

# Getting Started with Site Recovery Manager

Site Recovery Manager 1.0 and Later

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This document provides a high-level overview of VMware® Site Recovery Manager (SRM), a disaster recovery solution from VMware. If a disaster occurs, SRM helps you quickly restore your organization's IT infrastructure, dramatically shortening the length of time that you experience a business outage.

SRM is based on your existing IT setup using virtual machines that VMware VirtualCenter manages. The SRM architecture ties workflow automation to third-party storage replication.

## Planning for Disaster Recovery

Consider the following items as you set up a disaster recovery program:

- What is the maximum downtime you can accept? What is your Recovery Time Objective (RTO)?
- How much data loss can you accept? What is your Recovery Plan Objective (RPO)?
- What kind of recovery plan do you need for a partial disaster (such as a storage array failure) compared to a complete disaster (such as an entire facility being unavailable because of fire damage)?
- How do you classify your computing resources for restoration after a disaster? Are they critical, urgent, important, normal, or nonessential?

VMware professionals can assist you with performing a risk assessment and developing a plan to help ensure recovery. A recovery plan is built by mapping business application services with users as well as systems (physical servers and virtual machines).

## About Protected and Recovery Sites

SRM uses two sites, a protected site and a recovery site. The VirtualCenter Server 2.5 and the VI Client 2.5 must be installed at both sites, as well as an SQL Server or Oracle Database server. (See *Site Recovery Manager Compatibility Matrixes* documentation for a list of supported servers and databases.)

Each site has an inventory of virtual machines that reside on array-based replicated LUNs (logical unit numbers), which are disk volumes in a storage array that are identified numerically. Before installing SRM, install the Storage Replication Adapter (SRA) for your storage and storage replication environment. An SRA is software that ensures integration of your storage device with SRM. Because SRM interacts with arrays from a variety of storage vendors, consult the documentation that your storage vendor provides for array-specific information used during SRM installation and configuration. The SRAs that have been created by storage vendors for Site Recovery Manager can be downloaded from the vmware.com. (See *Site Recovery Manager Compatibility Matrixes* for a list of supported SRAs).

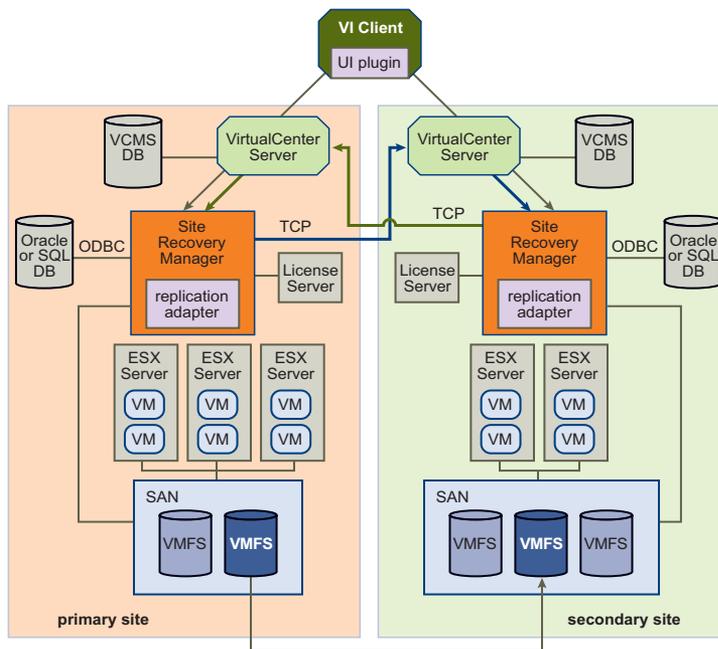
Optimally SRM is installed bidirectionally, so that each site serves as a recovery site for the other. The two sites should be at a significant geographic distance from each other. The protected and recovery sites must be in a networked configuration that allows TCP connectivity.

## About SRM Architecture

Each site consists of a VirtualCenter Server, which is a Windows machine that runs the VirtualCenter service. Installed with each VirtualCenter Server is the SRM Server. The SRM Server hosts Site Recovery Manager and array management technology. It also serves the SRM plug-in to the VI Client. Management is done from the VirtualCenter client on the protected site.

SRM uses block-based replication with SRAs installed on the SRM Server. This integration of hardware and software supports the most demanding application business continuance needs, in this case, a failover following a disaster. An example of SRM architecture is illustrated in [Figure 1](#).

**Figure 1.** SRM Architecture



## Preparing to Use SRM

An environment that is ready for SRM includes the following.

- The protected and recovery sites are identified.
- Protected virtual machines residing in hosts or clusters are managed by VirtualCenter Server 2.5, and are residing on a supported ESX Server.

