


# VMware vSphere Replication 5.8 Release Notes

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Check for additions and updates to these release notes.

For information about the vSphere Replication 5.8.0.x patch releases, see the corresponding KB articles.

- [vSphere Replication 5.8.0.2 Express Patch Release \(KB 2112022\)](#).
- [vSphere Replication 5.8.0.1 Express Patch Release \(KB 2091019\)](#).

## What's in the Release Notes

These release notes cover the following topics:

- [Localization](#)
- [What's New](#)
- [Product Documentation](#)
- [vCloud Suite Licensing and Integration](#)
- [Installation](#)
- [Upgrading vSphere Replication](#)
- [Operational Limits of vSphere Replication](#)
- [Open Source Components](#)
- [Caveats and Limitations](#)
- [Resolved Issues](#)
- [Known Issues](#)

## Localization

VMware vSphere Replication 5.8 is available in the following languages:

- English
- French
- German
- Japanese
- Korean
- Simplified Chinese
- Traditional Chinese

## What's New

The following features are new for this release:

- Enhanced reporting - This version of vSphere Replication introduces a new reporting dashboard that provides summary reports of vSphere Replication usage. Administrators now have better visibility into their replication environment, simplifying management and reducing downtime.
- Interoperability with VCHS-DR service and SRM - The prior release, version 5.6, added functionality to support replicating VMs to the vCloud Hybrid Service (VCHS) but was not supported with SRM. This release allows customers to replicate workloads to VCHS while also supporting orchestration of other workloads via SRM. Note that SRM cannot be used with vSphere Replication for orchestrated disaster recovery to VCHS.

## Product Documentation

In addition to the current release notes, you can use the documentation set for vSphere Replication 5.8 that includes the following deliverables.

- [vSphere Replication 5.8 Documentation Center](#)
- [Compatibility Matrixes for vSphere Replication 5.8](#)

Cookies Settings

- [vSphere Replication for Disaster Recovery to Cloud](#)
- [vCloud Hybrid Service - Disaster Recovery User's Guide](#)
- [VMware vCloud Connector Documentation Center](#)

## vCloud Suite Licensing and Integration

You can license vSphere Replication 5.8 individually or as part of vCloud Suite 5.8. You should consider the licensing and integration options that are available to you.

Some vCloud Suite components are available as standalone products that are licensed on a per-virtual machine basis. When the products are part of vCloud Suite, they are licensed on a per-CPU basis. You can run unlimited number of virtual machines on CPUs that are licensed with vCloud Suite.

You can combine the features of vSphere Replication with other components of vCloud Suite to leverage the full capabilities of the software-defined data center. For more information, see *vCloud Suite Architecture Overview and Use Cases*.

## Installation

Download the vSphere Replication zip file and unzip it. vSphere Replication 5.8 includes two OVF files. You can deploy each package by using the Deploy OVF wizard in the vSphere Web Client:

1. `vSphere_Replication_OVF10.ovf`: Use this file to install all vSphere Replication components, including the vSphere Replication Management Server and a vSphere Replication Server.
2. `vSphere_Replication_AddOn_OVF10.ovf`: Use this file to install an optional additional vSphere Replication Server.

For more information on installation, see section Installing vSphere Replication in the [vSphere Replication Documentation Center](#).

## Upgrading vSphere Replication

The downloadable ISO image is the only means of upgrading from vSphere Replication 5.5.x or 5.6 to vSphere Replication 5.8. You cannot upgrade vSphere Replication from version 5.5.x or 5.6 to version 5.8 by using vSphere Update Manager or the official VMware Update Repository from the VAMI of the vSphere Replication appliance.

To upgrade from vSphere Replication 5.1.x to 5.8, you must first upgrade from 5.1.x to 5.5.x or 5.6, and then upgrade to vSphere Replication 5.8 by using the ISO image. See the [compatibility matrix](#) for further information on supported versions.

See [Upgrading vSphere Replication](#) to upgrade to vSphere Replication 5.8.

## Operational Limits for vSphere Replication

The operational limits of vSphere Replication 5.8 are the same as for vSphere Replication 5.1.x, and 5.5.x. See <http://kb.vmware.com/kb/2087771>.

