

Printing Workflow Solutions

TIFF Front End Lite Workstation Installation Guide

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A	February 26, 2003	Keith Chan	First Release
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1. SCOPE

This document outlines both basic and optional components used in base hardware configurations for the Dell Optiplex Workstation/Windows 2000 Professional system. It also includes procedures for setting up the workstation to be TIFF Front End Lite ready.

2. HARDWARE CONFIGURATIONS

This section describes current Optiplex Workstation/Windows 2000 Professional hardware platform configurations. It includes peripheral connection diagrams to help installation personnel connect the workstation and peripherals. Basic and optional components are outlined in Table 2-.

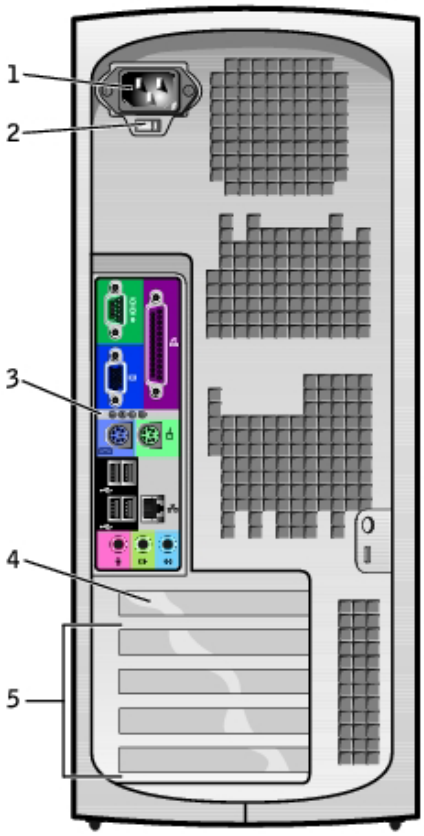
The standard platform with Windows 2000 Professional supported for TIFF Front End Lite workstation is:

- Dell Optiplex GX260 Workstation.

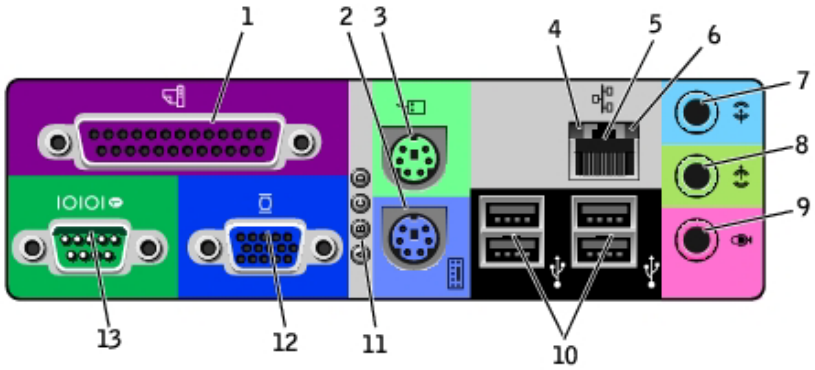
Each workstation has a basic single building block configuration. The user can add options outlined in the configuration tables as needed.

2.1 Dell Optiplex GX270 Workstation (Single Hyper-Threaded P IV Processor)

This section outlines the hardware configurations of the Dell Optiplex GX270 Workstation (see Table 2-).



1. AC Power Connector
2. AC Voltage switch
3. Back-panel Connectors
4. AGP/DVI Adapter card slot
5. PCI Card Slots.



1. Parallel Port (LPT1)
2. Keyboard
3. Mouse
4. Link Integrity Light
5. Copper Gigabit NIC
6. Network Activity Light
7. Audio Line-In Connector
8. Audio Line-Out Connector
9. MIC Connector
10. USB Connectors (6 for GX270)
11. Diagnostic LED's
12. Video Connector
13. Serial Port (COM1)

PCI 1 (Top down) – Optional Intel Gigabit PCI NIC

PCI 2 and 3 – Adaptec AHA2944UW or AHA29160/39160 SCSI PCI Controller

PCI 4 – Digi ClassicBoard 4 PCI Card

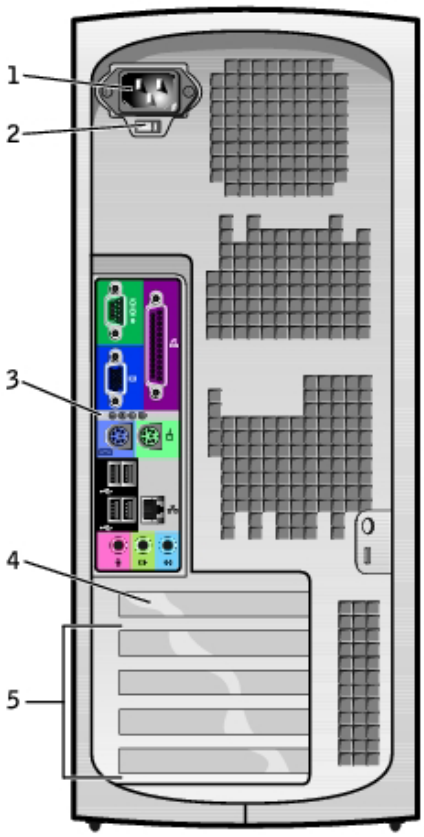
Figure 2-1: Optiplex GX270 Workstation peripheral connection diagram

Item	Type	Manufacturer	Model	Comments
PC	1 x 3.06 GHz Hyper-threading Pentium IV, FD, CD	DELL		512 KB L2 cache
RAM	1024 MB dual channel, 400 MHz DDR SDRAM DIMM	DELL		
RAM	Optional 1024 MB Non-ECC DIMM U/G	DELL		
Hard disk	2 x 40 GB EIDE disks	DELL/QUANTUM		
DVD CD-ROM	Enhance IDE	SAMSUNG	---	Assembled in top position
Video	On-board Integrated Intel Extreme Graphics 2 with up to 64MB shared memory Graphics Controller	Intel	---	
Network	On-board Integrated Intel PRO 1000MT Copper Gigabit Ethernet Controller	Intel	---	
Network	Optional Intel PRO/1000 FC Gigabit PCI Ethernet Controller	Intel	---	Installed in PCI 1
Keyboard	---	DELL	---	English
Mouse	PS/2	DELL	---	---
Power cord + documents	---	DELL	---	North America
External modem	Optional USR56K Ext. PnP	US Robotics	---	North America, connected to COM1
Monitor	19”, MPR II color monitor	DELL		---
Power cord + documents	---	DELL	---	North America
Software + documents	Windows 2000 Professional, **5** client licenses	Microsoft		English, W2K Optiplex Configuration preloaded
Software + documents	GHOST 6.5	Symantec	---	English

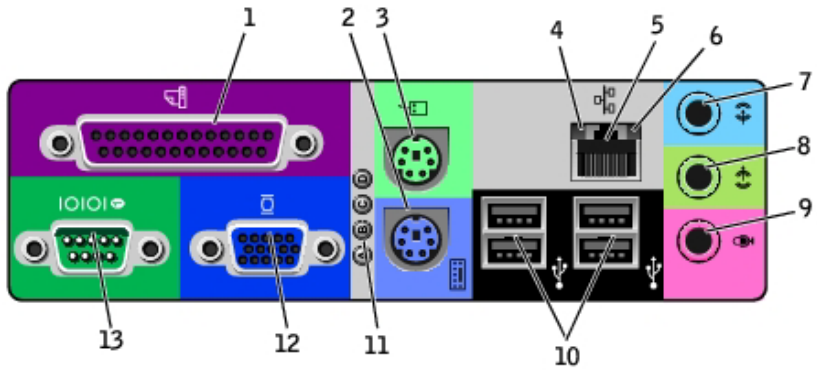
Table 2-1: Optiplex GX270 Workstation components, US/Canada

2.2 Dell Optiplex GX260 Workstation (Single Pentium IV Processor)

This section outlines hardware configurations of the Dell Optiplex GX260 Workstation sold by Creo as a TIFF Front End Lite workstation (see Table 2-).



