Configuring Thinstation:

I am currently using a prebuilt copy of Thinstation version 2.1.1 I found on the net (unfortunately I can't remember where, or I'd give props where deserved). This version seems to contain all the drivers needed for DELL models optiplex gx110, gx150 and even latitude C400 (laptops).

There are many ways to configure your thinstation experience. If you are curious of these configurations, do a web search for it or go to (http://thinstation.sf.net/faq.html).. I'm just going to focus on how I have mine configured..

Here's a quick overview…

When a workstation is set to pxe, the first thing it will do is look for a DHCP server. The scope options will send the workstation looking for the tftp server (I have mine setup on my Terminal Server). The workstation downloads the linux OS, and the instructions specific to that unit. The machine then boots that OS, and launches RDesktop (linux version of Remote Desktop) that is configured to point to the Terminal Server.

Here are the files you'll need to modify.

C:\TftpdRoot\thinstation.hosts. This file is where you enter each computer, and what group(s) it belongs to.

- HOST – this is the computer name. On the Terminal Server, you will see each unit by this name.
- MAC – Mac address of the machine.
- GROUPS – Identify each group you want this machine to be associated with. The groupname will correspond with a file in the c:\Tftpdroot folder with that name. See below for settings in this file.…
- COMMENTS – Notes to keep track of each unit.

C:\TftpdRoot\thinstation.conf.group-groupname. In my configuration, I have unique user accounts I use for each machine (this helps keep temp folders, not sharing application_data info and session information unique for each user). I make a unique file with a different groupname based on the username I use to log the session onto windows. You can use one account for all machines easily by setting the GROUPS section of the thinstation.hosts file for each machine to point to the same file.
In the thinstation.conf.group-groupname file there are 3 items you'll want to change for your instance –

- <server IP Address> - IP Address of Terminal Server
- <username> Full Username of domain account
- <password> - Password of domain account

Terminal Services:

You can find many help files on setting up Terminal Services, and my instance will be different than yours. Essentially, the thinclient workstation is firing off Remote Desktop. If your server is setup to allow Remote Connections and the username and password you supplied in the thinstation.conf.group-groupname file has the rights to log into the server, this setup should work. Don't forget to keep an eye on the number of Terminal Services licenses you currently have, you can run out fast!
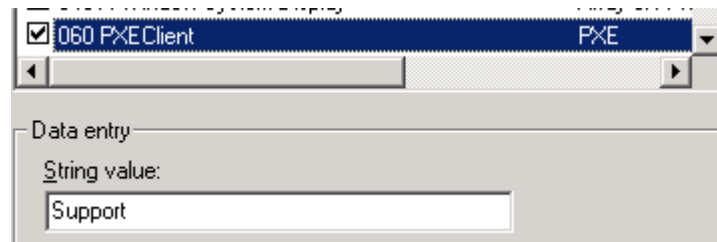
DHCP Configuration:

In DHCP, go to Administrative Tools -> DHCP -> domain -> Scope -> Scope Options.
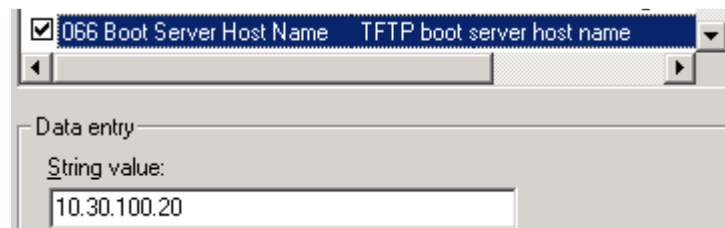*if any of the following options are not available, refer to the "Add predefined options" section that follows.

Add the following Scope Options:

060 PXEClient

066 Boot Server Host Name (sting value = the TFTP server's IP address)

067 Bootfile Name

☑ 067 Bootfile Name   Bootfile Name

Data entry

String value:

thinstation.nbi.zpxe

0193 thinsvr

☑ 193 thinsvr   ThinClientServer

Data entry

Server name:

Resolve

IP address:

Add

10.30.100.20

Remove

Up

Down

Add predefined options

Right-click on DHCP server and select "Set Predefined Options..."
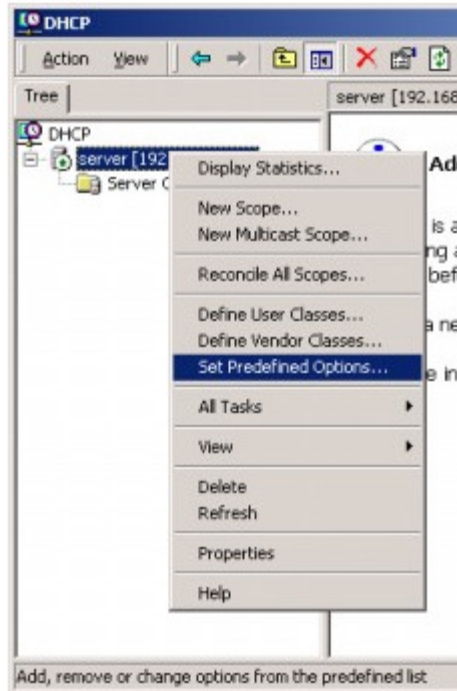
In the Predefined options dialog, choose option class "DHCP Standard Options" and click the "Add" button.

