

Detailed Role-Based Learning Paths

AWS offers 4 standard “learning paths” to help guide individuals to learn the AWS skills most relevant to their role:



Decision Making

Learn cloud fundamentals and best practices to help guide your leadership decisions.



Architecting

Learn to design applications and systems.



Developing

Learn to develop cloud applications.



Operations

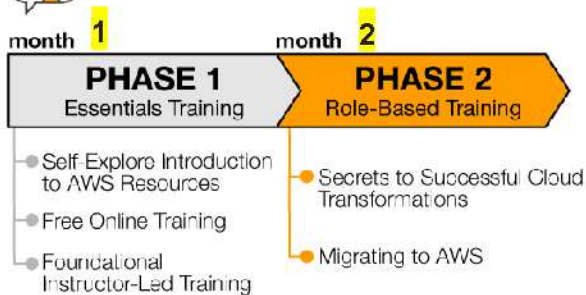
Learn to create automatable and repeatable deployments of applications, networks, and systems.

Decision Making Learning Path

Learn cloud fundamentals and best practices to help guide your leadership decisions.



Decision Making Learning Path



The Decision Making learning path is designed to help you learn the fundamentals so you can make effective decisions about cloud strategy for your organization. Training covers topics like organizational job roles and migration strategy. This path includes recommended training for both Business Decision Makers and Technical Decision Makers. Deep technical expertise is not required for this path.

Business Decision Makers are defined as business leaders contributing to cloud strategy and vision decisions. This includes C-level executives and line of business owners.

Technical Decision Makers are defined as technical professionals who are leaders in cloud implementation or management. This includes IT practice managers and IT directors.

Phase 1: Cloud Awareness and Essentials Training (month 1-3)

An Introduction to AWS

Video: [What is Cloud Computing? \(3 minutes\)](#)

A short introduction to Cloud Computing.

Whitepaper: [Overview of Amazon Web Services](#)

An overview of the advantages and benefits of cloud computing

Video: [AWS Chicago Summit 2016 Keynote](#)

An overview of the AWS ecosystem with customer case studies. Watch as much or as little as you choose (1h 24m, but the first 20 minutes gives a good overview of AWS).

Video: [AWS re:Invent 2016 Keynote](#)

Watch Andy Jassy, CEO of Amazon Web Services, deliver the latest news and announcements from AWS re:Invent 2016, including the launch of AWS products. Also, hear how ENEL, FINRA, McDonald's, and Workday are using AWS to transform their businesses.

“Introduction to...” Videos

Recommended for Technical Decision Makers. These videos provide a brief overview of popular services. Watch them to identify which services you'd like to explore further:

- Compute: [Introduction to Amazon EC2](#) (4 minutes)
- Storage: [Introduction to Amazon S3](#) (3 minutes)
- Data Archiving: [Introduction to Amazon Glacier](#) (3 minutes)

- Development: [Introduction to AWS Elastic Beanstalk](#) (3 minutes)
- Deployment: [Introduction to AWS CloudFormation](#) (3 minutes)
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- Database: [Introduction to Amazon RDS](#) (3 minutes)
- Data Warehouse: [Introduction to Amazon Redshift](#) (3 minutes)
- Big Data: [Introduction to Amazon Elastic MapReduce](#) (3 minutes)
- Streaming Data Capture: [Introduction to Amazon Kinesis](#) (2 minutes)
- Identity and Access Management: [Introduction to AWS IAM](#) (2 minutes)

Free, Online Training

[AWS Cloud Practitioner Essentials](#) (6 hours)

AWS Cloud Practitioner Essentials is intended for individuals who seek an overall understanding of the AWS Cloud, independent of specific technical roles. It provides a detailed overview of cloud concepts, AWS services, security, architecture, pricing, and support.

[Job Roles in the Cloud](#) (30 minutes)

Recommended for Technical Decision Makers. This self-paced course presents presumed job roles applicable to an enterprise-level AWS Cloud environment. It starts by presenting on-premises roles to be used as a comparison. It also covers what infrastructure as code is and how job roles can evolve depending upon adherence to a DevOps model using infrastructure as code.

