

Windows based Workflows

Applying Windows 2000 Ghost to Dell 8G Servers

Document Number
709-00384A-C-PR01

2006-07-06

Kodak®
3700 Gilmore Way
Burnaby, BC
Canada V5G 4M1
(604) 451-2700

Copyright 2006 Kodak. All rights reserved.

Revision History

Revision	Date	Author	Comments
A	Mar 1, 2005	Derek Braendel	First Release. PE800, PE2800
B	Jun 3, 2005	Derek Braendel	Added PE2850
C	Oct 25, 2005	Derek Braendel	Added PE830
D	July 6, 2006	Derek Braendel	Modified UPS installation section for both APC and TrippLite

CONTENTS

1. INTRODUCTION 1

1.1 AVAILABLE GHOST IMAGES 1
1.2 OTHER RELATED DOCUMENTS 2
1.3 PROCEDURE OVERVIEW 3

2. HARDWARE CONFIGURATION REFERENCE 3

3. GHOSTING THE OS FROM THE SERVER GHOST IMAGE CD 4

3.1 GHOSTING W2K FROM AN OS IMAGE 4
3.2 SETTING UP SYSTEM PREPARATION TOOL MINI SETUP WIZARD 5

4. DETECTING NEW HARDWARE 6

4.1 NETWORK CARD DETECTION 6
4.2 REMOVE UNUSED MODEMS 6
4.3 VERIFYING THE DIGI ACCELEPORT 2P/4P 7

5. SETTING UP DISKS 8

5.1 DISK CONFIGURATION REFERENCE 8
5.2 SETTING UP DISK CONFIGURATION 10
5.2.1 Re-Install Removed Disks 10
5.2.2 Configuring Disks on Dell Servers 10
5.2.3 Configuring One or more Data Disks 10

6. CONFIGURING PERFORMANCE SETTINGS 11

6.1 VERIFYING VIRTUAL MEMORY 11
6.2 CONFIGURING NETWORKING 11
6.2.1 Verifying NIC Driver Settings (including AppleTalk binding) 11

7. MS HOT FIXES 12

7.1 FROM MICROSOFT 12
7.2 FROM CREO'S SUS 12

8. INSTALLING IIS 12

9. INSTALLING AND CONFIGURING REMOTE ACCESS 12

9.1 CONFIGURE FOR RRAS 13
9.2 CONFIGURING THE REMOTE ACCESS PORT 13
9.3 CHANGING THE RRAS IP ADDRESS POOL SIZE 13
9.4 DISABLING THE DHCP RELAY AGENT 14
9.5 CONFIGURING REMOTE ACCESS 14
9.6 GRANTING DIAL-IN PERMISSIONS 14

10. UPDATING SERVER BIOS 15

11. INSTALLING AIT/DLT 15

12. INSTALLING UPS SOFTWARE 15

13. PERFORMING A WINDOWS 2000 SPOT CHECK 15

14. SYSTEM DISASTER RECOVERY....16
14.1 SETTING UP FOR SYSTEM DISASTER RECOVERY....16

1. INTRODUCTION

This document provides procedures to install Windows 2000 (W2K) baseline image for Prinergy, Synapse InSite, Print Console, or BestRIP running on Creo-approved Dell Intel Server platforms.

This document provides step-by-step procedures on Windows 2000 installation and configuration using a Ghost image prepared specifically for each platform. Contact Technology Infrastructure Systems Group for the Win2K Stand Installation Template if there is no suitable Ghost image or for other non-standard hardware.

Supported platforms include Dell PowerEdge Servers PE800, PE830, PE2800, PE2850.

Make sure that you have the following software before beginning installation.

Table 1: Necessary Software

Disk	Type	Version	Comments
Server Ghost	CD	x.xx	OEM RIP software
Blank floppies	Floppy	N/A	For creating driver disk if needed

1.1 Available Ghost Images

The following Ghost Baselines are available from Manufacturing by orderring through **CD.Requests@Creo.com**. A listing of Windows OS Baselines follows.

Table 2: List of Ghosts

Server	OS	SP	Med	Class	Workflow	Partitions	OS Drive	Latest Production Image
Dell								
GX260	Win2K	3	CD	Pro	Veris			651-00068A
GX260	Win2K	3	CD	Pro	Prinergy			21-0156A
GX270	Win2K	3	CD	Pro	Veris			651-00070A
GX270	Win2K	3	CD	Pro	Prin/Connect/Direct			651-00052A
GX270	Win2K	3	CD	Pro	Insite			651-00052A
GX270	Win2K	4	CD	Pro	Integris			651-00042C
GX280	Win2K	4	CD	Pro	Prin/Connect/Direct			651-00233A
GX620	Win2K	2	DVD	Pro	Prin/Connect/Direct			651-00417A
GX620	WinXP	2	DVD	Pro	Prin/Connect/Direct			651-00418A
PE400	Win2K	4	CD	Server	Evo, Director, Integris, Veris	1	C:	651-00092A
PE400	Win2K	4	CD	Server	InSite	3	C:	651-00137A
PE400	Win2K3	0	DVD	Server	All	1	C:	651-00112A
PE700	Win2K	4	DVD	Server	Prinergy, Impact	3	D:	651-00168A
PE700	Win2K	4	DVD	Server	Evo, Director, Integris, Veris	1	C:	651-00168A
PE700	Win2K	4	DVD	Server	InSite	4	C:	651-00168A
PE700	Win2K3	0	DVD	Server	All	1	C:	651-00151A
PE800	Win2K	4	DVD	Server	Evo	1	C:	651-00290A
PE800	Win2K	4	DVD	Server	Prinergy	3	D:	651-00290A
PE800	Win2K	4	DVD	Server	InSite	4	D:	651-00425A
PE800	Win2K3	0	DVD	Server	All	1	C:	651-00420A
PE830	Win2K	4	DVD	Server	Evo	1	C:	651-00422A

