Lifecycle rule actions

Choose the actions you want this rule to perform. Per-request fees apply. Learn more or see Amazon S3 pricing

- [ ] Transition *current* versions of objects between storage classes
- [ ] Transition *previous* versions of objects between storage classes
- [ ] Expire *current* versions of objects
- [ ] Permanently delete *previous* versions of objects
- [ ] Delete expired delete markers or incomplete multipart uploads

When a lifecycle rule is scoped with tags, these actions are unavailable.

Amazon Dynamodb

Database	Data Warehouse	Data Archive
RDS	Redshift	Amazon Glacier
Amazon Dynamodb	Used for data analyzing	

ASG Scaling Policy

Predictive scaling

Scheduled Action
Specific time or event
Time :09:00 am

Dynamic scaling

Target tracking

When: CPU >50
How: AWS determine itself

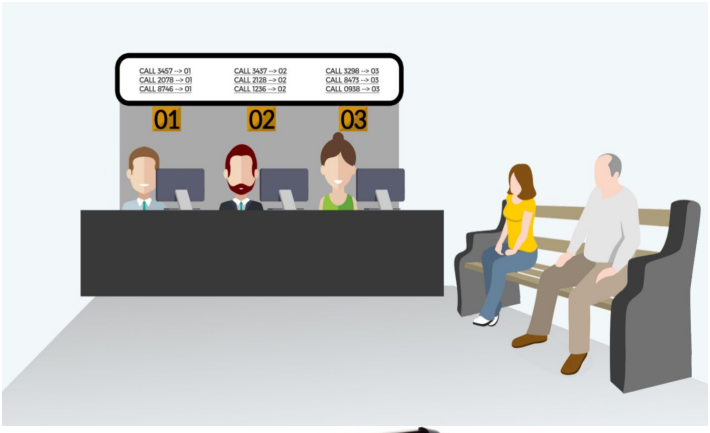
Simple

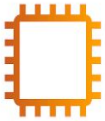
When: CPU >50
How: Add 1 EC2

Step

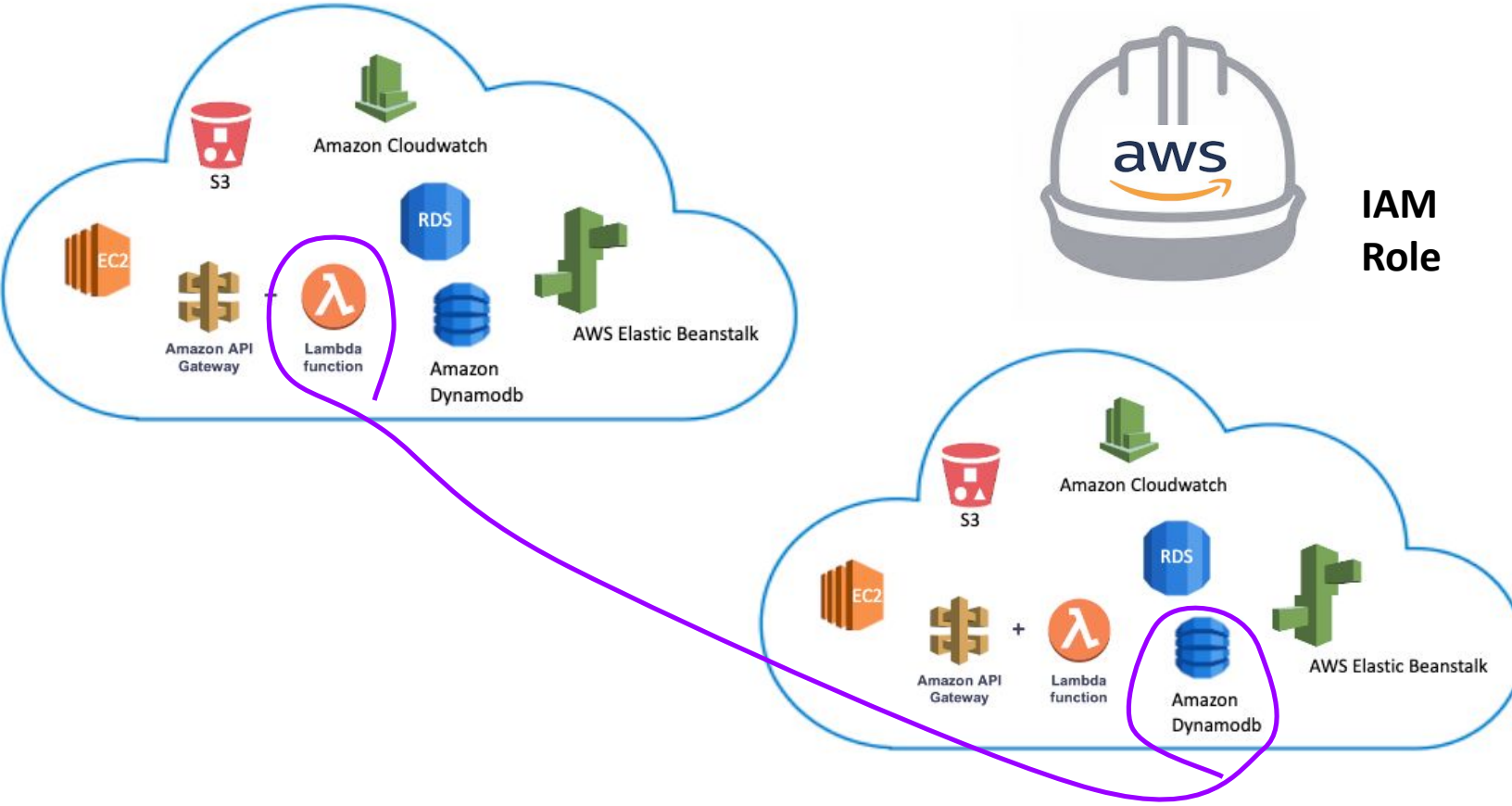
Step 1:
- When: 50<CPU<80
- How: Add 1 EC2

Step:2
- When: CPU >80
- How: Add 2 EC2

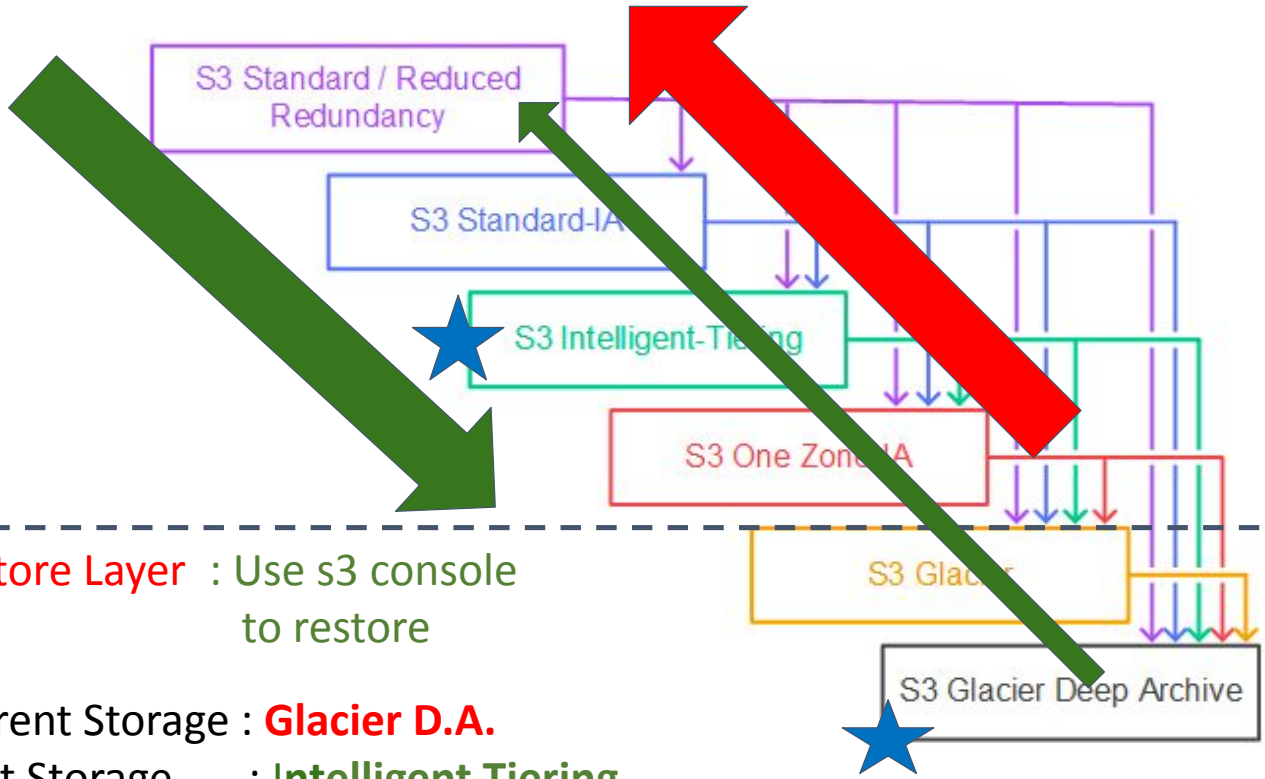




Queue Management Systems



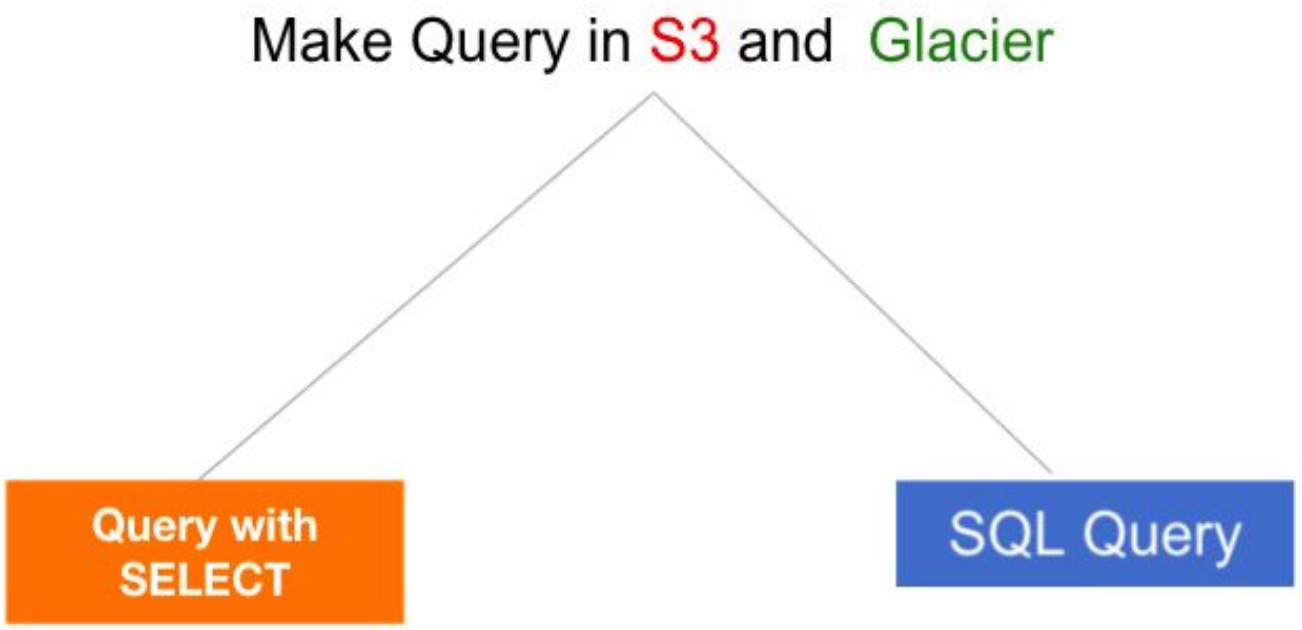
S3 Lifecycle Configuration-AWS console or CLI

