Faysal Aziz

Cloud Computing Practical Fundamentals

Hands-on training for employable skills

FA-0131 · 2-day

DevOps, Cloud & Infrastructure

Introduction

This 2-day intensive course offers participants a comprehensive introduction to the vast field of cloud computing. The primary objective is to help beginners and recent graduates understand and gain hands-on experience with popular cloud platforms like Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP) that will **make them employable**. We'll start with the basics of cloud computing, moving on to delve deeper into areas like virtual machines (VMs), Docker containers, web hosting modules, database containers, and cloud security. We'll also emphasize the hands-on implementation of concepts learned, ensuring participants leave with valuable, employable skills. It will also prepare the learner to delve into the world of Analytics and Machine Learning with the foundations gained from this training.

Learning outcomes

By the end of the course, participants will be able to:

- Understand the basics of cloud computing and its core services.
- Gain knowledge about popular cloud platforms like AWS, Azure, and GCP.
- Understand and create Virtual Machines (VMs) and Docker Containers.
- Deploy web hosting modules and database containers using Docker for analytics.
- Understand cloud security principles and apply them to various scenarios.
- Work comfortably within the environments of AWS, Azure, and GCP.
- Demonstrate employable skills in the domain of cloud computing.

Prerequisites

Knowledge:

- Basic understanding of IT and networking concepts.
- Familiarity with networking concepts would be beneficial but not mandatory.

Hardware:

- A computer with at least 8GB RAM and a stable internet connection.
- Modern browser (latest version of Google Chrome, Mozilla Firefox, or Microsoft Edge) for accessing cloud platforms.

Training outline

1. Day 1:

Introduction and Setting Up (1 hour)

- Welcome and Introductions
- Overview of the course
- Setting up AWS, Azure, and GCP accounts

Introduction to Cloud Computing (1 hour)

- Understanding Cloud Computing
- Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS)
- Benefits and Challenges of Cloud Computing

Overview of Cloud Providers (2 hours)

- Introduction to AWS
- Introduction to Azure
- Introduction to GCP
- Comparison of AWS, Azure, and GCP

Hands-on Lab: Virtual Machines (2 hours)

- Understanding Virtual Machines
- Creating a VM in AWS, Azure, and GCP
- VM operations: start, stop, resize, delete

Introduction to Containers and Docker (2 hours)

- Understanding Containerization

- Introduction to Docker
- Docker vs VM
- Hands-on Lab: Running a simple application in a Docker container

2. Day 2:

Hands-on Lab: Web Hosting and Database Containers (2 hours)

- Introduction to web hosting in the cloud
- Deploying a web hosting module using Docker
- Understanding Database Containers
- Deploying a Database Container using Docker

Overview and Hands-on Lab: Storage Services (2 hours)

- Understanding Cloud Storage Services
- Hands-on Lab: Storing and retrieving data in AWS S3, Azure Blob Storage, and Google Cloud Storage

Cloud Security Basics (2 hours)

- Understanding Security in the Cloud
- Security Principles in AWS, Azure, and GCP
- Best practices for Cloud Security

Hands-on Lab: Implementing Cloud Security (2 hours)

- Implementing Security Measures in AWS, Azure, and GCP
- Creating and Managing IAM roles
- Implementing firewall and network security

Wrap-up and Next Steps (1 hour)

- Course Review and Key Takeaways
- Exploring career paths and certifications in Cloud Computing
- Open Q&A and Course Feedback

Note: Each session will include a 15-minute Q&A at the end, allowing participants to clarify any doubts they might have.

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