PE830	Win2K	4	DVD	Server	Prinergy	3	D:	651-00422A
PE830	Win2K	4	DVD	Server	InSite	4	D:	651-00424A
PE830	Win2K3	0	DVD	Server	All	1	C:	651-00421A
PE1400	Win2K	3	CD	Server	All	3	D:	21-0092B
PE1600	Win2K	3	CD	Server	All	3	D:	651-00021A
PE2400H	Win2K	3	CD	Server	All	3	D:	21-0048B
PE2400L	Win2K	3	CD	Server	All	3	D:	21-0049B
PE2500	Win2K	4	CD	Server	All	3	D:	651-00158A
PE2600	Win2K	4	DVD	Server	Prinergy/Impact	3	D:	651-00174A
PE2600	Win2K	4	DVD	Server	Evo/Director	1	C:	651-00174A
PE2600	Win2K3	0	DVD	Server	All	1	C:	651-00094A
PE2600	NT4.0		CD	Server	Impact	3	D:	651-00027A
PE2650	Win2K	4	CD	Server	Prinergy/Impact	3	D:	651-00251A
PE2650	Win2K	4	DVD	Server	Evo	1	C:	651-00251A
PE2800	Win2K	4	DVD	Server	Evo	1	C:	651-00291A
PE2800	Win2K	4	DVD	Server	Prinergy	3	D:	651-00291A
PE2800	Win2K3	0	DVD	Server	All	1	C:	651-00333A
PE2850	Win2K	4	DVD	Server	Evo	1	C:	651-00369A
PE2850	Win2K	4	DVD	Server	Prinergy	3	D:	651-00369A
PE2850	Win2K3	0	DVD	Server	All	1	C:	651-00376A
PE4400	Win2K		CD	Server	All	3	D:	21-0046B
PE4400	Win2K	3	CD	Server	Render	3	D:	21-0047A
PE4600	Win2K	4	CD	Server	Prinergy	3	D:	651-00190A
PE4600	Win2K	4	CD	Server	Evo	1	C:	651-00190A
PE6400	Win2K	3	CD	Server	All	3	D:	21-0045B
PE6600	Win2K	3	CD	Server	All	3	D:	21-0155B

Note: At this point, it is assumed that the server hardware has been configured as per document 709-00383A (Dell 8G Server Hardware Setup), and the server is ready for Windows 2000 to be installed.

1.2 Other related documents

Table 3: List of Docs

Kodak P#	Title	Overview
709-00615A	PE830 Server Hardware Setup	Hardware Setup for the PE830
709-00384A	Dell 8G Server. Applying a Windows 2000 Ghost	Applying the Windows 2000 OS Baseline once this document is complete.
709-00230A	Win2K3 Install from Ghost for Dell Prinergy	Applying the Windows 2003 OS Baseline once this document is complete.
709-00383A	Dell 8G Server Hardware Config Procedure	Hardware Setup doc for PE800, PE2800, PE2850
72-3572A	Dell Hardware Setup	Hardware setup for PE2400, 4400, 6400, 2500, 2600, 400, 700
72-3476B	Win2K Install from Dell Ghost for Prinergy	Applying Windows 2000 Ghost baseline for PE2400, 4400, 6400, 2500, 2600, 400, 700
709-00319A	Dell Opti GX280 HW Setup and Ghost Install	Hardware and Ghost install for GX280 Optiplex
709-00584A	Dell Opti GX620 HW Setup and Ghost Install	Hardware and Ghost install for GX620 Optiplex
709-00285A	HP Proliant Hardware Configuration Procedure	Hardware Setup document for HP Servers
709-00300A	Win2K Install from Ghost on HP Servers	Applying Windows 2000 Baseline for HP Servers
72-2125A	Workflow Hardware Site Prep	Power, Environmental, and Dimension specs for all DEC Alpha, DG Aviion, HP, Dell, Servers, Tap Libraries, and RAIDs.
XX0119A	Server Specs and Slot Location Matrix	Overview specification matrix for all DEC, DG, Dell, HP

		Servers along with recommended PCI slot locations
XX0396A	ResourceCD Matrix	Listing of all supported Firmware, Drivers, and Utilities for DG, Dell and HP Servers.

1.3 Procedure overview

Table 4: Setup Overview

Operating System Installation	Steps
Section 3: Ghost OS from Server ghost image CD (platform-specific)	1. Boot system into Windows 2003 DOS prompt off the Ghost CD. (Or create the bootable floppy) to access the FAT32/FAT RECOVERY partition. 2. Ghost (v8) OS server image onto server.
Remove the server from LAN (if connected)	This is a security measure to ensure that the server is not infected with any viruses over the network. We will place the server back on the LAN after its security is tightened.
Section 4: Sys Prep Tool Mini-setup wizard	1. License Win2K, name server, set administrator password, do initial communications configuration, etc. 2. Reboot server.
Section 5 and 6: Add new hardware and set up disks (if necessary)	1. Setup PERC, PCI to PCI Bridge (ONLY if prompted). 2. Verify Digi multi-serial-port PCI card. Reinstall driver if necessary. 3. Setting up disks (partitions, stripe sets if required)
Section 8: Configure performance settings	1. Verify virtual memory. 2. Verify and configure networking (including NIC settings and Appletalk binding)
Section 9: Tighten Security	Apply current post SP4 cumulative MS security patches/hotfixes.
Place Server on LAN	
Section 11: Install AIT/DLT and UPS software	See *Configuring Tape devices on Windows 2000 server.*
Section 12: Verify Post SP4 hotfixes/patches.	SP4 + IE 6's security patches are applied in the ghost images.
Section 14: Win2K spot check	

2. HARDWARE CONFIGURATION REFERENCE

The hardware must be configured before installing Windows 2000, refer to one of the following documents:

Kodak P#	Title	Overview
709-00615A	PE830 Server Hardware Setup	Hardware Setup for the PE830
709-00383A	Dell 8G Server Hardware Config Procedure	Hardware Setup doc for PE800, PE2800, PE2850

Platforms have various types of disk Disk configurations.

