HP StorageWorks Replication Solutions Manager simulation guide

About this document

This document contains instructions for setting up the HP Replication Solutions Manager (replication manager) in simulation mode, which includes enabling simulation and defining host, storage, and database resources. For information about the replication manager features, see the online help.

Intended audience

This document is intended for technical personnel involved in sales, training, or preproduction testing of replication solutions for HP storage arrays.

Related documentation

The following documents contain information relevant to the simulation guide:

- *HP StorageWorks Business Copy EVA administrator guide*
- *HP StorageWorks Continuous Access EVA administrator guide*
- *HP StorageWorks EVA replication software consolidated release notes*
- *HP StorageWorks EVA software compatibility reference*
- *HP StorageWorks JREserver installation instructions*
- *HP StorageWorks Replication Solutions Manager administrator guide*
- *HP StorageWorks Replication Solutions Manager command line user interface (CLUI) reference*
- *HP StorageWorks Replication Solutions Manager installation guide*
- *HP StorageWorks Replication Solutions Manager online help and user guide*

You can find these documents from the Manuals page of the HP Business Support Center web site:

http://www.hp.com/support/manuals

In the Storage section, click **Storage software** and then select your product.

About simulation mode

You can perform any replication manager function in simulation mode that you can perform in a production environment with the following limitations:

- Only the Windows host agent is simulated. Other host platforms are not available for simulation.
- Each simulated host volume can contain one virtual disk only. In a production environment, a host volume can be comprised of multiple virtual disks.

Simulation mode allows you to use the functions of the replication manager without having to use any of your production data or resources. These functions include creating snapshots and snapclones, creating DR groups and adding virtual disks to them, and performing failovers. This functionality is built into the replication manager and does not require a separate installation or activation.

> **NOTE:**
>
> A supported JRE is required on the server from which you browse to HP Replication Solutions Manager, whether in production or simulation mode. See *HP StorageWorks EVA software compatibility reference* for supported JRE versions.

Preparing for simulation mode

Before using simulation mode, install the replication manager on a server that is not running HP StorageWorks Command View EVA. See *HP StorageWorks Replication Solutions Manager installation guide* for more information. HP recommends that you do not use simulation mode in a production environment.

To enable simulation mode, you must not have any previously discovered storage systems or enabled hosts in the replication manager. If you do, these resources must first be purged from the replication manager's database. If you are going to run simulation mode in a production environment, therefore, follow the procedure in "Purging resources" on page 8 before proceeding to "Simulating resources" on page 4.

Planning considerations

Before using the replication manager in simulation mode, there are important planning considerations that must be taken into account. These considerations depend on the reason you are using simulation mode and the storage system it is to run on.

If you are not currently a user of the replication manger and want to use simulation mode to evaluate it, consider the following:

- If you have HP storage, install the replication manager on a machine other than a production machine. That is, do not install the replication manager on the same machine as HP Command View EVA.
- You need not install any HBAs.
- Add at least one simulated storage system and two simulated enabled hosts.
- Determine whether you want to simulate DR groups. If so, you must simulate two storage resources that are at the same controller software version.
- Determine whether you want to simulate Oracle databases. If so, you must add at least one simulated Oracle instance.

If you are an HP Command View EVA user, but not a replication manager user and you want to use simulation mode to evaluate the replication manager, consider the following:

- You need not install any host agents.
- If you install the replication manager on the same machine as HP Command View EVA, the replication manager will find your storage resources and simulation mode will be disabled. To use the replication manager in simulation mode, you must purge your storage resources and perform database cleanup (as described in "Purging resources" on page 8) and add simulated resources.

△ **CAUTION:**

HP strongly recommends that you do not run simulation mode on a production machine (that is, on the same machine as HP Command View EVA). The results can be disastrous. When you disconnect HP Command View EVA, you lose control of the storage resources that were being managed. If you purge the replication manager database and have not backed it up, you will lose all jobs.

If you are an HP Command View EVA user and have been running the replication manager on a production machine, consider the following:

- There is a danger that a user will browse to the replication manager, notice that it has a simulation mode, and attempt to use it on your production machine.
- To use the replication manager in simulation mode on a production machine, you must purge your storage resources and perform database cleanup (as described in "Purging resources" on page 8) and add simulated resources.

When you exit simulation mode, ensure that you purge any existing data (see "Purging resources" on page 8). If data remains and you attempt to enter simulation mode at a later time, you will not be successful. The replication manager is not designed to enter simulation mode if there is data in the database.

