ECE566 Enterprise Storage Architecture
Lab #0.5: Finishing Up Your Server

We reshuffled some steps in Lab 0 to account for network issues. To make sure every group has full access to their racked servers, this mini-lab will patch in the skipped steps.

**NOTE: DO NOT PROCEED UNTIL THE INSTRUCTOR HAS ANNOUNCED THAT IP ADDRESSES HAVE BEEN ALLOCATED IN THE DATACENTER! NOTHING BELOW WILL WORK UNTIL THEN.**

This assignment will be completed in your groups.

As in Lab 0, you’ll do a little bit of data recording in the inventory sheet (columns in green, yellow, or magenta) and make a small written deliverable (steps highlighted in cyan).

## 1 Network setup check

Reminder: Our asset tracking database will be [this simple Google Sheet](#).

Validate that your server got an IP address for (a) the out-of-band management “DRAC” card and (b) the normal ethernet interface to Ubuntu.

On a command line of any OS, do:

```bash
ping esa##.egr.duke.edu
and
ping esa##-oob.egr.duke.edu
```

Where esa## is your server. The result should tell you the IP address and whether or not you’re getting responses back.

If you *aren’t* getting an IP address or if you *aren’t* getting ping results:

1. Visit your server in the datacenter and confirm ethernet cables are connected per Lab 0.
2. If esa##-oob isn’t responding, reboot your machine, access the setup screen for the remote access card, and investigate/fix.
3. If esa## isn’t responding, login to Ubuntu and investigate/fix.
4. If you can’t fix the issues, talk to the instructor after class or via email.

Assuming things *are* working:

1. Record the IP address for esa##.egr.duke.edu under the magenta “IP” column of the inventory sheet.
2. Record the IP address for esa##-oob.egr.duke.edu under the magenta “Mgmt-IP” column.
2  Test remote access

Navigate your web browser to the IP address and/or hostname of the remote access card and see the remote access interface. You may get certificate warnings or other warnings; ignore these. Login with “root” and the password you set, and test the following:

- Use the power control to power the server off and on.
- Access the remote console. Take a screenshot and include this in your write-up.

**Browser security issue:** These servers are pretty old, so their management cards use a version of Transport Layer Security (TLS, which underlies HTTPS) that is considered insecure in most modern browsers. Therefore, to access them, use Firefox, and enable older TLS as follows:

- In Firefox, go to the url “about:config”
- Find the setting “security.tls.version.min” and set it to 1
- If you use Firefox regularly and are concerned about the impact of this, you can revert this setting back to its default when not accessing the server’s remote management interface.

**NOTE:** If the remote access console doesn’t work and you’re on an R710 or similar server with an iDRAC6, follow the “iDRAC6 setup” guide linked from the course site to update firmware if needed.

Once remote access is working, if you haven’t already, note this in the magenta “Remote access setup?” column in the asset management spreadsheet. Also, confirm that IPMI is disabled in the “IPMI disabled?” column.

3  OS checkup

Ensure that you can SSH to your primary interface (esa##) with the login and password you created – use the IP address you noted earlier.

Look at the “/proc/meminfo” and “/proc/cpuinfo” files and/or run the “top” command to verify your CPU/memory stats.

Run “sudo fdisk -l /dev/sd?” to look at the drive info and partition tables of all our drives. Use the “lsblk” command to view this info in abbreviated form. Take a screenshot for your write-up.

Once all this is done, if you haven’t already, note this in the magenta “OS install ok?” column in the asset management spreadsheet.

4  All good!

If everything looks good, then you’re all set! If you’re having trouble, see the instructor.