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 Chapter 6
• Proxmox Chapter 8

• Notes:
  • Add node to cluster

• Assignments:
  • Assignment
  • Assignment

---

**Week 4**

• Topics:
  • Finish up, Proxmox exam
  • Review
• 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)
• 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