<u>**Note**</u> - Contains all services required for CLF-C02. Can always do more reading on each resource elsewhere and please use chatgpt prompt or prac exams to distinguish service uses.

Prioritise - Compute (p.4) , Database (p.5), Storage (p.11),Cloud Financial (p.3),   Management & governance (p.9) , Security & compliance (p.12+13) → For those who are overwhelmed/limited memory recall.

Analytics Services

- **Amazon Athena**
  Serverless interactive query service that uses standard SQL to analyze data stored directly in Amazon S3.

- **AWS Data Exchange**
  Marketplace for securely finding, subscribing to, and using third-party data sets.

- **Amazon EMR (Elastic MapReduce)**
  Managed big data platform that runs frameworks like Apache Hadoop and Apache Spark for large-scale data processing.

- **AWS Glue**
  Fully managed ETL (Extract, Transform, Load) service that prepares data for analytics by cataloging and transforming it.

- **Amazon Kinesis**
  Platform for real-time streaming data ingestion, processing, and analysis.

- **Amazon MSK (Managed Streaming for Apache Kafka)**
  Fully managed Apache Kafka service for building and running real-time data streaming applications.

- **Amazon OpenSearch Service**
  Managed service to deploy, operate, and scale OpenSearch clusters for log analytics, real-time application monitoring, and search.

- **Amazon QuickSight**
  Scalable business intelligence service that lets you create and publish interactive dashboards with ML-powered insights.

- **Amazon Redshift**
  Fully managed, petabyte-scale data warehouse designed for complex queries and analytics on structured data.

Application Integration Services

- **Amazon EventBridge**
  Serverless event bus service that connects applications using events from AWS services, integrated SaaS applications, or custom apps.

- **Amazon Simple Notification Service (Amazon SNS)**
  Fully managed pub/sub messaging service for sending push notifications, SMS, emails, and triggering Lambda functions.

- **Amazon Simple Queue Service (Amazon SQS)**
  Fully managed message queuing service used to decouple and coordinate distributed components via reliable message delivery.

- **AWS Step Functions**
  Serverless orchestration service that lets you coordinate multiple AWS services into workflows using visual workflows and state machines.

—

Business Applications

- **Amazon Connect**
  Cloud-based contact center service for setting up and managing customer service call centers easily and cost-effectively.

- **Amazon Simple Email Service (Amazon SES)**
  Scalable email sending service used for marketing, transactional, and notification emails.

Cloud Financial Management

- **AWS Billing Conductor**
  Customizes billing and cost allocation across multiple AWS accounts for consolidated billing.

- **AWS Budgets**
  Allows you to set custom cost and usage budgets and receive alerts when thresholds are exceeded.

- **AWS Cost and Usage Report**
  Provides detailed, comprehensive billing reports for cost analysis and auditing.

- **AWS Cost Explorer**
  Visualization tool to analyze, track, and forecast AWS costs and usage patterns.

- **AWS Marketplace**
  Digital catalog for discovering, purchasing, and deploying third-party software and services on AWS.

Serverless Services

- **AWS Fargate**
  Serverless compute engine for containers that lets you run containers without managing servers or clusters.

- **AWS Lambda**
  Serverless computing service that lets you run code in response to events and automatically manages the compute resources.

Compute Services

- **AWS Batch**
  Fully managed batch processing service that runs large-scale parallel and high-performance computing workloads.

- **Amazon EC2 (Elastic Compute Cloud)**
  Scalable virtual servers in the cloud that provide flexible compute capacity.

- **AWS Elastic Beanstalk**
  Platform-as-a-Service (PaaS) to deploy and manage applications without handling underlying infrastructure.

- **Amazon Lightsail**
  Simplified VPS (Virtual Private Server) service designed for easy deployment of websites and applications with predictable pricing.

- **AWS Local Zones**
  Infrastructure deployments that place compute, storage, and other services closer to end-users for low latency.

- **AWS Outposts**
  Fully managed service that extends AWS infrastructure and services on-premises for hybrid cloud use cases.

- **AWS Wavelength**
  Brings AWS compute and storage services to the edge of 5G networks to enable ultra-low latency applications.

