Actifio Resiliency Director Release Notes

Contents

1 Introduction

This document includes the release notes for Actifio Resiliency Director 10.0.x. The latest version of the Actifio Resiliency Director Release Notes can be found on the ActifioNOW Customer portal.

About Actifio Resiliency Director

Actifio Resiliency Director (RD) is an orchestration product that is used to automate disaster recovery for environments using appliances for backup and replication to a disaster recovery (DR) site or Cloud. RD coordinates with the appliances to automate the tasks of recovering VMs, physical servers, and their data in the event of a site-wide outage or disaster at the production site or cloud region. RD allows users to pre-configure the most manual or tedious aspects of the recovery, allowing for one-step recovery of all the in-scope servers and data in a repeatable, reliable, and predictable fashion.

Actifio Resiliency Director has the following three components:

- Actifio Resiliency Director - Collector
- Actifio Resiliency Director - Server
- Actifio Resiliency Director - Cloud Recovery

These components are available as Virtual Appliances.

Product Documentation

The following table summarizes the various Resiliency Director documents.

Document	Description
Actifio Resiliency Director Deployment Guide	Provides information on how to deploy the RD OVA file using the VMware vSphere Web Client. It also explains the configuration procedure.
Deploying Actifio Resiliency Director in the Google Cloud Platform	Provides information on how to deploy RD in the Google Cloud Platform.
Actifio Resiliency Director CLI Guide	Provides the details to execute the CLI commands for Actifio Resiliency Director.
Actifio Resiliency Director RESTful API Guide	Provides the procedures for installation and scripts to run with the Actifio Resiliency Director APIs.

Document	Description
Actifio Resiliency Director Release Notes	Contains a summary of new features and functionality, installation notes, resolved issues, and known limitations and restrictions of RD release.s

Product documentation for RD is provided through an Online Help system that is integrated directly into RD and can access from RD. To access the help files, login to the RD, click the help icon at the top-right corner of the page and then click **Help**.

The ActifioNOW Customer Portal

You can always find the latest documentation for RD releases on the ActifioNOW customer portal. From the ActifioNow customer portal you can access the Actifio product documentation, including release notes, and search the knowledge base for answers to specific questions.

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.

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.
3. From the ActifioNOW customer portal you can access:
   - o **Product Documentation** - View the user documentation for your Actifio products and releases.
   - o **Knowledge Base** - Search across all of the available content for relevant articles.

Actifio Support and Service

Access these locations for help with your Actifio product suite:

Customer Support Numbers	**U.S. Toll-Free Number**: 1.855.392.6810 **From Anywhere**: +1.315.261.7501 **Australia**: 0011 800-16165656 **Germany**: 00 800-16165656 **New Zealand**: 00 800-16165656 **UK**: 0 800-0155019
Customer Support Email	support@actifio.com
Customer Support Portal	http://support.actifio.com/ When prompted, enter the user name and password provided by your Actifio representative.
General Information	http://www.actifio.com

actifio

2 Release Notes for RD 10.0.5

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

Topics:

- What's New in this Release
- Resolved Issues in RD 10.0.5
- Resolved Security Issues in RD 10.0.5
- Known Issues in RD 10.0.5
- Known Security and CVE Issues in RD 10.0.5
- Limitations
- Installation and Upgrade Instructions
- Supported Configurations

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.5:

- Added the ability to execute the recovery of failed apps and VMs while recovery plan is in progress.
- Added the ability to select machine type while configuring the VM for recovery.
- Removed the ability to recover the data into AWS and Azure clouds
- All new conversion engine for VMware to GCE recoveries. This benefits recoveries to be faster and more consistent and the support/compatibility matrix for operating systems is broader, with a faster ability to add new support when needed.
- Unlike previous versions of RD, version 10.0.5 is only supported in conjunction with the 10.0.5 version of AGM and Sky. Refer to the sections Installation and Upgrade Instructions and Supported Configurations for additional details.

Resolved Issues in RD 10.0.5

The following are the issues resolved in the Actifio Resiliency Director 10.0.5:

Resolved Issues

Issue	Tracking
Under certain circumstances, when a recovery plan was in an invalid state, if RD Collector is rebooted it will fail to come back up.	210981525
RD Cloud Recovery is unable to pick the latest import OnVault image for recovery.	239934419

Resolved Security Issues in RD 10.0.5

The following are the list of security issues resolved in Actifio Resiliency Director 10.0.5.

Description	Tracking
CentOS: security advisory for iwl1000-firmware (CESA-2021:0339).	243787081
RD PDF box version has dependency on Bouncy Castle vulnerable version.	233983307
CVE-2022-25762 - 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 continues to use the socket after it has been closed.	233259463
Updated the jackson-databind.jar to the latest version.	232769933
CVE-2021-33813 - An XXE issue in SAXBuilder in JDOM through 2.0.6 allows attackers to cause a denial of service via a crafted HTTP request.	211589575
Updated the tomcat vulnerabilities - CVE-2021-33813, CVE-2021-33037, CVE-2021-41079, CVE-2021-30640, CVE-2021-42340, and CVE-2021-44228.	210432984

actifio

Known Issues in RD 10.0.5

The following are the list of known issues in Actifio Resiliency Director 10.0.5:

Known Issues

Issue	Workaround	Tracking
Recovery operation fails while trying to recover a VM on the same vCenter with different. clusters.	Configure the following parameters: • `rdtask setproperty -property suppressNicMacAddressConflictVerification -value to true` • `rdtask setproperty -property preserveuuid -value to false`	RD-2267
Application Group Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448
Recovery operation fails with error "Unable to receive any status for the fail-over job from Actifio Appliance" during recovery plan execution.	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty -property cds-failover-complete-retries-interval -value 45;` • `rdtask setproperty -property cds-failover-complete-retries -value 20;`	RD-2461
[Windows system only] RD script fails to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475
RD Collector fails to retrieve the network details if any new network interface is added.	Reboot the source VM after adding any new network interface.	RD-2769

