

What Is the Recommended List of AWS Whitepapers? "

<https://www.knowledgehut.com/blog/cloud-computing/recommended-aws-whitepapers>)

1. AWS Certified Cloud Practitioner Certification Exam

[AWS Certified Cloud Practitioner Certification](#) is the foundational level certification exam that will help you validate your skills and knowledge of the AWS cloud. Also, it is a prerequisite alternative for some of the AWS specialty exams. The following whitepapers are recommended for this course:

- [Overview of Amazon Web Services](#) – Covers all the cloud-based products offered by AWS for computing, storing, networking, analysis, databases, developing, managing, security, IoT, etc.
- [Architecting for the Cloud](#) – This whitepaper provides advice and guidance on architecture and how it is applied in cloud computing. You will be introduced to all the basic concepts required to design AWS solutions.
- [How AWS Pricing works](#) – In this whitepaper, you will learn about how AWS services are priced. It covers on-demand, reservation-based, pay-as-you-go payment model that provides the best ROI.

2. AWS Certified Solutions Architect – Associate

[AWS Solutions Architect certification exam](#) validates your skills in designing distributed applications. This includes knowledge of building secure and reliable applications using the AWS platform, troubleshooting, disaster recovery, data security practices, deployment of hybrid systems, etc. To prepare for this certification exam, you must study the following AWS whitepaper:

- [AWS Well-Architected](#) – This whitepaper was created to help the cloud architects in building resilient, efficient, high-performing, and secure infrastructure for their system and applications. The framework provided by the AWS is based on the five pillars – Reliability, Operational Excellence, Performance Efficiency, and Cost Optimization. With this whitepaper, you will be able to learn how to use a consistent approach for evaluating architectures and implementing designs.

3. AWS Certified Developer- Associate

[AWS Developer certification](#) is an associate-level certification is all about developing and maintaining applications using the AWS platform. This also covers other AWS services like storage, databases, workflow, notifications, and change management services. To ace this certification exam, you need to go through the following AWS whitepapers:

- [AWS Security Best Practices](#) – It is for professionals working on designing and configuring the infrastructure and applications deployed on the AWS platform. It includes the best practices used in defining the Information Security Management System (ISMS) for protecting your data and assets.
- [Practicing Continuous Integration and Continuous Delivery on AWS](#) – It covers the concepts and advantages of continuous integration and continuous delivery used as a part of the DevOps initiative.
- [Implementing Microservices on AWS](#) – This whitepaper includes how to use microservices for speeding up deployment cycles, improving scalability and maintainability, etc.
- [Serverless Architecture with AWS Lambda](#) – This whitepaper aims to give an overview of AWS lambda and the best practices used to build serverless applications on AWS.
- [Optimizing Enterprise Economics with Serverless Architecture](#) – This whitepaper is created to help the senior architects, Chief Technology Officers (CTOs), and Chief Information Officers (CIOs) get an understanding of the impact of serverless architecture on IT economics, team agility, and market.

- [Running Containerized Microservices on AWS](#) – It guides developers and architects on running containerized applications on the AWS platform. This includes security, lifecycle management, and architectural design patterns for containerized applications deployed on the AWS.
- [Blue/Green Deployments on AWS](#) – This whitepaper covers the Blue/Green deployment technique that shifts traffic between identical environments of application's different versions to release application.

4. AWS Certified SysOps Administrator - Associate

Created for system administrators, [AWS SysOps Administrator certification](#) requires knowledge in operational as well as technical aspects of AWS. You must know how to deploy applications on the AWS platform, transfer data between data centers and the AWS, select the right AWS service, secure and manage the system. You can try the following whitepapers to get a better grasp of these concepts:

- [Architecting for the Cloud](#) – Made for developers and solutions architects, this whitepaper includes concepts on how to build solutions that can be deployed on the AWS platform. You will be learning about the benefits of attributes specific to cloud computing like infrastructure automation and elasticity.
- [Amazon Web Services: Overview of Security Processes](#) – This whitepaper covers the operational security and physical processes that are used for describing the server and network architecture of the AWS platform. You will be learning how to ensure the security of the data and application deployed on the AWS platform.
- [Development and Test on Amazon Web Services](#) – In this whitepaper, you will learn how AWS adds value to the different aspects of the software development cycle. For development, it will cover how to manage version control, project management tools, AWS environment, build process, and the best practices used on the AWS platform. For the test, it includes managing testing environment, running tests like fault tolerance testing, acceptance testing, load testing, etc. Studying this whitepaper will help you select the right scenario for your project. This whitepaper is meant for project managers, system architects, developers, and testers.
- [Backup, Archive and Restore approaches on AWS](#) – This whitepaper deals with solutions used for backing up your data on the cloud. There are discussions on the best practices used for protecting data on the AWS platform. You will learn about backing up, archiving, and restoring data. This whitepaper is meant for IT administrators, backup architects, and solutions architects that are working in the field of securing data in the IT environment.
- [Amazon Virtual Private Cloud Connectivity Options](#) – Created for Amazon VPC administrators, corporate network engineers, and architects, this whitepaper reviews the connectivity options available on the AWS. You will get an overview of all the options that can be used for facilitating network connectivity.

