Schedule and outline

Texts

- Virtualization for Dummies (Dummies)
- ESXi Documentation from VMware
- Learning VMware Vsphere (LVV)
- Proxmox Admin guide (PX)

Week 1 (Aug 24 - 28)

- 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:
  - Project 1 - Research
  - Also begin project 2

Week 2 (Aug 31 - Sep 4)

- 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:
  - Proxmox Install
  - NFS Install

Week 3 (Sep 7 - Sep 11)

- Topics:
  - Clustering
  - High availability
- Readings:
  - PX 6
- Slides:
• Proxmox Chapter 6
• Proxmox Chapter 8

• Notes:
  • Add node to cluster

• Assignments:
  • FreeNAS Install
  • Proxmox HA

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**Week 4 (Sep 14 - 18)**

• Topics:
  • Finish up, Proxmox exam
  • Review

• Readings:
  • Proxmox 8

• Assignments:
  • Proxmox Stats

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**Week 5 (Sep 21 - 25)**

• 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

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**Week 6 (Sep 28 - Oct 2)**

• 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
• ESXi and iSCSI

Week 7 (Oct 5 - 9)

• 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 (Oct 12 - 15)

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

Week 9 (Oct 19 - 23)

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

Week 10 (oct 26 - Oct 30)

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

Week 11 (nov 2 - 6)
• Topics:
  ◦ More kubernetes
  ◦ Kubernetes on GCP
• Slides:
  ◦ Slides
• Assignments:
  ◦ K8s php and redis

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**Week 12 (nov 9 - 13)**

• Topics:
  ◦ More kubernetes
• Assignments:
  ◦ K8s pokemon
  ◦ K8s google cloud

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**Week 13 (nov 16-20)**

• Topics:
  ◦ Docker exam
  ◦ Kubernetes exam
  ◦ Canvas exam

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**Week 14 (nov 23)**

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

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**Week 14( Nov 30 - Dec 4)**

• Monday - Presentations
• Wed - Presentations