Day 1 – Cloud Computing Basics & AWS Setup

What is Cloud Computing?

Cloud computing is the delivery of computing services such as servers, storage, databases, networking, and software over the Internet ('the cloud'). It allows individuals and organizations to access and use technology resources on demand without owning or managing the physical infrastructure.

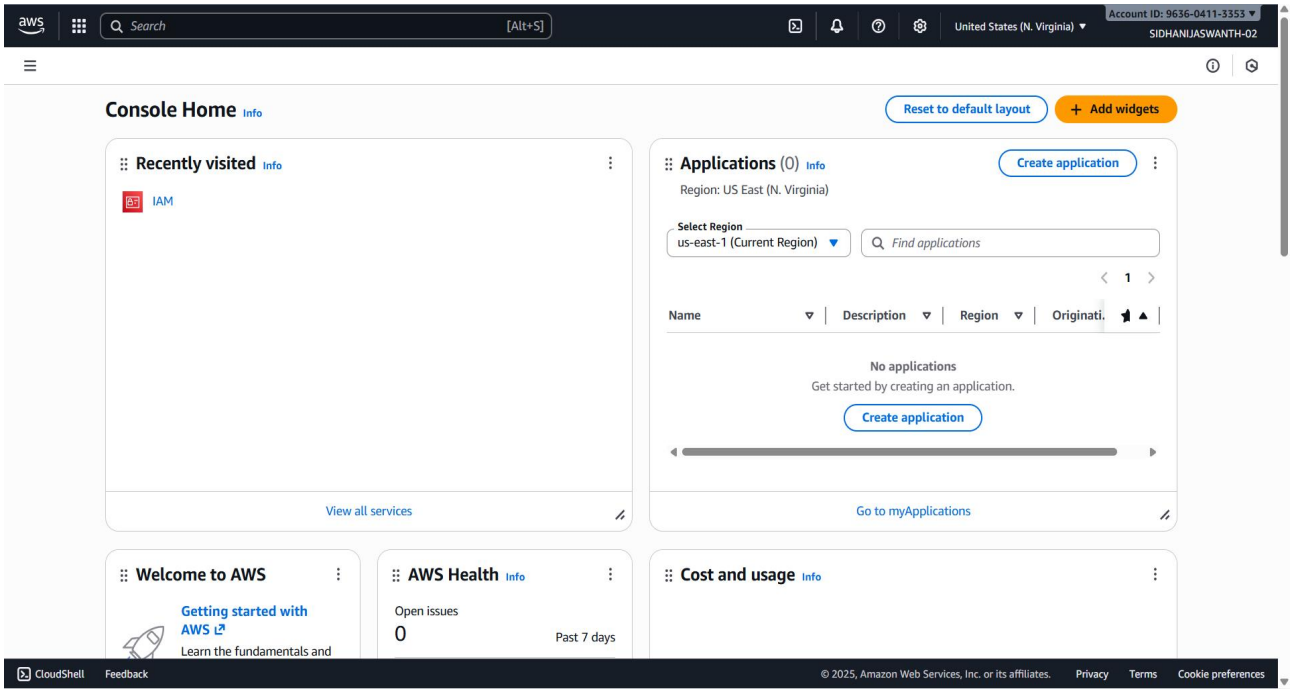
Key Characteristics of Cloud Computing

• On-Demand Self-Service – Provision resources automatically without human intervention.
• Broad Network Access – Available over the Internet through multiple devices.
• Resource Pooling – Shared infrastructure dynamically allocated among users.
• Rapid Elasticity – Resources can expand or contract with user needs.
• Measured Service – Usage is monitored and billed per consumption.

Comparison of Major Cloud Provider

Feature	**Amazon Web Services (AWS)**	**Microsoft Azure**	**Google Cloud Platform (GCP)**
Core Features & Services	• EC2 (Compute) • S3 (Storage) • Lambda (Serverless) • RDS, DynamoDB (Databases) • SageMaker (AI/ML)	• Virtual Machines • Blob Storage • Azure Functions • SQL Database, Cosmos DB • Azure ML (AI/ML)	• Compute Engine • Cloud Storage • Cloud Functions • BigQuery, Firestore • Vertex AI (AI/ML)
Pricing Model	• Free tier available • Pay-as-you-go • Enterprise discounts	• Free tier & credits • Pay-as-you-go • Hybrid enterprise benefits	• Free tier & trial credits • Pay-as-you-go • Sustained-use discounts
Global Data Center Reach	• 33+ Regions, 105+ Zones (2025) • Strong global coverage	• 60+ Regions, 120+ Zones (2025) • Enterprise-focused presence	• 40+ Regions, 130+ Zones (2025) • Energy-efficient infrastructure

Screenshot



Reflection

This first day of learning introduced me to the core principles of cloud computing. I found the shared resource concept fascinating and was impressed by how scalable and cost-efficient the cloud model is. While exploring AWS, I was initially overwhelmed by the console's complexity but soon understood its logical layout. Comparing AWS, Azure, and GCP helped me appreciate how each cloud provider differentiates itself in services and pricing. I'm excited to continue applying these insights to real-world projects in the next sessions.