AWS Vocab

* Compute
  + Elastic Cloud computing (EC2)
    - EBS volumes (see storage)
    - Amazon Machine Images (AMIs) = templates of pre-configured ECS Instances
    - Instance Types, parameters = vCPUs, memory, instant storage, network perf
      * General Purpose = balanced
      * Compute Optimized = high performance processors
      * Memory Optimized = fast performance for large data
      * Accelerated Computing = hardware accelator/co-processor
      * Storage Optimized = lots of read/write from storage
    - Purchasing options
      * On-demand
      * Reserved instances
      * Savings plan
      * Spot instances
      * Capacity Reservations
    - Tenancy
      * Shared Tenancy
      * Dedicated Instances
      * Dedicated Hosts
    - Persistent vs Ephemeral storage
  + Elastic Load Balancer
    - Application Load Balancer
    - Network Load Balancer
    - Classic Load Balancer
    - Components
      * Listeners
      * Target Groups
      * Rules
      * Health Checks
    - Internet-facing vs Internal
  + Elastic Container Service (ECS)
  + Elastic Container Registry (ECR)
  + Elastic Kubernetes Service (EKS)
  + AWS Elastic Beanstalk
  + Autoscaling
    - Scale UP vs Scale OUT
  + AWS Lambda
    - Serverless Computing
    - Lambda function
    - Trigger
    - Event sources
    - Downstream Resources
  + Amazon Lightsail
  + Amazon Batch
* Storage
  + EC2 Instance storage
  + Elastic Block Store (EBS)
  + AWS Simple Storage Services (S3)
    - S3 Bucket
    - Storage classes
      * S3 Standard
      * S3 intelligent Tiering
      * S3 Standard – Infrequent Access (Standard-IA)
      * S3 One zone – Infrequent Access (1Z-IA)
    - Versioning
    - Server-Access logging
    - Static Website Hosting
    - Object-level logging
    - Encryption (see Encryption – Mechanisms)
  + Amazon Glacier
    - Expedited
    - Standard
    - Bulk
  + Amazon Elastic File System
    - Performance modes
      * General Purpose
      * Max I/O
    - Throughput modes
      * Bursting Throughput
      * Provisioned Throughput
  + Amazon FSx
  + AWS Storage Gateway
    - Configurations
      * File gateway
      * Volume (stored)
      * Volume (Cached)
      * Tape Gateway
  + Amazon Backup
* Networking
  + Virtual Private Cloud (VPC)
  + Subnets
    - Public vs Private
    - Route Tables
    - Network Access Control Lists (NACLs)
  + Internet Gateway (IGW)
  + Security Groups
  + NAT Gateway
  + VPN
  + Direct Connect
  + VPC Peering
  + Transit Gateway
  + Elastic IP Addresses (ENIs)
  + Elastic Network Interfaces (EIP)
  + Elastic Network Adaptor (ENA)
  + VPC Endpoints
    - Interface vs Gateway
  + AWS Global Accelerator
  + Domain Name System (DNS)
  + Amazon Route 53
    - Simple Routing policy
    - Failover Routing policy
    - Geo-location Routing Policy
    - Geoproximity Routing Policy
    - Latency Routing Policy
    - Weighted Routing Policy
    - Multivalue Answer Rouging Policy
  + Amazon Cloudfront
* Databases
  + Amazon Relational Database Service (RDS)
    - Backup
    - Backtrack
    - Snapshot
    - Amazon Aurora
  + Amazon DynamoDB
    - (High Availability): On-Demand Backup and Restore
    - PiT recovery
    - DynamoDB Accelerator (DAX)
  + AWS Database Migration Service (DMS)
  + ElastiCache
    - Cluster
  + Amazon Neptune
  + Amazon Redshift
    - Cluster
* Infrastructure
  + Availability Zones (AZs)
  + Regions
  + Edge locations
  + Regional Edge Caches
* High Availability
  + High availability vs Fault Tolerance
  + Multi-Tier Architecture
    - Web tier
    - App tier
    - Database Tier
  + Recovery Time Objective
  + Recovery Point Objective
  + Disaster Recovery (DR)
  + AWS Snowball
  + RDS Multi-AZ
  + Read Replicas
  + Design Patterns
    - Back up/Restore
    - Pilot Light
    - Warm Stand by
    - Active: Active/Passive
  + Amazon Aurora
    - Single Master
    - Multi Master
    - Serverless
* Architecture
  + Decoupled Architecture
  + Event-driven Architecture
  + Simple Queue Service (SQS)
  + Simple Notification Service (SNS)
  + Stream
  + Amazon Kinesis
  + Multi-Tier Design
  + Single-tier Architecture
  + Serverless design
  + Micro-service design
* Security
  + Identity and Access Management (IAM)
    - Users
    - Groups
    - Roles
    - Policies
    - Multi-factor Authentication (MFA)
    - Identity Federation
  + AWS Organizations
    - Primary Account
    - Organizational units
    - Service Control Policies (SCPs)
  + Amazon Cognito
    - User Pools
    - Identity Pools
  + Amazon Guard Duty
  + Amazon Macie
  + Amazon Inspector
  + AWS Security Hub
  + AWS Shield
  + AWS Web Application Firewall (WAF)
  + AWM Firewall Manager
* Encryption
  + Key Management Service (KMS)
    - Key policies
  + Cloud Hardware Security Module (CloudHSM)
    - Custom Key Store
  + Encryption Mechanisms
    - Server-Side Encryption with S3 managed keys (SSE-S3)
    - Server-Side Encryption with KMS managed keys (SSE-KMS)
    - Server-Side Encryption with customer provided keys (SSE-C)
    - Client-Side Encryption with KMS managed keys (CSE-KMS)
    - Client-Side Encryption with Customer Provided Keys (CSE-C)
* Management
  + Amazon CloudWatch
    - Metrics
      * Standard metrics
      * Custom metrics
    - States (OK, ALARM or INSUFFICIENT DATA)
    - Alarms
    - Event (time or event-based)
    - Rule
    - Notifications
    - CloudWatch Agent
    - CloudWatch Logs
      * Log groups
      * Metric filters
      * CloudWatch Logs Insights
    - CloudWatch Even Bridge functionality
      * Event
      * Target
      * Rules
  + Logs
  + AWS CloudTrail
  + AWS Config
    - Rules
  + Amazon Athena
  + AWS Organizations (see Security)
  + AWS Logging
    - CloudWatch logging Agent
    - CloudTrail Logging
    - CloudFront access logs
    - VPC Flow Logs