Amazon AWS-SysOps Administrator Study Guide Exam SOA-C01

Contents

Introduction
What Does this Book Cover?
<u>Interactive Online Learning Environment and Test Bank</u>
Exam Objectives
Objective Map
Assessment Test
Answers to the Assessment Test
Chapter 1 Introduction to Systems Operations on AWS
Systems Operators
AWS Certified SysOps Administrator - Associate
Which AWS Services Should You Study?
Reference Architecture: The Three-Tier Design
Summary
Exam Essentials
Review Questions
Chapter 2 Working with AWS Cloud Services
Introduction to AWS Cloud Services
Summary
Exam Essentials
Resources to Review
<u>Exercises</u>
Review Questions
<u>Chapter 3 Security and AWS Identity and Access Management (IAM)</u>
Security on AWS
Securing Your AWS Account with AWS Identity and Access

	Management (IAM)
	Securing Your AWS Cloud Services
	Monitoring to Enhance Security
	AWS Cloud Service-Specific Security
	Summary
	Exam Essentials
	<u>Exercises</u>
	Review Questions
<u>Ch</u>	apter 4 Compute
	Introduction to AWS Compute Services
	Amazon Elastic Compute Cloud (Amazon EC
	Amazon EC2 Container Service (Amazon ECS
	AWS Elastic Beanstalk
	AWS Lambda
	Amazon Lightsail
	AWS Batch
	Summary
	Exam Essentials
	Resources to Review
	Exercises
	Review Questions
<u>Ch</u>	apter 5 Networking
	<u>Introduction to Networking on AWS</u>
	Amazon Virtual Private Cloud (Amazon VPC)
	AWS Direct Connect
	Load Balancing
	<u>Virtual Private Network (VPN)</u>
	Amazon Route 53

Amazon CloudFront

Summary
Resources to Review
Exam Essentials
<u>Exercises</u>
Review Questions
<u>Chapter 6 Storage Systems</u>
<u>Understanding Different Storage Options</u>
Block Storage on AWS
Object Storage on AWS
Systems Operator Scenario: The Newspape
Additional Storage Solutions
Summary
Resources to Review
Exam Essentials
<u>Exercises</u>
Review Questions
<u>Chapter 7 Databases</u>
<u>Introduction to AWS Databases</u>
Monitoring Amazon RDS
Non-Relational Databases
Amazon DynamoDB
Amazon Redshift
<u>Databases</u>
Amazon ElastiCache
Summary
Resources to Review
Exam Essentials

Exercises

Review Questions

01 . 0	A 1	T	. 1	
('hantar X	Annligation	Lanlor	mont and	Management
Chapter of	application.	יטוקסע	ymem amu	Management

Introduction to Application Deployment and Management

Deployment Strategies

Deployment Services

Summary

Resources to Review

Exam Essentials

Exercises

Review Questions

Chapter 9 Monitoring and Metrics

Introduction to Monitoring and Metrics

An Overview of Monitoring

Amazon CloudWatch

Amazon CloudWatch Events

Amazon CloudWatch Logs

Monitoring AWS Charges

AWS CloudTrail

AWS Config

Summary

Resources to Review

Exam Essentials

Exercises

Review Questions

Chapter 10 High Availability

Introduction to High Availability

Amazon Simple Queue Service

Amazon Simple Notification Service

Highly Available Architectures

Multi-Region High Availability

Highly Available Connectivity Options

Disaster Recovery

Summary

Resources to Review

Exam Essentials

Exercises

Review Questions

Appendix Answers to the Review Questions

Chapter 1: Introduction to Systems Operations on AWS

<u>Chapter 2: Working with AWS Cloud Services</u>

Chapter 3: Security and AWS Identity and Access Management

(IAM)

Chapter 4: Compute

Chapter 5: Networking

Chapter 6: Storage Systems

Chapter 7: Databases

Chapter 8: Application Deployment and Management

Chapter 9: Monitoring and Metrics

Chapter 10: High Availability

List of Tables

Chapter 1
TABLE 1.1
TABLE 1.2
Chapter 2
TABLE 2.1
TABLE 2.2
Chapter 3
TABLE 3.1
Chapter 4
TABLE 4.1
Chapter 5
TABLE 5.1
TABLE 5.2
TABLE 5.3
TABLE 5.4
TABLE 5.5
TABLE 5.6
TABLE 5.7
Chapter 6
TABLE 6.1
Chapter 7
<u>TABLE 7.1</u>
Chapter 9
TARIFO1

TABLE 9.2

TABLE 9.3

TABLE 9.4

TABLE 9.5

TABLE 9.6

TABLE 9.7

TABLE 9.8

TABLE 9.9

TABLE 9.10

Chapter 10

TABLE 10.1

List of Illustrations

Chapter 1

FIGURE 1.1 Lambda function interacting with the Amazon EC2 API and EC2 instances

FIGURE 1.2 AWS KMS operations with Lambda

Chapter 3

FIGURE 3.1 Shared responsibility model

FIGURE 3.2 Amazon Web Services Regions and Availability Zones (as of April 2017)

FIGURE 3.3 Amazon EC2 multiple layers of security

FIGURE 3.4 Amazon EC2 security group firewall

FIGURE 3.5 Amazon VPC network architecture

FIGURE 3.6 Flexible network topologies

Chapter 4

FIGURE 4.1 Differences between an instance store-backed Amazon EC2 instance and an Amazon EBS-backed Amazon EC2 instance

Chapter 5

FIGURE 5.1 AWS CLI used to create an Amazon VPC

FIGURE 5.2 Amazon VPC /22 CIDR block and subnets

FIGURE 5.3 Default network Access Control List

FIGURE 5.4 VPC diagram

FIGURE 5.5 DHCP option set

FIGURE 5.6 AWS CLI to create Internet gateway

FIGURE 5.7 VPC with VPN gateway

FIGURE 5.8 Weighted routing

FIGURE 5.9 Latency-based routing

Chapter 6

FIGURE 6.1 AWS CLI to create an Amazon EBS volume

FIGURE 6.2 Amazon EC2 instance with attached Amazon EBS volumes

FIGURE 6.3 AWS CLI with a rejected volume attachment

FIGURE 6.4 AWS CLI command to create snapshots

FIGURE 6.5 AWS CLI command to describe snapshots

FIGURE 6.6 Process to create an AMI from an instance store-backed instance

FIGURE 6.7 Amazon EFS create command

Chapter 7

FIGURE 7.1 The benefit of a managed service

FIGURE 7.2 Relational database tables with a shared key

FIGURE 7.3 The Instance Actions menu

FIGURE 7.4 DB Instance Class drop-down list

Chapter 9

FIGURE 9.1 Amazon CloudWatch integration

FIGURE 9.2 A threshold breach without a change in alarm state

Chapter 10

FIGURE 10.1 Demonstrates a queuing chain pattern

FIGURE 10.2 Short poll

FIGURE 10.3 Protocols supported by Amazon SNS

FIGURE 10.4 Fan-out scenario

FIGURE 10.5 Highly available three-tier architecture

FIGURE 10.6 Auto Scaling group

FIGURE 10.7 Unhealthy health check

FIGURE 10.8 No health check enabled

FIGURE 10.9 Health check for a complex failover

FIGURE 10.10 Evaluate target health

FIGURE 10.11 Redundant active-active VPN connections

FIGURE 10.12 AWS Direct Connect with redundant connections

FIGURE 10.13 AWS Direct Connect with backup VPN connection