## Open Source Components

The copyright statements and licenses applicable to the open source software components distributed in vSphere Replication 5.8 are available at the [vSphere Replication Open Source Disclosure page](#).

## Caveats and Limitations

To ensure successful virtual machine replication, you must verify that your virtual infrastructure respects certain limits before you start the replication.

- Replication statistics and reports are not available to users that run vSphere Replication 5.8 on a vCenter Server 5.1.
- Deploying more than one vSphere Replication appliance produces a warning on the boot screen. This requires user confirmation to either continue and configure all replications again or shut down the new appliance so that it does not interfere with the old one. This situation does not occur when deploying more than one vSphere Replication server.
- Each vSphere Replication Management Server can manage a maximum of 500 replicated virtual machines.
- vSphere Replication supports a maximum disk size of 62TB. If you attempt to enable replication on a virtual machine with a disk larger than 62TB, the virtual machine will not perform any replication operation and will not power on.
- vSphere Replication no longer supports IBM DB2 as the vSphere Replication database, in accordance with the removal of support for DB2 as a supported database for vCenter Server 5.5. If you use DB2 as an external vSphere Replication database, contact VMware support for instructions about how to migrate your data to a supported database.
- vSphere Replication does not support upgrading the VMware Tools package in the vSphere Replication appliance.
- For replications to cloud, a seed vApp can be used for only one replication.

## Supported Browser Versions

For supported browser versions for the vSphere Web Client, see the documentation of the vSphere Web Client that you use.

## Resolved Issues

The following issues have been resolved in this release.

- [vSphere Replication cannot register a host of the appliance](#)

You might encounter the following issues with vSphere Replication processes: vSphere Replication warns you with an alarm for CPU usage. In vCenter Server -> Manage -> vSphere Replication -> Replication servers, the vSphere Replication server is listed with a disconnected status. Certain VRMS operations stall. The VRMS logs contain error: `OutOfMemoryError: Java heap space`.

This issue has been resolved.

- **In rare cases, vSphere Replication displays a stale replication instance when the replicated virtual machine is deleted from the source site.**

Attempting to stop the replication displays an error: `Unable to compute permissions. See the log for more details`.

This issue has been resolved.

## Known Issues

The following known issues have been discovered through rigorous testing and will help you understand some behavior you might encounter in this release.

- [General](#)
- [Replications to vCenter Server](#)
- [Replications to Cloud](#)
- [Documentation](#)

### General

The issues in this section pertain to the vSphere Replication vApp, or to all types of replication.

- **NEW The vSphere Replication Management server cannot start after upgrading vSphere Replication from 5.5.1.x to 5.8**

After you upgrade vSphere Replication that uses the embedded database from version 5.5.1.x to 5.8, the vSphere Replication Management server does not start up automatically and you are unable to start it manually by using the VAMI. The following error message appears in the `hms-configtool.log` file:

`ERROR: null value in column "id" violates not-null constraint.`

Workaround: See [Unable to Start the vSphere Replication Management Server After an Upgrade \(KB 2107220\)](#).

- **Reporting views in vSphere Replication are empty when vSphere Replication and Site Recovery Manager are installed on the same vCenter Server.**

The views that display historical data of vSphere Replication for a specific vCenter Server, that can be accessed through the vSphere Web Client, under **vCenter Server -> Monitor -> vSphere Replication -> Reporting**, do not contain data. The issue is caused by the co-existence of vSphere Replication and Site Recovery Manager UI in the same vSphere Web Client.

Workaround: None.

- **Missing vSphere Replication permissions after upgrading the vSphere Replication appliance, certificate or IP change.**

If you upgrade the vSphere Replication appliance, or if for some other reason the certificate or the IP address of the vSphere Replication appliance changes, the permissions that are assigned to the default VRM user roles are deleted.

This problem is observed every time the vSphere Replication extension is unregistered and registered with the vCenter Server extension manager.

Workaround: The permissions that are assigned to custom roles are not removed. Clone the predefined VRM roles and create your custom roles before upgrading the vSphere Replication appliance, or changing its certificate or IP address.

- **vSphere Replication service is inaccessible after vCenter Server certificate changes.**

If the vCenter Server certificate changes, vSphere Replication becomes inaccessible.

Workaround: See [vSphere Replication is Inaccessible After Changing vCenter Server Certificate](#).

