

This project is about general networking. You will be asked about existing configurations. In general the answers to the questions can be found on the machine for which you are an administrator. No root privileges should be necessary to answer any of the questions.

Questions about network drivers. (visit **drivers/net** in the kernel source code)

- 1) Support for several types of 3-Com (3cXXX) Ethernet cards are available for the Linux kernel, list 4 such cards.
- 2) List 3 Intel Ethernet drivers.
- 3) On a Parallel line cable running PLIP, what are pins 18,19 and 20 used for?

Questions about configuration of TCP/IP. (examine the front of your machine, also run the ifconfig and netstat commands)

- 4) Use a command to find out the fully qualified hostname of your machine? What is the fully qualified hostname and what command did you use to find this out?
- 5) What is the hardware (ethernet) address of your machine?
- 6) What does it use for its broadcast address?
- 7) The routing table for your machine contains one gateway entry. What is that entry?
- 8) What netmask does the loopback interface use?

Question about arp. Ping two other of the lab machines.

- 9) What entries are in the arp table? Give the full entries including the hardware addresses.

Questions about the resolver. Examine **/etc/resolv.conf** and **/etc/nsswitch.conf**; read the manual entry for **resolv.conf**.

- 10) What methods (NIS, DNS/bind, hosts file) does your machine use to locate a hostname and in what order?
- 11) What other machine does your machine use for DNS (resolver)?
- 12) Your machine allows certain other machines to be accessed without typing the entire (fully qualified) host name. Which hostnames can be accessed using this shorthand.

Questions about the route table on **panther**.

- 13) What two gateways (routers) does **panther** know about?
- 14) What route entry on **panther** allows **panther** to talk to the machine you administer? Hint: what network address and subnet mask is your machine part of?

Questions about netmasks.

- 15) A machine has internet number 134.139.43.56 and netmask 255.255.255.0; give its subnet number (network name) and subnet broadcast address.
- 16) A machine has internet number 134.139.201.134 and netmask 255.255.255.224; give its subnet number (network name) and subnet broadcast address.