Table 5: Impact, Prinergy, InSite Drive Letters

Disk	Drive Letter	Type	Information
0	C:	NTFS	W2K NT Loader, boot files
0	D:	NTFS	W2K paging, operating system, Prinergy executables, third-party executables
0	E:	NTFS	Prinergy DataLog (on BestRip servers, BestRip Job Queue, and output data storage and spooling.
	H:	N/A	CD-ROM
1	J:	NTFS	Database and ITP data files (Not required by Renderstation or BestRIP)
2+	G – Z	NTFS	Additional RAID. Database and Jobs (Not required by Renderstation or BestRip)

Table 6: Evo and Director Drive Letters

Drive	Drive Letter	Type	Information
0	C:	NTFS	W2K NT Loader, boot files, operating system, Prinergy executables, third-party executables, Prinergy DataLog (on BestRip servers, BestRip Job Queue, and output data storage and spooling.
	H:	N/A	CD-ROM
1	J:	NTFS	Database and ITP data files (Not required by Renderstation or BestRIP), Ghost Images
2+	G – Z	NTFS	Additional RAID. Database and jobs (Not required by Renderstation or BestRip)

Table 6: Print Console Drive Letters

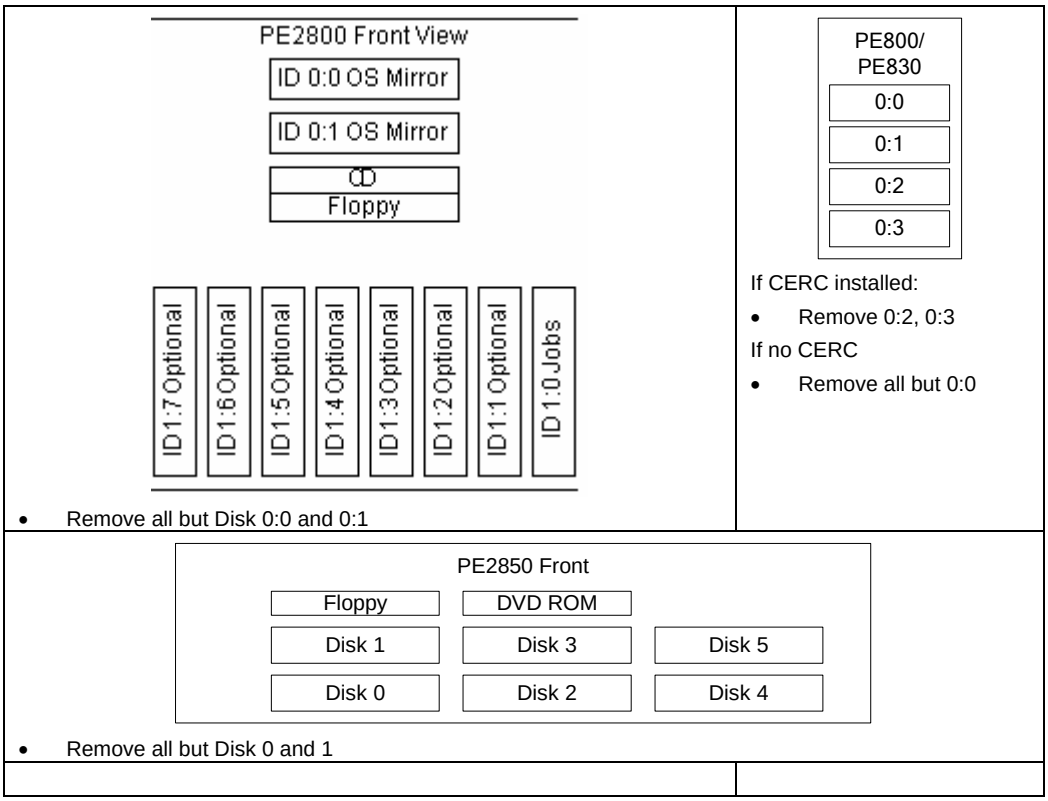
Drive	Drive Letter	Type	Information
0	C:	NTFS	W2K NT Loader, boot files, operating system, Print Console executables, third-party executables, and output data storage and spooling.
0	D:	NTFS	Jobs Drive.
	H:	N/A	CD-ROM
1	J:	NTFS	Jobs Drive

3. GHOSTING THE OS FROM THE SERVER GHOST IMAGE CD

3.1 Ghosting W2K From an OS Image

1) Ensure that you have the Server Ghost Image CD for your particular server platform.
2) Insert the appropriate Ghost CD as listed in Table 2: List of Ghosts and reboot your server. It will automatically start Ghost.
3) From the main menu, select **Local > Disk > From Image,** and then press Enter. Select the desired GHOST image file on the CD and then press **Enter**.
4) Highlight the first hard disk from the Disk list and press **Enter**.
5) Ensure the New Size is equal to or greater then the Old Size. **Adjust as necessary** and hit **OK**.
6) Hit **Yes** to proceed with the restore.
7) Upon completion of the restore power down the server.
8) **For Prinergy Ghost Images (Ghosts where the OS drive is on D:\) only.** Skip this section if you are using the Evo/Director (OS is on C:\) image. For all Servers using a Prinergy Image you MUST remove any Disks other then the OS Disk. The reason is that Ghost applies a new disk signature onto the Disk. Windows upon seeing a new disk signature will apply NT drive letter conventions where drive letters are assigned per disk 1st, per partition second. This will offset your OS on D:\ to some other drive letter if any other disks are seen before you log into Windows.
    a) Power down the server.
    b) Remove all externally connected RAIDs and physically installed disks in the drive cage except for the SYSTEM disks.

