

#	Classification	AWS Service	About	Keywords for exam
1	What is Cloud Computing	What is Cloud Computing		
2		Different Types of Cloud Computing		
3		AWS Cloud Overview		
4	IAM	IAM Users & Groups		
5		IAM Policies		
6		IAM MFA		
7		AWS CLI		
8		IAM Roles for AWS Services		
9		IAM Credential Report	Lists all your account's users and the status of various credentials	
10		IAM Access Advisor	Shows the service permissions granted to a user and when it was last accessed.	
11		IAM Best Practices		
12		Shared Responsibility for IAM		
13	Elastic Compute Cloud	EC2		
14		EC2 with website		
15		Security Groups & Ports	Control n/w security into or out of EC2 instances. SG rules can be referenced by IP Address / by Security Group EC2 instance can access the internet by default.. OUTBOUND.	Security groups contain only ALLOW rules.
16		SSH Overview		
17		EC2 Instance Connect		
18		EC2 Roles	Never do AWS configure in EC2 instances and store your credentials / PEM file. Since it will be exposed to others as well. Instead use EC2 Roles .	
19	EC2 Instance Storage	EBS	A n/w drive you can attach while the instance is running. Persist data even after termination.	
20		EBS Snapshots	Back up your EBS volume anytime without detaching.	Bound to specific AZ. Think of them as n/w USB stick.
21		AMI	Create AMIs from your instances, this will be like an image with preinstalled softwares etc.	AMIs are built for specific region
22		EC2 Instance Store	High performance Hardware disk Better IO performance	Risk of data loss if hardware fails.
23		EFS	Managed NFS that can be mounted on 100s of EC2. Works with Linux EC2. Multi AZ No capacity planing. Pay per use.	
24		Shared Responsibility for EC2		
25	ELB-ALB-ASG	ELB	Are servers that forward internet traffic to downstream members. ALB - L7 Nw LB - L4 Classic - Both	Managed load balancer
26		ALB	HTTP / HTTPS --> Layer-7	
27		ASG	Scale out / scale in Auto register new instances to LB. Replace unhealthy instances.	
28	S3	S3	Allows to store objects (files) in buckets (directories) Objects have a key (Full Path)	Buckets must have globally unique name. Buckets must be defined at region level
29		S3 Bucket Policy	User Based: IAM Policies. Which API call should be allowed for a specific IAM User. Resource Based: Bucket wide rules from S3 console - allow or deny requests across account or public requests and so on. Object ACLs: Finer grain. Defined at object level. Bucket ACLs: Less common	Grant public access to the bucket. Force objects to be encrypted at upload. Grant cross account access.
30		S3 Website	Host static websites	
31		S3 Versioning	To keep the previous versions of the file	
32		Server Access Logging	For audit purposes you may want to log all access to 3 buckets	
33		S3 Replication	CRR: Cross Region Replication SRR: Same Region Replication Must enable versioning in the source and target buckets.Copying is async. Give proper permissions to IAM.	

34		S3 Storage Class	1. Amazon S3 Standard - General Purpose 2. Amazon S3 Standard - Infrequent Access 3. Amazon S3 One Zone - Infrequent Access 4. Amazon S3 Intelligent Tiering 5. Amazon Glacier 6. Amazon Glacier Deep Archiving You can define lifecycle rules to define the rules of the storage to move to different storage classes after X days.	
		Snowball	Physical data transport solution that helps to moved TBs or PBs of data in / out of AWS. Pay per data transfer. Alternate to moving data over network.	If it is going to take more than a week to transfer data over n/w then use this. 80TB Use case: Disaster recover, server decommissioning.
		Snowball edge	Have computational capability to the device Supports a custom EC2 AMI so you can perform processing on the go. Supports custom Lambda functions. Very useful to preprocess data while moving	Have 100 TB capacity Use case: data migration
		Snowmobile	Truck comes to you. Transfer Exabytes of data ==> 1 EB = 1000 PB == 1,000,000 TB Each snowmobile will have 100 PB capacity. (use multiple in parallel) Better than snowball if you are transferring more than 10 PB of data.	