- **If vFlash is enabled for a virtual machine on the source site, vSphere Replication disables it after recovery.**

During replication, vSphere Replication does not check for or reserve vFlash resources on the target site and cannot guarantee that vFlash resources will be available for the virtual machine at the target site. If vFlash is configured, but vFlash resources are not available, the virtual machine fails to power on at the target site. To avoid this issue, vSphere Replication disables vFlash for the virtual machine during recovery.

Workaround: Manually re-enable vFlash for the virtual machine after the recovery.

- **Replication status does not change from Configuring to Error and blocks recovery attempts.**

If the primary site vSphere Replication Management Server (VRMS) becomes unavailable and cannot be restored while replication reconfiguration operation is in progress, the replication never shows an error state and recovery can not be initiated.

Workaround: Contact VMware Support Services for assistance.

- **vSphere Replication Management Server (VRMS) might leak a partially recovered virtual machine in the target vCenter Server after a failed recovery.**

In rare cases VRMS might stop during recovery immediately after registering the recovered virtual machine in the target vCenter Server. The last recovery error in the replication details panel says `VRM Server was unable to complete the operation`. When VRMS restarts, it cleans up the files for the partially recovered virtual machine. In some cases, it fails to unregister the virtual machine from the target vCenter Server. Subsequent

- **During replication of multiple virtual machines, a vSphere Replication server might enter a state where it does not accept any further VRMS connections but continues to replicate virtual machines.**

Workaround: Reboot the vSphere Replication server.

- **vSphere Replication operations fail with a Not Authenticated error.**

If you start an operation on one site, for example configuring vSphere Replication on a virtual machine, and then restart vCenter Server and the vSphere Replication appliance on the other site, vSphere Replication operations can fail with the error **VRM Server generic error. Please check the documentation for any troubleshooting information. The detailed exception is: 'com.vmware.vim.binding.vim.fault.NotAuthenticated'**. This problem is caused by the fact that the vSphere Replication server retains in its cache the connection session from before you restarted vCenter Server and the vSphere Replication appliance.

Workaround: Clear the vSphere Replication connection cache by logging out of the vSphere Web Client and logging back in again.

- **Operation in vSphere Replication Management Server fails with error "... UnmarshalException".**

When the vSphere Replication Management Server experiences high load or transient network errors, operations can fail with UnmarshalException due to errors in the communication layer.

Workaround: Try the failed operation again.

- **The VAMI might not respond when you install an update.**

When you upgrade vSphere Replication, a status message 'Installing Updates' might not disappear even after the updates install successfully because the VAMI is not responding.

Workaround: Refresh the VAMI UI in the browser or open it in a new tab.

- **A virtual machine recovered in vSphere Replication does not power on in vCenter Server.**

When you use vSphere Replication to run a recovery on a virtual machine, it fails, and the status of the replication is not 'Recovered'. The virtual machine is registered in the vCenter inventory, but when you try to power it on, it fails with error: **File [datastorename] path/vmname.vmx was not found**. The virtual machine registration as part of the vSphere Replication recovery workflow can succeed in vCenter Server, but the response might not reach the vSphere Replication Management Server due to a transient network error. vSphere Replication reverts the replication image and reports a failed recovery task due to virtual machine registration error. If you initiate another recovery, it fails with a message that a virtual machine with the same name is already registered in vCenter Server.

Workaround: Remove the partially recovered virtual machine from the vCenter Server inventory. Do not delete the files from disk. Try the recovery again.

- **vSphere Replication is not available in an attempt to reconfigure replication if the connection to the target site is broken.**

If you connected two sites and configured replication for a virtual machine between them, then changed the certificate of one of the vSphere Replication appliances with a new self-signed certificate, the connection between the sites must be repaired.

Workaround: Click reconnect at the target site and verify that the sites are connected before attempting the operation.

- **Replication stalls when you revert to a snapshot during a paused replication.**

When you configure replication for a virtual machine and pause the replication, take a snapshot, then resume the replication and revert to the snapshot, instead of going into the paused state, the replication status in the UI does not change and makes no progress.

Workaround: Pause and then resume the replication.