1. AC Power Connector
2. AC Voltage switch
3. Back-panel Connectors
4. AGP/DVI Adapter card slot
5. PCI Card Slots.



1. Parallel Port (LPT1)
2. Keyboard
3. Mouse
4. Link Integrity Light
5. Copper Gigabit NIC
6. Network Activity Light
7. Audio Line-In Connector
8. Audio Line-Out Connector
9. MIC Connector
10. USB Connectors (4)
11. Diagnostic LED's
12. Video Connector
13. Serial Port (COM1)

PCI 1 (Top down) – Optional Intel Gigabit PCI NIC

PCI 2 and 3 – Adaptec AHA2944UW or AHA29160/39160 SCSI PCI Controller

PCI 4 – Digi Classic Board 4 PCI Card

Figure 2-2: Optiplex GX260 Workstation peripheral connection diagram

Item	Type	Manufacturer	Model	Comments
PC	1 x 2.4 GHz Pentium IV, FD, CD	DELL		256 KB L2 cache
RAM	1 GB 266 MHz DDR SDRAM DIMM	DELL		2 x 512MB DIMMs
Hard disk	2 x 40 GB EIDE disks	DELL/QUANTUM		
DVD CD-ROM	Enhance IDE	SAMSUNG	---	Assembled in top position
Video	On-board Integrated Intel 845G Graphics Controller	Intel	---	
Network	On-board Integrated Intel 1000MT Copper Gigabit Ethernet Controller	Intel	---	
Network	Optional Intel PRO/1000 FC Gigabit PCI Ethernet Controller	Intel	---	Installed in PCI 1
Keyboard	---	DELL	---	English
Mouse	PS/2	DELL	---	---
Power cord + documents	---	DELL	---	North America
External modem	Optional USR external 56K or MultiTech for Europe	USR or MultiTech	---	Connected to COM1
Monitor	19”, MPR II color monitor	DELL		---
Power cord + documents	---	DELL	---	North America
Software + documents	Windows 2000 Professional, **5** client licenses	Microsoft		English, W2K Optiplex Configuration preloaded
Software + documents	GHOST 6.51	Symantec	---	English

Table 2-2: Optiplex GX260 Workstation components, US/Canada

3. GETTING STARTED

Before loading the TIFF Front End Lite software, check against the software tables and make certain that the hardware is configured as described in *Section 2, Hardware Configurations*

Before beginning installation, check that you have the following:

- Crosshead (Philips) screwdriver
- Network cable
- Software (see Table 3-1)

Table 3-1: Necessary software

Disk	Type	Version	Comments	Systems
Windows 2000 Professional	CD	2000 SP3	Operating system	All
Dell W2K Resource CD (P/N: 21-0151A-K)	CD	A-K	W2K Pro image, utilities for the specific platform	All
Server Image CD's	CD	J	Server Ghost Image CD's for each GX Workstation	
TIFF Front End Lite	CD	2.x	TIFF Front End Lite	All
Workflow Systems Emergency Repair Disk	Floppy	N/A	Repair disk created later for each customer's machine	All
APC PowerChute Plus	CD	5.2	Software utility for UPS monitoring	If purchased
Blank floppies	Floppy	N/A	For creating driver disk off W2K Resource CD if needed	Optiplex

3.1 Is My Hardware Connected Correctly?

We are working with Dell and production personnel to pre-configure these systems before shipping to the field. In this case, you are not required to configure the System BIOS, load Windows 2000, etc.

If the system is not pre-configured, you must start the Workstation installation by configuring the hardware as described in *Section 5.2 Optiplex GX Workstation Fresh System Setup*

4. HARDWARE CONNECTIONS

4.1 Connecting Workstation Hardware Components

Complete the following steps before installing Windows 2000 Professional:

1. Connect any external hardware (see Section 2, Hardware Configurations).
2. Install alternative network cards if requested by the customer.
3. Connect the software dongle (if necessary) to the LPT1 port.

4.2 Connecting UPS (Optional)

The following should be connected to the UPS (if option is purchased):

- Workstation
- Monitor
- Modem (if applicable)

Use the appropriate power cord to meet the specific country requirements at the customer site

5. HARDWARE SETUP

5.1 Pre-Configured Optiplex GX Workstation Setup

This section describes how to set up a workstation that has been pre-configured for optimized system performance for TIFF Front End Lite.

The first time that you boot up the system, it will launch a mini-setup wizard. You will reply to several input prompts (see *Section 5.1.1, System Preparation Mini-Setup*) and then reboot the system to be ready for TIFF Front End Lite software installation.

5.1.1 System Preparation Mini-Setup

1. Power up the system. A Windows 2000 mini-setup screen will appear. Select **Next**.
2. Select **I Accept this Agreement** and then select **Next.**
3. Select **Next** in the Regional Settings window.
4. In the **Name** field, type PrintConsole Workstation. In the **Organization** field, type the customer name. Select **Next**.
5. Enter the Product ID code (from the sticker on the side panel of the workstation) and select **Next**.
6. Type in the appropriate computer name and enter the password, then select **Next**.
7. Type in the "Modem Dialing Information" area code select **Next**.
8. Set the correct date/time and select **Next**.
9. Select "**Typical Settings**" in the Network Settings window and select **Next**.
10. At this point, the system will pop up a "**Setup Cancelled**" error message; click <**OK**> to continue (It's safe to ignore the harmless message).
11. Specify the domain name if the local network has one. If not, leave it at the default setting (i.e. WORKGROUP) and select **Next**, **Next**, then **Finish** to reboot the system.

5.1.2 Cleaning Up the Old Computer Name in the Registry

1. Once the system has booted up, select **Next** at the Network Identification Wizard prompt.
2. Select the "Users must enter a user name and password to use this computer" option and select **Next**, then **Finish** to close the wizard.
3. Log on to the Administrator account with the correct password entered.
4. Open a DOS window and change the directory to C:\DRIVERS\RESKIT, then enter:
   ```
   REGFIND w2k260 –r newname
   ```
   On the next line, enter:
   ```
   REGFIND W2K260 –r NEWNAME
   ```

5.1.3 Clearing Out Computer Eventlogs

1. Right-click **My Computer** and select **Manage** to bring up the Computer Management Console.

2. Select and expand the **Eventview** option, then select and clear the contents of the **System** and **Application** logs to clear out all references of the old computer name in these logs.

5.1.4 Verifying Internal Disk Configurations

1. Expand the Storage component under the Computer Management (Local) tree and select **Disk Management**. The Disk Management view appears on the right-hand window of the Microsoft Management Console (MMC).

2. If the Write Signature and Upgrade Disk Wizard dialog box appears, select **Cancel**. The disk layout similar to the following should appear (create partitions as needed):

   WARNING: If you accept this prompt by selecting **Next**, W2K will convert all un-partitioned disk(s) to Dynamic disk type. It is not recommended since DOS will NOT recognize the Dynamic disk type.

