**Aws interview mindset**

**Most of the sevice were divided into compute and storage serfvices**

**In compute we have EC 2 machines they are just like any other server you can deploy anything on these machines your web server**

**your web servers,**

**batch applications**

**ML model**

**what not next is lambda functions you can consider them as servers but they run out demand for example you deploy your api on these lambda functions you will be charged only for the time you will consume these abis for container balance amazon has ecs and eks if you are application requires containerization then this is the perfect solution for you ecs simplifies the containerization and ecs brings the power of different is to aws compared to the traditional setup where you have to pack the securities and manage the machines these services are a lifesaver**

**Aws cloud practitioner mcq hint based**

1. **Cloud trail** = ec3 previously accessed now no longer accessible so to monitor this

Will identify when an ec2 is terminated, api logs

Using this cloud trail we can record aws api calls into an auditable logs

To monitor all the user account changes

To monitor illegal api calls

Eg if to findout who removed an ec2 instances yesterady..

This service allow risk auditing by monitoring and recording account activites on a continuous basis.To keep track of user actions from unautohrized user if copied data from an aws s3 to their own account

1. **Cloud watch** = audit , log, trouble shoot, tracking of ec2 detailed information

To determin the cpu capacity of an application running on ec2 instance

This will give warning based on montlhy bill estimate

Monitored you estimated charges

Track down an ec2 instance stopper

Monitoor the operational health of the aws cloud whole computing

To generate a bill alaram

1. **Cloud wathc alarm – hint cpu utilization**
2. **Code commit –** private version controll, secure storage and manage verison
3. **Benefir of decouploing an aws - ability to upgrade componenet independently**
4. **Amazon xrays –** end to end performance metrics and trouble shooting
5. **Aws cost anamaoly detection –** ml to monitor cost and usage
6. **Aws security poster management cspm --**  sevice that aggregates alerts from various aws services
7. **Access key –** this allow a programtic access to aws thorugh aws clr or apis
8. **S2 transfer gateway -**  quickly & secureily move files over long distances btwhn cliesnt and s3
9. **Budget and cloudwatch –** this will allow u to get notification when reach threshold
10. **Aws knowledge center-** get frequrent asked question
11. **Aws partner network APN technology –** if a comp need solf from independent software

**A third party consultant** vendors..as weel as management and security vendors hint aws platform growth

If a company need assistance with migration and for hands-on-assistance

1. **aws config –** compnay need to review resources dependcies before the comp make any changes to the resourecs

access configuration changes to aws resources

to check the compliance of aws resources setting on a continuous basis

to audtin and monti aws resources changes

track the changes made to the resources over time

to ensure that ec2 instance are utilized authorized ami - config

1. **trusted advisor – hint service quotas**
2. **aws cost and wage report –** to give a quick sight dashboard every week by its billing data
3. **aws system manager paramter store –**  to manage the configuration data and password for its critical business applications and most cost effective
4. **CLI** = if a develper need to quickly provision and manage service by script
5. **Data sync** = inflight encryption and end to end data validations , onprem to aws migraition
6. **Migration strategy**
7. **Replatform - lift-tinker-and-shift** to convert monolithic app to microservices
8. **Rehosting -- List and shift-** moving apps to cloud
9. **Repurchasing** — Moving to a different product.
10. **Refactoring / Re-architecting** — **Re-imagining how the application is architected and developed, typically using cloud-native features.**
11. **Retire — Get rid of.**
12. **Retain — Usually this means “revisit” or do nothing (for now).**
13. **Aws cloud formation** = infra as a code, in repetable manner
14. **Code star** – cici pipeline easy deployment
15. **Aws outpost** – low lateny, hybrid , service used in cloud but infrastructure is in on prem dc
16. **Workspace** - =desktop environment for serveral employees
17. **Aws organization** – consolidated billing across acount single bill

**Service control policies** - organiztion

1. **Fargate**- serverless compute for container
2. **Waf** – web app firewall hint sql in=jecticion or cross site sceipting attack
3. **Vpc flow logs**- abitlity to capture n/w traffic in vpc or inbound outbound traffic in vpc
4. **Inspector** – security & complains of application deployed on aws
5. **Ebs and efs** – data were not deleted even if you reboot the ec2
6. **EC2 image builder** -- service assist with creation testing and managfement of custom amazon ec2 instances
7. **File gateway = nfs/smp protocol**
8. **Volumne gateway = isci**
9. **Tap gateway = vtl**
10. **Smb -fxs file gateway**
11. **Nfs – s3 file gateway**
12. **Ec2 instacnce store** – data is deleted if you reboot the ec2

