

How I did Lab 11:

- Installed chrony on RedHat machines:
 - Dnf install chronyc
- On Machine A:
 - Int /etc/chrony.conf, I edited to only have both NIST time servers and only allow for LAN and DMZ subnets to access these servers:

```
server time-a-wwv.nist.gov iburst
server time-a-b.nist.gov iburst

allow 10.21.32.0/24
allow 100.64.12.0/24
```

- In /etc/dhcp/dhcpd.conf I configured the ntp servers now according to the subnet IPs instead of one global rule for both NIST servers. So the option ntp-servers was set in the subnet for 100.64.12.0/24 and 10.21.32.0/24.

- On Machine E:
 - To install NFS, I did: dnf install nfs-utils
 - In the /etc/exports file I configured:

```
/home/accounting/www 100.64.12.0/24(rw,sync,root_squash,no_all_squash)
```

- I created the directory: /home/accounting/www

- On Machine C:
 - To install NFS, I did: apt install nfs-common
 - I mounted the NFS server by doing:

```
mount -t nfs -o ro,soft
10.21.32.2:/home/accounting/www/var/www/html/dundermifflin/accounting/
```

- To make this mount permanent I went into /etc/fstab and entered this:

```
10.21.32.2:/home/accounting/www /var/www/html/dundermifflin/accounting nfs
ro,soft 0 0
```

- Also, in /etc/group, I added www-data to the accounting group so it could access the web files in accounting and display it on the website.

- On Machine D:
 - To install NFS, I did: dnf install nfs-utils
 - Everything above was copied for this machine. Instead of adding www-data, it is called 'apache' which was added to the accounting group
 - In crontab -e, I changed the rsync command to get the dundermifflin content from machine c without copying over accounting. This is the new input:

```
*/5 * * * * rsync -aH --exclude='accounting/'
100.64.12.3:/var/www/html/dundermifflin/* /var/www/html/dundermifflin
```

- Once all of this was done, I did a reboot of all devices, starting with A and then the rest.

Time taken on Lab: 7 hours.