

Data ONTAP[™] Release 5.0

Upgrade for UNIX

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Introduction

This booklet describes how to upgrade a filer to Data ONTAP™ Release 5.0 from a UNIX client. For information about upgrading from a Windows client, consult the booklet *Upgrade for Windows*.

To upgrade the filer's software, you need the following items:

- If your filer is running a release of Data ONTAP earlier than 4.0 or is not running at all, a Data ONTAP 5.0 system boot diskette. You do not need a system boot diskette if you are upgrading from Data ONTAP release 4.0 or later.

There is a system boot diskette in your upgrade kit. You can also create a system boot diskette on a UNIX or Windows workstation by following the instructions in the *Welcome* booklet.

- System files, available from two sources:
 - A Data ONTAP CD-ROM for Release 5.0
 - NOW (NetApp On the Web), at:
<http://now.netapp.com/>

Before upgrading

You might need to perform one or more of the following actions before installing Release 5.0 on your filer:

- If you are running CIFS on the filer and are using a domain controller for authentication, make sure there is a domain account for the filer.



NOTE: If you are using a domain controller for authentication and do not create a domain account for the filer, the CIFS upgrade fails.

- If you are upgrading from Release 4.0.1c and have clients using NFS over TCP, have them unmount the filer.

Starting with Release 4.0.3 (and continuing in Release 5.0), NFS over TCP is disabled by default, so clients do not have to unmount the filer. In Release 4.0.1c, NFS over TCP was enabled.

- Save the core file from a preceding crash (if any).

When you boot Release 5.0 and the filer executes `savecore`, it does not recognize a core file if the core file was written by a release earlier than 4.0.3. If you are upgrading from a release earlier than 4.0.3 and your filer contains a core file that has not been saved, *before* you boot Release 5.0, take steps to save it.

There are several circumstances under which a core file might not have been saved. For example, you might have edited `/etc/rc` to remove the call to `savecore` at boot time, or `savecore` might have been unable to write the core files, in which case it would have written a message to that effect.

- Before you start the update, shut down the filer with the `halt` command. If the filer is not shut down cleanly, data is left in the NVRAM. Release 5.0 cannot use an NVRAM log from a release earlier than 4.1.

Downloading files from NOW

You can download system files from NOW at

<http://now.netapp.com/>

To download system files, follow these steps:

1. Log in to NOW. NOW login information is on the protocol license sheet sent with the filer.
2. Click Software Library.
3. Click Data ONTAP 5.
4. Click the latest release of Data ONTAP.
5. Click Accept to accept the license conditions.
6. Click the software you want under the type of host you are using and the model of your filer to download and save the file.
7. Click the Save button to save the file to your hard disk.

Upgrading from a UNIX client

Follow the steps in this section only if you are using a UNIX workstation for administrating the filer. If you are using a Windows PC, follow the instructions in the booklet *Upgrade for Windows*.

To perform the upgrade, you need access to both the filer's system console and a client system. Unless you are downloading the system files from NOW, the client system must be a UNIX workstation equipped with a CD-ROM drive and have write permission to the filer's root directory. In this section, the client system is shown with the name *adminhost*, and is shown running SunOS 4.1.x. If you use a client running another operating system, the syntax of UNIX commands might differ.

To upgrade your filer using a UNIX client, perform the preliminary tasks as needed, then perform the steps described in [“Copying and installing system files”](#) on page 5. Afterward, you can set up NFS or HTTP as described in the *System Administrator's Guide* or set up SNMP by as described in [“Setting up SNMP”](#) on page 10.

Preliminary tasks

Perform any of these tasks, as needed.

- If your filer is a release of Data ONTAP earlier than 4.0 or is not running at all, boot the filer from the Release 5.0 system boot diskette by following these steps:
1. Insert the Release 5.0 system boot diskette in the filer's diskette drive.



NOTE: The Release 5.0 system boot diskette is specific to the model of filer that you are updating. You received a diskette appropriate to the model you are updating. If you have different models, be sure to check the diskette labels to make sure you're using the correct diskette for the filer.

2. At the system console, enter the reboot command.

3. When the filer displays a list of options, select option 1, "Normal boot."
- If you have not entered licenses for an earlier Data ONTAP release, enter licenses for the protocols that you have purchased.

At the system console, use the `license` command to enter your licenses, as shown in the following example:

```
toaster> license nfs=XXXXXXX cifs=YYYYYYY http=ZZZZZZZ
```

In the command you type, use the license keys included in your upgrade kit instead of the ones used in the example. An = sign is required between the type of license and the license code; don't insert a blank before or after the = sign.

The filer acknowledges each license:

```
nfs site license enabled.  
      nfs enabled.  
cifs site license enabled.  
      Run cifs setup to enable cifs.  
http site license enabled.  
      Use "options httpd.enable" to enable http.
```

Copying and installing system files

Perform the following steps at the client system:

1. Mount the filer's root file system to the client's `/mnt` directory:

```
adminhost# mount toaster:/ /mnt
```

where `/mnt` is the directory on the client where you want to mount the filer's root file system.

