

Veritas™ Resiliency Platform 3.0 Release Notes

Veritas Resiliency Platform: Release Notes

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Overview

In diesem Kapitel werden folgende Themen behandelt:

- [Informationen zu Veritas Resiliency Platform](#)
- [Informationen zu Resiliency Platform-Funktionen und -Komponenten](#)
- [New features and changes in Veritas Resiliency Platform 3.0](#)
- [What is not supported?](#)
- [Using the product documentation](#)

Informationen zu Veritas Resiliency Platform

Veritas Resiliency Platform bietet eine einheitliche Lösung, mit der Sie proaktiv die durchgängige Verfügbarkeit der Geschäftsprozesse über Private, Public und Hybrid Clouds aufrechterhalten können. Die Resiliency Platform ermöglicht Ihnen die vollständige Automatisierung aller Resiliency-Vorgänge im Zusammenhang mit virtuellen Computern, Anwendungen und mehrschichtigen Business Services in Ihrem Rechenzentrum. Sie sichert die bestehenden Investitionen in Technologie, indem sie sich in Ihre bestehenden Umgebungen und Infrastruktur integriert.

Für die Datenreplikation können Sie die Resiliency Platform oder eine Drittanbieterlösung verwenden, die von der Veritas Resiliency Platform unterstützt wird. Eine Liste der unterstützten Hersteller und Produkte finden Sie im *Veritas Resiliency Platform Hardware and Software Compatibility Guide*.

Das Resiliency Platform-Datentransfergerät ist eine getrennt lizenzierte Funktion der Veritas Resiliency Platform. Es bietet eine Datenreplikation zwischen geografisch getrennten Rechenzentren und stellt damit eine wirksame Lösung für die Notfallwiederherstellung bereit. Das Resiliency Platform-Datentransfergerät kann für die folgenden Zwecke verwendet werden:

- Für die Wiederherstellung von virtuellen VMware-Computern im Rechenzentrum vor Ort
- Für die Wiederherstellung von virtuellen VMware- und Hyper-V-Computern im Cloud-Rechenzentrum

Die Resiliency Platform verfügt über die folgenden Kernfunktionen:

Sicherheit und Compliance	Veritas Resiliency Platform bietet verbesserte Datenverschlüsselung für Daten während der Verarbeitung.
Vorhersagbarkeit	Kunden können garantiert geschäftskritische Recovery Time Objectives (RTO, Ziele für die Wiederherstellungszeit) und Recovery Point Objective (RPO, Ziele für den Wiederherstellungspunkt) erfüllen.
Compliance	Kunden können die Einhaltung von internen und externen Vorgaben für die Gewährleistung der geschäftlichen Verfügbarkeit durch Überprüfungsberichte und Tests der Notfallwiederherstellung in Echtzeit ohne Betriebsunterbrechung nachweisen.
Automatisierung	Kunden können eine vollständige Automatisierung aller Resiliency-Vorgänge, einschließlich Durchführungsregeln für die Wiederherstellung, und eine Orchestrierung des Startens und Beendens der Wiederherstellung für mehrschichtige Anwendungen nutzen. Damit wird das Risiko von Ausfallzeiten durch Benutzerfehler reduziert.
Flexibilität	Kunden können Ihre vorhandenen Infrastrukturen weiter nutzen, Innovationen nach eigenen Anforderungen einführen und dabei die Flexibilität der Resiliency Platform einsetzen, um Workloads zwischen verschiedenen Standorten oder sogar in die Cloud zu migrieren.

Siehe "[Informationen zu Resiliency Platform-Funktionen und -Komponenten](#)" auf Seite 10.

Informationen zu Resiliency Platform-Funktionen und -Komponenten

Im Folgenden finden Sie eine kurze Einführung in die wichtigsten Komponenten der Veritas Resiliency Platform und die zugehörigen Beziehungen. Administratoren, die für die Bereitstellung und Konfiguration des Produkts verantwortlich sind, müssen genaue Kenntnisse darüber haben.

Resiliency Manager	<p>Die Komponente, die Resiliency-Fähigkeiten in einer Resiliency Domain bereitstellt. Sie besteht aus lose verknüpften Diensten, einem verteilten Daten-Repository und einer Managementkonsole. Der Resiliency Manager wird als virtuelle Appliance bereitgestellt.</p>
Infrastructure Management Server (IMS)	<p>Die Komponente, die die Asset-Infrastruktur in einem Rechenzentrum erkennt, überwacht und verwaltet. Der IMS überträgt Informationen über die Asset-Infrastruktur an den Resiliency Manager. Der IMS wird als virtuelle Appliance bereitgestellt.</p> <p>Um die Skalierung zu ermöglichen, können mehrere IMS im gleichen Rechenzentrum bereitgestellt werden.</p>
Veritas InfoScale Operations Manager – Managementserver	<p>Dies ist die Komponente, die die Erkennung von InfoScale-Anwendungen ermöglicht, die im Veritas InfoScale Operations Manager, auch als „Veritas InfoScale Operations Manager-Server“ bezeichnet, bereits konfiguriert sind. Sie können die InfoScale-Anwendungen, die in Veritas InfoScale Operations Manager bereits konfiguriert sind, unter Linux, Solaris, AIX und Windows verwalten.</p> <p>Sie müssen diese Komponente nur hinzufügen, wenn Sie die InfoScale-Anwendungen verwalten und wiederherstellen möchten, die bereits in Veritas InfoScale Operations Manager konfiguriert sind.</p>
NetBackup Server	<p>Die Komponente, die eine Wiederherstellung von virtuellen Computern auf einem lokalen oder Remote-Rechenzentrum mit von NetBackup generierten Backup-Images ermöglicht.</p> <p>Sie müssen diese Komponente nur hinzufügen, wenn Sie die virtuellen Computer unter Verwendung von durch NetBackup generierten Backup-Images wiederherstellen möchten.</p>
Replication Gateway	<p>Dies ist die Komponente des Veritas Resiliency Platform-Datentransfergeräts, die als virtuelle Appliance in beiden Rechenzentren bereitgestellt und zur Durchführung einer Replikation zwischen den Rechenzentren verwendet wird.</p> <p>Wenn Sie eine Replikationstechnologie eines Drittanbieters verwenden möchten, ist eine Bereitstellung des Replication Gateways nicht erforderlich.</p>

