

## CET442 Lab #4

### Remote Desktop: Terminal Services

#### Introduction:

Many server operating systems support remote access in various forms. Windows servers support "terminal services," which is actually an adaptation of the remote desktop protocol (RDP). RDP transmits the keyboard, mouse, and GDI (Graphical Device Interface) commands between two computer systems, thereby providing a complete remote desktop interface. Remote access to servers is a handy tool for administering them, especially when there are many servers at a distant location.

RDP isn't the only "answer" to the remote access problem; VNC (Virtual Network Computing) is another solution that you'll explore in this experiment. Finally, command line services are available in the Unix world by Telnet (unsecure) and SSH (Secure SHell).

**Materials Required:** Windows 2000 Server; any other Windows computer running 95/NT4/98/2000/XP. Two blank floppy diskettes.

1. Log into the Windows 2000 Server. From the *Services* control panel (under Administrative Tools), make sure that the "Terminal Services" feature is running. You can't remotely connect to the server without terminal services running!
2. To remotely log into your server you will need a client terminal program. Windows 2000 server uses a proprietary client for the terminal program. This client is written to floppy disk by the server, and is then installed on the remote workstation(s) that you'll be using to remotely access the Windows 2000 server.

Under Administrative Tools start the "Terminal Services Client Creator" program. You'll see a dialog box that looks like this:



In this dialog box choose the highlighted option (Terminal Services for 32-bit x86 windows). Insert the first of the floppy disks and click OK. When the application prompts for the second disk, insert it as well.

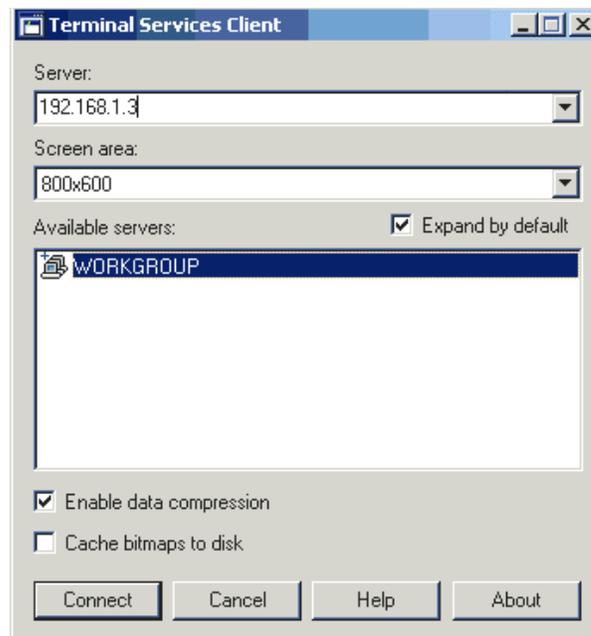
Clearly mark these two floppy disks to aid in installing them on the target system.

### *Installing and Using the Client*

1. Move to the destination computer (where you'll be remotely accessing the server). Install the #1 disk into drive A: and execute the *setup.exe* program. Choose the options for installing the terminal services client. The client will be installed on the computer. With this program you can log into the Windows 2000 server through the network.
2. To start the client, choose the Terminal Services Client from the Start menu:



3. When the client starts, you'll need to supply either a computer name or IP address for the box that you wish to log into. (Since DNS isn't fully operational on your network yet, you'll probably just use the raw IP address):



Type the correct IP of the server that you're wanting to connect to, and click the CONNECT button.

4. Upon connection, you should *immediately* see a client screen like the one below:



If you see this, congratulations -- you can now remotely access your Windows 2000 Server.

5. Experiment and find out:

- a) Can more than one user use terminal services on the server? If so, what happens when more than one user is logged in?
- b) Can one client log into multiple Windows 2000 servers at the same time?
- c) How secure is terminal services, and what ports are used to support it? (Use Ethereal to "sniff" the network during a terminal services session to find out.)
- d) How does Windows Terminal Services compare to VNC? Try installing a VNC server on one of your workstation or workstation images. Then install the VNC client on a different machine and try it out.

You can download VNC from: <http://www.uk.research.att.com/vnc/>

## ***Laboratory Report Contents***

The following should be included in your report for this experiment:

- A summary of the procedures you used to enable terminal services.
- Answers to the experimental questions posed in Step 5, giving any necessary details.
- A detailed summary of how you implemented VNC services, showing screen shots where necessary.