AWS Fundamentals:

- You should have a good understanding of the various AWS services and how they work together to build cloud solutions. This includes understanding the differences between services and knowing which services to use for different use cases.
- You should understand the different pricing models used by AWS, including on-demand, reserved, and spot instances. You should also be able to calculate the cost of running different types of EC2 instances and other AWS services.

Resources:

- AWS Global Infrastructure: https://aws.amazon.com/about-aws/global-infrastructure/
- AWS Core Services: https://aws.amazon.com/products/
- AWS Pricing: https://aws.amazon.com/pricing/

Compute:

- To prepare for the exam, you should have a good understanding of the different EC2 instance types, including their capabilities and pricing. You should also be familiar with how to launch, configure, and manage EC2 instances.
- You should be familiar with Auto Scaling and Elastic Load Balancing, including how to configure and use them to ensure high availability and scalability of your resources.
- You should have a good understanding of how to use and configure Lambda functions, including how to write and deploy code to Lambda, and how to trigger Lambda functions from other AWS services.

Resources:

- Amazon EC2 Instances: https://aws.amazon.com/ec2/instance-types/
- Auto Scaling: https://aws.amazon.com/autoscaling/
- Elastic Load Balancing: https://aws.amazon.com/elasticloadbalancing/
- AWS Lambda: https://aws.amazon.com/lambda/

Storage:

- You should understand how to use and configure S3 buckets, including how to set up bucket policies, versioning, and lifecycle policies. You should also be familiar with the different S3 storage classes and when to use them.
- You should be familiar with EBS volumes and how to create and attach them to EC2 instances. You should also understand the differences between EBS and instance store.
- You should have a good understanding of Glacier and how to use it for long-term data archiving.

Resources:

- Amazon S3: https://aws.amazon.com/s3/

- Amazon EBS: https://aws.amazon.com/ebs/
- Amazon Glacier: https://aws.amazon.com/glacier/

Networking and Content Delivery:

- To prepare for the exam, you should have a good understanding of VPCs, including how to create and configure them, and how to use subnets and routing tables to control traffic flow.
- You should be familiar with Route 53 and how to use it for DNS management, including setting up DNS records and configuring health checks.
- You should understand how to use and configure CloudFront for content delivery, including how to set up distributions and configure caching behavior.

Resources:

- Amazon VPC: https://aws.amazon.com/vpc/
- Amazon Route 53: https://aws.amazon.com/route53/
- Amazon CloudFront: https://aws.amazon.com/cloudfront/

Databases:

- You should have a good understanding of RDS and how to create and configure database instances, including MySQL, PostgreSQL, and Aurora. You should also understand how to use RDS features such as read replicas and backups.
- You should understand how to use and configure DynamoDB for NoSQL database needs, including how to create tables, configure throughput, and use DynamoDB streams.
- You should be familiar with ElastiCache and how to use it for caching and in-memory storage.

Resources:

- Amazon RDS: https://aws.amazon.com/rds/
- Amazon DynamoDB: https://aws.amazon.com/dynamodb/
- Amazon ElastiCache: https://aws.amazon.com/elasticache/

Security and Identity:

- You should have a good understanding of IAM and how to create and manage IAM users, groups, and roles. You should also understand how to use IAM policies to control access to AWS resources.
- You should understand how to use and configure KMS for encryption and key management, including how to encrypt and decrypt data using KMS.
- You should be familiar with Cognito and how to use it for user authentication and management.

- You should understand how to use security groups and Network ACLs to secure your infrastructure, including how to configure inbound and outbound rules.

Resources:

- AWS Identity and Access Management (IAM): https://aws.amazon.com/iam/
- AWS Key Management Service (KMS): https://aws.amazon.com/kms/
- Amazon Cognito: https://aws.amazon.com/cognito/
- Security Groups and Network ACLs: https://docs.aws.amazon.com/vpc/latest/userguide/VPC_SecurityGroups.html

Management and Governance:

- You should understand how to use and configure CloudWatch for monitoring and logging, including how to set up alarms and create custom metrics.
- You should be familiar with CloudTrail and how to use it for auditing and compliance, including how to configure trails and analyze log data.
- You should understand how to use and configure Config for compliance and resource management, including how to use Config rules to enforce compliance policies.
- You should understand how to use and configure Trusted Advisor for cost optimization and security, including how to use the recommendations provided by Trusted Advisor to improve your AWS infrastructure.

