Introduction to Cloud Computing

40 Hours

About the Course

Cloud Computing is increasingly becoming an alternative choice for many enterprise organizations. It can be cost effective by lowering the overall cost for some technology use cases (such as web scale implementation) and applications (such as backup and disaster recovery). As a result, many enterprise organizations are seeking to hire professionals with cloud computing skills in coming years. This course will prepare participants for developing their cloud computing skills.

This forty hour course is an introduction to cloud computing and provides an overview of leading cloud products / platforms (such as Amazon AWS, Microsoft Azure, Google Cloud, VMware vCloud Air, OpenStack) currently in vogue. The course presents hands-on introductory lab session on certain cloud platforms. Based on this hands-on experience, participants might decide which cloud platform to adopt for future work and/or developing expertise.

Course objectives

Upon completion of this training course, attendees obtain knowledge on:

- Cloud service models and deployment models
- Cloud access
- Setup and use of cloud compute resource
- Security around compute resource
- Various higher level services available in each cloud platforms

Course Contents

The forty hour course covers the topics as noted below. There are hands-on lab sessions focusing on access and compute aspects of each cloud platform.

- **Introduction**

- **Overview of Cloud Computing**
  - Definition of Cloud
  - Service models
    - Infrastructure-as-a-Service (IaaS)
    - Platform-as-a-Service (PaaS)
    - Software-as-a-Service (SaaS)
  - Deployment models
    - Private cloud
    - Public cloud
    - Hybrid cloud
    - Community cloud
  - Strengths and weaknesses (Pros and Cons)
  - Future of Cloud Computing

- **Amazon AWS**
  - Services offering
    - Compute, Storage & Content Delivery, Networking, Database, Analytics

- Hands-on with AWS Compute (Amazon EC2)

- **Microsoft Azure**
  - Services offering
    - Compute, Web & Mobile, Data & Storage, Analytics, Internet of Things
  - Hands-on with Azure Compute (provision Windows and Linux virtual machines)

- **Google Cloud**
  - Services offering
    - Compute, Storage, Networking, Big Data
  - Hands-on with Google Compute (Compute Engine)

- **VMware vCloud Air**
  - Services offering
    - Virtual Private Cloud, Dedicated Cloud, Block Storage, Disaster Recovery
  - Hands-on with VMware Virtual Private Cloud

- **OpenStack**
  - Open Source product development
  - Components (projects)
    - Compute, Networking, Orchestration, Block Storage and Object Storage
  - Hands-on with OpenStack Compute (Nova)

- **Review and conclusion**