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1. INTRODUCTION

This document provides procedures to install Windows 2000 (XP & 2003 whenever they're officially supported) for Prinergy, Evo, Director, Synapse InSite or Print Console running on Kodak-approved HP server platforms.

This document provides step-by-step procedures on Windows installation and configuration using a Ghost image prepared specifically for each platform. Contact the Technology Infrastructure Solutions Group for the Windows (2000, XP or 2003) Installation Template if there is no suitable Ghost image or for other non-standard hardware.

Supported platforms include Intel Processor based HP ProLiant Servers of ML370/DL380 (G4, G5) ML370/ DL380(G4/G5), ML110, ML310(G3), and DC7100 & 7600 Workstations. HP does not support Windows 2000 on the ML310 (G4/G5).

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

Table 1: Necessary Software

Disk	Type	Version	Comments	Systems
Windows Resource CD for HP	CD	Kodak P/N: 651-00203B	Drivers and Firmware updates	All HP Workstation and Servers

The most current listing of Ghosts can be found on the Resource CD under **\Docs\GhostList.PDF**. A listing of those Ghosts at the time of this writing is provided for convenience.

Table 2: List of Ghosts

Server	OS	SP	Med	Class	Workflow	Partitions	OS Drive	Latest Production Image
HP								
DC7100	Win2K	4	DVD	Pro	Renderstation/Prinergy	2	C:	651-00264A
DC7600	Win2K	4	DVD	Pro	Renderstation/Prinergy	2	C:	651-00495A
DC7600	WinXP	2	DVD	XP	Renderstation/Prinergy	2	C:	651-00496A
ML110	Win2K	4	DVD	Server	Evo	1	C:	651-00234A
ML110	Win2K	4	DVD	Server	Prinergy	3	D:	651-00234A
ML310G3	Win2K	4	DVD	Server	Evo	1	C:	651-00372A
ML310G3	Win2K	4	DVD	Server	Prinergy	3	D:	651-00372A
ML310G3	Win2K	4	DVD	Server	InSite	3	D:	651-00432A
ML310G3	Win2K3	1	DVD	Server	All	1	C:	651-00373A
ML310G4	Win2K3	2	DVD	Server	All	1	C:	651-00779A
ML310G5	Win2K3	2	DVD	Server	All	1	C:	651-00939A
ML370G4	Win2K	4	DVD	Server	Evo	1	C:	651-00205A
ML370G4	Win2K	4	DVD	Server	Prinergy	3	D:	651-00205A
DL380G4	Win2K	4	DVD	Server	Evo	1	C:	651-00374A
DL380G4	Win2K	4	DVD	Server	Prinergy	3	D:	651-00374A
DL380G4	Win2K3	2	DVD	Server	All	1	C:	651-00375A
ML370G5	Win2K	4	DVD	Server	Evo	1	C:	651-00746A
ML370G5	Win2K	4	DVD	Server	Prinergy	3	D:	651-00746A
ML370G5	Win2K3R2	2	DVD	Server	All	1	C:	651-00750C
DL380G5	Win2K	4	DVD	Server	Evo	1	C:	651-00752A
DL380G5	Win2K	4	DVD	Server	Prinergy	3	D:	651-00752A
DL380G5	Win2K3R2	2	DVD	Server	All	1	C:	651-00750C

1.1 Hardware Configuration Reference

The hardware must be configured before installing Windows 2000, refer to the HP Server Hardware Setup document 709-00285 & 709-00840(for ML370G5 and DL380G5) for instructions.

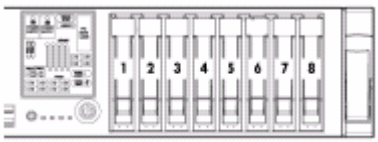
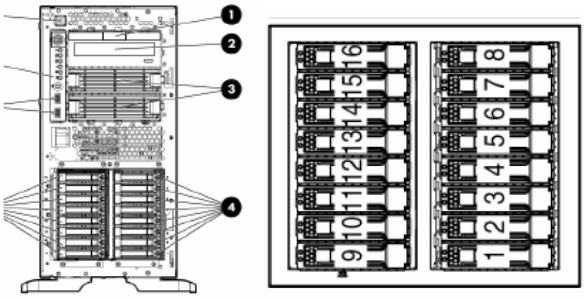
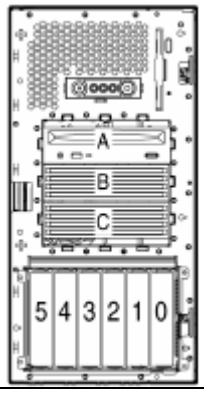
2. GHOSTING THE OS FROM THE SERVER GHOST IMAGE CD

