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:
Notes:
  - Add node to cluster

Assignments:
  - Assignment
  - Assignment

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**Weekly Topics**

**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 Vsswitch 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
• Assignments:
  ◦ Assignment

Week 10 (oct 28 - Nov 2)

• Topics:
  ◦ Kubernetes
  ◦ K8s yml files
• Slides:
  ◦ Slides
• Assignments:
  ◦ Assignment

Week 11 (nov 3- 10)
Week 12 (nov 11-17)

** Test 3 ** Docker and Kubernetes

- Topics:
  - Assignment

Week 13( nov 18-24)

Week 14( nov 25)

- Monday - ?? ** Thanksgiving **

Week 14( Dec 1 - 8)

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