

# AWS Academy Cloud Architecting

## Content resources

### Module 2: Introducing Cloud Architecting

[AWS Well-Architected](#)  
[Operational Excellence Pillar – AWS Well-Architected Framework](#)  
[Security Pillar – AWS Well-Architected Framework](#)  
[Reliability Pillar – AWS Well-Architected Framework](#)  
[Performance Efficiency Pillar – AWS Well-Architected Framework](#)  
[Cost Optimization Pillar – AWS Well-Architected Framework](#)  
[Sustainability Pillar – AWS Well-Architected Framework](#)  
[AWS Well-Architected Tool User Guide: What Is AWS Well-Architected Tool?](#)  
[AWS Well-Architected Tool](#)  
[What Is Infrastructure as Code?](#)  
[Choosing an AWS Database Service](#)  
[AWS Cloud Security](#)  
[AWS Global Infrastructure](#)  
[AWS Local Zones Locations](#)  
[Points of Presence](#)

### Module 3: Securing Access

[AWS Well-Architected](#)  
[AWS Well-Architected Framework – Appendix: Questions and Best Practices](#)  
[Security Pillar: Security Foundations](#)  
[AWS Identity and Access Management User Guide: Apply Least-Privilege Permissions](#)  
[AWS Identity and Access Management User Guide: AWS Security Credentials](#)  
[AWS Identity and Access Management User Guide: Security Best Practices in IAM](#)  
[AWS Identity and Access Management User Guide: Tasks that Require Root User Credentials](#)  
[AWS IAM Identity Center User Guide: What Is IAM Identity Center?](#)  
[AWS Identity and Access Management User Guide: Security Best Practices in IAM](#)  
[AWS Identity and Access Management User Guide: Testing IAM Policies with the IAM Policy Simulator](#)  
[AWS Identity and Access Management User Guide: Identity-Based Policies and Resource-Based Policies](#)  
[Service Authorization Reference: Actions, Resources, and Condition Keys for AWS Identity and Access Management \(IAM\)](#)  
[IPADDRESSGUIDE's CIDR to IPv4 Conversion](#)

## Module 4: Adding a Storage Layer with Amazon S3

[Amazon Simple Storage Service User Guide: What Is Amazon S3?](#)  
[Amazon Simple Storage Service User Guide: How Amazon S3 Works](#)  
[Amazon Simple Storage Service User Guide: Organizing Objects Using Prefixes](#)  
[Amazon Simple Storage Service API Reference: PutObject – See Also](#)  
[AWS CLI Command Reference: S3](#)  
[Amazon Simple Storage Service API Reference: PutObject](#)  
[Amazon Simple Storage Service User Guide: Uploading and Copying Objects Using Multipart Upload](#)  
[Amazon S3 Transfer Acceleration: Speed Comparison](#)  
[AWS Transfer Family User Guide: What Is AWS Transfer Family?](#)  
[Amazon S3 Pricing](#)  
[Amazon S3 Storage Classes](#)  
[Amazon Simple Storage Service User Guide: Expiring Objects](#)  
[Amazon Simple Storage Service User Guide: Creating Object Key Names](#)  
[Amazon Simple Storage Service User Guide: Categorizing Your Storage Using Tags](#)  
[Amazon Simple Storage Service User Guide: Using Versioning in S3 Buckets](#)  
[Amazon Simple Storage Service User Guide: Using Cross-Origin Resource Sharing \(CORS\)](#)  
[Amazon S3 Strong Consistency](#)  
[Amazon Simple Storage Service User Guide: Data Protection in Amazon S3](#)  
[Amazon Simple Storage Service User Guide: Protecting Data with Encryption](#)  
[AWS Services by Region](#)  
[Amazon Simple Storage Service User Guide: Amazon S3 Inventory](#)  
[AWS Pricing Calculator](#)  
[AWS Well-Architected](#)  
[AWS Well-Architected Framework – Appendix: Questions and Best Practices](#)  
[Security Pillar – AWS Well-Architected Framework](#)  
[Security Pillar: Data Protection](#)  
[Performance Efficiency Pillar – AWS Well-Architected Framework](#)  
[Cost Optimization Pillar – AWS Well-Architected Framework](#)  
[Reliability Pillar – AWS Well-Architected Framework](#)

