System Administration for Beginners

Week 6 Quiz

March 6, 2007

1. $[e^{i\pi} + 1]$ Name and `inst` login:

2. [3] What are the three types of users for which permissions are defined?

3. [2] Knowing that `r` is read, `w` is write, and `x` is execute, what is the numerical representation for a file with permissions `rwx--x-w-`?

4. [2] Who started the Free Software Foundation and launched the GNU Project, which would develop a set of tools which would become a large and crucial part of GNU/Linux?

5. [5] When I access the internet, how is it possible that I can access a website by a given name (e.g., `berkeley.edu`) rather than memorizing IP addresses? (Hint: What does DNS do?)

6. [4] Remember the simplified OSI model had three layers, Physical, Transport, and Application. Name two (2) examples of application layer protocols that we described in class (do not confuse this with applications that are built to use a protocol, like Mozilla Firefox or Microsoft Outlook)?

7. [2] What UNIX command do I use if I want to check if a certain computer is on the network, but I do not have physical access to the computer or the network it is on?

8. [5] With regards to RFC 2131, expand the acronym DHCP and describe the four (4) steps of interaction between a client and DHCP server. Which transport layer protocol does DHCP use and what destination does the client send its requests to? (You may use the back of this sheet)

9. [5] In the public-key encryption algorithm RSA, a private key can be stored in various ways. *dmp1* and *dmq1* can generally be written as $d \bmod (p-1)$ and $d \bmod (q-1)$, respectively, where the private exponent d is kept secret and p and q are primes. What is *iqmp*?