlimited) using these commands:</p> <pre>vssadmin list shadowstorage vssadmin Resize ShadowStorage /On=[drive]: /For=[drive]: /Maxsize=[size]</pre> <p>To change the storage area size in the Windows UI, refer to: http://www.techotopia.com/index.php/Configuring_Volume_Shadow_Copy_on_Windows_Server_2008</p> <p>Re-run the backup once the VSS state is stable and shadow storage is set to unbounded.</p>
5046	Backup staging LUN is not visible to the Actifio Connector	<p>The staging LUN is not visible to the UDSAgent on the application's host because the host is unable to detect the staging LUN from the Actifio Appliance.</p> <p>Check the Fibre Channel zoning or iSCSI connection and network ports are properly configured as detailed in Network Administrator's Guide to Actifio VDP.</p>
5049	Actifio Connector failed identifying logical volume on the backup staging lun	<p>The Actifio Connector could not see the staging LUN. This can be caused by a bad connection or by trouble on the LUN.</p> <p>Verify that iSCSI connectivity is good, then make sure it works by mapping the VDisk, partitioning it, formatting it, copying files to it, etc. The steps for partitioning and formatting are OS specific.</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
5056	Actifio Connector failed mounting the logical volumes present on LUN mapped from Actifio	<p>During backup, mounting a staging disk could fail if it:</p> <ul style="list-style-type: none"> • is unable to import volume group • is using raw device instead of multipath device • failed to create lv on pv, etc. <p>During mount, it could fail due to stale LUNs on the host. Look at the connector logs and identify the possible root cause.</p> <ul style="list-style-type: none"> • If failure is due to stale LUNs, then reboot the host. • If failure is due to unable to create pv due to lvm filtering rules, then modify lvm.conf to accept all devices.
5076	SyncFilesets: Failed syncing staging volume	<p>This error is due to a communications problem between the host and the staging disk. Check all the VSS writers for the stable state by issuing these commands from the Windows command line:</p> <pre>vssadmin list providers vssadmin list writers</pre> <p>If one or more of these services are not running, then start them and try to rerun the job. Restart the VSS service if the writer's state shows Not Stable. If the problem persists after a restart, then reboot the host.</p>
5078	Actifio Connector: The staging disk is full	<p>Jobs fail if a file that was modified in the source disk is copied to the staging disk, but the file is larger than the free space available in the staging disk.</p> <p>To fix the issue with full staging disk, increase the staging disk. Specify the size of the staging disk in the Advanced Settings for the application. Set the value for staging disk size such that it is greater than the sum of size of the source disk and the size of the largest file.</p> <p>Note: Changing the staging disk in Advanced Settings provokes a full backup.</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
5087	Actifio Connector: Failed to write files during a backup (Source File)	<p>Anti-virus programs or third party drivers may have applied file locks that cannot be overridden.</p> <p>Check the UDSAgent.log to see which file could not be accessed. Attempt to find which process is locking the file using lsof on Linux, or fltmc on Windows. Exclude the file from the antivirus or capture job and re-try the capture.</p> <p>The current processes known to Microsoft are listed at: https://msdn.microsoft.com/en-us/library/windows/hardware/dn265170%28v=vs.85%29.aspx.</p> <p>These errors are rarely found on Linux, but it is possible that a process such as database maintenance or patch install / update has created an exclusive lock on a file.</p> <p>Install the latest Actifio Connector.</p> <p>A file system limitation or inconsistency was detected by the host operating system.</p> <p>Run the Windows Disk Defragmenter on the Actifio staging disk.</p> <p>Low I/O throughput from the hosts disks or transport medium, iSCSI or FC.</p> <p>Ensure there are no I/O issues in the host's disks or transport medium. The transport medium will either be iSCSI or Fibre Channel depending on out of band configuration. Consult storage and network administrators as needed.</p>
5131 - SQL Logs report error 3041	SQL log backups on instance fail with error 5131	<p>https://blogs.msdn.microsoft.com/dsnotes/2014/03/25/more-on-user-profile-service-functionality</p> <p>To resolve this, enable "Do not forcefully unload the user registry at user logoff"</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
5132	Actifio Connector: The VSS snapshot was deleted during backup	<p>Disk pressure on the volume caused the VSS snapshot to be deleted. Either more disk space is needed or the VSS shadow copy space is limited.</p> <p>The VSS Snapshot could be deleted due to various reasons like the VSS Shadowstorage running out of space or applications like Anti-virus or tools like Diskeeper causing the snapshot to be deleted.</p> <p>Usually this error includes a reason why the snapshot was deleted like: The VSS snapshot was deleted during backup. SetFileSize(0) failed for \\?\C:\Windows\act\Staging_692615\RecoveryBin\InProgress\Network_folders(01CFEC4D37A72B2D).docx</p> <ol style="list-style-type: none"> 1. Make sure that you have sufficient space on the shadowstorage and it is set to unbounded using these commands: <pre>vssadmin list shadowstorage vssadmin resize shadowstorage</pre> 2. Ensure that the connector is at latest version. 3. Check if any Anti-virus is causing the file to be locked during backup. (You can define UDSAgent.exe as a safe process in the AV settings.) 4. Check if any third party software like Diskeeper is causing the issues. <p>More information may be available in Microsoft KB articles</p>
5136	Actifio Connector: The staging volume is not readable	<p>Check /act/logs/UDSAgent.log for more details.</p> <p>If the UDSAgent.log indicates a corrupted filesystem, run chkdsk on the staging volume.</p>
5138	Actifio Connector: Fingerprint verification failed for backup (Source File)	<hr/> <p>Note: SQL Server 2005 requires a minimum set of patches in order to run on Windows 2008 R2. If the app is SQL and the issue persists, or is seen frequently, ensure the environment is running at least SQL Server 2005 RTM SP4.</p> <hr/> <p>There may be an inconsistency between the source and target data Change Block Tracking (CBT). If CBT is not computing the correct verification values, add --ignore-cbt to the Connector Options in Advanced Settings and then retry the capture job. If the job is successful, reset the Connector Options by removing --ignore-cbt.</p>
5241	Actifio Connector: Failed to mount/clone applications from mapped image (Source File)	<p>Invalid username and password being parsed from the control file.</p> <p>On the source, review the UDSAgent.log to see if the source is configured with the correct username/password under Advanced Settings in the connector properties.</p>