Simulating resources

Configure simulation mode by adding storage, host, and optional Oracle resources to the simulated system by executing the following procedure:

1. From the replication manager main window, enable simulation mode by selecting **Tools** > **Simulation Mode** and then selecting the simulation mode check box.

The content (right) pane heading displays `*** SIMULATION MODE ***`. The list tab shows the currently configured simulated storage systems.

📝 **NOTE:**

The Simulation Mode check box indicates whether simulation mode is currently enabled and also acts as a toggle that switches to and from simulation mode. If simulation mode is not available, a tooltip on the menu item shows the reason for its unavailability.

2. To simulate storage resources, select **Tools** > **Simulation Mode** > **Configure Simulated Storage Resources** from the simulated replication manager main window.
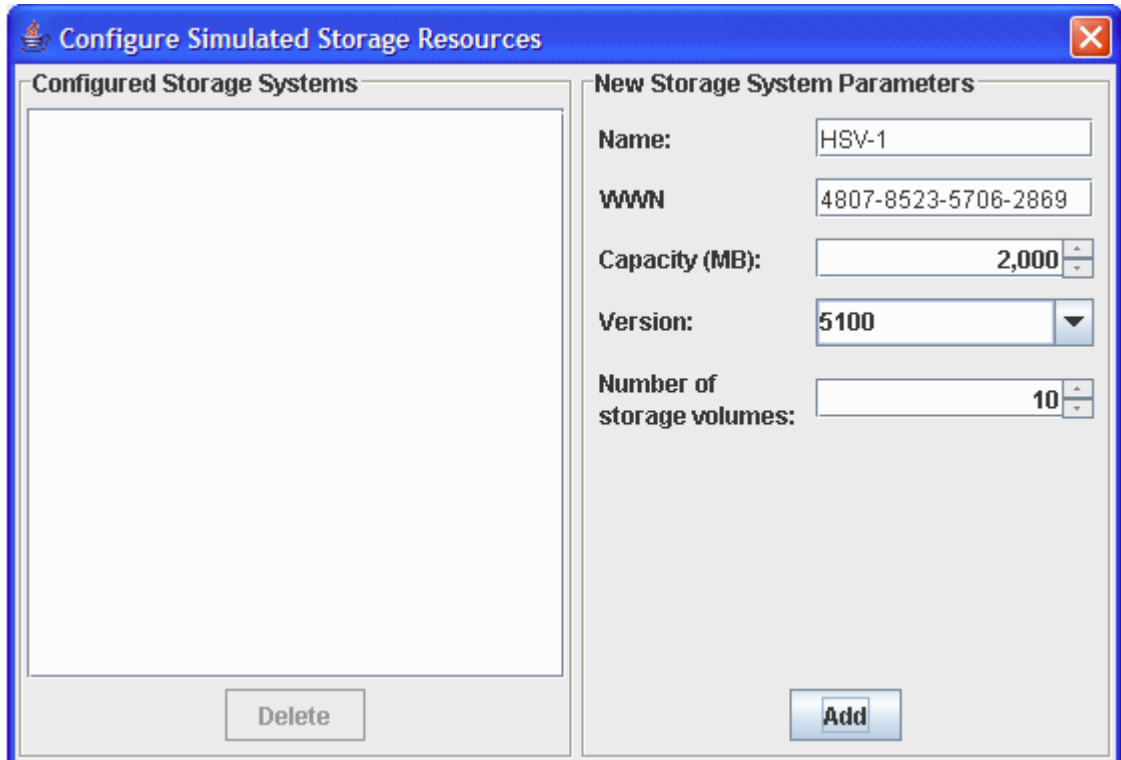
The Configure Simulated Storage Resources window opens.

Figure 1 Configure simulated storage resources window

3. Enter the storage system parameters in the right pane and then click **Add**.

You can configure the properties in the right pane before adding simulated storage systems, which simulates adding a storage system to a virtual SAN that will be discovered by the replication manager.

4. Optional. Select the simulated storage systems in the navigation pane and then click **Delete** to remove them from the virtual SAN.

Deleting a simulated storage system causes the system to have a state of unknown in the replication manager. You can then remove the system from the replication manager using the normal database cleanup method.