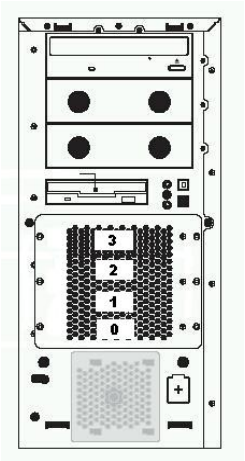
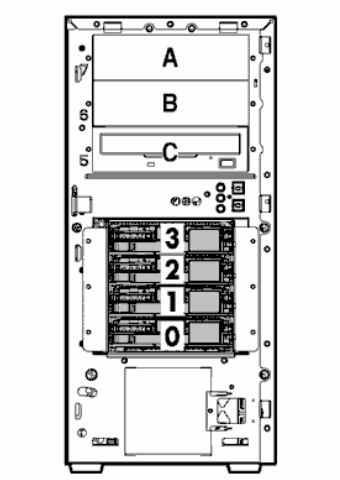
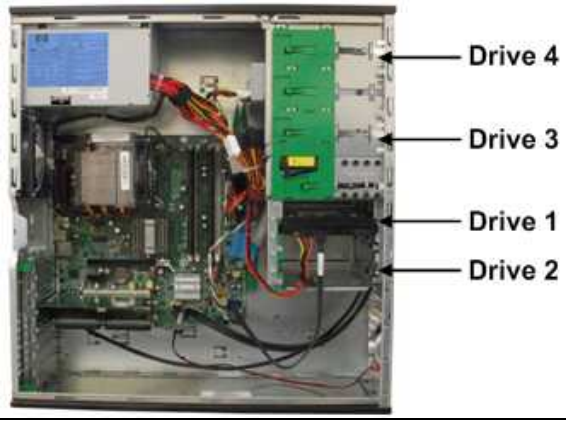
2.1 Ghosting W2K From an OS Image

1) Disconnect any External RAIDs connected to your Server.

2) **For Prinergy 2.x (where the OS is on Drive D:) configurations only**: Slightly remove any of non OS disks from the server as shown below:

Table 3

DL380G5 	• **Power Down the Server** • In section 4 on picture on left • Leave disks in slots 1 and 2 alone(system) • Pull out disks in slots 3-8 about 1” (if present)
ML370G5 	• **Power Down the Server** • In section 4 on picture on left • Leave disks in slots 1 and 2 alone(system) • Pull out disks in slots 3-16 about 1”
ML370G4 	• **Power Down** the Server • Leave the Disks in slots B and C alone. • Pull out disks in slots 0 to 5 about 1 inch.
DL380G4 	• **Power Down** the Server • Leave the Disks in slots 0 and 1 alone. • Pull out disks in slots 2 to 5 about 1 inch.

ML110 	• **Power Down** the Server • Leave Disks in slots 0 and 1 alone. • Pull out Disks in slots 2 and 3 about 1 inch.
ML310G3 	• **Power Down** the Server • Leave Disks in slots 0 and 1 alone (System CERC SATA1.5/6 Ch Raid Controller) or Leave ONLY Disk in slot 0 in system without the Raid Controller. • Pull out Disks in slots 2 and 3 (and 1 for system without the Raid Controller) about 1 inch.
DC7100/7600 	• **Power Down** the Workstation • Leave Drive 1 installed. • Disconnect the SATA Data cable to Drives 2, 3, and 4.

These disks will remain disconnected until the user logs into the newly installed OS for the 1st time. Failure to do so will prevent you from logging into the OS since the registry has been corrupted due to a drive letter synch problem.

