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:
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
• Create templates
• Distributed Vswitch and HA

**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)**
• Topics:
  ◦ More kubernetes
  ◦ Kubernetes on GCP
• Slides:
  ◦ Slides
• Assignments:
  ◦ K8s php and redis

Week 12 (nov 11-17)

• Topics:
  ◦ More kubernetes
• Assignments:
  ◦ K8s pokemon
  ◦ K8s google cloud

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