Installing, Configuring, and Using Shared Recovery Site Support

VMware vCenter Site Recovery Manager 4.0 and later

VMware vCenter Site Recovery Manager (SRM) is typically used to protect a specific instance of vCenter by pairing it with another vCenter instance with which it shares replicated datastores. The first instance (the protected site) is configured to failover to the second instance (the recovery site) in such a way that all of the protected virtual machines at the protected site are added to the inventory of the recovery site, and recovered under the control of a plan that enables the recovery site to assume full responsibility for providing the services formerly hosted at the protected site. This one-to-one relationship of protected site to recovery site cannot accommodate use cases in which multiple protected sites are configured to failover to a single recovery site. That sort of use case is characteristic of organizations that must provide a single recovery site with which multiple protected sites (remote field offices, for example) can pair. It is also a requirement for service providers who want to offer business continuity (recovery site) services to multiple customers.

SRM 4.0 includes a new feature, shared recovery site support, that enables many-to-one pairings of protected sites with a recovery site. This technical note explains how to install and configure shared recovery site support.

Overview of Shared Recovery Site Workflow

When configured for shared recovery site support, SRM supports the same procedures and workflows that it does in the normal configuration.

- SRM server installation must be initiated from the Windows command shell using a special command-line option. The installation process includes an extra step that specifies a custom SRM extension name, which is used by a protected site to pair with the shared recovery site.

- Whenever a user connects to the vCenter server at the protected site and clicks the Site Recovery icon on the vSphere Client Home page, SRM displays a dialog box that requires the user to select a specific SRM extension to connect to.

Installation

For each shared recovery site customer, you must install SRM once at the customer site and again at the recovery site. Both installations must specify the same custom SRM extension. Each SRM server installation at the shared recovery site must have a dedicated host. You cannot install multiple instances of the SRM server on a single host.

To enable shared recovery site support, run the SRM installer from the Windows command line, as shown in Example 1.

Example 1. Installer Command Line

```
<SRM Installer.exe> /V"CUSTOM_SETUP=1"
```

When run from the command line using this option, the SRM installer presents two additional screens on which you specify a unique SRM extension to be used by a pair of sites.

Select a Plugin Identifier

Click **Custom SRM Plugin identifier**. Any other choice does not support the shared recovery site configuration.

Specify a Custom SRM Extension

The **Custom SRM Extension** screen presented by the installer has three fields:

- **SRM ID** – a string of up to 29 ASCII characters from the set of ASCII upper- lower-case characters, digits, the underscore, the period, and the hyphen. The underscore, period, and hyphen cannot be used as the first or last characters of the SRM ID, and cannot appear adjacent to one another. If you create an SRM ID That is longer than 29 characters, installation fails with a message of the form "Error while registering extension."

- **Organization** – a string of up to 50 ASCII characters that specifies the organization that created the extension.

- **Description** – a string of up to 50 ASCII characters that provides a description of the extension.

Example 2 illustrates example values for these strings.

Example 2. SRM Extension Information

```
SRM ID: Example_Manhattan
Organization: Example Corporation
Description: Recovery site for Example Corp Manhattan office
```

NOTE If you install SRM with a custom extension, you can still create an additional installation for the same vCenter instance, using the default extension, or vice versa.

Install the SRM Client Plug-In

After the SRM server installation is complete, you can install the SRM client plug-in as described in the SRM *Administration Guide*. When you download the plug-in from an SRM server that has been configured for shared recovery site support, the plug-in remains on the Available list after it has been installed.

Site Pairing

When you pair a protected site with a shared recovery site, several constraints apply:

- Both sites must have been installed specifying the same custom SRM extension.

- Both sites must have specified the same authentication method. If certificate-based authentication is used, both sites must use matching certificates. If credential-based authentication is used, both sites must specify the same values for Organization and Organization Unit. (The value you specify for Organization in the Specify a Custom SRM Extension page has no relation to the value that you specify for Organization when you configure credential-based authentication.)

- A single shared recovery site can support a maximum of 10 protected sites.

Connecting to SRM

When a user connects to the vCenter server at the protected site and clicks the Site Recovery icon on the vSphere Client Home page, SRM displays a dialog box that requires the user to select an SRM extension to connect to.

For each SRM extension registered at the shared recovery site, this dialog box lists the **SRM ID**, **Organization**, and **Description** that were supplied when the extension was created.

NOTE When connecting to the shared recovery site, every customer can see all of the SRM extensions registered for the site, including company names and descriptions.

Shared Recovery Site Administration

At a shared recovery site, multiple customers share a single vCenter and in some cases a single ESX host. The vCenter administrator at the shared recovery site must manage permissions so that each customer (where customer is defined as the owner of an SRM extension) has sufficient privileges to configure and use SRM, but no customer can access resources that belong to another customer.

Users and Groups

Any customer with adequate permissions must be able to access the recovery site to create, test, and run recovery plans. The vCenter administrator at the shared recovery site should create a separate group for each customer. None of the customers' user accounts should be member of the vCenter Administrators group.

Shared Customer Resources

All customers have read access to all folders of the recovery site vCenter Server.

In some cases, customers also share a common datacenter and ESX host. No customer should be given permission to rename, move or delete the datacenter or host. No customer should be given permission to create virtual machines outside the customer's dedicated folders and resource pools. No customer should be allowed to change roles or assign permissions for objects that are not dedicated to the customer's own use.

To prevent unwanted propagation of permissions across different organizations' resources, permissions on the vCenter root folder, datacenters, and hosts should not be propagated.

Isolated Customer Resources

Each customer should be assigned a separate virtual machines folder in the **Virtual Machines and Templates** inventory view. Set permissions on this folder to prevent any other customer's virtual machines from occupying it. For example, set the Administrator role (with the propagate option on) for the customer on the customer's folder. This arrangement prevents duplicate name errors that might otherwise occur when multiple customers protect virtual machines that have identical names. This folder should also contain all of the customer's placeholder virtual machines, so that they can inherit its permissions. Other customers should be assigned no permissions for this folder

Customers should also have dedicated resource pools, datastores, and networks, all protected in a similar way.

Tasks

In the **Recent Tasks** window, users who have permissions to view a task target can see tasks initiated by other users. This means that all customers will see all tasks that have a shared resource, such as a shared host, datacenter or the vCenter root, as a target.

Events

Events posted by all instances of SRM associated with a shared recovery site have identical permissions. A user who can see events from any instance of SRM can see events from all instances.

Known Issues

The following known issues are present in this feature at SRM 4.0.

- If you run the installer from the command line shown in Example 1 but do not specify a custom SRM identifier, the SRM plug-in cannot be downloaded form the resulting server installation.

- Before you start an installation in repair mode to change a custom SRM ID, you must close the vSphere Client.

- You cannot disable an SRM plug-in that was downloaded from a shared recovery site.

- All customers of a shared recovery site have read access to all folders at the site.

- If there is a host at the shared recovery site for which a user has the Recovery Datacenter Administrator role, then the user create inventory mappings to resources on that host.