       Table 8: Disk Layout for Removal



9) Remove the Ghost CD from the drive.

10) Press Enter to accept the Reset Computer prompt and restart the server.

11) Upon booting up, W2K may warn you that you should run AUTOCHK to repair possible partition corruption. You can safely ignore this warning message.

WARNING: Make sure that you NEVER interrupt the Autocheck process while it is running.

3.2 Setting Up System Preparation Tool Mini Setup Wizard

The system will boot up with a Microsoft mini setup wizard. Respond to the prompts below:

1) Click **Next** at the Welcome to Windows 2000 Setup Wizard prompt.

2) At the License Agreement dialog, select **I accept this agreement**, and then click **Next**.

3) Click **Next** at the Regional Settings prompt.

4) At the Personalize Your Software prompt:

   a) In the **Name** field, enter **Prinergy, Evo, Director, InSite or BestRIP Server**.

   b) In the **Organization** field, enter the appropriate customer company name, and then click **Next**.

5) Enter the W2K Product Key and then click **Next**.

   Note: If you have a Windows 2003 Product Key label we are allowed downgrade rights and you can use the following key:
   CXJD4 – DWWM9 – 887XH – K7JQ7 – BQG4Y

6) Set **Licensing Mode** to **Per Server** and set the number of connections to 10 for Primary servers (including Prinergy Access), and 5 for other servers (including Prinergy Secondary servers/Renderstations, Evo, Director, Synapse InSite servers, Prinergy Satellite servers, and BestRIP servers), and then click **Next**.

7) Set the machine name, using the following convention:

YCSxn for all Prinergy servers and for Synapse InSite for Prinergy servers:

x = **P** for Primary Server or **S** for Secondary Server (Note that the terms "primary" or "secondary" are not NT/W2K related.)

n = the number of the machine shipping (e.g. YCSP023, YCSS300)

BWSn for Synapse InSite for Brisque servers

n = the number of the machine shipping (e.g. BWSP023)

PW00n for Synapse InSite for Brisque servers

n = the number of the machine shipping (e.g. PW00023)

8) Enter/confirm the Administrator password= **creo**, and then click **Next**.
9) Enter the area code (such as 604) in the Modem Dialing Information dialog, and then click **Next**.
10) Set the correct date and time, and time zone, and then click **Next**.
11) If the prompt appears, select Remote Administration Mode at the Terminal Services Setup screen, and then click **Next**.
12) At the **Networking Settings Setup** screen, select **Typical Settings,** and then click **Next**.
13) At the **Workgroup or Computer Domain Setup** screen, click **Next** (Setup starts copying files, wait…)
14) Click **Finish** to reboot server when prompted. Do not re-install the disks yet.

4. DETECTING NEW HARDWARE

Once the system is booted up, it may detect hardware changes in the target system (compared to that of the source system where the ghost image was created) and display the **Found New Hardware Wizard** dialog. **Respond to these dialogs accordingly ONLY if they appear**.

4.1 Network Card Detection

After applying a Ghost Image the NIC driver will need to be re-applied.

1) Hit **Next** to the Found New Hardware wizard.
2) You should be prompted for the Intel Pro 1000 or Broadcom. Select **Search for a suitable driver** and hit **Next**.
3) Select **Specify a Location** and hit **Next**.
4) Browse to your **%SystemDrive%\Drivers**\(Broadcom or Intel Pro). Continue navigating in until you get to the NIC's **.INF** driver. Select it and hit **Open > OK > Next**.
5) At the File Needed prompt **Browse** to the same **.INF** file as you pointed to last step. Select it and hit **Open > OK**.
6) Hit **Yes** to the Signature not found prompt. At this point the Found New Hardware window will appear to freeze while the networking layer rebinds. This can take about a minute.
7) Once the update has completed hit **Finish**.

4.2 Remove unused Modems

The baseline Ghost Image has included both the US Robotics and MultiTech Modems. You will get an Error when starting Windows Event ID 20013 "The communication device attached to port COM1 is not functioning.". Remove the modems that you are not using.

1) Start **Control Panel** > **Phone and Modem Options** and select the **Modems** tab.

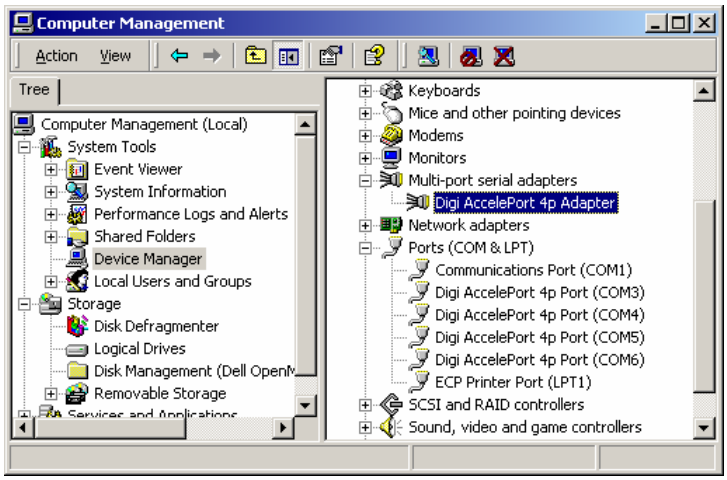
2) Select either the USRobotics or MultiTech Modems that are **not** connected to your Server and hit **Remove** > **Yes**.