Resiliency Domain	<p>Der logische Umfang einer Resiliency Platform-Bereitstellung.</p> <p>Eine Erweiterung ist über mehrere Rechenzentren möglich.</p>
Rechenzentrum	<p>Für den Anwendungsfall einer Notfallwiederherstellung muss die Resiliency Domain mindestens zwei Rechenzentren an verschiedenen Standorten, ein Produktionsrechenzentrum und ein Wiederherstellungsrechenzentrum, enthalten. Jedes Rechenzentrum verfügt über einen Resiliency Manager und einen oder mehrere IMS. Wenn Sie das Resiliency Platform-Datentransfergerät für die Replikation verwenden, muss jedes Rechenzentrum auch mindestens ein Replication Gateway haben.</p>
Asset-Infrastruktur	<p>Die Rechenzentrum-Assets, die Sie Resiliency Platform zur Erkennung und Überwachung durch den IMS hinzufügen.</p> <p>Die Asset-Infrastruktur kann Hosts (Windows- oder Linux-Server), Virtualisierungsserver für Hyper-V und VMware sowie Gehäuse (Speichergruppen) umfassen. Sobald die Asset-Infrastruktur vom IMS erkannt wird, werden die erkannten virtuellen Computer oder Anwendungen in der Konsole als Assets aufgeführt, die verwaltet oder geschützt werden sollen.</p>
Resiliency Group	<p>Die Einheit für die Verwaltung und Steuerung in der Resiliency Platform. Sie organisieren Assets, die miteinander in Beziehung stehen, in einer Resiliency Group und verwalten bzw. überwachen sie als einzelne Entität.</p>
Service Objective	<p>Eine Vorlage zur Definition des Typs von Vorgängen und Technologien, die für eine Gruppe von Assets unterstützt werden. Sie können ein Service Objective auf jede Resiliency Group anwenden.</p> <p>Eine Vorlage, die die Merkmale eines Dienstes identifiziert. Dabei kann es sich um Merkmale in Verbindung mit der Verfügbarkeit handeln, beispielsweise lokale Redundanz und eine Anzahl von Knoten in einem Cluster, oder um Merkmale der Notfallwiederherstellung, beispielsweise eine Remote-Wiederherstellung, Recovery Point Objective (RPO), SLA, Unterstützung von Simulationen usw. Das Service Objective wird angewendet, wenn eine Gruppe von Assets einer Resiliency Group hinzugefügt wird.</p> <p>Die Resiliency Platform überwacht die Resiliency Groups basierend auf der Service Objective-Definition und meldet gegebenenfalls die Risiken.</p>

Virtual Business Service (VBS)

Ein mehrschichtiger Business Service, bei dem jede VBS-Ebene eine oder mehrere Resiliency Groups hostet. Mit einem VBS können Sie mehrere Dienste als einzelne Einheit für die Darstellung, die Automatisierung und das gesteuerte Starten und Beenden in der gewünschten Reihenfolge gruppieren. VBS verwendet das Verfahren der vertikalen Gruppierung, um mehrere Dienste zu gruppieren. Sie können Vorgänge zur Notfallwiederherstellung für den gesamten VBS durchführen.

New features and changes in Veritas Resiliency Platform 3.0

This release of Veritas Resiliency Platform includes the following new features, changes, and enhancements.

Automated disaster recovery and migration support for Microsoft Azure

Veritas Resiliency Platform 3.0 introduces the support for recovery of the data center assets to Microsoft Azure. You can configure and protect your VMware and Hyper-V virtual machines for recovery to Azure using the Resiliency Platform Data Mover.

You can use Resiliency Platform to seamlessly move your single-tiered or multi-tiered workloads between on-premises data center and Azure. Resiliency Platform provides controlled recovery options for the recovery of your on-premises workload to Azure.

Enhanced support for vCloud Director

Resiliency Platform 3.0 introduces the support for recovery of VMware and Hyper-V virtual machines to vCloud Director without adding the vCenter server or Hyper-V servers. This feature can help you perform disaster recovery of virtual machines even without accessing the VMware or Hyper-V servers.

Internationalization support for German language

In addition to the Internationalization support introduced in Resiliency Platform 2.2, Resiliency Platform 3.0 provides some additional Internationalization support for German language. Starting with 3.0, you can see the localized version of the Resiliency Platform Console if you are logging in from German locale browser. The product can be used in a German environment.

For Internationalization support introduced in Resiliency Platform 2.2, refer to *Veritas Resiliency Platform 2.2 Release Notes*.

Support for multiple Resiliency Managers in a data center

Resiliency Platform 3.0 introduces support for multiple Resiliency Managers in a data center. Multiple Resiliency Managers in a data center helps in maintaining resiliency and fault tolerance in the data center.

What is not supported?

Veritas Resiliency Platform does not support the following features:

- EFI (Extensible Firmware Interface) enabled Hyper-V Generation 2 virtual machines are not supported if replication technology is Resiliency Platform Data Mover.
- VMware fault tolerant virtual machines.
- Executing a custom script on a host that is not actively reporting to Resiliency Platform environment through Infrastructure Management Server (IMS) or Infoscale Operations Manager Management Server.
- Database user authentication for Oracle applications.
- Rehearse and cleanup rehearsal operations for applications on Microsoft Failover Cluster.
- Rehearse and cleanup rehearsal operations for applications inside virtual machines having data on raw disks mapped to virtual machines and data replicated through 3PAR RemoteCopy or NetApp SnapMirror through fibre channel.
- Rehearse and cleanup rehearsal operations if the recovery data center is in vCloud.
- Takeover operation from a cloud data center to on-premises data center.
- Raw device mapping (RDM) is not supported for virtual machine disaster recovery using Resiliency Platform Data Mover.
- Replacing the Replication Gateway on the on-premises data center is not supported for the use case of recovery of virtual machines to vCloud Director without adding the vCenter server or Hyper-V server.
- Starting and stopping of resiliency groups is not supported for the use case of recovery of virtual machines to vCloud Director without adding the vCenter server or Hyper-V server.

Array-based replication does not support the following:

- Combination of replicated and non-replicated storage to virtual machines is not supported.
- Combination of storage from multiple array technologies is not supported.

Using the product documentation

[Tabelle 1-1](#) lists the URLs for Veritas Resiliency Platform documentation and [Tabelle 1-2](#) lists the Veritas Resiliency Platform guides.

