AWS Cloud Practitioner

Premium Cheat Sheet

The Definitive CLF-C02 Exam Success Guide

CLF-C02

2026 Edition · Exam Ready · Pass on Your First Attempt

Welcome. This guide was built for one purpose: to make sure you walk into that exam room with **confidence** and walk out with a pass. The AWS Certified Cloud Practitioner (CLF-C02) is your entry point into the most in-demand ecosystem in cloud computing. Whether you're transitioning careers or validating your cloud knowledge, this cert opens doors. Let's get you through it.

Questions	65 (Multiple Choice / Multiple Response)
Duration	90 Minutes
Passing Score	700 / 1000
Cost	$100 USD per attempt
Prerequisites	None – open to everyone
Validity	3 Years

Exam Domain Weights

Domain	Focus Area	Exam Weight
Domain 1	Cloud Concepts	24%
Domain 2	Security & Compliance	30%
Domain 3	Cloud Technology & Services	34%
Domain 4	Billing, Pricing & Support	12%

■ **EXAM WATCH**

Domain 3 (Cloud Technology) is the LARGEST domain at 34% — yet most students over-study Domain 2. Balance your study time accordingly. Domains 2+3 together = 64% of your exam score.

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MODULE 1: Cloud Concepts & Value Proposition

Domain 1 — 24% of Exam

Cloud computing isn't just a technology shift — it's a **business model revolution**. Understanding the *why* behind cloud adoption is what separates a Cloud Practitioner from someone who just memorized facts.

The 6 Advantages of Cloud Computing (AWS Framework)

- **Trade CapEx for OpEx** — Stop paying for idle data center capacity. Pay only for what you use.
- **Massive Economies of Scale** — AWS aggregates usage from millions of customers, driving costs down for everyone.
- **Stop Guessing Capacity** — Auto Scaling means you never over-provision OR run out of resources.
- **Increase Speed & Agility** — New resources in minutes, not weeks. Launch a global app today.
- **Stop Spending on Data Centers** — Focus on your product, not on racking servers and managing cooling systems.
- **Go Global in Minutes** — Deploy to multiple AWS Regions worldwide with a few clicks.

Cloud Deployment Models

Model	What It Means for You	Example
Public Cloud	Fully on AWS. Resources shared across customers (multi-tenant). Best for: startups, agile teams.	EC2, S3, RDS on AWS
Private Cloud (On-Premises)	Virtualized resources in your own data center. More control, higher cost.	VMware, OpenStack
Hybrid Cloud	Mix of on-premises + cloud. Best for: compliance needs, gradual migration.	AWS Outposts, Direct Connect

Cloud Service Models: IaaS, PaaS, SaaS

Model	Responsibility Split	AWS Example
IaaS	You manage: OS, runtime, app, data. AWS manages: physical servers, networking.	Amazon EC2
PaaS	You manage: app code and data only. AWS manages: everything below.	AWS Elastic Beanstalk
SaaS	You just use it. Zero management overhead.	Amazon WorkMail, Salesforce

■ **PRO TIP**

On the exam, IaaS = EC2 (you manage the OS). PaaS = Elastic Beanstalk (AWS manages the platform). SaaS = managed service you access via browser/API. Know the boundary of YOUR responsibility in each model.

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MODULE 2: AWS Global Infrastructure

Regions, AZs, Edge Locations — Every Exam Tests This

AWS's global infrastructure is its superpower. Understanding its architecture tells you **where** your data lives, **how** it stays available, and **why** AWS can guarantee near-zero downtime.

Component	What It Is & When to Use It	Scale / Example
AWS Region	A distinct geographic area containing multiple Availability Zones.	us-east-1 (N. Virginia)
Availability Zone (AZ)	One or more discrete data centers with independent power, cooling, and networking within a Region.	us-east-1a, 1b, 1c
Edge Location / PoP	Used by CloudFront CDN and Route 53 to cache content closer to users. NOT for deploying EC2.	Global network
Local Zone	AWS infrastructure extension into metros for ultra-low latency (single-digit ms).	Los Angeles, Dallas
AWS Outposts	AWS hardware physically installed IN your on-premises data center.	Your data center
AWS Wavelength	Compute at the edge of 5G networks for ultra-low latency mobile applications.	Verizon 5G zones

■ **EXAM WATCH**

CRITICAL GOTCHA: An Edge Location is NOT an Availability Zone and NOT a Region. Edge Locations serve CloudFront CDN caching — you cannot deploy EC2 instances there. This exact distinction appears on nearly every exam attempt.

