# Lab 31: Managing Networking

Note

All labs rely on previous courseware and lab information.

## Scenario

That was an amazing weekend. Three days off and now you are all refreshed. Time to get to work. Mrs. Y’s tasks were all completed last week, so you have a new set of items on your list. This week: Make sure the Linux machine can connect to the Internet and transfer files.

## Objectives

In this lab, you will:

* Test connectivity to the internet by using ping and nslookup
* Transfer the company audit files to Internal Affairs using the command scp

## Exercise 1: Test Network Connectivity

Mrs. Y approaches you today with a big smile. She seems very pleased with the fact that you finished all of your tasks from last week instead of putting them off until this week. She asks you to verify that the Linux machine can connect to the Internet using ping and the nslookup commands and hands you a new task list for this week.

Helpful Hint

You may have to use sudo to complete this exercise if you are not root.

### TODO

1. Use the ping command on IP address *APPROVEDIP* to check for a reply.
2. Use the nslookup command to query the DNS server for the web address www.*APPROVEDWEBSITE*.com.

Note

Ask your instructor for the appropriate IP address and web address for your environment.

### Steps

1. Validate that you are in the companyA home folder by typing pwd and pressing ENTER.

**cd companyA**

1. Type ping *APPROVEDIP* and press ENTER to test connectivity to the IP address.

**ping 13.224.11.184**

Note

Press **CTRL+C** key combination to cancel the requests after a few seconds.

[labsuser@centos ~]$ ping 13.224.11.184

PING 13.224.11.184 (13.224.11.184) 56(84) bytes of data.

64 bytes from 13.224.11.184: icmp\_seq=1 ttl=235 time=8.71 ms

64 bytes from 13.224.11.184: icmp\_seq=2 ttl=235 time=8.74 ms

64 bytes from 13.224.11.184: icmp\_seq=3 ttl=235 time=8.73 ms

64 bytes from 13.224.11.184: icmp\_seq=4 ttl=235 time=8.73 ms

64 bytes from 13.224.11.184: icmp\_seq=5 ttl=235 time=8.76 ms

^C

--- 13.224.11.184 ping statistics ---

5 packets transmitted, 5 received, 0% packet loss, time 4007ms

rtt min/avg/max/mdev = 8.712/8.736/8.763/0.103 ms

1. Type nslookup *APPROVEDWEBSITE* and press ENTER to obtain the IP address translation of the approved website.

**nslookup *www.amazon.com***

[labsuser@centos ~]$ nslookup www.amazon.com

Server: 172.31.0.2

Address: 172.31.0.2#53

Non-authoritative answer:

www.amazon.com canonical name = www.cdn.amazon.com.

www.cdn.amazon.com canonical name = www.amazon.com.edgekey.net.

www.amazon.com.edgekey.net canonical name = e15316.e22.akamaiedge.net.

Name: e15316.e22.akamaiedge.net

Address: 104.112.164.65

## Exercise 2: Transfer Audit Files

Another easy task completed as you make another check mark on Mrs. Y’s list. Any faster and she might think your trying to take her job. Next on the list of things to do, figure out how to transfer the filteredAudit.csv copy that has been placed in the SharedFolders section to the Internal Affairs folder: IA.

Helpful Hint

You may have to use sudo to complete this exercise if you are not root.

### TODO

1. Create an IA group and add YOURUSERNAME to the group.
2. Create a folder in the companyA main directory called IA.
3. Transfer the companyA/SharedFolders/filteredAudit.csv to the IA folder using scp.

### Steps

1. Validate that you are in the companyA home folder by typing pwd and pressing ENTER.

**cd companyA**

1. Create an IA group by typing **sudo groupadd IA** and pressing ENTER.
2. Add the IA group to your user as a secondary group by typing

**sudo usermod -a –G IA labsuser** and pressing ENTER.

1. Type

**sudo chown emcbath:Personnel SharedFolders/filteredAudit.csv**

and press ENTER to change the file permissions to allow for data transfer.

1. Create a folder in the companyA folder by typing **mkdir IA** and pressing ENTER.
2. Change the permissions to the IA folder by typing

**sudo chown labsuser:IA /home/labsuser/companyA/IA**

and pressing ENTER.

1. Transfer, using your own username, the filteredAudit.csv file to the IA folder by typing

**scp SharedFolders/filteredAudit.csv labsuser@127.0.0.1:/home/labsuser/companyA/IA**

and pressing ENTER.

1. Type your password at the password prompt and press ENTER.

Helpful Hint:

Remember you set your password as **MySecretPassword**

1. Validate your work by typing **ls -laR IA** and pressing ENTER. Note that ownership permissions for the file will be different.

[labsuser@centos companyA]$ ls -laR IA

IA:

total 12

drwxrwxr-x 2 labsuser IA 4096 Aug 25 04:55 .

drwxr-xr-x 1 labsuser 1001 4096 Aug 25 04:55 ..

-rw-r--r-- 1 labsuser labsuser 187 Aug 25 04:55 filteredAudit.csv

## STOP

You have successfully completed this lab.