**Module 01: Architecting Fundamentals**

[Global infrastructure - Overview of Amazon Web Services](https://docs.aws.amazon.com/whitepapers/latest/aws-overview/global-infrastructure.html)

[AWS re:Invent 2018: Foundations of AWS Global Cloud Infrastructure (ARC217)](https://www.youtube.com/watch?v=gH46jrFfiCc)

[Global Infrastructure](https://aws.amazon.com/about-aws/global-infrastructure/)

**AWS Datacenter**

[Data Centers - Our Controls](https://aws.amazon.com/compliance/data-center/controls/)

[AWS re:Invent 2022 - Dive deep on AWS networking infrastructure (NET402)](https://www.youtube.com/watch?v=HJNR_dX8g8c)

**AWS Availability Zones**

[Regions and Zones - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html)

[AWS re:Invent 2022 - Operating highly available Multi-AZ applications (ARC329)](https://www.youtube.com/watch?v=mwUV5skJJ0s)

**AWS Region**

[Regions, Availability Zones, and Local Zones - Amazon Relational Database Service](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.RegionsAndAvailabilityZones.html)

[AWS re:Invent 2022 - Multi-Region design patterns and best practices (ARC306)](https://www.youtube.com/watch?v=ilgpzlE7Hds)

**AWS Local Zones**

[What is AWS Local Zones? - AWS Local Zones](https://docs.aws.amazon.com/local-zones/latest/ug/what-is-aws-local-zones.html)

[AWS re:Invent 2022 - AWS Local Zones: Building applications for a distributed edge (HYB202)](https://www.youtube.com/watch?v=bDnh_d-slhw)

**AWS Edge locations**

[Edge location - AWS Well-Architected Framework](https://wa.aws.amazon.com/wellarchitected/2020-07-02T19-33-23/wat.concept.edge-location.en.html)

[AWS Summit DC 2022 - Reinvent hybrid and edge: Extend AWS to your environments](https://www.youtube.com/watch?v=YFUXagI4i64)

**AWS Well-Architected Framework pillars**

[AWS Well-Architected Framework - AWS Well-Architected Framework](https://docs.aws.amazon.com/wellarchitected/latest/framework/welcome.html)

[AWS re:Invent 2022 - The well-architected way (ARC210)](https://www.youtube.com/watch?v=nOKvA8HykW8)

**AWS Well-Architected Tool**

[What is AWS Well-Architected Tool? - AWS Well-Architected Tool](https://docs.aws.amazon.com/wellarchitected/latest/userguide/intro.html)

[AWS re:Invent 2022 - Cloud optimization with Trusted Advisor and AWS Well-Architected Tool (SUP307)](https://www.youtube.com/watch?v=xOQzhagC9hA)

**Module 02: Account Security**

**AWS account root user**

[AWS account root user - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_root-user.html)

[AWS re:Invent 2022 - Reimagining multi-account deployments for security and speed (NFX305)](https://www.youtube.com/watch?v=MKc9r6xOTpk)

**AWS Identity and Access Management (IAM)**

[What is IAM? - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html)

[AWS re:Invent 2018: [REPEAT 1] Become an IAM Policy Master in 60 Minutes or Less (SEC316-R1)](https://www.youtube.com/watch?v=YQsK4MtsELU)

**AWS Principals**

[AWS JSON policy elements: Principal - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_elements_principal.html)

[AWS re:Inforce 2023 - A first-principles approach: AWS Identity and Access Management (IAM) (IAM201)](https://www.youtube.com/watch?v=z-tbVVojMp0)

**AWS IAM users**

[Overview of AWS identity management: Users - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction_identity-management.html)

[AWS re:Inforce 2022 - AWS Identity and Access Management (IAM) deep dive (IAM301)](https://www.youtube.com/watch?v=YMj33ToS8cI)

**Granting programmatic access**

[Granting programmatic access - Amazon WorkSpaces Web](https://docs.aws.amazon.com/workspaces-web/latest/adminguide/getting-started-iam-user-access-keys.html)

[AWS re:Invent 2022 - Revitalize your security with the AWS Security Reference Architecture (SEC203)](https://www.youtube.com/watch?v=uFrj0jHN848&list=PL2yQDdvlhXf8bvQJuSP1DQ8vu75jdttlM)