[AWS Security Fundamentals](#) (3 hours)

Recommended for Technical Decision Makers. This self-paced course is designed to introduce you to fundamental cloud computing and AWS security concepts including AWS access control and management, governance, logging, and encryption methods. It also covers security-related compliance protocols and risk management strategies, as well as procedures related to auditing your AWS security infrastructure.

Foundational Instructor-Led Training

[AWS Technical Essentials](#) (1 day)

For Technical Decision Makers. Learn the foundations of cloud computing, storage, and networking on AWS in this one-day course for anyone who wants to get started using AWS.

[AWS Business Essentials](#) (1 day)

For Business Decision Makers. Learn about the benefits of cloud computing and how a cloud strategy can help you meet your business objectives.

Phase 2: Additional Training to Consider

Instructor-Led Training

[Secrets to Successful Cloud Transformations](#) (1 day)

For Business Decision Makers. Learn about the recommended strategy, people, migration plan, and financial management methodology for moving workloads to the cloud. This course will help you build a holistic cloud adoption plan and understand who you need to hire or train to execute that plan.

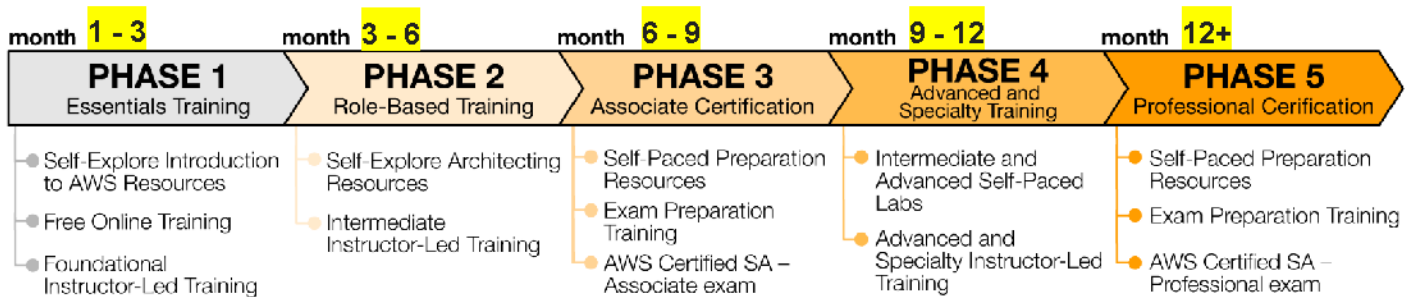
[Migrating to AWS](#) (2 days)

For Technical Decision Makers. Migrating to AWS focuses on planning and migrating existing workloads to the AWS Cloud. The course covers various cloud migration strategies with a detailed discussion on each phase of the migration process, including portfolio discovery, application migration planning and design, migration execution, and post-migration validation and application optimization.

Architecting Learning Path

Learn to design applications and systems.

Architecting Learning Path



The Architecting Learning Path is designed for individuals who want to learn to design scalable, highly available, and fault tolerant systems on AWS. This path is primarily for people who are in a Solutions Architect or Solution Design Engineer role.

The track is structured in a way so that an individual may start or stop working through the learning program at the appropriate point for them, based on their previous experience and current or desired certification level. The path includes requires a combination of self-study, self-paced labs, formal training, and certification exams.

Architecting using AWS requires more than training and study. We also encourage individuals to identify real-world projects to put their knowledge to work along the way. There is no substitute for hands-on experience at work.

Time for completion: It's estimated that approximately 4+ weeks per person over 12 months will need to be allowed for completing the Architecting Track.

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This lab takes you through how to automatically distribute incoming web traffic across multiple Amazon EC2 instances by using Elastic Load Balancing. We walk you through the process to create a basic load balancer, configure health checks, assign security groups, and review settings for your Elastic Load Balancer

[Introduction to AWS Identity and Access Management \(IAM\)](#)

This lab takes you through how to manage users and user permissions with IAM. You will practice how to centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access.

