

# Compaq SANworks Virtual Replicator Version 2.0A (Service Pack 1)

## README

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These are the release notes for Compaq SANworks Virtual Replicator Version 2.0A (Service Pack 1). This service pack updates the full and upgrade license versions of Virtual Replicator 2.0. It does not apply to evaluation copies or to Version 1.1. Compaq strongly recommends that all customers running Version 2.0 upgrade to Version 2.0A.

### Installing Version 2.0A

### Uninstalling Virtual Replicator

### New Features in this Release

### Corrections in this Release

### Known Problems in this Release

### Known Documentation Errors

### General Notes and Issues

## Installing Virtual Replicator Version 2.0A (Service Pack 1)

- [Prerequisites](#)
- [Installing from the Virtual Replicator CD](#)
- [Installing from the Compaq website](#)
- [Verifying that Version 2.0A is installed](#)
- [Additional information for installing on a cluster](#)

- **Prerequisites**

Before installing Version 2.0A, make sure you have

- Installed Virtual Replicator 2.0 (and restarted your computer).
- Closed all applications on your computer.
- The Virtual Replicator 2.0 or 2.0A CD, or access to the network share from which you originally installed Virtual Replicator 2.0.

**Note:** The Windows Scheduled Tasks applet is a prerequisite for Virtual Replicator 2.0 and Version 2.0A.

Version 2.0A is available on the Virtual Replicator CD or on the Compaq website.

- **Installing from the Virtual Replicator CD**

To install using the CD:

1. Insert the Installation CD into your CD-ROM drive.
2. On the Setup screen, click **Service Pack 1 Update**.
3. Follow the instructions in the wizard screens to extract the Version 2.0A files to your system.
4. Click **OK** to begin installation immediately, or click **Cancel** if you want to install Version 2.0A at a later time. To install later, run (double-click) **setup\_vr20sp1.vbs** in the directory you specified earlier.
5. To proceed with installation, click **Next** in the install wizard screens. If you are prompted, insert the Virtual Replicator CD or specify the network path for the Virtual Replicator 2.0 **Storage Software** folder.
6. Click **Finish** to conclude the installation.
7. Restart your system.
8. Log in to the same account to complete the installation.

- **Installing from the Compaq website**

Version 2.0A is available in a self-extracting file, **vr20sp1.exe**, that can be downloaded from the Compaq SANworks Virtual Replicator website:  
[www.compaq.com/products/storageworks/swvr/swvr\\_index.html](http://www.compaq.com/products/storageworks/swvr/swvr_index.html).

Follow the directions on the web page for downloading the file to your system.

0. After downloading **vr20sp1.exe**, double-click the file to extract the files and start installation.
1. On the Setup screen, click **Service Pack 1 Update**.
2. Follow the instructions in the wizard screens to extract the Version 2.0A files to your system.
3. Click **OK** to begin installation immediately, or click **Cancel** if you want to install Version 2.0A at a later time. To install later, run (double-click) **setup\_vr20sp1.vbs** in the directory you specified earlier.
4. To proceed with installation, click **Next** in the install wizard screens. If you are prompted, insert the Virtual Replicator CD or specify the network path for the Virtual Replicator 2.0 **Storage Software** folder.
5. Click **Finish** to conclude the installation.
6. Restart your system.
7. Log in to the same account to complete the installation.

[Back to Top](#)

- **Verifying that Version 2.0A is installed**

You can verify that Version 2.0A has been successfully installed in the following ways.

Using the command prompt:

0. Change to the drive where Virtual Replicator is installed.
1. Type **snapmgr**. The SnapMgr version number 2.02.144 is displayed.

Using Windows Explorer:

2. Locate and open the Virtual Replicator folder. The default is C:\>Program Files > Compaq > SANworks Virtual Replicator 2.0.
3. Right-click **snapmgr.exe**, and click Properties.
4. Click the Version tab and check for the following values:
  - File version: 2.0.2.144
  - Product version: 2.0.046

- **Installing in a cluster**

Use the following procedure to install Version 2.0A on a cluster system.

In a two-node cluster with nodes A and B:

0. Move all cluster groups to node B and then install Service Pack 1 on node A using the instructions above.
1. Reboot node A and then move all of the cluster groups over to node A.
2. Using Cluster Administrator, confirm that any pre-existing pools or network disks are working correctly on node A.
3. Install Version 2.0A on node B and reboot.
4. Using Cluster Administrator, confirm that any pre-existing pools or network disks are working correctly on node B.

[Back to Top](#)

## **Uninstalling Virtual Replicator**

Use the Add/Remove Programs applet in the Windows Control Panel to uninstall Virtual Replicator, including Version 2.0A.