3) Close Control Panel.

4.3 Verifying the Digi AccelePort 2P/4P

The driver for the Digi Acceleport will automatically detect and install upon 1st boot. All you need to do is verify the COM ports have been picked up properly.

1) Select **Device Manager** from the **Computer Management** MMC console, verify that the ***Digi AccelePort 2P or 4P*** device appears in the Device Manager's device list as shown below:



- 2P – 2 Port controller. This should show up as COM3 and COM4.
- 4P – 4 Port controller. This should show up as COM3 to COM6.

2) Verify that the Ports (COM & LPT) section illustrated above show COM3 and above as being controlled under the Digi AccelePort.

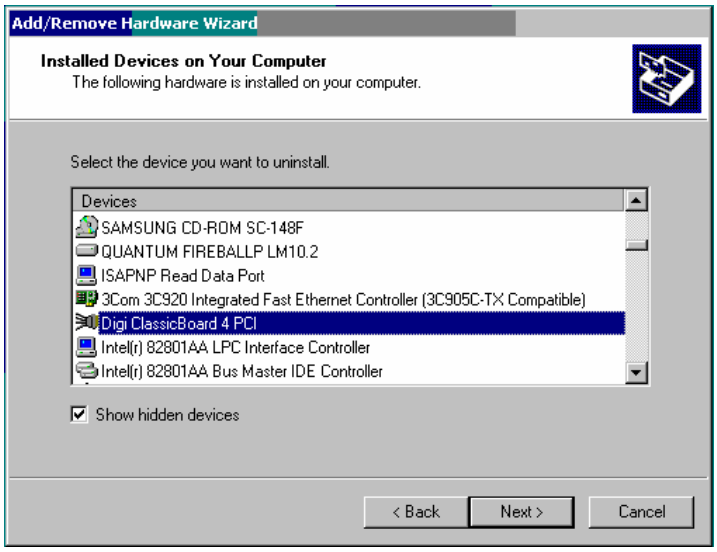
3) Correcting the Driver Settings if the steps above fail.

   a) Select **Start>Settings>Control Panel>Add/Remove Hardware**. The Add/Remove Hardware Wizard appears.

   b) Click **Next.** The **Choose a Hardware Task** dialog appears.

   c) Check the **Uninstall/Unplug a device** option, and then click **Next**. The Choose a Removal Task dialog appears.

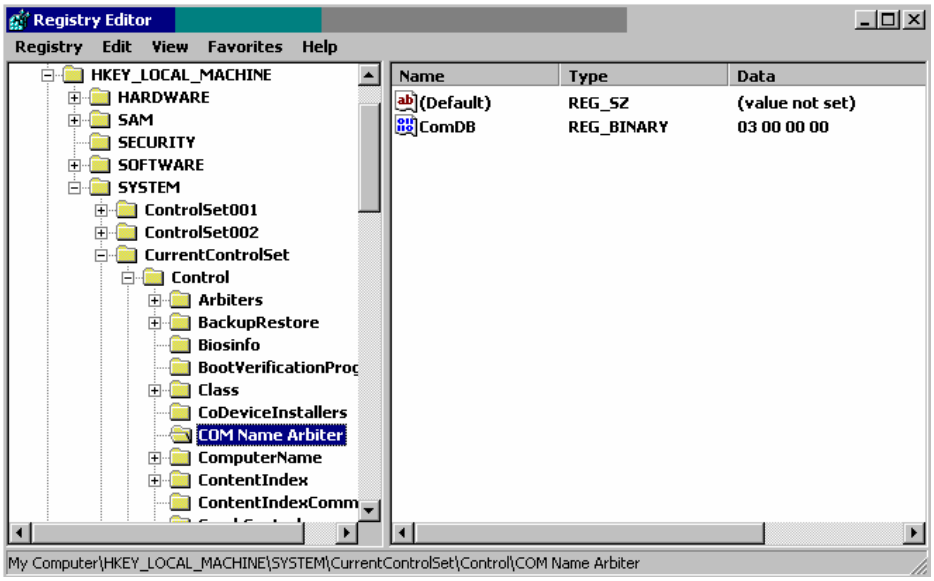
   d) Check the **Uninstall a device** option, and then click **Next. The Installed Deices on Your Computer** window appears:



e) Check the **Show hidden devices** check box, then scroll down the list until the***Digi AccelePort 4P*** device is found, click on the device (high-lighted as seen above), and then click **Next**. The Uninstall a Device window appears:

f) Select the **Yes, I want to uninstall this device** option, and click **Next**, wait for the dialog window disappears to complete uninstalling the device. (If two instances of this device are shown, you MUST repeat these steps again to remove the 2nd device on the list)

g) Start the **regedit** utility to verify/modify the key as shown in picture below:



h) Start the Digi driver cleanup steps by double-clicking on the file (**DGCLEAN.CMD**) in the Drivers\Digi\AccelePort 4P\vx.x directory on your System drive.

i) Reboot the server. Logon to the Administrator account, and then follow the setup procedure below to re-install a fresh version of this driver.

