

VMware vCenter Site Recovery Manager 5.1

AT A GLANCE

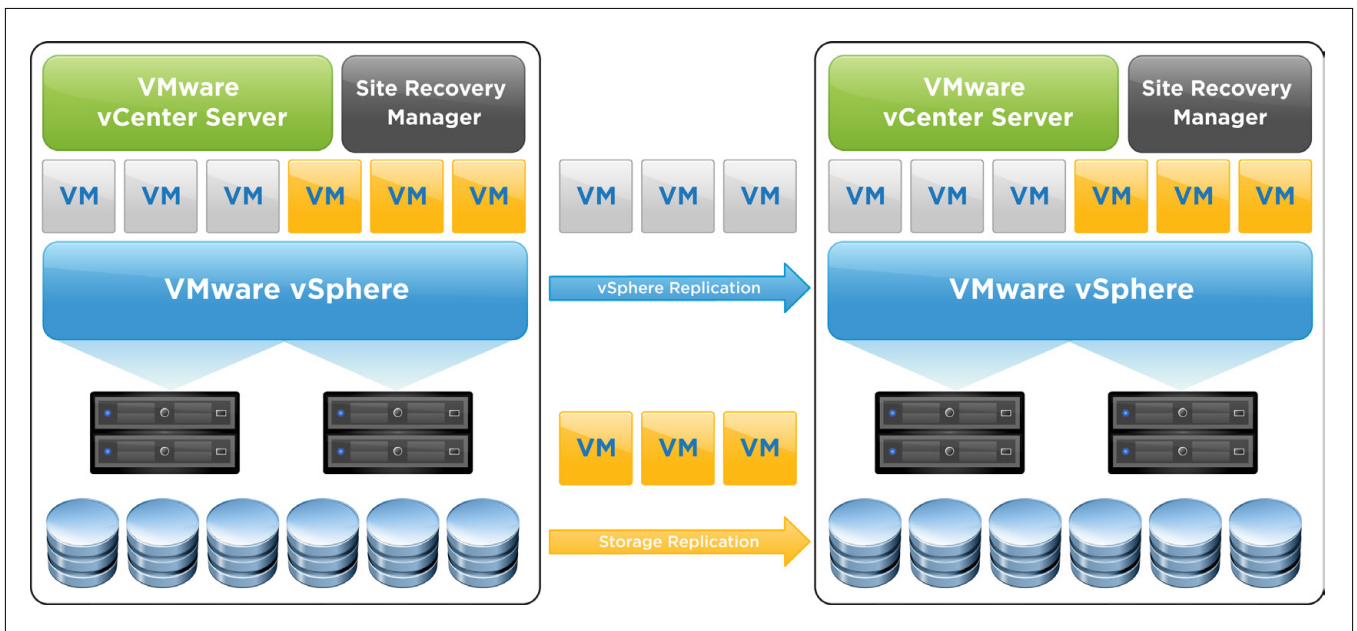
VMware vCenter™ Site Recovery Manager™ is the market-leading disaster-recovery management product. It ensures the simplest, most affordable and most reliable disaster protection for all virtualized applications. Site Recovery Manager leverages cost-efficient VMware vSphere® Replication or storage-based replication to provide centralized management of recovery plans, enable nondisruptive testing, and automate site recovery and migration processes.

BENEFITS

- Replace traditional, error-prone manual runbooks with simple, automated recovery plans.
- Enable frequent nondisruptive testing of recovery plans to ensure that they meet business requirements.
- Automate site recovery and migration processes to ensure fast, reliable recovery.
- Streamline planned migrations and preventive failovers.
- Choose among a broad set of replication options. Use vSphere Replication for affordable replication, or storage-based replication for large, business-critical environments.

What Is VMware vCenter Site Recovery Manager?

vCenter Site Recovery Manager is the market-leading disaster-recovery management product. It ensures the simplest and most reliable disaster protection for all virtualized applications. Site Recovery Manager leverages cost-efficient vSphere Replication and supports a broad set of high-performance storage-replication products to replicate virtual machines to a secondary site. Site Recovery Manager provides a simple interface for setting up recovery plans that are coordinated across all infrastructure layers, replacing traditional error-prone runbooks. Recovery plans can be tested nondisruptively as frequently as required to ensure that they meet business objectives. At the time of a site failover or migration, Site Recovery Manager automates both failover and failback processes, ensuring fast and highly predictable recovery point objectives (RPOs) and recovery time objectives (RTOs).



