Pittsburgh Technical Institute
RIS Installation Lab

Windows 2000 Professional Installation:

1. Boot to the Professional CD to start the installation.
2. Delete **ALL** existing partitions on your hard drive.
3. During the Professional installation, create the following partitions:
    a. C:\ 2GB
    b. D:\ 4GB
    c. E:\ All remaining space

4. Choose to install professional on the C:\ drive.
5. Format the drive NTFS
6. Place your name in the Name field
7. Place MCSE-PTI in the Organization Field
8. The installation key code is:
    a. RBDC9-VTRC8-D7972-J97JY-PRVMG

9. Your computer name should be PTI-"*your last name*"
10. The administrative password should be "password"
11. Set the appropriate date and time.
12. Choose typical settings on the network settings page
13. Choose the default and allow your computer to join a workgroup called WORKGROUP
14. Allow Professional to finish its installation, and reboot the machine.
15. While logging in the first time, choose the option to make users enter a username and password at each login.
16. Open your dial-up networking connections. Determine which connection is the top NIC card, and which connection is your bottom NIC card. Rename each connection appropriately (names will be: Bottom NIC, Top NIC).
17. Assign each NIC card the appropriate static IP address and subnet mask. You can find these numbers on the last page of this handout.

Windows 2000 Advance Server Installation

1. While booted into your new Windows 2000 Professional installation, put your Windows 2000 Advance Server CD into the CD-ROM drive.
2. When the Welcome Screen appears, choose Install Windows 2000… Click OK… and choose Install a new copy of Windows 2000 (Clean Install).
3. Accept the Licensing Agreement, and enter the same product key from Professional.
4. Finish this GUI portion of the install by accepting all defaults.

5. Choose to install Advance Server on the D:\ drive and format it NTFS.
6. Allow server to finish the Text Portion of setup.

7. Place your name in the Name field
8. Place MCSE-PTI in the Organization Field
9. Enter "50" Per Server connections
10. Your computer name should be PTI-"*your last name*"
11. The administrative password should be "password"
12. Take the check mark out of Internet Information Services (IIS), leave the rest of the Windows 2000 Components set at default.
13. Set the appropriate date and time.
14. Choose typical settings on the network settings page
15. Choose the default and allow your computer to join a workgroup called WORKGROUP
16. Allow Advance Server to finish its installation, and reboot the machine.

17. Log on to your server and choose "I will configure this server later", click next, and clear the check mark that says "Show this screen at Start Up". Close the window.
18. Open your dial-up networking connections. Determine which connection is the top NIC card, and which connection is your bottom NIC card. Rename each connection appropriately (names will be: Bottom NIC, Top NIC).
19. Assign each NIC card the appropriate TCP/IP Configurations (from the last page of this handout).

Windows 2000 Advanced Server – Advanced Configurations

1. While booted into Advanced Server, install Active Directory using the ***dcpromo*** command.
2. You will configure your new domain controller in the following manner:
    a. A new domain controller for a new domain.
    b. A new domain tree
    c. A new forest of domain trees
    d. Be creative with your FQDN, but be sure it is a ".local" FQDN.
    e. Accept all of the remaining defaults… including the installation of a DNS server.
3. Allow Active Directory to install and reboot your machine.

4. After you log back into your Windows 2000 Advanced Server, edit the Boot.ini file so that the boot menu only gives you 5 seconds to choose and operating system.
5. Format the E:\ drive to be NTFS, and give it a volume label called "RIS Images".
6. Open the properties pages for the C:\ drive and the D:\ drive. Give them each the appropriate volume label (use these names: Win2K Pro and Win2K Server).

7. Install DHCP.
8. Create a new scope called "MCSE Class"
9. Give the scope a range of 192.168.0.2 – 192.168.0.254 and a subnet mask of 255.255.255.0.
10. Make two exclusion ranges. One range should exclude all the Top NIC IP Address from your list, and the other range should exclude all the Bottom NIC IP Address.
11. Assign the 006 option, and give it the address of your Advanced server machine. (Hint use both IP Address assigned to your machine).
12. **DO NOT** – Active your scope or Authorize your DHCP server.
13. Connect a share called SP2 on a server called "pti-andrews". Use the username "student" and the password "password" when required. Copy the service pack to your machine.
14. Connect a share called Visio on a server called "pti-andrews". Use the username "student" and the password "password" when required. Copy the "Visio Installation Files" folder to your machine.
15. Install Visio to your server (Full Installation).
16. Apply service pack 2 to your server.
17. Reboot your machine and boot into Windows 2000 Professional.

18. Once rebooted into Windows 2000 Professional, connect to a share called Office2K on a server called "pti-andrews". Use the username "student" and the password "password" when required. Copy the folder named "Office 2000 Installation Files" to your machine.
19. Install all of Office 2000 to your Professional installation.
20. **DO NOT** apply server pack 2 to your Professional installation.
21. Reboot your machine and boot into Windows 2000 Advanced Server.
22. Install RIS using the following instructions.