Containers Services

- **Amazon Elastic Container Registry (Amazon ECR)**
  Fully managed Docker container registry for storing, managing, and deploying container images securely.

- **Amazon Elastic Container Service (Amazon ECS)**
  Highly scalable container orchestration service to run and manage Docker containers without managing servers.

- **Amazon Elastic Kubernetes Service (Amazon EKS)**
  Managed Kubernetes service that makes it easy to run Kubernetes clusters on AWS without manual setup.

Customer Engagement Services

- **AWS Activate for Startups**
  Program offering startups credits, training, and technical support to help build and scale on AWS.

- **AWS IQ**
  Marketplace that connects AWS customers with AWS-certified experts for on-demand project help.

- **AWS Managed Services (AMS)**
  Fully managed service that helps enterprises operate AWS environments with best practices and compliance.

- **AWS Support**
  Provides technical support plans tailored to customers' needs, including troubleshooting and guidance.

Database Services

- **Amazon Aurora**
  High-performance, fully managed relational database compatible with MySQL and PostgreSQL, designed for availability and scalability.

- **Amazon DynamoDB**
  Fully managed, serverless NoSQL database that provides fast and predictable performance with seamless scalability.

- **Amazon MemoryDB for Redis**
  Fully managed, Redis-compatible, in-memory database designed for ultra-low latency and high throughput.

- **Amazon Neptune**
  Fully managed graph database service optimized for storing and querying highly connected datasets.

- **Amazon RDS (Relational Database Service)**
  Managed relational database service supporting multiple engines (MySQL, PostgreSQL, Oracle, SQL Server, MariaDB).

Developer Tools

- **AWS AppConfig**
  Service to create, manage, and deploy application configurations safely and quickly.

- **AWS CLI (Command Line Interface)**
  Tool to manage AWS services from your terminal or command prompt.

- **AWS Cloud9**
  Cloud-based integrated development environment (IDE) for writing, running, and debugging code.

- **AWS CloudShell**
  Browser-based shell to manage AWS resources without installing or configuring local tools.

- **AWS CodeArtifact**
  Secure, scalable artifact repository for software packages used in development.

- **AWS CodeBuild**
  Fully managed build service that compiles source code, runs tests, and produces deployable software packages.

- **AWS CodeCommit**
  Fully managed source control service that hosts secure Git repositories.

- **AWS CodeDeploy**
  Automated deployment service for updating applications across compute services such as EC2, Lambda, and on-premises servers.

- **AWS CodePipeline**
  Continuous integration and continuous delivery (CI/CD) service for fast and reliable application and infrastructure updates.

- **AWS CodeStar**
  Unified user interface to manage software development activities in one place.

- **AWS X-Ray**
  Service that helps developers analyze and debug distributed applications, tracking requests as they travel through services.

End User Computing

- **Amazon AppStream 2.0**
  Fully managed application streaming service that allows users to stream desktop applications from AWS to any device.

- **Amazon WorkSpaces**
  Managed Desktop-as-a-Service (DaaS) solution providing secure, cloud-based virtual desktops.

- **Amazon WorkSpaces Web**
  Secure, cloud-based web browsing service that isolates browsing activities from local devices.

Frontend Web and Mobile

- **AWS Amplify**
  Framework and set of tools for building scalable mobile and web applications with backend integration.

- **AWS AppSync**
  Managed GraphQL service that simplifies application development by handling data synchronization and offline capabilities.

- **AWS Device Farm**
  Testing service that allows developers to test their mobile and web apps on real devices hosted in the AWS Cloud.

Internet of Things (IoT)

- **AWS IoT Core**
  Managed cloud service that lets connected devices securely interact with cloud applications and other devices.

- **AWS IoT Greengrass**
  Extends AWS to edge devices so they can act locally on data, run AWS Lambda functions, and communicate securely even without internet connectivity.

Machine Learning Services

- **Amazon Comprehend**
  Natural Language Processing (NLP) service that uses machine learning to find insights and relationships in text.

- **Amazon Kendra**
  Intelligent search service powered by machine learning for enterprise document search.

- **Amazon Lex**
  Service for building conversational interfaces (chatbots) using voice and text.

