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
    • 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

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)
- **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