■ **PRO TIP**

When choosing a Region for your workload, consider 4 factors: (1) Compliance/data residency laws, (2) Proximity to users for low latency, (3) Service availability — not all services are in every Region, (4) Pricing — varies by Region.

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MODULE 3: Security, Compliance & Shared Responsibility

Domain 2 — 30% of Exam | Your Highest-Scoring Opportunity

Security is the backbone of everything AWS does. At 30% of your exam, mastering this domain is the **single fastest way to boost your score**. Start here if you're short on time.

The AWS Shared Responsibility Model

Think of it this way: AWS is like a landlord who builds and maintains the building. **You're the tenant** — responsible for what happens inside your apartment.

AWS Responsibility "Security OF the Cloud"	• Physical data center security • Hardware & network infrastructure • Hypervisor & virtualization layer • Managed service configurations (e.g., RDS patching)
Your Responsibility "Security IN the Cloud"	• Your data (encryption at rest & in transit) • IAM users, roles, and permissions • OS patching on EC2 instances • Network/firewall config (Security Groups, NACLs) • Application-level security

■ **EXAM WATCH**

The exam will try to trick you with 'who is responsible for X?' questions. Key rule: If AWS manages the service for you (like RDS), AWS patches the database engine. But YOU are ALWAYS responsible for your data, access controls, and what runs on your EC2 OS.

AWS Identity & Access Management (IAM)

IAM is the **gatekeeper of your entire AWS environment**. Master it — it appears on every single AWS exam.

IAM Concept	What It Does & When to Use It	Use Case
Root User	The master account (email/password). Has UNLIMITED access. Never use for daily tasks. Enable MFA immediately.	CRITICAL
IAM User	A person or service with a username + password + access keys. Default: zero permissions.	Daily Admin
IAM Group	A collection of users. Attach policies to groups, not individual users — it scales better.	Team Access
IAM Role	A temporary identity assumed by a service, user, or external account. Key for EC2 permissions, Lambda, etc.	Cross-Service
IAM Policy	A JSON document that defines: what ACTIONS are allowed, on which RESOURCES, under what CONDITIONS.	Permissions

■ **PRO TIP**

Always follow the Principle of Least Privilege — grant ONLY the permissions needed, nothing more. Use IAM Roles for EC2 instances (never embed access keys in your code). Enable Multi-Factor Authentication (MFA) on the root account and all privileged users.

Core Security Services

Service	What It Does	Category
AWS Shield	Standard (free, always on): protects against Layer 3/4 DDoS. Advanced ($3K/mo): enhanced protection + DDoS Response Team.	DDoS Protection
AWS WAF	Web Application Firewall. Filters HTTP/HTTPS traffic. Blocks SQLi, XSS, bad bots. Works with CloudFront, ALB, API Gateway.	App-Layer Security

Amazon GuardDuty	AI-powered threat detection. Monitors CloudTrail, VPC Flow Logs, DNS logs for malicious activity. Enable with one click.	Threat Detection
Amazon Inspector	Automated vulnerability scanning for EC2 instances and container images (ECR). Gives CVE scores.	Vuln Assessment
Amazon Macie	Uses ML to discover, classify, and protect sensitive data (PII, credit cards) stored in Amazon S3.	Data Privacy
AWS KMS	Key Management Service. Create and control encryption keys. Integrated with S3, EBS, RDS, Lambda.	Encryption Keys
AWS Secrets Manager	Store and auto-rotate secrets (DB passwords, API keys). Different from Parameter Store — this one ROTATES.	Secrets Rotation
AWS CloudTrail	Logs management events by default. Configure data events separately.	Governance/Audit
AWS Artifact	On-demand access to AWS compliance reports (SOC, PCI, ISO). Download NDAs and compliance docs.	Compliance Docs

■ EXAM WATCH

Know the difference: **CloudTrail** = WHO made API calls (audit/compliance). **CloudWatch** = WHAT is happening with performance/metrics (monitoring). These are frequently confused on exam questions — they are completely different services.

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MODULE 4: Core Compute Services

EC2, Lambda, Containers — Domain 3

Amazon EC2 — Elastic Compute Cloud

EC2 is your **virtual server in the cloud**. Think of it as renting a computer from AWS. You control the OS, the software, and the configuration — this is IaaS in action.