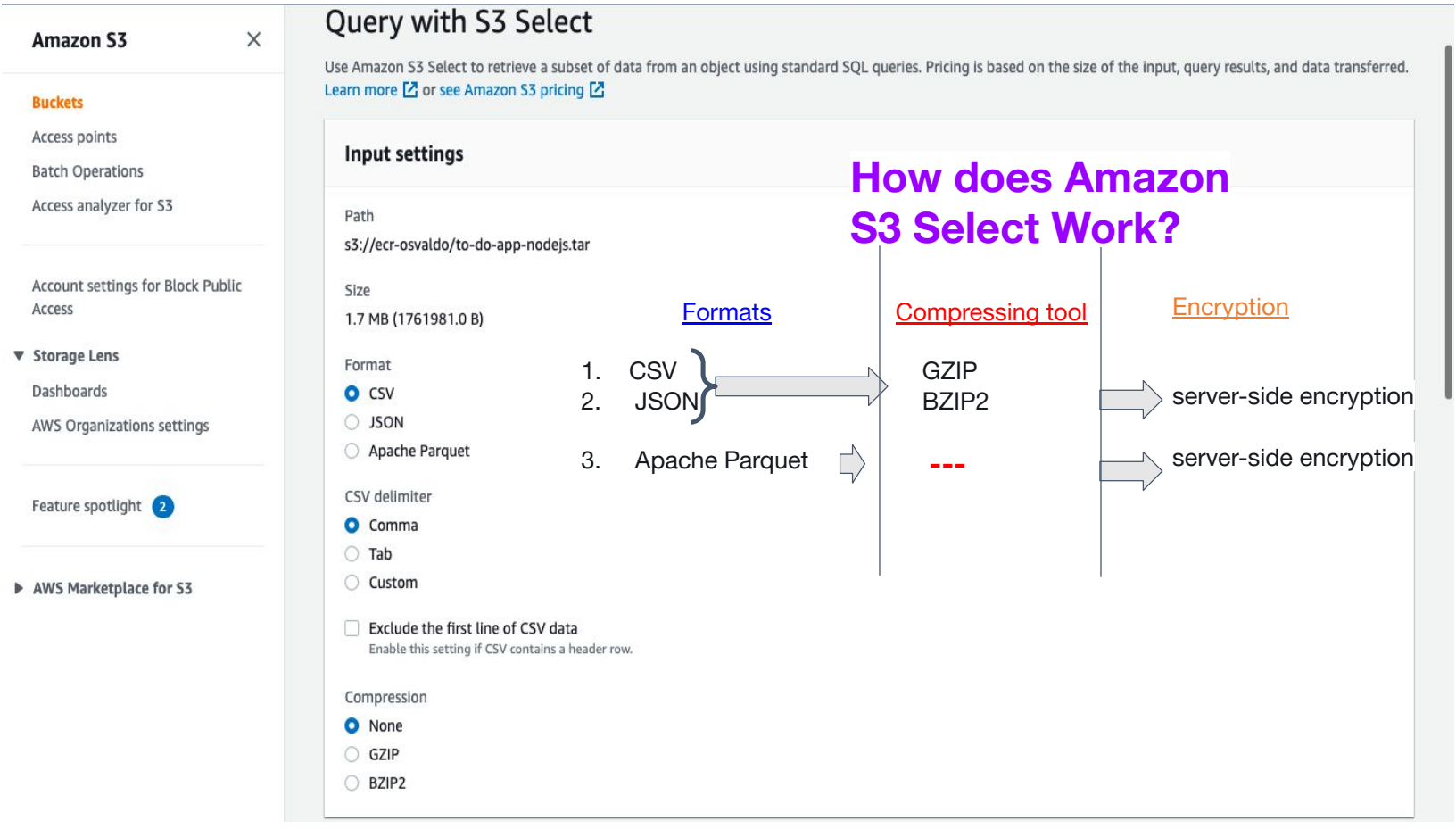


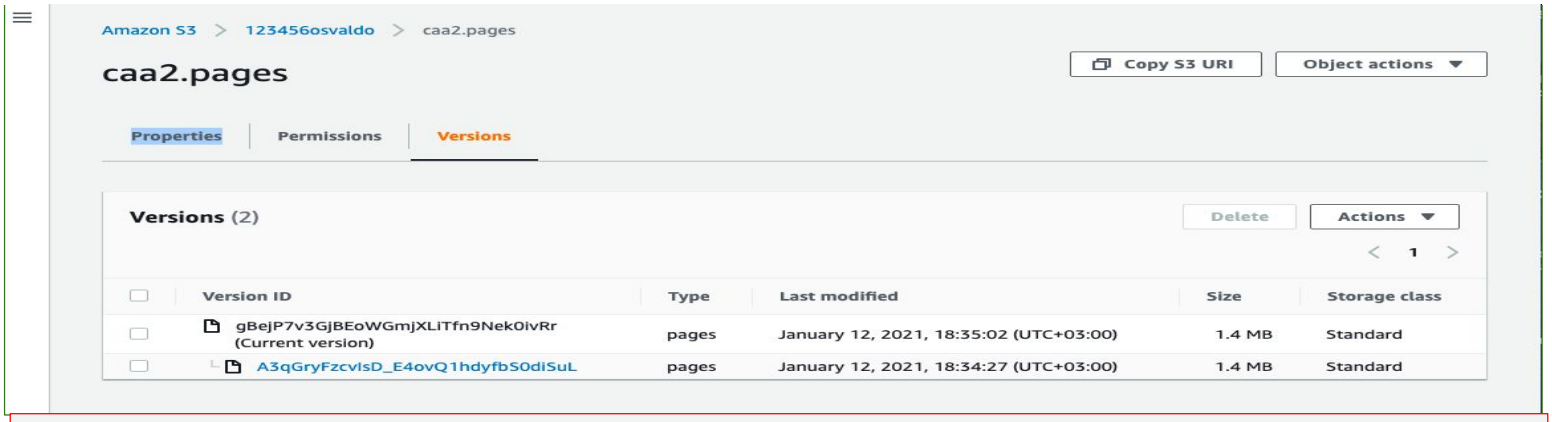
Restore Layer : Use s3 console to restore

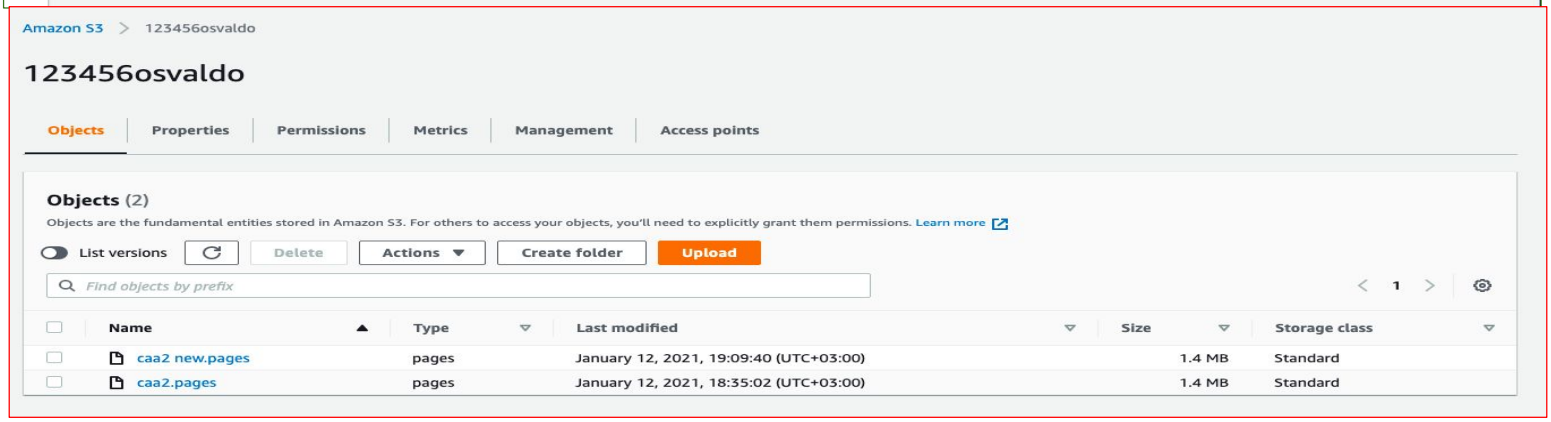
Current Storage : **Glacier D.A.**

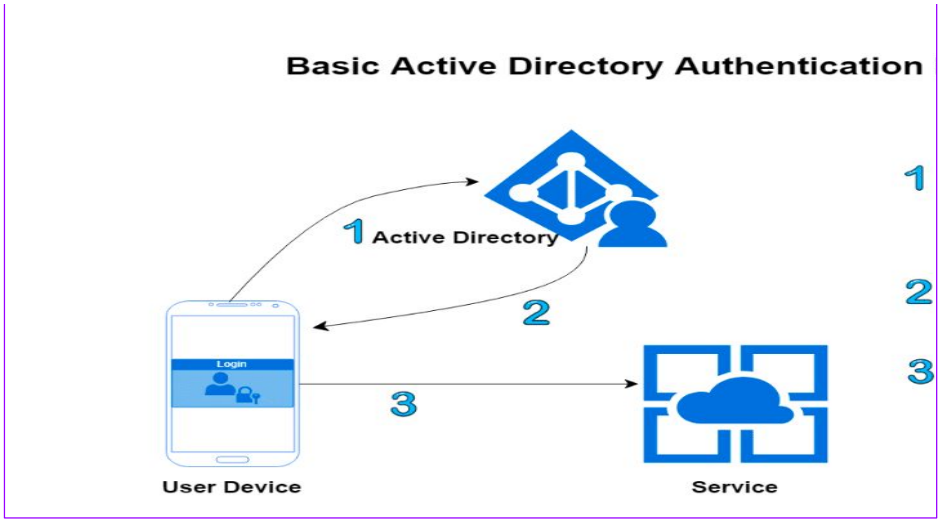
Next Storage : **Intelligent Tiering**


Make Query in S3 and Glacier
Query with SELECT
SQL Query


Amazon S3
Buckets
Access points
Batch Operations
Access analyzer for S3
Account settings for Block Public Access
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight 2
AWS Marketplace for S3
Query with S3 Select
Use Amazon S3 Select to retrieve a subset of data from an object using standard SQL queries. Pricing is based on the size of the input, query results, and data transferred.
Learn more or see Amazon S3 pricing
Input settings
Path
s3://ecr-osvaldo/to-do-app-nodejs.tar
Size
1.7 MB (1761981.0 B)
Format
CSV
JSON
Apache Parquet
CSV delimiter
Comma
Tab
Custom
Exclude the first line of CSV data
Enable this setting if CSV contains a header row.
Compression
None
GZIP
BZIP2
How does Amazon S3 Select Work?
Formats
Compressing tool
Encryption
1. CSV
2. JSON
3. Apache Parquet
GZIP
BZIP2
---
server-side encryption
server-side encryption