Known Issues

Issue	Workaround	Tracking
Recovery plan execution fails while powering-on virtual machines.	Change the RAM size of virtual machine, the memory size must be a multiple of 4MB.	RD-3352
VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx. This occurs when storage pool is not configured on target appliance.	Define the target storage pool on the target appliance.	RD-3969
Extra disk with double size of VM disk is found on GCP after the recovery operation.	No known workaround. Issue will be fixed in a future release.	RD-4157
An error "Impermissible static Ethernet address: 00:0c:29:30:15:6e" occurs while running a recovery plan. This is due to conflicts with VMware reserved MACs, as source VM has one or more NICs with MAC addresses that start with VMware reserved MAC ranges.	Use any of these workarounds: • Change the Mac address on source VM and then run new backup/replicate to target. To change MAC address on source, first delete the NIC and then add it again. • Run the recovery plan by configuring the static IPs for all the Ethernet cards in the VM. If a static IP assignment is selected, RD generates a new MAC address for the recovered VM's NICs.	RD-4291
Upgrading from version 10.0.2 or earlier release fails, if the user selects the option for "Installation after upload".	Upload the upgrade file with "Installation after upload" set to "no" and then select the "Upgrade" option after the upload completes.	RD-4535
Resetting the recovery plan with VM's in it can cause issues if there are any recovered applications in it.	Reset the application recovery plan before resetting the VM RP.	RD-4653
Database recoveries where logs are available will now roll forward to the newest point in time available. The update to roll logs forward during recoveries from StreamSnap and Dedup Async images will be added in a future release.	No known workaround. Issue will be fixed in a future release.	RD-4679
Unable to login to the RD from the CLI when upgraded from 10.0.3.343.	Reset the user password using the **Change Password** option in the GUI by clicking the user name in the upper right corner.	RD-4699

actifio

Known Issues

Issue	Workaround	Tracking
Sybase application recovery fails with the error "Sybase TARGET_DB_USER or TARGET_DBUSER_PASSWD not correct".	Upgrade the Sky appliance and Actifio connector to SP4, perform a fresh backup and then perform recovery of the VM and followed by the recovery of the application.	RD-4797
In RD Collector, the edit Application Group page does not list the applications and vCenter when Actifio Sky is not reachable.	Verify that Sky is in the Online state from the Connections menu.	RD-4821
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
When protecting VMs, if the OS and application binaries are spread over multiple VMware VMDKs, then all of those VMDKs must be included in backups to have a recoverable backup. This should include all filesystem partitions needed for the OS to boot, all drivers, VMtools, etc.	If the boot volume is not the first drive, you may need to manually select it instead of using the "Boot only" option.	247937101
If using Sky appliance 10.0.5 without the November 2022 MHR, then it will be necessary to manually delete all recovered hosts after resetting a recovery plan before the plan can be run again.	Manually cleanup all recovered hosts after the successfully reset of recovery plan.	253270197

Known Security and CVE Issues in RD 10.0.5

The following table lists the known security and CVE issues in Actifio Resiliency Director 10.0.5:

Known CVEs

Description	CVE# or Bug Tracking ID
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. 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.*	CVE-2017-7561 CVE-2020-1695

Description	CVE# or Bug Tracking ID
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 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.*	CVE-2022-42003
Need to update the protobuf-java-XXX.jar to the version. It will be addressed in a following release.	253747387

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.5:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

- RD does not currently support resetting to a new static IP address when recovering Ubuntu into VMware.

Installation and Upgrade Instructions

- RD 10.0.5 is supported only with VDP 10.0.5,. You need to upgrade AGM and Sky first, followed by RD being upgraded. Also, while AGM and Sky are running 10.0.5, RD 10.0.4 should not be used to run any recovery plans until the RD is upgraded to 10.0.5.

- All systemstate applications must be removed from the application groups before performing the upgrade, or the upgrade will not be allowed to proceed.

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- Before the upgrade, Actifio recommends you to take a snapshot of your RD VM's disks from your hypervisor. However, a snapshot of the VM's memory is not required. If the upgrade fails for any reason, you can use the snapshot to restore your RD. After the upgrade, log in and perform some basic validation, then delete the snapshot when everything looks as expected.

- Upgrades to RD version 10.0.5 are only supported from RD 10.0.4. If upgrading from an earlier version, upgrade to RD 10.0.4 MHR first and then upgrade to RD 10.0.5.

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.5

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	10.0.5

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7, 7.0
ESX	5.5, 6.0, 6.5, 6.7, 7.0

Note: *VMware must be licensed to support resource pools at the DR site.*

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019
RHEL	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 8.0, 8.1, 8.2
CentOS	7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.0, 8.1, 8.2
SUSE	SLES 11– SP4, SLES 12.x, SLES 15, SLES 15 SP1, SLES 15 SP2
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Note: *RD Cloud Recovery supports only the Operating Systems supported by Actifio Sky with the cloud mobility feature.*

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	89.0.x
Google Chrome	105.x

Supported Clouds

The Actifio Resiliency Director is supported on the Google Cloud Platform (GCP) cloud.

actifio

3 Release Notes for RD 10.0.4

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

Topics:

- What's New in this Release
- Resolved Issues in RD 10.0.4
- Known Issues in RD 10.0.4
- Known Security and CVE Issues in RD 10.0.4
- Limitations
- Installation and Upgrade Instructions
- Supported Configurations

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.4:

- Added ability to recover all databases supported with Actifio in RD Server, Collector, and Cloud Recovery, specifically adding the following:
    - Db2
    - MariaDB
    - MaxDB
    - MySQL
    - Oracle (both file system format and ASM)
    - PostgreSQL
    - SAP ASE
    - SAP HANA
    - SAP IQ
- Enhanced the SQL Server integration to support the ability to specify individual database names, instead of only prefixes and suffixes.
- Added the ability to change the password of RD Server, Collector, and Cloud Recovery from the GUI.