- **vSphere Replication VAMI is not accessible on Internet Explorer 8 and Chrome on Windows XP64 and Windows Server 2003. You see the error message described in [Microsoft KB 968730](#).**

Workaround: Use Firefox to access the VAMI. If Firefox is not an option, install the [Microsoft hotfix](#) on Windows XP and Windows Server 2003.

- **vSphere Replication returns error for VMK\_STALE\_FILEHANDLE.**

If a vSphere Replication persistent state file is on an NFS volume and you remove that volume on the NFS server in such a way that the ESXi Server gets a stale file handle, vSphere Replication attempts to access the persistent state file forever and makes no progress.

Workaround: Commonly, the virtual machine is located on the same volume as the persistent state file and will also be inaccessible. If the virtual machine is not located on the removed NFS volume and is still accessible, unconfigure and reconfigure replication so that a new persistent state file is generated on new storage. Reconfiguring replication will result in a full sync.

- **If you change the vCenter Server certificate, and then log into vSphere Replication, you might see vSphere Replication Management Server is not accessible.**

If you change the vCenter Server certificate you lose connectivity to vSphere Replication and when you try to log in to vSphere Replication, you see this error: vSphere Replication Management Server is not accessible.

Workaround: Power off and power on the vSphere Replication appliance.

## Replications to vCenter Server

The issues in this section are specific to replications to a vCenter Server.

- **VRMS stops during recovery, replication operations fail, and no virtual machine is registered in the target vCenter Server.**

Replication operations stall or fail with error: **VRM Server was unable to complete the operation**. Replica files are available in the target location ready to be registered as a virtual machine in vCenter Server without any vSphere Replication temporary files. If VRMS stops immediately after the vSphere Replication server prepares the virtual machine image from the replica files, VRMS might not update the database and the VR server is no longer aware of the recovered replication. Management operations on the replication involving the vSphere Replication server immediately fail and block sync operations.

Workaround:

1. Manually move the replicated virtual machine image, the .vmx and .vmdk files, into another datastore folder.
2. Stop the replication in the vSphere Replication appliance.
3. Manually register the .vmx file of the replica image as a virtual machine in the target vCenter Server.

If you do not manually move the replicated virtual machine .vmx and .vmdk files, VRMS deletes the .vmdk files as it does not detect vSphere Replication server part of failover for the replication has already been performed.

- **Recovery wizard fails with error: The source virtual machine has no instance available for recovery.**

In vCenter Server -> Manage -> vSphere Replication -> Replication servers, the vSphere Replication server is listed with a disconnected status. The recovery wizard does not display the appropriate error message for the described situation, but message about the replica instance is not available.

Workaround: Resolve the connectivity between VRMS and the vSphere Replication server and try the recovery operation again.

- **A recovered virtual machine with multiple point-in-time instances enabled can lose the attached disks to the latest snapshot when you revert to a previous snapshot and then revert to latest snapshot again.**

When you recover a virtual machine for which you enabled point-in-time instances and attach a disk for unresolved disks, if any, the disks attach to the latest snapshot. If you revert to a previous snapshot and then revert to the latest one, the attached disks are not available.

Workaround: Edit settings of the virtual machine and add the required disks as existing hard disks.

- **Moving multiple replications from one vSphere Replication server to another results in error.**

Reconfigure or move operations fail with "SocketTimeoutException: Read timed out" and replications go into the Error state. When the source or target vSphere Replication server and the storage are under heavy load, moving a replication can take more than a few minutes and result in the timeout error.

Workaround: Reconfigure the replication on the new vSphere Replication server.

- **Set of disks does not match error replication state after reconfiguring replication after adding a hard disk.**

When you add a new disk to a replicated virtual machine and reconfigure replication to include the new disk for replication, the replication goes into full sync state as expected. In rare cases, the UI might show a disk mismatch error for the virtual machine while the full sync is in progress even though there is no error. After the full sync completes and an instance is created for the virtual machine, the error clears.

Workaround: None.

- **During recovery, the pop-up for credentials to the source site does not display if sites have been paired from a different session.**

When you use a different browser to pair sites and configure replication between them, then launch the Recover wizard from a different browser, instead of prompting you for credentials to connect to the site, vSphere Replication says the source site is unavailable.

Workaround: Log out of the vSphere Web Client and log in again. The credentials prompt appears.