**IAM roles**

[IAM roles - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles.html)

[AWS re:Invent 2022 - Harness power of IAM policies & rein in permissions w/Access Analyzer (SEC313)](https://www.youtube.com/watch?v=x-Kh8hKVX74)

**IAM identity-based policies**

[Example IAM identity-based policies - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_examples.html)

**IAM Resource-based policies**

[Identity-based policies and resource-based policies - AWS Identity and Access Management](https://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies_identity-vs-resource.html)

**AWS Organizations**

[What is AWS Organizations? - AWS Organizations](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_introduction.html)

[AWS re:Inforce 2019: Managing Multi-Account AWS Environments Using AWS Organizations (FND314)](https://www.youtube.com/watch?v=fxo67UeeN1A)

**Service control policies (SCPs)**

[Service control policies (SCPs) - AWS Organizations](https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps.html)

[Enforce Preventive Guardrails Using Service Control Policies | Amazon Web Services](https://www.youtube.com/watch?v=mEO05mmbSms)

**Module 03: Networking 1**

**Amazon VPC**

[What is Amazon VPC? - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/userguide/what-is-amazon-vpc.html)

[AWS re:Invent 2022 - Advanced VPC design and new Amazon VPC capabilities (NET302)](https://www.youtube.com/watch?v=cbUNbK8ZdA0)

**Default Amazon VPCs**

[Default VPCs - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/userguide/default-vpc.html)

[AWS re:Invent 2021 - Networking foundations](https://www.youtube.com/watch?v=4QoFt8so9hI)

**Network access control lists (ACLs)**

[Control traffic to subnets using network ACLs - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/userguide/vpc-network-acls.html)

[AWS re:Invent 2022 - Layered VPC security and inspection (NET311)](https://www.youtube.com/watch?v=Ya4WFO9P0i8)

**Security groups**

[Security groups - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/userguide/security-groups.html)

[AWS re:Invent 2022 - Revitalize your security with the AWS Security Reference Architecture (SEC203)](https://www.youtube.com/watch?v=uFrj0jHN848&list=PL2yQDdvlhXf8bvQJuSP1DQ8vu75jdttlM)

**Module 04: Compute**

**Amazon EC2**

[What is Amazon EC2? - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html)

**Amazon Machine Image (AMI)**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

**EC2 instance families**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html>

**AWS Compute Optimizer**

[What is AWS Compute Optimizer? - AWS Compute Optimizer](https://docs.aws.amazon.com/compute-optimizer/latest/ug/what-is-compute-optimizer.html)

**Amazon EC2 key pairs**

[Amazon EC2 key pairs and Amazon EC2 instances - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-key-pairs.html)

**EC2 Tenancy**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/amazon-ec2-managed-instances.html>

**Placement groups**

[Placement groups for your Amazon EC2 instances - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html)

**EC2 User data**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/user-data.html>

**Amazon Elastic Block Store (Amazon EBS)**

[What is Amazon Elastic Block Store? - Amazon EBS](https://docs.aws.amazon.com/ebs/latest/userguide/what-is-ebs.html)

**Instance store volumes**

[Instance store temporary block storage for EC2 instances - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html)

**Amazon EC2 purchase options**

[Amazon EC2 billing and purchasing options - Amazon Elastic Compute Cloud](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-purchasing-options.html)

**EC2 Spot Instances**

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-spot-instances.html>

**AWS Lambda**

<https://docs.aws.amazon.com/lambda/latest/dg/welcome.html>

**Module 05: Storage**

**Amazon S3**

[What is Amazon S3? - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/Welcome.html)

[AWS re:Invent 2022 - Deep dive on Amazon S3 (STG203)](https://www.youtube.com/watch?v=v3HfUNQ0JOE&t=1s)

**Amazon S3 access control**

[Access control list (ACL) overview - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/acl-overview.html)

[AWS re:Invent 2022 - Amazon S3 security and access control best practices (STG301)](https://www.youtube.com/watch?v=VeE-O0imUVY)

**S3 Bucket policies**

[Bucket policy examples - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/example-bucket-policies.html)

**Amazon S3 Access Points**

[Using access points - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/using-access-points.html)

