Cloud Operations Management Course Outline

The Cloud Operations course is all about empowering the student to become an operations specialist – from day one on the job. Student will be able to learn ins and outs of cloud operations industry – putting up servers, instances, storage across all the leading cloud vendors (Windows Azure, Rackspace, Heroku & Digital Ocean). Multiple labs and reading assignments across all the above Cloud Vendors. Depending on available time, basics of Google & IBM Cloud Services will also be covered. Windows Azure will be used as baseline for all deep dive labs. Students will also be introduced to DevOps concepts such as Chef and Puppet along with labs in Chef.

TOPICS

MODULE 1 CLOUD OPERATIONS: INTRODUCTION

Unit 1 Introduction to Cloud Operations

Unit 2 Cloud Operations: 1st Principles

Unit 3 Setting up Application on Heroku

Unit 4 Setting up a droplet in Digital Ocean

Unit 5 Setting up an Azure Websites instance on Azure Portal

Unit 6 Rackspace Sign up

Unit 7 Across All above Vendors, compare add ons being offered by respective vendors

MODULE 2 AZURE DEEP DIVE

Unit 1 Azure high level overview

Unit 2 Azure Platform: Key Components

Unit 3 Azure Portal: Create and Launch Azure Websites and Cloud Services

     Create a Virtual Machine in Azure

     Create a SQL DB, Storage and link these to Cloud Services/VM.

Unit 4 Azure Local Environment Installation and Setup

Unit 5 Download Publish Settings and Publish Azure Websites via Visual Studio

Unit 6 How to migrate an existing .NET app into Windows Cloud Services

Unit 7 How to publish Local Web app into Azure Websites using Visual Studio

Unit 8 How to RDP into your Cloud Services via Azure Cloud

Unit 9 Heroku Overview

Unit 10 Download Git Bash and Set up Public and Private Keys on Local Machine

Unit 11 A lab from Azure Gallery

      Linking Resources within Azure

MODULE 3 DEV OP TOOLS FOR CLOUD OPERATORS

Unit 1 What is Chef? Key Components, Basic Terminology.

Unit 2 Chef Solo Installation

Unit 3 Chef Server Installation

Unit 4 Setting Configuration and Starting Chef Services©

Unit 5 What is Knife and Configuration?

Unit 6 Getting Started With Chef

Unit 7 What is Puppet? Quick overview

      New topics Overview of New Relic - What is it, How to use it, and Why?

      Supplemental Material

MODULE 4 CLOUD SECURITY AND FUNDAMENTALS

Unit 1 Cloud Security

Unit 2 Regulatory and Compliance

Unit 3 QoS Ontology/Framework

Unit 4 Cloud SQL Backups on Azure

Unit 5 Cloud Storage Backups on Azure

Unit 6 Misc. Concepts and Topics based on Student Feedback