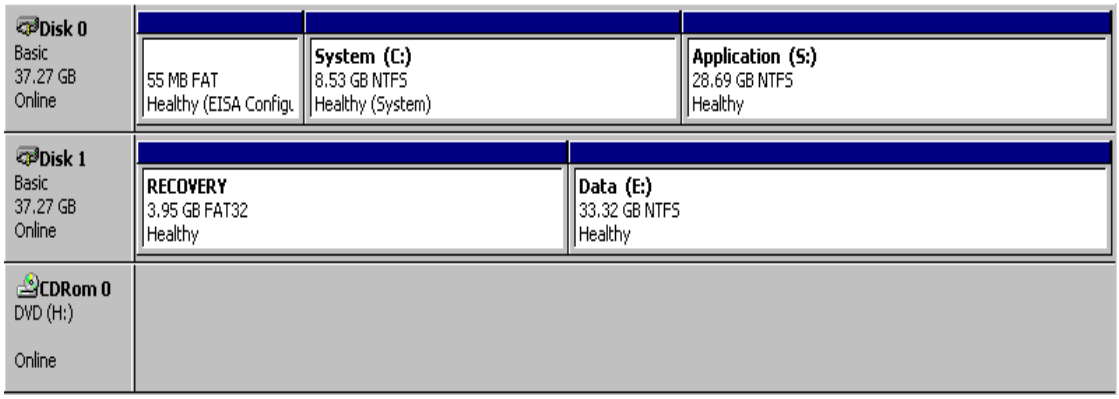


Figure 5-1: Disk layout of TIFF Front End Lite Workstation

Disk 0 has three partitions:

- Partition one is hidden Dell Utility Partition
- Partition “C” contains the W2K loader and boot files, Operating System files
- Partition “S” holds TIFF Front End Application software

Disk 1 has two partitions:

- Partition “RECOVERY” is for System GHOST images and tools etc.
- Partition “E” is for data storage

3. Exit Disk Management and MMC.

5.1.5 Verifying Virtual Memory

1. Right-click **My Computer** and select **Properties**. Select the **Advanced** tab and then select **Performance Options…**

   - Set **Application Responses** to **Optimize Performance for Applications**.

- Set Virtual Memory by selecting **Change…**, then selecting C: drive and **setting Initial Size = Maximum Size** (= 1.5 x of physical RAM installed, i.e. 1536 if the system has 1GB of RAM). Click **SET, OK, OK, OK**.

2. Select **Environment Variables…**

   - Set User Variables for Administrator to **TEMP = TMP = S:\Temp**. Repeat the same for System Variables and click **OK**.

3. Select **Startup and Recovery…**

   - Set Display list of Operating Systems to **5** seconds.

   - Uncheck **Automatically Reboot** and select **OK, OK, OK** and then **Yes** to restart the computer.

5.1.6 Configuring Remote Dial-Up Connection

1. Select Start->Settings->Network and Dial-up Connections-> Incoming Connections option and wizard appears.

2. In the "**General"** tab, ensure that either the "**USR Ext 56K PnP"** or the "**MultiTech ZBA92"** connection modem device is checked to enable the modem link to the Dial-up connection network.

3. In the "**Users"** tab, ensure that both "**Administrator"** and "**CreoService (CreoService)"** users are checked to grant access right to the above 2 users.

4. In the "Networking" tab, ensure that the "Internet Protocol (TCP/IP)", "Files and Printer Sharing for Microsoft Networks" and the "Clients for Microsoft Networks" options are checked. The "NetBEUI Protocol" option is not checked by default if the protocol is installed but DISABLED; or it won't appear at all if the protocol is not installed.

5. Click <**OK**> to complete and save the settings to complete configuring Remote Dial-up connection setup. The system should ready for remote users to dial-in for remote access.

5.1.7 Installing pcAnywhere Software

See *Section 6.5.4 Installing pcAnywhere (V10) Remote Host Control Software*

5.1.8 Creating the GHOST Baseline W2K OS (Site-Specific) Image

See *Section 6.5.6 Creating GHOST Baseline W2K OS Images*

5.1.9 Creating an Emergency Repair Disk

See *Section 6.5.7 Creating an Emergency Repair Disk*

5.1.10 Setting up TIFF Front End Lite Applications

See *Section 6.5.8 Setting Up TIFF Front End Lite Application Software*

5.2 Optiplex GX Workstation Fresh System Setup

This section describes how to set up a new Optiplex GX260 workstation that has *not* been pre-configured by the factory. It provides the following:

- Hardware configurations
- BIOS Settings
- Windows 2000 Professional operating system installation/configuration.

5.2.1 Optiplex GX Workstation Fresh System Setup

The drive bays configured from the factory with 2 x 40GB EIDE disk drives.



1. DVD Drive Eject Button
2. Floppy Drive LED
3. Floppy Drive Eject Button
4. Hard Drive LED
5. Power Button/LED
6. Front-Panel Door
7. MS Windows License Label
8. USB Connectors
9. Headphone Connector
10. Service Tag.

Figure 5-1: Front view of the Optiplex GX270/260 Workstation

System Factory Internal Disk Configuration

The default factory system internal disk configuration is configured with 2 x 40GB Enhanced IDE hard disks.

Disk 0 has three partitions:

- Partition one is hidden Dell Utility Partition
- Partition "C" contains the W2K loader and boot files, Operating System files
- Partition "S" holds TIFF Front End Application software

Disk 1 has two partitions:

- Partition "RECOVERY" is for System GHOST images and tools etc.
- Partition "E" is for data storage

Configuring the Hardware System Settings

Configuring the BIOS Settings

- Power up the system and observe for BIOS version level of different hardware components. The following are Windows 2000-compatible revisions of an Optiplex workstation:
- BIOS Version A0n (A04 minimum for GX260 to have Hyper-threading feature enabled)

Note: If the system BIOS revision is not as the indicated version, then if needed, follow the procedure in *Section*

Note: *Flashing the System* BIOS *below*.

- Press the F2 key whenever prompted to get to the BIOS setup screen.
- From the Main screen, verify the target system settings as outlined below:

FOR GX270:

- Verify and Correct Time and Date
- Drive Configuration = <ENTER>
  - Diskette Drive A: = 3.5 inch, 1.44 MB
  - SATA Primary Drive = OFF
  - SATA Secondary Drive = OFF
  - Primary Master Drive = Hard Drive
  - Primary Slave Drive = OFF
  - Secondary Master Drive = CD-ROM Device
  - Secondary Slave Drive = OFF
  - IDE Drive UDMA = On
- Boot Sequence: 1. Diskette Drive
  2. IDE CD-ROM Device
  3. Hard-Disk Drive C:
- Memory Information = 1024 MB DDR SDRAM
  System Memory Speed = 400 MHz

System Memory Channel Mode = Dual
AGP Aperture = 128 MB

- CPU Information: Hyper-Threading: Enabled
  CPU Speed: Normal
  BUS Speed: 800 MHz
  Processor ID: F29
  Clock Speed: 3.00 GHz
  Cache Size: 512KB
- Integrated Devices (Legacy Select Options): All Default settings (except Sound = OFF)
- Power Management: Suspend Mode = S3
  AC Power Recovery = Off
  Low power Mode = Disabled
- System Security = Default All
- Keyboard Numlock = On
- Report keyboard Errors = Report
- Auto Power on = Disabled
- Remote Wake up = Off
- Fast boot = On
- OS Install Mode = OFF
- IDE Hard Drive Acoustics Mode = Performance
- System Event Log = <ENTER>
- Asset Tag = Unique for each WORKSTATION

FOR GX260:

- Verify and Correct Time and Date
- Diskette Drive A: = 3.5 inch, 1.44 MB
- Primary Drive 0 = Hard Drive
- Primary Drive 1 = Off (or Hard Drive if 2nd Drive is installed)
- Secondary Drive 0 = DVD CD-ROM Reader
- Secondary Drive 1 = Off (or Hard Drive if 3rd Drive is installed)
- Boot Sequence: 1. Diskette Drive
  2. IDE CD-ROM Device
  3. Hard-Disk Drive C:
- Memory Information = 1024 MB DDR SDRAM
  System Memory Speed = 266 MHz
  AGP Aperture = 64 MB
- CPU Information: Hyper-Threading: Enabled
  CPU Speed: Normal
  BUS Speed: 533 MHz
  Processor ID: F12
  Clock Speed: 3.06 GHz
  Cache Size: 512KB
- Integrated Devices: Default settings for all except USB Emulation = OFF
- PCI IRQ Assignment: Intel Corp VGA adapter: IRQ 9

```
                    Intel Corp Serial bus:                IRQ 11
                    Intel Corp Multimedia:                IRQ 11
                    Intel Corp USB adapter:               IRQ 9
                    Intel Corp USB adapter:               IRQ 3
                    Intel Corp USB adapter:               IRQ 5
                    Intel Corp USB adapter:               IRQ 3
                    Adaptec SCSI adapter:                 IRQ 11
                    DIGI INTERNATIONAL comm. adapter:     IRQ 9
                    Intel Corp Network card:              IRQ 5
```