Temporarly block level storage attahced to ec2

1. **Amazon fsx file gateway** – windows file share form onprem to aws
2. **Fsx** – windows file server
3. **S3** – unlimited storage and low cost, store call record for 6 years & highly durable and cost effective most cost effective
4. **Cloud watch alarm**- acmp want to add/remove ec2 instance based on cpu utilization
5. **Sqs simple queue service**- decoupling or used to achieve loosely coupled architecture
6. **Data migration service dms** – oprem db to cloud db service
7. **Fsx for windows file servier** – support smp protocol
8. **Aws artifacts-**  compliance & certification report on demand , report for aws security control privd the report to the auditor, complinace report , including internation organize for standard iso report

Security and compliance report ondemand , pci report , BAA reports NDA report payment card

To download security and compliance review oa company infr

Soc system and organisation control report - artifacts

1. **Access control list ACL –** which control the read and write to s3 buckets
2. **Server side encryption-** user to encrupt data at rest in s3
3. **To minimize network latency –** use ec2 in single availbility zones
4. **Aws trust advisor – hint pf css (perfomance fault tolerance, cost opti, securituy, service limit)**
5. **Rotate aws keys-** to help security on the aws cloud
6. **Use tag to organize the resoure-**a detailed level
7. **Aws personla health dashboard-** general aws infa – sefvice health dashboard
8. **Customized asseesment –** aws migration evaluator
9. **Aws inspector –** security assesment
10. **Aws control tower-** setting up and governnig secure multi account aws environment
11. **Access analyzer for s3 -**  if user want to reviiew all the s3 policies
12. **Aws s3 file gateway – hint industry standard file system protocol**
13. **Cloud9 –** ide
14. **Cloud shell –** browser based pre authentication service
15. Aws cloud development kit cdk – provision aws resoruc using commin programminglanguage
16. **Dms** – migration postgresql to rds migraiion
17. **Amazon aurora serverless**- hit db frequently and lease management overhead
18. **Route53** – is used to register dns domain name & dns web service to connnect user to the plaftorm, hint failover
19. **Aws global accelerator & route53 =** high availability & low latency by enabilgin failover across different aws region
20. **Aws global accelerator =**  which require static ip address hint
21. To change password – using cli or console
22. **neptune and document db - provide replication across multiple az by default**
23. **Aurora – it take default backup automated**
24. **Pay as u go pricing model- once the free tire useag company completed**
25. **Aws security token service sts –** hint temporary security credentials ,limited privlidege for credentials for authentication
26. **Aws security hub -**  manage the seucity alert and must organizt the alret into a single dashboard
27. **Amazon maice –** personal idenfiable informtion pii
28. **Allow acces to an ec2 instance throughg only a specific port – security group in the aws cloud**
29. **Accelerated computing -**  compute intensice workload that used gpus
30. **Aws cost exploreer – hing after migration(usefull for visualizing)**
31. **Aws pricing calculator – befor migration**
32. **Amplify –** ios app develp aws hint mobile app backend development
33. **Security group – a firewall tjhat controll flow to and from the resour to ur vpc and**
34. **Elastic file system –** if a comp any has a large num of linux ec2 inst in severla availibilyt zone th app of ec2 inst need access to a common set of file
35. **Aws appsync –** connect app to hint permanant graphql and pub sub apis

To develop graph ql apis

1. **Aws professional service provide =**  adivisory solution for aws adtoption hint, a global form of exper to complete the migraion faste amd more reliable
2. **Pinpoint –** connect with customer thorugh scalable , targeted multibanned communicatio

Hint communication across channels

1. **Fxs for lustre** – not designed for native winodws file system, compute intensive workloads
2. **Aws lex**- chatbot, conversation interface
3. **Aws cloud front-**cdn for global edge location

Secure delivery of data, vide , application and apis to user globally with low latency

Cloud front tempplate with this we can result eh deply multiple aws resourcs

1. **Global accelerator-** that use static ip address
2. **Aws wavelength –** a storage servivec that use edfoe of telecommunication n/w
3. **Worklink –** secure one click access to internal website and app
4. **Beanstalk –** to run dev on multipls language
5. **Appstream 2.0 -**eg if a studne is using low cost laptop lightweight . aws service without inversint in baackend or high end client hardware
6. **Redish-** inmemory db not rdb
7. **High availability – multiple az deployment hint rds (recovery time less than 5 min)**
8. **For an year (1 or 3) hint – saving plan or dedicate or reserced instance**
9. **Security of the data is company resopnsible**
10. **Fargate** = eliminate need to provision and manage container host
11. **Aws discovery service-** to gather information about host name ipaddress mac address to migratie to aws cloud
12. **Aamzon machine image & ebs snapshot =**  which provide disaster recovery solution
13. **Elastic bean stalk**- easy deploymentof service withou provision any serfvier need
14. **Aws sdk s/w develpmentn kit -**  allow to access aws service from application code
15. **Direct connect –** a private m/w connect btwn aws and corporate n/w