[Amazon S3 Access Points Overview](https://www.youtube.com/watch?v=W4Rl2YqfJ9Y)

**Amazon S3 Intelligent-Tiering**

[Amazon S3 Intelligent-Tiering - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/intelligent-tiering.html)

[Introduction to the Amazon S3 Intelligent-Tiering Storage Class | Amazon Web Services](https://www.youtube.com/watch?v=6brzBokCYV0)

**Amazon S3 Versioning**

[Using versioning in S3 buckets - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/Versioning.html)

[Amazon S3 Data Protection Overview - Versioning, Object Lock, & Replication | Amazon Web Services](https://www.youtube.com/watch?v=b18KlhIgmjQ)

**Amazon S3 multipart upload**

[Uploading and copying objects using multipart upload - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/mpuoverview.html)

**Amazon S3 Transfer Acceleration**

[Configuring fast, secure file transfers using Amazon S3 Transfer Acceleration - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/transfer-acceleration.html)

[Introduction to Amazon S3 Transfer Acceleration](https://www.youtube.com/watch?v=J2CVnmUWSi4)

**Amazon S3 Event Notifications**

[Amazon S3 Event Notifications - Amazon Simple Storage Service](https://docs.aws.amazon.com/AmazonS3/latest/userguide/EventNotifications.html)

[AWS re:Invent 2022 - Deep dive on Amazon S3 (STG203)](https://www.youtube.com/watch?v=v3HfUNQ0JOE)

**Amazon EFS**

[What is Amazon Elastic File System? - Amazon Elastic File System](https://docs.aws.amazon.com/efs/latest/ug/whatisefs.html)

[AWS re:Invent 2021 - Deep dive on Amazon EFS | AWS Events](https://www.youtube.com/watch?v=39bGVEgZcEE)

**Amazon FSx**

[AWS re:Invent 2021 - Deep dive on Amazon FSx for Lustre | AWS Events](https://www.youtube.com/watch?v=m8_wy1xkwA8)

**AWS Storage Gateway**

[AWS re: Invent STG 204: Using AWS Storage Gateway](https://www.youtube.com/watch?v=Ut5TG1ueU1E)

**AWS DataSync**

[AWS re:Invent 2020: Migrate your data to AWS quickly and securely using AWS DataSync](https://www.youtube.com/watch?v=8l4cka4AXjE)

**AWS Snowcone**

[What Is AWS Snowcone? - AWS Snowcone User Guide](https://docs.aws.amazon.com/snowball/latest/snowcone-guide/snowcone-what-is-snowcone.html)

[AWS re:Invent 2020: Optimize your data migration with AWS Snowcone and AWS Snowball Edge](https://www.youtube.com/watch?v=92wzRTXIAmY)

**AWS Snowball Edge**

[What is AWS Snowball Edge? - AWS Snowball Edge Developer Guide](https://docs.aws.amazon.com/snowball/latest/developer-guide/whatisedge.html)

[AWS re:Invent 2020: Optimize your data migration with AWS Snowcone and AWS Snowball Edge](https://www.youtube.com/watch?v=92wzRTXIAmY)

**Module 06 : Database Services**

**Amazon RDS**

[AWS re:Invent 2022 - Performance monitoring with Amazon RDS and Aurora, featuring Autodesk (DAT323)](https://www.youtube.com/watch?v=wokRbwK4YLo)

**Amazon RDS Multi-AZ failover**

[Configuring and managing a Multi-AZ deployment - Amazon Relational Database Service](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html)

[Introduction to Amazon RDS Multi-AZ deployments | Amazon Web Services](https://www.youtube.com/watch?v=_MROZtLtCcA)

**Read replicas**

[Working with DB instance read replicas - Amazon Relational Database Service](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_ReadRepl.html)

[How do I create a read replica for an Amazon RDS database?](https://www.youtube.com/watch?v=COsx7UrMGL4)

**Amazon Aurora**

[What is Amazon Aurora? - Amazon Aurora](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/CHAP_AuroraOverview.html)

[AWS re:Invent 2022 - Deep dive into Amazon Aurora and its innovations (DAT326)](https://www.youtube.com/watch?v=pzZydB78Eyc)