- IRQ Reservations = All 3, 4, 5, 7, 10, 11, 14, 15 = Available
- Power Management: Suspend Mode = S3
  AC Power Recovery = Off
  Low power Mode = Disabled
- System Security = Default All
- Keyboard Numlock = On
- Report keyboard Errors = Report
- Auto Power on = Disabled
- Remote Wake up = Off
- Fast boot = On
- System Event Log = <ENTER>
- Asset Tag = Unique for each WORKSTATION

- Press <ESC> and select “Save Changes and exit” to exit and reboot the system.

Flashing the System BIOS

- Create the bootable BIOS floppy off the Dell W2K Resource CD (21-0151A-K) by double-clicking on **H:\BIOS_FW\GX270\BIOS_A01\BR60481.exe (or H:\BIOS_FW\GX260\BIOS_A05\BR56977.exe for GX260 or H:\ BIOS_FW\GX150\BIOS_A09\BGX15009.EXE for GX150).** Insert a blank floppy into the drive as prompted.

- After the floppy is created successfully, restart the Workstation.

- The Workstation will automatically boot into the Flash BIOS Update Program – Version A0x prompt.

- Follow the instructions displayed on the screen by pressing any key to continue.

- Press Y to accept the prompt to replace A0n (or lower) BIOS with A01 BIOS.

- The BIOS flash will start. DO NOT disrupt the BIOS flash in progress until it is fully complete.

- Press any key to reboot the Workstation. Verify that the new revision of BIOS A01 is shown during the boot up screen.

6. WINDOWS 2000 PROFESSIONAL INSTALLATION

This section provides step-by-step procedures on Windows 2000 Professional installation and configuration. After you complete the procedures in this section, your system will be ready for TIFF Front End Lite software installation.

This information will only apply if your system hardware has been set up according to the hardware configuration outlined in S*ection* *5.2 Optiplex GX Workstation Fresh System Setup*

6.1 Creating the Boot Disk

Disk duplication utility (DiskDupe) is used to create the bootable Window XP floppy. The utility must be installed and running from a Windows 2K/ NT/95/98 system. The floppy will allow user to access FAT32 partition that is larger than 2 GB. The new Revision K of Dell W2K Resource CD is now bootable and able to access FAT32 partitions.

1. Insert the Dell W2K Resource CD into the CD-ROM drive of a working Windows system (likely your laptop). Double-click on **CD-DRIVE:\BOOTDISK\DISKDUPE\SETUP.EXE** to start installing the DiskDupe utility, accepting the default of all install prompts to complete the utility installation.
2. If you need to replace your CD-ROM drive with the floppy drive in your laptop, then copy the following floppy image files, as appropriate, to a temporary directory on the hard drive:
   - **H:\BOOTDISK\XPCDB\XPCDB-C.IMG** for creating a XP/DOS system with multi-platform selections with SCSI or IDE CD-ROM access.
   - **H:\BOOTDISK\XPNetB\XX0214AH.IMG** for creating a XP (access FAT32 partition) system with access to network drives with multi-platform selection menu (supports the1600SC/2600/4600/GX270/260's onboard Gigabit NIC).
3. Insert a blank floppy disk into the drive, and then start the DiskDupe utility from the **Start** menu.
4. Select Source = ***.IMG** file (one of 2 shown above) and Target = **A:** drive (floppy drive).
5. Select **Action**, and then select **Start Duplication** to begin disk duplication.
6. Once the disk duplication has completed, you will be prompted to insert another floppy disk. Select **Cancel** and remove the floppy disk from the drive and label it accordingly.

6.2 Creating the Boot Partition On the System Disk

Note: Skip this step if you plan to load Windows 2000 from a ghost baseline W2K image.

This section provides procedures to create the primary boot partition (C:) on the system disk (Disk0/ SCSI ID 0) using the GDISK.EXE utility from Symantec's GHOST package to set up Windows 2000 on the first partition as the OS system drive (C: drive).

- Insert the bootable Dell W2K Resource CD (Creo P/N: 21-0151A) into CD-ROM drive and boot the system off the CD.
- Enter `Z:` (CD-ROM drive) to log onto the CD drive.
- Enter `CD \DOS_UTIL` to change to the Z:\DOS_UTIL directory.
- Enter `GDISK 1 /CRE /PRI /SZ:8600 <Enter>` to create a primary Boot/System partition.

6.3 Creating Windows 2000 Device Driver Diskettes

Note: Skip this step if you plan to load Windows 2000 from a ghost baseline W2K image.

You will ONLY need to create Post W2K CD initial Release's mass storage device driver such as SCSI or Raid controller onto the floppy to specify different Mass storage device (pressing the <F6> key) during initial phase of W2K installation. All other devices drivers (such as the Network device, Video, etc.) can be installed off the new Dell W2K Resource CD for all Servers (21-0151A) after the base W2K is loaded.

6.4 Installing Windows 2000 Professional (from a ghost image)

6.4.1 Loading the W2K OS Image From a Server Image CD

- Insert the bootable GX260 Workstation Server Image CD into CD-ROM drive and boot the system off this CD.
    - Once the system is booted into the DOS prompt A:\>, then do one of the following: Enter `Z:` to log the system to the CD-ROM drive.
    - Enter `CD \RECOVERY` to change current directory to Z:\RECOVERY, then
    - Enter `GHOST6` to start up GHOST utility. From the main menu, select **Local > Disk > From Image** and press ENTER.
    - Press the TAB key to move the cursor to a desired image file (G262KH6A.GHO for GX260) and press ENTER.
    - Highlight the first hard disk from the drive list and press ENTER. Verify/change the partition sizes to the following according to desired platform:
    - 1st Partition = 8600MB (NTFS), 2nd Partition = 28xxxMB (NTFS)
- Press the TAB key to move the cursor to the **OK** button, and press ENTER.

- Press the TAB key to move the cursor to the **Yes** button and press ENTER to proceed with loading the disk image (takes approximately 5 minutes).
- Remove the CD from the drive and press ENTER to accept the Reset Computer prompt after the download is completed. The system will boot into a baseline W2K Professional operating system.

6.4.2 Performing System Preparation Mini Setup

- Follow the procedures in *Section 5.1, Pre-Configured Optiplex GX Workstation* Setup to complete the Windows 2000 Professional setup configurations to prepare the system ready for TIFF Front End Lite software installation.

6.5 Installing Windows 2000 Professional (from Microsoft CD)

6.5.1 Starting Windows 2000 Installation (text mode)

- Insert the Windows 2000 Professional CD into the CD-ROM drive, restart the system, and then press <SPACE> bar (when prompted) to boot the system off the CD.

  Note: Adaptec AHA-290x/291x/294x/394x/4944/AIC 78xx PCI SCSI (2944UW) Controller's W2K version of device driver is available off the Windows 2000 CD and will be automatically detected and loaded if the controller is installed.

- Press ENTER key at the Welcome to Setup prompt.
- Press F8 at the Licensing Agreement prompt.
- At the disk partition selection prompt, select the **C: Unformatted or Damaged 8605MB** partition and press ENTER to install Windows 2000 Professional to this partition.
- Press <C> to continue, then press ENTER at the **Format the partition using the NTFS File System** prompt to accept formatting of the partition to NTFS. (Setup starts formatting of the drive, and you must wait…)
- The system will automatically reboot when done formatting partition and copying system files.