Free, Online Training

[AWS Cloud Practitioner Essentials](#) (6 hours)

AWS Cloud Practitioner Essentials is intended for individuals who seek an overall understanding of the AWS Cloud, independent of specific technical roles. It provides a detailed overview of cloud concepts, AWS services, security, architecture, pricing, and support.

[Job Roles in the Cloud](#) (30 minutes)

This self-paced course presents presumed job roles applicable to an enterprise-level AWS Cloud environment. It starts by presenting on-premises roles to be used as a comparison. It also covers what infrastructure as code is and how job roles can evolve depending upon adherence to a DevOps model using infrastructure as code.

[AWS Security Fundamentals](#) (3 hours)

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[Big Data Technology Fundamentals](#) (90 minutes)

This self-paced course provides baseline general knowledge of the technologies used in big data solutions. It covers the development of big data solutions using the Hadoop ecosystem, including MapReduce, HDFS, and the Pig and Hive programming frameworks. This web-based course helps you build a foundation for working with AWS services for big data solutions. This course is offered at no charge, and can be used on its own or to help you prepare for the Big Data on AWS instructor-led course.

Foundational Instructor-Led Training

[AWS Technical Essentials](#) (1 day)

Learn the foundations of cloud computing, storage, and networking on AWS in this one-day course for anyone who wants to get started using AWS.

Phase 2: Architecting Training

Self-Explore Resources for Architecting

Whitepaper: [Operational Checklists for AWS](#)

This paper is targeted at developers and architects who are looking for operational and architectural guidance from AWS to help assess their application's operational

readiness. It provides two checklists - Basic and Enterprise - so that you can evaluate your applications against a list of essential and recommended best practices and deploy them with confidence.

Whitepaper: [Architecting for the AWS Cloud: Best Practices](#)

This whitepaper provides prescriptive guidance to cloud architects so that they can build highly scalable and elastic applications optimized to run in AWS cloud. It discusses cloud concepts and highlights various design patterns and best practices.

Whitepaper: [AWS Well-Architected Framework](#)

The Well-Architected Framework enables you to assess and improve your cloud-based architectures to better understand the business impact of your design decisions. This paper addresses general design principles, as well as specific best practices and guidance in four conceptual areas (security, reliability, performance efficiency, and cost optimization). These four areas are defined as the pillars of the Well-Architected Framework. The framework provides a set of questions that allow you to assess an existing, or proposed architecture, and also provides a set of AWS best practices for each pillar. Using this framework in your architecture will help you produce more stable and efficient systems.

Intermediate Instructor-Led Training

[Architecting on AWS](#) (3 days)

This course covers the fundamentals of building IT infrastructure on AWS. The course is designed to teach solutions architects how to optimize the use of the AWS Cloud by understanding AWS services and how these services fit into cloud-based solutions

[Migrating to AWS](#) (2 days)

Migrating to AWS focuses on planning and migrating existing workloads to the AWS Cloud. The course covers various cloud migration strategies with a detailed discussion on each phase of the migration process, including portfolio discovery, application migration planning and design, migration execution, and post-migration validation and application optimization.

Phase 3: Solutions Architect – Associate Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

See the concepts covered on the exam to get a blueprint of what you need to study.

[Sample Questions](#)

Check your knowledge and pinpoint concepts and areas requiring more study.

[Study Guide](#)

The AWS Certified Solutions Architect Official Study Guide for the Associate exam will get you fully prepared through expert content, and real-world knowledge, key exam essentials, chapter review questions, access to interactive online learning environment, and much more. This official study guide, written by AWS experts, covers exam concepts, and provides key review on exam topics.

Whitepapers: Broaden your technical understanding with whitepapers written by the AWS team, independent analysts, and AWS partners.

[Architecting for the Cloud: AWS Best Practices](#)

[AWS Security Best Practices](#)

[Amazon Web Services: Overview of Security Processes](#)

[AWS Well-Architected Framework](#)

[Development and Test on AWS](#)

[Backup, Archive, and Restore Approaches Using AWS](#)

[Amazon Virtual Private Cloud Connectivity Options](#)

[How AWS Pricing Works](#)

Practice Exam

Test your knowledge online in a timed environment. Click [here](#) to register.