- **Amazon Polly**
  Text-to-speech service that turns text into lifelike spoken audio.

- **Amazon Rekognition**
  Image and video analysis service for object, scene, facial recognition, and moderation.

- **Amazon SageMaker**
  Fully managed service to build, train, and deploy machine learning models at scale.

- **Amazon Textract**
  Service that automatically extracts printed text and data from scanned documents.

- **Amazon Transcribe**
  Automatic speech recognition (ASR) service that converts speech to text.

- **Amazon Translate**
  Neural machine translation service for language translation.

Management and Governance Services

- **AWS Auto Scaling**
  Automatically adjusts compute resources to maintain performance and optimize costs.

- **AWS CloudFormation**
  Infrastructure as Code (IaC) service to model and provision AWS resources using templates.

- **AWS CloudTrail**
  Service that records AWS API calls and user activity for auditing and governance.

- **Amazon CloudWatch**
  Monitoring and observability service for AWS resources and applications.

- **AWS Compute Optimizer**
  Recommends optimal AWS resources to reduce cost and improve performance.

- **AWS Config**
  Tracks AWS resource configurations and compliance over time.

- **AWS Control Tower**
  Automates setup and governance of multi-account AWS environments.

- **AWS Health Dashboard**
  Provides personalized alerts and remediation guidance for AWS service events.

- **AWS Launch Wizard**
  Simplifies deployment of third-party applications on AWS by guiding resource sizing.

- **AWS License Manager**
  Helps manage software licenses across AWS and on-premises environments.

- **AWS Management Console**
  Web-based user interface to manage AWS services.

- **AWS Organizations**
  Centralized management of multiple AWS accounts with consolidated billing and policies.

- **AWS Resource Groups and Tag Editor**
  Organizes AWS resources for easier management through grouping and tagging.

- **AWS Service Catalog**
  Enables organizations to create and manage approved catalogs of AWS resources.

- **AWS Systems Manager**
  Provides operational insights and automation for managing AWS resources.

- **AWS Trusted Advisor**
  Offers real-time best practice recommendations to optimize AWS infrastructure.

- **AWS Well-Architected Tool**
  Assesses workloads against AWS best practices to improve architecture.

Migration and Transfer Services

- **AWS Application Discovery Service**
 Helps enterprise customers plan migration projects by collecting information about on-premises data centers.

- **AWS Application Migration Service**
 Simplifies, expedites, and reduces the cost of migrating applications to AWS.

- **AWS Database Migration Service (AWS DMS)**
 Migrates databases to AWS securely and with minimal downtime.

- **AWS Migration Hub**
 Provides a central location to track the progress of application migrations across multiple AWS and partner tools.

- **AWS Schema Conversion Tool (AWS SCT)**
 Converts database schema and code to a format compatible with target AWS database engines.

- **AWS Snow Family**
 Physical devices and edge computing to move large amounts of data securely into and out of AWS.

- **AWS Transfer Family**
 Fully managed support for file transfers directly into and out of Amazon S3 using protocols like SFTP, FTPS, and FTP.

Networking and Content Delivery Services

- **Amazon API Gateway**
 Fully managed service to create, publish, maintain, monitor, and secure APIs.

- **Amazon CloudFront**
 Content Delivery Network (CDN) service for fast delivery of websites, APIs, video content, and other assets.

- **AWS Direct Connect**
 Dedicated network connection from your premises to AWS for lower latency and increased bandwidth.

- **AWS Global Accelerator**
 Improves availability and performance of applications with global traffic management.

- **Amazon Route 53**
 Highly available and scalable DNS (Domain Name System) web service.

- **Amazon VPC (Virtual Private Cloud)**
 Enables provisioning of isolated AWS cloud resources within a virtual network.

- **AWS VPN**
 Securely connects your on-premises network or device to AWS using encrypted VPN tunnels.

Storage Services

- **AWS Backup**
  Centralized backup service to automate and manage backups across AWS services.

- **Amazon Elastic Block Store (Amazon EBS)**
  Block-level storage volumes for use with Amazon EC2 instances; ideal for databases and transactional workloads.