6.5.2 Continuing Windows 2000 Professional Installation (graphics mode)

- Select **Next** at the Regional Settings prompt.
- At the "Personalize your software" prompt:
- In the **Name** field, enter **TIFF Front End Lite Workstation**.
- In the **Organization** field, enter the appropriate customer company name and select **Next**.
- Enter the W2K Product Key (off the sticker on the side panel) and select **Next**.
- Set the machine name to **CWn** where:
- **n** = the number of the machine shipping (e.g. cw1023, cw1024)

- Enter/confirm the Administrator password (= creo) and select **Next** to set computer name.
- Set the correct Date and time and Time zone and select **Next** at the Date & Time settings window,
- Select "Custom Settings" at the Networking Settings window and select **Next.**
- Check the "Internet Protocol (TCP/IP)" check box and click on the Properties button.
- In the "Internet Protocol (TCP/IP) properties" window, select the WINS tab, uncheck the "Enable LMHOSTS Lookup" option, select "Enable NetBIOS over TCP/IP" option and click OK>, then OK, then **Next** to continue with Network setup.
- Type in a domain name to join if the local network has one, otherwise, leaves it at the default setting (i.e. part of a WORKGROUP) and select **Next.**
- Select **Finish** to complete initial W2K setup and reboot the system.
- Upon boot up, select **Next** at the Network Identification Wizard window.
- Select the "Users must enter a user name and password to use this computer" option and select **Next**, then **Finish** to close the wizard.
- Log on to the Administrator account with the correct password entered. And the "Getting started with Windows 2000" window is displayed, uncheck "Show this screen at startup" and click **Exit**.
- Select **Start->Settings->Control Panel->Add/Remove Programs** to add the following Window 2000 components:
- Select **Add/Remove Windows Components**
- Uncheck **Index Service**
- Uncheck the **Internet Information Services (IIS)**
- Select **Management and Monitoring Tools** and then select **Details** to ensure the following sub-component is selected:
- **Simple Network Management Protocol** and then select **OK**
- Select **Other Network File and Print Services** and select **Details** to ensure the following sub-component is selected:
- **Print Services for Unix** and then select **OK**
- **Script Debugger** (ensure ALL other components are NOT selected) and then select **Next,** then select **Finish** to complete adding additional Windows 2000 components (Windows will start copying files. Wait…)
- Click **Close** to close the **Add/Remove Programs** window.

6.5.3 Setting Up Windows 2000 Professional—Custom Settings

Update Various W2K Drivers For GX270

Intel 8xx ChipSet Software Update

1. Insert the Dell W2K Resource CD into drive; navigate to **H:\W2KDRVR\GX270\IChip500** directory on the CD.
2. Double-click on **Setup.exe** to execute the Chipset software installer.
3. Reboot the Server when prompted.

Intel Integrated PRO 1000MT Gigabit Network Interface Controller

1. Right-click **My Computer** and select **Manage**.
2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Network adapters** and the currently installed driver is shown.
3. Right-click on the NIC driver and select **Properties** and the dialogue box appears.
4. Select the **Driver** tab and then select **Update Driver…**.
5. In the Upgrade Device Driver Wizard window, select **Next**.
6. Select **Next** at the wizard prompt for the device driver location to select **Search for a suitable driver for my device (recommended)**. Select **Next**.
7. Select **Specify a location**, **CD-ROM** drives and select **Next** for the location of the driver. (At this time, insert the Dell W2K Resource CD into the drive.).
8. At the disk insertion prompt, select **Browse…,** then select the appropriate folder (**H:\W2KDRVR\I1KXTV7**) and select **Open**, **OK**.
9. Select (highlight) the following driver (Version 7.0.34.0) from the list displayed:

   Intel® PRO/1000 Network Connection

10. Select **Next**, **Next** (and wait… while copying files).
11. Select **Finish** when prompted.
12. Select **Close**, **OK** to complete the driver update.

Analog Devices SoundMAX integrated Digital Audio Controller

1. Insert the Dell W2K Resource CD into drive; navigate to **H:\W2KDRVR\GX270\AD198** directory on the CD.
2. Double-click on **Setup.exe** to execute the SoundMAX device driver software installer.
3. Reboot the Server when prompted.

Intel USB 2.0 Controller Supplement Driver Update

1. Right-click **My Computer** and select **Manage**.

2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Display adapters** and the currently installed driver is shown.
3. Right-click on the **Universal Serial Bus (USB) Controller** with the **Yellow Question Mark** next to it.
4. From the drop down menu select **Properties,** click on the **Driver** tab and select **Update Driver.**
5. From the Upgrade Device Driver Wizard screen click **Next**. When prompted select the recommended option and click **Next**.
6. From the next screen deselect all options except for **Specify a location** and click **Next**.
7. Browse to the location (**H:\W2KDRVR\GX270\USB2Supl**) and choose **OK** and then click **Next** for the files to be installed.
8. Click **Finish** to complete the installation.

Intel Extreme Graphics Controller

1. Right-click **My Computer** and select **Manage**.
2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Display adapters** and the currently installed driver is shown.
3. Right-click on the Display driver and select **Properties** and the dialogue box appears.
4. Select the **Driver** tab and then select **Update Driver…**.
5. In the Upgrade Device Driver Wizard window, select **Next**.
6. Select **Next** at the wizard prompt for the device driver location to select **Search for a suitable driver for my device (recommended)**. Select **Next**.
7. Select **Specify a location**, **CD-ROM** drives and select **Next** for the location of the driver. (At this time, insert the Dell W2K Resource CD into the drive.).
8. At the disk insertion prompt, select **Browse…,** then select the appropriate folder (**H:\W2KDRVR\GX270\ISPG613** of the Resource CD) and select **Open**, **OK**.
9. Select (highlight) the following driver (Version 6.13.10.3510) from the list displayed:

   Intel 82865G Graphics Controller

10. Select **Next**, **Next** (and wait… while copying files).
11. Select **Finish** when prompted.
12. Select **Close**, **OK** to complete the driver update.

The driver MUST be Uninstalled (i.e. Right-click on the device driver and select "**Uninstall**" option), then reboot the server. Once the server is booted up, the driver will automatically re-discovered by W2K and the new Intel Graphic Controller 82865G's desired device driver will then be taken effect (i.e. User can now change the display resolution, color depth, etc.)

Update Various W2K Drivers For GX260

Intel 8xx ChipSet Software Update

1. Insert the Dell W2K Resource CD into drive; navigate to **H:\W2KDRVR\GX260\800Chip** directory on the CD.
2. Double-click on **Setup.exe** to execute the Chipset software installer.
3. Reboot the Server when prompted.

Intel Integrated PRO 1000MT Gigabit Network Interface Controller

1. Right-click **My Computer** and select **Manage**.
2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Network adapters** and the currently installed driver is shown.
3. Right-click on the NIC driver and select **Properties** and the dialogue box appears.
4. Select the **Driver** tab and then select **Update Driver…**.
5. In the Upgrade Device Driver Wizard window, select **Next**.
6. Select **Next** at the wizard prompt for the device driver location to select **Search for a suitable driver for my device (recommended)**. Select **Next**.
7. Select **Specify a location**, **CD-ROM** drives and select **Next** for the location of the driver. (At this time, insert the Dell W2K Resource CD into the drive.).
8. At the disk insertion prompt, select **Browse…,** then select the appropriate folder (**H:\W2KDRVR\I1KXTV7**) and select **Open**, **OK**.
9. Select (highlight) the following driver (Version 7.0.34.0) from the list displayed:

   Intel® PRO/1000 Network Connection

10. Select **Next**, **Next** (and wait… while copying files).
11. Select **Finish** when prompted.
12. Select **Close**, **OK** to complete the driver update.

