


# VMware vSphere Replication 5.5 Release Notes

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Check for additions and updates to these release notes.

## What's in the Release Notes

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## Localization

VMware vSphere Replication 5.5 is available in the following languages:

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

## What's New

The following features are new for this release:

- New user interface: You can access vSphere Replication from the Home screen of the vSphere Client. The vSphere Replication UI provides a summarized view of all vCenter Server instances that are registered with the same SSO and the status of each vSphere Replication extension. Each site in the list is a link that points to the vCenter Server Summary table where a vSphere Replication portlet displays consolidated information about the target sites, and incoming and outgoing replications grouped by status. The vSphere Replication UI also provides links to vSphere Replication monitoring and management views for each selected site. The vSphere Replication Monitoring views list all outgoing and incoming replications in detail. vSphere Replication Manage views contain details about target sites and replication servers as well as summary information.
- Multiple points in time recovery: This feature allows the vSphere Replication administrator to configure the retention of replicas from multiple points in time. After a recovery, vSphere Replication presents the retained instances as ordinary virtual machine snapshots. Each replica is a Point in Time (PIT) to which you can revert the virtual machine. You can recover virtual machines at different points in time (PIT), such as the last known consistent state. You can configure the number of retained instances on the Recovery Settings page of the replication configuration wizards. You can view details about the currently retained instances in the replication details panel for a specific replication in vSphere Replication Outgoing and Incoming views.
- Adding additional vSphere Replication servers: You can deploy multiple vSphere Replication servers to meet load balancing needs.
- Outgoing and Incoming views.
- Interoperability with Storage vMotion and Storage DRS on the primary site: You can move the disk files of a replicated source virtual machine using Storage vMotion and Storage DRS, with no impact on the ongoing replication.
- vSphere 5.5 includes VMware Virtual SAN as an experimental feature. You can use VMware Virtual SAN datastores as a target datastore when configuring replications, but it is not supported for use in a production environment. Using vSphere Replication with VMware Virtual SAN environments is subject to certain limitations in this release. See [Using vSphere Replication with Virtual SAN Storage](#) for the limitations when using Virtual SAN with vSphere Replication. See the Virtual SAN Public Beta Community on how to enable Virtual SAN. [Troubleshooting](#) provides workarounds or provide fixes for Virtual SAN. If you experiment with Virtual SAN, VMware is interested in your feedback.

that you are willing to share. Please submit a support request through the access methods outlined in the Virtual SAN Public Beta Community pages:

- [Virtual SAN Public Beta URL for existing customers](#)
- [Virtual SAN Public Beta URL for new customers](#)
- Configure vSphere Replication on virtual machines that reside on VMware vSphere Flash Read Cache storage. vSphere Flash Read Cache is disabled on virtual machines after recovery.

## Installation

Download the vSphere Replication zip file and unzip it. vSphere Replication 5.5 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 the Installing vSphere Replication chapter in [vSphere Replication Administration](#).

## Upgrading vSphere Replication

To upgrade vSphere Replication to 5.5, you must upgrade its vCenter Server first. See the interoperability matrix for further information on supported versions. Once you have upgraded to vCenter Server v5.5, see [Upgrading vSphere Replication](#) to upgrade to vSphere Replication v5.5.

**IMPORTANT:** Do not select the option in **Update > Settings** in the VAMI to automatically update vSphere Replication. If you select automatic updates, VAMI updates vSphere Replication to the latest version, which might not be compatible with vCenter Server 5.5. Leave the update setting set to **No automatic updates**.

## Operational Limits for vSphere Replication

The operational limits of vSphere Replication 5.5 are the same as for vSphere Replication 5.1. See <http://kb.vmware.com/kb/2034768>.

## Open Source Components

The copyright statements and licenses applicable to the open source software components distributed in vSphere Replication 5.5 are available at the [vSphere Replication Community](#).

## Caveats and Limitations

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

- 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.
- 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.

## Supported Browser Versions

For supported browser versions for the vSphere Web Client, see [Using the vSphere Web Client](#).

## 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.

- **NEW 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 5.1 might not be functional after upgrading to 5.5 if its vCenter Server is not upgraded first.**

Workaround: Upgrade vCenter Server to version 5.5. See [Upgrading vSphere Replication](#) for instruction on upgrading.

- **Updated vSphere Replication actions in vSphere Web Client are not available after upgrade**

If you upgrade from vCenter Server version 5.1.x to version 5.5, and if you log in to the updated vSphere Web Client before you upgrade the vSphere Replication appliance to version 5.5.x, after the upgrade of the appliance replication actions through the vSphere Replication plug-in are not available.

**Workaround:** Restart the vSphere Web Client.

- If vCenter Server runs on Windows, restart the VMware vSphere Web Client service.
- If vCenter Server runs on Linux, establish an SSH connection to the vCenter Server system, log in as the root user, and run the following command: `service vsphere-client restart`.

- **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.`

Workaround: None.

- **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.

- **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.

- **Certain vSphere Replication errors require reboot 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`

Workaround: Reboot the vSphere Replication appliance or restart VRMS service: `/etc/init.d/hms restart`. Restart the disconnected vSphere Replication servers.

- **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.

- **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: Manually override the configuration state of the replication from **Inprogress** to **Error** in VRMS using the MOB interface and VRMS database. Contact VMware support 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 recovery attempts show an error in the recovery wizard that the selected virtual machine folder already contains an entity with the same name.

Workaround: Manually remove the virtual machine from the target vCenter Server, but keep its disks as they point to the replica placeholder files.

- **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.

- **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.

- **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.

- **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.

- **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.

- **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 popup 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 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.

- **Replication goes into an error state when the virtual machine disk is greater than 2 TB and the target ESX 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 ESX host that has access to the

Workaround: None. When the source virtual machine has a disk that is larger than 2 TB, you must use ESX 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.

- **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.

- **ESXi host is limited when accessing particular disks.**

A virtual machine with a disk larger than 62TB that has replication enabled blocks the power on functionality of that virtual machine.

vSphere Replication does not support replicating disks larger than 62TB. If you attempt to enable replication on a virtual machine with such a disk, the virtual machine will not perform any replication operation and will not power on.

- **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, 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.

- **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](#)

- **vSphere Replication server registration might take a long time depending on the number of hosts in the vCenter Server inventory.**

If the vCenter Server inventory contains a few hundred or more hosts, the **Register VR server** task takes 10 to 20 minutes to complete, as vSphere Replication updates each host's SSL thumbprint registry. The vCenter Server **Events** pane displays **Host is configured for vSphere**



Workaround: Wait for the registration task to complete. After it finishes, you can use vSphere Replication for incoming replication traffic. See also [vSphere Replication Server Registration Takes Several Minutes](#).

- **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 5.5 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.

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

If the vCenter Server certificate changes during the upgrade to vCenter Server 5.5, vSphere Replication becomes inaccessible.

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

- **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.



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