3) Ensure that you have the Prinergy W2K HP Resource CD (651-00203B) and Server Ghost Image CD for the particular server platform.
4) Insert the appropriate Ghost CD as listed in Table 2: List of Ghosts and reboot your server. It will automatically start Ghost.
5) From the main menu, select **Local > Disk > From Image,** and then press Enter. Select the desired GHOST image file on the DVD and then press **Enter**.
6) Highlight the first hard disk from the drive list and press **Enter**.
7) Ensure the New Size is equal to the Old Size. **Adjust as necessary** and hit **OK**.
8) Hit **Yes** to proceed with the restore.
9) Upon completion of the ghost restore, remove the CD and restart the server.

3. 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) Respond to the License Agreement dialog 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 **Workflow Server**.
   b) In the **Organization** field, enter the appropriate customer company name, and then click **Next**.
5) 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)
6) Enter/confirm the Administrator password (= creo), and then click **Next**.
7) Select 604 for the Area Code and hit **Next**.
8) Set the correct date and time, and time zone, and then click **Next > Finish**.
9) The server will now reboot.
10) If this is Windows 2000 Pro (ie. DC7100/7600 box) do the following.
    a) At the Network Identification Wizard select **Next**.
    b) At the Users of This Computer window select **Users must enter a User Name and Password** and then hit **Next** > **Finish**.

4. DETECTING DRIVERS

After you log in for the first time the Server will re-synch the computer name from the Ghost. It will then prompt you for one or more driver source locations. All drives should be in the %SystemDrive%\Drivers directory.

1) After you log in for the first time the Server will re-synch the computer name from the Ghost.
2) Select the following drivers. Note – all drivers are located in the **%SystemDrive%\Drivers** directory.

Message	Item	Selecting the driver
B57W2K.SYS	Broadcom NIC	Select **Browse** and select **%SystemDrive%\Drivers\Broadcom NIC\Vx.x** and hit **Open > OK**.
Broadcom NetXtreme	Broadcom NIC	Select **Search > Next.**

		Select **Specify location > Next**. Select **Browse** and select %**SystemDrive%\Drivers\ML110W2KNicVx.x** Select **Open,** select **B57W2K.INF** and hit **Open > OK > Next**. If prompted for another re-point of the driver hit **Browse > Open > OK**. This will take a minute to initialize the NIC, then select **Finish**.

3) Power down and Re-attach the RAIDs if they were previously disconnected (ie. Prinergy Ghosts).
   a) Power down the Server.
   b) Re-insert the internal disks and attach the External RAID.
   c) Reboot the Server.

5. SETTING UP DISKS

Platforms have one of the following types of disk drive configurations.

Table 4: Impact and Prinergy 2.0 Drive Letters, InSite

Drive	Partition	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). Ghost backups
2+	K – Z	NTFS	Additional RAID. Database and Jobs (Not required by Renderstation or BestRip)

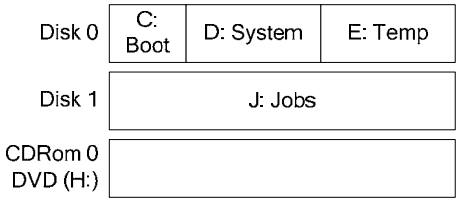


Table 5: Prinergy 3.0, Evo, Director, InSite Drive Letters

Drive	Partition	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+	K – Z	NTFS	Additional RAID. Database and jobs (Not required by Renderstation or BestRip)

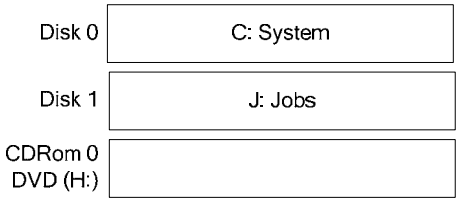


Table 6: Renderstation Drive Letters

Drive	Partition	Type	Information
0	C:	NTFS	W2K NT Loader, boot files, operating system, Renderstation executables, third-party

			executablesand output data storage and spooling.
0	D:	NTFS	Jobs drive (Data1)
	H:	N/A	CD-ROM
1	J:	NTFS	Jobs drive (Data2)
2+	K – Z	NTFS	Jobs drive (Data3+)

