Schedule and outline

Texts

- [Virtualization for Dummies](Dummies)
- [ESXi Documentation from VMware](ESXi)
- [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

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)

- 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 6 (Sep 28 - Oct 2)

- Topics:
  - More Docker
  - docker compose
- Readings:
  - **Entrypoint vs CMD**
  - **Chapter 3**
  - **Basic container networking**
- Slides:
  - **Docker storage**
  - **Docker compose**
- Assignments:
  - **Docker - Mysql Apache**

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### Week 7 (Oct 5 - 9)

- Topics:
  - Kubernetes
- Readings:
  - **demo**
  - **K8S tutorial**
- Slides:
Week 8 (Oct 12 - 15)

- Topics:
  - Kubernetes
  - K8s yml files

Week 9 (Oct 19 - 23)

- Topics:
  - Kubernetes

- Slides:
  - Slides

- Assignments:

Week 10 (oct 26 - Oct 30)

- Topics:
  - More kubernetes

- Slides:
  - Slides
  - Slides

- Assignments:
  - K8s wordpress

Week 11 (nov 2 - 6)

- Topics:
  - More kubernetes
  - Cloud?
  - Walkthrough

- Slides:
- Assignments:
  - K8s php and redis

Week 12 (nov 9 - 13)

- Topics:
  - More kubernetes

- Slides:

- Assignments:
  - K8s pokemon
  - K8s cloud

Week 13 (nov 16-20)

- Topics:
  - Slides
  - Example backend
  - Example frontend
Week 14 (Nov 23)

- Topics:
  - Kubernetes exam
  - Canvas exam
  - **Thanksgiving**
- Assignments:
  - [Presentation Instructions]

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Week 14 (Nov 30 - Dec 4)

- Monday - Presentations
- Wed - Presentations