Exam Prep Training

Exam Prep Quest

We've packaged a [Self-Paced Labs Quest](#) specifically for the Solutions Architect – Associate exam.

Exam Prep Workshop

Learn exam strategies from a certified technical instructor. Enroll in [AWS Certification Exam Readiness Workshop: AWS Certified Solutions Architect - Associate](#).

AWS Certification Exam

AWS Certified Solutions Architect – Associate Exam

Click [here](#) to register for an exam in the AWS Training and Certification Portal.

Phase 4: Advanced Architecting and Specialty Training

Intermediate and Advanced Self-Paced Labs

[Building Your First Amazon Virtual Private Cloud \(VPC\)](#)

[Creating Amazon EC2 Instances](#)

[Working with Elastic Load Balancing](#)

[Maintaining High Availability with Auto Scaling \(for Linux\)](#)

[Working with Amazon CloudFront for Dynamic Content Acceleration](#)

[Working with Amazon DynamoDB](#)

Advanced and Specialty Instructor-Led Training

[Advanced Architecting on AWS](#) (3 days)

Learn how to build complex AWS solutions incorporating data services, governance, and security. Gain best practices for building scalable, elastic, secure, and highly available applications. Intended for experienced IT professionals who are already familiar with AWS services.

[Security Operations on AWS](#) (3 days)

Security Operations on AWS demonstrates how to efficiently use AWS security services to stay secure and compliant in the AWS Cloud. The course focuses on the AWS-recommended security best practices that you can implement to enhance the security of your data and systems in the cloud. This is a specialty course best suited for individuals who are responsible for governing, auditing, and testing an organization's IT infrastructure, and ensuring conformity of the infrastructure to security, risk, and compliance guidelines.

[Big Data on AWS](#) (3 days)

Big Data on AWS introduces you to cloud-based big data solutions such as Amazon EMR, Amazon Redshift, Amazon Kinesis and the rest of the AWS big data platform. This is a specialty course best suited for individuals responsible for designing and implementing big data solutions.

[Data Warehousing on AWS](#) (3 days)

Data Warehousing on AWS introduces you to concepts, strategies, and best practices for designing a cloud-based data warehousing solution using Amazon Redshift, the petabyte-scale data warehouse in AWS. This is a specialty course best suited for database architects, administrators, and developers, as well as data analysts and scientists.

[Building a Serverless Data Lake](#) (1 day)

Building a Serverless Data Lake is a one-day, advanced-level bootcamp designed to teach you how to design, build, and operate a serverless data lake solution with AWS services. This is a specialty course best suited for hands-on data analysis architects, analysts, and practitioners.

Phase 5: Solutions Architect – Professional Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

[Sample Questions](#)

Whitepapers: Broaden your technical understanding with whitepapers written by the AWS team, independent analysts, and AWS partners.

[Securing Data at Rest with Encryption](#)

[Web Application Hosting in the AWS Cloud](#)

[Migrating AWS Resources to a New Region](#)

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Exam Prep Training

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AWS Certification Exam

AWS Certified Solutions Architect – Professional Exam

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Developing Learning Path

Learn to develop cloud applications.



Developing Learning Path



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Foundational Instructor-Led Training

[AWS Technical Essentials](#) (1 day)

Learn the foundations of cloud computing, storage, and networking on AWS in this one-day course for anyone who wants to get started using AWS.

Phase 2: Developing Training

Self-Explore Resources for Developing

Whitepaper: [SDKs for Amazon Web Services](#)

This index highlights the primary SDKs, IDE Toolkits, and Command Line Tools for developing and managing your AWS applications.

Videos: [Developer Tools & SDKs from AWS re:Invent 2014](#)

A series of videos focusing on developing applications that take advantage of AWS, including SDKs, the AWS command-line interface and automating the software delivery pipeline.