AWS Directory Service for Microsoft Active Directory

Simple AD

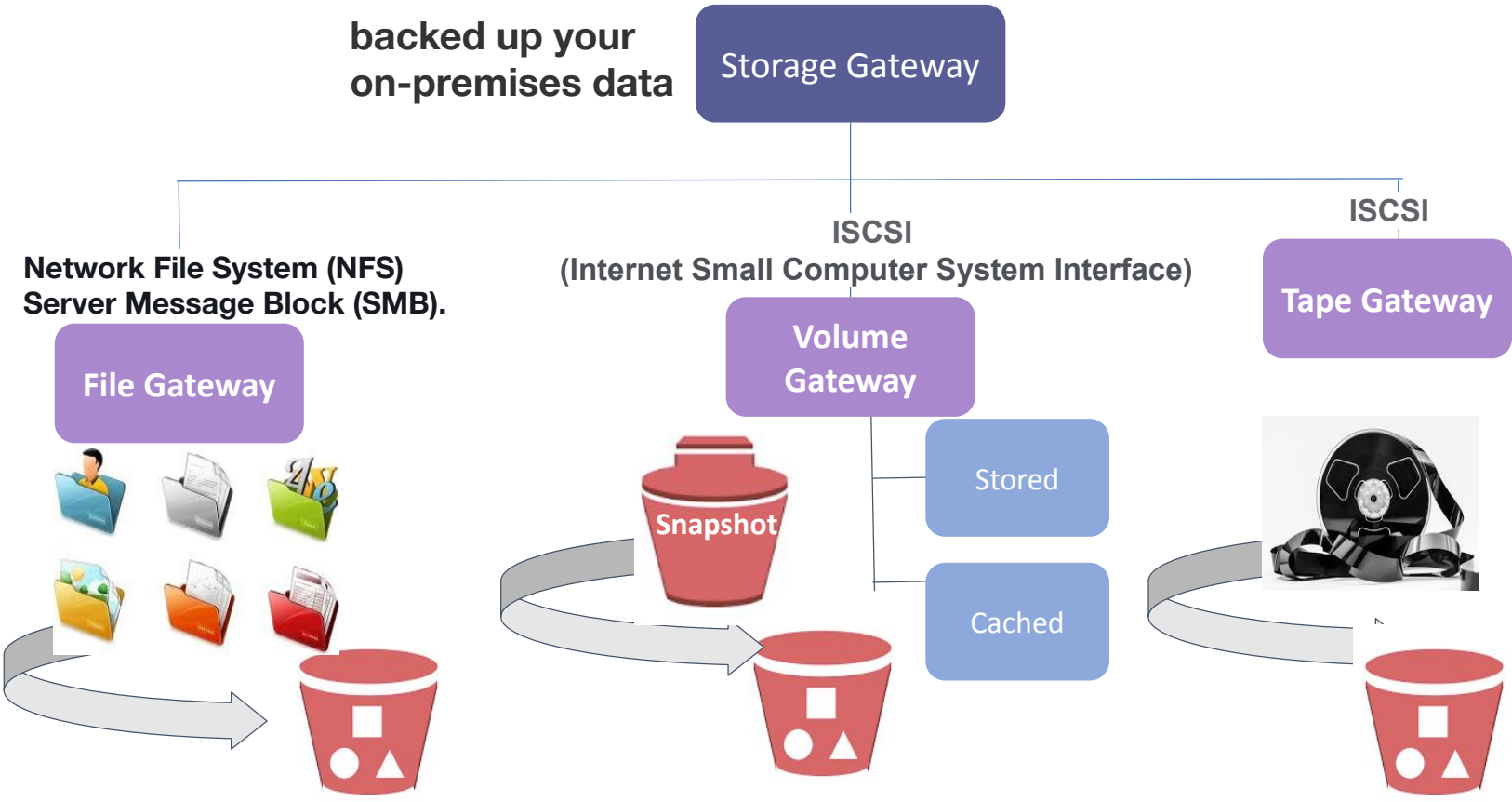
AD Connector

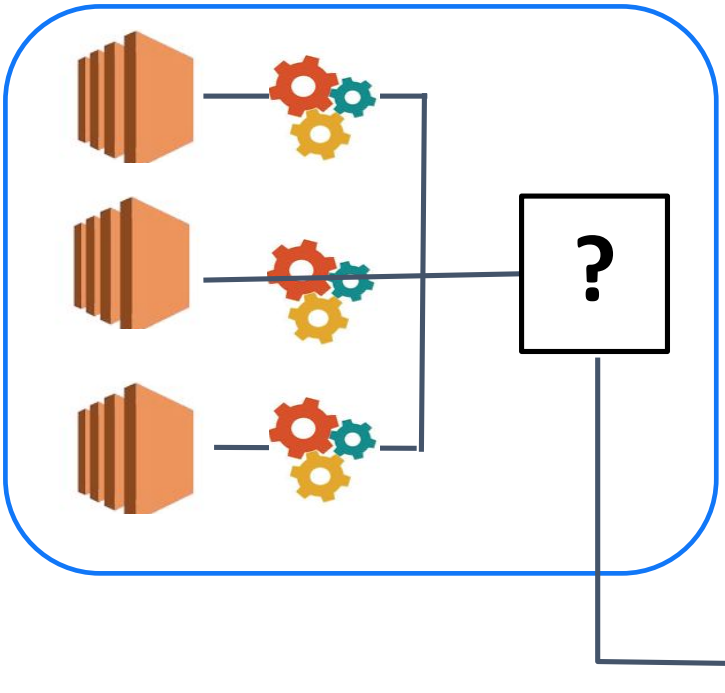
Amazon Cognito

Which type of record?

Create Domain Variations via Sub Domains	Mapping Value	Value Type	Record Type
www.clarusway.us	 Point out	IP of Server 1.2.3.4.5	A AAA
		Another Domain www.xxxxx.com	CNAME
		AWS End point S3 Bucket url Load Balancer DNS CloudFront	Alias
		Etc..	MX

Record Value type determines the record type



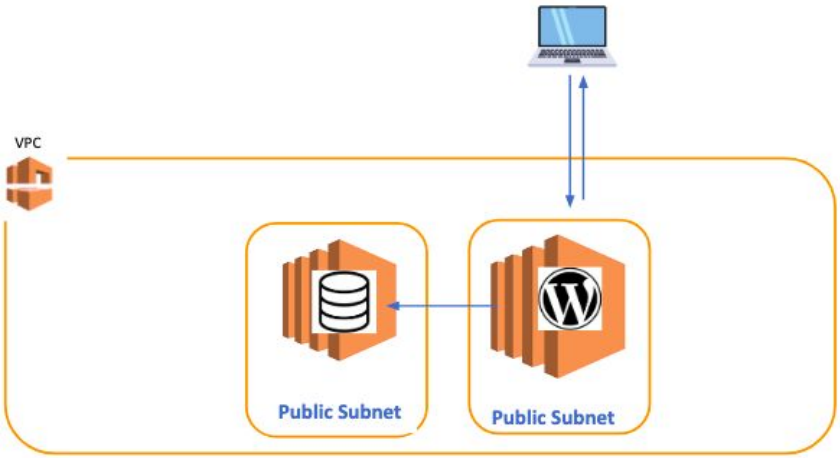


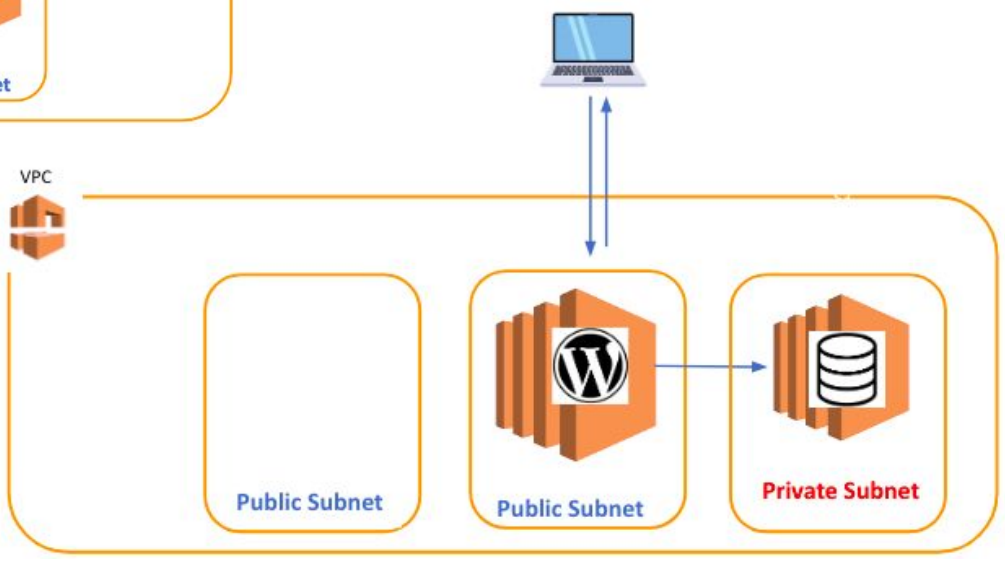
Amazon FSx for Windows

EFS

Amazon FSx fo Lustre

DynamoDb Accelerator (DAX)





