Technical Note



Replacing the NV9000 HDD

Introduction

This procedure replaces the HDD (hard-disk drive) in an NV9000 FR0040-10 frame.

This process assumes that you cannot access the data on the HDD for any reason. The HDD is not recognized in the disk manager; there is no drive letter associated with it; and you cannot read any data from the drive.

Procedure

diskmgmt.msc

Follow these steps to replace the HDD:

- 1 Power down and disconnect the controller from power. Wait 30 seconds.
- 2 Remove and replace the HDD from the bottom drive tray at the front of the controller.
- 3 Reconnect power, restart the controller, and log in.
- 4 Initialize the HDD using the disk manager. Because the HDD is still uninitialized, the disk manager will start the initialization automatically:



Click 'Next' and proceed through the pages, using default settings. Close the disk manager.

5 Insert a formatted USB drive into the running controller. The USB drive must have the HDD setup files on it.

You can obtain the relevant files from Miranda's FTP site. The name of the folder is **TBD**. See the listing at the end of this note for details. The files total about 400 MB in size. You should place these files in a folder called Drive_D_hdd_setup_thumb_drive on the USB drive.

Change the drive letter to 'X'.

- 6 Run mbrfix in a command prompt window to put a master boot record on the new HDD.
- 7 Browse to HDD_image.bat on the USB drive. Double-click it to run it.

Observe the progress in the command prompt window. When the process is finished, the command prompt window will close.

Then run dixml to restore the D:\ partition with HDD_BOOT_DRIVE_IMAGE which is on the USB drive.

When done, close all open windows.

- 8 Verify that you have two partitions, D: and E: on the new HDD.
- 9 Restart the controller, holding the 'Del' key during the initial bootup. The "CMOS Setup" page appears after a few seconds:

Phoenix - Award BIOS	CMOS Setup Utility
Standard CMOS Features	Frequency/Voltage Control
Advanced BIOS Features	Load Fail-Safe Defaults
Advanced Chipset Features	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save and Exit Setup
▶ PC Health Status	Exit without Saving
Esc : Quit F10 : Save and Exit Setup	$\uparrow \downarrow \Rightarrow \leftarrow$: Select Item
Virus Protect	ion, Boot Sequence

1 Using the arrow keys, choose "Advanced BIOS Features"





2 Choose 'Hard Disk Boot Priority' and press the 'Enter' key. The priority list appears:

3 Follow the directions on the screen to place the HDD first.

- 10 Restart the controller and login.
- 11 Backup the client's SSD to the E: drive using DriveImager (on the desktop).

Follow these steps:

1 Double-click DriveImager.exe to launch it:

	🐥 Flash Media Imaging and Formatting Utilities			
_	🛫 Tools 👩 Log 🤣 Help			
	Available Drives			
veImager .exe	Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 5000 2.5)	Format FAT16 Bootable	Write Image to Drive	
		😻 Extract Zip	Create Drive Image File	
	C:\-10.004 GiB - Fixed - NTFS -	🤰 Run Bootprep	Write XP MBR	
	E:\ — 40.003 GiB — Fixed — NTFS —	Check Files Integrity		
	└── F:\ ── 0.957 GiB ── Fixed ── FAT ──	Format to NTES		
	1:58 PM: (Imaging Drive) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 5000 2.5)) Finished Creating drive image 1:51 PM: (Imaging Drive) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 5000 2.5)) Started writing image to file: "E:\System Backup\Production-B-Day-StandAlone-12-19-2008.nvbin" 9:07 AM: (Finished writing image to drive, please unplug card) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 5000 2.5)) Writing Image to Drive			
	9:04 AM: (Writing Image to Drive) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 50 "E:\EmbeddedXP\Secondary\Drive_C_WINXP-EMB-SP2_Secondary_Resea 9:04 AM: (Writing Image to Drive) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 50 9:03 AM: (Writing Image to Drive) (Physical Drive 0 (3.679 GiB) (SanDisk SSD SATA 50	000 2.5)) Started writing image from aled_SSD_3728_2D.nvbin" 000 2.5)) Image file OK 000 2.5)) Started checking image fil	file: e:	
	E\EmbeddedXP\Secondary\Drive_C_WINXP-EMB-SP2_Secondary_Resealed_SSD_3728_2D.nvbin			
	2:34 PM: (Finished writing image to drive, please unplug card) (Physical Drive U (3.824 to Drive	8 GIB) (SILICONSYSTEMS SATA 4GB-	4000)) vvriting Image	
		ATA 400 40000 Carated colline in an	- L LI	

2 Click 'Create Drive Image File'. A 'Save' dialog appears in which you may name the backup image file. The directory is E:\System Backup. You should not select a different directory.

Name the backup you create: Use one of these names, as appropriate:

HDD REPLACEMENT STANDALONE-mm-dd-yyyy

- HDD REPLACEMENT PRIMARY-mm-dd-yyyy
- HDD REPLACEMENT SECONDARY-mm-dd-yyyy

where *mm*, *dd*, and *yyyy* are the month, day, and year of the backup.

After a few minutes, the backup completes and you will see a completion message.

- 12 When the backup in step 11 is complete, restart the controller, holding the 'Del' key to access CMOS Setup. Set the boot priority (as in step 9) so that the SSD is first in the list. The controller will thereafter boot from the SSD.
- 13 Restart the controller. Run comptmgmt (on the desktop). Examine the event logs in to verify that the system is without errors and that the 'D:\nvision' folder exists.

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