- **Replication goes into an error state when the virtual machine disk is greater than 2 TB and the target ESXi host is a lower version than 5.5.**

When you configure a replication for a virtual machine which has a disk that is larger than 2 TB, and the target ESXi host that has access to the replica datastore is downgraded to a lower version, the replication goes into the Error state and you see an NFC error.

Workaround: None. When the source virtual machine has a disk that is larger than 2 TB, you must use ESXi 5.5 version on the target site.

- **When a target vSphere Replication server is not available, vSphere Replication does not show an error in the vSphere Web Client Monitor -> Issues page.**

If the target vSphere Replication server is not available because it is powered off or has network connectivity issues, and a replication is in an initial full-sync state, vSphere Replication does not report an issue in the Web Client at Monitor -> Issues page of the target vCenter Server. Instead, you see an event on the vCenter Server and a disconnected status at Manage -> vSphere Replication -> Replication servers.

Workaround: Check if a target vSphere Replication server is currently available at Manage -> vSphere Replication -> Replication Servers page. Alternatively, set an alarm for "VR Server disconnected" event on the target vCenter Server.

- **Cannot reconfigure replication after switching from embedded database to existing external database.**

If you configure vSphere Replication with an external database and configure replication within the same site, then switch to the embedded database, the replication is not available, which is as designed. If you switch back to the external database, the replication is in an error state. Reconfiguring the replication fails with the following error: ManagedObjectNotFound

Workaround: When restoring the vSphere Replication database to the previous external or embedded database, you must reset its contents.

- **Cannot configure a virtual machine with physical mode RDM disk even if the disk is excluded from replication.**

If you configure a replication for a virtual machine with physical mode, you might see the following error:



VRM Server generic error. Check the documentation for any troubleshooting information.

The detailed exception is: HMS can not set disk UUID for disks of VM : MoRef:

type = VirtualMachine, value =

, serverGuid = null'.

Workaround: None.

- **Configuring replication with vSphere Replication fails if the virtual machine contains two disks on different datastores.**

See [KB 2012610](#)

- **Recovering a virtual machine using the "Recover with latest available data" option is possible when the source virtual machine is powered on.**

If you select the option **Recover with latest available data** when recovering a virtual machine, it is possible to perform the recovery while the source virtual machine is powered on. However, the network cards of the recovered virtual machine are disconnected when it powers on. If you select "Recover with recent changes" when you recover a virtual machine, it is not possible to complete the recovery if the source virtual machine is powered on.

Workaround: Ensure that the source virtual machine is powered off before you connect the recovered virtual to the network.

- **Recovering a virtual machine with vSphere Replication 5.8 fails to power on the recovered virtual machine**

If a replicated virtual machine is attached to a distributed virtual switch and you attempt to perform a recovery in an automated DRS cluster, the recovery operation succeeds but the resulting virtual machine cannot be powered on.

Workaround: Edit the recovered virtual machine settings to attach it to the correct network.

- **Registering additional vSphere Replication servers takes a long time**

If vCenter Server manages several hundred ESXi Server hosts, registering an additional vSphere Replication server with the vSphere Replication appliance can take several minutes.

This is because the vSphere Replication server must register with each ESXi Server host.

## Replications to Cloud

The issues in this section are specific to replications to cloud.

- **Planned migration fails with error *Synchronization monitoring has stopped*.**

If the synchronization phase of a planned migration task takes more than 3 minutes, the task fails with error *Synchronization monitoring has stopped*. The synchronization can take more than 3 minutes to complete due to slow VSS quiescing, due to large accumulated delta since the last synchronization, or if large delta has been accumulated during the guest shutdown.

Workaround:

- Manually power off or shut down the guest OS of the source virtual machine.
  1. After the failed planned migration task, wait for the sync status to change to *OK*.
  2. Manually power off or shutdown the guest OS of the source VM.
  3. Try running the planned migration task again.
- Increase the toleration period for replication synchronizations on the vSphere Replication Management Server (VRMS).
  1. Log in to the VRMS appliance as the root user and navigate to */opt/vmware/hms/conf/*.
  2. Open the *hms-configuration.xml* file for editing and set the value of the *hms-sync-replication-error-toleration-period* property to a value that exceeds the actual duration of the synchronization phase.  
The value is set in milliseconds. For example, the value for 4 minutes is  $4*60*1000=240000$  milliseconds.
  3. Restart the VRMS service by running the command - */etc/init.d/hms restart*.
  4. Try running the planned migration task again.
- **Planned migration or synchronization fails with error *A replication error occurred at the vSphere Replication Server...***

If, during planned migration, the infrastructure (hosts, network, or storage) is under heavy load, running a planned migration might fail with the following error.