## Module 5: Adding a Compute Layer by Using Amazon EC2

[Amazon Elastic Compute Cloud User Guide: Amazon Machine Images \(AMI\)](#)

[Amazon Elastic Compute Cloud User Guide: Linux AMI Virtualization Types](#)

[Amazon Elastic Compute Cloud User Guide: Instance Types](#)

[AWS Compute Optimizer User Guide: What Is AWS Compute Optimizer?](#)

[Amazon Elastic Compute Cloud User Guide: Run Commands on Your Linux Instance at Launch](#)

[AMS Advanced Application Developer's Guide: Application Maintenance Strategies](#)

[AMS Advanced Application Developer's Guide: Amazon EC2 instance mutability in AMS](#)

[Amazon Elastic Compute Cloud User Guide: Amazon EC2 Instance Store](#)

[Amazon Elastic Compute Cloud User Guide: Amazon EBS Volume Types](#)

[Amazon Elastic Compute Cloud User Guide: Amazon EBS-Optimized Instances](#)

[Amazon Elastic File System User Guide: What Is Amazon Elastic File System?](#)

[Amazon Elastic File System User Guide: Amazon EFS File System Types and Storage Classes](#)

[Amazon Elastic File System User Guide: Using the EFS Mount Helper to Mount EFS File Systems](#)

[Amazon Elastic File System User Guide: Mounting on Amazon EC2 Linux Instances Using the EFS Mount Helper](#)

[Amazon FSx for Windows File Server User Guide: What Is FSx for Windows File Server?](#)

[Security Pillar – AWS Well-Architected Framework](#)

[Performance Efficiency Pillar – AWS Well-Architected Framework](#)

[Cost Optimization Pillar – AWS Well-Architected Framework](#)

[Sustainability Pillar – AWS Well-Architected Framework](#)

## Module 6: Adding a Database Layer

[Amazon DynamoDB Developer Guide: Setting Up DynamoDB \(Web Service\)](#)

[Amazon DynamoDB Developer Guide: Core Components of Amazon DynamoDB](#)

[AWS Well-Architected](#)

## Module 7: Creating a Networking Environment

[What Is CIDR?](#)

[Amazon Virtual Private Cloud – AWS PrivateLink: AWS Services that Integrate with AWS PrivateLink](#)

[AWS Well-Architected](#)

## Module 8: Connecting Networks

[AWS Transit Gateway Pricing](#)

[AWS Global Accelerator: Speed Comparison](#)

[AWS Direct Connect Locations](#)

[Reliability Pillar – AWS Well-Architected Framework](#)

[Security Pillar – AWS Well-Architected Framework](#)

[Performance Efficiency – AWS Well-Architected Framework](#)

[Cost Optimization – AWS Well-Architected Framework](#)

## Module 9: Securing User, Application, and Data Access

[AWS Identity and Access Management User Guide: What Is ABAC for AWS?](#)  
[AWS Identity and Access Management User Guide – IAM tutorial: Define Permissions to Access AWS Resources Based on Tags](#)  
[Identity Federation in AWS](#)  
[AWS IAM Identity Center](#)  
[AWS Identity and Access Management](#)  
[Amazon Cognito](#)  
[AWS Identity and Access Management User Guide – Overview of AWS Identity Management: Users](#)  
[AWS IAM Identity Center User Guide: What Is IAM Identity Center?](#)  
[SAML V2.0 Standard](#)  
[Amazon Cognito Developer Guide: Access Your Server-Side Resources with a User Pool](#)  
[Amazon Cognito Developer Guide: User Pools](#)  
[Amazon Cognito Developer Guide: Features](#)  
[AWS Organizations User Guide: What Are AWS Organizations?](#)  
[AWS Organizations User Guide: Service Control Policies \(SCPs\)](#)  
[AWS Identity and Access Management User Guide: Policy Evaluation Logic](#)  
[AWS Control Tower FAQs](#)  
[AWS Prescriptive Guidance: When Do I Need Symmetric Encryption?](#)  
[AWS Prescriptive Guidance: When Do I Need Asymmetric Encryption?](#)  
[AWS Prescriptive Guidance: About Data Encryption](#)  
[Amazon Simple Storage Service User Guide: Protecting Data with Encryption](#)  
[AWS Key Management Service](#)  
[AWS Key Management Service Developer Guide: How AWS Services Use AWS KMS](#)  
[AWS Key Management Service Developer Guide: AWS KMS Concepts](#)  
[AWS Key Management Service Features](#)  
[Security, Identity, and Compliance on AWS](#)  
[AWS WAF, AWS Firewall Manager, and AWS Shield Advanced Developer Guide: What Are AWS WAF, AWS Shield, and AWS Firewall Manager?](#)  
[Amazon Macie User Guide: What Is Amazon Macie?](#)  
[Amazon Inspector User Guide: What Is Amazon Inspector?](#)  
[Amazon Detective Administration Guide: What Is Amazon Detective?](#)  
[AWS Security Hub](#)  
[AWS Security Hub Features](#)  
[AWS Support User Guide: AWS Trusted Advisor](#)