Amazon FSx for Windows

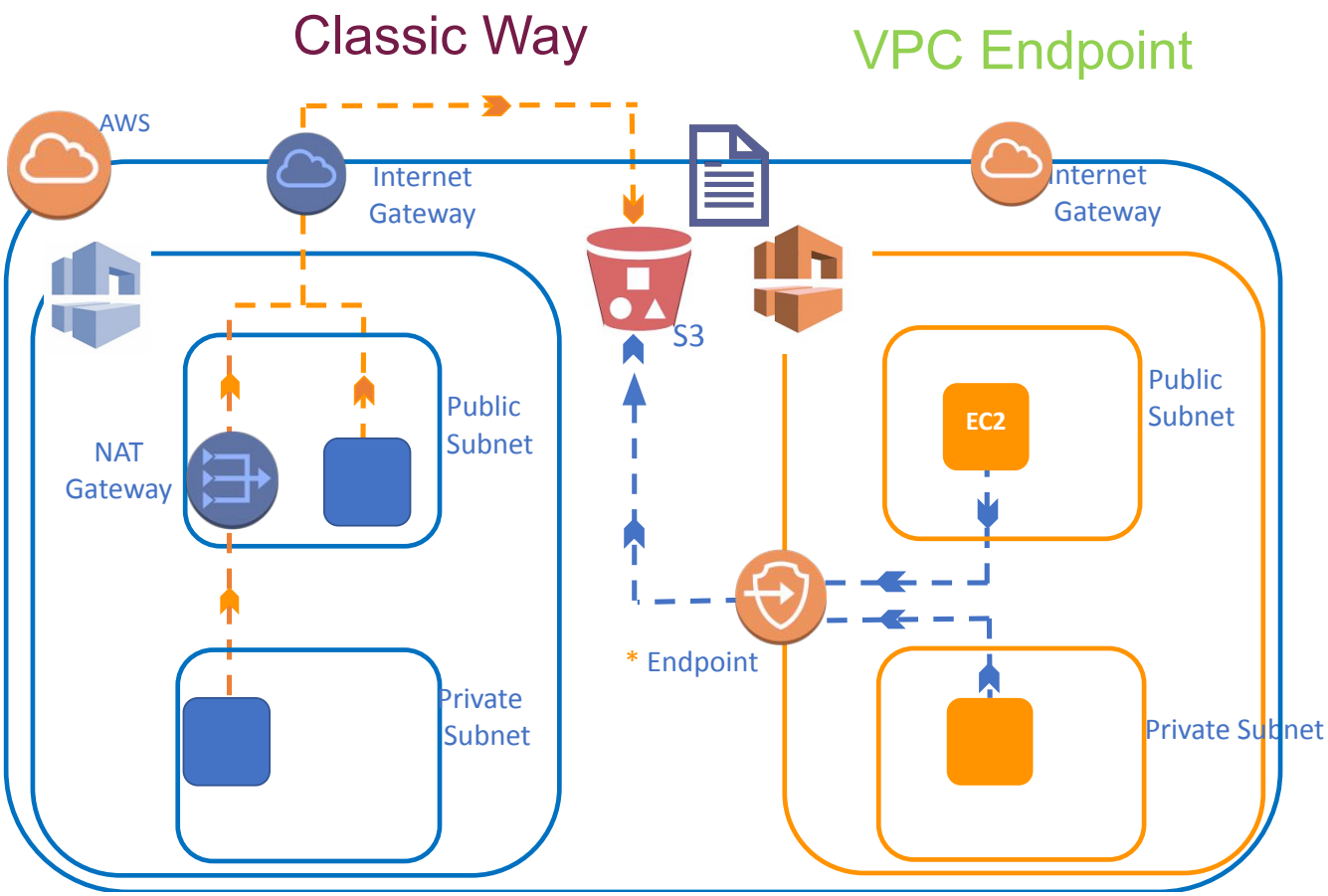
Amazon FSx for Lustre

EFS

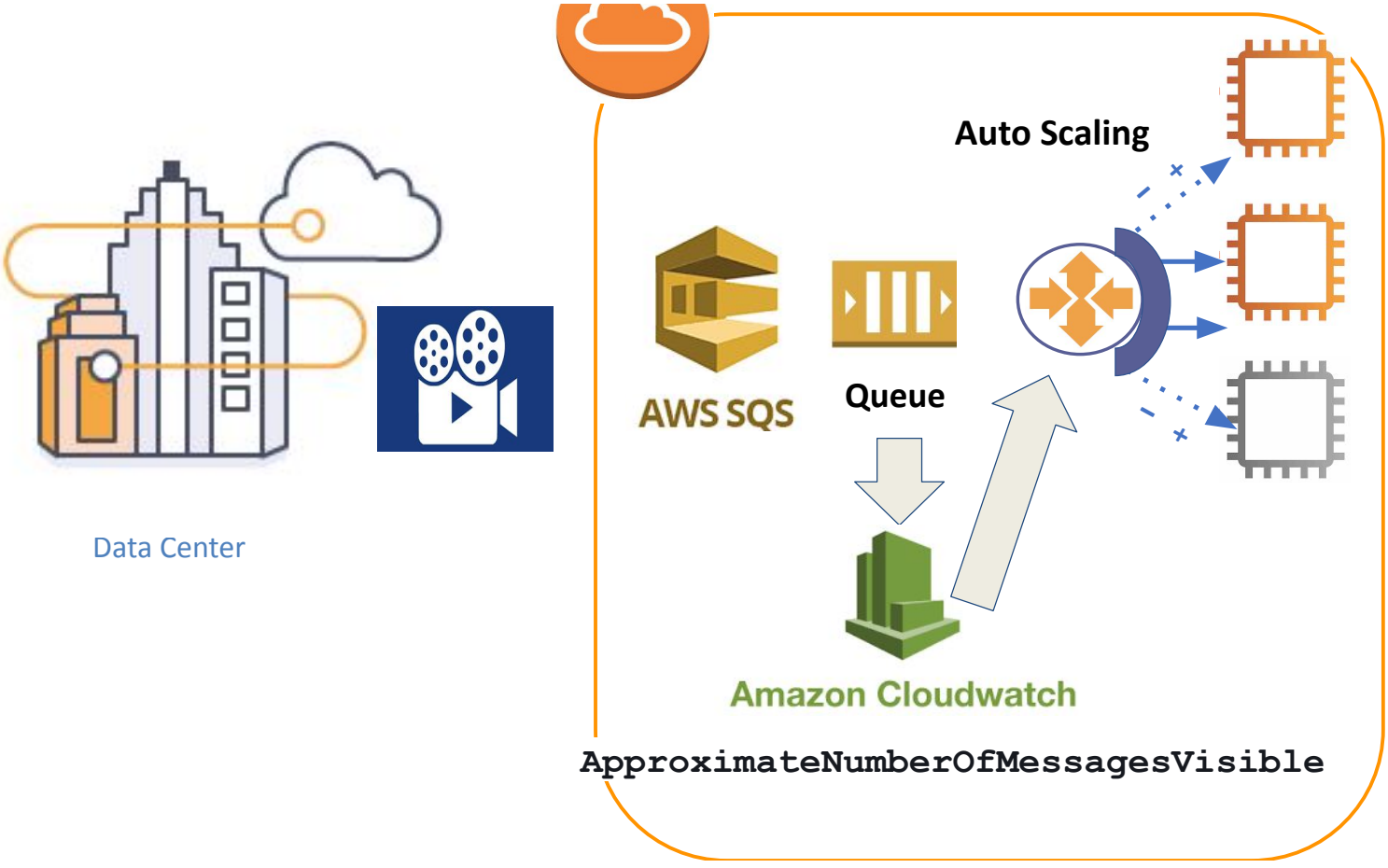
- **For windows Instance**
- **Can't write/read S3**
- **Used with Windows Active directory**

- **For Linux Instance**
- **Can write/read S3**
- **No Windows Active directory solution**

- **For Linux Instance**
- **Can't write/read S3**




Amazon EC2
Hibernation for EC2 Instances


Auto Scaling
AWS SQS
Queue
Amazon Cloudwatch
ApproximateNumberOfMessagesVisible
Data Center

```
aws s3 presign s3://osvaldo.destination.lambda/sorry.jpg
--expires-in 100 --profile osvaldo
```

You run an ad-supported photo sharing website using S3 to serve photos to visitors of your site. At some point, you find out that other sites have been linking to the photos on your site, causing loss to your business. What would be an effective method to mitigate this?

