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)
Week 12 (nov 11-17)

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

Week 13 (nov 18-24)

- Topics:
  - More kubernetes
- Assignments:
  - K8s pokemon
  - K8s google cloud

Week 14 (nov 25)

- Topics:
  - Monday - Docker exam
  - Wed - Kubernetes exam
  - Fri - Canvas exam
- **Thanksgiving**
- Assignments:
  - Presentation Instructions

Week 14 (Dec 1 - 8)

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