Introduction

The AWS Certified Solutions Architect–Professional (SAP-C01) exam is intended for individuals who perform a Solutions Architect–Professional role. This exam validates advanced technical skills and experience in designing distributed applications and systems on the AWS platform.

It validates an examinee's ability to:
- Design and deploy dynamically scalable, highly available, fault-tolerant, and reliable applications on AWS
- Select appropriate AWS services to design and deploy an application based on given requirements
- Migrate complex, multi-tier applications on AWS
- Design and deploy enterprise-wide scalable operations on AWS
- Implement cost-control strategies

Recommended AWS and General IT Knowledge and Experience
- Two or more years of hands-on experience designing and deploying cloud architecture on AWS
- Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment, and provisioning applications on AWS
- Ability to provide best practice guidance on the architectural design across multiple applications and projects of the enterprise
- Familiarity with a scripting language
- Familiarity with Windows and Linux environments
- Familiarity with AWS CLI, AWS APIs, AWS CloudFormation templates, the AWS Billing Console, and the AWS Management Console
- Explain and apply the five pillars of the AWS Well-Architected Framework
- Map business objectives to application/architecture requirements
- Design a hybrid architecture using key AWS technologies (e.g., VPN, AWS Direct Connect)
- Architect a continuous integration and deployment process

Exam Preparation

These training courses and materials may be helpful for examination preparation:

AWS Training: (aws.amazon.com/training)
- Advanced Architecting on AWS: 3-day instructor-led live or virtual course
- AWS Certification Exam Readiness Workshops: AWS Certified Solutions Architect–Professional: 1-day live course
- AWS Security Fundamentals: 1-day instructor-led live course
- AWS Well-Architected Training: 2-hour online training course
- EC2 Systems Manager: 2-hour online training course
- Migrating to AWS: 2-day instructor-led live or virtual course
- Deep Dive into Amazon Elastic Block Store (EBS): 1-hour online training course
- Deep Dive into Elastic File System (EFS): 1-hour online training course
- Migrating and Tiering Storage to AWS: 1-hour online training course

Suggested AWS Whitepapers (aws.amazon.com/whitepapers) Kindle and .pdf, and Other Materials
- AWS Security Best Practices whitepaper, August 2016

- AWS Well-Architected Framework whitepaper, November 2018
- Architecting for the Cloud AWS Best Practices whitepaper, October 2018
- Practicing Continuous Integration and Continuous Delivery on AWS Accelerating Software Delivery with DevOps whitepaper, June 2017
- Microservices on AWS whitepaper, September 2017
- Amazon Web Services: Overview of Security Processes whitepaper, May 2017
- Using Amazon Web Services for Disaster Recovery whitepaper, October 2014
- AWS Documentation for services, including but not limited to compute, management tools, storage, networking and content delivery, analytics, database, security, identity and compliance, and application integration web-pages
- AWS Architecture Center webpages

Exam Content

Response Types

There are two types of questions on the examination:
- **Multiple-choice:** Has one correct response and three incorrect responses (distractors).
- **Multiple-response:** Has two or more correct responses out of five or more options.

Select one or more responses that best complete the statement or answer the question. Distractors, or incorrect answers, are response options that an examinee with incomplete knowledge or skill would likely choose. However, they are generally plausible responses that fit in the content area defined by the test objective.

Unanswered questions will be scored as incorrect; there is no penalty for guessing.

Unscored Content

Your examination may include unscored items that are placed on the test to gather statistical information. These questions are not identified on the form, and do not affect your score.

Exam Results

The AWS Certified Solutions Architect–Professional (SAP-C01) is a pass or fail exam. The examination is scored against a minimum standard established by AWS professionals who are guided by certification industry best practices and guidelines.

Your results for the examination are reported as a score from 100 through 1000, with a minimum passing score of 750. Your score shows how you performed on the examination as a whole and whether you passed. Scaled scoring models are used to equate scores across multiple exam forms that may have slightly different difficulty levels.

Your score report contains a table of classifications of your performance at each section level. This information is designed to provide general feedback concerning your examination performance. The examination uses a compensatory scoring model, which means that you do not need to "pass" the individual sections, only the overall examination. Each section of the examination has a specific weighting, so some sections have more questions than others. The table contains general information, highlighting your strengths and weaknesses. Exercise caution when interpreting section-level feedback.

Content Outline

This exam guide includes weightings, test domains, and objectives only. It is not a comprehensive listing of the content on this examination. The table below lists the main content domains and their weightings.

Domain	% of Examination
1. Design for Organizational Complexity	12.5%
2. Design for New Solutions	31%
3. Migration Planning	15%
4. Cost Control	12.5%
5. Continuous Improvement for Existing Solutions	29%
TOTAL	**100%**

Domain 1: Design for Organizational Complexity

1.1. Determine cross-account authentication and access strategy for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements).

1.2. Determine how to design networks for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements).

1.3. Determine how to design a multi-account AWS environment for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements).

Domain 2: Design for New Solutions

2.1. Determine security requirements and controls when designing and implementing a solution.

2.2. Determine a solution design and implementation strategy to meet reliability requirements.

2.3. Determine a solution design to ensure business continuity.

2.4. Determine a solution design to meet performance objectives.

2.5. Determine a deployment strategy to meet business requirements when designing and implementing a solution.

Domain 3: Migration Planning

3.1. Select existing workloads and processes for potential migration to the cloud.

3.2. Select migration tools and/or services for new and migrated solutions based on detailed AWS knowledge.

3.3. Determine a new cloud architecture for an existing solution.

3.4. Determine a strategy for migrating existing on-premises workloads to the cloud.

Domain 4: Cost Control

4.1. Select a cost-effective pricing model for a solution.

4.2. Determine which controls to design and implement that will ensure cost optimization.

4.3. Identify opportunities to reduce cost in an existing solution.

Domain 5: Continuous Improvement for Existing Solutions

5.1. Troubleshoot solution architectures.

5.2. Determine a strategy to improve an existing solution for operational excellence.

5.3. Determine a strategy to improve the reliability of an existing solution.

5.4. Determine a strategy to improve the performance of an existing solution.

5.5. Determine a strategy to improve the security of an existing solution.

5.6. Determine how to improve the deployment of an existing solution.