# Configure storage system for disaster recovery

## ONTAP tools for VMware vSphere 9.11

NetApp
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# Configure storage system for disaster recovery

## Configure Storage Replication Adapter for SAN environment

You must set up the storage systems before running Storage Replication Adapter (SRA) for Site Recovery Manager (SRM).

**What you will need**

You must have installed the following programs on the protected site and the recovery site:

- SRM

  Documentation about installing SRM is on the VMware site.

  VMware Site Recovery Manager Documentation

- SRA

  The adapter is installed either on SRM.

**Steps**

1. Verify that the primary ESXi hosts are connected to the LUNs in the primary storage system on the protected site.
2. Verify that the LUNS are in igroups that have the `ostype` option set to *VMware* on the primary storage system.
3. Verify that the ESXi hosts at the recovery site have appropriate FC or iSCSI connectivity to the storage virtual machine (SVM). The secondary site ESXi hosts should have access to the secondary site storage, similarly the primary site ESXi hosts should have access to the primary site storage.

   You can do this either by verifying that the ESXi hosts have local LUNs connected on the SVM or by using the `fcp show initiators` command or the `iscsi show initiators` command on the SVMs. Check the LUN access for the mapped LUNs in the ESXi to verify FC and iSCSI connectivity.

## Configure Storage Replication Adapter for NAS environment

**What you will need**

You must have installed the following programs on the protected site and the recovery site:

- SRM

  Documentation about installing SRM can be found on the VMware site.

  VMware Site Recovery Manager Documentation

- SRA

  The adapter is installed on SRM and the SRA server.

**Steps**

1. Verify that the datastores at the protected site contain virtual machines that are registered with vCenter Server.
2. Verify that the ESXi hosts at the protected site have mounted the NFS exports volumes from the storage virtual machine (SVM).
3. Verify that valid addresses such as the IP address, host name, or FQDN on which the NFS exports are present are specified in the **NFS Addresses** field when using the Array Manager wizard to add arrays to SRM.
4. Use the `ping` command on each ESXi host at the recovery site to verify that the host has a VMkernel port that can access the IP addresses that are used to serve NFS exports from the SVM.

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# Configure Storage Replication Adapter for highly scaled environment

You must configure the storage timeout intervals per the recommended settings for Storage Replication Adapter (SRA) to perform optimally in highly scaled environments.

## Storage Provider settings

You should set the following timeout values on SRM for scaled environment:

| Advanced settings | Timeout values |
|---|---|
| `StorageProvider.resignatureTimeout` | Increase the value of the setting from 900 seconds to 12000 seconds. |
| `storageProvider.hostRescanDelaySec` | 60 |
| `storageProvider.hostRescanRepeatCnt` | 20 |
| `storageProvider.hostRescanTimeoutSec` | Set a high value(For example: 99999) |

You should also enable the `StorageProvider.autoResignatureMode` option.

See VMware documentation for more information on modifying Storage Provider settings.

VMware vSphere Documentation: Change Storage Provider Settings

## Storage settings

You must set the value of the `storage.commandTimeout` and `storage.maxConcurrentCommandCnt` timeout interval for highly scaled environments to 99,999 seconds.

The timeout interval specified is the maximum value. You do not need to wait for the maximum timeout to be reached. Most commands finish within the set maximum timeout interval.

You should also set the maximum time for SRA to perform a single operation in the vvol.properties file: offtap.operation.timeout.period.seconds=86400.

NetApp Knowledgebase Answer 1001111: NetApp Storage Replication Adapter 4.0/7.X for ONTAP Sizing Guide

VMware documentation on modifying SAN Provider settings has more information.

VMware Site Recovery Manager Documentation: Change Storage Settings

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