5. AWS Certified Solutions Architect – Professional

For [AWS Solutions Architect – Professional certification](#), a candidate must know best practices used for implementing AWS-based applications and cost-optimization. Also, they must have the skills required for migrating complex applications to the AWS platform and must be able to make architectural recommendations. Go through the following whitepapers to prepare for this certification exam:

- [Encrypting Data at Rest](#) – This whitepaper covers all the government or industry regulations, organizational policies involved in encryption at rest for protecting the data. You will learn about the different options that you can use for data encryption at rest available today.
- [Web Application Hosting in the AWS Cloud](#) – Meant for System architects and IT managers working to use the cloud for achieving scalability for meeting their computing needs, this whitepaper covers methods for achieving scalable and highly available web hosting.
- [Migrating AWS resources to a new AWS Region](#) – This whitepaper is created for customers of AWS who want to transfer their existing resources to a new region of AWS. It is not a definitive guide containing steps for the migrating process. However, it contains different methods and options that you can use for migrating different services to a new region.

6. AWS Certified DevOps Engineer – Professional

This certification demonstrates your skills of provisioning, managing, and operating applications on the AWS platform. It focuses on the fundamentals of using the DevOps movement required for automating processes and continuous delivery. You must know about implementing different methodologies used for automating the production operations. Here is a list of whitepapers you need to study to ace [AWS DevOps Engineer – Professional certification](#):

- [Microservices on AWS](#) – In this whitepaper, you will learn how to use microservices as an organizational and architectural approach for development. All the characteristics of microservices are summarized in this whitepaper including the challenges faced while building microservices. You will also learn how you can leverage the AWS as a product team to overcome these challenges.
- [Running Containerized Microservices on AWS](#) – In this whitepaper, there are discussions about the best architectural practices used for adopting containers on AWS. You will learn about leveraging the Microservices' principles of Martin Fowler and mapping them to real-life considerations and twelve-factor app pattern. With this whitepaper, you will be able to use the best software design patterns and practices to build microservices.
- [Infrastructure as Code](#) – This whitepaper covers the Infrastructure as Code, the best practice used for automating the provision of infrastructure services. It covers the advantages of using Infrastructure as Code and leveraging the AWS's capabilities for supporting the DevOps initiatives. This practice acts as a catalyst to attain a velocity that is more responsive to customer's needs.

7. AWS Certified Big Data – Specialty

[AWS Big Data – Specialty certification](#) is for professionals working in the field of data analysis with experience in designing and architecting big data solutions. You must have the skills in using the AWS tools for automating the process of data analysis, security practices, architectural practices, designing and maintaining big data, etc. Following is a list of whitepapers that will help you prepare for this certification exam:

- [Streaming Data Solutions on AWS with Amazon Kinesis](#) – This whitepaper is created for data analysts, data engineers, and big data developers who want to shift from batch to real-time analytics. It covers the analytics' evolution and how AWS services like Amazon Kinesis Analytics, Amazon Kinesis Firehose, and Amazon Kinesis Streams can be used for implementing real-time applications.
- [Big Data Analytics Options on AWS](#) – It covers big data analytics services offered by the AWS cloud. Created for data scientists, architects, and developers, this whitepaper ends with scenarios showcasing the different analytics options in working.
- [AWS Database Migration Service Best practices](#) – This paper gives an overview of all the best practices used for AWS DMS. This service allows the organization to minimize their associated downtime while changing database engines and migrating the database workloads to the AWS platform.
- [Migrating Applications to AWS](#) – In this whitepaper, you will learn how to use AWS Data Migration Service and AWS Schema Conversion Tool for transferring the on-premise database to the Amazon Relational Database Service. It covers all the features and benefits of using these tools and a step-by-step guide for migrating the database to the Amazon RDS. There are discussions on data migration and schema processes irrespective of the target database.