**Aurora Serverless v2**

[Using Aurora Serverless v2 - Amazon Aurora](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/aurora-serverless-v2.html)

[Essential Strategies for Aurora Serverless v2 Adoption | AWS Events](https://www.youtube.com/watch?v=by7WQ1igKl0)

**Amazon DynamoDB**

[What is Amazon DynamoDB? - Amazon DynamoDB](https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Introduction.html)

[AWS re:Invent 2022 - Deploy modern and effective data models with Amazon DynamoDB (DAT320)](https://www.youtube.com/watch?v=SC-YAPgJpms)

**DynamoDB global tables**

[Global tables - multi-Region replication for DynamoDB - Amazon DynamoDB](https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/GlobalTables.html)

[AWS re:Invent 2021 - DynamoDB deep dive: Advanced design patterns](https://www.youtube.com/watch?v=xfxBhvGpoa0)

**ElastiCache for Memcached**

[What is Amazon ElastiCache for Memcached? - Amazon ElastiCache](https://docs.aws.amazon.com/AmazonElastiCache/latest/mem-ug/WhatIs.html)

[AWS re:Invent 2018: ElastiCache Deep Dive: Design Patterns for In-Memory Data Stores (DAT302-R1)](https://www.youtube.com/watch?v=QxcB53mL_oA)

**ElastiCache for Redis**

[What is Amazon ElastiCache for Redis? - Amazon ElastiCache for Redis](https://docs.aws.amazon.com/AmazonElastiCache/latest/red-ug/WhatIs.html)

[AWS re:Invent 2021 - Deep dive on Amazon ElastiCache for Redis](https://www.youtube.com/watch?v=QEKDpToureQ)

**Amazon DynamoDB Accelerator (DAX)**

[In-memory acceleration with DynamoDB Accelerator (DAX) - Amazon DynamoDB](https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DAX.html)

[Announcing Amazon DynamoDB Accelerator (DAX)](https://www.youtube.com/watch?v=RshPGdKXnxc)

**AWS Database Migration Service**

[What is AWS Database Migration Service? - AWS Database Migration Service](https://docs.aws.amazon.com/dms/latest/userguide/Welcome.html)

[AWS re:Invent 2022 - What’s new with database migrations (DAT218)](https://www.youtube.com/watch?v=IYcI_Xo45zo)

**AWS Schema Conversion Tool**

[Converting database schemas using DMS Schema Conversion - AWS Database Migration Service](https://docs.aws.amazon.com/dms/latest/userguide/CHAP_SchemaConversion.html)

[AWS re:Invent 2020: Dive deep into AWS Schema Conversion Tool and AWS DMS](https://www.youtube.com/watch?v=8MS61KscTm4)

**Module 07 : Monitoring and Scaling**

**Amazon CloudWatch**

[What is Amazon CloudWatch? - Amazon CloudWatch](https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/WhatIsCloudWatch.html)

[AWS re:Invent 2022: AWS On Air ft. Amazon CloudWatch | AWS Events](https://www.youtube.com/watch?v=DI81zNwtn1Y)

**AWS CloudTrail**

[What Is AWS CloudTrail? - AWS CloudTrail](https://docs.aws.amazon.com/awscloudtrail/latest/userguide/cloudtrail-user-guide.html)

[AWS re:Invent 2020: A security operator’s guide to practical AWS CloudTrail analysis](https://www.youtube.com/watch?v=Tr78kq-Oa70)

**VPC Flow Logs**

[Logging IP traffic using VPC Flow Logs - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/userguide/flow-logs.html)

[AWS re:Invent 2022 - Layered VPC security and inspection (NET311)](https://www.youtube.com/watch?v=Ya4WFO9P0i8)

**Amazon EventBridge**

[What Is Amazon EventBridge? - Amazon EventBridge](https://docs.aws.amazon.com/eventbridge/latest/userguide/eb-what-is.html)

[AWS re:Invent 2022 - Designing event-driven integrations using Amazon EventBridge (API307-R)](https://www.youtube.com/watch?v=W3Rh70jG-LM)

**AWS Elastic Load Balancing (ELB)**

[What is Elastic Load Balancing? - Elastic Load Balancing](https://docs.aws.amazon.com/elasticloadbalancing/latest/userguide/what-is-load-balancing.html)