Dedicated, low latency connection, consistend n/w performance

1. **Vpc perring-** n/w connection btwn two vpc’s
2. **Vpc transit gateway –** n/w connection btwn two vps, or vpc to hundreds of vpc overtime
3. **Aws transcribe –** writing / speech to text serviec
4. **Aws- textract –** extrach text form document
5. **Sustainability-** minimize the environment impact of cloud workload
6. **Aws sdk –** programatci interactinowith aws service
7. **Private link-** vpc a & other serice private link
8. **Aws backup –** central data protection policy
9. **Aws cost allocation tag –** aws usage cost based business category
10. **Aws lake formation –** build and manage database
11. **Agility-**sped of you deploy particulare service
12. **Conceirge suport team – provide a primary point of context for aws billing and aws support**
13. **Enterprise and on ram support – eg if after migration the company required a response in 30 minutes if business critical system is down**
14. **Aws enterprise support – provide aws technical account manager tam, help user answering billing & account enquiries , operation risk ahead of new product launch**
15. **Aws Business support – provide least expensive provid full set of trust advisor**
16. **Aws enterprise support**
17. **Aws enterprise support**
18. **Lightsail –** preconfigured intances eg – a way to prived an laucnh instance eg wordpress

Company want to create a webist they don’t have much knowledge about aws services with few clicks they able to create a website

1. **Rightsizing recommendation-**  aws cost exploreer
2. **Abuse team –** if an unauthorized access occurred in onprem but orginated from aws
3. **Aws trust adviser – performance cost**
4. **Aws cloud hsm – hardware security model –** used to manage encruption keys in the cloud
5. **Intrustion detection system hing 3rd party -** market place
6. **Aws app flow** data transfer sas application
7. **Vpc flow log – to troubleshoot network connect issue btwn ec2 instances**
8. **Aws ops work – automate opertion with chef and puppet tool**
9. **Amazon code deploy - ability to release app changed in automated way**
10. **Eks – jhint kubernateive on aws**
11. **Redshift –** a warehouse petabyte data to analzy data
12. **Amazon comprehend-**  content classification of election books / nlp serives derive and understood valuable insignf from text with in document
13. **Aws caf- cloud transfromation journey recommendation**
14. **Envision phase – to measure business outcome during migration of company, transformation**
15. **Align phase – hint identity capability gaps**
16. **Envino**
17. **Align**
18. **Iam credential report-** generate list of iam users, give informatio about user and credential status of access key , mfa

**The date and time when a iam user pwd was last lloggedin in console**

**And wherteh mfa has been enabled in a console**

1. **Aws Migration evaluator-** data driven business cases for cloud planning, customized assesment Of its current onprem , if a company need a in-frqent access clear baseline of what comp run its on prem dc and eg if a comp want to review the current cost of running infa on prem and compure with aws cloud
2. **Newtwork load balancer – 4ht level udp or tcp traffic**
3. **Gateway load balancer – deploy and manage virtual appliance such as firewall intrusion detectionand preventino sysgem dep insepction system**
4. **Application load balancer- distribute incoming traffic evenly acorss all running instnace**
5. **Reliability –** ability to recover from failure
6. **S3 inverntory report-**  to track the tags, buckets and prefixed for the s3 object
7. **Nalc -**  subnet level
8. **Security group –** to control income and outcome of n/w traffice at the instance level
9. **Shield -**  to manage protection, ddos attack or distributd deniel of service
10. **Identity iam center – sso single sign on**
11. **Vpc endpoint -**  allow you to proivately connect vpc
12. **Macie -**  personal identiy data or secure data
13. **Autoscale –** up and down you ec2 basd on demands
14. **Aws cloud adoption framework –** to identifly and pritoties any business transformation opportunites and evaluate its aws readiness
15. **Business – data science, data monitization**
16. **Operatoin—observailibity chage & relese, monitoring, maintenance & optimzing**
17. **Governance – management(financial or app protfolio) tack business outcome**
18. **People – bridge btwn tech & business to help and cultur of continuou growth and learning**
19. **Security – it encuser data integrity and control cloud usage**
20. **Platform- cto,tl acrchetect and engineer design build**
21. **Session manager system manager and using ec2 instance connect-**  to connnec to ec2 instance with late amazon linux 2 ami