Disk 0	C: System	D: Jobs
Disk 0	J: Jobs	
DVD	H:	

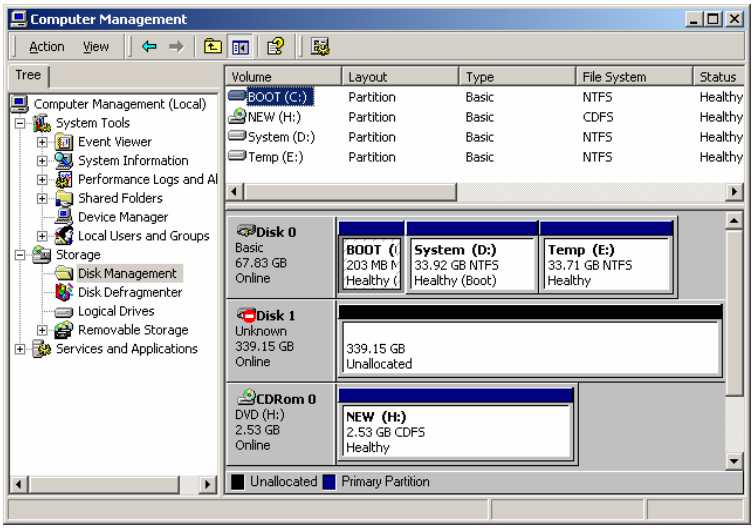
1) Right-click **My Computer,** and then select **Manage**. The Computer Management Console appears.

2) Select **Computer Management (Local) > Storage > Disk Management**. The Disk Management view appears showing the disks.

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 some external Raid disk set(s) only.

Note: The disk layout should appear with the correct configuration. If the configuration is not correct, modify partitions as needed.



4) If a small red **STOP** sign appears on the new/blank disk(s), right click the sign and select the **Write Signature** option to put the W2K disk signature onto the disk.

5.1 Configuring a new Data Disk

1) The 1st **Data** disk is configured as single volume (J: drive).

   a) Right-click the un-partitioned Disk1 and select New Partition…. The New Partition wizard appears. Click Next.

   b) Select Primary Partition, click Next (partition size = entire volume), and then click Next.

   c) Assign Drive Letter = **J:** and hit Next

   d) In "Format with the following settings" select the following:

File System to use	NTFS
Allocation Unit Size	Default
Volume Label	Data1
Perform Quick Format	Checked
Enable Folder Compression	Unchecked

2) Repeat the above steps on any additional Disks using drive letters J to Z.

3) Close the Computer Management Console.

5.2 Configuring Multiple External RAID Volumes

In Prinergy systems, there is no restriction for job storage on a single logical volume. Therefore, we strongly advise that multiple large volumes are not configured into a single stripe or volume set since this has a higher risk of losing data. This configuration would also require extra administrative steps in recovering the stripe set and its data when moving the RAID unit between different servers.

Instead, we strongly recommend that multiple Raid5 volumes be configured as individual NTFS volumes as described in section **5.1 Configuring a new Data Disk**.

5.3 Re-Assigning Drive Letters

If the drive letters in your system do not match that of Table 4 or Table 5 then change the drive letter as follows:

1) In **Computer Management** > **Disk Management** right click the partition you want to modify and select **Change Drive Letter**.

2) Select Edit and select a drive letter.

3) Select **OK** then **Yes**.

6. APPLY DRIVER / FIRMWARE UPDATES

This section applies to those systems that support the Support Pack. This includes the ML370, DL380. The ML110G1/310G3 and DC7100/7600 must have their drivers and firmware updated manually by checking Tech Planet for updated drivers.