		Storage Gateway	To expose S3 data to be accessed on-premises. Bridge between on-prem and cloud data in S3.	Hybrid Cloud Storage to allow on-premises to use the AWS Cloud Under the hood SG uses EBS.
35	Database & Analytics	RDS	Managed DB service for DB using SQL as query language. Following DB are managed by AWS: Postgres, MYSQL, Maria, MySQL, Aurora	
36		Aurora	Proprietary technology from AWS. Supports Postgres & MySQL .	Is Cloud Optimized . 5x perf improvement of MySQL. 3x perf improvement over Postgres.
37		Elastic Cache	To get managed Redis / Memcache	in-memory database. High perf, low latency.
38		Dynamo DB	Fully Managed Highly available with replication across 3 AZ.	No SQL Serverless DB. Single digit millisecond latency
39		Redshift	Is based on Postgres DB. It is NOT used for OLTP - Online Transaction Processing . Is OLAP: Online Analytical Processing. Load data every one hour. Not every second. 10x better performance and scales to PBs of data. Has SQL interface to perform queries. BI tools such as quicksight, tableau integrate with it.	Analytics & Data warehousing. Columnar storage of data.
40		EMR	Elastic Map Reduce. Not a DB. To create Hadoop Clusters to analyze and process vast amount of data.	Hadoop Clusters can be made of 100s of EC2 instance.
41		Athena	Query results will be put to S3.	Fully serverless DB to query S3.
42		DMS	Quickly & securely migrate DB. Homogeneous: Oracle to Oracle. Heterogeneous: MS SQL to Aurora.	Migration of DB.
43		Glue	To prepare & transform data for analytics. Glue data catalog: a catalog of datasets.	Managed Extract Transform Load (ETL) . Serverless
44	Compute Services	ECS	Elastic Container Service. Used to launch Docker containers . AWS will take care of starting / stopping containers. It is integrated with ALB. You MUST provision EC2 instances before hand and maintain the infra.	I want to run docker container on AWS : ECS
45		Fargate	Also used to launch docker containers on AWS. DONOT need to provision EC2 instances. Just runs based on the CPU & RAM we specify.	Serverless offering.
46		ECR	Private registry to store the docker containers. This is where you store docker images so that they can be run by ECS / Fargate	
47		Lambda	Serverless functions. Limited by time - short executions.	Event Driven : Functions get invoked when needed. Lambda doesnot do docker. Lambda pricing is based on number calls & duration & memory.

48		Batch	Fully Managed Batch processing at any scale. Batch jobs are defined as docker images and run on ECS. For longer running loads.	
49		Lightsail	Get virtual servers, storage, database, networking all in one place. Low & predictable pricing. High availability, NO Auto scaling , limited integrations.	Great for people with little cloud experience and want to get started quickly without configuring much.
50	Deployments & Infra Management	Cloud Formation	IaaS - Infrastructure as a code. Declarative of deploying your stack. Can give you the estimated costs too.	AWS Only
51		Elastic Beanstalk	Developer centric view of deploying an application on AWS. We still have control over the configuration	Beanstalk ==> PaaS AWS Only Using beanstalk is free, but you are going to pay for the underlying services.
52		AWS Code Deploy	To deploy our application automatically . Servers / instances must be provisioned ahead of time and install the code deploy agent.	Hybrid: EC2 instance & On-Prem.
53		AWS Systems Manager (Ansible type)	Helps to manage a fleet of EC2 & on-premise server. Get operational insights of your infrastructure. Patching automation. Run commands across all the servers.	Hybrid AWS Service. Want to patch a fleet of EC2 & on-prem servers. Run a command consistently across all servers.
54		Ops Works Overview	For provisioning limited set of AWS resources like EC2, RDS etc.	Managed Chef & Puppet.
55	AWS Global Infrastructure	Route 53	To route users to the closest deployment with least latency. Managed DNS.	Managed DNS. GLOBAL Service. Routing Policies: 1. Simple Routing Policy (No health check) 2. Weighted Routing Policy (70, 20, 10) - can use health check 3. Latency Routing Policy: 4. Failover Routing Policy: DR: In case primary is down, then we will be redirected to the failover instance.