**Hint – ssh ports and managing ssh keys**

1. **Resilence –** abillity to revoer form failure
2. **Elasticity – abiltiy to adop when required and release when not required**
3. **To delete an aws accoujnt-**  we need an root user aws account
4. **Root users—**changing the aws support plan

**Root user -**enable mfa on root user and create an iam user with admin previledge

1. **Spot instance---** tolerate interuption and large disocunt, stateless workload, cheapest
2. **Dedicated instnace**
3. **Dedicate host –**hint per keyword / software licence
4. **Reserved instances – predictable and uninterruptable**
5. **On demand Instancse –** short term spikes
6. **Nat gateway –**  allow traffice from one serfvice to public n/w
7. **Volume based discounts – to optimize the amount of storage the computed and most cost effective**
8. **Amazon dev pay – online billing**
9. **Internet gateway-** allow internet to servie on pcn public gateway
10. **Well architected framework waf- to deploy waf ruls rusing application load balancer 7th layer**
11. **Performance efficiency**
12. **Operation excellence** --- test failure scenarios or test validate/want ot make frequent changs ,small & reversible changes in cloud archtecture
13. **Reliablilty**
14. **Cost optimization**
15. **Security**
16. **Sustainability**
17. **Fargate & lambda-** seriverless
18. **Aws glue –** a ml data analytics for multiple sources/serverless data intergration services
19. **Amazon timestream –** a time stream database analyze trillion of event per day
20. **Code guru-**provide recommendation of code quality
21. **Aws budgets-** limit your billing , create allert allows custom allerts
22. **Amazon mq-** messaging quere service a message broker servicec ror achive mq or rabbit mq a fully managed servcice for opern surce message broker
23. **Storage gateway-** btwn onprem & cloud storge
24. **Vpc peering & transit gateway --**  n/w connection btwn two vpcs
25. **Amazon kinessis –** firehose tool / easily stream data ata any scale
26. **S3- transfer acceleration -**  used edge location to reduce latency
27. **Aws step function-** a serverless orchestration service, visual workflow for distributte applications
28. **EC2-** aws compute optimizer to provied recommendtaion based on work load metrices
29. **Aws application discovery servicec-** colleciton of config, usage, behcaiour of daata onf onprem dc
30. **Amazon sns –** combinatino of publisher and subsriber
31. **Shared responsible** 
    1. **Aws responsibility – infrasture, hardware, network, patch host os, virtualization, mfa, physical datacenter, pwer az, secure edge location, hypervisor nitro**
32. **Aws and customer both = patch & configuration management**
33. **Right sizing-**down size or lower possible hint least operation overhead based on utilization
34. **Aws aurora-** fulluy managed postgresql and mysql
35. **Aurora cross region read replica** – take backup with minimal distribution of db operation
36. **IAM-** is always the free one provided by aws service & apply fine grained persmission to aws service
37. **Iam roles --**  ec2 list make call to another sercies
38. **For amazon rds and ebs – aws service proved encryption at rest**
39. **Elastic cache -**in memeory databse eg **resish** and **memecahced** are the engines not a free one
40. **Aws key management service aws kms-** cerate and controll cryptographic key that protect our data
41. **Guard duty-** intllignet threat detection, malware, compriesed accoutn anamaoulous behaviour
42. **Saving plan- hint** commitment to use specifi amountof aws services , steady predictable uniterruptable (reserved)
43. **Volume discount-** buying in bulk you get cheaper u
44. **Deploy the app using multip az-** to increase resilenc for the application a critical lauch of app
45. **Sagemaker-** detect bias in ml data abd model
46. **SagemakerSTudi0-** an ide for ml
47. **Amazon mechanical truck -**  a distributed workforce, ondemand, 24x7 workforce aws global
48. **Aws Rekognization-**machine learning to classify image/video that are uploaded to a website
49. **Cognitito- eg** google login form some other wbsite
50. **Cognito user pool=**  this manage user authentication and authorization for application
51. **Billing & costmanagement-**pay for onlywhat u use
52. **Durability-** abiltiy of ystem to remain fuctional when faced with the challendge of normal operation over its lifetime
53. **Reliability** – means intend functional/ consistenly and correctly
54. **Amazon personlaize** -when u buy something it shows recommendation least development effort
55. **Aws serviuhce catalog** – enforce compliance with the organization business standare and goven and control who can deploy manage and decommission aws service or templace hint iac