In the Predefined options dialog, choose option class "DHCP Standard Options" and click the "Add" button.

You will need fill in the followings values in the Option Type dialog:
- o "Name:" field type "thinsrv"
- o "Data type" field choose "IP Address" and tick the "array" checkbox
- o "Code" field type "193"
- o "Description" field type "ThinClientServer".

TFTP Setup:

1. Copy folders TFtpdRoot, "Thinclient" and "Tools" to your TFTP servers root directory (c drive).
2. Launch the TFTPD32 utility at c:\Thinclient\Thinstation-2.1.1-prebuilt-NetBoot\TFtp\tftpd32o\tftpd32.exe.
3. Configure as follows.
   - Change the Base Directory to point to c:\TftpdRoot
   - Uncheck all Global Settings except TFTP Server.
   - Keep TFTP Security to Standard
   - Leave TFTP Configuration default.
   - Under Advanced TFTP Options, check Option Negotiation, PXE Compatibility, Show Progress Bar and Translate Unix file names.
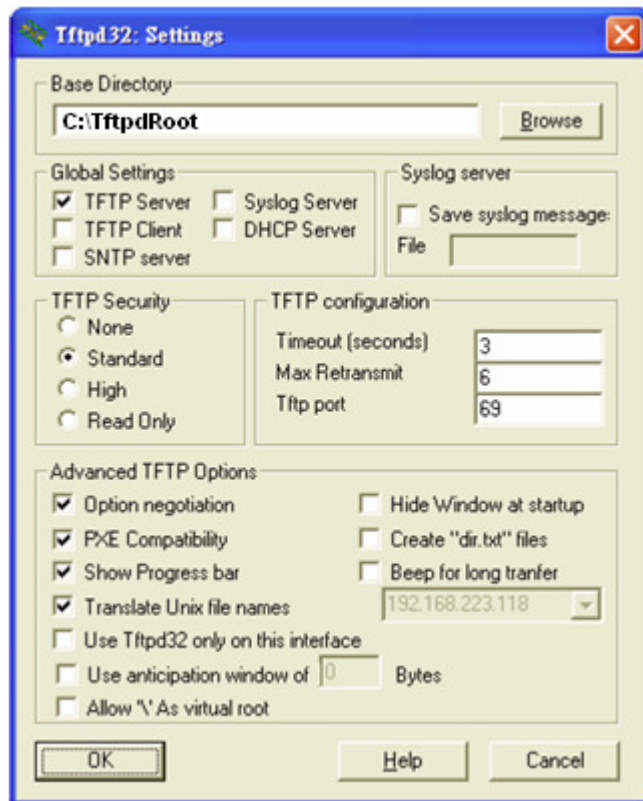
Run as Service:

Once you have your TFTP server configured, you can set the TFTPD32 process to run as a service, that way you can log off the server and it will still run. You can also wait until you know everything is working before you configure this.

Here is my instructions for making it a Windows Service using MS instsrv.exe and srvany.exe.

- Open a cmd (Start -> Run -> cmd) and do the followings:
  - c:
  - cd \Tools
  - instsrv tftpd c:\Tools\srvany.exe
- Open the registry (Start -> Run -> regedt32)
- Under HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\tftpd : create a 'Parameters' key
- Under the above key, create a new 'String Value' with the name 'Application' of type REG_SZ and specify there C:\Program Files\tftpd\tftpd32.exe
- Close your running tftpd32 (if you have one) and check with netstat -a that nothing is listening on UDP tftpd port (69)
- Goto services (left click on "My Computer" -> Manage -> Services and Applications -> Services) and start the tftpd service.
- Check now with netstat -a that there is a sevice that listen on UDP tftpd port, the output should look like this (the important line is the last):

```
Windows CMD

C:\Program Files\tftpd>netstat -a

Active Connections

  Proto  Local Address            Foreign Address          State
  TCP    w2k-yedidia:epmap        w2k-yedidia:0            LISTENING
  TCP    w2k-yedidia:microsoft-ds w2k-yedidia:0            LISTENING
  UDP    w2k-yedidia:bootps       *:*
  UDP    w2k-yedidia:tftp         *:*
```

Workstation setup:

The only setup needed is to configure pxe in the BIOS. Once you do that, change your boot sequence so PXE is first.

Since pretty much all BIOS setups are slightly different, you'll probably need to check online to find information on this. I would recommend disabling the hard drive in the BIOS and disconnecting it, that way there is no confusion during boot time.