56		Cloud Front	CDN. Replicate part of your applications to AWS edge locations. Cache common requests for improved user experience.	DDoS protection. GLOBAL Service Integration with shield, WAF.
57		S3 Accelerator	Accelerate global uploads & downloads into S3.	
58		AWS Global Accelerator	Improve global application performance by using the AWS global nw. Increase transfer speed by transferring file to an AWS edge location which will forward the data to the S3 bucket in the target region	
59	Cloud Integrations	SNS	Point to Point communication	Fully Managed Serverless Service to decouple the apps. Messages are deleted after they are read by the consumers.
60		SQS	One message to many receivers. SNS Subscribers can be: 1. HTTP / HTTPS 2. Emails, SMS Messages, Mobile notifications. 3. SQS 4. Lambda	Notifications, Subscribers, Publishers.
61		Kinesis	Streaming. Out of scope	
62	Cloud Monitoring	Cloud Watch Metrcs	Provides various metrics for all AWS services.	
63		Cloud Watch Alarms	Create alarms for any actions. Auto Scaling: inc / dec of EC2 instances. EC2 Actions: Start / Stop of EC2 instances	
64		Cloudwatch Logs	Collect logs from various AWS services	Hybrid Service
65		Cloud Watch Events	Cron Jobs React to events happening	Serverless. Same as below svc
		Amazon Event Bridge	Eg: task to trigger every one hour. Default event bridge: Events generated by AWS service. Partner event bridge: Receive events from SaaS apps Custom event bridge.	Same as above svc
66		AWS Cloud Trail	Governance, compliance, Audit for your AWS account.	History of the events / API calls made by your AWS account by : Console, SDK, CLI, AWS Services.
67		AWS X-Ray	Going to do tracing and visual analysis of your application.	Distributed tracing, perf monitoring, SLA, Service Graph. Remember Dynatrace, APM.
68		Service Health Dashboard	Present & historical status of all AWS services across all regions	

69		Personal Health Dashboard	Proactive Outage notifications of AWS services underlying our AWS resources.	
70	VPC	VPC		
71		Subnet		
72		Internet Gateways	Helps our VPC instances connect to the Internet.	
73		NAT Gateways	Allow your Private subnets to access the internet.	
74		Network ACL & Security Groups	NACL: A firewall that controls traffic from and to the subnet. Subnet level Can have ALLOW / DENY rules. SG: A firewall that controls traffic from and to the EC2. EC2 instance level. Can have only ALLOW rules.	NACL: Subnet level SG: EC2 instance level
75		VPC Flow Logs & VPC Peering	VPC Flow Logs: Capture information about IP traffic going into your interfaces from Ec2, S3 etc.. VPC Peering: To connect 2 VPCs. Make them behave as if they were part of the same network. NON Transitive	
76		VPC Endpoint Gateway	Allows you to connect to AWS services using a private network instead of connecting from www. VPC Endpoint gateway: S3 & Dynamo DB	To connect to S3 & Dynamo DB
77		VPC Endpoint Interface	VPC Endpoint Interface: Rest of the services privately	Rest of the services.
78		Site to Site VPN	To connect On-Prem server to AWS Via internet, encrypted VPN create it in 5 mins. Needs Customer Gateway (CGW) at customer end. & Virtual Private Gateway (VGW) at AWS to make a S-S VPN.	
79		Direct Connect	To connect On-Prem server to AWS Via Physical Private network Takes atleast a month to establish.	
80		Transit Gateway	Transitive peeing between 1000s of VPC and on-premises, hub-spoke conn	A way to connect 100s / 1000s of VPCs together with your on-premise infra.