Tabelle 1-1 URLs for Veritas Resiliency Platform documentation

URL	Description
https://sort.veritas.com/documents	The latest version of the product documentation: Product guides in PDF format. Online help portal. The help content is also available from the product console.
https://www.veritas.com/community/business-continuity/videos	The list of Resiliency Platform videos.
https://www.veritas.com/support/en_US/article.000127401	The late breaking news that is related to this release.

Tabelle 1-2 Names of Veritas Resiliency Platform guides

Title	Description
<i>Veritas Resiliency Platform Hardware and Software Compatibility List (HSCL)</i>	The list of hardware and software compatibility.
<i>Veritas Resiliency Platform Release Notes</i>	The release information such as main features, known issues, and limitations.
<i>Veritas Resiliency Platform 3.0 Overview and Planning Guide</i>	The information about the product, its features, and capabilities.
<i>Veritas Resiliency Platform 3.0 User Guide</i>	The information about deploying Resiliency Platform and using the product capabilities.
<i>Veritas Resiliency Platform Third-Party Software License Agreements</i>	The information about the third-party software that is used in Resiliency Platform.

System requirements

In diesem Kapitel werden folgende Themen behandelt:

- [Unterstützte Hypervisoren für die Bereitstellung der virtuellen Resiliency Platform-Appliance](#)
- [Anforderungen an Systemressourcen für die Resiliency Platform](#)
- [Network and firewall requirements](#)

Unterstützte Hypervisoren für die Bereitstellung der virtuellen Resiliency Platform-Appliance

In diesem Abschnitt werden die Hypervisorversionen aufgeführt, die für die virtuelle Resiliency Platform-Appliance unterstützt werden.

Microsoft Hyper-V:

- Windows Server 2012 mit Hyper-V
- Windows Server 2012 R2 mit Hyper-V

VMware:

- ESXi 5.1, 5.5, 6.0, 6.0U1, 6.0U2, 6.5
- vCenter Server 5.1, 5.5, 6.0, 6.0U1, 6.0U2, 6.5

Hinweis: Die Listen der unterstützten Plattformen für die Bereitstellung der virtuellen Appliance und für die Notfallwiederherstellung virtueller Computer sind unterschiedlich. Informationen zur Plattformunterstützung für die Notfallwiederherstellung virtueller Computer finden Sie in der *Kompatibilitätsliste für Hardware und Software (HSCL) für die Veritas Resiliency Platform*.

Anforderungen an Systemressourcen für die Resiliency Platform

Die Menge an virtuellen CPUs, Arbeitsspeicher und Speicherplatz, die Veritas Resiliency Platform benötigt, wird in diesem Abschnitt aufgeführt.

Die Mindestkonfiguration, die für eine virtuelle Appliance für Resiliency Manager, Infrastructure Management Server (IMS), Replication Gateway und YUM-Repository-Server empfohlen wird:

Tabelle 2-1 Mindestkonfiguration

Komponente	Mindestkonfiguration
Resiliency Manager	60 GB Speicherplatz auf dem Datenträger 32 GB RAM Virtuelle CPU 8
Infrastructure Management Server (IMS)	60 GB Speicherplatz auf dem Datenträger 16 GB RAM Virtuelle CPU 8
Replication Gateway	40 GB Speicherplatz auf dem Datenträger 16 GB RAM Virtuelle CPU 8 Zusätzlicher externer Datenträger von 50 GB
YUM-Repository-Server	60 GB Speicherplatz auf dem Datenträger 4 GB RAM Virtuelle CPU 2

Komponente	Mindestkonfiguration
<p>Zu Veritas Resiliency Plattform hinzuzufügende Hosts:</p> <ul style="list-style-type: none"> ■ Host mit Windows-Installation ■ Anwendungshost ■ Host des Resiliency Plattform-Datentransfergeräts ■ Speichererkennungshost ■ Hyper-V-Host 	<p>15 GB Speicherplatz auf dem Datenträger</p> <p>4 GB RAM</p> <p>Dual-Prozessor-CPU</p> <p>Wenn Sie einen einzelnen Host für mehrere Zwecke verwenden, fügen Sie den erforderlichen Speicherplatz und RAM für jeden Zweck hinzu. Beispiel: Wenn Sie einen einzelnen Host als Host mit Windows-Installation und als Anwendungshost verwenden, dann benötigen Sie mindestens 30 GB Speicherplatz und 8 GB RAM.</p> <p>Beachten Sie, dass Sie keinen einzelnen Host gleichzeitig als Host mit Windows-Installation und als Host des Resiliency Plattform-Datentransfergeräts verwenden können.</p>

Hinweis: Sie müssen die Ressourcen für den Resiliency Manager und den IMS reservieren, um sicherzustellen, dass diese Ressourcen nicht ausgelagert werden, wenn Hypervisoren überlastet werden.

Wenn die virtuelle Appliance die Mindestkonfiguration nicht einhält, erhalten Sie eine Warnung während des Bootstraps der virtuellen Appliance und Sie müssen bestätigen, dass Sie mit der aktuellen Konfiguration fortfahren möchten.

Wenn Sie planen, die virtuelle YUM-Appliance nicht zu verwenden, benötigen Sie einen Linux-Server mit mindestens 50 GB Speicherplatz, der als Repository-Server konfiguriert wird. Die Bereitstellung für den Repository-Server ist optional. In Zukunft müssen die Veritas Resiliency Plattform-Patches oder -Updates installiert werden.

Wenn Sie einen dynamischen Arbeitsspeicher auf Hyper-V aktivieren möchten, müssen die folgenden Voraussetzungen erfüllt sein:

- Der Arbeitsspeicher für den Start und die Mindestkonfiguration muss mindestens so groß sein wie der Arbeitsspeicher, der vom Hersteller empfohlen wird.
 - Wenn Sie dynamischen Speicher auf einem Windows Server 2012-Betriebssystem verwenden, geben Sie die Parameter für den Start-Arbeitsspeicher, den Mindest- und Maximalarbeitsspeicher in Vielfachen von 128 Megabyte (MB) ein. Wenn dies nicht erfolgt, führt dies möglicherweise zu Fehlern des dynamischen Arbeitsspeichers und es erfolgt keine Zunahme des Arbeitsspeichers in einem Gastbetriebssystem.
- Auch wenn Sie einen dynamischen Arbeitsspeicher verwenden, muss die oben genannte Mindestkonfiguration eingehalten werden.