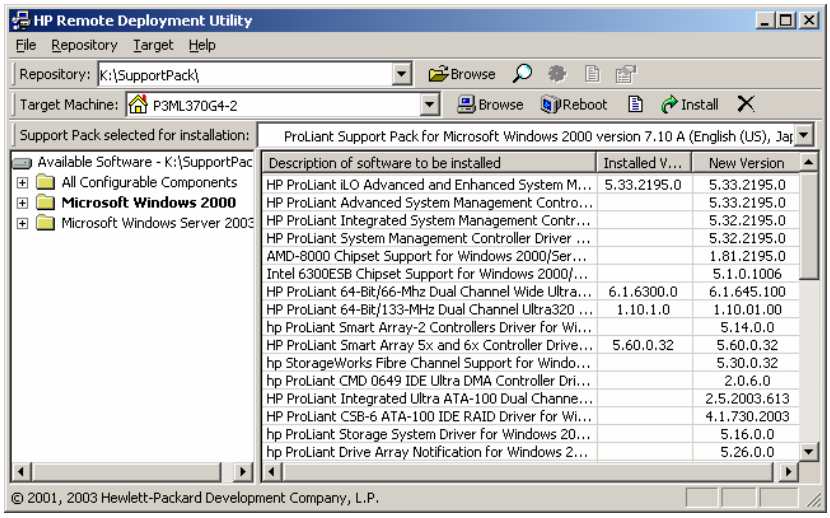
1) Apply HP's Support Pack Update. This update will upgrade all HP firmware and drivers in the system in one shot. Kodak has a modified version of this that preconfigures username and password for access to the tools. The source for this update can be found in the following locations:

Table 7

Kodak TechPlanet	Software > HP Platforms > <MyServer> > Downloads > Support Pack Update.
Resource CD	In the SupportPack directory

a) If you are downloading from TechPlanet expand the tool into your data drive.

b) Run **Setup.exe** and you should see the following:



c) Click the Install button to begin the installation.

d) Allow components to overwrite should be **unchecked**. Hit Next > Next to begin the upgrade. The upgrade should take about 10min. The status bar seems to go from 0 to 100 in about 2min and then seems to sit at 100% complete for the rest of the time that is normal.

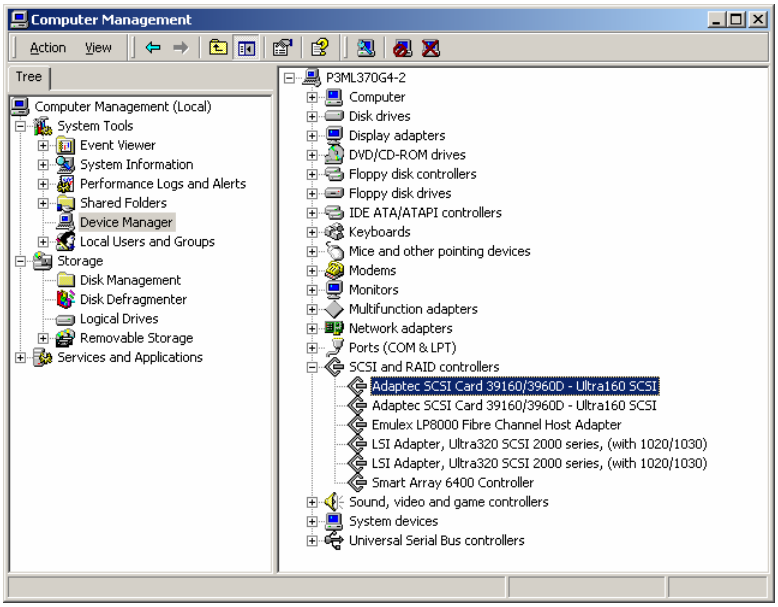
e) Click Finish and close the Remote Deployment Utility.

2) Some 3rd party drivers are not supported with the Support Pack update. These will need to be checked manually. Verify the following Drivers are at a minimum as listed in %SystemDrive%\Drivers folder, TechPlanet or the most recent ResourceCD. At the time of this writing:

Table 8

Device	Minimum Version
Adaptec 39u160	v6.1.6300.0
Adaptec 29u160	v6.1.6300.0
Digi Acceleport	V6.0.04.0
AIT	v3009
Intel Pro 1000 (optional)	v7.3.13.0

a) Select **Programs > Administrative Tools > Computer Management**. You should see the following:



b) For each of the adapters listed in Table 8 do the following.

i) Right click the Device and select **Properties**.

ii) Select the Driver tab and look at the driver version. If the version does not match that as in your %SystemDrive%\Drivers folder, Tech Planet or ResourceCD (or Table 8 for your convenience) do the following to upgrade the driver.