5. SETTING UP DISKS

5.1 Disk Configuration Reference

Configure the drive lettering as outlined below:

Note: H: is the CD-ROM

G:, J:, K: to Z: are the user data drives

Dell Servers for Evo, Director

Basic XXX GB Online SYSTEM	Dell Utility Partition 31.34 MB FAT Healthy	System (C:) NTFS (100% of disk – Utility Partition

Disk0:

- 1st Partition "No drive letter" is the Dell proprietary Utility partition
- 2nd Partition "C" holds the W2K loader, boot files, Operating System, applications, Temp files

Dell Servers for Prinergy, InSite (2+ Disks)

Basic XXX GB Online SYSTEM	Dell Utility Partition 31.34 MB FAT Healthy	BOOT (C:) 200MB NTFS	System (D:) Appx 0.5x DiskGB NTFS	DataLog (E:) Appx 0.5x DiskGB NTFS

Disk0:

- 1st Partition "No drive letter" is the Dell proprietary Utility partition
- 2nd Partition "C" holds the W2K loader and boot files; file system is NTFS
- 3rd Partition "D" holds the W2K Operating System, other applications; file system is NTFS
- 4th Partition "E" is the DataLog drive for Prinergy applications; file system is NTFS

Dell Servers for Prinergy, InSite (1 Disk)

Basic XXX GB Online SYSTEM	Dell 31MB	C: NTFS Boot 200MB	D: NTFS 20GB System	Extended Partition E: NTFS 16GB Temp	Extended Partition J: NTFS /end Data1

Disk0:

- 1st Partition "No drive letter" is the Dell proprietary Utility partition
- 2nd Partition "C" holds the W2K loader and boot files; file system is NTFS
- 3rd Partition "D" holds the W2K Operating System, other applications; file system is NTFS
- 4th Partition "E" is the DataLog drive for InSite applications; file system is NTFS
- 5th Partition "J" is the Jobs drive for InSite Database, file system is NTFS

Dell Servers for All Workflows

Basic XXX GB Online DATALOG	Data1 (J:) All Free Space NTFS Healthy

Disk1, 2, ...:

- All available space is used for the NTFS Data1 partition.

Note: The Data drive had once contained a FAT32 Recovery partition for Ghosts. This is no longer required since Ghost8 supports writing/reading to NTFS partitions when booted into DOS. The directory **\Backup** in the Data1 drive will hold the Ghost images now.

5.2 Setting up Disk Configuration

5.2.1 Re-Install Removed Disks

If you are using a **Prinergy Image** and you had previously removed the Data Drives prior to first boot from section 3.1 step 8), you can re-install the disks now.

1) Power down the Server.
2) Attach any external RAIDs and re-insert the removed data drives.
3) Reboot the Server.

5.2.2 Configuring Disks on Dell Servers

1) Right-click **My Computer,** and then select **Manage**. The Computer Management Console appears.
2) Select **Computer Management (Local) > Storage > Disk Management**. The Disk Management view appears.
3) In the Write Signature and Upgrade Disk Wizard dialog box, select **Cancel**.

WARNING: If you accept this prompt by selecting Next, W2K will convert all un-partitioned disk(s) to the new Dynamic disk type, which should be set for external Raid disk set(s) only. Note that DOS will not recognize the Dynamic disk type.

4) If a small red **STOP** sign appears on the new/blank disk(s), then right click on the sign and select the **Write Signature** option to put the W2K disk signature on. This needs to be done before volume(s) can be created.

5.2.3 Configuring One or more Data Disks

System drives are often configured as RAID1 mirrors by a RAID controller. These RAID controllers can also configure 2 or more drives as a RAID1 or RAID5 which also present themselves to Disk Administrator as a single Disk. In addition you may also have external RAIDs connected to the Server which may be configured as 1 or more additional Disks to Disk Administrator. Although it is possible to have Disk Administrator bind all these disk together as one single large volume it is not recommended since the disks will be forced into Dynamc Disk mode. Dynamic Disk mode will prevent Ghost from using your RAID as a Destination, and also puts all your eggs in one basket. If 1 disk fails, you will lose access to everything.

We recommend that each Disk being presented to Disk Administrator (other then System Disk) be configured as a single Volume, Basic Disk.

1) Right-click the un-partitioned Disk and select **Create Partition…**. The Create Partition wizard appears. Click **Next**.
2) Select **Primary Partition**, click **Next** (partition size = entire volume), and then click **Next**.
3) Select the following for each Disk other then the System Disk:

Drive Letter	1st disk: J: 2nd disk: G: 3rd disk: K: ...
File System	NTFS
Allocation Unit Size	default
Volume Label	1st disk (J:): Data1 2nd disk (G:): Data2 3rd disk (K:): Data3 ....
Format Type	Quick Format

4) Click **Next**, **Finish** to complete creating a partition.
5) Close the Computer Management Console if no additional disks need to be configured.

6) Create a folder **\Backup** on **J:**. This is for Ghost Backups.

6. CONFIGURING PERFORMANCE SETTINGS

6.1 Verifying Virtual Memory

1) Right-click **My Computer** and select **Properties**.
2) Select the Advanced tab, and then select Performance Options.
   a) Set Application Responses to Optimize Performance for Background Services.
   b) Set **Virtual Memory** by selecting **Change…**, then selecting you OS drive and setting **Initial Size = Maximum Size** (= 1.5 x of physical RAM installed. For example, if the system has 1GB RAM installed, then enter 1536). Click **OK**, **OK**.
   c) If a second physical disk is used, create **an additional** paging file on this drive where Maximum Size = Initial Size = 1.5x Physical RAM.
3) Select **Environment Variables.**
   - Set **User Variables** for Administrator to **TEMP = TMP = E:\Temp.** Repeat the same for System Variables, and then click **OK**.
4) Select **Startup and Recovery**.
   - Set Display list of Operating Systems to **5** seconds. Uncheck Automatically Reboot, and then click OK, OK to confirm.
5) Click **No** to the restart the computer prompt.

6.2 Configuring networking

6.2.1 Verifying NIC Driver Settings (including AppleTalk binding)

Make sure that the Network Interface Card has the correct driver settings, and verify that AppleTalk is binding to the appropriate NIC.