*A replication error occurred at the vSphere Replication Server for replication <group\_name>. Details: 'Error for (datastoreUUID: "..."), (diskId:*

```
"..."), (hostId: "..."), (pathname: "..."), (flags: retrieable): Class: NFC Code: 10; NFC error: The operation completed successfully; Set error flag: retrieable; ...'
```

Usually, this error is transient and the operation succeeds if you retry running it.

Workaround: If the error occurs frequently in your environment, you can increase the toleration period for replication synchronizations on the vSphere Replication Management Server (VRMS).

1. Log in to the VRMS appliance as the root user and navigate to `/opt/vmware/hms/conf/`.
2. Open the `hms-configuration.xml` file for editing and set the value of the `hms-sync-replication-error-toleration-period` property to `300000`.
3. Try running the planned migration task again.

- **All operations on a seed vApp in vCHS are disabled.**

If you configure a replication to cloud and select a vApp from the vCHS inventory to be used as a replication seed, all operations on the seed vApp are disabled.

Workaround: None. Replication seeds cannot operate as virtual machines. A seed vApp can be used for only one replication.

- **You cannot disable the automatic mirroring of source VM NICs and MAC addresses to the target site.**

When you configure a virtual machine for replication to cloud, its NICs and MAC addresses are copied automatically as part of provisioning the placeholder VM on the cloud site.

If the test network is not isolated from the production network and the networks have common routing, a test recovery of the replicated virtual machine might result in duplicate MAC addresses in your virtual data center.

Workaround: Use the vCloud Director UI to reset the MAC address of the replicated virtual machine. See [Resetting the MAC Address of a Virtual Machine that is Replicated to Cloud \(KB 2086292\)](#).

- **The network configuration of replication source VM is mirrored when a replication is configured, but only partially updated after that.**

If, after the initial full sync, you update the NICs on the replication source VM, the NICs on the target site are updated. However, if you update the MAC address of a NIC on the source VM, the address on the target VM is not updated. The MAC addresses of newly-added NICs are not copied to the target VM, either.

Workaround: None.

- **Exception Invalid datastore format '<Datastore Name>' appears when vSphere Replication runs a sync task**

If you rename a datastore on which replication source virtual machines are running, replication sync operations for these virtual machines fail with error

```
VRM Server runtime error. Please check the documentation for any troubleshooting information. The detailed exception is: 'Invalid datastore format '<Datastore Name>'
```

Workaround: Pause and resume the replications that use source virtual machines from the renamed datastore.

## Documentation Issues

- **NEW Incorrect information on upgrade paths in the localized versions of the vSphere Replication 5.8 documentation, topic Upgrading vSphere Replication**

The non-English versions of topic [Upgrading vSphere Replication](#) contain incorrect information about the supported upgrade paths. The following paragraphs contains the correct information about the supported upgrade paths:

The downloadable ISO image is the only means of upgrading from vSphere Replication 5.5.x or 5.6 to vSphere Replication 5.8. You cannot use vSphere Update Manager or the virtual appliance management interface (VAMI) of the vSphere Replication appliance to upgrade vSphere Replication from version 5.5.x or 5.6 to version 5.8.

You cannot upgrade vSphere Replication 5.1.x directly to version 5.8. You must upgrade from version 5.1.x to 5.5.x or 5.6 first, and then upgrade from version 5.5.x or 5.6 to version 5.8 by using the ISO image for vSphere Replication 5.8.

- **Incorrect link to the compatibility matrix in the localized versions of the vSphere Replication 5.8 documentation, topic Upgrading vSphere Replication**

The topic [Upgrading vSphere Replication](#) contains an incorrect link to the compatibility matrix for vSphere Replication 5.8.

Please use the following link to access the compatibility matrix for vSphere Replication 5.8: <http://www.vmware.com/support/vsphere-replication/doc/vsphere-replication-compat-matrix-5-8.html>



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