Table 2: Most Common Errors that Cause Events, Actifio VDP

Error Code	Error Message	What to Do
5547	Oracle: Failed to backup archivelog (Source File)	<p>The Actifio Connector failed to backup archive log using RMAN archive backup commands. The likely causes for this failure are:</p> <ul style="list-style-type: none"> Connector failed to establish connection to database The archive logs were purged by another application TNS Service name is configured incorrectly, causing backup command to be sent to a node where the staging disk isn't mounted <p>Search for ORA- or RMAN- errors in the RMAN log. This is the error received from Oracle. Use the preferred Oracle resource as these are not Actifio conditions, and hence cannot be resolved within Actifio.</p> <ul style="list-style-type: none"> Actifio Connector logs: /var/act/log/UDSagent.log Oracle RMAN logs: /var/act/log/*****_rman.log

Event 10034 Example Problem and Resolution

A single appliance dedicated to a single major database with this snapshot SLA:

- Oracle DB: capacity 8870GB, daily every 4hr, retain 1 month.
- Archive log: capacity 1500GB, daily every 30min, retain 7 days.

This rapidly runs out of snapshot memory.

Table 3: Snapshot Memory and Bitmap Space Memory Accounting: Too Much

Size	Snaps Per Day	Days Retained	Total Snaps	Snapshot TB	Snapshot Bitmap Space Needed (MB)
8870	6	30	180	1559	780
1500	48	7	336	492	246

This setup requires total snapshot memory of 780+246=1026MB, but max snapshot memory is 512 MB. So we cannot keep so many snaps of such a large database.

One solution is to deduplicate some of the older snapshots. We could instead keep 10 days of snapshots and 20 days of s. This comes to 506MB, just under the 512MB limit. **XXXXXXXXXXXXXXXXXXXXXX**

Table 4: Snapshot Memory and Bitmap Space Memory Accounting: Just Right

Size	Snaps Per Day	Days Retained	Total Snaps	Snapshot TB	Snapshot Bitmap Space Needed (MB)
8870	6	10	60	520	260
1500	48	7	336	492	246

Error 698 About Name Mismatches

Name Mismatches

Any ESX/ESXi host can have three different names. Mismatches in these names can cause backups or restores or clones to not work correctly.

- The name of the ESX host as known to itself (call this the **ESX-ESX-name**). This is the name that will show up if you were to run a hostname command on the ESX server itself. This hostname follows IETF host naming standards and can be all numeric or contain dashes and dots. Recommendation: This name should be something unique, begin with a letter, and be in the DNS table for the site.
- The name of the ESX host known to the vCenter Server (**ESX-vCenter-name**). This is the name that was used in the vCenter GUI to connect to the ESX host. The vCenter GUI allows any name and uses DNS to resolve the IP address. This means that the name can be just an IP address, can begin with a digit, or be a fully qualified host name. If it begins with a digit, that is bad news - RDM mounting cannot be made to work. vCenter does not allow an ESX name to be changed after it has been connected. The ESX host must be disconnected and reconnected with another name. Recommendation: This should be the same as the ESX-ESX-name. The vCenter will need to be able to ping the ESX-ESX-name.
- The name assigned to the ESX host by the Actifio Sky system to export storage to it (**ESX-Sky-name**). If the ESX host has to have VDisks exposed to it, we will need to create a generic host. The ESX host can see the Sky system's iSCSI initiator. An entry is created in the Sky database. This hostname has to follow Sky naming conventions and so it cannot begin with a digit.

Recommendations

- Create a Sky host for every ESX host.
- The ESX-Sky-name should be the same as the ESX-vCenter-name.

When you discover VMs, the virtual machine names are added to the database, and so is the ESX host name for those VMs.

- **Good:** If the ESX name that is added is the ESX-vCenter-name is already present in the Sky system as the ESX-Sky-name, the host will be updated in the database with the "isesxhost" set to true.
- **Bad:** If the ESX-vCenter-name and ESX-Sky-name don't match, a new database entry for the ESX-vCenter-name is created, and mount failures become much more likely.

After the discovery of VMs is done, go into the AGM and enter the username and password for the ESX-vCenter-name. This enables the Sky system to bypass the vCenter on certain operations, resulting in better performance and fewer "clear-lazy-zero" errors.

If you follow the recommendation that ESX hosts have a ESX-Sky-name and you login to the Sky's iSCSI target from the ESX host, then you can perform RDM based mounting even on these out-of-band ESX servers.

As a last resort to address this issue, you can restart management services in ESX server.

Note: A restart of the ESX server management services may be required. For more information, refer to the following KB from VMware: [Restarting the Management agents on an ESXi or ESX host \(1003490\)](#)