Self-Paced Lab: [Programming Amazon DynamoDB with .NET](#)

This lab will provide a further understanding of using the AWS Toolkit for .NET and

leveraging Amazon DynamoDB for application development. It will demonstrate the basic steps required to install Visual Studio Community Edition and the AWS Toolkit for Visual Studio and to build an application in C# that leverages DynamoDB using the AWS SDK for .NET. To successfully complete this lab, you should be familiar with Visual Studio for C# and have a basic knowledge of launching and connecting to Windows systems in AWS.

Self-Paced Lab: [Deploy a Java EE App on AWS Elastic Beanstalk Using Docker Containers](#)

This lab demonstrates how to install a Java EE application into JBoss Wildfly, running in a custom Docker Container and then deploy your container to AWS Elastic Beanstalk.

Intermediate Instructor-Led Training

[Developing on AWS](#) (3 days)

Developing on AWS helps developers understand how to use the AWS SDK to develop secure and scalable cloud applications. The course provides in-depth knowledge about how to interact with AWS using code and covers key concepts, best practices, and troubleshooting tips.

Phase 3: Developer – Associate Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

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[Sample Questions](#)

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[AWS Well-Architected Framework](#)

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AWS Certification Exam

AWS Certified Developer – Associate Exam

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Phase 4: Advanced Developing, DevOps, and Specialty Training

Intermediate and Advanced Self-Paced Labs

[Building Your First Amazon Virtual Private Cloud \(VPC\)](#)
[Working with AWS Elastic Beanstalk](#)
[Building a Media Sharing Website – Part 1: Media Upload](#)
[Building a Media Sharing Website – Part 2: Transcoding](#)
[Building Search into your Applications with Amazon CloudSearch](#)
[Blue/Green Deployment Pattern with AWS Elastic Beanstalk](#)
[Working with AWS CloudFormation](#)
[Automating AWS Services with Scripting and the AWS CLI](#)

Self-Explore Resources for DevOps

Website: [What is DevOps?](#)

Whitepapers:

[Introduction to DevOps on AWS](#)

[Overview of Deployment Options on AWS](#)

Knowledge Check: [Are You Ready for DevOps Engineering on AWS Training?](#)

Advanced and Specialty Instructor-Led Training

[DevOps Engineering on AWS](#) (3 days)

DevOps Engineering on AWS demonstrates how to use the most common DevOps patterns to develop, deploy, and maintain applications on AWS. The course covers the core principles of the DevOps methodology and examines a number of use cases applicable to startup, small and medium-sized business, and enterprise development scenarios.

[Building a Serverless Data Lake](#) (1 day)

Building a Serverless Data Lake is a one-day, advanced-level bootcamp designed to teach you how to design, build, and operate a serverless data lake solution with AWS services. This is a specialty course best suited for hands-on data analysis architects, analysts, and practitioners.

[Running Container-Enabled Microservices on AWS](#) (1 day)

Running Container-Enabled Microservices on AWS is designed to teach you how to manage and scale container-enabled applications by using Amazon EC2 Container Service (ECS). This is a specialty course best suited for individuals looking to learn more about running containerized applications at scale.

Phase 5: DevOps Engineer – Professional Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

[Sample Questions](#)

Whitepapers: Broaden your technical understanding with whitepapers written by the AWS team, independent analysts, and AWS partners.

[Encrypting Data at Rest](#)

[Web Application Hosting in the AWS Cloud](#)

[Migrating AWS Resources to a New Region](#)