- **Amazon Elastic File System (Amazon EFS)**
  Scalable, fully managed elastic NFS file system for use with AWS Cloud services and on-premises resources.

- **AWS Elastic Disaster Recovery**
  Minimizes downtime and data loss with fast, reliable disaster recovery to AWS.

- **Amazon FSx**
  Provides file systems for Windows, Lustre, NetApp ONTAP, and OpenZFS—ideal for specialized workloads.

- **Amazon S3 (Simple Storage Service)**
  Object storage service that offers industry-leading scalability, data availability, security, and performance.

- **Amazon S3 Glacier**
  Low-cost cloud storage for data archiving and long-term backup with retrieval times from minutes to hours.

- **AWS Storage Gateway**
  Hybrid cloud storage service that connects on-premises environments with cloud storage.

Security, Identity, and Compliance Services

- **AWS Artifact**
  Central resource for compliance reports and security and compliance documentation.

- **AWS Audit Manager**
  Automates evidence collection to simplify auditing and compliance.

- **AWS Certificate Manager (ACM)**
  Provision, manage, and deploy SSL/TLS certificates for securing websites and applications.

- **AWS CloudHSM**
  Hardware Security Module (HSM) service to generate and use encryption keys in a secure, dedicated appliance.

- **Amazon Cognito**
  Provides user sign-up, sign-in, and access control for web and mobile apps.

- **Amazon Detective**
  Analyzes, investigates, and quickly identifies the root cause of potential security issues.

- **AWS Directory Service**
  Connects AWS resources with existing on-premises Microsoft Active Directory or creates standalone directories.

- **AWS Firewall Manager**
  Central management of firewall rules across accounts and resources.

- **Amazon GuardDuty**
  Intelligent threat detection service that continuously monitors for malicious activity.

- **AWS Identity and Access Management (IAM)**
  Controls users' and services' permissions and access to AWS resources securely.

- **AWS IAM Identity Center (AWS Single Sign-On)**
  Centralized user access management with single sign-on across multiple AWS accounts and applications.

- **Amazon Inspector**
  Automated security assessment service for identifying vulnerabilities and deviations from best practices.

- **AWS Key Management Service (KMS)**
  Managed service to create and control encryption keys used to encrypt data.

- **Amazon Macie**
  Uses machine learning to discover, classify, and protect sensitive data stored in AWS.

- **AWS Network Firewall**
  Managed network firewall to protect VPCs with rules that filter traffic.

- **AWS Resource Access Manager (AWS RAM)**
  Shares AWS resources securely across AWS accounts.

- **AWS Secrets Manager**
  Protects and manages access to secrets such as database credentials and API keys.

- **AWS Security Hub**
  Centralizes and prioritizes security findings from multiple AWS services and partner tools.

- **AWS Shield**
  Managed Distributed Denial of Service (DDoS) protection service.

- **AWS WAF (Web Application Firewall)**
  Protects web applications from common web exploits.

One last page below.

Aws exam guide CLF-C02 :
https://d1.awsstatic.com/training-and-certification/docs-cloud-practitioner/AWS-Certified-Cloud-Practitioner_Exam-Guide.pdf

ChatGPT prompt - Please please do this only after reading so the content is at least in your subconscious or somewhere in your brain so the emulated prac questions act as repetition.. Don't cheat yourself of the hardwork <3.

Chat Gpt Prompt to emulate exam prac questions (Copy below)

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I'm preparing for the AWS Cloud Practitioner Exam.**CLF-C02.**
Your job is to **emulate the AWS Exam.**
I need you to create questions on **Domain 3: Cloud Technology & Services** from the AWS exam.
Do one question at a time, don't reveal the answer till I ask.
Ensure it's the same difficulty as the exam to thoroughly prepare me to ace it.
Pleasure ensures the difficulty of the exam as I must ace it. (**ensure the difficulty is the same as the exam**). Focus on **helping me memorise each service function and distinguishing their use cases**.
—-

^ (can adjust this for specific service categories e.g Analytics, Application Integration, Compute, Containers, Customer Engagement, Databases, Storage etc). Images below on what it'll look like. Can do 50 of these whenever throughout the day.