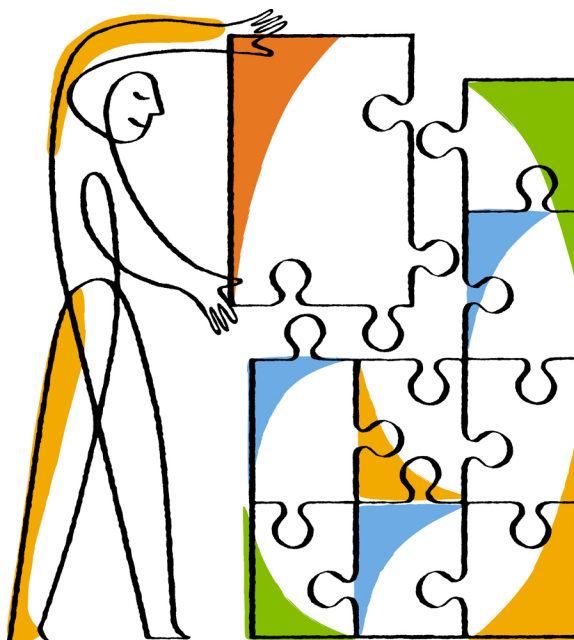




NetApp® FAS/V-Series Storage Replication Adapter 2.1 for Clustered Data ONTAP®

For VMware® vCenter Site Recovery Manager

Release Notes



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Storage Replication Adapter overview

Storage Replication Adapter for clustered Data ONTAP is a storage vendor specific plug-in to VMware vCenter Site Recovery Manager that enables interaction between Site Recovery Manager and the Storage Virtual Machine (SVM, formerly known as Vserver).

Storage Replication Adapter enables communication between Site Recovery Manager and the controller at the SVM level. The adapter interacts with the SVM to discover replicated datastores.

For more information about the new and enhanced features of Site Recovery Manager, see the Site Recovery Manager documentation.

New in this release

Storage Replication Adapter 2.1 for clustered Data ONTAP supports all the workflows in Site Recovery Manager versions 5.0, 5.1, and 5.5, such as the discovery of arrays and replicated devices, test recovery, recovery (planned migration and disaster recovery), and reprotect capability. Volume filtering and automatic igroup creation are also supported.

- Automatic discovery of LIFs enabled for NFS
This feature enables Storage Replication Adapter to automatically detect addresses to be used for NFS mounts if you have configured LIFs for use only with NFS protocol.
- IPv6 addressing
This feature provides expanded routing and addressing capabilities.
- NFS host name mounting for IPv6
This feature enables Storage Replication Adapter to report NFS host names to Site Recovery Manager so that ESX or ESXi hosts can perform NFS mounts by using the host name rather than the IP address for failover and test failover operations.

For more information about Storage Replication Adapter, see the *Storage Replication Adapter Installation and Administration Guide* on the NetApp Support Site.

Related information

NetApp Support Site: support.netapp.com

System requirements for using Storage Replication Adapter

Before you run Storage Replication Adapter, you must meet certain requirements related to Data ONTAP and Site Recovery Manager.

- For the 32-bit Storage Replication Adapter, the Site Recovery Manager version you are using must be 5.0.
- For the 64-bit Storage Replication Adapter, the Site Recovery Manager version you are using must be 5.1 or 5.5.
- One of the following Site Recovery Manager versions must be installed on Windows: 5.0, 5.1, or 5.5.
- Your storage system must be running Data ONTAP for configuring Storage Virtual Machines (SVMs) as storage arrays.
- FlexClone license must be enabled for test failover operation.
The license is optional because a test failover operation can be performed when the option `replication_disruptive_test_failover` is set to on in the `ontap_config` file.
- SnapMirror license must be enabled on the storage system.
- In a NAS environment, NFS services must be running.
- In a SAN environment, iSCSI services must be running.

- Storage Replication Adapter must be installed on the Site Recovery Manager server at the protected and recovery sites.
- Perl 5.8.8 or Perl 5.14.2 must be installed on the system on which Site Recovery Manager is installed.

Note: If the Site Recovery Manager installation does not include the required Perl version, you can install Perl separately with the default configuration. For more information about downloading Perl, see the Perl download page.

- To use secureHTTP, SSH must be enabled using security login.
By default, SSL is enabled.
By default, Storage Replication Adapter calls the Data ONTAP API over HTTP.
- The 80 or 443 port corresponding to the HTTP or SSL protocol must be open on the firewall. The port is between the Site Recovery Manager server and the storage system running Data ONTAP.
- For Data ONTAP 8.2.x, the cluster should be enabled with IPv6 before enabling IPv6 for data LIFs and the cluster-management LIF.

For a detailed list of the supported software version and storage systems, see the Interoperability Matrix.

For information about the NetApp platforms that are supported in the VMware environment, see the NetApp-VMware platform compatibility matrix on the VMware site.

Related information

VMware Compatibility Guide: www.vmware.com/resources/compatibility/search.php?deviceCategory=srax

Perl script download page: www.perl.com/download.csp

NetApp Support Site: support.netapp.com

Interoperability Matrix: support.netapp.com/matrix

Verifying support for your configuration in the IMT

You can use the NetApp Interoperability Matrix (IMT) to verify Storage Replication Adapter support for your configuration: Data ONTAP software, host operating system, and the like. Verify your configuration before you install or upgrade to Storage Replication Adapter 2.1.