Network and firewall requirements

The following are the network requirements for Veritas Resiliency Platform:

- Before you use the hostname and the IP address in the Network settings, you need to register them with the DNS server.
- The hostname or the IP address which is used for product configuration, should not have multiple entries in the DNS server. For example, the IP address should not be associated with multiple hostnames, or the hostname should not be associated with multiple IP addresses.
- Ensure that ports 88 and 750 on DNS server are open for communication with IMS.
- In case of recovery to cloud, ensure that port 53 on DNS server is open for bi-directional communication with the cloud data center.
- The hostname that you use for a virtual appliance must not start with a digit and must not contain the underscore (_) character.
- Veritas Resiliency Platform supports only Internet protocol version 4 (IPV4).
- If you plan to use the DHCP server, the DHCP server should be in the same subnet where you plan to deploy the product.

The following ports are used for Veritas Resiliency Platform:

Tabelle 2-2 Ports used for Resiliency Manager

Ports used	Purpose	For communication between	Direction	Protocol
443	Used for SSL communication	Resiliency Manager and web browser	Browser to Resiliency Manager	HTTPS, TLS v1.1+
14176	Used for communication between the Resiliency Manager and Infrastructure Management Server (IMS)	Resiliency Manager and IMS	Bi-directional	HTTPS, TLS v1.1+

Ports used	Purpose	For communication between	Direction	Protocol
7001	Used for database replication	Resiliency Manager and IMS In case of multiple Resiliency Managers, between Resiliency Managers	Bi-directional	TCP with SSL/TLS1+
389	Used for communication with LDAP/AD server	Resiliency Manager and LDAP/AD server	Bi-directional	TCP, user provided
636	Used for communication with LDAP/AD server	Resiliency Manager and LDAP/AD server	Bi-directional	TCP with SSL/TLS, user provided
22	Used for communication between remote host to the appliance klish access	Appliance and the hosts	Bi-directional	TCP
123	Used for NTP synchronization	Appliance and the NTP server	Bi-directional	TCP
14180	Used for accessing API service	Resiliency Manager and the API service	Bi-directional	HTTPS, TLSv1.1+

Tabelle 2-3 Ports used for on-premises IMS and in-cloud IMS

Ports used	Description	For communication between	Direction	Protocol
14176	Used for communication between the Resiliency Manager and Infrastructure Management Server (IMS)	Resiliency Manager and IMS	Bi-directional	HTTPS, TLSv1.1+
5634	Used for IMS configuration	IMS and the hosts	Bi-directional	HTTPS, TLSv1.1+

Ports used	Description	For communication between	Direction	Protocol
14161	Used for running the IMS console	Resiliency Manager and IMS	Resiliency Manager to IMS	HTTPS, TLSv1.1+
22	Used for communication between remote host to the appliance klish access Used for remote deployment of the packages on remote UNIX host from IMS	IMS and the hosts	Bi-directional	TCP
135	Used for remote deployment on client computer (inbound)	Host and remote Windows hosts	Bi-directional	TCP
123	Used for NTP synchronization	Appliance and the NTP server	Bi-directional	TCP

Table 2-4 Ports used for on-premises Replication Gateway and in-cloud Replication Gateway

Ports used	Description	For communication between	Direction	Protocol
33056	Used for replication	On-premises virtual machine and Replication Gateway/Storage Proxy		TCP
5634	Used for communication with IMS	IMS and Replication Gateway/Storage Proxy	Bi-directional	HTTPS, TLSv1.1+
8089	Used for replication	in-cloud component and on-premises component	Bi-directional	TCP

Tabelle 2-5 Ports used for target Gateway in resync operation

Ports used	Description	For communication between	Direction	Protocol
67	BOOTP server	Target Gateway enabled with DHCP role and host	Uni-directional	UDP
68	BOOTP client	Target Gateway enabled with DHCP role and host	Uni-directional	UDP
69	TFTP protocol	Target Gateway enabled with PXE role and host	Uni-directional	TCP/UDP

Tabelle 2-6 Ports used for virtual machines

Ports used	Description	For communication between	Direction	Protocol
22	Used for communication between remote host to the appliance klish access Used for remote deployment of the packages on remote UNIX host from IMS	IMS and the hosts	Bi-directional	TCP
5634	Used for communication with IMS	IMS and the hosts	Bi-directional	HTTPS, TLSv1.1+
33056	Used for replication	Virtual machine and Replication Gateway		TCP

Fixed issues

In diesem Kapitel werden folgende Themen behandelt:

- [Fixed issues](#)

Fixed issues

This chapter lists the issues that have been fixed in the Veritas Resiliency Platform 3.0 release.

Tabelle 3-1 Issues fixed in Veritas Resiliency Platform 3.0

Incident number	Abstract
5170	Replication information error
8465	Resiliency group and VBS names in charts are displayed incorrectly in Japanese and Chinese
8433	Cannot edit application discovery frequency for the uploaded application bundles from console
8617	Metering report does not work for third-party replication technologies
5167	VMDK and VMX files need to be in the same folder
5092	Edit resiliency group operation may fail after rehearsal or cleanup rehearsal
8654	Previously configured network mapping may not work after re-adding a VMware vCenter server
8697	Replication information not discovered for Hyper-V virtual machines configured in Microsoft Failover Clustering environment using Non-English characters in the CSV path

Incident number	Abstract
8326	Resiliency group details in the console displays stale vCloud virtual machine entries after migrating back a resiliency group to the premises site

Known issues

In diesem Kapitel werden folgende Themen behandelt:

- Disaster recovery (DR) configuration for resiliency group fails if Microsoft Hyper-V Replica is configured after you add a virtual machine in Resiliency Platform
- In the VM Inventory report, instead of allocated memory, Resiliency Platform shows the total memory of the virtual machines
- Certain validations do not work while creating a resiliency group of applications (3721289)
- Rehearsal does not work after being aborted
- The configure DR operation fails if virtual machines in the resiliency group belong to different servers
- For resiliency groups containing VMware virtual machines with NFS datastore mounted from a NetApp volume with substring vol, Migrate or takeover operations may fail
- The license expiry status is inconsistent on Resiliency Managers configured on different time zones
- In the Hyper-V guest environment, the writable disk is shown in the Read-Only state (3785911)
- Long SRDF device group names are not discovered (3786826)
- Multiple repository paths on the same host are not allowed for the repository server (3734149)
- Unknown state displayed for the Resiliency groups of dark sites that are part of VBS (3794650)
- An Oracle custom application is not discovered if the instance names do not match (3796579)

