

## COURSE GLOSSARY

# AWS Concepts

**Amazon DynamoDB:** A fully managed NoSQL database service that offers fast, predictable performance using a key-value and document data model and is designed for massive scale and low-latency use cases

**Amazon EC2:** A core AWS compute service that provides scalable, resizable virtual servers (instances) for running applications with full control over operating systems and configurations

**Amazon RDS:** A managed relational database service that automates database administration tasks like provisioning, patching, backups, and scaling for engines such as MySQL, PostgreSQL, Oracle, and SQL Server

**Amazon S3:** Simple Storage Service, an object storage service that provides highly durable, scalable, and secure storage for files, backups, and media with multiple storage classes for different access patterns

**Amazon Web Services (AWS):** A comprehensive cloud platform from Amazon that offers hundreds of on-demand services for computing, storage, networking, databases, analytics, and more to help organizations build and run applications at scale

**AWS Cloud Adoption Framework (AWS CAF):** A structured guide that helps organizations plan and execute cloud migrations by aligning technical and business perspectives across six areas like business, people, governance, and platform

**AWS CloudFormation:** An AWS service for Infrastructure as Code that lets you define, deploy, and manage AWS resources using declarative templates so environments can be created consistently and automatically

**Hallucination:** When a model produces confident but incorrect or fabricated information, often due to gaps or biases in its training data or reasoning process

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**AWS Snowball:** A physical data transport appliance service that securely transfers very large volumes of data to AWS when network transfer is impractical or too slow

**AWS Well-Architected Framework:** A set of best-practice principles and guidance from AWS to help architects design and operate secure, high-performing, resilient, and efficient cloud systems

**Cloud computing:** A model for delivering computing resources (servers, storage, databases, networking, software) over the internet on a pay-as-you-go basis instead of owning and maintaining physical infrastructure

**Consumption-based model (pay-as-you-go):** A pricing approach where customers are billed only for the resources they actually use, enabling variable costs that scale with demand rather than large upfront capital expenditures

**Cost Optimization (Well-Architected pillar):** The pillar concerned with using the right resources, eliminating unnecessary spend, and making financially efficient architectural decisions to maximize cloud value

**Elasticity:** The ability of a cloud environment to automatically scale computing resources up or down in real time to match workload demand and avoid over- or under-provisioning

**Infrastructure as Code (IaC):** The practice of defining and provisioning cloud infrastructure using machine-readable configuration files or templates, enabling automation, repeatability, and version control

**Migration strategy:** A planned approach for moving applications, data, and workloads from on-premises environments to the cloud, often including methods like rehosting, refactoring, or replicating databases

**On-premises:** Traditional IT deployment where hardware and software are owned, managed, and operated within an organization's physical facilities rather than hosted in the cloud

**Operational Excellence (Well-Architected pillar):** The pillar that emphasizes processes, automation, observability, and organizational practices to run and evolve systems reliably and efficiently

**Performance Efficiency (Well-Architected pillar):** The pillar that ensures compute, storage, and networking resources are selected and used to meet system performance requirements as demand changes

**Reliability (Well-Architected pillar):** The pillar that ensures a system can recover from failures, scale to meet demand, and maintain availability through redundancy, monitoring, and testing

**Rightsizing:** The practice of adjusting cloud resources (instance types, storage, etc.) to match actual workload requirements in order to improve performance and reduce unnecessary costs.

**Security (Well-Architected pillar):** The pillar of the Well-Architected Framework focused on protecting data, systems, and assets through identity and access management, detection, and mitigation controls

**Sustainability (Well-Architected pillar):** The pillar that focuses on minimizing the environmental impact of cloud workloads by optimizing resource use and energy efficiency