Schedule and outline

Texts

- [Virtualization for Dummies](Dummies)
- [ESXi Documentation from VMware](ESXi)
- [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](Explained)
- 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
  - 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 Vswitch and HA

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**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

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**Week 8**

- Topics:
  - More Docker
- Readings:
  - Entrypoint vs CMD
  - Chapter 3
  - Basic container networking
- Assignments:
  - Docker - Mysql Apache

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**Week 9**

- Topics:
  - Kubernetes
demo
- Readings:
  - K8S tutorial
- Slides:
  - Slides
  - Slides
- Assignments:
  - K8s sentiment

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**Week 10 (oct 28 - Nov 2)**

- Topics:
  - Kubernetes
  - K8s yml files
- Slides:
  - Slides
- Assignments:
  - K8s wordpress

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**Week 11 (nov 3- 10)**
Topics:
  - More kubernetes
  - Kubernetes on GCP

Slides:
  - Slides

Assignments:
  - K8s php and redis

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**Week 12 (nov 11-17)**

- Topics:
  - More kubernetes
- Assignments:
  - K8s_pokemon
  - K8s_google_cloud

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**Week 13 (nov 18-24)**

- Topics:
  - Monday - Docker exam
  - Wed - Kubernetes exam
  - Fri - Canvas exam

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**Week 14 (nov 25)**

- Topics:
  - Monday - Prep for presentations
  - **Thanksgiving**
- Assignments:
  - Presentation Instructions

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**Week 14 (Dec 1 - 8)**

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