EC2 Pricing Models — The Most Tested Topic

Pricing Model	How It Works	When to Use	Cost
On-Demand	Pay per second/hour. No commitment.	Best For: Unpredictable workloads, dev/test, new apps	Highest
Reserved Instances	1-yr or 3-yr commitment. Up to 72% off On-Demand.	Best For: Steady-state, predictable workloads (24/7 production)	Low
Savings Plans	Commit to $/hour usage for 1-3 years. More flexible than RIs.	Best For: Flexible compute (EC2 + Lambda + Fargate)	Low
Spot Instances	Discounted spare EC2 capacity; may be interrupted.	Best For: Batch jobs, big data, fault-tolerant, stateless workloads	Lowest

Dedicated Hosts	Physical server dedicated to you. Bring-Your-Own-License support.	Best For: Compliance, regulatory, per-socket licensing	Highest

■ **EXAM WATCH**

Spot instances = CHEAPEST but CAN BE INTERRUPTED with 2-min warning. The exam loves scenarios asking 'which is most cost-effective for a fault-tolerant batch job?' — Answer: Spot. For 'always on, predictable workloads' — Answer: Reserved Instances or Savings Plans.

Serverless & Container Compute

Service	What It Does	Best For
AWS Lambda	Run code without managing servers. Pay per invocation + duration. Supports Node.js, Python, Java, Go, .NET. Max 15 min timeout.	Event-driven functions, APIs, automation
AWS Fargate	Serverless containers. Run Docker/ECS/EKS workloads without managing EC2 cluster nodes.	Containerized apps, no server management
Amazon ECS	Elastic Container Service. AWS-native Docker container orchestration.	Docker workloads on AWS
Amazon EKS	Managed Kubernetes. AWS handles the Kubernetes control plane.	Kubernetes workloads, multi-cloud portability
AWS Elastic Beanstalk	PaaS: Upload your code, Beanstalk handles provisioning, load balancing, scaling, monitoring.	Developers who want speed, not infra control
Amazon Lightsail	Simplified VPS for simple websites, WordPress, small apps. Fixed monthly pricing.	Beginners, simple workloads

■ **PRO TIP**

For the CLF exam, Lambda = serverless = no servers to manage = you only pay when code runs. Fargate = serverless containers (no EC2 to manage). ECS/EKS = containers but you CAN choose to manage EC2 nodes.

MODULE 5: AWS Storage Services

S3, EBS, EFS, Glacier — Know the Difference

Service	What It Is	When to Use It
Amazon S3	Object storage. Store ANY file type. 11 nines (99.999999999%) durability. Scalable to exabytes. Accessible over HTTP(S).	Backups, static websites, data lakes, media files
Amazon EBS	Block storage attached to EC2. Like a hard drive for your virtual machine. Persists independently from EC2. One AZ only.	OS boot volumes, databases on EC2

Amazon EFS	Elastic File System. Shared NFS file system. Multiple EC2 instances can mount it simultaneously. Scales automatically.	Shared content, CMS, home directories
S3 Glacier	Cold archive storage. Retrieval in minutes to hours. Glacier Instant: ms. Flexible: minutes-hours. Deep Archive: hours.	Long-term archives, compliance data, backups
AWS Storage Gateway	Hybrid bridge: connects on-premises apps to AWS cloud storage via standard protocols.	Data center to cloud migration/extension
AWS Snow Family	Physical devices for offline data transfer and edge computing. Models and capacity vary.	Offline data migration, edge computing

■ **EXAM WATCH**

Memory hack: S3 = Objects (files, images, videos). EBS = Blocks (attached to ONE EC2, one AZ). EFS = Files (shared across MULTIPLE EC2s). Glacier = Archives (cold storage, retrieval delay).

S3 Storage Classes — Cost vs. Access Speed

S3 Class	Characteristics	Ideal Use Case
S3 Standard	Frequent access. Low latency. Highest cost.	Production apps, active data
S3 Intelligent-Tiering	Auto-moves data between tiers based on access patterns. Small monitoring fee.	Unknown or changing access patterns
S3 Standard-IA	Infrequent Access. Lower cost, retrieval fee applies.	Backups accessed monthly
S3 One Zone-IA	Single AZ only. Cheaper than Standard-IA but less resilient.	Re-creatable data, secondary backups
S3 Glacier Instant	Archive + instant retrieval (ms latency).	Medical images, news media archives
S3 Glacier Flexible	Archive. Retrieval in minutes to hours.	Compliance archives, rarely accessed
S3 Glacier Deep Archive	Lowest cost in all of AWS storage. Retrieval in 12-48 hours.	7+ year regulatory archives

MODULE 6: Database Services

Relational, NoSQL, Caching — Match the Service to the Use Case

Service	What It Is	Best For
Amazon RDS	Managed relational DB. Supports MySQL, PostgreSQL, Oracle, SQL Server, MariaDB, Aurora. AWS handles backups, patching, HA.	Traditional relational workloads, OLTP

