Overview

Lecture 1: Introduction

- NIST Definition of Cloud

- IaaS, PaaS, SaaS, FaaS

- Public vs. Private Cloud

- Basic "hosting" service vs. managed service

- Benefits/Risks/Regulations: Scalability, Privacy, GDPR, Safe Harbor/Privacy Shield

- Business Models: Overbooking, Pay-per-Use, Standardization & Automation

Go to lecture »

Lecture 2: Cloud capabilities

- Cloud roles: Platform/Service provider vs. customers (developers, enterprises)

- Cloud architectures & definitions

- Operational requiremens

- Cloud performance

- Cloud service provisioning

- Extra Lectures: Various cloud stacks, Cloud networking, Security concepts

Go to lecture »

Lecture 3: IaaS introduction

- Intro to Cloud Platforms (Exoscale, Amazon AWS/EC2 and Google Cloud Platform)

- Virtual Server+Storage+Networking capabilities

- Automation via Terraform

- Hands-on demos

Go to lecture »

Lecture 4: Beyond IaaS

- Container Services (Docker & Kubernetes)

- Differences Container vs. classical server virtualization

- PaaS, SaaS, FaaS (Concepts, Examples)

- Hands-on demos

Go to lecture »

Lecture 5: Cloud-native software development

- Cloud-native software basics & definitions

- Microservices

- 12-factor Apps

- Frameworks and tools

- Hands-on demos

Go to lecture »