AWS Contents

Setting up the system for AWS
AWS Storage: The S3 Bucket
AWS Storage: The Root Module
AWS Compute: AMI Data, Key Pair, and the File Function
AWS Compute: The EC2 Instance
AWS Compute: User Data and Template Files
AWS Compute: The Root Module
AWS Networking: VPC, IGW, and Route Tables
AWS Networking: Subnets, Security, and the Count Attribute
AWS Networking: The Root Module
AWS infrastructure : IAM policies, Auto-scaling,Lambda, Cloud Trail, Cloud Watch, RDS, Cloudfront
AWS : HA Architecture
Design and implement hosting solutions on different AWS environments like dev, stage and prod.
Setup large-scale, high-traffic, redundant, cloud-based Iaas/PaaS/SaaS environment at a Public
Cloud provider like AWS

OPENSTACK CONTENTS:

Openstack Overview
Overview of project history and releases
Core projects overview (Nova, Glance, Keystone, Swift, Quantum,Cinder)
Nova architecture overview
VM provisioning walkthrough
OpenStack Networking Overview
KVM networking with Linux bridges
Single-host vs multi-host networking
The role of Network Manager
Different Network Manager types
Floating IPs
Traffic Flow
Openstack Storage Overview
Project overview
Usage and use cases
The Ring, RingBuilder, partitioning
Account, container and object servers
Replication
Security/ACLs
Deployment and Operations
Automated Installation of Openstack
Example installation architectures
Service Architecture
Openstack cookbooks – Management server, Keystone, Glance, Quantum (Neutron), Nova, Cinder,
Horizon
OpenStack HA (High Availability) Overview
Setup some of the components in HA mode with Load Balancer
Kolla
Overview of Kolla
Preparing to Install Kolla
Installing OpenStack with Kolla
Verifying Kolla
Managing Kolla
OpenStack Zun
OpenStack's Container Service (Zun)

Where Does Zun Fit In?
Installing Zun with Devstack
Managing Containers with Zun
OpenStack Magnum
OpenStack's Container Infrastructure Management Service (Magnum)
Where Does Magnum Fit In?
Installing Magnum with DevStack
Managing Clusters with Magnum Using the CLI
Managing Clusters with Magnum Using the Dashboard

Terraform

Infrastructure As Code In AWS / OpenStack With Terraform
Terraform Project With AWS / OpenStack
Configuring Terraform with AWS / OpenStack
Creating an AWS / OpenStack Resource With Terraform
Terraform Concepts
Terraform Concepts - Introduction
Terraform Resources
Terraform Data Sources
Terraform Locals
Terraform Outputs
Terraform Templates And Files
Terraform Providers
Terraform Variables
Terraform Modules
Terraform Modules - Introduction
Project Layout
Terraform Custom Modules
Terraform Registry Modules
Terraform State
Terraform State - Introduction
Terraform Plans
Terraform Remote State
Managing Terraform State
Managing Multiple Environments & Resource Meta Parameters
Managing Multiple Environments & Resource Meta Parameters Introduction
Terraform Workspaces
Resource Meta Parameters
Terraform with OpenStack
Block Storage
Compute
Networking
Load Balancer
Firewall
Object Storage
Design and develop reusable components and operational strategies in the cloud to support scalability, high availability, performance, monitoring, backup, restore, etc.
  Docker & Kubernetes (Container)