Analog Devices SoundMAX integrated Digital Audio Controller

1. Insert the Dell W2K Resource CD into drive; navigate to **H:\W2KDRVR\GX260\ADI198x** directory on the CD.
2. Double-click on **Setup.exe** to execute the SoundMAX device driver software installer.
3. Reboot the Server when prompted.

Intel USB 2.0 Controller Driver Update

1. Right-click **My Computer** and select **Manage**.

2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Display adapters** and the currently installed driver is shown.
3. Right-click on the **Universal Serial Bus (USB) Controller** with the **Yellow Question Mark** next to it.
4. From the drop down menu select **Properties,** click on the **Driver** tab and select **Update Driver.**
5. From the Upgrade Device Driver Wizard screen click **Next**. When prompted select the recommended option and click **Next**.
6. From the next screen deselect all options except for **Specify a location** and click **Next**.
7. Browse to the location (**H:\W2KDRVR\GX260\ICH0-USB**) and choose **OK** and then click **Next** for the files to be installed.
8. Click **Finish** to complete the installation.

Intel 82845G/GL Graphics Controller

1. Right-click **My Computer** and select **Manage**.
2. Select **Device Manager** (left-hand side window) and then click on the "+" size of **Display adapters** and the currently installed driver is shown.
3. Right-click on the Display driver and select **Properties** and the dialogue box appears.
4. Select the **Driver** tab and then select **Update Driver…**.
5. In the Upgrade Device Driver Wizard window, select **Next**.
6. Select **Next** at the wizard prompt for the device driver location to select **Search for a suitable driver for my device (recommended)**. Select **Next**.
7. Select **Specify a location**, **CD-ROM** drives and select **Next** for the location of the driver. (At this time, insert the Dell W2K Resource CD into the drive.).
8. At the disk insertion prompt, select **Browse…,** then select the appropriate folder (**H:\W2KDRVR\GX260\I845G** of the Resource CD) and select **Open**, **OK**.
9. Select (highlight) the following driver (Version 6.13.1.3084) from the list displayed:

   Intel 82845G/GL Graphics Controller

10. Select **Next**, **Next** (and wait… while copying files).
11. Select **Finish** when prompted.
12. Select **Close**, **OK** to complete the driver update.

The driver MUST be Uninstalled (i.e. Right-click on the device driver and select "**Uninstall**" option), then reboot the server. Once the server is booted up, the driver will automatically re-discovered by W2K and the new Intel Graphic Controller 82845G/GL's desired device driver will then be taken effect (i.e. User can now change the display resolution, color depth, etc.)

Setting Up Video Mode

- Right-click on the Desktop and select **Properties** to bring up the Display Properties window.
- Click on the **Settings** tab and set the following:
- **Screen Area** = **1024 x 768 Pixels**
- **Colors** = **True Color** (24 bit)
- Select **Apply** and then select **OK** and then **Yes** to confirm and save the screen display settings.
- Select the **Effects** tab, check all options except Use Large Icons, and select **Apply**.
- Select the **Background** tab and select **Creo-WallPaper**. (If this option does not exist, copy the Creo-WallPaper.BMP file from the Dell W2K Resource CD's WallPP directory into WINNT directory.) Set **Picture Display** to **Stretch** and select **Apply** and then **OK** to exit the Display Properties window.

Setting Up Disk Configuration

TIFF Front End Lite Workstation has a consistent drive lettering as outlined below:

Disk0:

- 1st Partition = No Drive Letter, Hidden Dell Utility Partition
- 2nd Partition = C:, File System = NTFS: BOOT, W2K loader and boot files, Operating System files
- 3rd Partition = S:, File System = NTFS: APPLICATIONS, TIFF Front End Lite application software.

Disk1:

- 1st Partition = No Drive Letter, File System = FAT32: Backup system ghost utility and images.
- 2nd Partition = E:, File System = NTFS: DATA, Customer Data files.

- Right-click on **My Computer** and select **Manage** to open the Computer Management Console. Under **Computer Management (Local)**, expand the **Storage** component and select **Disk Management**.
- If the Write Signature and Upgrade Disk Wizard dialog box appears, select **Cancel**

  WARNING: If you accept this prompt by selecting **Next**, W2K will convert all un-partitioned disk(s) to Dynamic disk type. It is not recommended since DOS will NOT recognize the Dynamic disk type.

- Right-click on the CD drive (D:) by pointing the cursor at the CD icon and then select **Change drive letter and path**. Select **Edit** and change the CD drive letter from D: to H: and select **OK**, then **Yes** to confirm the change.
- Right-click the third partition of Disk0 and select **Create Partition**. The Create Partition Wizard window appears. Select **Next**. To create S: partition with **File System** = **NTFS**, **Label** = **Applications, Perform a quick format.**

- Repeat the steps above to create a 4GB FAT32 RECOVERY partition and the remainder of the disk to be NTFS partition for Data partition on Disk1.
- Right-click on the C: partition and select “Properties”, then type “System” in the LABEL field and click <**OK**>. The final disk layout should look like the following picture:

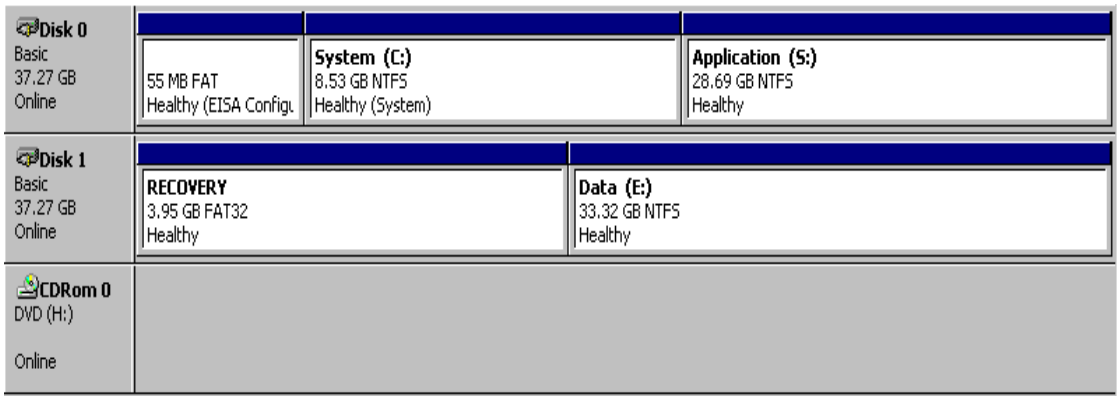


Figure 6-1: Disk layout of TIFF Front End Lite Workstation

- Exit Disk Management and MMC.

Setting Up User(s)

- Expand the **Local Users& Groups** tree by clicking on the + sign) and select the **Users** tree.
- Right-click on the right hand side window and select **New User**. The New User dialog window appears.
- Type in **User name** = **CreoService**.
- Enter the password `pathfinder` and confirm.
- Uncheck **User must change password at next logon**.
- Check **Password never expires** and select **Create**, then **Close**.
- Select **Group**, then right-click on **Administrators** and select **Add to Group**. The Administrators Properties window appears. Select **Add**. In the **Select Users on Groups** window, select the **CreoService** account and select `Add` to add this user to the Administrators Group. Select **OK**, **OK** to complete setting up users.

Setting up EventLogs

- Expand the **Event Viewer** tree and right-click on the **Application** tree to select **Properties**. The Application Properties dialog window appears. In the **Log Size** field, set the following:
- **Maximum Log Size** = 2048 **KB**
- **When Maximum Log Size is reached** = **Overwrite events as needed** and select **OK**

- Repeat the above steps for the **Security** and **System** trees but set the **Maximum Log Size** = 512 **KB** for the **Security** tree.