A. Remove public read access and use signed URLs with expiry dates.

B. Use CloudFront distributions for static content.

C. Block the IPs of the offending websites in Security Groups.

D. Store photos on an EBS Volume of the web server.

Cost Savings Plan

1 year/1000 dollars/limit

Compute
Saving Plans
EC2
Fargate
Lambda
%66 Cost Saving

EC2 Instance
Saving Plans
EC2
%72 Cost Saving

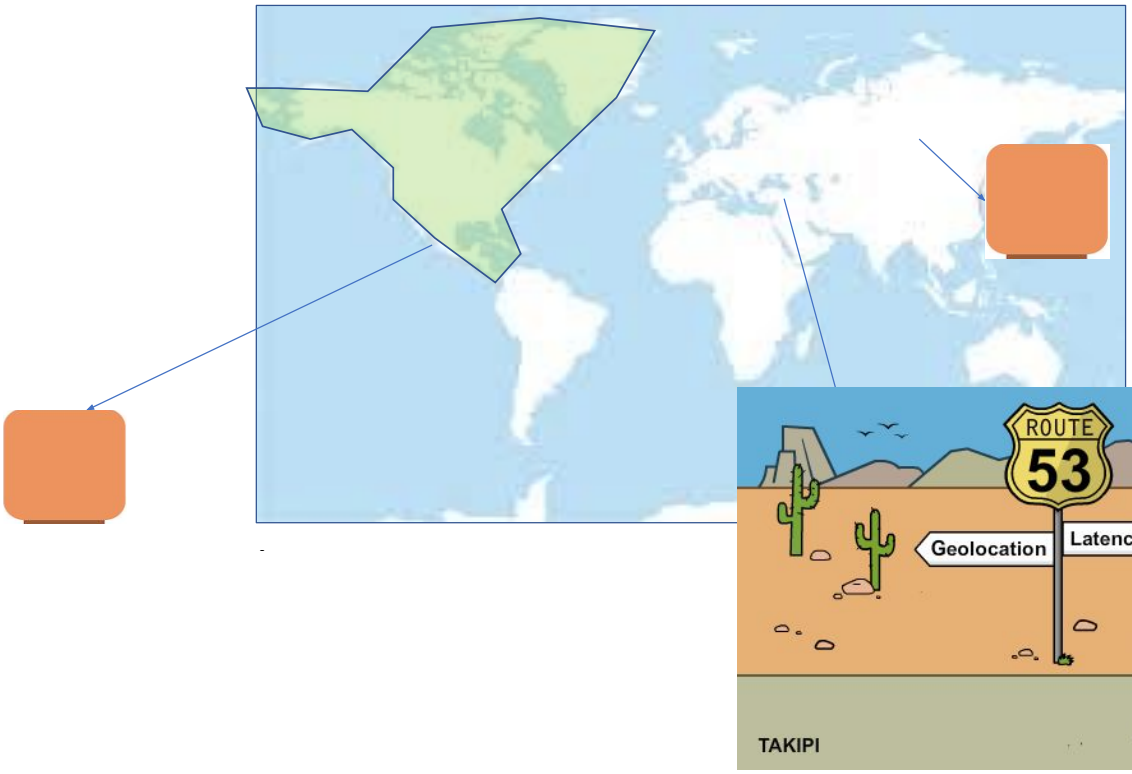
Reserved Instances

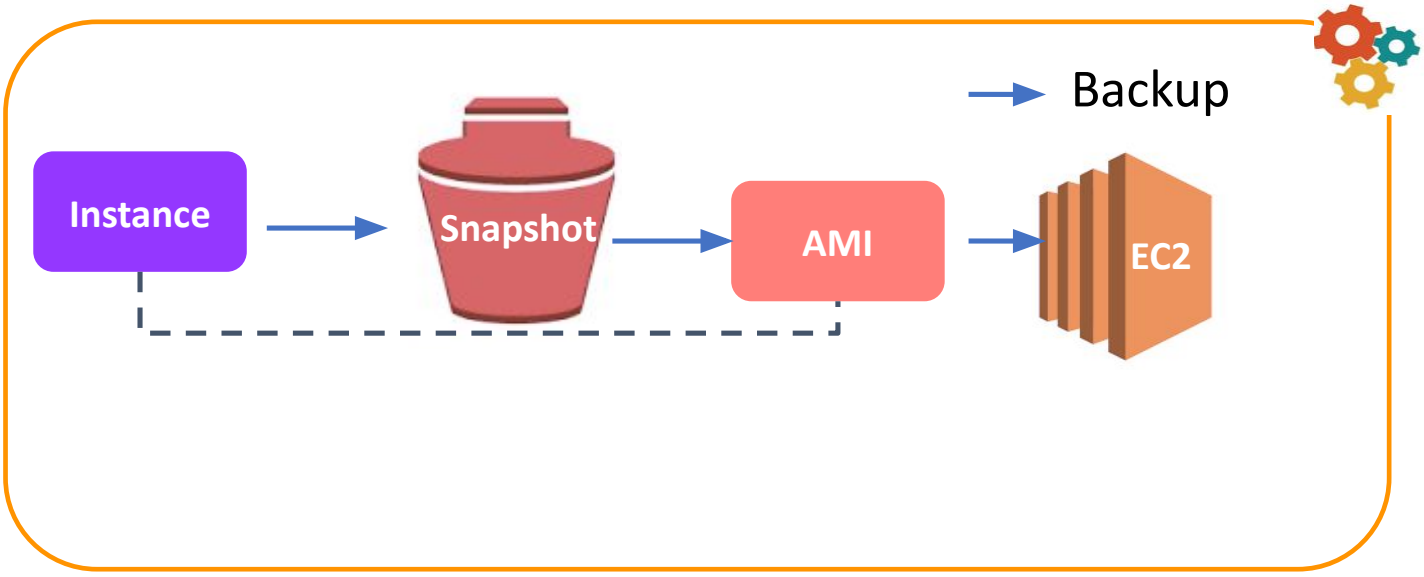
1 year/1500 dollars/limitless

Convertible
RI (Reserved Instance)
EC2
%66 Cost Saving

Standart
RI (Reserved Instance)
EC2
%72 Cost Saving

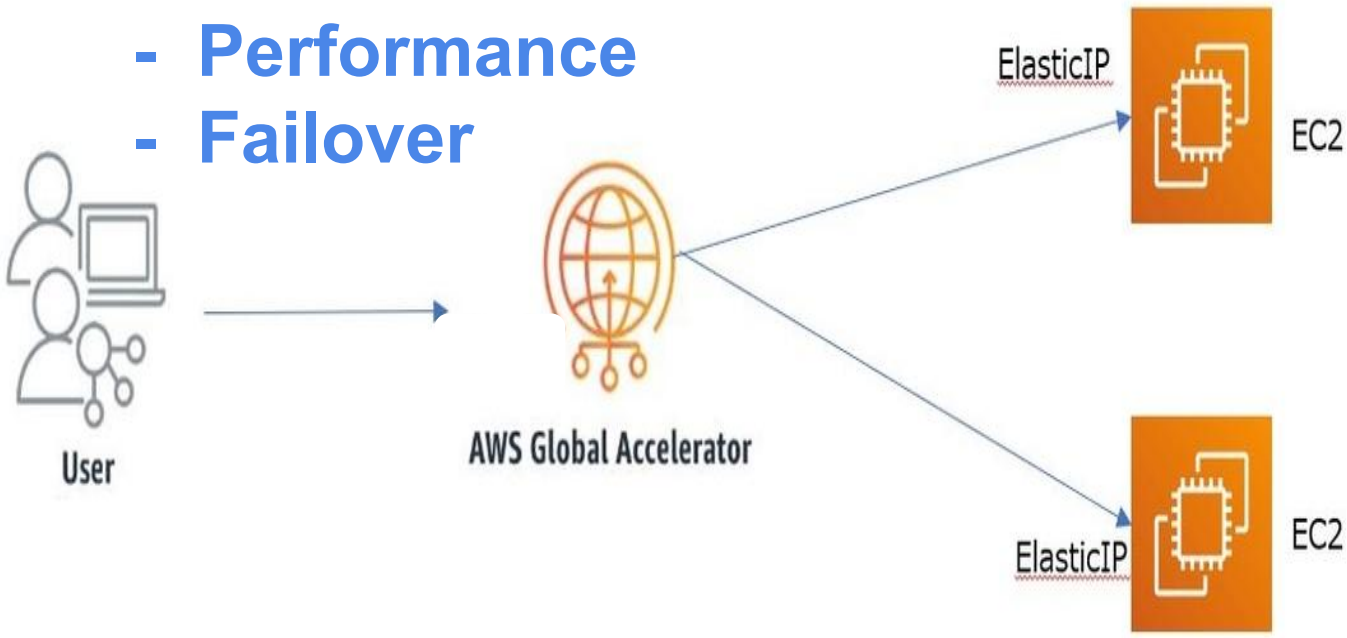
convertible to the other size of instance





Lifecycle of Snapshot

- Static IP
- Performance
- Failover



You are building an automated transcription service in which Amazon EC2 worker instances process an uploaded audio file and generate a text file. You must store both of these files in the same durable storage until the text file is retrieved. You do not know about the storage capacity requirements. Which storage option would be both cost-efficient and scalable in this situation?

A. Multiple Amazon EBS Volume with snapshots

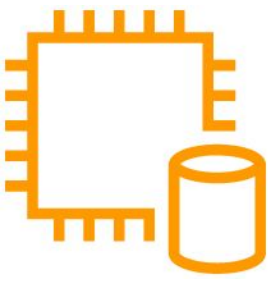
B. A single Amazon Glacier Vault

C. A single Amazon S3 bucket

D. Multiple instance stores


Amazon EBS


Amazon Glacier


Instance Store

Network ACL: acl-02fec58ef42e8e6e9

Default NACL

Details | **Inbound Rules** | Outbound Rules | Subnet associations | Tags

Edit inbound rules

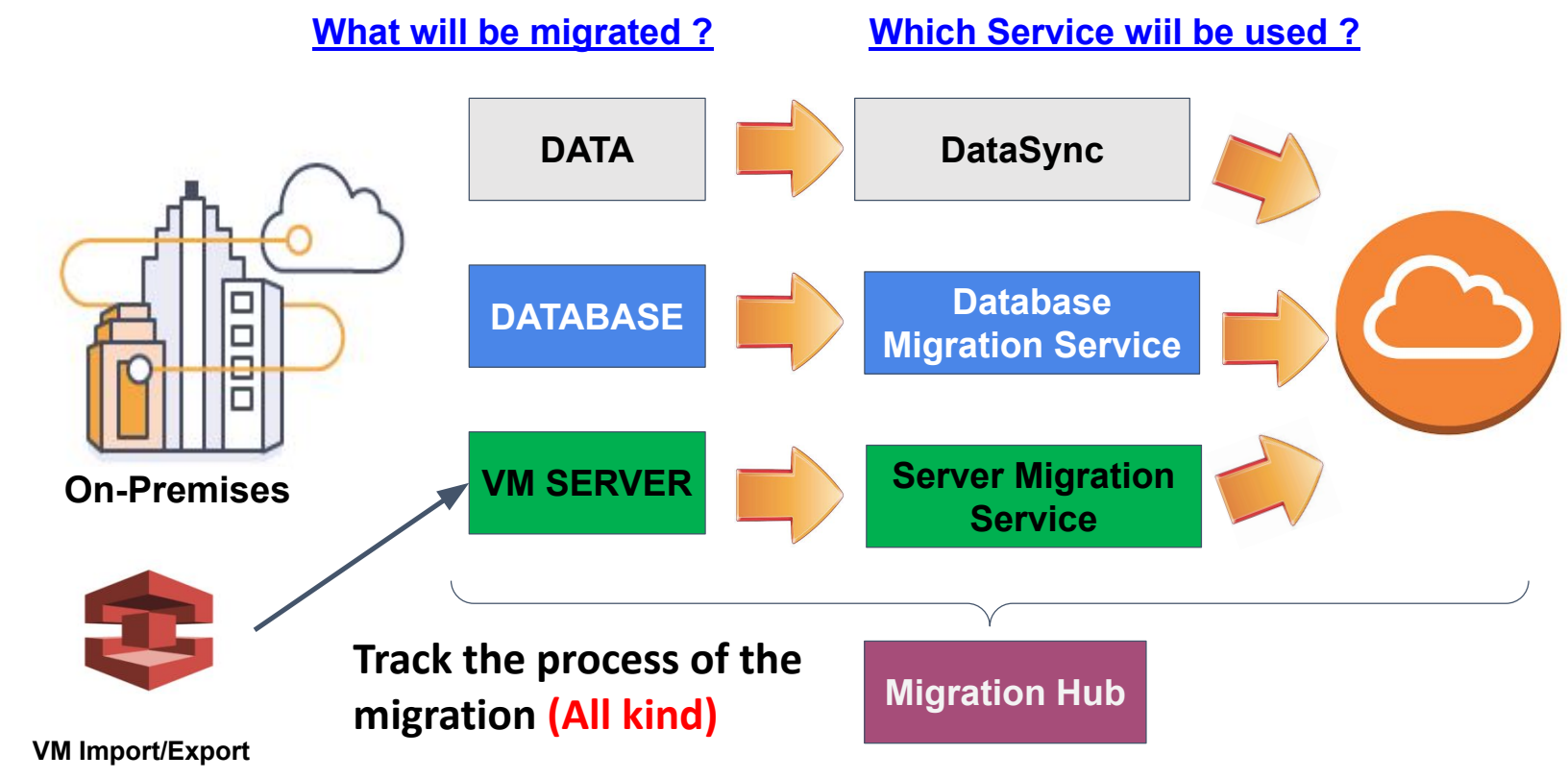
View: All rules

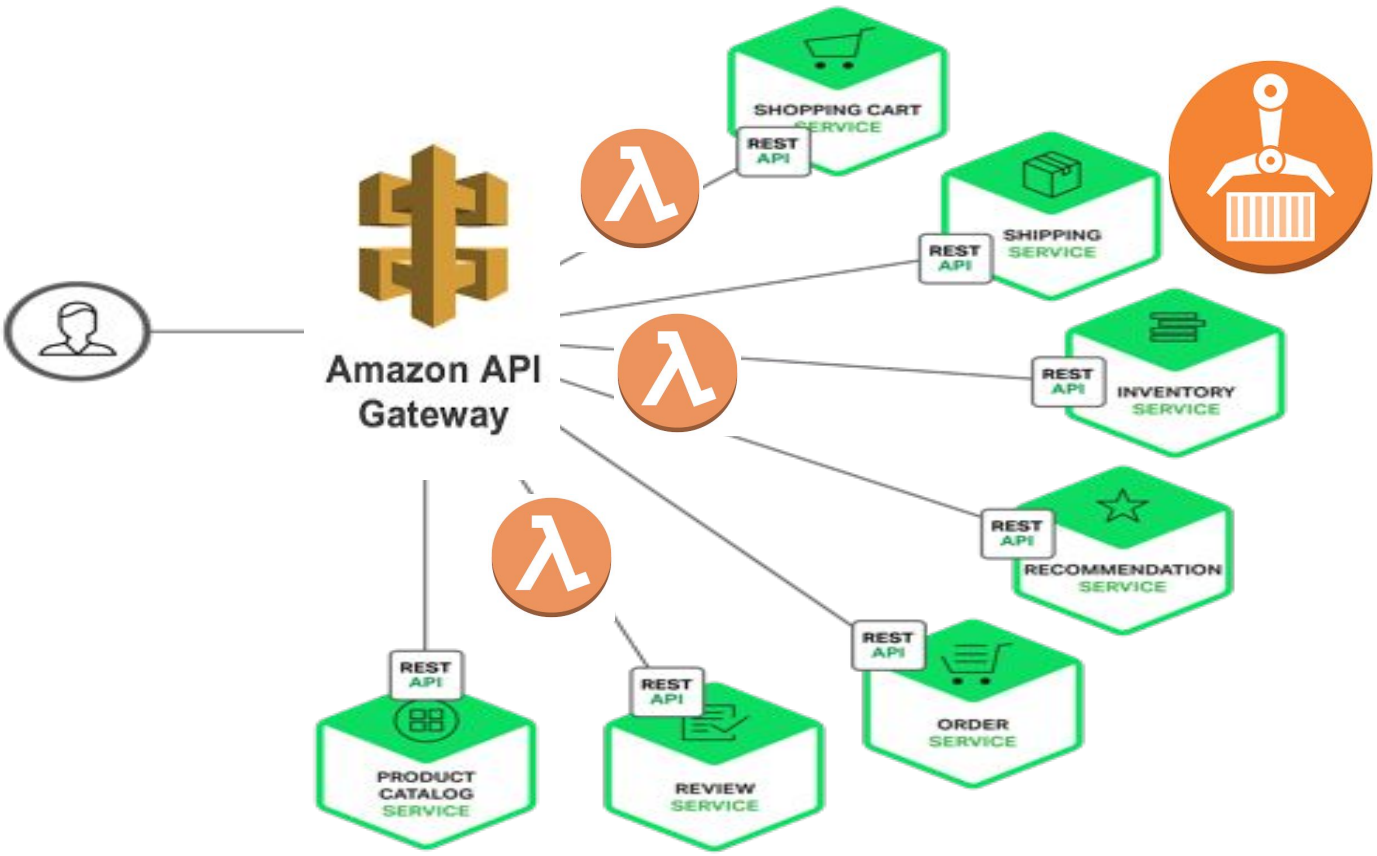
Rule #	Type	Protocol	Port Range	Source	Allow / Deny
100	ALL Traffic	ALL	ALL	0.0.0.0/0	ALLOW
*	ALL Traffic	ALL	ALL	0.0.0.0/0	DENY