Resources:

- Amazon CloudWatch: https://aws.amazon.com/cloudwatch/
- AWS CloudTrail: https://aws.amazon.com/cloudtrail/
- AWS Config: https://aws.amazon.com/config/
- AWS Trusted Advisor: https://aws.amazon.com/premiumsupport/trustedadvisor/

Application Integration:

- You should understand how to use and configure SQS for messaging, including how to send and receive messages and how to configure visibility timeouts.
- You should be familiar with SNS and how to use it for mobile push notifications and messaging, including how to create topics and subscriptions.
- You should understand how to use and configure SWF and Step Functions for workflow automation, including how to create workflows and state machines.

Resources:

- Amazon Simple Queue Service (SQS): https://aws.amazon.com/sqs/
- Amazon Simple Notification Service (SNS): https://aws.amazon.com/sns/
- Amazon SWF: https://aws.amazon.com/swf/
- Step Functions: https://aws.amazon.com/step-functions/

Messaging and Streaming:

- You should understand how to use and configure Kinesis for data streaming and processing, including how to create Kinesis streams and use Kinesis Analytics.
- You should be familiar with MQ and how to use it for message queuing, including how to create queues and send and receive messages.
- You should understand how to use and configure SNS for mobile push notifications and messaging, including how to create topics and subscriptions.

Resources:

- Amazon Kinesis: https://aws.amazon.com/kinesis/
- Amazon MQ: https://aws.amazon.com/amazon-mq/
- Amazon SNS: https://aws.amazon.com/sns/

Analytics:

- You should understand how to use and configure Athena for ad-hoc querying of data in S3, including how to create tables and run queries.
- You should be familiar with EMR and how to use it for big data processing, including how to create and configure EMR clusters and use Hadoop and Spark.
- You should understand how to use and configure Redshift for data warehousing, including how to create and configure Redshift clusters and use SQL for data analysis.
- You should understand how to use and configure QuickSight for business intelligence and analytics, including how to create visualizations and dashboards.

Resources:

- Amazon Athena: https://aws.amazon.com/athena/
- Amazon EMR: https://aws.amazon.com/emr/
- Amazon Redshift: https://aws.amazon.com/redshift/
- Amazon QuickSight: https://aws.amazon.com/quicksight/

Serverless:

- You should understand how to use and configure API Gateway for building RESTful APIs, including how to create and deploy API Gateway APIs and use API Gateway stages and deployment.
- You should be familiar with AWS Lambda and how to use it for serverless computing, including how to create and deploy Lambda functions and use Lambda triggers.
- You should understand how to use and configure AWS SAM for building serverless applications, including how to use SAM templates to define and deploy serverless resources.

- You should understand how to use and configure the Serverless Application Repository for sharing and deploying serverless applications, including how to create and publish serverless applications.

Resources:

- Amazon API Gateway: https://aws.amazon.com/api-gateway/
- AWS Lambda: https://aws.amazon.com/lambda/
- AWS Serverless Application Model (SAM): https://aws.amazon.com/serverless/sam/
- Serverless Application Repository: https://aws.amazon.com/serverless/serverlessrepo/

Hybrid Architecture:

- You should understand how to use and configure AWS Outposts for running AWS infrastructure on-premises, including how to deploy and manage Outposts instances.
- You should be familiar with AWS VPN and how to use it for securely connecting your on-premises network to AWS, including how to create and configure VPN connections and gateways.
- You should understand how to use and configure Direct Connect Gateway and Transit Gateway for connecting your VPCs to your on-premises network, including how to create and configure gateways and use Direct Connect and VPN connections.

Resources:

- AWS Outposts: https://aws.amazon.com/outposts/
- AWS VPN: https://aws.amazon.com/vpn/
- AWS Direct Connect Gateway: https://aws.amazon.com/directconnect/gateway/
- Transit Gateway: https://aws.amazon.com/transit-gateway/

Interview Questions:

- https://www.sebae.net/videos/top-30-cloud-computing-interview-questions-and-answers-cloud-interview-questions-intellipaat/
- https://intellipaat.com/blog/interview-question/cloud-computing-interview-questions/
- https://intellipaat.com/blog/interview-question/amazon-aws-interview-questions/