- VBS DR operations fail when an application resiliency group with unconfigured DR is added in VBS (3794105)
- Expired resiliency plan cannot be executed even after editing the schedule (3861955)
- Resiliency groups for Hitachi enclosures are not displayed on dashboard under Top RG by replication lag chart (3861173)
- Snapshot disk is read only after rehearse operation is performed in Hyper-V with SRDF replication (3862088)
- Static IP customization may not work under certain conditions (3862916, 3862237)
- Need to manually refresh all assets after a site recovery (3861929)
- Disk utilization risk not resolved after DR operations
- Migrate operation becomes unresponsive if the operation is initiated from an unavailable site (3862253)
- Remote cluster group dependencies not validated before migrate (3863082)
- VBS migrate operation cannot be performed after failure (3862124)
- Resiliency group state does not get updated when production site is down (3863081)
- DNS customization does not work if FQDN is not defined (5037)
- Some versions of VMware Tools are not supported (4969)
- Login to the Resiliency Manager console fails at times
- Warning message may be displayed for network mapping (8644)
- Newly added NIC information is not displayed (10856)
- Validations displayed while configuring resiliency group for remote recovery (10961)
- An operation may fail if invoked at a time when virtual machine is being migrated using Vmotion (6476)
- vLan mapping compulsory for DRS enabled VMware virtual machines (10322)
- Create resiliency group operation displays error for RHEL 7.0 and RHEL 7.1 virtual machines with open-vm-tools version 9.4.X (8479)

Disaster recovery (DR) configuration for resiliency group fails if Microsoft Hyper-V Replica is configured after you add a virtual machine in Resiliency Platform

- DR operations fail if the data disk count of virtual machines at cloud data center and on-premises data center is same (10982)
- Rehearsal operation does not get launched for cloud data center immediately after you edit resiliency group to remove one virtual machine (10992)
- Removing Windows Data Mover virtual machine does not uninstall the Replication add-on(11024)
- Known issues: Resiliency Platform Data Mover
- Known issues: Recovery to Amazon Web services (AWS)
- Known issues: Recovery to vCloud Director
- Known issues: NetBackup integration
- Known issues: Multiple Resiliency Managers in a data center

Disaster recovery (DR) configuration for resiliency group fails if Microsoft Hyper-V Replica is configured after you add a virtual machine in Resiliency Platform

This issue applies to the disaster recovery (DR) configuration for a resiliency group. The DR configuration operation fails if a Hyper-V Replica is configured on the Hyper-V virtual machine after you add the virtual machine to the Infrastructure Management Server (IMS).

Workaround:

Use the Resiliency Platform console to refresh the Hyper-V host manually. It discovers the Hyper-V Replica information, and the configuration DR operation functions as expected.

In the VM Inventory report, instead of allocated memory, Resiliency Platform shows the total memory of the virtual machines

In the VM Inventory report, for the virtual machines on the Hyper-V Server, the Resiliency Platform console displays the total memory instead of their allocated memory.

Certain validations do not work while creating a resiliency group of applications (3721289)

When you create a resiliency group of applications, the following validations do not work:

- Check if the Resiliency Platform Applications Enablement add-on is deployed on the host. If the Veritas Resiliency Platform Applications Enablement add-on is not correctly installed on the managed host, the create resiliency group operation for application fails. In such situation, you need to install the add-on on the host before creating the resiliency group for applications.
- If the workflow fails, resiliency group should not get created.

Rehearsal does not work after being aborted

If you abort a rehearsal operation, that rehearsal operation does not work afterwards.

Workaround:

Run cleanup rehearsal operation before performing Rehearsal again.

The configure DR operation fails if virtual machines in the resiliency group belong to different servers

If you try to configure disaster recovery (DR) for a resiliency group with multiple virtual machines that belong to different servers, the configure DR operation fails.

For resiliency groups containing VMware virtual machines with NFS datastore mounted from a NetApp volume with substring vol, Migrate or takeover operations may fail

If a VMware datastore is mounted from a NetApp replicated volume and the volume name contains the substring vol, the corresponding resiliency groups may fail to migrate across data centers.

Workaround:

Rename the NetApp volume to remove the substring vol from the name.

The license expiry status is inconsistent on Resiliency Managers configured on different time zones

If Resiliency Managers are configured on different time zones, then the license on one Resiliency Manager may expire before the license on the other Resiliency Manager. This behavior is seen on the second Resiliency Manager for almost 12 hours.

In the Hyper-V guest environment, the writable disk is shown in the Read-Only state (3785911)

In the Hyper-V guest environment, if a disk is writable but the disk manager or any other Windows utility shows that the disk is in the Read-only state, you need to restart the Hyper-V guest machine.

This can occur in the recovery data center during the migrate and takeover operation.

Long SRDF device group names are not discovered (3786826)

Symmetrix Remote Data Facility (SRDF) device groups with names longer than 18 characters cannot be discovered in the Resilience Manager web console.

Multiple repository paths on the same host are not allowed for the repository server (3734149)

While you add a repository server, you cannot add multiple repository paths on the same host as multiple entries for repository server.

Unknown state displayed for the Resiliency groups of dark sites that are part of VBS (3794650)

If a virtual business service (VBS) contains a resiliency group that belongs to dark sites, the state of the individual resiliency group is displayed as unknown if it is not online.

An Oracle custom application is not discovered if the instance names do not match (3796579)

When you add an Oracle custom application, Resiliency Platform to discover, the Application Inputs screen includes two Instance name fields. You must specify the same name in each field; otherwise, the application is not discovered.

VBS DR operations fail when an application resiliency group with unconfigured DR is added in VBS (3794105)

User cannot perform disaster recovery operations when the VBS consists of an application resiliency group which is not configured for DR.

Expired resiliency plan cannot be executed even after editing the schedule (3861955)

Once a resiliency plan schedule expires, it cannot be executed even after editing the schedule. No error is encountered when you try to edit the schedule, but the plan is not executed on edited schedule.

Workaround:

Delete the previous resiliency plan schedule and create a new resiliency plan schedule.

Resiliency groups for Hitachi enclosures are not displayed on dashboard under Top RG by replication lag chart (3861173)

In case of Hitachi enclosures, the resiliency groups are not displayed on the dashboard under Top RG by replication lag since replication lag for Hitachi enclosures is reported in percentage and the chart being displayed on the dashboard uses *HH:MM:SS* format.