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AWS Certification Exam

AWS Certified DevOps Engineer – Professional Exam

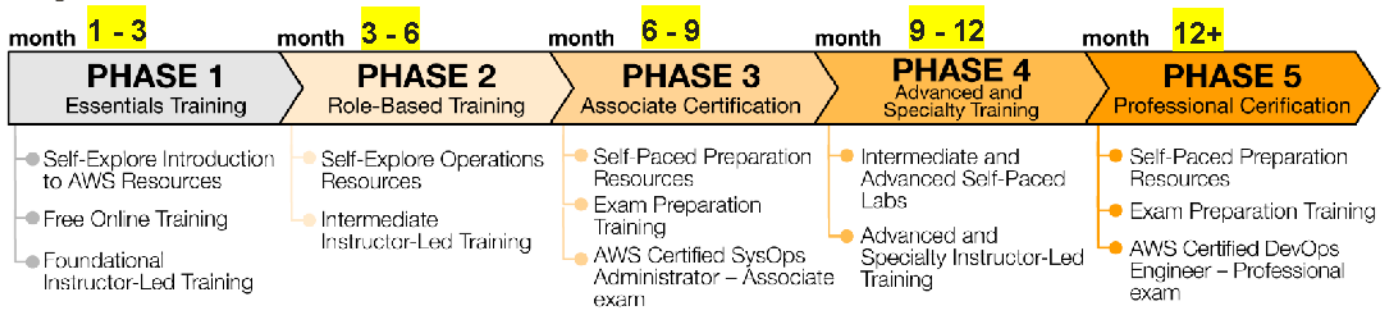
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Operations Learning Path

Learn to create automatable and repeatable deployments of applications, networks, and systems.



Operations Learning Path



The Operations Learning Path is designed for individuals who want to learn how to create automatable and repeatable deployments of applications, networks, and systems on the AWS platform, and for those who want to continue to learn about common DevOps practices. This path is primarily for sysops administrators, systems administrators, and individuals in a DevOps role.

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Time for completion: It's estimated that approximately 3+ weeks per person over 12 months will need to be allowed for completing the Operations Learning Path.

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[Introduction to AWS CloudFormation](#)

In this lab, you will use a pre-configured sample template that creates an Amazon EC2 instance and installs WordPress with a local MySQL database for storage on it. You will then clean up your resources by deleting the stack.

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This self-paced course presents presumed job roles applicable to an enterprise-level AWS Cloud environment. It starts by presenting on-premises roles to be used as a comparison. It also covers what infrastructure as code is and how job roles can evolve depending upon adherence to a DevOps model using infrastructure as code.

[AWS Security Fundamentals](#) (3 hours)

This self-paced course is designed to introduce you to fundamental cloud computing and AWS security concepts including AWS access control and management, governance, logging, and encryption methods. It also covers security-related compliance protocols and risk management strategies, as well as procedures related to auditing your AWS security infrastructure.

Foundational Instructor-Led Training

[AWS Technical Essentials](#) (1 day)

Learn the foundations of cloud computing, storage, and networking on AWS in this one-day course for anyone who wants to get started using AWS.

Phase 2: Operations Training

Self-Explore Resources for Operations

Whitepaper: [Overview of Deployment Options on AWS](#)

AWS provides number of options for provisioning of infrastructure and deployment of applications. Each service has a unique approach for managing application deployments and offers various strategies for updating your application. This whitepaper is intended

for anyone looking for information on different deployment options in AWS. It lays out common features available in deployment services (such as AWS Elastic Beanstalk, AWS CloudFormation, AWS OpsWorks and AWS CodeDeploy), articulates strategies for updating application stacks, and presents few examples of hybrid deployment models for complex workloads

Whitepaper: [ITIL Asset and Configuration Management in the Cloud](#)

Cloud initiatives require more than just the right technology. They also must be supported by organizational changes, such as people and process changes. This paper is intended for IT service management (ITSM) professionals who are supporting a hybrid cloud environment that leverages AWS. It outlines best practices for asset and configuration management, a key area in the IT Infrastructure Library (ITIL), on the AWS cloud platform.

Self-Paced Lab: [Working with AWS CloudFormation](#)

This lab will demonstrate how to work with AWS CloudFormation, which are JSON templates that define the AWS resources, and any associated dependencies or runtime parameters required to run your application. You can use the templates to quickly deploy your defined environment to AWS.

Self-Paced Lab: [Automating AWS Services with Scripting and the AWS CLI](#)

This lab demonstrates how to access and manage AWS services in three ways: through the AWS Management Console, the AWS Command Line Interface (CLI), and the AWS Software Development Kit (SDK). You will use one or more of these three options to access Amazon S3, Amazon EBS, Amazon EC2 and Amazon CloudWatch.