For information about the most recent updates and patch levels, consult the *Site Recovery Manager Compatibility Matrixes* documentation.

- A Microsoft SQL Server Enterprise 2005 or Oracle Database 10g server is ready for use on the protected and recovery sites.
- Array-based replication (iSCSI or Fibre Channel storage array) is installed and configured at the protected and recovery sites. If other vendor-provided components are required, the components are installed.
- The SRM server must have access to a VirtualCenter server that manages ESX hosts that have access to volumes managed by the replicated arrays.
- Administrator roles and permissions are identified for the administrators who will install, configure, set up, test, and manage SRM.

## Setting Up SRM

The following table describes process of setting up SRM. These steps assume that you already have a working Virtual Infrastructure with VirtualCenter clients installed as well as the SRAs installed and configured. For more information, see the *Administration Guide for Site Recovery Manager 1.0*.

Task	Description
Prepare the site	See <a href="#">“Preparing to Use SRM.”</a>
Install	<ol style="list-style-type: none"> <li>1 Install SRM on the protected and recovery site.</li> <li>2 Connect to the VirtualCenter Server with the clients to manage SRM.</li> <li>3 Download SRM and enable the plug-in from VirtualCenter.</li> <li>4 Connect the protected and recovery sites.</li> </ol>
Configure array managers in SRM	<ol style="list-style-type: none"> <li>1 Configure the protected site array managers.</li> <li>2 Configure the recovery site array managers.</li> <li>3 Confirm that the VMFS datastore is detected (LUN replication should be set up before installing SRM).</li> </ol>
Define inventory mappings	Configure the mapping between resources on the protected and recovery site, specifically networks, folders, and resource pools. This enables protected machines to recover quickly on the recovery site after a disaster occurs.
Create protection groups	<p>Set up protection groups on the protected site. To do this:</p> <ol style="list-style-type: none"> <li>1 Select a LUN group on the protected site.</li> <li>2 Select a placeholder volume on the recovery site to store placeholder (shadow) virtual machine configuration files.</li> <li>3 Apply inventory mappings for the protection group on the recovery site.</li> </ol>
Create recovery plans	On the recovery site, create recovery plans to address the disaster scenarios you identified. You can customize the plan with command steps if needed. Test the plan to be sure you are ready for a disaster.
Configure and edit virtual machine properties	Set or edit properties for individual virtual machines, such as network IP address or to add recovery messages and commands pertaining to this machine.
Configure security and alerts	Configure security and monitoring options.
Maintain SRM	Periodically review your recovery plans and make sure you update the plans as business conditions or your IT environment change.

## Working with the SRM User Interface

After SRM is installed and the SRM plug-in is enabled in the VirtualCenter interface, click the **Site Recovery** icon on the VI Client navigation bar to direct the VI Client to the SRM Server. The view on the user interface changes accordingly. The Inventory Panel displays the options relevant to site recovery, specifically protection groups and recovery plans. You can act on these objects using tabs and links in the Information panel. For details, see the SRM administrator’s guide and online help.

## Finding More Information

- *Site Recovery Manager 1.0 Release Note*—Provides late-breaking news and a description of known issues.  
[http://www.vmware.com/support/srm/srm\\_10\\_releasenotes.html](http://www.vmware.com/support/srm/srm_10_releasenotes.html)
- *Administration Guide for Site Recovery Manager 1.0*—Provides a conceptual overview as well as reference information about SRM prerequisites, system requirements, installation and licensing, configuring virtual machines, protected and recovery sites, recovery plans, testing and running failover, failback scenarios, adding users, procedural checklists, and terminology.  
[http://www.vmware.com/pdf/srm\\_10\\_admin.pdf](http://www.vmware.com/pdf/srm_10_admin.pdf)
- *Site Recovery Manager Compatibility Matrixes*—Lists server, client, database, and guest operating system version compatibilities for Site Recovery Manager.  
[http://www.vmware.com/pdf/srm\\_10\\_compat\\_matrix.pdf](http://www.vmware.com/pdf/srm_10_compat_matrix.pdf)

- *Site Recovery Manager API Guide*—Describes how third-party clients can use Web services to interact with Site Recovery Manager.  
[http://www.vmware.com/support/developer/srm-api/srm\\_10\\_api.pdf](http://www.vmware.com/support/developer/srm-api/srm_10_api.pdf)
- *Site Recovery Manager Evaluator Guide*—Provides a conceptual overview as well as step-by-step workflows describing planning for using SRM, setting up protected and recovery sites, testing failover, the failover and failback process, alarms and status monitoring, and a discussion of roles and privileges.  
[http://www.vmware.com/pdf/srm\\_10\\_eval\\_guide.pdf](http://www.vmware.com/pdf/srm_10_eval_guide.pdf)

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