

Page 1: Introduction & Core Services

1. What is AWS?

- **Amazon Web Services (AWS)** is a cloud platform offering compute, storage, database, and networking services.
- Provides on-demand, scalable, and cost-efficient solutions.

2. Core AWS Services

Service Category	Key Services	Description
Compute	EC2, Lambda	Virtual servers & serverless computing
Storage	S3, EBS, Glacier	Object, block, and archival storage
Database	RDS, DynamoDB, Redshift	Relational & NoSQL databases
Networking	VPC, Route 53, CloudFront	Network setup, DNS, CDN

3. Security & IAM

- **IAM (Identity & Access Management)** controls users, roles, and permissions.
- Features: MFA, roles, policies, fine-grained access control.

4. Monitoring & Management

- **CloudWatch:** Monitor resources & logs
- **CloudTrail:** Track API activity
- **AWS Config:** Resource inventory & compliance

Page 2: Advanced Services & Best Practices

1. Serverless & Containers

- **Lambda:** Run code without servers
- **API Gateway:** Manage REST APIs
- **ECS/EKS:** Container orchestration

2. Analytics & Machine Learning

- **AWS Athena:** Query S3 data using SQL
- **Redshift:** Data warehousing

- **SageMaker: Build, train & deploy ML models**

3. DevOps & Automation

- **CloudFormation: Infrastructure as code**
- **CodePipeline / CodeBuild / CodeDeploy: CI/CD automation**

4. Best Practices

- **Use multi-AZ deployments for high availability**
- **Implement least-privilege IAM policies**
- **Enable CloudTrail and CloudWatch for auditing**
- **Monitor cost and resource usage**

5. Popular AWS Use Cases

- **Web hosting, backups, big data analytics, ML, IoT, SaaS applications**