[However, resiliency group details page displays the replication lag for a specific resiliency group.]

Snapshot disk is read only after rehearse operation is performed in Hyper-V with SRDF replication (3862088)

Snapshot disk is read only after rehearse operation is performed in Hyper-V with SRDF replication (3862088)

We use `Diskpart` command to clear read only flag. But the command does not work intermittently. Hence during rehearse operation in Hyper-V SRDF replication environment, sometimes the snapshot disk gets mounted in read only mode.

Workaround:

- Take the disk offline and then bring it online.
- Power on the virtual machine.

Static IP customization may not work under certain conditions (3862916, 3862237)

Hyper-V provides Linux Integration Services(LIS) which allows static IP customization for Linux guest. However sometimes the operation does not succeed even though the operation reports success. In such cases, the IP is not assigned to the Linux guest.

Workaround:

Log in to the virtual machine console and manually assign the IP address.

Need to manually refresh all assets after a site recovery (3861929)

After a primary site is recovered, you need to manually refresh all the asset configurations such as configurations of enclosures, virtual machines, discovery host.

Following is the order in which the asset configuration needs to be refreshed:

- For EMC VNX, EMC RecoverPoint and Hitachi, refresh the discovery host first, then refresh the enclosures, and then finally refresh the VMware vCenter servers.
- For NetApp, first refresh the VMware vCenter server and then refresh the enclosures.

Disk utilization risk not resolved after DR operations

The disk utilization risk is not resolved if the disk is made available after the resiliency group associated with the risk, is migrated to the recovery site.

Migrate operation becomes unresponsive if the operation is initiated from an unavailable site (3862253)

If you try to perform the migrate operation instead of the takeover operation from a site which is currently not available, the operation becomes unresponsive indefinitely.

Remote cluster group dependencies not validated before migrate (3863082)

Veritas Resiliency Platform allows you to migrate a global service group which is mapped as a resiliency group and has dependent service groups on DR cluster which are not online. As a result, the start resiliency group operation on the recovery site may fail.

VBS migrate operation cannot be performed after failure (3862124)

If the workflow fails during a VBS migrate operation, then migrate operation cannot be retried for the VBS.

Workaround:

Fix the issue which caused the failure and then bring the VBS online on production site and then perform the Migrate operation. You can also try to perform migrate operation on individual resiliency group after fixing the issue which caused the failure.

Resiliency group state does not get updated when production site is down (3863081)

If the production site where a resiliency group is online, goes down, the state of the resiliency group does not change. However, the state of the application changes to display Online(Stale) to reflect that the online state of the resiliency group is stale and may not be recent.

DNS customization does not work if FQDN is not defined (5037)

This issue occurs if FQDN is not defined for virtual machines running on Hyper-V platform (Linux and Windows).

Some versions of VMware Tools are not supported (4969)

Resiliency Platform uses vSphere web service API, `ValidateCredentialsInGuest()`, which does not work with some versions of VMware Tools that are installed in guest virtual machine. This issue may lead to failure in IP customization of Windows virtual machines in vSphere environment.

Workaround

Install the latest version of VMware Tools.

vSphere web service API, `ValidateCredentialsInGuest()`, works with VMware Tools version 9.4.10.2092844.

Login to the Resiliency Manager console fails at times

Sometimes, login to the Resiliency Manager console fails.

Workaround:

Stop the Resiliency Manager instance and then restart it.

Warning message may be displayed for network mapping (8644)

At times, even if the network mapping is set up in the environment, you may get a warning message for network mapping similar to the following while performing a disaster recovery operation:

```
Some virtual machines may not connect to network after migrate as the required network mapping are not defined.
```

Workaround:

You need to click on Continue and the operation proceeds as expected.

Newly added NIC information is not displayed (10856)

If a network interface card (NIC) is attached to a virtual machine and the following conditions are met, then the new NIC is not listed on the Network customization panel when you configure the resiliency group for remote recovery.

- The virtual machine belongs to a resiliency group.
- Apply IP customization is enabled.
- IPs addresses are edited.

Workaround:

Edit the resiliency group to uncheck the Apply IP customization check box, and submit the wizard.

Again edit the resiliency group and select the Apply IP customization check box. The information of the new NIC is displayed for IP customization.

This issue does not occur if IP address are not edited.

Validations displayed while configuring resiliency group for remote recovery (10961)

Disk mismatch or disk correlation missing validations are displayed while configuring a resiliency group for remote recovery in the following situations:

- When you remove a virtual machine from an resiliency group having more than one virtual machine and try to add it again.

An operation may fail if invoked at a time when virtual machine is being migrated using Vmotion (6476)

- In case of a resiliency group having a single virtual machine, if you delete and create the resiliency group again using the same virtual machine.

Workaround:

Wait for at least 40 minutes for the discovery of virtual machine to complete. Or you can manually refresh the virtual machine.

An operation may fail if invoked at a time when virtual machine is being migrated using Vmotion (6476)

In case a virtual machine is being migrated through VMotion or through DRS and at the same time, any VRP operation is invoked on that particular virtual machine, the operation may fail as the resources are in transient state.

Workaround:

You need to re-launch the operation once the migration of the virtual machine completes.

vLan mapping compulsory for DRS enabled Vmware virtual machines (10322)

If vSphere DRS is enabled for a VMware HA cluster and virtual machine has port group attached from distributed switch, then you must do vLan mapping for successfully performing the migrate operation.

This is applicable only to vCenter server and ESXi version lower than 6.5.

Create resiliency group operation displays error for RHEL 7.0 and RHEL 7.1 virtual machines with open-vm-tools version 9.4.X (8479)

If you try to configure a resiliency group with RHEL 7.0 and 7.1 virtual machines having open-vm-tools version 9.4.X, the operation displays the following error:

```
Unable to determine filesystem used size for virtual machine for licensing
```

Workaround:

DR operations fail if the data disk count of virtual machines at cloud data center and on-premises data center is same (10982)

Install open-vm-tools version 9.10.X and above on those RHEL 7.0 and RHEL 7.1 virtual machines and then try to configure resiliency group.

