

Thank you for your interest in joining CANAL. The objective of this exam is to evaluate your abilities and level of understanding you already have. Do not worry if you cannot answer all the questions, or if you do not understand a topic. It is expected that you will not be able to answer every question 100% correct. Do not guess any answers, as wrong you will be penalized against you. If you are unsure, it is best to say so. Remember this is only a way for us to gauge the skills and abilities you already have.

Interview times for positions will be determined on an individual basis and you will be contacted by e-mail.

- 1) Using your operating system's command line you run the ping command to check your computer's internet connectivity with the host **google.com**. The test is successful and reveals no problems with reaching the remote host. What would you expect the address of the remote host to be:
 - a. 10.25.32.213
 - b. 64.233.167.99
 - c. 141.209.88.21
 - d. 172.25.41.26

Why do you think the IP address is the one you chose?

- 2) Explain the difference between an IP address and a MAC address. Define and give an example of both.

- 3) Explain how to find the Ethernet Adapter address under Windows XP.

- 4) Do you have a basic understanding of UNIX and / or Linux? If so, please briefly explain the extent of your knowledge.

- 5) What is Kerberos used for? Please give a brief description of how it works.

- 6) What is NFS? Have you set it up before in the past?

- 7) Please list all of the programming languages that you are comfortable in and how much experience you have in using them.

8) Please rate the following:

Not sure what it is	Don't know	Somewhat know	Have experience	Experienced	
					Installing Kerberos
					Maintaining Kerberos
					Installing LDAP
					Maintaining LDAP
					Installing a Mail Server
					Maintaining a Mail Server
					Using SSH

9) What is the difference between TCP and UDP?

10) Given the address 192.168.40.80 and a bit mask of 21 bits, please write:

- a. Network Address
- b. Broadcast Address
- c. Number of available hosts in the subnet

- 11) In one room, we have three light switches. In another room, we have three incandescent light bulbs arranged in a triangle. Each switch controls one bulb in the “normal” way (up is on, down is off). All switches start out in the down position. How can you tell which switch controls which bulb by doing a single trip to the switch room followed by a single trip to the bulb room?
- 12) Give a brief description of your understanding of DHCP.
- 13) Explain how to find the Ethernet Adapter address under Linux.
- 14) Do you have a basic understanding of VMware? If so, please briefly explain the extent of your knowledge.

- 15) Give a brief description of the differences between a crossover and a straight-through cable. If you mention colors, please follow the TIA/EIA 568 B standard.