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
- 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 11

- Test 2
- Topics:
  - Kubernetes
  - demo
- Readings:
  - K8S tutorial
  - Working with Kubernetes Objects
- Slides

Week 12

- Topics:
  - Kubernetes on GCP
  - Kubernetes
- Slides

Week 13
Week 14

- Topics:
  - More kubernetes
  - K8s yml files
  - virtualbox?
- Slides
- Assignment

Week 15

- Monday - catch up
- Wed - Practical (test4)
- Fri - Canvas (test4)

We will have presentations on the day of the final.