1) From the desktop, right-click **My Network Places**. Select **Properties.**
2) A window will open. Right-click **Local Area Connection** icon and select **Properties**. The Local Area Connection Properties dialog box will open.
3) Enable the **Show Icon** in taskbar when connected check box.
4) Click **Configure**, and then select the **Advanced** tab.
   a) Set **Speed & Duplex** to **AUTO DETECT.**
   b) Hit OK.
5) Right click **AppleTalk Protocol** > **Properties** and ensure a valid AppleTalk "Zone" appears in the Zone field. If the Accept inbound connections on this adapter option is available, check this check box and click **OK**.
6) Select **Internet Protocol (TCP/IP)** and select **Properties > Advanced > WINS** and chose the following then hit **OK** back to the General tab:

Enable LMHOSTS lookup	**Unchecked**
Enable NetBIOS over TCP/IP	**Selected**

7) Close the Network and Dial-up Connections window.

7. MS HOT FIXES

Windows baselines have the most recent security updates at the time they are created. Images may be months or years behind the most recent Microsoft Critical updates though. We highly recommend you obtain the latest Critical Updates directly from Microsoft. Some customers insist on having Creo "qualify" critical updates before they are applied to their workflow systems. In this case we have all images point directly to Creo's SUS Server. You have the choice of either applying the patch from Microsoft (recommended) or from the Creo SUS Server.

7.1 From Microsoft

1) Select **Start** > **Run** and type: **WUPDMGR.EXE**
2) Select **Custom** (not express) and wait for the update check.
3) Select **Review and Install Updates**.
4) Select all critical updates except for Service Packs. Some Workflows are Service Pack sensitive.
5) Follow the rest of the prompts to apply the updates.

7.2 From Creo's SUS

Creo servers running Windows 2000 and Windows 2003 are factory-configured with Automatic Updates, which monitors and downloads critical security updates from http://windowsupdate.creo.com. When a new update is available, a small icon appears in the System Tray, as shown:



1) When you click the icon, a dialog box appears and gives you the following options:
   - Install the updates now
   - Remind you to install the updates in a specified period of time
   - Close the dialog box, leaving the System Tray icon in place
2) Select **Install the Updates Now** and follow the on-screen prompts.

8. INSTALLING IIS

IIS and SecureIIS is now installed by the InSite4 DVD install script. No action required here.

9. INSTALLING AND CONFIGURING REMOTE ACCESS

By default the system is already configured for "Accept Incoming Connection" setup. Incoming Connections is only applicable if you are connected to a Workgroup, not a Domain. For Domain based network environment you must disable incoming connections and configure instead Routing and Remote Access.

Skip **section 9** if you are connected to a Workgroup and **not** connected to a Domain.

9.1 Configure for RRAS

1) Ensure you are logged into the Domain. Also ensure your Domain Account is included in the Local Administrators group.
2) To open Routing and Remote Access, select **Start > Programs > Administrative Tools**, and then select **Routing and Remote Access**. Its MMC is displayed.
3) By default, the local computer is listed in the console tree. Right-click the server and then select **Configure and Enable Routing and Remote Access**. A wizard is displayed.
4) Click **Next**.
5) Click **Manually configured server**, and then Click **Next**.
6) Click **Finish**. The Routing and Remote Access dialog box is displayed.
7) Click OK to the Error Message "Unable to add this computer to the list of valid remote access servers in the AD" if prompted.
8) Click **Yes** to start Remote Access.

9.2 Configuring the Remote Access Port

An RAS port is a communication channel that supports a single point-to-point connection. By default Windows 2000 configures 10 ports for VPN. Disable these ports because they are unnecessary.

1) In the Routing and Remote Access MMC, right-click **Ports** and select **Properties**.
2) In the Devices window, double click on **WAN Miniport (PPTP)**. The Configure Device – WAN Miniport (PPTP) window appears.
3) Clear the following selections:
    - Remote access connection (inbound only)
    - Demand-dial routing connection (inbound and outbound)
4) Click **OK**.
5) Repeat the steps 2 – 4 on the WAN Miniport (L2TP) device.
6) Repeat the steps 2 – 4 on the Direct Parallel device. Click **OK**.

9.3 Changing the RRAS IP Address Pool Size

By default the RAS server uses DHCP to lease IP addresses in blocks of 10 and stores them in the registry. The server leases additional addresses in blocks of 10 as needed. Since we will never use 10 addresses, we will modify the behavior by editing the registry. Even though we will be disabling the DHCP relay agent in the next step, changing this behavior is still desirable even if the customer chooses to use DHCP in the end.

1) Open the Registry Editor by, from the **Start** menu, selecting **Run**. The Run window appears.
2) In the **Open** box, type `regedit` and click **OK**. The Registry Editor window appears.
3) Browse to **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\RemoteAccess\Parameters\IP**.
4) In the **Edit** menu select **New / DWORD Value**. In the **Value Name** field, type `InitialAddressPoolSize`.
5) In the **Value** field, type `1`. In the **Radix** section, select **Decimal**. Click **OK**.

9.4 Disabling the DHCP relay agent

The Dynamic Host Configuration Protocol (DHCP) relay agent relays DHCP messages between DHCP clients and DHCP servers on different IP networks. We will be using a static pool of addresses to assign to RAS clients and will not be using this feature. If this feature is enabled, RAS will automatically lease unnecessary addresses from the DHCP server.

1) In the Routing and Remote Access MMC, expand IP routing and select **DHCP Relay Agent**.
2) In the right window, in the Interface column, Right-click **Internal** and select **Properties**. The Internal Properties window appears.
3) Uncheck **Relay DHCP packets**, and then click **OK**.