2. Change directory to `/mnt`.

```
adminhost# cd /mnt
```

If you are using the CD-ROM, insert the Data ONTAP Release 5.0 CD-ROM into your CD-ROM drive, then follow one of these steps, depending on the model of your filer:

- If your filer is an F200 or F300 series model, extract the files and specify the input file, output file, and block size with the following command:

```
adminhost# tar xvf  
          /CD-ROM_MNT_PT/ONTAP/release/X86/SYSFILES.TAR
```

Substitute the name of your CD-ROM mount point for */CD-ROM_MNT_PT*, and the release number on the CD-ROM for *release*, then proceed to step 3.

- If your filer is an F500 or F600 series model, extract the files and specify the input file, output file, and block size with the following command:

```
adminhost# tar xvf  
          /CD-ROM_MNT_PT/ONTAP/release/ALPHA/SYSFILES.TAR
```

Substitute the name of your CD-ROM mount point for */CD-ROM_MNT_PT* and the release number on the CD-ROM for *release*.

The tar command reports the names of the files it has copied; they are *tar_image.Z* and *install_netapp*.

Skip Step 3 and go to Step 4.

3. If you are using files downloaded from NOW, enter the following command:

```
adminhost# tar xvf SYSFILES.TAR
```

Substitute for *SYSFILES.TAR* the name you gave the systems file archive.

The tar command reports the names of the files it has copied; they are *tar_image.Z* and *install_netapp*.

Remove the tar file by entering the following command:

```
adminhost# rm SYSFILES.TAR
```

Substitute for *SYSFILES.TAR* the name you gave the systems file archive.

4. Run the `install_netapp` script with an argument that tells the script where to install the files; this is the mount point for the filer's root directory. You can keep or delete the tar files.
- If you want to delete the tar files, use the following command:

```
adminhost# ./install_netapp /mnt
```

- If you want to keep the tar files, use the following command:

```
adminhost# ./install_netapp -k /mnt
```

where */mnt* is the directory on the client where you mounted the filer's root file system.

The install script reports its steps as it goes:

```
install_netapp: uncompress tar_image.Z  
install_netapp: cd "/mnt"; tar xvf "/mnt/tar_image"
```

The script invokes tar, which reports the files it extracts, like this:

```
x etc/boot/netapp-x86 symbolic link to netapp_5.0-x86  
x etc/boot/0-x86, 1804 bytes, 4 tape blocks
```

The last few messages are similar to the following:

```
x etc/firmware/pca200em.bin, 41288 bytes, 81 tape blocks  
x etc/syslog.conf.sample, 542 bytes, 2 tape blocks  
x etc/httpd.mimetypes.sample, 3163 bytes, 7 tape blocks  
install_netapp: cd "/"; rm -rf tar_image install_netapp
```

5. Unmount the filer's root directory.

- a. From the client system, unmount the filer's root file system (/) by entering the following commands:

```
adminhost# cd /  
adminhost# umount /mnt
```

where */mnt* is the directory on the client where you mounted the filer's root file system.

- b. Eject the boot diskette from the filer and, if you used the Data ONTAP CD-ROM, eject it from the CD-ROM drive.



NOTE: You must remove the system boot diskette before you issue the reboot command, or the filer again boots from the diskette rather than from its hard disk.

6. Copy the executable files.

At the system console, enter `download` to copy the executables to the boot blocks of the filer's hard disks:

```
toaster> download  
toaster>
```

The `download` command does not provide an acknowledgment; when copying has finished (this can take a long time), the filer prompt appears again.

7. Reboot from the filer's disk.

At the system console, reboot the filer:

```
toaster> reboot
```

The copyright notice followed by "NetApp Release" and the release number appears.

8. If you have quotas enabled, immediately after the reboot the filer scans your entire file system to reenables quotas after upgrading. There is a loss of performance during this operation. To postpone the scan, enter the command:

```
toaster> quota off
```

Restart the scan and reenables quotas using the `quota on` command at a more convenient time. If you have more than one volume, use the `quota on` command for each volume on which you want to enable quotas.

9. If the `/vol/vol0/etc/serialnum` file does not exist on your filer, record the filer's serial number. Then create `/vol/vol0/etc/serialnum`, and put the filer's serial number in it. The file makes it easier for Network Appliance Technical Support to assist you after receiving an autosupport email message from your filer.



NOTE: `/vol/vol0` is the volume that is created when you install Release 5.0 for the first time. Volume names begin with `/vol`. You can rename `/vol/vol0`. For further information, consult the *System Administrator's Guide*.

10. In a safe place, store the system boot diskette and the Data ONTAP Release 5.0 CD-ROM.



NOTE: If you create a second volume after the upgrade, remember to remove any `snap sched` commands from `/etc/rc` in all volumes. The lack of a volume name in the `snap sched` command in a pre-5.0 release prevents the command from working properly on a multivolume system. In Release 5.0, the `snap sched` command is persistent across reboots, so you don't need to put it in `/etc/rc`.

Your filer is now available and running Data ONTAP Release 5.0. You can set up NFS or HTTP as described in the *Quick Start Guide*. You can also set up SNMP by following the instructions in the next section.

Setting up SNMP

If you plan on using SNMP with the filer and have not installed the NetApp® MIB, copy the MIB file from the NetApp MIB diskette to a UNIX system, as follows:

```
adminhost# tar xvf /dev/fd0  
adminhost# uncompress netapp.mib.Z
```

Replace */dev/fd0* with the device name of your diskette drive if it is not */dev/fd0*.

The MIB file is now saved in a file named *netapp.mib* on *adminhost*.

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