[AWS re:Invent 2018: [REPEAT 1] Elastic Load Balancing: Deep Dive and Best Practices (NET404-R1)](https://www.youtube.com/watch?v=VIgAT7vjol8)

**AWS Auto Scaling**

[What is Amazon EC2 Auto Scaling? - Amazon EC2 Auto Scaling](https://docs.aws.amazon.com/autoscaling/ec2/userguide/what-is-amazon-ec2-auto-scaling.html)

[AWS re:Invent 2019: Capacity management made easy with Amazon EC2 Auto Scaling (CMP326-R1)](https://www.youtube.com/watch?v=9BlsFNBnKHc)

**Module 08 : Automation**

**AWS CloudFormation**

[What is AWS CloudFormation? - AWS CloudFormation](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/Welcome.html)

[AWS re:Invent 2019: [REPEAT 1] Best practices for authoring AWS CloudFormation (DOP302-R1)](https://www.youtube.com/watch?v=bJHHQM7GGro)

**AWS Elastic Beanstalk**

[What is AWS Elastic Beanstalk? - AWS Elastic Beanstalk](https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/Welcome.html)

[AWS re:Invent 2019: Deploy your code, scale, and lower cloud costs using Elastic Beanstalk (DOP326)](https://www.youtube.com/watch?v=o4clRJuH9xU)

**AWS Solutions Library**

[AWS Solutions Library | Amazon Web Services | AWS](https://aws.amazon.com/solutions/)

[AWS re:Invent 2022 - Delighting developers: Builder experience at AWS (DOP208-L)](https://www.youtube.com/watch?v=N2kZAlTcDf4)

**AWS CDK**

[What is the AWS CDK? - AWS Cloud Development Kit (AWS CDK) v2](https://docs.aws.amazon.com/cdk/v2/guide/home.html)

[AWS re:Invent 2019: [REPEAT 1] Deep dive into AWS Cloud Development Kit (DOP402-R1)](https://www.youtube.com/watch?v=9As_ZIjUGmY)

**AWS Systems Manager**

[What is AWS Systems Manager? - AWS Systems Manager](https://docs.aws.amazon.com/systems-manager/latest/userguide/what-is-systems-manager.html)

[AWS re:Invent 2020: Automate anything with AWS Systems Manager](https://www.youtube.com/watch?v=AaI2xkW85yE)

**Amazon CodeWhisperer**

[What is CodeWhisperer? - CodeWhisperer](https://docs.aws.amazon.com/codewhisperer/latest/userguide/what-is-cwspr.html)

[Amazon CodeWhisperer Overview | Amazon Web Services](https://www.youtube.com/watch?v=j8BoVmHKFlI)

**Module 09: Containers**

**Microservices architecture on AWS**

[Simple microservices architecture on AWS - Implementing Microservices on AWS](https://docs.aws.amazon.com/whitepapers/latest/microservices-on-aws/simple-microservices-architecture-on-aws.html)

[AWS re:Invent 2022 - Application integration patterns for microservices (API303-R)](https://www.youtube.com/watch?v=GoBOivyE7PY)

**Amazon ECR**

[What is Amazon Elastic Container Registry? - Amazon ECR](https://docs.aws.amazon.com/AmazonECR/latest/userguide/what-is-ecr.html)

[AWS re:Invent 2021 - Up-level your container image security with the latest from Amazon ECR](https://www.youtube.com/watch?v=gvzyF0WxQao)

**Amazon ECS**

[What is Amazon Elastic Container Service? - Amazon Elastic Container Service](https://docs.aws.amazon.com/AmazonECS/latest/developerguide/Welcome.html)

[AWS re:Invent 2022 - What's new and what's next with Amazon ECS (CON210)](https://www.youtube.com/watch?v=El64yANTmIA)

**Amazon EKS**

[Getting started with Amazon EKS - Amazon EKS](https://docs.aws.amazon.com/eks/latest/userguide/getting-started.html)

[AWS re:Invent 2022 - Building containers for AWS (CON325)](https://www.youtube.com/watch?v=S7JwFFZ-7_Q&list=PL2yQDdvlhXf-I_sgsmmp8NiGGo-QKUL0f)