## Module 10: Implementing Monitoring, Elasticity, and High Availability

[Amazon EC2 Auto Scaling User Guide: What Is Amazon EC2 Auto Scaling?](#)  
[Amazon EC2 Auto Scaling User Guide: How Step Scaling Policies Work](#)  
[Amazon Aurora User Guide: Managing Performance and Scaling for Aurora DB Clusters](#)  
[What Is DNS?](#)  
[Amazon Route 53 Developer Guide: Configuring Amazon Route 53 as Your DNS Service](#)  
[Amazon Route 53 Developer Guide: Supported DNS Record Types](#)  
[Reliability Pillar – AWS Well-Architected Framework](#)  
[Performance Efficiency Pillar – AWS Well-Architected Framework](#)

## Module 11: Automating Your Architecture

[The Case for Investing in Cloud Automation](#)  
[Introduction to DevOps on AWS: Automation and Tooling](#)  
[What Is Infrastructure as Code?](#)  
[AWS CloudFormation](#)  
[AWS CloudFormation User Guide: AWS Resource and Property Types Reference](#)  
[What's the Difference Between YAML and JSON](#)  
[AWS CloudFormation User Guide: Template Anatomy](#)  
[AWS CloudFormation User Guide: AWS CloudFormation Designer Interface Overview](#)  
[AWS CloudFormation User Guide: Example Change Sets](#)  
[AWS CloudFormation User Guide: Updating Stacks Using Change Sets](#)  
[AWS CloudFormation User Guide: Resource Type Support](#)  
[AWS CloudFormation User Guide: Working with Nested Stacks](#)  
[AWS Quick Starts](#)  
[Serverless Image Handler on AWS](#)  
[CodeWhisperer User Guide: Getting Started](#)  
[Operational Excellence Pillar: Operational Excellence](#)  
[Security Pillar: Security Foundations](#)  
[Reliability Pillar: Reliability](#)  
[Cost Optimization Pillar: Cost Optimization](#)  
[AWS Well-Architected Framework](#)

## Module 12: Caching Content

[Let's Architect! Leveraging In-Memory Databases](#)  
[Caching Challenges and Strategies](#)  
[AWS Caching Solutions](#)  
[Amazon CloudFront Developer Guide: What Is Amazon CloudFront?](#)  
[Amazon CloudFront Key Features](#)  
[Deliver Content Faster with Amazon CloudFront](#)  
[Amazon CloudFront Developer Guide: Managing How Long Content Stays in the Cache \(Expiration\)](#)  
[Amazon Elastic Transcoder Documentation](#)  
[How to Help Protect Dynamic Web Applications against DDoS Attacks by Using Amazon CloudFront and Amazon Route 53](#)  
[Latency Reduction of Hybrid Architectures with Amazon ElastiCache](#)  
[Amazon ElastiCache Documentation](#)  
[Amazon ElastiCache User Guide: Caching Strategies](#)  
[Performance Efficiency Pillar: PERFO3-BP05 Implement Data Access Patterns that Utilize Caching](#)  
[Reliability Pillar: REL02-BP01 Use Highly Available Network Connectivity for Your Workload Public Endpoints](#)  
[Cost Optimization Pillar: COST08-BP01 Perform Data Transfer Modeling](#)  
[Cost Optimization Pillar: COST08-BP02 Select Components to Optimize Data Transfer Cost](#)  
[Cost Optimization Pillar: COST08-BP03 Implement Services to Reduce Data Transfer Costs](#)  
[AWS Well-Architected](#)