Site Recovery Manager automates the failover and migration of virtual machines to a secondary site. Site Recovery Manager relies on either vSphere Replication or a broad range of storage-based replication products to replicate virtual machines to the recovery site.

How Is VMware Site Recovery Manager Used?

Traditional disaster-recovery solutions often fail to meet business requirements because they are too expensive, complex and unreliable. As a result, IT departments—uncertain if the quality of the protection is worth the cost—hesitate to expand disaster protection beyond their most critical applications. The best disaster-recovery solution should provide great protection, with minimum hassle, at the lowest possible cost. IT organizations use VMware vSphere and vCenter Site Recovery Manager to ensure highly reliable RTOs and RPOs at a much lower cost and level of complexity than traditional disaster recovery. With Site Recovery Manager, organizations can expand disaster protection to all applications that they run on the vSphere platform, and to smaller sites.

Organizations use Site Recovery Manager to:

Simplify the setup of recovery and migration plans.

Traditional recovery plans are complex to set up. They are usually captured in manual runbooks, which are error-prone and quickly fall out of sync with configuration changes. With Site Recovery Manager, setting up a recovery plan is simple and can be done in a matter of minutes, instead of the weeks required to set up traditional runbooks. Through an interface that is tightly integrated with VMware vCenter Server, the user simply selects which virtual machines to protect, maps virtual machines to resources at the recovery site and specifies the virtual machine boot sequence. Site Recovery Manager dramatically simplifies recovery plans by automatically coordinating most of the manual steps of traditional recovery plans.

Perform nondisruptive testing of recovery and migration plans.

With Site Recovery Manager, recovery plans can be tested as frequently as required without disrupting production systems. Site Recovery Manager provides a detailed report of the test outcomes, including the RTO achieved. With this information, organizations gain confidence that their disaster protection will meet their business objectives. They can save testing results and use them to demonstrate compliance with disaster-recovery requirements.

Automate site recovery and migration processes to ensure fast and reliable RTOs.

Site Recovery Manager automates the entire site recovery and migration process. Upon initiation of a disaster failover, business services are automatically recovered with no manual intervention. Because automation eliminates the risk inherent in manual processes, disaster failover can be executed much faster and with highly predictable RTOs. Typical recovery times vary between 30 minutes and a couple of hours, depending on the configuration.

Streamline planned migrations and preventive failovers.

In addition to disaster recovery, Site Recovery Manager is often used to simplify and automate planned site migrations and preventive failovers. Automated failback enables quick and easy migration of applications from the secondary site back to the production site, using the original recovery plan. In addition, planned migration can be used when an organization knows a few hours ahead of time that virtual machines will be migrated. In this case, the planned migration workflow ensures clean migrations of virtual machines in an application-consistent state with no data loss.

How Does Site Recovery Manager Work?

Site Recovery Manager integrates tightly with an underlying replication product, vSphere and vCenter Server to automate end-to-end recovery processes. Site Recovery Manager relies on the following components:

Replication of virtual machines to a secondary site.

Site Recovery Manager requires an underlying replication product to copy virtual-machine data to a secondary site. Replication can be provided either by built-in vSphere Replication or by a third-party storage-based replication product. vSphere Replication provides cost-efficient and simple replication for smaller sites and Tier 2 applications. Storage-based replication is mostly used for business-critical environments.

Integration with replication product. Site Recovery Manager integrates with the underlying replication product through a storage replication adapter (SRA). This piece of software—written by the replication vendor—enables Site Recovery Manager to see which virtual machines are being replicated and coordinate execution of recovery plans with the replication layer.

Integration with vCenter Server. Site Recovery Manager requires separate vCenter Server instances at both the production and failover sites. Site Recovery Manager instances are deployed at both sites and integrate directly with their local vCenter Server instances.

Setup of recovery plans. Site Recovery Manager provides an intuitive interface to help users create recovery plans for different failover scenarios. Users can map production resources to recovery resources, specify which virtual machines to protect and their relative boot sequences, and identify low-priority virtual machines to suspend at the failover site. Users can also include custom scripts and automatically reconfigure IP addresses for their virtual machines.