5. To simulate host resources, select **Tools** > **Simulation Mode** > **Configure Simulated Host Resources**.

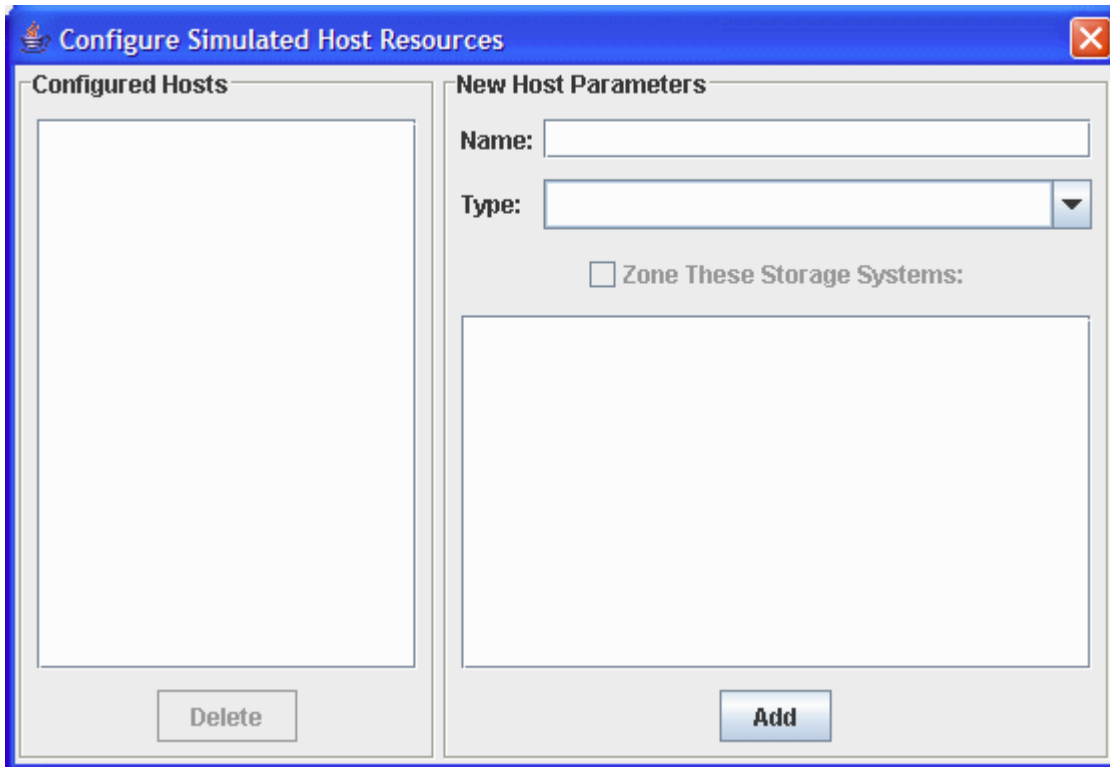The Configure Simulated Host Resources window opens.

Figure 2 Configure simulated host resources window

6. Enter the new host parameters in the right pane and then click **Add** to configure simulated hosts.

The list under Configured Hosts shows the currently configured simulated enabled hosts. You can zone an enabled host to a simulated storage system. Some of the virtual disks on the selected storage system are then automatically presented to the host and logical volumes are created on the simulated host.

NOTE:

Presentation to the host is automatic because there is no other way for these objects to be created. In a normal system, the operating system tools for disk management are used to partition the disks. Since there is no real host in this case, it must be done automatically. A job monitor window shows the progress of the host agent discovery and virtual disk presentation operations.

7. To zone an enabled host to a simulated storage system:

a. Select the **Zone These Storage Systems** check box.

b. In the lower right pane, select the storage systems you want to zone and then click **Add**.

The monitor job window opens.

c. Wait for the progress bar to reach 100% and then click **OK**.

The monitor job window closes.

d. In the navigation (left) pane, click **Enabled Hosts**.

The enabled hosts appear in the content pane.

e. In the navigation pane, click **Storage System**.

The storage system appears in the content pane.

f. In the navigation pane, click **Host Volumes**.

The host volumes appear in the content pane.

