I installed chrony and enabled systemd-timesyncd on redhat machines and Debian machines respectively. I configured the router's ntp server as time-a-wwv.nist.gov and time-a-b.nist.gov in /etc/chrony.conf and allowed the subnets of dmz and lan networks using server and allow statements. However, I noticed that I needed to use the ip addresses of the servers since my machine could not resolve the FQDN. I found the ip addresses using nslookup and used them in /etc/chrony.conf. Furthermore, I edited /etc/dhcp/dhcpd.conf and added the option ntpservers with the ip of router in the dmz and lan subnets scopes. I figured that configurations in /etc/chrony.conf and /etc/systemd/timesyncd.conf could mess with the configuration given by the dhcp server, I commented out the lines I had to necessarily comment out. After that, I checked whether the machines are using the correct ntp servers using chronyc resources and timedatectl timesync-status.

For the nfs configuration, I started by installing nfs on machine e. After that, I edited the /etc/exports file and added the following entry: /home/accounting/www

100.64.22.0/24(rw,sync,root_squash,no_all_squash).

I also added files in the directory to test such as foo.html.
Then, I went to machine c and installed nfs client. First, I mounted the directory using the mount command on machine c. Since the directory can only be accessed by the accounting group, I added apache to the accounting group. I figured out the username of apache using ps aux and it turned out to be www-data. Furthermore, I tested the files on the webserver using curl and I had a problem where www.dundermifflin.com does not direct to dundermifflin.com. Hence, I edited the /etc/hosts file which overrides some ip-hostnames translations handled by DNS.

Moreover, I had trouble making the mount permanent, so instead of doing that in /etc/fstab, I set up the automounter to mount machinee:/home/accounting/www to

machinec:/var/www/html/dundermifflin/accounting. I did that using autofs after installing it. I faced troubles and I ended up doing the mapping in /etc/auto.master and /etc/auto.misc after making copies of them of course. I used the following lines in /etc/auto.master and /etc/auto.misc respectively:

/var/www/html/dundermifflin /etc/auto.misc --timeout=180 accounting

-fstype=nfs,soft,ro   10.21.32.2:/home/accounting/www.