Content 2021

Resources

- **CIT VM Farm**
  - Create VM and connect from osx/Linux
  - Gpt partition example (Not needed for first lab)
  - MBR partition example
  - Manage VMs with CLI instead of Web
  - Connect to vm from Linux host
- **AWS**
  - Create AWS Educate Account
  - Create EC2 instance
  - Connect EC2 instance
- **Software**
  - If you are using windows to connect to your vm, you might need the following:
  - Putty
  - TightVNC
  - If you have a newer version of windows 10 and have installed the linux subsystem, you can just ssh from the command line like you do in OSX and Linux.

Module 1 - Partitioning

- **Slides**
  - Intro Slides
- **Reading**
  - Tracks and Sectors
  - Overview of hard drivevs
  - SSDs
  - Nand memory
  - MBR Overview
- **Lectures**
  - Finish remainder of intro slides
  - Dos Partitioning Video
  - Partitioning Explained (Only the first 5 minutes)
- **Screenshots**
  - More partitioning help
  - Bionic partitioning video
- **Lab**
  - System Install

Module 2 - Filesystems and Inodes

- **Slides**
  - Slides 2(These are referenced in some of the videos)
- **Reading**
  - Filesystem Sign in first. Read the following pages: Filesystem-high level view, metadata, inode, data block map, Directories, Superblock, Mount and Unmount operations, File creation and Deletion operations. To sign in, go to `library.dixie.edu` and click on `ebook collections`.
  - Superblock definition
- **Lectures**
  - Inode linking Video
  - More about Inodes Video
  - Directories and Inodes Video
  - Mebibyte vs Megabyte Video
  - Partition and block discussion
- **Screenshots**
  - Creating a filesystem

    - Creating a filesystem 2
    - Resize FS with parted
- **Lab** More partitions and EXT

Module 3 - EXT

- **Slides**
    - Slides 3
- **Reading**
    - Ext(somewhat of a review)
- **Lectures**
- **Screenshots**
    - Resizing
    - Break Superblock
    - Orphan Inode
    - Corrupt Inode
    - Break Permissions
- **Lab** Resize EXT
- **Lab** Fix EXT

Module 4 - Raid

- **Slides**
    - Raid Slides
- **Reading**
    - Raid
    - Software raid cheatsheet
- **Lectures**
    - AWS Review
    - Aws attach disks
    - AWS mdadm ec2 sample
- **Screenshots**
    - My Software raid howto
- **Lab** Raid Report
- **Lab** Software Raid
- **EXAM 1** review

Module 5 - LVM

- **Slides**
    - LVM Slides
- **Reading**
    - Logical volumes
    - LVM Intro
    - LVM cheatsheet
- **Lectures**
- **Screenshots**
    - LVM During Install How To
    - Bionic basic lvm install
    - LVM Configure
    - Bionic extension
- **Labs**
    - LVM 1
    - LVM 2

Module 6 - Remote Filesystems

ISCSI & NFS

- **Slides**
  - NFS Slides
- **Reading**
- **Lectures**
  - ISCSI overview
- **Screenshots**
  - NFS Install How To
  - ISCSI AWS 2021
- **Labs**
  - NFS
  - ISCI

Module 7 - GPT/UEFI

- **Slides**
  - UEFI and GPT Slides
- **Reading**
  - UEFI Boot
  - GPT Overview
  - Good Overview of Parted
  - GPT Partitioning
- **Lectures**
- **Screenshots**
  - UEFI Install Screens
  - UEFI comands
- **Labs**
- **EXAM 2** review

Module 8 - Windows

- **Slides**
  - FAT
  - NTFS
- **Reading**
  - FAT (follow all the links on that page)
  - NTFS
  - MORE NTFS
- **Lectures**
- **Screenshots**
- **Labs**
  - FAT

Module 9 - BTRFS?

- **Slides**
  - btrfs
- **Reading**
  - Snapshots with snapper
- **Lectures**

- **Screenshots**
- **Labs**
  - btrfs

Module 10 - Forensics

- **Slides**
  - forensic
- **Labs**
  - Forensic

Module 11 - Cloud Storage

- **Slides**
  - S3
  - EFS
  - EBS
- **Reading**
  - S3
  - EFS
  - EFS when
- **Lectures**
- **Screenshots**
- **Labs**
  - AWS S3
  - AWS EFS
  - AWS EBS

Module 12 - Misc

- **Slides**
  - SMB
  - Windows encryption
  - Encryption
  - chroot & resurrecting from a broken fstab
- **Reading**
  - Linux quotas
  - EFS on windows
- **Lectures**
  - Windows and Linux filesharing
- **Screenshots**
- **Labs**
  - Linux quotas
  - Windows fileshares to linux
- **EXAM 3** review

Student presentations

- Description

Last project

- Description