Edit outbound rules

View: All rules

Rule #	Type	Protocol	Port Range	Destination	Allow / Deny
100	ALL Traffic	ALL	ALL	0.0.0.0/0	ALLOW
*	ALL Traffic	ALL	ALL	0.0.0.0/0	DENY



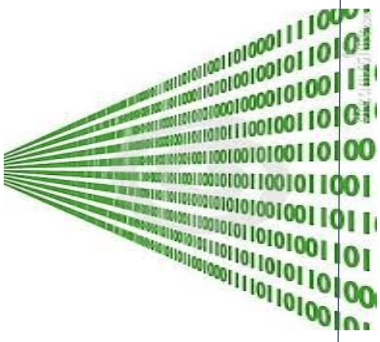


Real time Streaming

Capture

Transfer/Load

Analyze



Kinesis Video Stream

Kinesis Streams

Kinesis Data Stream

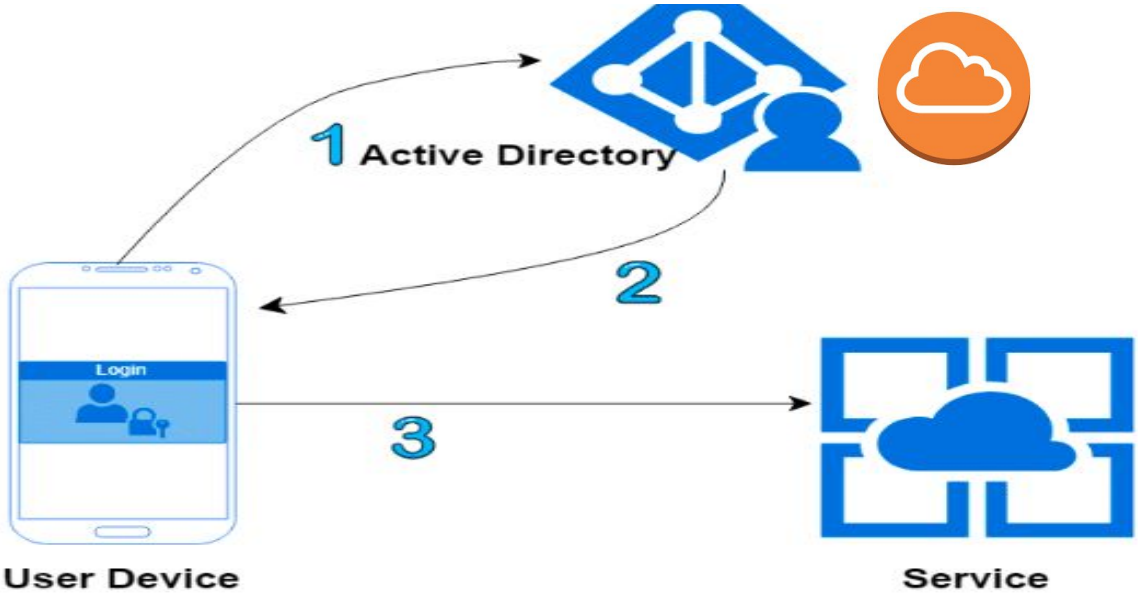
Kinesis Firehose

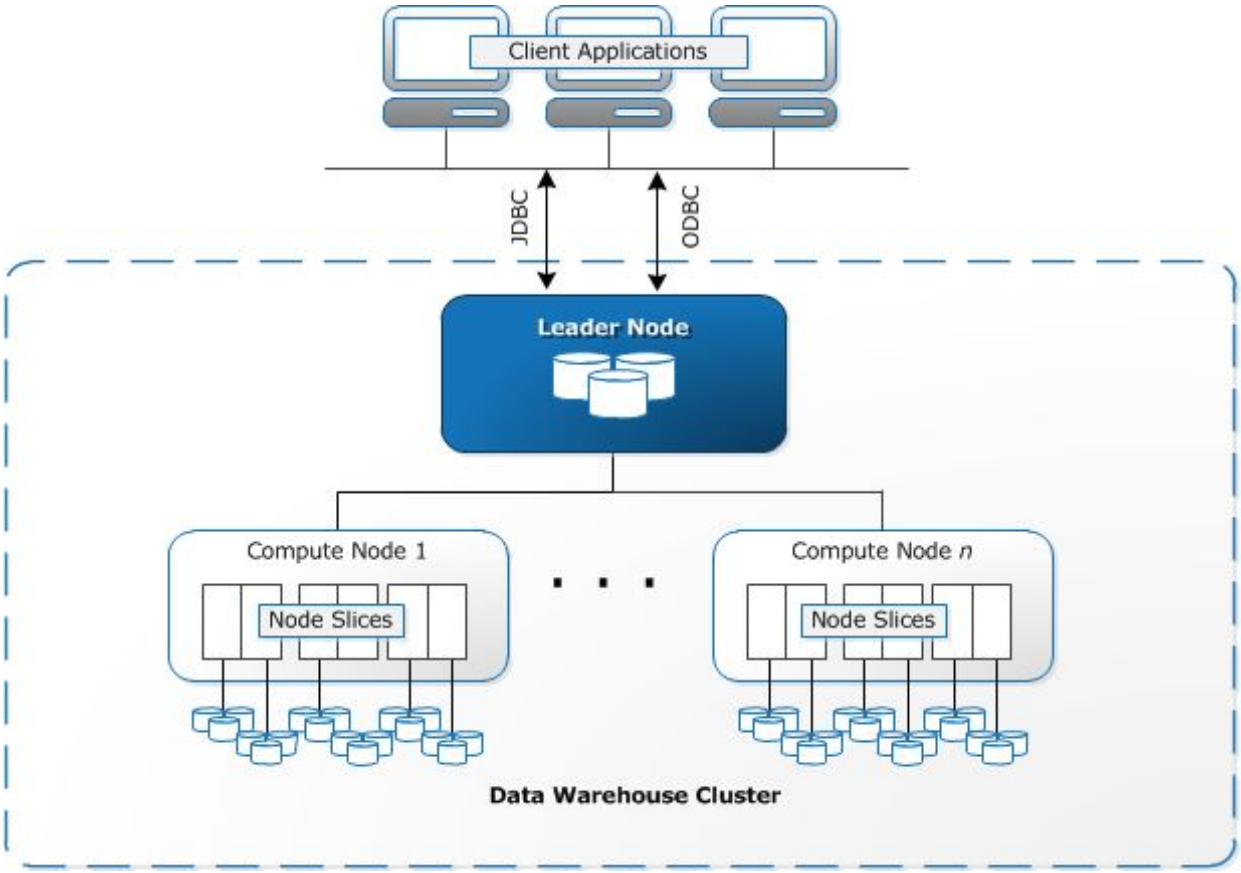
Load streaming data into Amazon S3, Amazon Redshift, and Amazon Elasticsearch Service

Kinesis Analytics

Analyze data streams using standard SQL queries

Your company authenticates users in a very disconnected network requiring each user to have several username/password combinations for different applications. You have been assigned a task of consolidating and migrating services to the cloud and reducing the number of usernames and passwords, employees need to use. What would you recommend?





