

Practical Exercise 9-4: Working with Network Commands

This Practical Exercise will take students through the use of network commands to manage and troubleshoot the systems network interface.

1. Bring the VirtualBox window back up that you used in Exercise 9-3. If the screen has gone black click your mouse anywhere in the window and press **CTRL-ALT**. You should be at a root command prompt.
2. Test connectivity by entering **ping 127.0.0.1**. This will test your network interface card. You should see that you are receiving packets from 127.0.0.1 along with the time it takes to receive them in milliseconds. Press **CTRL-C** to stop the ping utility.
3. At this step I would usually have you ping a fellow students Linux workstation. This will not work though as all of the systems being used have the same layer 2 MAC address and it will not work.
4. Test connectivity by entering **ping 10.25.6.254** to ping the default gateway. Press **CTRL-C** to stop the ping utility.
5. Test connectivity by entering **ping 10.20.1.53** to ping the DNS server. Press **CTRL-C** to stop the ping utility.
6. Since we can reach the DNS server we should be able to resolve URL and hostnames to IP addresses. Test it by entering **ping www.google.com**. The system should resolve the hostname into an IP address and send ICMP echo request packets to it. Press **CTRL-C** to stop the ping utility.
7. Display summary information about your network interface by entering **netstat -s | more** at the shell prompt. Review the information displayed.
8. Trace the route to www.google.com by entering **traceroute www.google.com** at the shell prompt. Note the various routers crossed as your packets traverse the Internet to www.google.com.
9. You can now close and restore this image.

--End of Practical Exercise--