If you have installed Virtual Replicator on Windows NT 4.0, first run **remove\_perfNT4.vbs** by double-clicking the file name in the directory where Setup extracted the Version 2.0A files. The default location is C:\TEMP\VR20SP1. Then use Add/Remove Programs to complete uninstallation.

After uninstalling Virtual Replicator, you must manually delete the directory where Setup extracted the Version 2.0A files.

[Back to Top](#)

## **New Features in this Release**

- [Diskeeper defragmentation tool](#)
- [New policy for maintaining pool free space](#)
- **Diskeeper**

This release of Virtual Replicator includes a Windows 2000 version of Diskeeper from Executive Software International, Inc. This tool replaces the built-in Windows 2000 disk defragmenter, and lets you defragment basic, dynamic, and virtual disks. Although snapshots can be defragmented, doing so is not considered best practices and not recommended. This version of Diskeeper installs only on Windows 2000 with Service Pack 1 (all versions except Professional).

Install Diskeeper separately from Virtual Replicator and Version 2.0A using the Virtual Replicator main setup screen.

**Notes for using Diskeeper with virtual disks:**

- Do not use Diskeeper's Boot-Time Defragmentation feature on virtual disks.
- You cannot defragment a virtual disk if you have set the NTFS allocation unit size to be greater than 4 Kilobytes.

See the Diskeeper Readme and online help files for more information.

If you require additional assistance for using the Diskeeper product, contact Executive Software Technical Support at [www.execsoft.com/tech-support/tech-support.asp](http://www.execsoft.com/tech-support/tech-support.asp) or (818)547-2050.

- **New policy for maintaining pool free space**

Virtual Replicator has a new policy that you can define in the Windows Registry to prevent a pool from running out of free space. This policy is one of the settings you can make as part of the Virtual Replicator Lifeguard service, which monitors storage pools. It is highly recommended that you use the Lifeguard policy settings to prevent full pools and lost data.

The **MinFreeSpacePerPoolPercent** policy specifies a percentage of the pool's free space that should always be available. The policy limits actions such as virtual disk creation and virtual disk growth if they would cause the pool free space to fall below the specified threshold. This ensures that you do not use all available free space in a pool, which could result in lost snapshots and data.

See the section in these release notes, [Avoiding pool-full situations](#), for a description of how to set the **MinFreeSpacePerPoolPercent** policy.

[Back to Top](#)

## Corrections in this Release

- [Perfmon counters are installed correctly](#)
- [Pools are online after failing over on cluster systems](#)
- [Cluster Resource Monitor no longer crashes during pool creation](#)

- **Perfmon counters are installed correctly**

Performance Monitor counters are now correctly installed and include new counters for virtual disks and snapshots.

- **Pools are online after failing over on cluster systems**

Previously, when a pool failed over on a cluster, it might not automatically come online on the other node. In some situations, resources dependent on the pool cluster resource might also fail to come online. These problems have been fixed.

- **Cluster Resource Monitor no longer crashes during pool creation**

Previously, when creating a new pool, the cluster resource monitor occasionally crashed, causing the resources on that node to restart or fail over. This problem has been fixed.

[Back to Top](#)

## Known Problems in this Release

- [Installing Microsoft Exchange Version 5.5 on a virtual disk](#)
- [Using virtual disks and snapshots in DFS systems](#)
- **Installing Microsoft Exchange Version 5.5 on a virtual disk**

If you are using Virtual Replicator Version 2.0 in a Windows 2000 cluster and you try to install Exchange V5.5 on a virtual disk, the following error message appears:

"This cluster group does not contain the appropriate cluster resources. Select a group that contains an IP address, network name, and a shared hard disk."

To correct this problem, install a patch for Exchange 5.5 before you install it on a cluster where you are running Virtual Replicator. Go to the following Microsoft website for information on the patch: [support.microsoft.com/support/kb/articles/q184/8/80.asp](http://support.microsoft.com/support/kb/articles/q184/8/80.asp)

- **Using virtual disks and snapshots in DFS systems**

Virtual disks and snapshots can participate in DFS through shared folders (or mount points). Virtual Replicator does not support creating a DFS root on a virtual disk or snapshot.

See the Virtual Replicator 2.0 readme for additional known problems.

[Back to Top](#)

## Known Documentation Errors

- **Storage Unit cluster resources no longer available**

The Virtual Replicator Administrator's Guide and online help incorrectly state that pool resources *and* storage unit resources are automatically created when you create or add storage units to a pool in a cluster. Virtual Replicator 2.0 no longer creates cluster resources of type SCE Storage Unit. Only a pool resource (SCE Pool) is created. However, any pool migrated from Virtual Replicator 1.1 will continue to have Storage Unit resources.

