

AWS Networking & Global Infrastructure Cheat Sheet

Topic	Keywords	Definition / Purpose	Components / Types	Use Cases / Notes
EC2 Scalability & Auto Scaling	Auto Scaling, ELB, AZs, Horizontal/Vertical Scaling, Launch Templates, ASG	Automatically adjusts EC2 instances to meet demand	Launch Configuration/Template, Auto Scaling Group, Scaling Policies	Cost-efficient, high availability, performance, fault tolerance
VPC (Virtual Private Cloud)	Subnet, Route Table, IGW, NAT, SG, NACL, VPC Peering, Flow Logs, Endpoints	Logically isolated virtual network in AWS	Subnets (Public/Private), Route Tables, IGW, NAT, SG, NACLs, Peering, Endpoints (Gateway/Interface), Flow Logs	Secure network isolation, hybrid cloud connectivity, monitoring
Subnets & Route Tables	Public/Private Subnet, Route Table, AZ	Subnet = segment of VPC; Route Table = directs traffic	Public → IGW, Private → NAT, Subnet linked to Route Table	Determines traffic flow for EC2 instances
IGW & NAT Devices	Internet Gateway, NAT Gateway, NAT Instance	IGW = internet access for public subnets; NAT = internet access for private subnets	NAT Gateway (managed), NAT Instance (custom)	Secure outbound internet from private subnets
Network ACL vs Security Group	Stateless, Stateful, Allow/Deny	NACL = subnet-level, stateless; SG = instance-level, stateful	NACL: Allow & Deny, SG: Allow only	Extra layer of security (NACL), fine-grained instance security (SG)

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VPC Peering	Private IP, Non-transitive, CIDR	Connects two VPCs privately	One-to-one connection between two VPCs	Cross-account VPC communication, multi-tier apps
VPC Endpoints	Gateway Endpoint, Interface Endpoint, PrivateLink	Private connection to AWS services	Gateway = S3/DynamoDB, Interface = ENI/PrivateLink	Secure access to AWS services without internet
VPC Flow Logs	Monitoring, CloudWatch, S3	Captures IP traffic metadata	Enabled at VPC, Subnet, or ENI	Troubleshooting, security analysis, compliance
AWS VPN	Site-to-Site, Client VPN, IPsec	Secure encrypted connection between on-premises & AWS	Site-to-Site VPN, Client VPN	Hybrid cloud, remote access for workforce
CloudFront vs Global Accelerator	CDN, Edge Locations, AWS Global Network, TCP/UDP, Caching	CloudFront = content delivery; Global Accelerator = low-latency routing	CloudFront caches at edge; GA routes via AWS network	CloudFront → websites, video streaming; GA → gaming, VoIP, latency-sensitive apps
Elastic Load Balancing (ELB)	ALB, NLB, GLB, Layer 4/7, Health Checks	Distributes traffic across targets for HA & scalability	ALB = HTTP/HTTPS, path/host routing; NLB = TCP/UDP; GLB = IP, virtual appliances	Web apps, real-time apps, multi-AZ deployment
Amazon Route 53	DNS, Domain Registration,	Highly available DNS	Routing: Simple, Weighted, Latency-based, Failover, Geolocation	Global websites, disaster recovery, multi-region apps

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	Routing Policies, Health Checks	service for routing users		

AWS Networking & Acceleration Cheat Sheet

Service	Purpose / Use Case	Key Features	Exam Keywords / Clues
Amazon PrivateLink	Securely connect your VPC to AWS services or other VPCs without using the public internet	Private connectivity, works with S3, Kinesis, CloudWatch, third-party apps	<i>"private connection," "avoid internet," "secure service access," "VPC endpoint"</i>
AWS Transit Gateway	Central hub to connect multiple VPCs and on-premises networks	Simplifies network architecture, scalable, supports inter-region peering	<i>"hub-and-spoke network," "connect multiple VPCs," "central routing"</i>
AWS Global Accelerator	Improve global application performance and availability	Routes traffic to nearest healthy endpoint via AWS global network, static IPs, supports TCP/UDP	<i>"low latency," "static IP addresses," "real-time traffic," "multi-region"</i>
AWS Content Delivery Network (CDN)	Speed up delivery of content globally	Uses edge locations (PoPs) to cache content, improves website/video performance	<i>"CDN," "edge locations," "cached content," "global content delivery"</i>
Amazon CloudFront	AWS's CDN service for web apps, videos, APIs	Distributes static/dynamic content, integrates with S3, ALB, supports HTTPS, caching at edge	<i>"HTTP/HTTPS content delivery," "caching," "edge locations," "website/videos acceleration"</i>

