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
  - 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
  - Create virtual machine using vcsa
  - Install VMware Tools Linux
- Slides:
  - ESXI review
  - VMWare VCSA
- Assignments:
  - Install Esxi

Week 6

- Readings:
  - LVV chapter 3
  - LVV Chapter 8
- Slides:
  - VCSA Objects
  - VMWare machines
  - ISCSI
- My How To’s:
  - create cluster
  - add host to cluster
  - Move hosts to cluster
  - Create cluster datastore
- Assignments:
  - Install VCSA
  - Create templates
  - ISCSI

Week 7

- Readings:
  - LVV Chapter 4
Networking concepts overview
vSphere Standard Switches
vSphere Distributed Switch Architecture
DRS Settings

- Slides:
  - Virtual Network
  - Distributed switch
  - DRS
  - High Availability

- My how-tos:
  - Create an eSXI port group and new vswitch video
  - Add a vm to a vSwitch
  - Create distributed switch video video2
  - Enable vmotion

- Assignments:
  - VSwitch
  - Distributed Vswitch and HA

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**Week 8**

- Kahoot review
- Exam on VMWare (Testing Center)
- Fall Break

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**Week 9**

- Topics:
- Readings:
  - LXC vs Docker
  - Slides
  - Docker
- Readings:
  - Chapter 1
- Assignment
- Assignment
- Assignment
- Slides
- Slides
- Slides

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**Week 10**

- Topics:
  - More Docker
- Readings:
  - Entrypoint vs CMD
  - Chapter 3
  - Basic container networking
- Assignment

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**Week 11**

- Test 2
- Topics:
  - Kubernetes
  - demo
- Readings:
Week 12

- Topics:
  - Kubernetes on GCP
  - Kubernetes

Week 13

- Topics:
  - More kubernetes

Thanksgiving

Week 14

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

Week 15

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

We will have presentations on the day of the final.