RIS Installation Guide

Step 1 – Install the RIS Server Service

1. Find Add/Remove programs in the Control Panel.
2. Select Add/Remove Windows Components.
3. Put a check in the Remote Installation Services box, and choose next.
4. Allow the service to install, choose Finish, and reboot your machine.

Step 2 – RIS Server Setup

1. Place your Windows 2000 Professional CD into the drive. Close the auto-startup window.
2. Select Start, Run, and type "RISETUP". The RIS Setup Wizard will appear. Choose Next.
3. Specify the location of the Remote Installation Folder. This is when you would use your required 2GB NTFS partition (that is not the system or boot partition). In this case, we have this prepared already. It is our E:\ drive. The wizard should automatically default to E:\RemoteInstall.

   This is because the wizard has checked each of our existing partitions and has discovered that the E:\ drive is the only available drive that is not a system or a boot partition. To double-check this, go to your Computer Management MMC and then click on Disk Management. At the top, you will see C:\ drive listed as the System partition and the D:\ drive is listed as the Boot partition.

   Close Computer Management to continue on with the Wizard.

4. Accept the default location for the Remote Installation folder and choose next.
5. You will now need to choose if you want your RIS server to respond to clients requesting service. Place a check mark in the first box, but leave the second box empty.

   The second box is strictly for extra security. If this box is selected, the RIS server will only respond to known clients… in other words, clients that have a pre-staged computer account with a valid GUID. Choose Next.

6. You must now specify where the Windows 2000 Professional installation files are located. This should be on the CD you placed in the drive in #1. Use the Browse button to make sure that the Wizard is pointing to your CD-ROM drive, choose OK, and choose Next.
7. The folder that contains your new installation image must have a name. By default, the Wizard names the folder "win2000.pro". Keep this name so you always know what image is the CD-based image, and choose Next.
8. In the Friendly Description box, make sure it reads "Microsoft Windows 2000 Professional – CD Based" (you will add only the "– CD Based" text). This way you will always know which image is the CD – Based image. Choose Next.
9. Review your settings, and choose Finish. Your CD-Based image will now be created. Click Done.

Step 3 – Set your RIS Policy

1. Open Active Directory Users and Computers
2. Right Click on your domain and choose properties
3. Select the Group Policy Tab, Click on the Default Domain Policy, and then Click Edit.

   Your Default Domain GPO MMC should open. This GPO is the default that is has no options set in it. This GPO will apply to everything in the domain, and can be configured as if it were a new GPO that you just created.

4. Open the User Configuration container… then open the Windows Settings folder. Click on Remote Installation Server.
5. In the right hand portion of the screen, double click on the Choice Options icon. The Choice Options Properties dialog box will appear.

   Automatic Setup – Allows for a fully automated installation. The user does not need to interact with the setup at all.
   Custom Setup – Allows for a customized installation (determined by the client).
   Restart Setup - Allows for a stalled or fail installation to be restarted.
   Tools – Allows administrators to provide other tools for installation.

6. Select "Don't Care" for the Automatic Setup portion, and select "Deny" for all other options.
7. Click OK and close the GPO and the domain properties dialog box.

Step 4 – Create a RIS answer file

1. Create a folder on your desktop called "Setup Manager".
2. From your Windows 2000 Advanced Server CD, extract all the Setup Manager files to the folder you just created.

   The path to the Setup Manager files is:
   cdrom drive letter:\support\tools\deploy

   Select all the files in the Deploy folder, right click and choose Extract.

3. Open the Setup Manager folder, and launch the Setup Manager.
4. From the Welcome screen on the Setup Manager Wizard click Next.
5. Select "Create a new answer file", and click Next.
6. Select "Remote Installation Services", and click Next.
7. Select "Fully Automated", and click Next.
8. Accept the Licensing Agreement, and click Next.
9. Enter a "password" as your administrator password, and click Next.
10. Set your Display Settings to the following:
    a. Colors: True Color (32 Bit)
    b. Screen area: 1024x768
    c. Refresh Frequency: 72 Hertz
    d. click Next.

11. Select "Typical settings", and click Next.
12. Set the time zone at (GMT-5:00) Eastern Time
13. Select "No, do not edit the additional settings", and click Next.
14. Enter this for the Description String – "Custom Unattended Installation File"
15. Enter this for the Help String – "This is the first Unattended installation file custom created for this RIS Server", and click Next.

    Remember the text that you enter here will be the same text that you see from the CIW (Client Installation Wizard) during the initial phase of the RIS client startup.

16. Browse to this folder:

    E:\RemoteInstall\Setup\English\Images\win2000.pro\i386\templates

17. Name your new answer file "RISUnattend1", make sure the Save As Type is a .sif, and click Save.
18. Click Next.

Step 5 – Associate your new answer file with a RIS Image.

1. Open Active Directory Users and Computers.
2. Find your RIS server computer object, right click on it, and choose properties.

