



1. INTRODUCTION

Firmware is the binary code stored in the tape drive's permanent memory that controls its basic operation. Firmware revisions may be released by the manufacturer to address specific issues discovered after manufacturing. The Certance Tape Drive Firmware Upgrade utility (DFU) can be used to upgrade firmware on supported Certance tape drives.

IMPORTANT: If your tape drive was purchased as part of a computer system, be sure to check with the system manufacturer before upgrading firmware. You may have a special version of firmware, and replacing it with a standard version may cause incompatibilities.

Supported operating systems

- Windows 2000/XP/2003 (should also work on Windows NT 4.0)
- Red Hat Linux 3.0 (should also work on 7, 8 and 9 and Enterprise 2.1)
- NetWare 5.1 and 6.5
- Solaris 8 and 9

Supported Devices:

Certance DAT24 (DDS-3) Tape Drive
Certance DAT40 (DDS-4) Tape Drive
Certance DAT 72 Tape Drive
Certance DAT240 Autoloader (DDS-4)
Certance DAT432 Autoloader (DAT 72)
Certance Travan 40 Tape Drive
Certance LTO-1 Ultrium Tape Drive
Certance LTO-2 Ultrium Tape Drive

Certance LTO-2 Half-Height Ultrium Tape Drive
Certance LTO-3 Ultrium Tape Drive

NOTE: Firmware upgrade to the robotics or controller is not supported on LTO autoloaders with this utility.

2. INSTALLATION

Installation of the software is very simple: Copy the appropriate executable file for your operating system to the hard drive, then run the program. (You can also run it directly from the Resource CD in most cases.) For important information about each operating system, see Appendix A.

The executable names are:

Firmware Upgrade.exe (DFU for Windows)
dfu.lx (DFU for Linux)
dfu.nw (DFU for NetWare)
dfu.sl (DFU for Solaris)

3. WINDOWS OPERATION

The Windows version (Firmware Upgrade.exe) has a graphical user interface. Double-click on the icon to launch the application. Drives appear as nodes in a device tree. If no supported tape drive is found by the application, an error dialog will be displayed.

Double-click any tape device on the tree display (or select one and click the Upgrade button). A file dialog will ask for a firmware file to be selected. Select the appropriate file for your drive, click OK and then click OK on the warning dialog. The drive will be upgraded.

4. LINUX, NETWARE AND SOLARIS OPERATION

The Linux, NetWare and Solaris versions (dfu.lx, dfu.nw and dfu.sl, respectively) are command-line driven. Use the following command to upgrade firmware to a supported tape drive:

```
dfu -f:<path-filename> [-id:<logical-device-id>]
```

For example, to upgrade LTO drive firmware to version 13602107:

```
dfu -f:c:\temp\v13602701-000.img -id:1
```

If more than one tape drive is attached to your system, use the **dfu show** command to view all available tape drives and their logical device IDs. Then use the logical device ID of the desired tape drive for upgrading its firmware.

Use the **dfu help** command to display the above commands.

NOTE:

- Double quotes are required around a path-filename that contains spaces.
- If -id:<logical-device-id> is omitted, the default is -id:0.

APPENDIX A – INSTALLATION NOTES

Windows:

1. When using Firmware Upgrade for the tape drive in an autoloader/changer, the Removable Storage Manager must first be stopped.
2. In rare cases, if the software is unable to detect your tape drive, services used by your backup application may need to be manually stopped from Computer Management. Exiting a backup application alone will not always cause the application to release the tape drive.

Linux:

- If a Travan 40 tape drive (ATAPI) is not seen by the operating system, enter the following commands (or run the batch file `ide-scsiConf` found in the `diag` directory of the Certance Resource CD):

```
rmmod ide-tape &> /tmp/junk
rmmod ide-scsi &> /tmp/junk
modprobe ide-scsi
```
- Other helpful Linux information is available at <http://www.torque.net/sg/> .

NetWare:

Observe the following requirements and limitations on the NetWare version:

- File access operations may require the use of volume names.
- You may need to toggle output screens with Alt-Esc to view messages on later versions of NetWare.
- The software uses the NWASPI driver, not the application tape driver, to access the tape drive. If using a commercial backup application, *nwtape.cdm* may need to be unloaded to ensure proper operation.
- ATAPI devices such as the Travan 40 are not supported by NetWare.

Solaris:

Because of Solaris architecture, on some systems it can take up to 50 seconds to scan through the list of attached devices when executing a command. This time can be reduced by cleaning out old entries in `/dev/rmt`. A reboot `---r` or boot `-r` will be required for the devices to be seen.