Resolved Issues in RD 10.0.4

The following are the issues resolved in the Actifio Resiliency Director 10.0.4:

Resolved Issues

Issue	Tracking
Need to increase the retry count (guest-process-status-chk-attempts) provided during recovery.	RD-4564
Sometimes, recovery of cloud VM's takes more time and shows timeout to retrieve the status of the Job.	RD-4566
Under some circumstances, incorrect parameters may be shown for SQL Server recoveries, where a single database may be selected for recovery, but the options for multiple databases are displayed, including the "Consistency Group Name" field. Entering a value for this field will result in a failure during recovery if only a single database is being recovered.	RD-4568
Unable to define the Target/VM name while creating the recovery plan.	RD-4572
Unable to populate (delete SQL database and overwrite database) drop-down lists for app class parameters of SQL Server database.	RD-4574
RD shows an incorrect error message when duplicate app class property is created.	RD-4583
Unable to add volume list in RD Cloud Recovery while adding or editing a cloud.	RD-4584
Unable to create Application Group in RD when VM and SQL apps have the same name.	RD-4588

actifio

Issue	Tracking
During the 10.0.3 upgrade, the schema upgrade fails to change Organization from "ALL" to "none".	RD-4589
When AGM services are not running, the Add/Edit pages of Application Group in RD Cloud Recovery throws the incorrect error message "Unable to invoke the request".	RD-4591
In RD Cloud Recovery, the AGM password getting changed when AGM is down or not reachable.	RD-4598
RD unable to find the OnVault Images for the failed VM's when a user tries to recover using the Single VM Recovery option.	RD-4618

Known Issues in RD 10.0.4

The following are the list of known issues in Actifio Resiliency Director 10.0.4:

Known Issues

Issue	Workaround	Tracking
Recovery operation fails while trying to recover a VM on the same vCenter with different. clusters.	Configure the following parameters: • `rdtask setproperty -property suppressNicMacAddressConflictVerification -value to true` • `rdtask setproperty -property preserveuuid -value to false`	RD-2267
Application Group Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448

Known Issues

Issue	Workaround	Tracking
Recovery operation fails with error "Unable to receive any status for the fail-over job from Actifio Appliance" during recovery plan execution.	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty -property cds-failover-complete-retries-interval -value 45;` • `rdtask setproperty -property cds-failover-complete-retries -value 20;`	RD-2461
[Windows system only] RD script fails to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475
RD Collector fails to retrieve the network details if any new network interface is added.	Reboot the source VM after adding any new network interface.	RD-2769
Recovery plan execution fails while powering-on virtual machines.	Change the RAM size of virtual machine, the memory size must be a multiple of 4MB.	RD-3352
VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx. This occurs when storage pool is not configured on target appliance.	Define the target storage pool on the target appliance.	RD-3969
Extra disk with double size of VM disk is found on GCP after the recovery operation.	No known workaround. Issue will be fixed in a future release.	RD-4157

actifio

Known Issues

Issue	Workaround	Tracking
An error "Impermissible static Ethernet address: 00:0c:29:30:15:6e" occurs while running a recovery plan. This is due to conflicts with VMware reserved MACs, as source VM has one or more NICs with MAC addresses that start with VMware reserved MAC ranges.	Use any of these workarounds: • Change the Mac address on source VM and then run new backup/replicate to target. To change MAC address on source, first delete the NIC and then add it again. • Run the recovery plan by configuring the static IPs for all the Ethernet cards in the VM. If a static IP assignment is selected, RD generates a new MAC address for the recovered VM's NICs.	RD-4291
Upgrading from version 10.0.2 or earlier release fails, if the user selects the option for "Installation after upload".	Upload the upgrade file with "Installation after upload" set to "no" and then select the "Upgrade" option after the upload completes.	RD-4535
Resetting the recovery plan with VM's in it can cause issues if there are any recovered applications in it.	Reset the application recovery plan before resetting the VM RP.	RD-4653
Database recoveries where logs are available will now roll forward to the newest point in time available. The update to roll logs forward during recoveries from StreamSnap and Dedup Async images will be added in a future release.	No known workaround. Issue will be fixed in a future release.	RD-4679
Unable to login to the RD from the CLI when upgraded from 10.0.3.343.	Reset the user password using the **Change Password** option in the GUI by clicking the user name in the upper right corner.	RD-4699
Sybase application recovery fails with the error "Sybase TARGET_DB_USER or TARGET_DBUSER_PASSWD not correct".	Upgrade the Sky appliance and Actifio connector to SP4, perform a fresh backup and then perform recovery of the VM and followed by the recovery of the application.	RD-4797
In RD Collector, the edit Application Group page does not list the applications and vCenter when Actifio Sky is not reachable.	Verify that Sky is in the Online state from the Connections menu.	RD-4821

Known Security and CVE Issues in RD 10.0.4

The following table lists the known security and CVE issues in Actifio Resiliency Director 10.0.4:

Known CVEs

Description	CVE#
The jQuery Validation Plugin provides drop-in validation for your existing forms. It is published as an npm package "jquery-validation". jquery-validation before version 1.19.3 contains one or more regular expressions that are vulnerable to ReDoS (Regular Expression Denial of Service).	CVE-2021-21252

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.4:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

- RD does not currently support resetting to a new static IP address when recovering Ubuntu into VMware.

Installation and Upgrade Instructions

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- Before the upgrade, Actifio recommends you to take a snapshot of your RD VM's disks from your hypervisor. However, a snapshot of the VM's memory is not required. If the upgrade fails for any reason, you can use the snapshot to restore your RD. After the upgrade, log in and perform some basic validation, then delete the snapshot when everything looks as expected.

- Upgrades to RD version 10.0.x are only supported from RD 8.0.3. If upgrading from an earlier version, upgrade to RD 8.0.3 first and then upgrade to RD 10.0.x.