**AWS Fargate**

[What is AWS Fargate? - Amazon ECS](https://docs.aws.amazon.com/AmazonECS/latest/userguide/what-is-fargate.html)

[AWS re:Invent 2022 - A close look at AWS Fargate and AWS App Runner (CON406)](https://www.youtube.com/watch?v=MZBbhqt6bQs)

**Module 10: Networking II**

**VPC Endpoints**

[What are VPC endpoints? - Securely Access Services Over AWS PrivateLink](https://docs.aws.amazon.com/whitepapers/latest/aws-privatelink/what-are-vpc-endpoints.html)

[AWS re:Invent 2020: VPC endpoints & PrivateLink: Optimize for security, cost & operations](https://www.youtube.com/watch?v=LNf8jjBt72Y)

**Gateway endpoints**

[Gateway endpoints - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/privatelink/gateway-endpoints.html)

I**nterface endpoint**

[Configure an interface endpoint - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/privatelink/interface-endpoints.html)

**VPC peering**

[What is VPC peering? - Amazon Virtual Private Cloud](https://docs.aws.amazon.com/vpc/latest/peering/what-is-vpc-peering.html)

[AWS re:Invent 2022 - Advanced VPC design and new Amazon VPC capabilities (NET302)](https://www.youtube.com/watch?v=cbUNbK8ZdA0)

**AWS Site-to-Site VPN**

[What is AWS Site-to-Site VPN? - AWS Site-to-Site VPN](https://docs.aws.amazon.com/vpn/latest/s2svpn/VPC_VPN.html)

[AWS re:Invent 2018: AWS VPN Solutions (NET304)](https://www.youtube.com/watch?v=qmKkbuS9gRs)

**AWS Direct Connect**

[What is AWS Direct Connect? - AWS Direct Connect](https://docs.aws.amazon.com/directconnect/latest/UserGuide/Welcome.html)

[AWS re:Invent 2018: AWS Direct Connect: Deep Dive (NET403)](https://www.youtube.com/watch?v=DXFooR95BYc)

**AWS Transit Gateway**

[What is a transit gateway? - Amazon VPC](https://docs.aws.amazon.com/vpc/latest/tgw/what-is-transit-gateway.html)

[AWS re:Invent 2019: [REPEAT 1] AWS Transit Gateway reference architectures for many VPCs (NET406-R1)](https://www.youtube.com/watch?v=9Nikqn_02Oc)

**Module 11: Serverless**

**Amazon API Gateway**

[What is Amazon API Gateway? - Amazon API Gateway](https://docs.aws.amazon.com/apigateway/latest/developerguide/welcome.html)

[AWS re:Invent 2019: [REPEAT 1] AWS Transit Gateway reference architectures for many VPCs (NET406-R1)](https://www.youtube.com/watch?v=9Nikqn_02Oc)

**Amazon Simple Queue Service (Amazon SQS)**

[What is Amazon Simple Queue Service? - Amazon Simple Queue Service](https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/welcome.html)

[AWS re:Invent 2020: Scalable serverless event-driven architectures with SNS, SQS & Lambda](https://www.youtube.com/watch?v=8zysQqxgj0I)

**Amazon Simple Notification Service (Amazon SNS)**

[What is Amazon SNS? - Amazon Simple Notification Service](https://docs.aws.amazon.com/sns/latest/dg/welcome.html)

**Amazon Kinesis Data Streams**

[What Is Amazon Kinesis Data Streams? - Amazon Kinesis Data Streams](https://docs.aws.amazon.com/streams/latest/dev/introduction.html)

[AWS re:Invent 2021 - Introducing Amazon Kinesis Data Streams On-Demand Mode](https://www.youtube.com/watch?v=mQhPMJHmz_E)

**Amazon Kinesis Data Firehose**

[What Is Amazon Kinesis Data Firehose? - Amazon Kinesis Data Firehose](https://docs.aws.amazon.com/firehose/latest/dev/what-is-this-service.html)

[AWS re:Invent 2020: Top 5 best practices for data streaming with Amazon Kinesis](https://www.youtube.com/watch?v=UE34CWAhT3o)

**AWS Step Functions**

[What is AWS Step Functions? - AWS Step Functions](https://docs.aws.amazon.com/step-functions/latest/dg/welcome.html)

