

# AWS SysOps Associate Certification Training

## Course Agenda

### 1. Monitoring and Metrics

- Overview of Cloud Monitoring
- CloudWatch: key concepts
- CloudWatch: Logs
- AWS CloudTrail overview
- Third-party Monitoring apps
- Cloudwatch metrics
- CloudWatch Log analysis
- Cloudtrail logs
- Monitoring and Security
- Troubleshooting
- Quick quiz
- Lab
- ELB: Cross Zone load balancing
- ELB: Connection Draining
- ELB: Sticky Sessions
- ELB and databases
- AS: Main parts
- AS: Instance Health
- AS Termination policies
- AS: Steady Group
- AS: Typical lifecycle
- AS: Alarm sustain and cool down
- AS : Event hooks
- Route53: Concepts
- Route53: Record types
- Route53: Features
- Route53: Latency Based Routing
- Route53 and ELB
- Troubleshooting Scalability
- Quiz
- Lab

### 2. High Availability

- Scaling: overview
- Elastic Load Balancing overview
- Auto Scaling overview
- Route 53 overview
- Scaling Examples
- ELB: Creating
- ELB: How it Works

### 3. Analysis

- Cost reduction opportunities
- Tagging: overview: What tags are
- Tagging: CLI commands
- Tagging: Parameters and Restrictions
- Tagging: Examples of tags
- Tagging: Cost management
- Tagging: Billing (Demo included)
- Cloudwatch: Billing alarms
- Cost Explorer (Demo included)
- AWS Trusted Advisor
- Lab
- CloudFormation: Resources
- CloudFormation: Init
- CloudFormation: Init and User Data
- CloudFormation: WaitCondition
- CloudFormation: Outputs
- CloudFormation: Errors
- CloudFormation: Demo
- CloudFormation: Creating Base templates
- CloudFormation: Troubleshooting templates
- Lab

### 4. Deployment and Provisioning

- Cloud Deployments Overview
- Deployment with Auto Scaling
- Blue / Green Deployment
- Version Updates with Auto Scaling
- Overview of the technologies for automated deployment
- CloudFormation: Terminology
- CloudFormation: Structure of the template
- CloudFormation: Maintaining Templates
- CloudFormation: Working with Stacks
- CloudFormation: Ref functions
- CloudFormation: Parameters
- CloudFormation: Mappings

## 5. Data Management

- Introduction to the section
- EC2 volume/storage types
- EC2 EBS snapshots overview
- S3 overview
- Glacier overview
- Concepts of Data lifecycle on AWS
- Some storage limits important to know
- How to work with EBS volumes
- EBS RAID
- EBS Snapshots in details
- Using Amazon S3 in details
- S3 access (with console demo)
- Demo #2: create IAM group policy with Policy Generator
- S3 versioning
- S3 CORS
- S3 Reduced Redundancy storage
- Using Amazon Glacier (with demo #3)
- Storage Security
- EBS and encryption
- S3 and encryption
- Storage troubleshooting
- Storage Pricing
- Quiz
- Lab

## 6. Security

- IAM Overview
- IAM User Administration
- IAM Groups
- IAM User Permissions
- MFA
- Securing AWS Master Account

## 7. Networking

- Section overview
- Cloud Networking Basics
- VPC
- CIDR Notation
- Private IP Ranges and Limits for VPC
- VPC and Subnets
- VPC Custom Route Tables
- Default VPC
- VPC peering
- Connecting VPC and on-premises datacenter
- VPC hard and soft Limits
- Public and Private Subnets
- Configuring Subnets
- Bastion Host and security groups for it
- NAT: basic principles
- NAT: route tables
- NAT: NAT server and NAT Gateway
- NAT: High Availability design
- NAT: Port forwarding
- Security Groups limits
- VPC and DNS
- ENI
- Demo
- Security: overview
- Security: Security Groups and network ACL's
- Placement groups
- Troubleshooting
- Quiz
- Lab