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.4

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	8.1.0+, 9.0+, 10.0+
	Note: *Recovery of file systems and databases is only supported when using appliances running version 8.1 and higher.*
	Note: *Actifio RD Cloud Recovery supports Actifio appliance version 9.0.4 and above, and version 10.0.0 and above, with hotfix 2222 required for version 10.0.0, and hotfix 2354 required for version 10.0.1.*
	Note: *For recovery of CAF and Oracle databases, the AGM and Actifio Appliance version should be 10.0.4.*

Note: *Actifio RD Cloud Recovery supports Actifio Global Manager (AGM) version 9.0.5 and above.*

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7, 7.0
ESX	5.1, 5.5, 6.0, 6.5, 6.7, 7.0

Note: *VMware must be licensed to support resource pools at the DR site.*

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019

Operating Systems	Version
RHEL	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 8.0, 8.1, 8.2
CentOS	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.0, 8.1, 8.2
SUSE	SLES 11- SP4, SLES 12.x, SLES 15, SLES 15 SP1, SLES 15 SP2
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Note: *RD Cloud Recovery supports only the Operating Systems supported by Actifio Sky with the cloud mobility feature.*

Note: *CentOS 6.x will no longer be supported effective October 31, 2021.*

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	88.0.x
Google Chrome	90.x
Microsoft Internet Explorer	11.0.x

Note: *Actifio does not support Microsoft Internet Explorer from RD 10.0.5 onwards.*

Supported Clouds

The Actifio Resiliency Director is supported on the following clouds:
- Amazon Web Services (AWS) cloud
- Google Cloud Platform (GCP) cloud
- Microsoft Azure cloud

actifio

4 Release Notes for RD 10.0.3

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

Topics:

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.3:

- RD Cloud Recovery and RD Server is enhanced with Dashboard UI to give at-a-glance view of recovery plans, application groups, and RD health.
- Added ability to recover DB apps from OnVault, in addition to a snapshot pool.
- Added support for AWS encryption key specification.

Resolved Issues in RD 10.0.3

The following are the issues resolved in the Actifio Resiliency Director 10.0.3:

Resolved Issues

Issue	Tracking
Single VM recovery of ReadyVM failed.	RD-4427
The `configsystem` and `configdns` commands fail to update the DNS entries in the /etc/resolv.conf file.	RD-4331
Fixed typo in the error message (Error: Edit of Application Group is not supported for the recovery plan states: Reset Failed).	RD-4432
Cloud types listed in the cloud type drop-down of the Add Cloud page do not show in alphabetical order.	RD-4433
Changed the date format to display zeros when there is a single digit in the date.	RD-4434
Unable to add Azure credentials in RD Cloud Recovery 10.0.2 due to the incompatible retrofit jar file.	RD-4447
RD static IP assignment for Linux VMs fails to work in the Japanese language.	RD-4449
Null point exceptions occurred while executing the VM recovery.	RD-4453
Added support to retrieve the latest appliance version from AGM to RD Cloud Recovery.	RD-4454
Added support to generate an output file for Windows Guest manager.	RD-4455
Retrieve current setting in windows 2016 fails when the interface has registry values as null.	RD-4456
Application recovery status stuck in "In Progress" state when error message from appliance exceeds length threshold, causing inability to retry the recovery.	RD-4481

actifio

Known Issues in RD 10.0.3

The following are the list of known issues in Actifio Resiliency Director 10.0.3:

Known Issues

Issue	Workaround	Tracking
Recovery operation fails while trying to recover a VM on the same vCenter with different. clusters.	Configure the following parameters: • `rdtask setproperty -property suppressNicMacAddressConflictVerification -value to true` • `rdtask setproperty -property preserveuuid -value to false`	RD-2267
Application Group Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448
Recovery operation fails with error "Unable to receive any status for the fail-over job from Actifio Appliance" during recovery plan execution.	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty -property cds-failover-complete-retries-interval -value 45;` • `rdtask setproperty -property cds-failover-complete-retries -value 20;`	RD-2461
[Windows system only] RD script fails to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475
RD Collector fails to retrieve the network details if any new network interface is added.	Reboot the source VM after adding any new network interface.	RD-2769
Recovery plan execution fails while powering-on virtual machines.	Change the RAM size of virtual machine, the memory size must be a multiple of 4MB.	RD-3352

Known Issues

Issue	Workaround	Tracking
VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx. This occurs when storage pool is not configured on target appliance.	Define the target storage pool on the target appliance.	RD-3969
Application Options shows the database list as empty when an application is protected with DedupAsync policy. This occurs while creating the application group.	Configure the application simultaneously while configuring the recovery plan.	RD-4017
Extra disk with double size of VM disk is found on GCP after the recovery operation.	No known workaround. Issue will be fixed in a future release.	RD-4157
RD fails to retrieve system details of the protected VM, if a VMware application is protected with Direct OnVault Policy. This issue occurs on Actifio appliance 9.0.4.	Enter the CPU, Memory and NIC details manually or upgrade the appliance to 9.0.6 or 10.0 or higher.	RD-4211
An error "Impermissible static Ethernet address: 00:0c:29:30:15:6e" occurs while running a recovery plan. This is due to conflicts with VMware reserved MACs, as source VM has one or more NICs with MAC addresses that start with VMware reserved MAC ranges.	Use any of these workarounds: • Change the Mac address on source VM and then run new backup/replicate to target. To change MAC address on source, first delete the NIC and then add it again. • Run the recovery plan by configuring the static IPs for all the Ethernet cards in the VM. If a static IP assignment is selected, RD generates a new MAC address for the recovered VM's NICs.	RD-4291
Upgrading to version 10.0.3 from any earlier release fails, if the user selects the option for "Installation after upload".	Upload the upgrade file with "Installation after upload" set to "no" and then select the "Upgrade" option after the upload completes.	RD-4535
The system hostname will reset after upgrading from RD 10.0.2 or earlier to RD 10.0.3.	Users can login to the CLI using any ssh client and issue the command "rdtask configsystem -hostname <hostname>" to reset the hostname back to the desired value.	RD-4560

actifio

Issue	Workaround	Tracking
Under some circumstances, incorrect parameters may be shown for SQL Server recoveries, where a single database may be selected for recovery, but the options for multiple databases is displayed, including the "Consistency Group Name" field. Entering a value for this field will result in a failure during recovery if only a single database is being recovered.	Edit the application group and update the SQL application configuration to reset to the default by selecting "Exclude" and making sure no databases are selected, and then save the configuration and application group. Next, re-edit the application group and re-select the desired SQL database, enter the required parameters, and save the application group again.	RD-4568

Known Security and CVE Issues in RD 10.0.3

The following table lists the known security and CVE issues in Actifio Resiliency Director 10.0.3:

Known CVEs

Description	CVE#	Tracking
RD uses older version of PostgreSQL which causes security vulnerability. This issue is noticed and will be addressed in the following release.	CVE-2018-10925	RD-4441

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.3:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

- RD does not currently support resetting to a new static IP address when recovering Ubuntu into VMware.