8. Optional. Select simulated enabled hosts in the navigation pane and then click **Delete** to remove them.

9. To simulate Oracle resources, select **Tools** > **Simulation Mode** > **Configure Simulated Oracle Resources**.

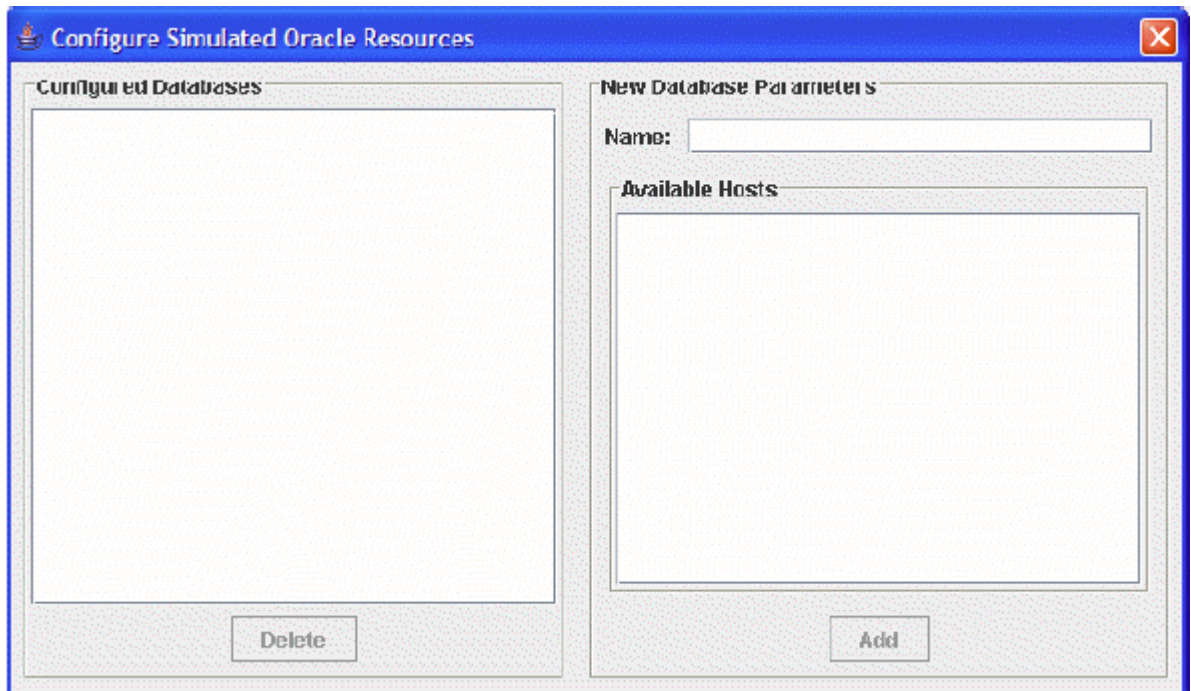The Configure Simulated Oracle Resources window opens.

Figure 3 Configure simulated Oracle resources window

> **NOTE:**
> Oracle databases reside on enabled hosts, so you must select a host agent from the list on the right before using the Add button to add a simulated database instance. If no host agents are listed, either no enabled hosts have been added to the simulated system or enabled hosts have been added, but were not zoned to a simulated storage system. Zoning is a requirement because the data in an Oracle database must reside on a logical volume that comes from a storage system being managed by the replication manager.

10. Enter the new database parameters in the right pane and then click **Add** to add a simulated database instance.

The list under Configured Databases shows the currently configured Oracle database instances.

11. Select an enabled host in the content pane.

You are selecting the host where the simulated Oracle database will reside.

12. Click **Add**.

In the navigation pane, the database is shown as associated with the host.

13. In the navigation pane, click **Oracle**.

The Oracle database appears in the content pane.

14. Optional. Select the configured databases in the navigation pane and then click **Delete** to remove simulated Oracle database instances.

You may now use the replication manager as described in the online help and user guide.

Purging resources

You can purge only those resources that are no longer managed by the replication manager. To purge resources:

1. From the replication manager main window, select **Tools** > **Configure**.

   The Configuration window opens.

2. In the navigation pane, select **Storage Access** > **Management Servers** > **EVA Management Servers**.

   The EVA Management Servers window opens in the right pane.

3. In the EVA Management Servers pane, clear the check box under Manage and then click **OK**.

   The Saving Configuration window appears while the configuration is saved to the management server and then the Configuration window closes.

4. From the replication manager main window, select **Tools** > **Configure**.

   The Configuration window reopens.

5. In the navigation pane, select **Database** > **Cleanup**.

   The Cleanup configuration settings window opens in the right pane.

6. Select the storage array records to be purged and then click **OK**.

   Knowledge of the resources you are managing is deleted from the replication manager and then the Configuration window is closed.

7. To delete enabled hosts from the replication manager, select **Enabled Hosts** in the navigation pane.

   The Enabled Hosts window opens in the content pane.

8. Select the hosts you want to delete and then select **Actions** > **Delete**.

   The selected hosts are removed from the replication manager.

9. Click the refresh icon.

Figure 4 Refresh icon