   Hint: Most computer objects (in Real World scenarios) will be found in the appropriate OU or Domain containers. We have not created any OU's to this point, and the only computer in our domain is the RIS server. Because the RIS server is also a domain controller, look under Domain Controllers to find the RIS server computer object.

3. Select the Remote Install tab, and click Advanced Settings.
4. Select the Images tab.

   You will see that your custom unattended installation file is already present and associated with an image. This is because of the location that we saved the answer file in earlier.

5. Close all dialog boxes.

Step 6 – Creating a RIPrep Image

1. Contact your instructor. (He will assign you a partner that is ready for the next step also).
2. Have your partner boot his/her machine into Windows 2000 Professional (you should be booted into Windows 2000 Advanced Server).
3. Once your partner's Windows 2000 Professional installation is up and running, connect to the 'REMINST' share on your machine to start the RIPrep Image creation. Use the following path to get to the RIPrep executable:

   \\YourServerName\reminst\admin\i386\riprep.exe

This should launch the 'Remote Installation Preparation Wizard' on your partners Windows 2000 Professional machine.

4. From the Wizard Welcome window, choose Next.
5. The server name that appears in the next window should be the name of your server by default.

   This is the server where you will be saving the RIPrep image. This could be any RIS server on your network. For now, you should accept the default and choose Next.

6. This window asks you what folder you would like to place your new RIPrep image into. There are a couple things to remember here:
   a. The name of the folder should be in the 8 dot 3 format. That means the folder's name should have up to (but no more than) 8 characters, a period, and then 3 characters. For example 'win2000.pro'. This is because the Client Installation Wizard (CIW) uses a DOS like interface, and needs to see the folder name in this format.
   b. Also, the three characters at the end of the folder name should always be 'pro'. This lets the RIS server and the CIW know that a RIS image is in that folder.

7. Name your folder 'myRIPrep.pro', and choose Next.
8. Give your RIPrep image a friendly name and Help Text description as follows:
   a. Friendly Name: My RIPrep Image #1
   b. Help Text: Windows 2000 Professional – with Office 2000
   c. Choose Next
9. Review your settings to insure that everything is correct, and choose Next.
10. Choose Next to start the creation of the RIPrep Image.

    Remember that before the RIPrep image is created, Sysprep is executed on your model machine. This insures that there are no individual configuration settings in the image when it is being pushed out to other machines.

11. After the RIPrep image is complete. You and your partner should switch roles, and start this section over again at #2.
12. After both partners are finished, contact your instructor.

Class Roster and TCP/IP Assignments

Name	Top NIC IP Address	Subnet Mask	Bottom NIC IP Address	Subnet Mask
Rob Andrews	192.168.0.10	255.255.255.0	192.168.0.110	255.255.255.0
Dave Aran	192.168.0.11	255.255.255.0	192.168.0.111	255.255.255.0
Jerry Baum	192.168.0.12	255.255.255.0	192.168.0.112	255.255.255.0
Don Bitters	192.168.0.13	255.255.255.0	192.168.0.113	255.255.255.0
Tony Caliguiri	192.168.0.14	255.255.255.0	192.168.0.114	255.255.255.0
Chas Conn	192.168.0.15	255.255.255.0	192.168.0.115	255.255.255.0
Jan Graeser	192.168.0.16	255.255.255.0	192.168.0.116	255.255.255.0
Kevin Griffin	192.168.0.17	255.255.255.0	192.168.0.117	255.255.255.0
Jeremy Hancock	192.168.0.18	255.255.255.0	192.168.0.118	255.255.255.0
Dave Holliday	192.168.0.19	255.255.255.0	192.168.0.119	255.255.255.0
Dennis Hudak	192.168.0.20	255.255.255.0	192.168.0.120	255.255.255.0
Mitch Kwiatkowski	192.168.0.21	255.255.255.0	192.168.0.121	255.255.255.0
Brett Marriott	192.168.0.22	255.255.255.0	192.168.0.122	255.255.255.0
Brian McCarthy	192.168.0.23	255.255.255.0	192.168.0.123	255.255.255.0
Ed Minarcin	192.168.0.24	255.255.255.0	192.168.0.124	255.255.255.0
Tim Minehart	192.168.0.25	255.255.255.0	192.168.0.125	255.255.255.0
Jon Minteer	192.168.0.26	255.255.255.0	192.168.0.126	255.255.255.0
Mike Muto	192.168.0.27	255.255.255.0	192.168.0.127	255.255.255.0
Heather Pazak	192.168.0.28	255.255.255.0	192.168.0.128	255.255.255.0
Larry Pollitt	192.168.0.29	255.255.255.0	192.168.0.129	255.255.255.0
Anthony Sansonetti	192.168.0.30	255.255.255.0	192.168.0.130	255.255.255.0
Jennifer Sheets	192.168.0.31	255.255.255.0	192.168.0.131	255.255.255.0
Nate Snyder	192.168.0.32	255.255.255.0	192.168.0.132	255.255.255.0
Mark Wall	192.168.0.33	255.255.255.0	192.168.0.133	255.255.255.0