Installation and Upgrade Instructions

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- Upgrades to RD version 10.0.x are only supported from RD 8.0.3. If upgrading from an earlier version, please upgrade to RD 8.0.3 first, and then upgrade to RD 10.0.x.

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

- When upgrading to version 10.0.3 from any earlier release, if the user selects the option for "Installation after upload", the upgrade will fail. To upgrade successfully, upload the upgrade file with "Installation after upload" set to "no", then select the "Upgrade" option after the upload has completed.

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.3

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	8.1.0+, 9.0+, 10.0+
	Note: *Recovery of file systems and databases is only supported when using appliances running version 8.1 and higher.*
	Note: *Actifio RD Cloud Recovery supports Actifio appliance version 9.0.4 and above, and version 10.0.0 and above, with hotfix 2222 required for version 10.0.0, and hotfix 2354 required for version 10.0.1.*

Note: *Actifio RD Cloud Recovery supports Actifio Global Manager (AGM) version 9.0.5 and above.*

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7, 7.0
ESX	5.1, 5.5, 6.0, 6.5, 6.7, 7.0

Note: *VMware must be licensed to support resource pools at the DR site.*

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019
RHEL	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 8.0, 8.1, 8.2
CentOS	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.0, 8.1, 8.2
SUSE	SLES 11- SP4, SLES 12.x, SLES 15, SLES 15 SP1, SLES 15 SP2
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Note: *RD Cloud Recovery supports only the Operating Systems supported by Actifio Sky with the cloud mobility feature.*

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	81.0.x
Google Chrome	86.x
Microsoft Internet Explorer	11.0.x

Supported Clouds

The Actifio Resiliency Director is supported on the following clouds:

- Amazon Web Services (AWS) cloud
- Google Cloud Platform (GCP) cloud
- Microsoft Azure cloud

actifio

5 Release Notes for RD 10.0.2

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

Topics:

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.2:

- Added support for recovery on the Microsoft Azure cloud.

- Added support for RD Cloud Recovery to leverage external authentication, using an Actifio appliance as the source. Additionally, this also results in the ability to leverage an LDAP/AD directory for authentication.

Resolved Issues in RD 10.0.2

The following are the issues resolved in the Actifio Resiliency Director 10.0.2:

Resolved Issues

Issue	Tracking
RD shows an empty error message while upgrading the RD Server or Collector or Cloud Recovery from 10.0.0. to 10.0.1 version.	RD-4319
The Timezone list in the Resiliency Director configuration page is enhanced to show in sorted order.	RD-4337
VM recovery fails with error message "Exception :/ by zero" when CPU reservation is calculated without considering the null value for CoresPerSocket/Virtual Sockets.	RD-4353
Changed the sequence to reset the recovery execution mode to null in RD Server.	RD-4354
RD server shows an incorrect error message when no app or more than one apps is present on the target appliance.	RD-4355
Fixed vulnerability in the Apache Tomcat server and upgraded to 8.5.56.	RD-4412

Known Issues in RD 10.0.2

The following are the list of known issues in Actifio Resiliency Director 10.0.2:

Known Issues

Issue	Workaround	Tracking
Recovery operation fails while trying to recover a VM on the same vCenter with different. clusters.	Configure the following parameters: • `rdtask setproperty -property suppressNicMacAddressConflictVerification -value to true` • `rdtask setproperty -property preserveuuid -value to false`	RD-2267

actifio

Known Issues

Issue	Workaround	Tracking
Application Group Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448
Recovery operation fails with error "Unable to receive any status for the fail-over job from Actifio Appliance" during recovery plan execution.	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty -property cds-failover-complete-retries-interval -value 45;` • `rdtask setproperty -property cds-failover-complete-retries -value 20;`	RD-2461
[Windows system only] RD script fails to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475
RD Collector fails to retrieve the network details if any new network interface is added.	Reboot the source VM after adding any new network interface.	RD-2769
Recovery plan execution fails while powering-on virtual machines.	Change the RAM size of virtual machine, the memory size must be a multiple of 4MB.	RD-3352
VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx. This occurs when storage pool is not configured on target appliance.	Define the target storage pool on the target appliance.	RD-3969
Application Options shows the database list as empty when an application is protected with Dedeup Async policy. This occurs while creating the application group.	Configure the application simultaneously while configuring the recovery plan.	RD-4017
Extra disk with double size of VM disk is found on GCP after the recovery operation.	No known workaround. Issue will be fixed in a future release.	RD-4157

Issue	Workaround	Tracking
RD fails to retrieve system details of the protected VM, if a VMware application is protected with Direct OnVault Policy. This issue occurs on Actifio appliance 9.0.4.	Enter the CPU, Memory and NIC details manually or upgrade the appliance to 9.0.6 or 10.0 or higher.	RD-4211
An error "Impermissible static Ethernet address: 00:0c:29:30:15:6e" occurs while running a recovery plan. This is due to conflicts with VMware reserved MACs, as source VM has one or more NICs with MAC addresses that start with VMware reserved MAC ranges.	Use any of these workarounds: • Change the Mac address on source VM and then run new backup/replicate to target. To change MAC address on source, first delete the NIC and then add it again. • Run the recovery plan by configuring the static IPs for all the Ethernet cards in the VM. If a static IP assignment is selected, RD generates a new MAC address for the recovered VM's NICs.	RD-4291

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.2:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

- RD does not currently support resetting to a new static IP address when recovering Ubuntu into VMware.

Installation and Upgrade Instructions

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- Upgrades to RD version 10.0.x are only supported from RD 8.0.3. If upgrading from an earlier version, please upgrade to RD 8.0.3 first, and then upgrade to RD 10.0.x.

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.2.

