CS3800 – Homework 1

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A screenshot of a cell phone

Description automatically generatedI chose to do this assignment on Alpine Linux, a lightweight distribution of Linux focused on security and based on musl libc and busybox. Because of the size of Alpine Linux’s size, it’s often used for small or light systems that don’t have much hard drive space or computing power. It’s often used as a foundation for building docker images because of its small size and flexibility. It is even small enough to be able to run in RAM and not install on disk. Alpine Linux also has distributions specialized for different applications such as servers, virtual machines, Raspberry Pi, and ARM processors. To keep the size small, Alpine doesn’t have a desktop environment. It is entirely command line only. I chose to install this operating system as a virtual machine on my server that runs Proxmox, a level 1 hypervisor, as its operating system. I created the virtual machine with the following specifications:

The Alpine Linux installation process is quite streamlined so it was quite simple to install from the iso file. After booting from the iso file and signing in as root you are prompted to run a script called setup-alpine. The setup process prompts you for keyboard layout, system hostname, initialize network interfaces and network settings, set a root password, timezone, HTTP proxy, NTP client, repository mirror, SSH server, which disk to use and how it will be used. I used the default options for most prompts except network interfaces where I chose eth0 to initialize, timezone where I changed it to America/Chicago, and I choose disk sda, my 8GB hard disk, to install the operating system on in sys mode which in Alpine Linux is the traditional hard disk install.

The installation process was very straight forward and easy to follow. Anything I was not sure about during installation, like what mode to use the hard disk in, could easily be found in the Alpine Linux wiki online. This OS uses its own package manager apk. I am more use to Debian and Ubuntu’s apt package manager so I had to get use to using apk instead. They function very similarly but have distinct differences. Alpine Linux has a very similar system hierarchy to other Debian based distributions. If I were to install this OS again, I would try to install it in diskless mode where on boot the whole operating is loaded into memory and a hard disk is not needed.

Screenshot of full installation process

