

Final Exam Outline

ID720 Virtualisation

November 9, 2022

Introduction

The final exam for this semester will be on Wednesday, 16 November at 3:00 PM. The exam will comprise about 25 short answer questions covering a range of topics from the semester.

The exam **will not** include questions that require you to write code of configuration from scratch, although it may include samples of code or configuration with questions about them.

Outline

Exam questions will be based on the topics below.

1. Hypervisors and virtual machines
 - Hypervisors - hosted, bare metal
 - Virtualisation types - full, paravirtualisation
 - VM images
 - VM instances or guests
 - Volumes
 - Networking types - bridged, routed, NAT
 - Role of Dom 0
 - Driver domains
2. Managed cloud services
 - Advantages of managed services
 - Reasons to not use managed services
 - Images, instances, volumes
 - Floating IP addresses
 - OpenStack SDK
 - Terraform

3. Containers and Kubernetes

- Containers, differences between containers and "real" VMs
- Container repositories
- High level Kubernetes architecture
- Pods, deployments
- Services, types of services
- ConfigMaps, Secrets
- CI/CD pipelines
- Monitoring, Prometheus