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	8.1.0+, 9.0+, 10.0.0 and 10.0.1
	Note: *Recovery of file systems and databases is only supported when using appliances running version 8.1 and higher.*
	Note: *Actifio RD Cloud Recovery supports Actifio appliance version 9.0.4 and above, and version 10.0.0 and above, with hotfix 2222 required for version 10.0.0, and hotfix 2354 required for version 10.0.1.*

Note: *Actifio RD Cloud Recovery supports Actifio Global Manager (AGM) version 9.0.5 and above.*

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7, 7.0
ESX	5.1, 5.5, 6.0, 6.5, 6.7, 7.0

Note: *VMware must be licensed to support resource pools at the DR site.*

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019
RHEL	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 8.0
CentOS	6.x, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 8.0

Operating Systems	Version
SUSE	SLES 11- SP4, SLES 12.x, SLES 15, SLES 15 SP1
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Note: *RD Cloud Recovery supports only the Operating Systems supported by Actifio Sky with the cloud mobility feature.*

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	78.0.x
Google Chrome	83.x
Microsoft Internet Explorer	11.0.x

Supported Clouds

The Actifio Resiliency Director is supported on the following clouds:

- Amazon Web Services (AWS) cloud
- Google Cloud Platform (GCP) cloud
- Microsoft Azure cloud

6 Release Notes for RD 10.0.1

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

> Note: *If you are upgrading from RD version 10.0.0 to 10.0.1, be sure to refer instructions in* Installation and Upgrade Instructions *section.*

Topics:

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.1:

- Added the ability to restart and shutdown the Resiliency Director from the GUI instead of requiring CLI.
- Updated datastore selection logic to allow NFS datastores for VMX and SWAP files when recovery uses Actifio NFS Datastore integration.
- Added NSX-T support along with Standard, and Distributed ports for VM recovery in RD server.
- Added the ability to reset and check Web certificates using the CLI commands (`regeneratewebcert` and `checkwebcert`).

Resolved Issues in RD 10.0.1

The following are the issues resolved in the Actifio Resiliency Director 10.0.1:

Resolved Issues

Issue	Tracking
RD Collector fails to update the NIC's information (add or delete NIC's) for VMs while editing the application group.	RD-2620
Cancellation of a recovery plan changes its status to canceling, but fails to execute the cancel operation.	RD-4232
RD Cloud Recovery shows incorrect error message if AGM is not accessible and at the same time while editing application groups on the Cloud Recovery.	RD-4235
Unable to fetch port groups in the RD Server when one of the hosts is not accessible.	RD-4254
Unable to fetch VM details in the RD Server when one of the networks is not accessible.	RD-4255
Added a configurable parameter "`run.preflightcheck`" to validate cloud and network. This value is set to "true", by default.	RD-4259
Added support for multiple security groups in Amazon Web Services (AWS).	RD-4260
Unable to start "rdprovider service" when VMS is not accessible or vCenter password is changed.	RD-4293
RD Server does not show a warning message when Virtual Management Server (VMS) is changed.	RD-4295
Port group information and resource pool information is changing to default while editing the recovery plan.	RD-4296
Unable to delete appliance on the RD server when logged in as appliance user.	RD-4299
RD Cloud Recovery shows incorrect error message if source appliance is used as target appliance for OnVault VM recovery.	RD-4310
Added the ability to retrieve storage appliance that matches hostname or IP address.	RD-4311
RD Server shows incorrect error message if multiple VMs are found with the same UUID.	RD-4312
RD Server service may be temporarily unavailable if CPU utilization is high.	RD-4313
Sometimes, RD Server does not reflect the changes performed in the RD Collector if CPU utilization is high.	RD-4315
The PCI slot numbers for the newly added VM NIC's are changing to zero when updating application groups on the RD Collector which is part of the recovery plan on the RD Server.	RD-4317

actifio

Known Issues in RD 10.0.1

The following are the list of known issues in Actifio Resiliency Director 10.0.1:

Known Issues

Issue	Workaround	Tracking
Recovery operation fails while trying to recover a VM on the same vCenter with different. clusters.	Configure the following parameters: • `rdtask setproperty - property suppressNicMacAddressCon flictVerification -value to true` • `rdtask setproperty - property preserveuuid - value to false`	RD-2267
Application Group Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution does not show any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448
Recovery operation fails with error "Unable to receive any status for the fail-over job from Actifio Appliance" during recovery plan execution.	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty - property cds-failover- complete-retries- interval -value 45;` • `rdtask setproperty - property cds-failover- complete-retries -value 20;`	RD-2461
[Windows system only] RD script fails to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475
RD Collector fails to retrieve the network details if any new network interface is added.	Reboot the source VM after adding any new network interface.	RD-2769
Recovery plan execution fails while powering-on virtual machines.	Change the RAM size of virtual machine, the memory size must be a multiple of 4MB.	RD-3352

Known Issues

Issue	Workaround	Tracking
Unable to set static IP on both Ubuntu versions 16.04 and 18.04 VMs.	No known workaround. Issue will be fixed in a future release.	RD-3475
VM recovery fails due to insufficient memory resources in the parent resource pool during failover operation.	Increase memory reservation on the resource pool to handle the VM recovery.	RD-3510
VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx. This occurs when storage pool is not configured on Target appliance.	Define the target storage pool on the Target appliance.	RD-3969
Application Options shows the database list as empty when an application is protected with Dedeup Async policy. This occurs while creating the application group.	Configure the application simultaneously while configuring the recovery plan.	RD-4017
Extra disk with double size of VM disk is found on GCP after the recovery operation.	No known workaround. Issue will be fixed in a future release.	RD-4157
RD fails to retrieve system details of the protected VM, if a VMware application is protected with Direct OnVault Policy. This issue occurs on Actifio appliance 9.0.4.	Enter the CPU, Memory and NIC details manually or upgrade the appliance to 9.0.6 or 10.0 or higher.	RD-4211
An error "Impermissible static Ethernet address: 00:0c:29:30:15:6e" occurs while running a recovery plan. This is due to conflicts with VMware reserved MACs, as source VM has one or more NICs with MAC addresses that start with VMware reserved MAC ranges.	Use any of these workarounds: • Change the Mac address on source VM and then run new backup/replicate to target. To change MAC address on source, first delete the NIC and then add it again. • Run the recovery plan by configuring the static IPs for all the Ethernet cards in the VM. If a static IP assignment is selected, RD generates a new MAC address for the recovered VM's NICs.	RD-4291
In some versions of Google Chrome browser, some SQL Sever parameters are not displaying.	Open RD in a new tab in the same browser and it displays the SQL Server parameters perfectly.	RD-4351

