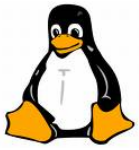
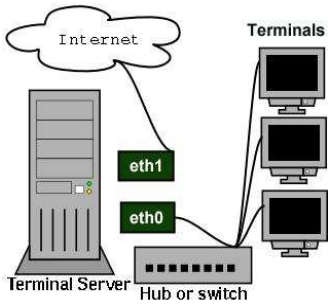
# K12LTSP.org
# Linux Terminal Server Project



- Our goal was to set up a linux terminal server with 7 thin clients at the Stokely Athletic Center computer lab.

- We installed the K12LTSP software with the intention of booting diskless workstations from our server. All applications were to run on our terminal server and the workstations would be “thin”, meaning that they have no software or hard drives. The K12LTSP CD set comes preloaded and preconfigured with everything that the students who use this computer lab will (such as OpenOffice.org).

- Overview of a K12LTSP Open Source Lab:
  A default K12LTSP installation uses two Ethernet cards: eth0 and eth1. One card connects the server to your school network. The other card creates a private network for terminals (thin-clients). Your server and eth1 act as a gateway for the terminals to the Internet and the rest of your network. eth1 is configured to get its IP address via DHCP. A private DHCP server runs on eth0 to give IP numbers to terminals. This configuration is flexible in that you can easily have multiple LTSP servers in your building all sharing the same default configuration. Servers are "plug and play" with little or no configuration required.




- The first minor problem was that we were asked for a 4th disk during installation, which we didn’t have. To remedy this we just had to uncheck “software development”.

- Installed Webmin.

- When things didn't go as expected we discovered that we didn't have a Linux compatible network card. As stated on the "reallylinux" website, it is crucial that the network card is fully supported by Linux. After contacting numerous stores in the area, Ron was finally able to find one that looked like it would work. A Netgear FA311v2 network card was then purchased and installed.

- We could see that new network card had been installed, but we were unable to activate network connectivity after it was configured.

- Tested it by connecting one terminal to the server, rebooting and entering the BIOS setup to allow us to choose boot device (network boot). If this had worked correctly we should have seen the PC begin initializing a Linux virtual desktop and then the login screen.

- Requested assistance from OIT, who said not to do this because linux terminal server uses DHCP.

- An OIT "expert" came by and spent an hour working on our server project. Two major problems we had that caused the port not to work with the thin client were that we did not install all of the 'LTSP" requirements and we had a bug in the hpcd commands. He recommended that we do a complete reinstall.

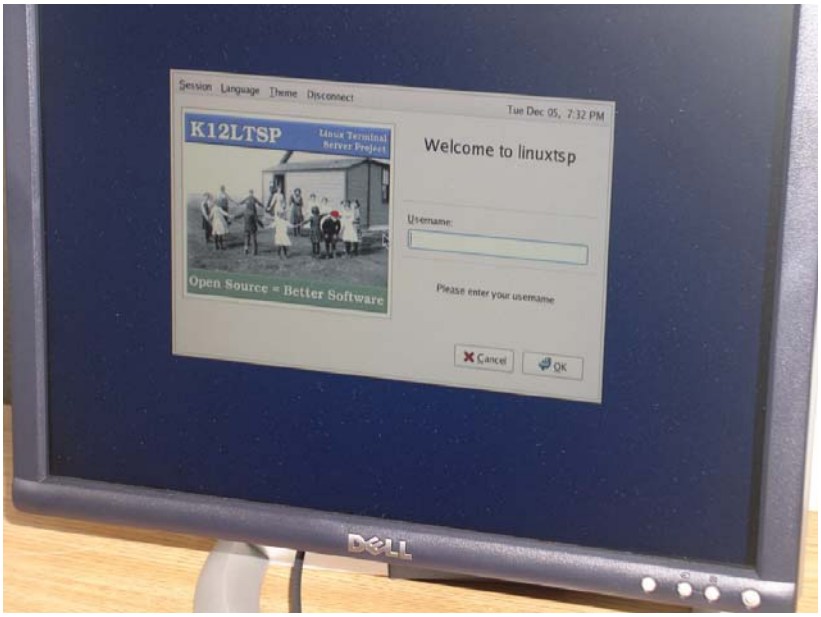
- The K12LTSP software was reinstalled, and this time all install options were checked.

- Tried restarting the workstation and got a gray screen with a large "X" cursor. After doing some investigating we determined that this had to do with the Xserver running on the workstation not being able to connect with the display manager running on the LTSP server. We were then able to determine that the display manager was running, but not accepting requests from

remote workstations (not listening on port 177). To fix this we had to configure the display managers (XDM and KDM).

- We also had to reactivate the Ethernet card after each restart of the server.

- The result:

## Resources:

45 Minutes to a Linux Terminal Server
http://www.reallylinux.com/docs/setupltsp.shtml

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