What will be migrated ? **Which Service wiil be used ?**

On-Premises

DATA → DataSync

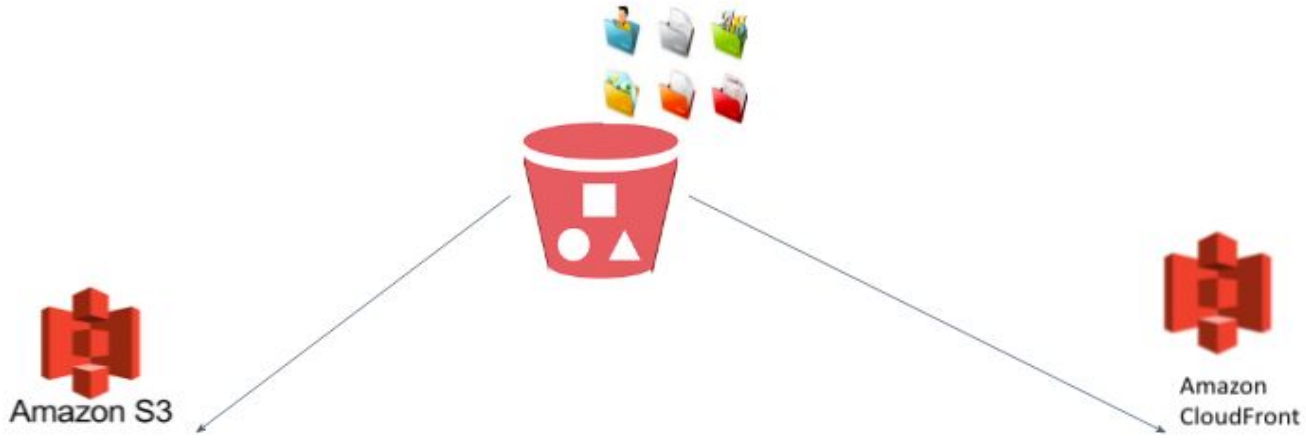
DATABASE → Database Migration Service

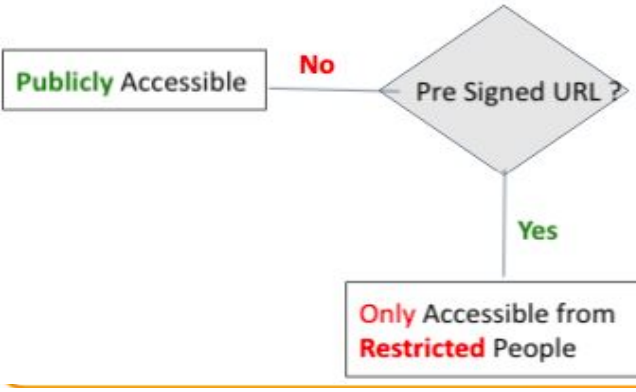
VM SERVER → Server Migration Service

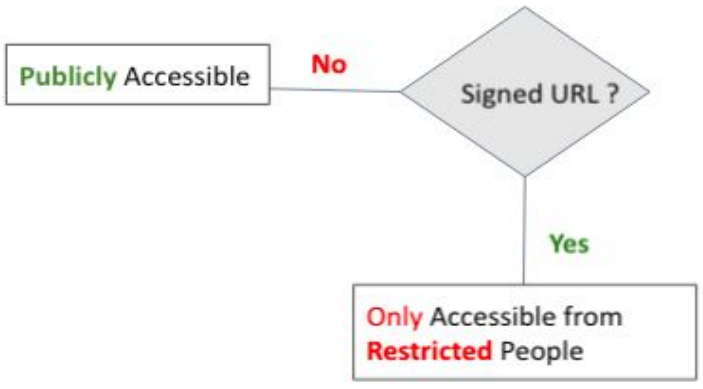
Physical data transfer device

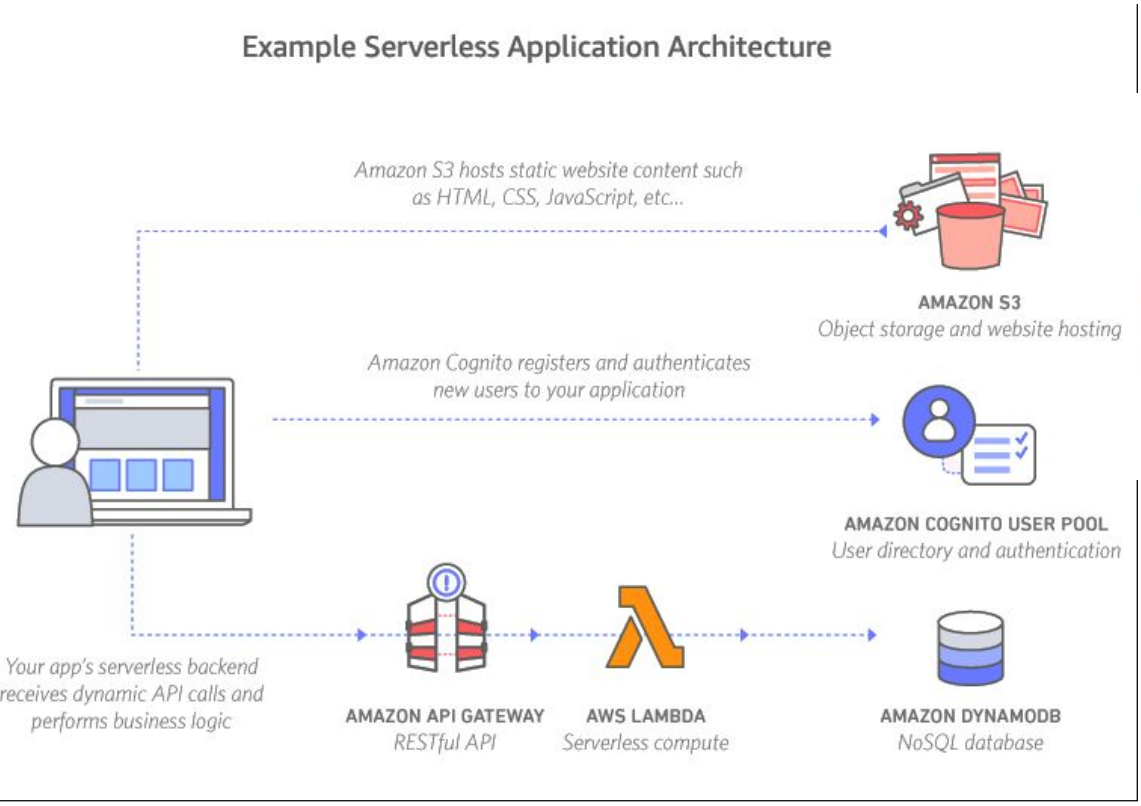
Snowball

Migration Hub









AWS SAM

AWS Directory Service

AWS Directory Service for Microsoft Active Directory

Simple AD

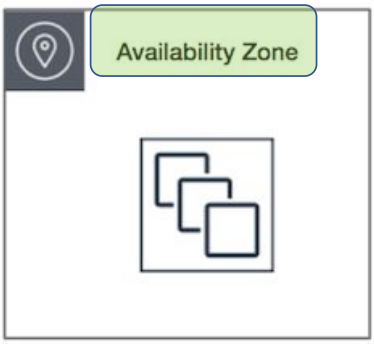
AD Connector

Amazon Cognito

Placement Group

1 AZ

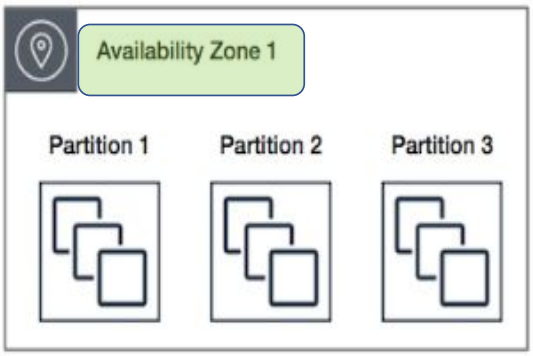
Cluster placement



Exam Tip: low latency& high performance

Multiple AZ in Single Region

Partition placement

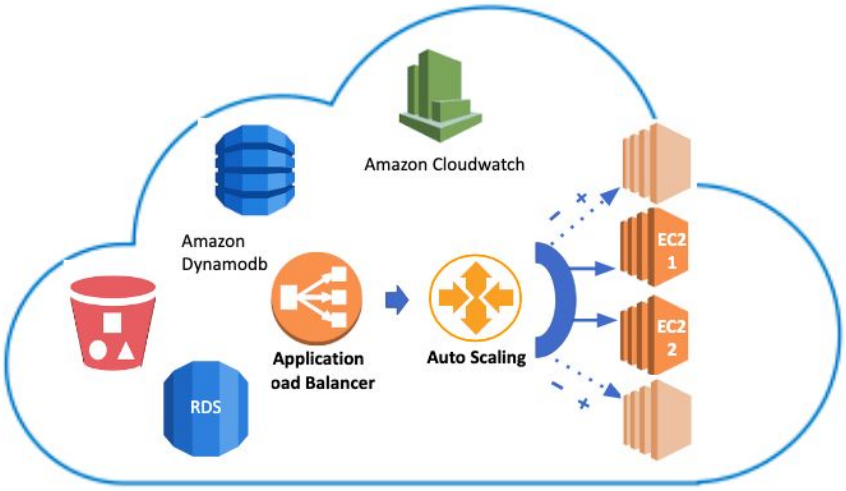


-Hadoop, Cassandra, and Kafka-
-Prevent correlated failures

Multiple AZ in Single Region

Spread placement

- High Availability
- Prevent simultaneous failure



OpsWorks Stacks CloudFormation Elastic Beanstalk

Bucket overview

Region	Amazon resource name (ARN)	Creation date	Access
US East (N. Virginia) us-east-1	arn:aws:s3:::info.awsdevopsteam.net	July 4, 2020, 01:02 (UTC+03:00)	Public

Objects | Properties | Permissions | Metrics | Management | Access points

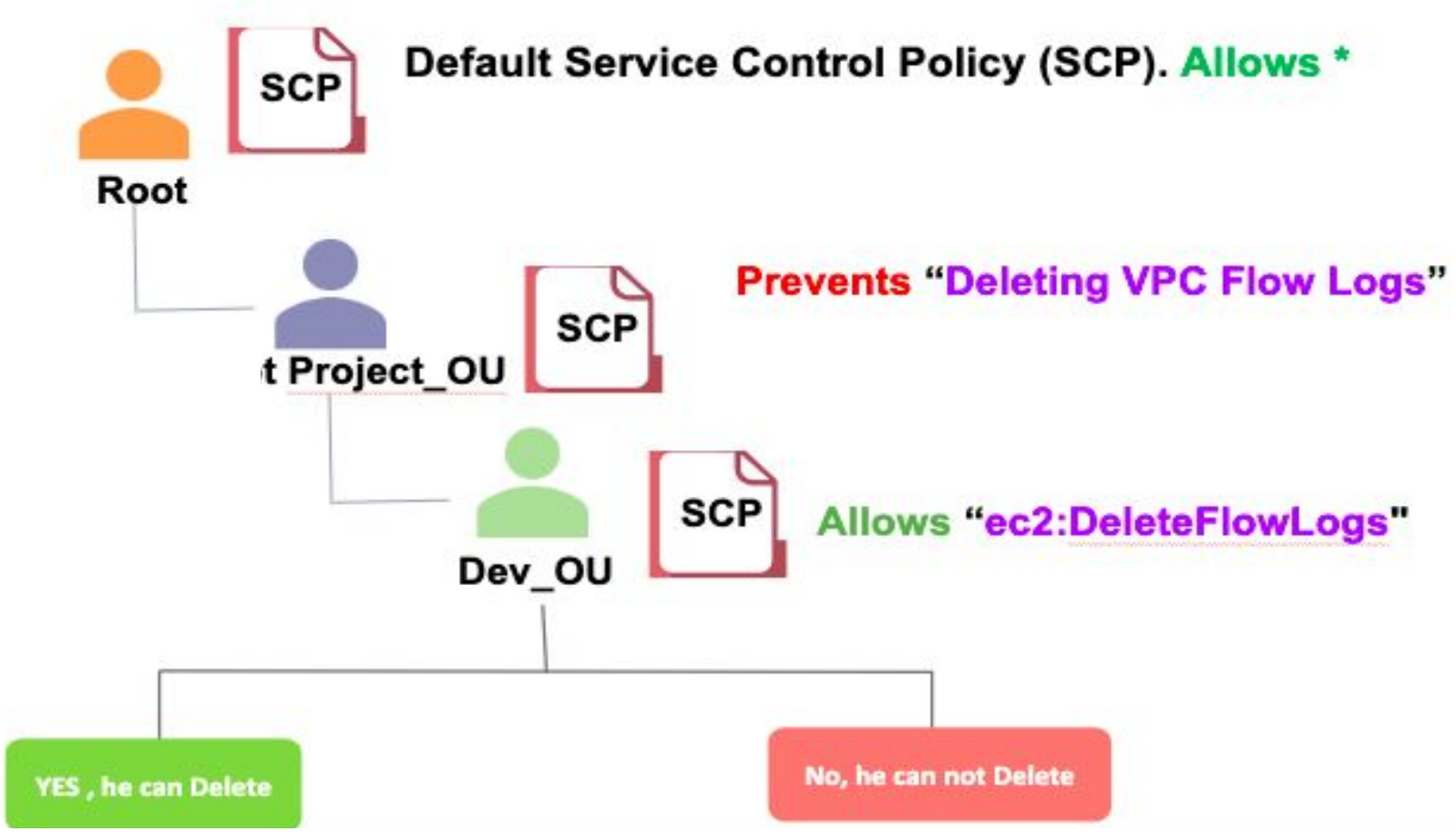
Cross-origin resource sharing (CORS)

Edit

The CORS configuration, written in JSON, defines a way for client web applications that are loaded in one domain to interact with resources in a different domain. Learn more