81	Advanced Identity	Cognito	Identity for your web and mobile application users. Supports sign-in with social n/w providers - Google/FB	
82		Directory Services Overview	1. AWS Managed Microsoft AD 2. AD Connector 3. Simple AD	
83		AWS SSO	One login to access multiple 3rd party accounts.	<i>Mostly a distractor</i>
84	Security & Compliance	Shield Standard	Free service, activated to all AWS customers. Protection from attacks from SYN / UDP floods, Reflection attacks, Layer - 3/4 attacks	Free version. Activated by default to all the AWS customers.
85		Shield Advanced	Paid service . \$3000 per month. Protection from more sophisticated attacks on EC2, ELB etc. 24/7 DDoS response team (DRP). Protect against highr fees during usage spike due to DDoS.	Paid version. If you need the response team. Higher level of defense.
86		WAF		
87		PEN Testing		Yes, you can carry out in 8 AWS services without AWS approval.
88		KMS	KMS CloudHSM AWS Managed KMS Customer Managed Keystore Custom Key Store	
89		Secrets Manager		A secret to be managing in RDS and to be rotated.
90		AWS Artifact		Can be used to support internal audit & compliance.
91		Amazon Guard Duty	Intelligent Threat discovery to Protect AWS Account. Analyzes CloudTrail Logs, DNS Logs, VPC flow Logs.	
92		Amazon Inspector	Automated security assessments of your EC2 instances, OS vulnerabilities, unintended n/w accessibility and generate reports. Need to install an agent.	
93		Config	Provides config & compliance history over time. Stores them in S3. Stuffs like restricted SSH access etc. will be flagged.	
94		Macie	Identify PII data in S3 buckets and notify via SNS	
95	Machine Learning	Rekognition		
96		Transcribe	Speech to text	
97		Polly	Text to speech	
98		Translate	Natural and accurate language translation	
99		Lex	Uses NLU to Build chatbobts and understand the intent.	

100		Connect	Virtual call center in the cloud	
101		Comprehend	For NLP	NLP
102		Sage Maker	To build ML Models.	
103	Account Management, Billing & Support	AWS Organizations	Allows to manage multiple AWS accounts.	1. Consolidated Billing 2. Pricing benefits: Aggreagated usage 3. Pooling of AWS resources 4. Automate AWS user creation. Scripted way. 5. SCP: Service Control Proxies
104 Estimating Costs in the Cloud	TCO Calculator	Provides a detailed report about cost comparision bw on-prem vs AWS. Now deprecated	
105		Pricing Calculator	Provides a detailed forecast about the AWS cost for the services that we want to use	
106 Tracking Costs in the Cloud	AWS Billing Dashoard	High level expense dashoard for the cost so far and gives a forecast too . Gives per service usage breakdown.	
107		Cost Allocation Tags	Track your AWS cost at a very detailed level. Create tags & Resource Groups to group them for costing.	
108		Cost & Usage Report	Most comprehenssive report of your AWS services usage. Gives hourly/daily usage report per IAM account / tag basis too.	Can be queried using redshift, athena, quicksight Current month's billing data will be delivered to an Amazon S3 bucket AWS Cost and Usage Reports can do the following: 1. Deliver report files to your Amazon S3 bucket 2. Update the report up to three times a day 3. Create, retrieve, and delete your reports using the AWS CUR API Reference
109		Cost Explorer	Visualization tool to create custom reports that analyze usage and cost data.	Can visualize & forecast upto last 12 months.
110 Monitoring costs in cloud	Billing Alarms	Raise alarm for ACTUAL costs & NOT PROJECTED Costs	Simple email alarm
111		AWS Budgets	Raise alarm for ACTUAL & PROJECTED Costs	
112		AWS Trusted Advisor	Provides recommendation by analyzing your AWS accounts - Cost, Performance, Fault tolerance, security, service limits.	Business & Support plans provide full benefit of trusted advisor. Full programmatic access to AWS support API. Ability to set cloud watch alarms when reaching limits. Otherwise core checks only.
113	AWS Support Plans	Basic Support Plan		
114		Developer Support Plan		
115		Business Support Plan		
116		Enterprise Support Plan		