Setting up Windows Explorer Property Settings

- Start Windows Explorer by selecting **Start > Accessories > Explorer**.
- Select **View > Details**.
- Select **Tools > Folder Options > View** tab.
- **Display compressed files and folders alternate color** = enabled
- **Display full path in address bar** = enabled
- **Display full path in title bar** = enabled
- **Show hidden files and folders** = enabled
- **Hide file extensions for known file types** = disabled
- Select **Apply,** then click the **Like current folder** button, **Yes** to confirm.
- Click **OK** to exit.

Changing CD-ROM Drive Letter (from D: to H:) in the Registry

To edit the registry to change the CD-ROM drive letter reference from D: to H: using REGFIND.EXE:

- Select **Start > Programs > Command Prompt** to open a command window.
- Enter `MD C:\DRIVERS\RESKIT` to create a directory.
- Enter `CD \DRIVERS\RESKIT`.
- Insert the W2K Resources CD into the CD-ROM drive. Select the DOS window.
- Enter `COPY D:\W2K_UTIL\RESKIT\*.*`.
- Enter `REGFIND D:\ -r H:\`

Create a TEMP directory on C: and S: drives:

- Enter `MD C:\TEMP`.
- Enter `MD S:\TEMP`.

Customizing Command Prompt Window Properties

Change the DOS command prompt properties according to the following:

- **Options** tab: Windows default settings (no changes)
- **Font** tab: **Font size** = **7 x12** (no other changes)
- **Layout** tab: **Screen Buffer size**: **Width** = **200**, **Height** = **1000**, uncheck **Let System Position Window**

- **Color** tab: no changes

Setting Up Windows 2000 Professional Remote Dial-up Connection

If one of the two modems below is purchased with the equipment; install the appropriate device drivers as shown below.

Installing USR Ext.56K PnP Modem

1. Connect the modem (if one included) and turn it on.
2. Reboot the Workstation and W2K will auto-detect and start the Add/Remove HW wizard for loading the driver for the installed modem
3. Select **Don't detect my modem** and then select **Next**.
4. For North American machines, select the following and then select **Next**.
    a. **Manufacturer** = **US Robotics Inc.**
    b. **Models** = USR Ext.56K PnP
5. Select **COM1** and then select **Next**.
6. Select the following and then select **Next**.
    a. **Country** = **United States** (default)
    b. **Area** = **604**

Installing MultiTech ZBA92 Modem

1. Select Have Disk, and place the Resource CD (21-0151A-C) into the CD drive. Point Windows at the appropriate folder: H:\W2KDRVR\MultiTech\MTZBA92.
2. Select MultiTech ZBA92 from the list.
3. Select **COM1** and then select **Next**.
4. Select the following and then select **Next**.
    a. **Country** = **United States** (default)
    b. **Area** = **604**

Note: If this modem is destined for a country other than the US/Canada, see the document Configuring an External Modem for RAS for configuration instructions for specific countries. The rest of the procedure is the same for both modems, once the proper driver is installed and the modem configured.

Setting Up InComing Connection (Remote Dial-Up Connection)

- Right-click on **My Network Places** and select **Properties** to start up "Network and Dial-Up Connection" window.

- Double-click on **Make New Connection** option and the "**Network Connection**" Wizard appears, click <**Next**>.
- Select the **Accept Incoming Connections** option from the list and click <**Next**> and a list showing "Connection devices" will appear, check (i.e. **Enabled**) the appropriate modem (installed in the steps above) and click <**Next**>.
- Select **Do Not Allow Virtual Private Connections** option and click <**Next**>.
- Check "**Administrator"** and "**CreoService (CreoService)"** users to be allowed to connect and click <**Next**>.
- Uncheck "**NetBEUI Protocol"** and leave all other Networking components checked and click <**Next**>.
- Click <**Finish**> and leave the Connection name field to "Incominng Connections" unchanged (It'll not allow the user to change this field anyhow) to complete setting up the Remote Dial-Up Connection.

Configuring Performance Settings

Verifying Virtual Memory

- Right-click on **My Computer** and select **Properties**.
- Select the **Advanced** tab and then select **Performance Options…**
- Set **Application Responses** to **Optimize Performance for Applications**.
- Set **Virtual Memory** by selecting **Change…**, then selecting the C: drive and setting **Initial Size = Maximum Size** (= 1.5x of Physically installed RAM, i.e. if 1GB RAM is installed, enter the value of 1536) and selecting **OK**, **OK**.
- Select **Environment Variables…**
- Set **User Variables** for Administrator to **TEMP = TMP = S:\Temp**
- Repeat the same for System Variables and select **OK**.
- Select **Startup and Recovery…**
- Set **Display list of Operating Systems** to **5** seconds.
- Set the "Write Debugging Information" to **Complete Memory Dump** option
- Uncheck **Automatically Reboot** and select **OK**, **OK** to confirm.
- Select **OK, Yes** to restart the computer.

Enabling the Disk Counter for the Performance Monitor

Enable the performance-monitoring tool. Note that this does not seem to affect performance but can be used for analysis.

- Select **Start** and then select **Run**.

- Enter `DISKPERF -Y`.

Disabling the DHCP Media Sense Settings

- Select **Start** and then select **Run**.
- Enter `REGEDT32`.
- Open **HKLM\System\CurrentControlSet\Services\Tcpip\Parameters** key and create the following Values and their Data as shown:
- **Value** = **DisableDHCPMediaSense**, **Type** = **Reg_DWORD**, **Data** = **1**
- **Value** = **DisableMediaSenseEventLog**, **Type** = **Reg_DWORD**, **Data** = **1**
- Enable the command prompt's auto-complete value by setting HKEY_CURRENT_USER\Software\Microsoft\Command Processor as follows:
- **Value** = **CompletionChar**, **Type** = **Reg_DWORD**, **Data** = **9**

Customizing Creo W2K Settings

Installing W2K Recovery Console

- Insert the W2K CD into the drive and log onto H: drive by entering `H:`.
- Enter `H:\I386\WINNT32 /CMDCONS` to start installing the Windows 2000 Recovery Console.

Modifying Boot.ini File

Modify the Boot.ini two main boot titles to read:

1. `Creo Windows 2000 Professional`
2. `Creo Recovery Console`

Setting Internet Explorer Custom Settings

- Right-click on the **Internet Explorer** icon and select "**Properties**"
- Select the **Advanced** tab, scroll down the list to "**Microsoft VM**" and check all 3 options under it.
- Select the **General** tab, and set the default home page to http://www.Creo.com/

6.5.4 Installing pcAnywhere (V10) Remote Host Control Software

Ensure that you have closed all other programs before you start. The installation will require a restart when it is completed.

