Introduction

The AWS Certified Advanced Networking Specialty examination validates advanced technical skills and experience in designing and implementing AWS and hybrid IT network architectures at scale. This examination is for individuals who perform complex networking tasks, and validates an individual's ability to:

- Design, develop, and deploy cloud-based solutions using AWS
- Implement core AWS services according to basic architectural best practices
- Design and maintain network architecture for all AWS services
- Leverage tools to automate AWS networking tasks

Required Prerequisite Certification
- Valid AWS Associate Certification (*AWS Certified Solutions Architect — Associate, AWS Certified Developer — Associate,* or *AWS Certified Systems Operations Administrator — Associate*)

Recommended AWS Knowledge
- Professional experience using AWS technology
- AWS Security best practices
- AWS storage options and their underlying consistency models
- AWS networking nuances and how they relate to the integration of AWS services

Recommended General IT Knowledge
- Advanced networking architectures and interconnectivity options (e.g., IP VPN, MPLS/VPLS)
- Networking technologies within the OSI model, and how they affect implementation decisions
- Development of automation scripts and tools
- Design, implementation, and optimization of the following:
    - Routing architectures (including static and dynamic)
    - Multi-region solutions for a global enterprise
    - Highly available connectivity solutions (e.g., DX, VPN)
- CIDR and sub-netting (IPv4 and IPv6)
- IPv6 transition challenges
- Generic solutions for network security features, including WAF, IDS, IPS, DDoS protection, and Economic Denial of Service/Sustainability (EDoS).

Examination Preparation

These materials may be helpful for examination preparation:
- AWS Cloud Computing Whitepapers (aws.amazon.com/whitepapers)
- AWS Documentation (aws.amazon.com/documentation)

Examination Content

Response Types
There are two types of multiple-choice questions on the examination. One type has one correct response and 3-4 incorrect responses (distractors). The other type has two or more correct responses out of a total of 5-6 responses. Always choose the best response(s). Incorrect responses are plausible, and are designed to be attractive to candidates who do not know the correct response. Unanswered questions are scored as incorrect; there is no penalty for guessing.

Your examination may include non-scored questions that are placed on the test to gather statistical information. These questions will not be identified on the examination, and will not affect your score.

Content Outline
This examination blueprint includes weighting, test objectives, and example content. Example topics and concepts are included to clarify the test objectives. They should not be construed as a comprehensive listing of all of the content of this examination.

The table below lists the main content domains and their weighting on the examination.

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Domain	% of Examination
1.0 Design and implement hybrid IT network architectures at scale	23%
2.0 Design and implement AWS networks	29%
3.0 Automate AWS tasks	8%
4.0 Configure network integration with application services	15%
5.0 Design and implement for security and compliance	12%
6.0 Manage, optimize, and troubleshoot the network	13%
TOTAL	100%

Domain 1.0: Design and implement hybrid IT network architectures at scale
1.1 Implement connectivity for hybrid IT
1.2 Given a scenario, derive an appropriate hybrid IT architecture connectivity solution
1.3 Explain the process to extend connectivity using AWS Direct Connect
1.4 Evaluate design alternatives that leverage AWS Direct Connect
1.5 Define routing policies for hybrid IT architectures

Domain 2.0: Design and implement AWS networks
2.1 Apply AWS networking concepts
2.2 Given customer requirements, define network architectures on AWS
2.3 Propose optimized designs based on the evaluation of an existing implementation
2.4 Determine network requirements for a specialized workload
2.5 Derive an appropriate architecture based on customer and application requirements
2.6 Evaluate and optimize cost allocations given a network design and application data flow

Domain 3.0: Automate AWS tasks
3.1 Evaluate automation alternatives within AWS for network deployments
3.2 Evaluate tool-based alternatives within AWS for network operations and management

Domain 4.0: Configure network integration with application services
4.1 Leverage the capabilities of Route 53
4.2 Evaluate DNS solutions in a hybrid IT architecture
4.3 Determine the appropriate configuration of DHCP within AWS

4.4 Given a scenario, determine an appropriate load balancing strategy within the AWS ecosystem
4.5 Determine a content distribution strategy to optimize for performance
4.6 Reconcile AWS service requirements with network requirements

Domain 5.0: Design and implement for security and compliance
5.1 Evaluate design requirements for alignment with security and compliance objectives
5.2 Evaluate monitoring strategies in support of security and compliance objectives
5.3 Evaluate AWS security features for managing network traffic
5.4 Utilize encryption technologies to secure network communications

Domain 6.0: Manage, optimize, and troubleshoot the network
6.1 Given a scenario, troubleshoot and resolve a network issue