

AN-028 Avoiding CHARON disk timeout messages in Windows/XP

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Applies to: All CHARON-VAX versions using disk images

Host OS: Windows XP Professional

VMS 'disk offline' error

Windows XP has the "System Restore" function enabled by default. This function will checkpoint files with specific extensions at certain events, to restore a recent version of the file in case of system malfunction. Other versions of Windows can enable this function.

The default file extension of disk images in the current releases of CHARON-VAX is .dsk, an extension on which the Windows system restore function operates by default. The result is that at the start of CHARON-VAX such a restore operation might be initiated, which has been measured taking 40 seconds or more for a large disks.dsk container file. Since VMS has no full speed access to the file during a system restore and considers that a disk is offline if it was not accessible during 6 seconds, a VMS 'disk offline' error might occur. The chance that this event happens appears to increase with increasing host system CPU frequency.

Workaround

There are several ways to disable a system restore for all CHARON-VAX disk images. Since the CHARON-VAX ODS2 disk image format is not understood by Windows, a restore operation by Windows is not appropriate for these disk images in any case:

1. Turn off the Windows system restore function system wide or for the volume containing the CHARON-VAX disk images (Control Panel | System | System Restore)
2. Modify the %windir%\system32\restore\Filelist.xml file, which specifies the files & directories monitored by the Windows system restore function.
3. Change the extension of your .dsk file to an extension which is not monitored by default (for instance *.vdisk) and adapt your configuration file accordingly.

Future releases of the CHARON emulators will use the *.vdisk extension instead in documentation, configuration files and examples.

Note that journaling enabled on the volume containing the disk images might cause a similar disk offline problem, and should be disabled in case of problems.

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