Self-Paced Lab: [Introduction to AWS Elastic Beanstalk](#)

This lab teaches you about AWS Elastic Beanstalk and leads you through the steps to launch an application using Elastic Beanstalk in the AWS Management Console.

Intermediate Instructor-Led Training

[Systems Operations on AWS](#) (3 days)

System Operations on AWS is designed to teach you how to create automatable and repeatable deployments of networks and systems on the AWS platform. The course covers the specific AWS features and tools related to configuration and deployment, as well as common techniques used throughout the industry for configuring and deploying systems.

Phase 3: SysOps Administrator – Associate Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

See the concepts covered on the exam to get a blueprint of what you need to study.

[Sample Questions](#)

Check your knowledge and pinpoint concepts and areas requiring more study.

Whitepapers: Broaden your technical understanding with whitepapers written by the AWS team, independent analysts, and AWS partners.

[Architecting for the Cloud: AWS Best Practices](#)

[AWS Security Best Practices](#)

[Amazon Web Services: Overview of Security Processes](#)

[AWS Well-Architected Framework](#)

[Development and Test on AWS](#)

[Backup and Recovery Approaches Using AWS](#)

[Amazon Virtual Private Cloud Connectivity Options](#)

[How AWS Pricing Works](#)

[Managing your AWS Infrastructure at Scale](#)

Practice Exam

Test your knowledge online in a timed environment. Click [here](#) to register.

Exam Prep Training

Exam Prep Quest

We've packaged a [Self-Paced Labs Quest](#) specifically for the SysOps Administrator – Associate exam.

AWS Certification Exam

AWS Certified SysOps Administrator – Associate Exam

Click [here](#) to register for an exam in the AWS Training and Certification Portal.

Phase 4: Advanced Operations, DevOps, and Specialty Training

Intermediate and Advanced Self-Paced Labs

[Working with AWS CloudFormation](#)

[Working with Amazon Elastic Block Store \(EBS\)](#)

[Working with Amazon EC2 Container Service](#)

[Building Amazon EBS-Backed AMIs](#)

[Maintaining High Availability with Auto Scaling \(for Linux\)](#)

[Working with AWS OpsWorks](#)

[Blue/Green Deployment Pattern with AWS Elastic Beanstalk](#)

[Working with AWS CloudFormation](#)

[Automating AWS Services with Scripting and the AWS CLI](#)

Self-Explore Resources for DevOps

Website: [What is DevOps?](#)

Whitepapers:

[Introduction to DevOps on AWS](#)

[Overview of Deployment Options on AWS](#)

Knowledge Check: [Are You Ready for DevOps Engineering on AWS Training?](#)

Advanced and Specialty Instructor-Led Training

[DevOps Engineering on AWS](#) (3 days)

DevOps Engineering on AWS demonstrates how to use the most common DevOps patterns to develop, deploy, and maintain applications on AWS. The course covers the core principles of the DevOps methodology and examines a number of use cases applicable to startup, small and medium-sized business, and enterprise development scenarios.

[Security Operations on AWS](#) (3 days)

Security Operations on AWS demonstrates how to efficiently use AWS security services to stay secure and compliant in the AWS Cloud. The course focuses on the AWS-recommended security best practices that you can implement to enhance the security of your data and systems in the cloud. This is a specialty course best suited for individuals who are responsible for governing, auditing, and testing an organization's IT infrastructure, and ensuring conformity of the infrastructure to security, risk, and compliance guidelines.

Phase 5: DevOps Engineer – Professional Exam Preparation and Completion

Self-Paced Preparation Resources

[Exam Guide](#)

[Sample Questions](#)

Whitepapers: Broaden your technical understanding with whitepapers written by the AWS team, independent analysts, and AWS partners.

[Encrypting Data at Rest](#)

[Web Application Hosting in the AWS Cloud](#)

[Migrating AWS Resources to a New Region](#)

Practice Exam: Test your knowledge online in a timed environment. Click [here](#) to register.

AWS Certification Exam

AWS Certified DevOps Engineer – Professional Exam

Click [here](#) to register for an exam in the AWS Training and Certification Portal.

