Schedule and outline

Texts

- Virtualization for Dummies *(Dummies)*
- ESXi Documentation from VMware
- Learning VMware Vsphere *(LVV)*
- Proxmox Admin guide *(PX)*

Week 1

- Topics:
  - Hypervisors
  - Types of virtualization
  - Virtualization with Proxmox
  - Connect iso to proxmox
  - Virtual Machines
- Readings:
  - Dummies chapter 1, 3
  - PX 1, PX 2.3.1, 2.3.2
  - Explained by vmware
- Slides:
  - Intro Slides
  - More Slides
  - Proxmox Chapter 1
- Notes:
  - Movie - Connect to proxmox with tunnel from mac/linux
  - Movie - install vm
- Assignments:
  - Assignment
  - Also begin project 2

Week 2

- Topics:
  - More on VMs
  - NFS and proxmox
  - Clustering
- Readings:
  - PX 5 (Explanation of the GUI) (review if needed)
  - PX 10
- Slides:
  - Proxmox Chapter 10
- Notes:
  - FreeNas Install
  - FreeNas NFS
  - FreeNas networking
- Assignments:
  - Assignment
  - Assignment

Week 3

- Topics:
  - Clustering
  - High availability
- Readings:
  - PX 6
- Slides:
Proxmox

Proxmox Chapter 6
Proxmox Chapter 8

Notes:
Add node to cluster

Assignments:
Assignment
Assignment

Week 4

Topics:
Finish up, Proxmox exam

Readings:
Proxmox 8

Assignments:
Assignment

Week 5

Virtual Machines

Readings:
LVV chapter 2
LVV chapter 5
LVV chapter 6

My how-tos:
Install ESXi
Connect to ISO
Install VMware Tools Linux

Slides:
ESXi review
VMWare VCSA

Assignments:
Install Esxi

Week 6

Readings:
LVV chapter 3
LVV Chapter 8
LVV Chapter 4
vSphere Distributed Switch Architecture
DRS

Slides:
VCSA Objects
VMWare machines
Virtual Network
Distributed switch
DRS
High Availability

My How To’s:
create cluster
Mount more hosts to nfs
Create vms on VCSA
Enable DRS
Create an eSXI port group and new vswitch video
Create distributed switch
Enable vmotion

Assignments:
Install VCSA
Week 7

- Exam on VMWare (Testing Center)
- Topics:
  - containers
  - docker
- Readings:
  - LXC vs Docker
  - Chapter 1
  - Good overview video of Docker
- Slides:
  - Containers
  - Docker 1
  - Docker 2
  - Docker 3
- Assignments:
  - Docker - hello
  - Docker - identidock
  - Docker - webapp

Week 8

- Topics:
  - More Docker
- Readings:
  - Entrypoint vs CMD
  - Chapter 3
  - Basic container networking
- Assignments:
  - Docker - Mysql Apache

Week 9

- Topics:
  - Kubernetes
demo
- Readings:
  - K8S tutorial
- Slides:
  - Slides
  - Slides
- Assignments:
  - K8s sentiment

Week 10 (oct 28 - Nov 2)

- Topics:
  - Kubernetes
  - K8s yml files
- Slides:
  - Slides
- Assignments:
  - K8s wordpress

Week 11 (nov 3- 10)
Week 12 (nov 11-17)

- Topics:
  - More kubernetes
  - Kubernetes on GCP
- Assignments:
  - K8s php and redis

Week 13 (nov 18-24)

- Topics:
  - Monday - Docker exam
  - Wed - Kubernetes exam
  - Fri - Canvas exam

Week 14 (nov 25)

- Topics:
  - Monday - Prep for presentations
  - ** Thanksgiving **
- Assignments:
  - Presentation Instructions

Week 14 (Dec 1 - 8)

- Monday - Presentations
- Wed - Presentations
- Fri - Presentations