Steps

1. Go to support.netapp.com/matrix.
2. If Storage Replication Adapter is not the selected Storage Solution, click **Change** and select Storage Replication Adapter under the Backup and Recovery category.



3. In the **Component Explorer** pane, select each component you want to verify.
4. When prompted to add the components to the worksheet, click **Add**.
Tip: Select the parent of a set of components to select all its children.
5. When you have added all the required choices, click **Show Results**.
6. When IMT lists each supported configuration, perform the required action:
 - Scroll across a configuration to view the supported components and any notes or alerts for the configuration.
 - Click the configuration name to display complete information for supported components, including support history and NetApp policies and guidelines for the selected Storage Solution category.

Tip: If no results are returned for your configuration, click **Feedback** in the upper right corner of the IMT.

Features not supported in Storage Replication Adapter

Some features, configurations, and functions are not supported in Storage Replication Adapter.

- Failover of exports or LUNs that have multiple replication destinations
SnapMirror relationships and multiple destinations within the same SnapMirror relationship are also not supported.
- Recovery from a specific quiesced or non-quiesced SMVI Snapshot copy
Storage Replication Adapter recovers data only from the last replicated SnapMirror Snapshot copy.
- SnapMirror load-sharing
This feature is not supported because Storage Replication Adapter does not support SnapMirror relationships on a single storage cluster.
- Qtrees
This feature is not supported.
- Single virtual machine consisting of different LUNs from different volumes
This configuration causes the recovery operation to fail and the following message is displayed:

```
Failed to unregister protected VMs
Unable to find a placeholder datastore for the host/cluster. Any
placeholder datastores registered with the Site Recovery Manager server
that were deleted and recreated in the vCenter server has to be removed
and added again as a new placeholder datastore in the Site Recovery
Manager server.
```

Important cautions

You should be aware of the important cautions to identify and resolve issues that might affect the operation of Storage Replication Adapter.

- You must ensure that the cluster name does not contain two consecutive dots (.).
For example, the cluster name should be `cluster.1`, not `cluster..1`.
- You must ensure that the cluster name does not include a dot (.) followed by an asterisk (*) in Data ONTAP 8.1.x.
- When NFS LIFs are not configured in a SAN environment, you should perform one of the following operations:
 - Ensure that the replicated RW volume is not mounted (no junction path) and is not linked to an export policy rule.
 - In any workflow, ensure that you include only SAN devices in the include list.
- When using Data ONTAP 8.1.x, during disaster recovery operations, you must ensure the following:
 - Multiple recovery plans are not run in parallel for recovery and reprotect operations
 - All the recovery plans are run one after the other during disaster recovery
 - Discovery of devices is not run in between the recovery and reprotect operations
- In a scalable environment, you must increase the default value (300 seconds) of the `storage.commandTimeout` parameter and you must increase the default value (5 counts) of the `storage.maxConcurrentCommandCnt` parameter in Site Recovery Manager.
Discovery of devices or any workflow fails if the default values are not increased. You can verify the values by using **Advanced Settings > Storage** in Site Recovery Manager.
- In a scalable environment, you must increase the default value (900 seconds) of the remote manager timeout parameter in the `vmware-dr.xml` file.
You can verify the value by navigating to the `C:\Program Files\VMware\VMware vCenter Site Recovery Manager\config` folder for Site Recovery Manager 5.1 or 5.5 and the `C:\Program Files(x86)\VMware\VMware vCenter Site Recovery Manager\config` folder for Site Recovery Manager 5.0.

For more information about modifying storage settings in Site Recovery Manager, see the Site Recovery Manager documentation on the VMware site.

Storage Replication Adapter known issues and limitations

You must be aware of the known issues, limitations, and workarounds for Storage Replication Adapter so that you can use the product more effectively.

Reprotect operations fail

Reprotect operations fail in some cases if they are run before the discovery of devices on the source and destination is completed.

If discovery continues to run in the background, the current state of some of the devices might not be updated in the database and Site Recovery Manager checks this database for the state of the devices.

Workaround

In Site Recovery Manager, click **Array Managers**, and then click **Devices** to verify that the discovery of devices is completed on the source and destination before starting a new reprotect operation.

How to get help and find more information

The NetApp Support Site provides access to troubleshooting tools, product documentation, and technical assistance. You can use NetApp Community forums to connect with peers, and the NetApp Library to access technical reports and white papers.

Resource	Description
<i>NetApp Support Site</i>	Access troubleshooting tools, product documentation, and technical support assistance.
<i>NetApp Community public forum</i>	Connect with peers, ask questions, exchange ideas, find resources, and share best practices.
<i>NetApp Library</i>	Access technical reports, white papers, and other documents.

Viewing product bugs using Bugs Online

NetApp provides an online tool that lets you search for the most current information about a known bug. You can also use this tool, which is available on the NetApp Support Site, to get a list of current or fixed bugs for a particular product, and search for information by bug number, keyword, or software product.

About this task

You can also set Bugs Online to automatically display all bugs of interest to you.

Steps

1. Access Bugs Online at <http://support.netapp.com/NOW/cgi-bin/bol>
2. Search for the bug in one of the following ways:
 - Enter the bug number.
 - Enter keywords related to the bug.
 - From the list in the Bug Type(s) field or the Product Type(s) field, select a software product. Some products are listed in one field and some in the other field. Be sure to check both to find the product you want.
3. To display all bugs of interest to you, use the New Bug Alerts Profiler at the bottom of the Bugs Online page to set bug searching criteria that matches your requirements.

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