Testing, disaster-recovery failover and planned-migration workflows. After a recovery plan has been set up, administrators can execute that plan with a testing, disaster-recovery failover or planned-migration workflow. The testing workflow brings up protected virtual machines in an isolated environment, ensuring that test virtual machines are completely isolated from production virtual machines. The disaster-recovery failover workflow stops replication and recovers protected virtual machines at the failover site with an emphasis on minimizing response times. The planned-migration workflow shuts down the virtual machines gracefully at the original site, syncs the data by completing replication and recovers the virtual machines at the failover site. With both the disaster-recovery failover and planned-migration workflows, users can automatically fail back to the production site by leveraging the initial recovery plan, simplifying routine migrations.

Key Features of Site Recovery Manager

Centralized Recovery Plans

- Create and manage recovery plans directly from vCenter Server.
- Discover and display virtual machines protected by vSphere Replication or storage-based replication.
- Map virtual machines to appropriate resources on the failover site (resource pools, virtual switches and virtual-machine folders).
- Specify boot sequence of virtual machines.
- Customize virtual-machine IP addresses.
- Customize shutdown of low-priority virtual machines at the failover site.
- Extend recovery plans with custom scripts.
- Control access to recovery plans with granular role-based access controls.
- Recover multiple sites into a single shared recovery site.

Nondisruptive Testing

- Automate execution of recovery tests.
- Leverage storage snapshot capabilities to perform recovery tests without interrupting replication.
- Recover virtual machines in an isolated network to avoid any impact on production applications.
- Store, view and export results of test and failover execution from vCenter Server.
- Customize execution of recovery plans for testing scenarios.
- Automate cleanup of testing environments after completing tests.

Support for vSphere Replication

- Leverage the industry's first hypervisor-based replication, purpose-built for vSphere and Site Recovery Manager.
- Manage replication directly through vCenter, at a more granular and flexible virtual-machine level.
- Eliminate requirements for identical storage arrays across sites.
- Support use of low-end storage, including direct-attached storage.
- Provide flexible RPOs of 15 minutes to 24 hours.
- Replicate only changes to increase network efficiency.
- Scale to hundreds of virtual machines.
- Support for file and application consistency.

Support for Third-Party Storage-Based Replication

- Choose among a broad range of compatible storage arrays and replication products from major vendors.
- Use storage-based replication solutions based on iSCSI, Fibre Channel or NFS storage.
- Ensure tight integration with Site Recovery Manager through SRAs.
- Automate replication and data-sync operations for coordinated disaster-recovery failovers and planned migrations.

Automated Disaster-Recovery Failover

- Monitor site availability and alert users about possible site failures.
- Initiate recovery-plan execution from vCenter Server with a single button.
- Stop replication and automate promotion of replicated datastores for recovery.
- Shut down low-priority virtual machines at failover site.
- Boot protected virtual machines with prespecified boot sequence.
- Execute user-defined scripts and pauses during recovery.
- Reconfigure virtual-machine IP addresses to match network configuration at failover site.
- Manage and monitor execution of recovery plans within vCenter Server.

Automated Failback

- Automate failback to original production site.
- Reprotect virtual machines by automatically reversing replication to original site.
- Execute original recovery plan in reverse direction.
- Available also with vSphere Replication.

Planned Migration

- Use planned-migration workflow to ensure zero data loss and application-consistent migrations.
- Execute graceful shutdown of protected virtual machines at the original site.
- Perform data sync to force complete replication of powered-off virtual machines to the failover site.
- Execute recovery plan leveraging application-consistent virtual machines.

Site Recovery Manager Editions

VMware vCenter Site Recovery Manager 5.1 is available in two editions to help you protect your virtual environment. Site Recovery Manager 5.1 Enterprise provides enterprise-level protection to all applications on the vSphere platform. Site Recovery Manager 5.1 Standard, designed for smaller environments, can be used to protect up to 75 virtual machines per site and per Site Recovery Manager instance.

Site Recovery Manager Enterprise can also be purchased as part of VMware vCloud Suite® Enterprise. More information about vCloud Suite can be found at <http://www.vmware.com/go/vcloud-suite-licensing>.

Find Out More

For information or to purchase VMware products, call 1-877-4VMWARE (outside of North America, +1-650-427-5000), visit <http://www.vmware.com/products> or search online for an authorized reseller. For detailed product specifications and system requirements, refer to the Site Recovery Manager installation and configuration guide.