Topic	Key Points	Keywords
VPC	Virtual Private Cloud: isolated network in AWS for your resources. Can define CIDR block, subnets, route tables, and gateways.	Isolated network, CIDR block, custom VPC
Subnets	Subdivide VPC into smaller networks. Can be public (internet-facing) or private (internal).	Public subnet, private subnet, IP range
Route Tables	Determines how traffic is routed in a VPC/subnet. Can associate with multiple subnets.	Routing, destination, target, subnet association
Internet Gateway (IGW)	Allows resources in a VPC to connect to the internet. Required for public subnets.	IGW, internet access, public subnet
NAT (NAT Gateway & NAT Instance)	Allows private subnet resources to access internet without exposing them. Gateway is managed & scalable; instance is EC2-based.	NAT, private subnet internet, NAT gateway, NAT instance
Security Groups (SGs)	Stateful firewall for EC2 and other resources. Controls inbound & outbound traffic.	Stateful, virtual firewall, inbound/outbound rules
Network ACLs (NACLs)	Stateless firewall at the subnet level. Controls inbound/outbound traffic with rules.	Stateless, subnet firewall, allow/deny rules
VPC Peering	Connects two VPCs privately using AWS network. Traffic stays on AWS backbone.	Private connection, VPC-to-VPC, cross-account VPC
VPC Endpoints / PrivateLink	Enables private connections to AWS services without internet. Includes interface & gateway endpoints.	Private connectivity, AWS service access, interface endpoint, gateway endpoint
AWS VPN	Connects on-premises network to AWS VPC securely over the internet.	Site-to-site VPN, IPSec, secure connection

Topic	Key Points	Keywords
Direct Connect	Dedicated physical network connection from on-premises to AWS. Low latency & high bandwidth.	Dedicated link, private connection, low latency
Transit Gateway	Central hub for connecting multiple VPCs and on-prem networks. Simplifies large-scale architectures.	Hub-and-spoke, VPC connectivity, route aggregation
Global Accelerator	Improves global app performance using AWS edge network. Provides static IP & routes traffic via optimal AWS region.	Edge network, global routing, static IP, performance boost
Content Delivery Network (CDN)	Network of servers that cache content closer to users. Reduces latency for heavy content.	Edge locations, caching, fast delivery, low latency
Elastic Load Balancers (ELB)	Distributes traffic across multiple targets (EC2, containers, IPs). Types: ALB, NLB, CLB.	Load balancing, high availability, ALB, NLB, CLB
Route 53	AWS DNS service for domain registration & traffic routing. Supports health checks, routing policies.	DNS, domain management, routing, failover, latency-based

Elastic Load Balancing (ELB) Cheat Sheet

Load Balancer Type	Layer	Use Case / Best For	Exam Keywords / Clues
Application Load Balancer (ALB)	Layer 7 (Application)	HTTP/HTTPS traffic, microservices, content-based routing (path/host-based), containers	<i>"HTTP/HTTPS," "microservices," "path-based routing," "WebSockets"</i>
Network Load Balancer (NLB)	Layer 4 (Transport)	TCP/UDP traffic, ultra-low latency, high performance, static IPs, gaming/IoT/financial apps	<i>"TCP/UDP," "low latency," "millions of requests per second," "static IP"</i>

Load Balancer Type	Layer	Use Case / Best For	Exam Keywords / Clues
Gateway Load Balancer (GWLb)	Layer 3 (Network)	Deploy and scale 3rd-party virtual appliances like firewalls, IDS/IPS	<i>"firewalls," "network appliances," "inspection," "3rd-party security"</i>
Classic Load Balancer (CLB)	Layer 4 & Layer 7 (Legacy)	Basic load balancing, supports HTTP/HTTPS and TCP, older apps	<i>"legacy," "basic L4 & L7," "older applications"</i>

Route 53 Routing Policies Cheat Sheet

Routing Policy	Use Case	Exam Keywords / Clues
Simple	Map a domain to a single resource. Default option, no advanced logic.	<i>"Single resource", "default", "basic DNS record"</i>
Weighted	Split traffic across multiple resources in percentages. Great for A/B testing or gradual migration.	<i>"A/B testing", "percentage traffic", "20/80 split"</i>
Latency-based	Send users to the AWS Region that gives the lowest latency.	<i>"lowest latency", "best performance for users"</i>
Failover	Active-passive setup: traffic goes to secondary resource if primary fails.	<i>"disaster recovery", "active-passive", "health check"</i>