Known Security and CVE Issues in RD 10.0.1

The following table lists the known security and CVE issues in Actifio Resiliency Director 10.0.1:

Known CVEs

Description	CVE#	Tracking
RD uses node version 10.14 which in turn uses the node-sass v4.8.3.	CVE-2018-11499 CVE-2018-11693 CVE-2018-11694 CVE-2018-11695 CVE-2018-11697 CVE-2018-11698 CVE-2018-19797 CVE-2018-19826 CVE-2018-19827 CVE-2019-6283	RD-4320
RD uses resteasy-jaxrs-3.0.26.Final.jar version which causes security vulnerability. This issue is noticed and will be addressed in the following release.	CVE-2020-1695	RD-4348

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.1:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

Installation and Upgrade Instructions

- **RD shows an empty error message while upgrading the RD Server or Collector or Cloud Recovery from 10.0.0. to 10.0.1 version. You can ignore this empty message by clicking the Okay button.**

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- Upgrades to RD version 10.0.x are only supported from RD 8.0.3. If upgrading from an earlier version, please upgrade to RD 8.0.3 first, and then upgrade to RD 10.0.x.

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.1.

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	8.1.0+, 9.0+, and 10.0.0
	Note: *Recovery of file systems and databases is only supported when using appliances running version 8.1 and higher.*
	Note: *Actifio RD Cloud Recovery supports Actifio appliance version 9.0.4 and above, and version 10.0.0 and above, with hotfix 2222 required for version 10.0.0.*

Note: *Actifio RD Cloud Recovery supports Actifio Global Manager (AGM) version 9.0.5 and above.*

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7, 7.0
ESX	5.1, 5.5, 6.0, 6.5, 6.7, 7.0

Note: *VMware must be licensed to support resource pools at the DR site.*

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019
RHEL	6.x, 7.1, 7.2, 7.3, 7.4, 7.6, 7.7, 8.0
CentOS	6.x, 7.1, 7.2

actifio

Operating Systems	Version
SUSE	SLES 11- SP4, SLES 12.x, SLES 15
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Note: *RD Cloud Recovery supports only the Operating Systems supported by Actifio Sky with the cloud mobility feature.*

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	76.0.x
Google Chrome	81.x
Microsoft Internet Explorer	11.0.x

7 Release Notes for RD 10.0.0

This section describes the new features and enhancements, system requirements, installation notes, resolves issues, and limitations.

It includes the following topics:

What's New in this Release

The following are the new features and enhancements in Actifio Resiliency Director 10.0.0:

Orchestrated recovery to the clouds

Highlights:

- New type of Resiliency Director appliance that is a single-instance, called Resiliency Director Cloud Recovery.
- Recovery supported to Amazon AWS and Google Cloud.
- Added ability to recover VMs and Servers from OnVault images (only when recovering to the cloud).
- Dynamic load balancing of recoveries from OnVault images across groups of appliances in the cloud.
- Resiliency Director Cloud Recovery connects to AGM to obtain the list of candidate applications for recovery and does not need to communicate with Actifio appliances at the source site.
- Introduced the following new objects to be defined:
    - **Clouds:** To predefine connection credentials and options for clouds used as DR destinations.
    - **Networks:** To predefine network details used during recovery of servers to a cloud.
    - **Appliance Groups:** To define the group of appliances to be used during recovery (when recovering from images in OnVault only).

Benefits:

- Customers can eliminate the need for their own DR site, and leverage on-demand resources in the cloud.

- Orchestration of recoveries to the cloud provide repeatable results that can be tested, and lower RTO due to elimination of manual steps and scripting.

- Reduced RTO due to horizontal scaling of recoveries across Sky appliances created (by the user) as-needed at the time of recovery.

Simplified/Restructured Menus

Highlights:

- All connections from Resiliency Director to external systems are now consolidated under a new menu item called "Connections".

- Items available under the Connections menu include:

  o AGM

  o Appliances

  o Appliance Groups

  o Virtual Management Servers

  o Clouds

  o Networks

  Note: *Availability of these menu items is conditional, depending on the Resiliency Director installation type.*

Benefits:

- More intuitive experience with fewer top-level menu items.

Enhanced SQL Server Recovery

Highlights

- When recovering SQL Servers using a two-step process (recovery of the core operating system and SQL Server binaries, followed by recovery of the user databases), the name conflicts are now handled automatically.

Benefits

- Elimination of manual steps to resolve name conflicts when using a two-step process to recover servers running Microsoft SQL Server

Resolved Issues in RD 10.0.0

The following are the issues resolved in the Actifio Resiliency Director 10.0.0:

Resolved Issues

Issue	Tracking
Resiliency Director fails to send recovery execution report to the configured email address.	RD-2459
Error message "java.lang.OutOfMemoryError: Java heap space" is displayed in the logs when rdprovider service is re-started.	RD-3409
Incorrect outputs are displayed for the following commands: • `rdinfo getsystemid` command displays IP address instead of systemid • `rdinfo getsysteminfo` command displays systemid instead of systeminfo	RD-3468
Error message "NullPointerException " is displayed intermediately while executing the recovery plan in RD Server with run once option and it does not allow the recovery plan execution.	RD-3568
Cleartext Transmission of Sensitive Information via HTTP.	RD-3569
Fixed multiple vulnerabilities in Apache Tomcat server and upgraded to 8.5.50.0.	RD-3636
Unable to supply script argument to failover and reset scripts.	RD-3669
Error message "Unable to connect to virtual management server" is displayed after editing the Virtual Management Server details and clicking on the test button to verify the connection to the server without modifying the credentials.	RD-3783
Virtual Machine recovery fails after prefix change in the existing recovery plan.	RD-3850
Duplicate Application Group entries are displayed on Resiliency Director Server.	RD-3859
The Enable Application Group level script check-box does not work properly and displays incorrect values in UI while adding or editing Application Group with "create new vm from vmware vm" filter.	RD-4149