9.5 Configuring Remote Access

The default settings were chosen during setup. We must customize the configuration for our needs. Temporary IP addresses will be used for the static IP pool and will be customized on site.

1) In the Routing and Remote Access MMC, **Right-click the server name** (local) and select **Properties**. The server name (local) properties appear.
2) In the **General** tab, uncheck **Router**.
3) In the **IP** tab, **Enable** the following:
    - Enable IP forwarding
    - Allow IP-based remote access and demand dial connections
4) In the IP address assignment, select **Static address pool** and then select **Add**. The New Address Range window appears.
    - In the **Start IP address** field, type `10.1.1.1`.
    - In the **End IP address** field, type `10.1.1.10`.

    These are temporary addresses and will be changed onsite. Click **OK**.
5) In the **NetBEUI** tab (if NetBEUI is available), ensure **Allow NetBEUI** is enabled and that **The entire network** is selected.
6) In the **AppleTalk** tab, uncheck **Enable AppleTalk remote access**.
7) Click **OK** and the Routing and Remote Access dialog box appears.
8) Click **Yes** and Remote access will be stopped and restarted.

9.6 Granting Dial-in Permissions

After the Remote Access server is installed and configured, you must specify from which users the remote access server can accept a connection. To simplify the configuration we will not be using Remote Access policies or granting RAS permission to domain users.

1) Right-click **My Computer** on the desktop and select **Manage**.
2) In the console tree, expand Local Users and Groups and select **Users**.
3) In the right window, Right-click the **Administrator** account and select **Properties**.
4) In the **Dial-in** tab, select **Allow access** in the **Remote Access Permissions section**.
5) Click **OK**.
6) Repeat steps 3 –5 for the **CreoService** account.

10. UPDATING SERVER BIOS

BIOS and Firmware is done from the Windows Desktop now instead of from the Hardware Setup stage. The BIOS and Firmware files are located on your Server's Ghost DVD, or on Tech Planet. Refer to Tech Planet for the latest tested versions. This will apply to:

- Server Motherboard Firmware
- Server ESM Firmware

1) Copy the Firmware/BIOS file to the **%System%\Drivers** directory.
2) Run the Firmware/BIOS exe file to start the update. The utility will detect that it's running on the appropriate Server. Follow the default onscreen prompts.
3) Reboot as required.
4) Repeat for any other Firmware.

11. INSTALLING AIT/DLT

Windows 2000 will auto-detect the connected device and prompt the user to install a device driver for it. Ensure the driver included in the Resource CD is used for the appropriate installed devices (e.g. Single DLT8000, FastStor 7/22, ATL P1000, etc.). AIT based Qualstar Tape libraries and AIT-2/3 single tape drive device driver is available from the W2K Resource CD. **Do not use the W2K default tape drive device driver**.

12. INSTALLING UPS SOFTWARE

There are 2 types of UPS's Kodak supports. You can tell the UPS you have by looking at the manufacturer name on the faceplate of the UPS, it will either be TrippLite or APC. Depending on which UPS you are using refer to the following documents:

Both documents are available on **TechPlanet** under **Software Solutions > APC or TrippLite > Reference**.

APC	719-00223A – Installing APC PowerCute Management software (v7.0.4 minimum)
TrippLite	719-00607A – Installing TrippLite PowerAlert Management software.

13. PERFORMING A WINDOWS 2000 SPOT CHECK

Once you have installed Windows 2000, perform a spot check on each machine to ensure that the operating system has been installed correctly.

To perform a spot check on the Windows installation:

1) Using Windows 2000 Event Viewer, check for any errors.
2) Check connectivity:
   a) Ensure that the network drop is live and connected to the appropriate hub/switch.
   b) Try browsing the network.
   c) Ping another server to ensure TCP/IP works.
   d) Map a drive to another system and copy a file.

CAUTION: Do not use a Prinergy server as a primary domain controller (PDC) or backup domain controller (BDC). Prinergy servers should be dedicated to Prinergy. Like DNS, PDCs and

other network services should have a dedicated server. These services don't require large resources and placing them on a Prinergy server (typically a powerful machine) is an unnecessary use of resources and negatively affects Prinergy's performance.

3) Defragment the system Disk before installing Creo Prinergy software.

14. SYSTEM DISASTER RECOVERY

Prinergy's backup solutions include a system disaster recovery strategy, which employs GHOST (General Hardware Operation System Transfer) as the server baseline W2K Operating System recovery tool. This utility allows users to recover their entire system (to the last known good system settings) within two hours (or less depending on the amount of data to be restored from the tape device) in case of a system disaster crash.

There is a two-step process taken when a disaster occurs:

1) The system is first booted from a Ghost DVD Image specific to your platform (see table Table 2: List of Ghosts). Apply the new baseline.
2) Once Windows 2000 is booted up, configure the W2K backup utility to restore the entire Prinergy system off the backup tape(s) to its original configurations.

See Prinergy 2.x Backup Guide (03-4171B) for Prinergy system recovery procedures.

14.1 Setting up for System Disaster Recovery

This section summarizes steps to prepare the system to be fully protected by the Prinergy backup strategy.

1) On the Prinergy Primary server, configure Prinergy OracleBackupManager to save database dump files to the local disk. (For details, refer to the Prinergy 2.x Backup Guide, P/N: 03-4171B).
2) Configure Windows 2000 Backup Utility to back up the database dump files, system drive with System State Data and Data drives if desired to tape(s).
3) Perform System Backup tests as outlined in the Prinergy 2.x Backup Guide (03-4171B).
4) Boot the system into DOS prompt from the Ghost DVD and then create the System Baseline W2K OS image using the GHOST utility onto the **Disk_1\Backup** directory.