(1) Download or copy from the resource CD if your the version in your %SystemDrive%\Drivers folder is not current.

(2) Select **Update Driver > Next > Search for a suitable driver > Specify a location**. Browse to your **%SystemDrive%\Drivers** folder and select the appropriate driver.

(3) Windows will try and use its default driver if it has one. **Enable** the **Install one of the other drivers** box and hit **Next**.

(4) Select the **non Microsoft** version under the **Provider** column. This should be pointing to the one in your %SystemDrive%\Drivers folder and hit **Next > Finish**.

(5) This will pop you back to the driver window and should display the updated driver version now.

(6) Close the windows and repeat for any other drivers.

7. CONFIGURING PERFORMANCE SETTINGS

7.1 Set Virtual Memory

You will be assigning 2 paging drives that the OS will load balance between during workflow operations. These 2 drives will be:

Table 9

Drive	Partition	Paging File Size
OS Drive, typically Disk 0	Your OS Partition (Evo-C:\, Prinergy2-D:\)	Init = 1.5x Physical RAM Max = 1.5x Physical RAM
1st Jobs Drive, typically Disk 1	Your 1st Jobs Partition J:\	Init = 1.5x Physical RAM Max = 1.5x Physical RAM

1) Right-click **My Computer** > **Properties > Advanced.**
2) Select **Performance Options > Change.**
   a) Select the Drive you want to modify.
   b) Set **Initial** and **Maximum** values to **1.5x that of your Physical RAM** and hit **Set**. This is typically 1536 if 1GB is installed in the system.
   c) Repeat for the next drive as listed in the table above.
   d) Exit by hitting OK. Don't bother rebooting at this point.
3) In **My Computer** > **Properties > Advanced**. select **Startup and Recovery** and select the following and hit **OK** when done:

Display list of Operating Systems	5 seconds
Write Debugging Information	None
Automatically Reboot	Unchecked

4) Select OK to exit System Properties and select **No** to the restart the computer.

7.2 Configuring networking

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) Right-click **Local Area Connection** icon and select **Properties**.
3) **Enable** the **Show icon in taskbar when connected** check box.
4) Force a rescan of the AppleTalk Zone (no Windows Professional machines).
   a) **Uncheck** the **AppleTalk Protocol** and hit **OK**.
   b) Right click **Local Area Connection** and select **Properties** again.
   c) Enable AppleTalk Protocol and hit OK. This will take a few seconds to process.
   d) Right click **Local Area Connection** and select **Properties** again.
   e) Select **AppleTalk** and hit **Properties**. You should now properly see the AppleTalk Zone.
   f) Hit **OK** to close the AppleTalk window.
5) Modify the TCP/IP Settings:
   a) Select (highlight) the Internet Protocol (TCP/IP) option and select **Properties** > **General tab** > **Advanced** > **WINS** and select the following

Enable LMHOST Lookup	Unchecked
Enable NetBIOS over TCP/IP	Selected

   a) Select OK to close the Networking windows.

8. 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.

9. SECURING YOUR SERVER

9.1 Antivirus

Kodak strongly recommends the customer purchase Symantec Antivirus Corporate Edition and install it on their Server as per our recommended guideline. The guideline is optimized for the least impact on performance and greatest impact on security. The guideline can be found **Tech Planet > Windows > Symantec Norton Antivirus > Installing Windows Security Updates** (doc 72-3634C-B-PR01.pdf).

9.2 Security Update Services SUS

Kodak Workflow Servers use Microsoft's Security Update Services (SUS) to allow for updating Microsoft Security Hotfixes. Upon 1st boot, part of the script forces the Server to scan and check for Kodak Certified updates. This normally takes about 10 to 20 minutes to complete if you're connected to the internet. To install the updates do the following:

1) When a new update is available a small icon appears in the System Tray, as shown below.



2) When you click on the icon, a dialog box opens 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.
3) Choose one of the options and follow the on-screen prompts

10. PERFORMING A WINDOWS 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.