Amazon AWS: Cloud Computing Basics

Understanding AWS Fundamentals

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What is AWS?

- Amazon Web Services (AWS) is a comprehensive cloud computing platform provided by Amazon.
- It offers a wide range of services including computing power, storage, and databases.
- AWS is used by businesses of all sizes to deploy applications and services.

How AWS Works

- AWS provides on-demand computing resources through a pay-as-you-go model.
- Users can access these resources via the internet, using a web interface or API.
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Note: AWS's global infrastructure includes multiple regions and availability zones to ensure reliability.

Why Use AWS?

- **Scalability:** Easily scale resources up or down based on demand.
- **Cost-Effective:** Pay only for the resources you use, avoiding upfront costs.
- **Reliability:** Benefit from AWS's global infrastructure for high availability.
- **Security:** Utilize robust security features to protect your data and applications.

AWS Security Features

- **Identity and Access Management (IAM):** Control access to AWS resources securely.
- **Encryption:** Encrypt data at rest and in transit to protect sensitive information.
- **Compliance:** AWS adheres to various compliance standards including GDPR, HIPAA, and more.
- **Security Groups:** Configure firewall rules to control traffic to your resources.

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Tip toprule

Regularly review and update your security policies and access controls to stay ahead of potential threats.

AWS Core Services

Category	Services
Compute	EC2, Lambda, Elastic Beanstalk
Storage	S3, Glacier, EBS, EFS
Database	RDS, DynamoDB, Aurora, Redshift
Networking	VPC, Route 53, CloudFront

Table: Key AWS Core Services