[AWS re:Invent 2022 - [NEW] Accelerate workloads using parallelism w/Step Functions & Lambda (API205)](https://www.youtube.com/watch?v=SG6_oy72hh4)

**Module 12: Edge Services**

**Amazon Route 53**

[What is Amazon Route 53? - Amazon Route 53](https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/Welcome.html)

[AWS re:Invent 2021 - Amazon Route 53: A year in review [REPEAT]](https://www.youtube.com/watch?v=77V23phAaAE)

**Amazon CloudFront**

[What is Amazon CloudFront? - Amazon CloudFront](https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/Introduction.html)

[AWS re:Invent 2020: Amazon CloudFront fundamentals: Features, benefits, and what’s new](https://www.youtube.com/watch?v=WZjFBxEgjvg)

**AWS Shield**

[AWS Shield - AWS WAF, AWS Firewall Manager, and AWS Shield Advanced](https://docs.aws.amazon.com/waf/latest/developerguide/shield-chapter.html)

[AWS re:Invent 2021 - {New Launch} AWS Shield: Automated layer 7 DDoS mitigation](https://www.youtube.com/watch?v=T3kqljTLR50)

**Shield Advanced**

[Example Shield Advanced use cases - AWS WAF, AWS Firewall Manager, and AWS Shield Advanced](https://docs.aws.amazon.com/waf/latest/developerguide/aws-shield-use-case.html)

[AWS re:Invent 2022 - Building DDoS-resilient applications using AWS Shield (NET314)](https://www.youtube.com/watch?v=5cfVebJ8wTo)

**AWS WAF**

[AWS WAF - AWS WAF, AWS Firewall Manager, and AWS Shield Advanced](https://docs.aws.amazon.com/waf/latest/developerguide/waf-chapter.html)

[AWS re:Invent 2020: Using AWS WAF and AWS Secrets Manager to enforce Amazon CloudFront origins](https://www.youtube.com/watch?v=32jU3lVumAk)

**AWS Firewall Manager**

[AWS Firewall Manager - AWS WAF, AWS Firewall Manager, and AWS Shield Advanced](https://docs.aws.amazon.com/waf/latest/developerguide/fms-chapter.html)

[AWS re:Invent 2020: Use AWS Firewall Manager to audit overpermissive security groups](https://www.youtube.com/watch?v=7CX0cyrfVZQ)

**AWS Outposts**

[What is AWS Outposts? - AWS Outposts](https://docs.aws.amazon.com/outposts/latest/userguide/what-is-outposts.html)

[AWS re:Invent 2022 - AWS Outposts: Bringing the AWS experience on premises (HYB312)](https://www.youtube.com/watch?v=OUNJ0F73HSs)

**Module 13: Backup and Recovery**

**AWS Backup**

[What is AWS Backup? - AWS Backup](https://docs.aws.amazon.com/aws-backup/latest/devguide/whatisbackup.html)

[AWS re:Invent 2019: Deep dive on AWS Backup, ft. Rackspace (STG341)](https://www.youtube.com/watch?v=av8DpL0uFjc)

**Disaster recovery options**

[Disaster recovery options in the cloud - Disaster Recovery of Workloads on AWS: Recovery in the Cloud](https://docs.aws.amazon.com/whitepapers/latest/disaster-recovery-workloads-on-aws/disaster-recovery-options-in-the-cloud.html)

[AWS re:Invent 2019: Backup-and-restore and disaster-recovery solutions with AWS (STG208)](https://www.youtube.com/watch?v=7gNXfo5HZN8)

**Recovery Time Objective (RTO)**

[What is the Recovery Time Objective (RTO) of Elastic Disaster Recovery? - AWS Elastic Disaster Recovery](https://docs.aws.amazon.com/drs/latest/userguide/What-is-RTO.html)

[Disaster Recovery of Workloads on AWS | AWS Events](https://www.youtube.com/watch?v=cJZw5mrxryA)

**Recovery Point Objective (RPO)**

[What is the Recovery Point Objective (RPO) of Elastic Disaster Recovery? - AWS Elastic Disaster Recovery](https://docs.aws.amazon.com/drs/latest/userguide/What-is-RPO.html)