Do not use Cluster Administrator to manually create or remove any Virtual Replicator cluster resources. Always use the VR MMC or command line tools to create and delete pools. By so doing, you then correctly create or remove cluster resources.

[Back to Top](#)

## General Notes and Issues

- [Interoperability with Microsoft Exchange and SQL Server with Microsoft Exchange and SQL Server](#)
- [Differences in how Windows NT 4.0 and Windows 2000 display virtual disks and snapshots](#)
- [Deleting scheduled tasks](#)
- [Managing other Virtual Replicator systems](#)
- [Avoiding pool-full situations](#)

- **Interoperability with Microsoft Exchange and SQL Server**

Virtual Replicator 2.0 was released prior to the release and wide use of SQL Server 2000 and Microsoft Exchange 2000. Interoperability between Virtual Replicator 2.0 and 2.0A and these new software versions has not been fully qualified and, therefore, cannot be guaranteed.

- **Differences in how Windows NT 4.0 and Windows 2000 display virtual disks and snapshots**

In Windows NT 4.0, virtual disks and snapshots appear in Disk Administrator. In Windows 2000, they appear in Computer Management > Storage > Logical Drives.

- **Deleting scheduled tasks**

Virtual Replicator does not have a feature for deleting scheduled tasks. To do this, use the Windows Scheduled Tasks applet, as described on page 11-4 of the Virtual Replicator System Administrator's Guide.

- **Managing other Virtual Replicator systems**

If you want to manage Virtual Replicator on a remote computer, make sure you have Virtual Replicator 2.0 and 2.0A installed on both the local and remote computers.

[Back to Top](#)

- **Avoiding pool-full situations**

It is critical that your storage pools do not run out of free disk space. If a pool runs out of disk space, you might lose data. You should regularly monitor pool free space, using the methods described in Chapter 6: Managing Pools, in the Virtual Replicator System Administrator's Guide, and in the online help.

In addition, it is recommended that you set policies for the Virtual Replicator Lifeguard service to prevent full pools. Following is the procedure for setting the **MinFreeSpacePerPoolPercent** policy, which specifies a percentage of the pool's free space that should always be available. The **MinFreeSpacePerPoolPercent** policy is an improvement over the previous Virtual Replicator policy, **MinFreeSpacePerPool**, therefore you are instructed to delete the latter policy as part of the procedure. See also Appendices D and E in the Virtual Replicator System Administrator's Guide and the online help for more information.

**Note:** Setting Virtual Replicator policies requires editing the Windows Registry. This is advised only for experienced users; if there is an error in your registry, your computer might not function properly. You should be prepared to restore the registry in the event of error. See the Registry Editor Help file for more information.

To define the **MinFreeSpacePerPoolPercent** value and set the minimum free space percentage for a pool:

1. Click Start > Run.
2. In the Run dialog box, type **regedit** or **regedt32**. The Registry Editor opens.
3. In the left pane, double-click **HKEY\_LOCAL\_MACHINE\SOFTWARE\Compaq\SANworks Virtual Replicator\2.0**

The right pane of the Registry Editor window shows the value entries for the selected key.

If using **regedit**:

4. Click **Edit > New > DWORD value**.
5. In the New Value box, type **MinFreeSpacePerPoolPercent** and press **Enter**.
6. Double-click **MinFreeSpacePerPoolPercent**.
7. In the Edit DWORD Value dialog box, type a value in decimal or hexadecimal. This value will be the minimum percentage of pool free space allowed. Any operations that would cause free space to decline below the minimum will be denied. The recommended value is decimal 3000, which results in 30.00% of the pool being reserved.
8. Click **OK**.  
The new value appears in the list of the value entries for the Virtual Replicator 2.0 key.
9. Delete the **MinFreeSpacePerPool** key by clicking it and pressing **Delete**.
10. Close the Registry Editor window.

If using **regedt32**:

11. Click **Edit > Add Value**.
12. In the Add Value dialog box, type **MinFreeSpacePerPoolPercent** for Value Name and select **REG\_DWORD** for Data Type.
13. Click **OK**.

14. In the DWORD Editor dialog box, type a value in decimal or hexadecimal. This value will be the minimum percentage of pool free space allowed. Any operations that would cause free space to decline below the minimum will be denied. The recommended value is decimal 3000, which results in 30.00% of the pool being reserved.
15. Click OK.  
The new value appears in the list of the value entries for the Virtual Replicator 2.0 key.
16. Delete the **MinFreeSpacePerPool** key by clicking it and pressing **Delete**.
17. Close the Registry Editor window.

[Back to Top](#)

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