## Module 13: Building Decoupled Architectures

[Elastic Load Balancing User Guide: What Is Elastic Load Balancing?](#)  
[Implementing Microservices on AWS](#)  
[Amazon MQ Developer Guide: What Is Amazon MQ?](#)

## Module 14: Building Serverless Architectures and Microservices

[Serverless Patterns Collection](#)

[Amazon Elastic Container Service Developer Guide: What Is Amazon Elastic Container Service?](#)

[Amazon API Gateway Developer Guide: Choosing between REST APIs and HTTP APIs](#)

[Serverless Applications Lens – AWS Well-Architected Framework](#)

[Serverless on AWS](#)

## Module 15: Data Engineering Patterns

[AWS Glue User Guide: Detect and Process Sensitive Data](#)

[Amazon S3 Storage Classes](#)

[AWS Well-Architected Framework: Data Analytics Lens](#)

[Security Pillar – AWS Well-Architected Framework](#)

[Performance Efficiency Pillar – AWS Well-Architected Framework](#)

[Cost Optimization Pillar – AWS Well-Architected Framework](#)

[Security Pillar – AWS Well-Architected Framework](#)

## Module 16: Planning for Disaster

[Disaster Recovery \(DR\) Architecture on AWS, Part II: Backup and Restore with Rapid Recovery](#)

[Disaster Recovery \(DR\) Architecture on AWS, Part III: Pilot Light and Warm Standby](#)

[Disaster Recovery \(DR\) Architecture on AWS, Part IV: Multi-site Active/Active](#)

[AWS Well-Architected](#)

[AWS Well-Architected Framework – Appendix: Questions and Best Practices](#)

[Reliability Pillar: Plan for Disaster Recovery \(DR\)](#)

[AWS Well-Architected Framework: OPS 10. How Do You Manage Workload and Operations Events?](#)

[Security Pillar: SEC03-BP03 Establish Emergency Access Process](#)

[Introducing Global Endpoints for Amazon EventBridge](#)

## Module 17: Bridging to Certification

[AWS Certified Solutions Architect – Associate \(SAA-C03\) Exam Guide](#)

[AWS Certification](#)

[AWS Certified Solutions Architect – Associate](#)

[Exam Prep Official Practice Exam: AWS Certified Solutions Architect – Associate \(SAA-C03 - English\)](#)

[Exam Prep Enhanced Course: AWS Certified Solutions Architect – Associate \(SAA-C03\)](#)

[AWS Cloud Quest: Solutions Architect](#)

[Build Your Future in the AWS Cloud](#)

[AWS Well-Architected](#)

[AWS Architecture Center](#)

[Welcome to AWS Documentation](#)

[AWS FAQs](#)

[Getting Started with AWS](#)

[AWS Builder Labs](#)

[AWS Ramp-Up Guides](#)

[AWS Reference Architecture Diagrams](#)

[AWS Whitepapers & Guides](#)

[AWS Quick Starts](#)

[AWS Glue User Guide: Getting Started with the AWS Glue Data Catalog](#)

[Hands-on Tutorials](#)

[Decision Guides](#)

[AWS Ramp-Up Guide: Solutions Architect](#)

## AWS Educate courses

The Accessing AWS Educate document in your course resources provides details on how to set up an AWS Educate account and access courses.

The following self-paced Getting Started courses provide foundational learning on the architectural layers discussed in this course:

- Getting Started with Cloud Operations
- Getting Started with Security
- Getting Started with Storage
- Getting Started with Compute
- Getting Started with Databases
- Getting Started with Networking
- Getting Started with Serverless