Known Issues in RD 10.0.0

The following lists the known defects in Actifio Resiliency Director 10.0.0:

Known Issues

Issue	Workaround	Tracking
Application Group Level script execution is not showing any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2447
VM Level script execution is not showing any data when recovery plan executed successfully.	No known workaround. Issue will be fixed in a future release.	RD-2448
During the execution of recovery plan, recovery fails with the error "Unable to receive any status for the fail-over job from Actifio Appliance".	Increase the property values of *cds-failover-complete-retries-interval* and *cds-failover-complete-retries* to a higher value as RD Server failed to retrieve the job status within the given time frame. Execute the following commands to increase the value for these properties: • `rdtask setproperty -property cds-failover-complete-retries-interval -value 45;` • `rdtask setproperty -property cds-failover-complete-retries -value 20;`	RD-2461
On Windows machine RD script failed to allocate static IP to the Recovered Machine when User Access Control (UAC) is enabled on source VM.	Disable User Access Control (UAC) on source VM and run backup to reflect the changes on next recovery.	RD-2475

actifio

Known Issues

Issue	Workaround	Tracking
Add/Delete NIC's information of VM in application group does not get updated even if user edits the application group.	Removing and adding VM to the application group updates the NIC's information. To get reflect the NIC's information in DB user need to perform the following steps. **Step1**: Edit the Application group containing VMs that had NICs deleted or added. **Step2**: Remove the affected VMs from application Group and save the application group. **Step3**: Edit application group and add the VM removed in step 2. Save the application group. **Step4**: Edit recovery plan, and verify configurable parameters (Resource pool, Port groups) for the VM and then save the recovery plan.	RD-2620
RD Collector fails to retrieve the network details if user adds any new network interface.	Reboot the source VM after adding any new network interface.	RD-2769
Recovery plan execution fails during powering-on virtual machines.	Change the RAM size of virtual machine, and the memory size must be a multiple of 4MB.	RD-3352
Unable to set static IP on both Ubuntu versions 16.04 and 18.04 VMs.	No known workaround. Issue will be fixed in a future release.	RD-3475
VM recovery fails due to insufficient memory resources in the parent resource pool for failover operation.	Change the memory reservation on the resource pool so it is large enough to handle the requirements for the VMs being recovered.	RD-3510
When storage pool is not configured on Target appliance, VM recovery fails and displays the error: Virtual Machine recovery failed. Reason:unsupported filter value property: udsuid=xxxxxxxxx.	Define the target storage pool on the DR side appliance.	RD-3969
While creating the application group, Application Options shows the database list as empty when the application is protected with Dedeup Async policy (DAR).	Configure the application while configuring the recovery plan.	RD-4017
After recovery, extra disk with double size of VM disk is found on GCP.	No known workaround. Issue will be fixed in a future release.	RD-4157

Issue	Workaround	Tracking
If Systemstate or VMware application is protected with Direct OnVault Policy, RD fails to retrieve system details of the protected VM's.	Manually enter the CPU, Memory and NIC details.	RD-4211

Known Security and CVE Issues in RD 10.0.0

The following table lists the known security and CVE issues in Actifio Resiliency Director 10.0.0:

Known CVEs

Description	CVE#	Tracking
RD uses the latest version of "js-base64" Plugin which in turn uses old version of jQuery script files.	CVE-2019-11358 CVE-2015-9251 WS-2016-0090	RD-4192

Limitations

The following are the limitations in Actifio Resiliency Director 10.0.0:

- This release does not support recovery of Microsoft SQL Failover Clusters or SQL Always On Availability Group (AAG) clusters. However, the databases captured from failover clusters and Availability Groups can be recovered to stand-alone SQL instances, or pre-existing failover clusters at the DR site.

- This release does not support recovery of VMs protected with templates created on an appliance after being managed by the AGM. [3861]

Installation, Upgrade and other Important Instructions

- When upgrading the RD appliance, you must upgrade the Resiliency Director Server before upgrading the Resiliency Director Collector.

- **Upgrades to RD version 10.0.0 are only supported from RD 8.0.3. If upgrading from an earlier version, please upgrade to RD 8.0.3 first, and then upgrade to RD 10.0.0.**

- If you want to change the IP address of RD appliance using the Front Panel (FP) console, use the **rdtask configsystem** command afterward to make the same IP change. This will update system configuration files and ensure continued operation of your RD Collector or RD Server.

actifio

Supported Configurations

This section provides supported configuration details for Actifio Resiliency Director 10.0.0.

Supported Actifio Appliance Versions

The following table lists the supported Actifio Appliance versions:

Name of the Appliance	Version
Actifio CDS and Sky Appliance	8.1.0+, 9.0+, and 10.0.0
	Note: Recovery of file systems and databases is only supported when using appliances running version 8.1 and higher.
	Note: Actifio RD Cloud Recovery supports Actifio appliance version 9.0.4 and above, and version 10.0.0 and above, with hotfix 2222 required for version 10.0.0.

Note: Actifio RD Cloud Recovery supports Actifio Global Manager (AGM) version 9.0.5 and above.

Supported VMware vSphere Versions

The following table lists the supported VMware vSphere versions:

VMware vCenter	Version
VMware vCenter	5.5, 6.0, 6.5, 6.7
ESX	5.1,5.5, 6.0, 6.5, 6.7

Note: VMware must be licensed to support resource pools at the DR site.

Supported Operating Systems

The following table lists the supported operating system versions:

Operating Systems	Version
Windows	2012, 2012 R2, 2016, 2019
RHEL	6.x, 7.1,7.2, 7.3 7.4, 7.6, 7.7, 8.0
CentOS	6.x, 7.1,7.2

Operating Systems	Version
SUSE	SLES 11- SP4, SLES 12.x
Open SUSE	12.x
Ubuntu Server	16.04 LTS, 18.04 LTS

Supported Browsers

The Actifio Resiliency Director can be accessed or used in these browsers:

Supported Browsers	Version
Mozilla Firefox	73.0.x
Google Chrome	80.x
Microsoft Internet Explorer	11.0.x

actifio