DR operations fail if the data disk count of virtual machines at cloud data center and on-premises data center is same (10982)

If the selected cloud virtual machine's size has exactly the same data disks count as that of on-premise virtual machine data disks count, the DR operations fail with the following error:

```
The maximum number of data disks allowed to be attached to a VM of this size is 'x'.", "code": 409, "message_id": "OperationNotAllowed"
```

Workaround:

while configuring for DR, add one extra disk to the data disk count of the on-premises virtual machine and then select the cloud virtual machine size accordingly.

Rehearsal operation does not get launched for cloud data center immediately after you edit resiliency group to remove one virtual machine (10992)

If your target data center is a cloud data center and you have removed a virtual machine by editing the resiliency group, then you may not be able to launch the rehearsal operation.

Workaround:

Refresh the cloud discovery and then edit the resiliency group again.

Removing Windows Data Mover virtual machine does not uninstall the Replication add-on(11024)

When you remove a Windows virtual machine listed in the Prepare host for replication view, the Resiliency Platform Replication add-on does not get uninstalled from that host.

Workaround:

You need to manually uninstall the Veritas Resiliency Platform SR IO Tap Driver package from the Control Panel of the virtual machine.

Known issues: Resiliency Platform Data Mover

The following known issues are applicable to Resiliency Platform Data Mover:

Virtual Machine protection using Data Mover has a few policy related limitations (5181)

Virtual Machine protection using Data Mover has SPBM (Storage Policy Based Management) from VMware related limitations. You may not be able to protect your virtual machines if it has any non-default policy attached that does not have vtstap filter.

Workaround:

You need to apply the policy with vtstap filter as one of the rules in it.

IOfilter bundle not removed from ESX hosts even after unconfiguring virtual machines (5178)

In case you are using Resiliency Platform Data Mover, even after you unconfigure all the virtual machines in the cluster that were configured for recovery, iofilter bundle does not get removed from the cluster.

Storage policy needs to be manually removed after all the virtual machines are unconfigured (5180)

The storage policy for virtual machines does not automatically get removed After all the protected virtual machines in the VMware vSphere server are unconfigured. It needs to be manually removed from virtual machine's storage policies.

Replication gets paused if you perform add disk operation (5182)

If you add a disk to the protected virtual machine, replication is paused and you are not able to perform any operation on the associated resiliency group.

Workaround:

Edit the resiliency group to remove the affected virtual machine and then add it back.

Cannot perform any operation after deleting disk from virtual machine (5182)

If you delete a disk from a virtual machine, you cannot perform any operation on the associated resiliency group.

Workaround:

Edit the resiliency group to remove the affected virtual machine and add it back.

Data Mover virtual machine in no op mode risk cannot be resolved (5183)

The Data mover virtual machine in no op mode risk cannot be resolved once it gets generated.

Risks not generated after taking snapshot of virtual machine replicated using Data Mover(6886)

If you take a snapshot of the virtual machine that is a part of a Resiliency Group that gets replicated using Resiliency Platform Data Mover, the risks are not generated after taking the snapshot.

Workaround:

You need to perform edit Resiliency Group operation after you take the snapshot of any virtual machine.

Known issues: Recovery to Amazon Web services (AWS)

The following known issues are applicable to AWS:

Some DHCP enabled NICs are not present on Cloud after migrate (7407)

If DHCP is enabled for NICs but network pairing is not complete, then during the migrate operation these NICs are ignored.

Workaround

Create a network pair for the DHCP enabled NICs so that the IP addresses are shown on AWS Cloud. Or you need to manually create the network interface after migrate operation is successfully completed.

One or more NICs of a migrated Windows virtual machine may not be visible (7718)

After migration, one or more network interface cards (NIC) associated with a Windows virtual machine may not be visible from the operating system. You may not be able to connect to the migrated virtual machine using the IP address assigned to these invisible NICs.

Workaround:

In device manager, under network connections, all the NICs are listed. The NICs that are not visible in Network Connections are also listed here, but they show an error similar to the following:

```
Windows could not load drivers for this interface.
```

Right click on the network interface that is showing the error and click on Uninstall Device.

After the uninstallation, scan for hardware changes in the device manager. The NIC gets installed properly and is visible.

Cloud IPs get added to on-premise NICs after migrate back to the on-premise site and reboot (7713)

After the successful migration to the production site (on-premise) and reboot of the Windows virtual machines, the cloud IP addresses get associated with the on-premise NICs.

This is because of some issue in networking script that causes the cloud IPs to be added to premise NICs on reboot after migrate back.

Workaround:

You need to manually remove the additional IPs from the on-premise NIC.

Migrate or takeover operations fail at the Add Network for AWS task and Create Network Interface sub-task (7719)

Due to some error, the cloud IPs get added to the on-premise NICs after migrating back to the premise. After that, if you perform the edit resiliency group operation or delete and again create the resiliency group, the migrate and takeover operations fail with the following error:

```
An error occurred (InvalidParameterValue) when calling the  
CreateNetworkInterface operation: invalid value for parameter address:  
[]
```

Workaround:

Start the virtual machine and manually remove the cloud IPs.

Refresh the host and vCenter server or Hyper-V.

Edit the resiliency group and then retry the migrate or takeover operation.

Sometimes network comes up on only one NIC although there are multiple NICs (8232)

Sometimes the RHEL virtual machines having multiple NICs are accessible using only one NIC IP after performing disaster recovery (DR) operations such as migrate, take over, and rehearsal. It happens because the DHCP client is unable to get the DHCP offer from the server which prevents the routing table to get the load. Hence, the virtual machines are not accessible by other NIC IPs.

Workaround

Using the available IP, access the virtual machine, and restart the network services.

Known issues: Recovery to vCloud Director

The following known issues are applicable to recovery to vCloud Director:

Migrate back of VBS from vCloud Director to on-premises data center fails (10975)

If you try to migrate back a VBS from vCloud Director to the on-premises data center, the operation fails.

Known issues: NetBackup integration

The following known issues are applicable to NetBackup integration:

MAC address starting with 00:0c:29 not supported for VMware virtual machines (7103)

If you want to restore an image on a VMware virtual machine with MAC address starting with 00:0c:29, the machine does not get powered on.

Workaround:

You need to edit the virtual machine settings and change the MAC address type of the Network adapter to Automatic. This changes the MAC address of the machine. You can then power on the virtual machine again.

A virtual machine backed up by multiple NBU master servers gets mapped with only one master server in the console (7608)

If a virtual machine gets backed up by multiple NBU master servers, it is mapped with only one master server in the Resiliency Manager console. You can create resiliency group or restore virtual machine only with the mapped master server.