Amazon Aurora	Managed relational database compatible with MySQL and PostgreSQL. Storage grows automatically.	High-performance relational apps
Amazon DynamoDB	Fully managed NoSQL key-value + document DB. Single-digit ms at ANY scale. Serverless, auto-scaling, global tables.	Gaming, IoT, session management, high-speed apps
Amazon Redshift	Petabyte-scale data warehouse. Columnar storage. For analytics (OLAP) NOT transactions (OLTP).	BI dashboards, data analytics, reporting
Amazon ElastiCache	In-memory caching. Redis or Memcached. Microsecond latency.	Session caching, leaderboards, real-time analytics
Amazon Neptune	Managed graph database. Social networks, fraud detection, knowledge graphs.	Highly connected datasets
Amazon DocumentDB	MongoDB-compatible document database. Fully managed.	Content management, catalogs, user profiles

■ **EXAM WATCH**

RDS vs DynamoDB is a CLASSIC exam question. Use RDS when you need structured relational data with complex joins. Use DynamoDB when you need massive scale, flexible schema, and single-digit ms performance. Redshift = analytics (OLAP). RDS = transactions (OLTP). Do NOT confuse these.

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MODULE 7: Networking & Content Delivery

VPC, Route 53, CloudFront, Load Balancers

Service	What It Does	Key Use Case
Amazon VPC	Your private, logically isolated network within AWS. You control IP ranges, subnets, routing, gateways.	Foundation of all AWS networking
Subnets	Public (internet accessible) or Private (no direct internet). Resources go in subnets.	Network segmentation
Internet Gateway	Connects your VPC to the public internet (bidirectional).	Public-facing resources
NAT Gateway	Lets private subnet resources reach the internet (outbound ONLY). They cannot be reached from outside.	Private EC2 downloading updates
Security Groups	Virtual firewall at the INSTANCE level. Stateful (return traffic auto-allowed). Allow rules only.	EC2, RDS, Lambda security
Network ACLs (NACLs)	Firewall at the SUBNET level. Stateless (return traffic needs explicit rule). Allow AND deny rules.	Broad subnet-level control

VPC Peering	Connect two VPCs (same or different accounts/regions) via private IPs. NOT transitive.	Cross-account resource sharing
AWS Direct Connect	Dedicated private network connection from your data center to AWS. NOT over the internet.	Consistent bandwidth, compliance
Amazon Route 53	AWS's scalable DNS service. Domain registration + DNS routing + health checks.	DNS management
Amazon CloudFront	Global CDN that caches content at edge locations worldwide. Integrates with AWS Shield for DDoS protection.	Low-latency content delivery
Elastic Load Balancer	Distributes traffic across multiple targets (EC2, containers, IPs). ALB (Layer 7), NLB (Layer 4).	High availability & scaling

■ **EXAM WATCH**

Security Groups vs NACLs: SG = instance level, STATEFUL, allow only. NACL = subnet level, STATELESS, allow AND deny. The exam WILL test this distinction. If you forget one thing, remember: Security Groups are STATEFUL.

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MODULE 8: Management, Monitoring & Governance

CloudWatch, CloudTrail, Trusted Advisor, Organizations

Service	What It Does	Primary Use
Amazon CloudWatch	Monitoring & observability. Collects metrics, logs, alarms. Set alerts when CPU > 80%.	Performance monitoring
AWS CloudTrail	API activity logging. Records who did what, when, from where. Your security audit trail.	Compliance, auditing, forensics
AWS Config	Tracks configuration changes to AWS resources over time. Checks compliance against rules.	Configuration compliance
AWS Trusted Advisor	Real-time best-practice recommendations across 5 pillars: Cost, Security, Performance, Fault Tolerance, Service Limits.	Account health checks
AWS Organizations	Manage multiple AWS accounts centrally. Consolidated billing. Apply Service Control Policies (SCPs).	Multi-account governance
AWS Control Tower	Automates multi-account setup with guardrails. Builds on Organizations.	Landing zone setup
AWS Systems Manager	Operational control: Run commands, manage patches, store config parameters on EC2 at scale.	Ops automation
AWS CloudFormation	Infrastructure as Code (IaC). Define your entire AWS environment in JSON/YAML templates.	Repeatable deployments

PRO TIP

Trusted Advisor provides best-practice checks across areas such as cost, security, performance, fault tolerance, and service limits. Available checks depend on your Support plan.