Installing the Host Software

- Insert the pcAnywhere CD into the CD-ROM drive.
- Do the following to start the installation:

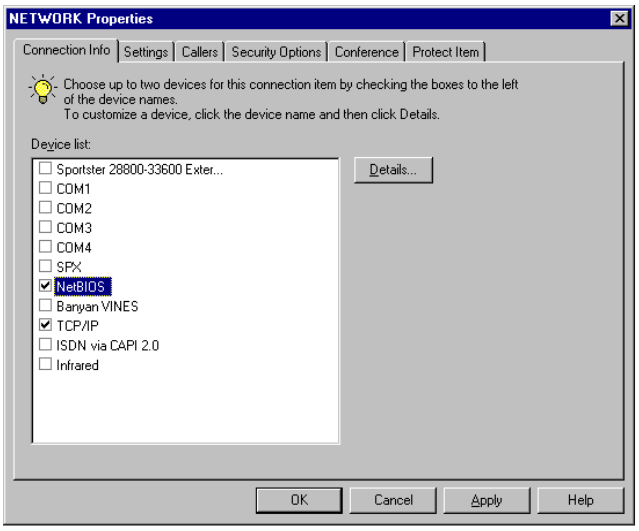
- If you have CD Autorun enabled on your system the pcAnywhere CD installation utility will appear. Select **Exit**.
- Start the Control Panel/Add/Remove Software applet, then point to **H:\csinst.exe** and select **OK**. The pcAnywhere CD-ROM installation utility will appear. Select **Install Software**.
- Select **Next** at the Welcome dialog box.
- A User Information dialog box appears. Fill in the **Name** and **Company** fields and select **Next** to continue.
- Select **Yes** at the Online License Agreement dialog box.
- A Choose Destination Location dialog box appears. Select **Next** to accept the default location of C:\Program Files\pcANYWHERE.
- Select **Next** to continue at the Review dialog box.
- Select **Next** at the Symantec Support Solutions dialog box.
- Select **Next** at the How To Reach Us dialog box.
- Select **Next** at the Windows 95 Solution dialog box.
- Select **SKIP** at the Register Now! Dialog box.
- The pcAnywhere Setup dialog box appears. Select **No** to view the readme file.
- The Setup Complete dialog box appears. Select **Yes**, **I want to restart my computer now**.
- Select **Finish** to restart the system.

Configuring pcAnywhere Host

- Launch pcAnywhere by selecting **Start > Programs > pcANYWHERE > pcANYWHERE**.
- Select **Next** to accept the default **Modem connection types**.
- Select **Next** to accept the default **Network connection of TCP/IP**.
- Select **Finish** to accept the default **Direct Serial connection of COM1**.

Configuring the network connection:

- Select **Be A Host PC** on the toolbar. Four icons appear in the frame below.
- Right-click **Network** and select **Properties**.
- In the "**Connection Info"** tab select (check) **TCP/IP** and **NetBIOS (If NetBEUI is installed)**.
- In the "**Callers"** tab Add "**Administrator"** and **"CreoService (CreoService)" users to the Caller list** to grant Dial-in access right to the 2 added Users. Click <**Apply**> and <**OK**> to save change.

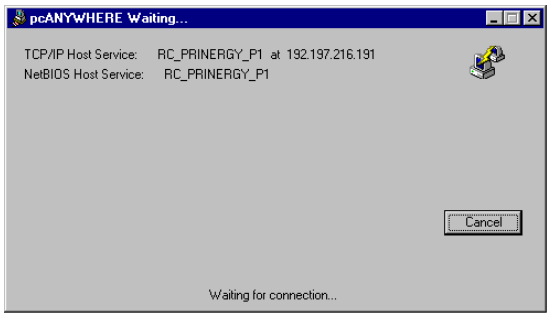


Cleaning up unused connections:

- Right-click **Direct** and select **Delete**.
- Right-click **Modem** and select **Delete**.

Starting the host service:

- Double click on the **Network** icon.
- The pcANYWHERE host should be on the window's taskbar.
- Maximize the host. It should read:
  `TCP/IP Host Service: WorkstationName at IPAddress`
  `NetBIOS Host Service: WorkstationName (ONLY if NetBEUI is installed and enabled)`



- Test the connection with the pcAnywhere client.
- If you do not have the pcAnywhere client, contact the Response Center for assistance. They can test the connection for you.

6.5.5 Installing Windows 2000 Service Pack 2 (and Post SP2 Updates)

Note: Skip this step if Windows 2000 Professional with Service Pack 2 version of CD is used. (This CD is currently shipping with the latest shipment of Dell Optiplex workstation.)

Windows 2000 Updates are normally downloaded and installed off the Internet directly from the Microsoft Windows Updates page. All Windows critical updates (up to May 15/02) are usually installed (also installed in the OS ghost image on the Server Image CD). Currently, Media Player V7.0 has NOT been tested. Do not install it.

Windows 2000 Service Pack 2 is available and can be ordered off CD Request mailing list. SP2 CD is a customer installable CD, read the install procedure included on the SP2 customer CD before installing it.

W2K Post SP2 Security patches/hot fixes should also be applied, please contact Vancouver P3Lab for latest information on the latest patch levels of all the "MUST HAVE" patches.

6.5.6 Creating GHOST Baseline W2K OS Images

- Boot the system off the DOS floppy created in *Section 6.1, Creating the Boot Disk.*
- Once the system is booted into the DOS prompt A:\>, enter `C:` to log onto C: drive
- Enter `GHOST6` to start up GHOST version 6.5. From the main menu, **select Local > Disk > To Image** and press ENTER twice.
- Highlight the first hard disk (with 3 partitions) from the list in the Select local source drive by clicking on the drive number window, and press ENTER.
- Press TAB to move the cursor to the destination drive field and press the down arrow to scroll through the available drives. Select the drive from which GHOST was executed.
- Press TAB to move the cursor down to the **File Name** field and type in a file name (such as TFEFinal) and press ENTER.
- Press TAB to move the cursor to **High** on the Compress Image prompt and press ENTER.
- Press TAB to move the cursor to **Yes** on the Question prompt and press ENTER to start writing the disk image to a mapped network drive.
- Press ENTER at the Dump Complete prompt.
- From the **Main Menu**, select **Quit** and press ENTER to exit GHOST.

6.5.7 Creating an Emergency Repair Disk

- Label a floppy disk **Emergency Repair Disk** and put it in A: drive
- Select **Start > Programs > Accessories > System Tools > Backup** to start the Window 2000 Backup utility.
- Select **Tools > Create an Emergency Repair Disk** option from the menu, and the **Emergency Repair Diskette** window appears.
- Check the **Also backup the registry to the repair directory. This backup can be used to help recover your system if the registry is damaged** check-box and click **OK**.
- When done, select **OK** and then select **Exit**.

- Take out the diskette and write-protect it.
- Do not forget to write on the system serial number, date and to update it every time you change the configuration (prior to shipment). When the system is ready, ship it with the system.

6.5.8 Setting Up TIFF Front End Lite Application Software

To install the application programs for TIFF Front End Lite, first install Copydot Toolkit Viewer, then TIFF Assembler. To avoid possible DLL conflicts please install them in this order. For information on installing these applications, please refer to the install documentation for each application:

Application	**Document**	**Part Number**
Copydot Toolkit Viewer 4.0	Copydot Toolkit User Guide	03-4089
	Copydot Toolkit (Viewer) Release Notes	06-0304
TIFF Assembler 2.0	TIFF Assembler User Guide	03-4150
NFS Maestro Client 7.1	Hummingbird Maestro NFS Connectivity (Section 5)	72-3056A-K

7. SETUP FOR DISASTER RECOVERY

This section outlines steps to prepare the system to be protected by a backup strategy.

- Set up system hardware and Windows 2000 Professional as described in this document.
- Boot the system into DOS prompt off the Dell W2K Resource CD or Dell Server Image CD with the appropriate DOS IDE driver, and then create the System fully configured (site specific) W2K OS image using GHOST utility.

8. SYSTEM DISASTER RECOVERY

We recommend that every Optiplex workstation be configured with the 2nd disk drive to set up a RECOVERY partition for storing ghost images of a fully configured (site-specific configuration) system disk. The system can then implement a simple system disaster recovery strategy, by using GHOST (General Hardware Operation System Transfer) as the workstation baseline W2K Professional Operating System recovery tool. This utility allows users to recover the entire system (to the last known good system settings) within 30 minutes in case of a system disaster crash.

The simple backup strategy includes a two-step process taken when a disaster occurs:

- The system is first booted off a Server Image CD with the appropriate DOS IDE controller driver.
- Invoke the GHOST utility included on the CD (or 4GB FAT32 RECOVERY partition) to download the appropriate fully configured W2K OS image (i.e. backup) to the first drive in the system. Reboot and the system should be ready for normal operation.