A transient virtual machine remains in the ESX server in one scenerio (7413)

If you restore a resiliency group from site A to site B and then restore it back to site A, then two virtual machines are seen on the ESX server of site A.

Workaround:

Restart the services on the vCenter server.

Operations for virtual machine do not work if the remote master server gets reconfigured (8600)

If the remote master server is reconfigured, the remote master association for the virtual machine gets detached and no operation works for the virtual machine.

Workaround:

You need to remove and then add both the master servers again.

Known issues: Multiple Resiliency Managers in a data center

The following known issues are applicable if you have multiple Resiliency Managers in a data center:

In a cloud data center, DR operations need to be performed only from the Resiliency Manager associated with the cloud IMS (10895)

In a cloud deployment with multiple Resiliency Managers, you can perform the DR operations only from the Resiliency Manager that is associated with the cloud IMS.

Newly added Resiliency Manager cannot remove the existing offline Resiliency Manager(10821)

If a new Resiliency Manager is added to a data center while any Resiliency Manager in the other data center is offline, then the newly added Resiliency Manager cannot remove the offline Resiliency Manager.

Workaround:

Log in to klish and use the following option of command to restart the database service:

```
services rm restart db
```

Now you can remove the offline Resiliency Manager.

Limitations

In diesem Kapitel werden folgende Themen behandelt:

- [Rehearsal is not supported if volume is configured using asynchronous replication in IBM XIV enclosure](#)
- [Limitations for on-premises Windows hosts for Resiliency Platform Data Mover replication](#)
- [Hyper-V hosts having snapshots not supported for recovery to AWS](#)
- [Computer name of virtual machine on vCloud differs if the name exceeds permitted character limit](#)
- [Localization of adding application type is not supported](#)
- [Localization related limitations](#)
- [Virtual machine name limited to 35 characters](#)

Rehearsal is not supported if volume is configured using asynchronous replication in IBM XIV enclosure

If the consistency group or the volume is configured using asynchronous replication in IBM XIV array, then the snapshot operation is not supported by XIV enclosure. Hence if the resiliency group is configured with virtual machines that are using asynchronous consistency group or volume-based replication, then the rehearsal operation fails at the 'create snapshot' step.

Limitations for on-premises Windows hosts for Resiliency Platform Data Mover replication

Following limitations are applicable only for on-premises hosts on Windows platform and the replication is Resiliency Platform Data Mover:

- To perform the Initialize Disk operation, consistency group must be in PAUSED or STOPPED state.
- If system recovery is done manually, then you need to first stop the replication and then start the replication using the CLI.
 - “C:\Program Files\Veritas\VRTSitrptap\cli\vxtpaction.exe” stop –cg <CGID>
 - “C:\Program Files\Veritas\VRTSitrptap\cli\vxtpaction.exe” start –cg <CGID> where *CGID* is the consistency group ID.

Hyper-V hosts having snapshots not supported for recovery to AWS

A Hyper-V host having snapshots is not supported for recovery to AWS.

Computer name of virtual machine on vCloud differs if the name exceeds permitted character limit

The maximum allowed character limit for a Computer name on vCloud is, 15 for Windows and 63 for Linux. If the host name part of the fully qualified domain name (FQDN) of a virtual machine exceeds the limit, then after performing migrate or take over operation the Computer name of the virtual machine on vCloud has a default name.

The name can be edited as required.

Localization of adding application type is not supported

Localization of adding applications type is not supported due to back-end limitations. The Add Application Type wizard in Settings > Application Support > Uploaded tab does not accept the inputs in non-English characters.

Localization related limitations

The following are a few localization related limitations applicable to Veritas Resiliency Platform 3.0:

- Resiliency Plan task name does not change on changing the browser locale.
- Notification text does not get localized
- Email text does not get localized
- Activities task result does not get localized
- Host level task does not get localized
- For German AD, User's group name is mandatory
- Main task of workflow for resiliency groups created before upgrade does not get localized
- Workflow performed before upgrade does not get localized
- State of Resiliency Manager, IMS, or InfoScale Operations Manager server displayed in the Resiliency Platform console does not get localized.

Virtual machine name limited to 35 characters

If recovery is on Azure then the virtual machine name should not exceed 35 characters.

Virtual appliance security features

Dieser Anhang enthält folgende Themen:

- [Operating system security](#)
- [Management Security](#)
- [Network security](#)
- [Access control security](#)
- [Physical security](#)

Operating system security

Veritas Resiliency Platform appliance operating system is hardened against potential security exploitation by removing the operating system packages that are not used by the Resiliency Platform. All the default yum repository files that are shipped with the operating system are removed.

The Control + Alt + Delete key combination has been disabled to avoid any accidental reboot of the virtual appliance. Exec-shield is enabled to protect the virtual appliance from stack, heap, and integer overflows.

Management Security

Only two users are available on the appliance: admin user and support user. These two user accounts are used to access the appliance based on the requirement.

Only admin login is available for the appliance. The password policy of admin login is modified to prompt the user to change the password on the first login.

If the admin user password is lost, you need to contact Veritas support for resetting the admin user password.

On successful completion of the product bootstrap, admin user can only access a limited menu of commands through klish. Besides admin user, support user is also supported in the appliance but remote login of support user is disabled. To access the support user, one need to login as an admin and go through klish. An option `support > shell` is provided in the klish menu to switch the user to support and access the bash shell of support. After selecting this option, the support user is given superuser privileges. Using this option is not recommended and it should be used only with the assistance of technical support.

Timeout of the bash shells of all users is set to 900 seconds.

Network security

The TCP timestamp responses are disabled in Resiliency Platform virtual appliance. Another network security feature of the appliance is that during the product bootstrap process, only those ports that are used by the product for communication and data transfer, are opened through the firewall and all the other communications are blocked.

Uncommon network protocols such as DCCP, SCTP, RDC, TIPC have been disabled so that any process cannot load them dynamically.

Siehe "[Network and firewall requirements](#)" auf Seite 19.

Access control security

Resiliency Platform virtual appliance implements certain access control measures. The umask is set to 0700 across the appliance. The access permissions of some of the files such as home folder of root, the log directory etc. is restricted. All the security and the authorization messages are logged into the appliance.

Physical security

In the Resiliency Platform virtual appliance, the USB storage access is disabled.