8. AWS Certified Advanced Networking - Specialty

To ace [AWS Advanced Networking - Specialty certification](#), you must know how to use the AWS platform for performing complex networking tasks using the hybrid IT networking architecture. You should know how to architect and implement network solutions using AWS services. Also, you must be an expert in implementing

compliance, automating tasks, optimizing the network, troubleshooting, etc. The following list of whitepapers will help you prepare for this exam:

- [AWS Best Practices for DDoS Resiliency](#) – This whitepaper will help you improve the application's resiliency against the Distributed Denial of Service attacks. You will be learning about the attacks, the capabilities of AWS, DDoS-resilient reference architecture, and migration techniques. This paper is created for security engineers and IT decision-makers working in the field of security, networking, and AWS.
- [An Introduction to High-Performance Computing on AWS](#) – In this paper, you will cover the benefits of using HPC workloads for computing on AWS. You will learn about how cloud services are used by organizations for gaining access to the most advanced computing capabilities.
- [Integrating AWS with Multiprotocol Label Switching](#) - This whitepaper covers the best high-availability architectural practices used for integrating the Amazon Virtual Private Cloud to the Multiprotocol Label Switching network.

9. AWS Certified Security – Specialty

To prepare for [AWS Security – Specialty certification](#), you must know the basics of security and the security services offered on the AWS platform like data encryption, identity, and access management, monitoring, incident response, logging, data protection, etc. Here is a list of whitepapers that will help you get a clear understanding of the above-mentioned concepts:

- [AWS Key Management Service Best Practices](#) – This whitepaper covers the usage of AWS KMS, the difference between different customer master keys, auditing the use of keys, ensuring least privilege using AWS KMS key policies, etc.
- [AWS Security Best Practices](#) – In this whitepaper, you will get an overview of topics like identifying, protecting, and categorizing assets of AWS and managing the AWS resources' accessing details. You will also learn how you can secure data, application, operating system and the infrastructure.
- [Security at Scale: Governance in AWS](#) - This whitepaper will help you learn how to use the resources of AWS to achieve high-level governance. You will go through the features and governance related to the services of AWS. Using the AWS platform for building your integrated environment is also covered in this whitepaper.
- [Security at Scale: Logging in AWS](#) – This whitepaper covers all the logging requirements of common compliance. You will also learn about all the features of AWS CloudTrail and how it satisfies the logging requirement.
- [AWS Security Best Practices](#) – This whitepaper provides an overview of security topics like identification, categorization, and protection of assets on AWS, management of access to AWS resources, and discussions on different ways used for securing data, operating system, application, and the overall infrastructure.
- [Security at Scale: Governance in AWS](#) - This paper covers methods of achieving high-level governance using the AWS resources. With the help of this paper, you will be able to understand the features of security and governance incorporated in the AWS services and how you can build your integrated environment on the AWS platform.
- [Security at Scale: Logging in AWS](#) – With this whitepaper, you will get a complete overview of the requirements of common compliance in relation to logging. Apart from this, you will also learn about the different features of AWS CloudTrail and how it can be used for satisfying the logging requirements.

10. AWS Certified Machine Learning – Specialty

This [AWS Machine Learning – Specialty certification](#) is for professionals who know how to create, implement, and maintain Machine Learning solutions. The exam validates your skills to design secure, reliable, cost-optimized, and scalable solutions for machine learning problems. You should also know how to identify the right AWS service. The following whitepapers will help you ace this certification:

- [Machine Learning Foundations](#) – This paper will help create a foundation of Machine Learning and Artificial Intelligence and how technicians and researchers can use AWS services for deploying machine learning solutions.

- [Managing Machine Learning Projects](#) – This whitepaper covers the best practices used to manage machine learning projects. You will learn to manage and mitigate the risks involved in the deliverance of the complex machine learning systems. It is intended for software development engineers, data scientists, managers, and business stakeholders.
- [Power Machine Learning at Scale](#) – It includes the best practices used for the execution of machine learning workflows. You will learn about the recommended solutions, challenges, and end-to-end considerations as well as execution of parallelized modeling at scale thorough high-performance computing on AWS.

These whitepapers will aid in expanding the knowledge of the AWS cloud. The technical content of these whitepapers including the guides, reference material, and reference architecture diagrams is written by the AWS community.