



Introduction Course Overview

About this Course and the Certification

Core Knowledge AWS And General IT Knowledge

Security Features that AWS Provides and Best Practices

Able to Design and Implement for Elasticity and Scalability

Network Technologies as They Relate to AWS Networking, Including: DNS and load balancing, Amazon Virtual Private Cloud (VPC), and AWS Direct Connect

Working with VPC DNS

Storage and Archival Options

State Management

Database and Replication Methodologies

Self-Healing Techniques and Fault-Tolerant Services

Disaster Recovery And Fail-Over Strategies

Application Migration Plans to AWS

Deployment and Management

Hands-on Lab: Configuring VPC DNS

AN INSTITUTE FOR SPECIALIZED STUDIES:



Enterprise Account Management

Consolidated Billing

Consolidated Billing and EC2 Reserved Instances

Cross Account IAM User Strategies

Creating Cross Account Roles

Temporary Access Using Roles and STS

Federated Access Using SAML

Web Identity Federation

Costing and Resource Tagging

Resource Groups

AWS Config

Budgets and CloudWatch Alarms

Exercise: Playing With Web Identity Federation

Required Services Amazon CloudTrail

Amazon CloudTrail Overview

Configuring CloudTrail in the Console

Monitoring CloudTrail Events with CloudWatch

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AWS Key Management Service

AWS KMS Overview

Using The CLI to Encrpyt and Decrypt Data with the CMK

Amazon Kinesis

Amazon Kinesis Overview

Kinesis Mobile IOT Scenario Example

Amazon EC2 And Design Patterns

Integrating CloudWatch Logging with EC2

Real-Time Processing of Log Files with Amazon Kinesis

Protecting Production Resources

Migrating EC2 Resources to Another Region

EC2 Backup Strategies

HPC (High Performance Computing) on EC2

HPC with Cluster and Grid Computing

Architecting for Performance

Increasing Performance with EBS Raid Configurations

High Availability and Disaster Recovery with Multi-Region Design

Hands-On: Route 53 Complex Configurations





Mitigating DDoS Attacks with AWS

Supporting Legacy Applications in the Cloud

Elastic Load Balancer Design Patterns

Exercise: Protecting Production Resources

Hands-on Lab: Configuring Proxy Protocol on an ELB and Nginx

Hands-on Lab: Configuring EBS Volume RAID 0

Hands-on Lab: Restoring Files from EBS Volume Snapshots

Hands-on Lab: Creating Complex Routing Policies

Virtual Private Cloud (VPC)

Network and Data Security

Network Monitoring with VPC Flow Logs

Extending On-Premise Networks with VPN

Using Directory Service to Connect Hybrid Architectures

Security Zones





Understanding AWS IP Subnet Reservations

Hands-on Lab: Configuring VPC S3 Endpoints and NAT Gateways

AWS Direct Connect

Working with AWS Direct Connect Virtual Interfaces

Accessing Remote Regions

Amazon ElastiCache

ElastiCache Overview

ElastiCache: Memcache

ElastiCache: Redis

Amazon Redshift

Redshift Overview

Amazon CloudFront

CloudFront Key Concepts and Overview

Dynamic Content with CloudFront

CloudFront Reporting

CloudFront Security





CloudFront Performance Considerations

Streaming Media with CloudFront

Forcing HTTPS to The Origin

Creating a Multi-Region CloudFront Solution

Amazon Elastic Transcoder

ElasticTranscoder Overview

Streaming With S3, CloudFront, and Elastic Transcoder

Hands-on Lab: Streaming Video with Elastic Transcoder, S3, and

CloudFront

AWS Data Pipeline

Introduction to Data Pipeline

Using Data Pipeline to Replicate DynamoDB Data Across Regions

Hands-on Lab: Using Data Pipeline to Copy DynamoDB Data to S3

Amazon RDS

RDS Overview and Security Options



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MySQL and MariaDB on RDS: Multi-region Delivery, Migrating Data from On-Premise, and Disaster Recovery

Oracle DB on RDS

MSSQL DB on RDS

Amazon CloudSearch

Amazon CloudSearch

Amazon EMR

Amazon EMR

Hands-on Lab: Analyzing Log Files with EMR

Deployment Concepts On AWS Services

CloudFormation

Cloudformation Hands-on

<u>OpsWorks</u>

OpsWorks Hands-on

Amazon SQS

Message Priority

Batch Processing Job Observer



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Hands-on Lab: Auto Scaling Based off of SQS Message Queue Size

DynamoDB

DynamoDB Overview and Some Design Patterns

Secondary Indexes

DynamoDB Multi-Region Replication

Preparing For The Exam

Study Methods after Completing the Course

Test Taking Best Practices

Practice Exam

Quiz: Practice Exam

Quiz: Are You Ready To Take The Exam?

Course Features

Course SchedulerHands-on LabsPractice ExamExercisesFlash CardsLearning

PathsCommunityStudy Tools