MODULE 9: Billing, Pricing & Support

Domain 4 · 12% of Exam | Easy Points · Don't Leave Them on the Table

Billing & Cost Management Tools

Tool / Feature	What It Does	Use Case
AWS Pricing Calculator	Estimate costs before deployment. Build multi-service estimates.	Pre-deployment planning
AWS Cost Explorer	Visualize and analyze actual spending; forecast future costs.	Cost analysis
AWS Budgets	Set cost or usage thresholds and receive alerts.	Cost control & alerts
Cost & Usage Reports	Detailed billing data with line-item granularity; deliver to S3.	Finance & accounting
Savings Plans	Commit to a $/hour amount for 1 or 3 years; applies to eligible compute use.	Reduce compute costs
Reserved Instances	1- or 3-year commitment for eligible services such as EC2, RDS, and Redshift.	Predictable workloads

AWS Support Plans · Current in 2026

Plan	What You Get	Minimum Price
Basic	Included plan: account and billing support, documentation, forums, and service health resources.	Included
Business Support+	24/7 access to AWS experts; 30-minute engagement target for critical production issues.	From $29/account/month
Enterprise Support	Designated Technical Account Manager (TAM), proactive guidance, and enhanced response targets.	$5,000/month minimum
Unified Operations	Expanded expert support, domain specialists, architecture guidance, and operations support.	$50,000/month minimum

Paid-plan fees are the greater of the stated minimum or the applicable percentage of AWS charges. Pricing and features can change; check the AWS Support pricing page before purchase.

■ EXAM WATCH

Business Support+ targets engagement within 30 minutes for critical production issues. Enterprise Support includes a designated Technical Account Manager (TAM). Check current AWS plan terms for response targets.

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MODULE 10: AI, Machine Learning & Amazon Bedrock

2026 Study Note - AI/ML Services

AWS current CLF-C02 in-scope list includes AI/ML services such as Amazon Q, SageMaker AI, Comprehend, Lex, Polly, Rekognition, Textract, Transcribe, and Translate. The list is non-exhaustive and may change.

Service	What It Does	Key Use Case
Amazon Bedrock	Fully managed GenAI service. Access foundation models (FMs) from Amazon Titan, Anthropic Claude, Meta Llama, Cohere, Mistral via API. Build AI apps without managing ML infra.	GenAI applications, chatbots, content generation
Amazon SageMaker AI	Build, train, and deploy custom ML models. Full ML lifecycle management.	Custom ML model development
Amazon Rekognition	Image and video analysis. Object detection, facial recognition, content moderation.	Image/video analysis
Amazon Polly	Text-to-speech. 60+ voices, 30+ languages. Create lifelike audio.	Accessibility, voice apps
Amazon Transcribe	Automatic speech recognition (ASR). Audio/video to text.	Transcription, subtitles, call analytics
Amazon Translate	Neural machine translation. 75+ languages.	Content localization
Amazon Lex	Build conversational chatbots using voice + text. Powers Amazon Alexa.	Chatbots, IVR systems
Amazon Comprehend	NLP: extract sentiment, entities, key phrases, and topics from text.	Text analytics, document classification
Amazon Q Business	Enterprise GenAI assistant. Answers questions from your internal data sources securely.	Enterprise knowledge management

Prioritize AI/ML services named in AWS current CLF-C02 in-scope list, including Amazon Q and SageMaker AI. Bedrock is an AWS GenAI service, but is not named in that list; treat it as broader AWS context.

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FINAL STRATEGY: Your 7-Day Exam Sprint

- **Day 1-2: Cloud Concepts + Global Infrastructure** — Modules 1-2. Nail the 6 advantages and know Region vs AZ vs Edge Location cold.
- **Day 3: Security & Shared Responsibility** — Module 3. This is 30% of your exam. Memorize the SRM boundary and all security services.
- **Day 4: Compute + Storage + Databases** — Modules 4-6. Focus on pricing models (EC2), S3 classes, and database selection.
- **Day 5: Networking + Management + Billing**
  - Modules 7-9. Security Groups vs NACLs. Support plan tiers. Cost Explorer vs Budgets.
- **Day 6: AI/ML + Full Practice Exam**
  - Module 10 + take a full 65-question timed practice exam at CloudExamPro.com.
- **Day 7: Review Weak Areas + Rest**
  - Review questions you missed. Don't cram new material. Trust your preparation.

EXAM WATCH

The #1 reason students fail: they study content but skip practice exams. You MU full-length practice exams before test day. CloudExamPro.com has both free and banks mapped to every domain.

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