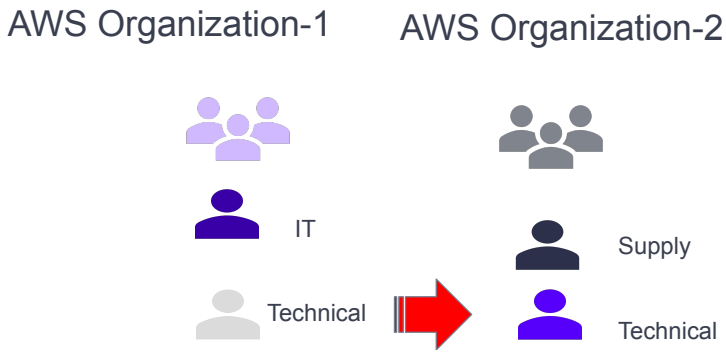
No configurations to display

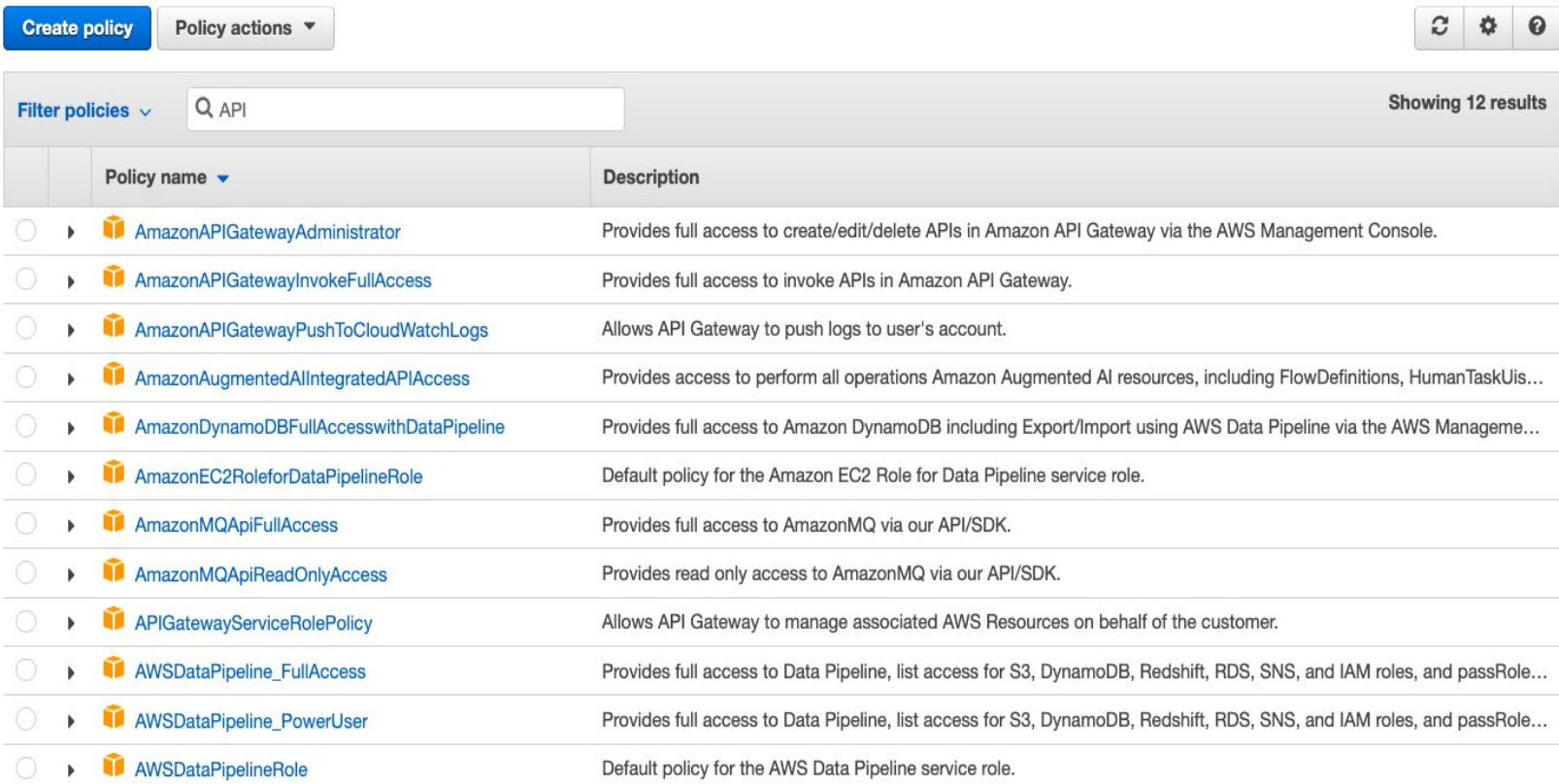
Copy



MEMBER AND MASTER ACCOUNT LEAVING PROCESS

1. Remove the **member account** from the old Organization.
2. Send an invite to the member account from the new Organization.
3. Accept the invite to the new Organization from the member account.
4. Delete the old Organization.
5. Send an invite to the master account
6. Accept the invite to the new Organization from the master account





Step 3: Configure Instance Details

Credit specification ⓘ ☐ Unlimited
Additional charges may apply

File systems ⓘ Add file system ↻ Create ne

▼ Advanced Details

Enclave ⓘ ☐ Enable

Metadata accessible ⓘ Enabled

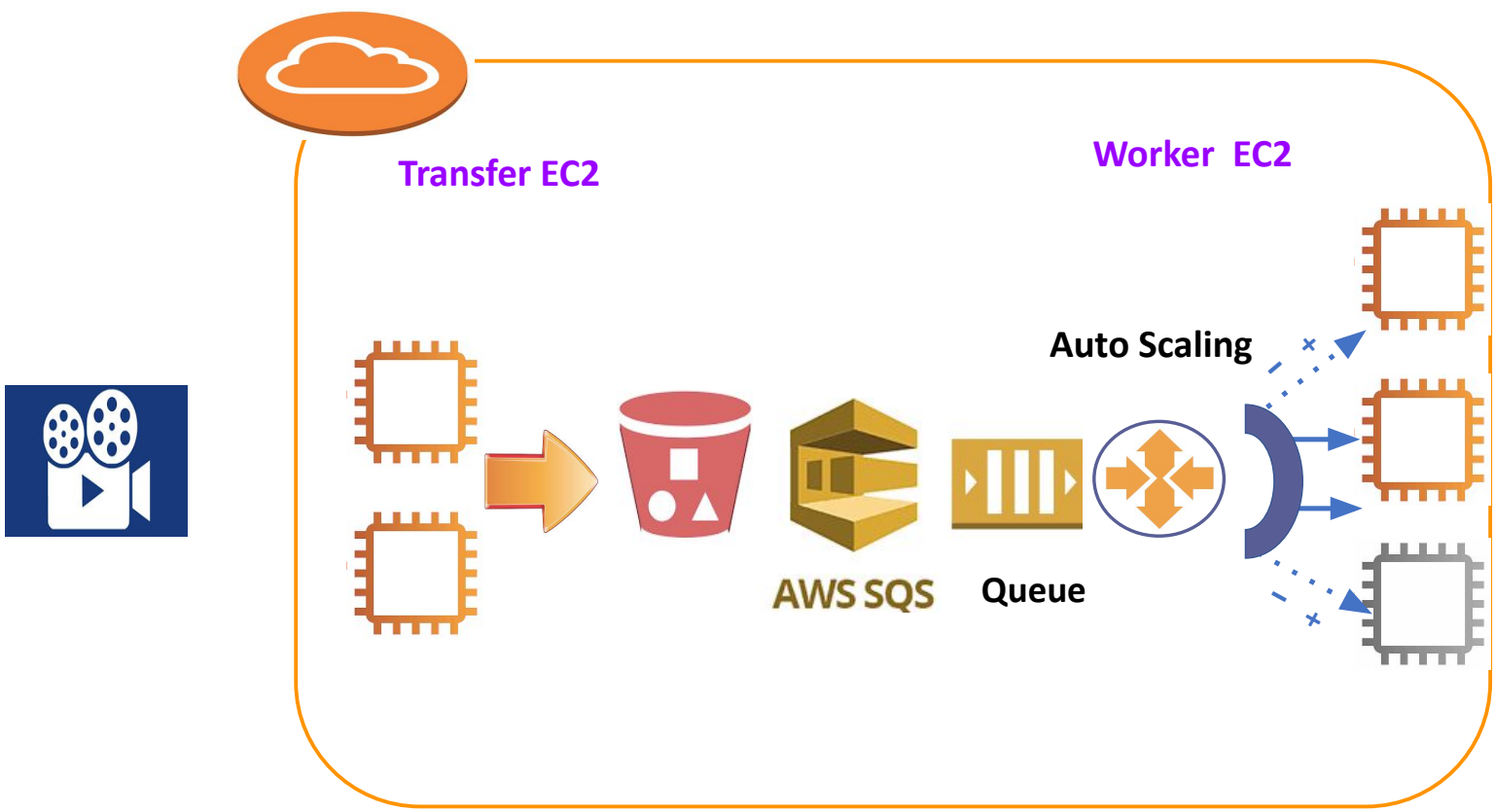
Metadata version ⓘ V1 and V2 (token optional)

Metadata token response hop limit ⓘ 1

User data ⓘ ◉ As text ○ As file ☐ Input is already base64 encoded

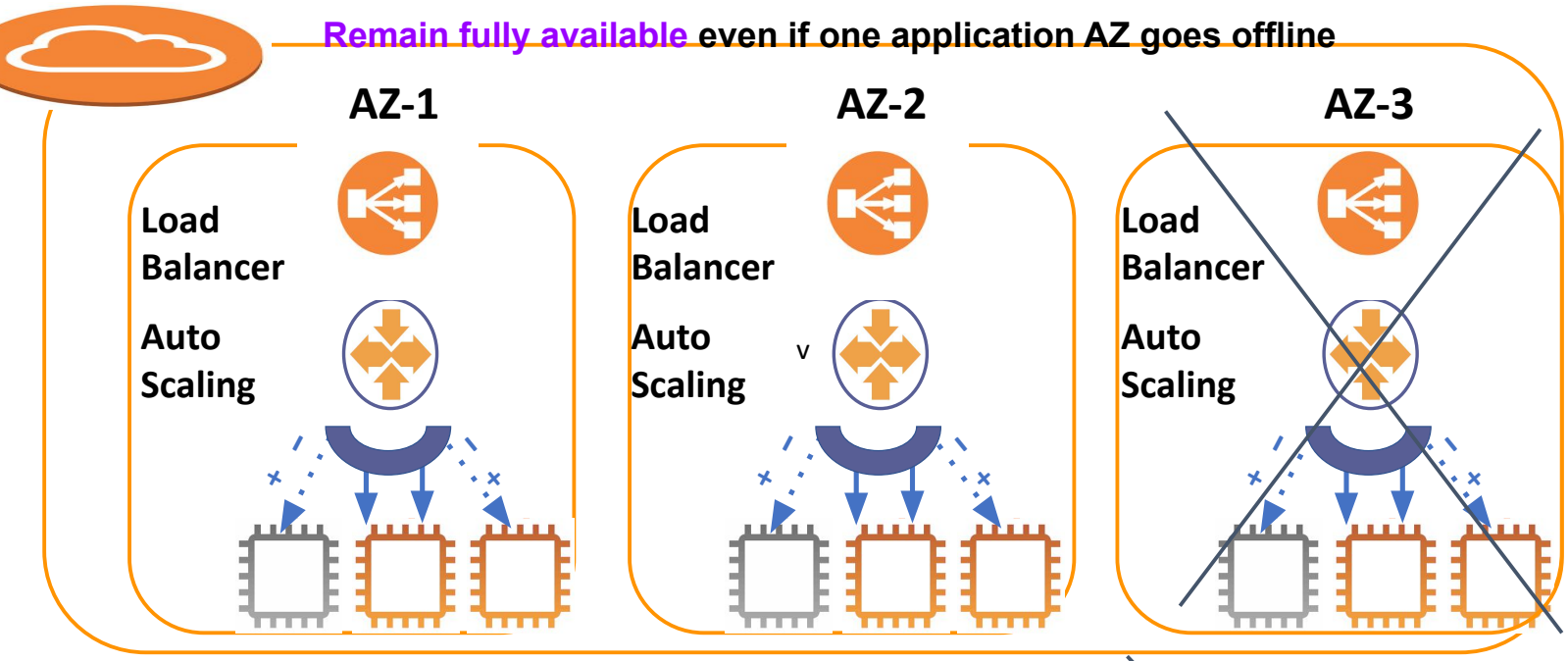
(Optional)

```
#! /bin/bash
yum update -y
yum install -y httpd
systemctl start httpd
systemctl enable httpd
```



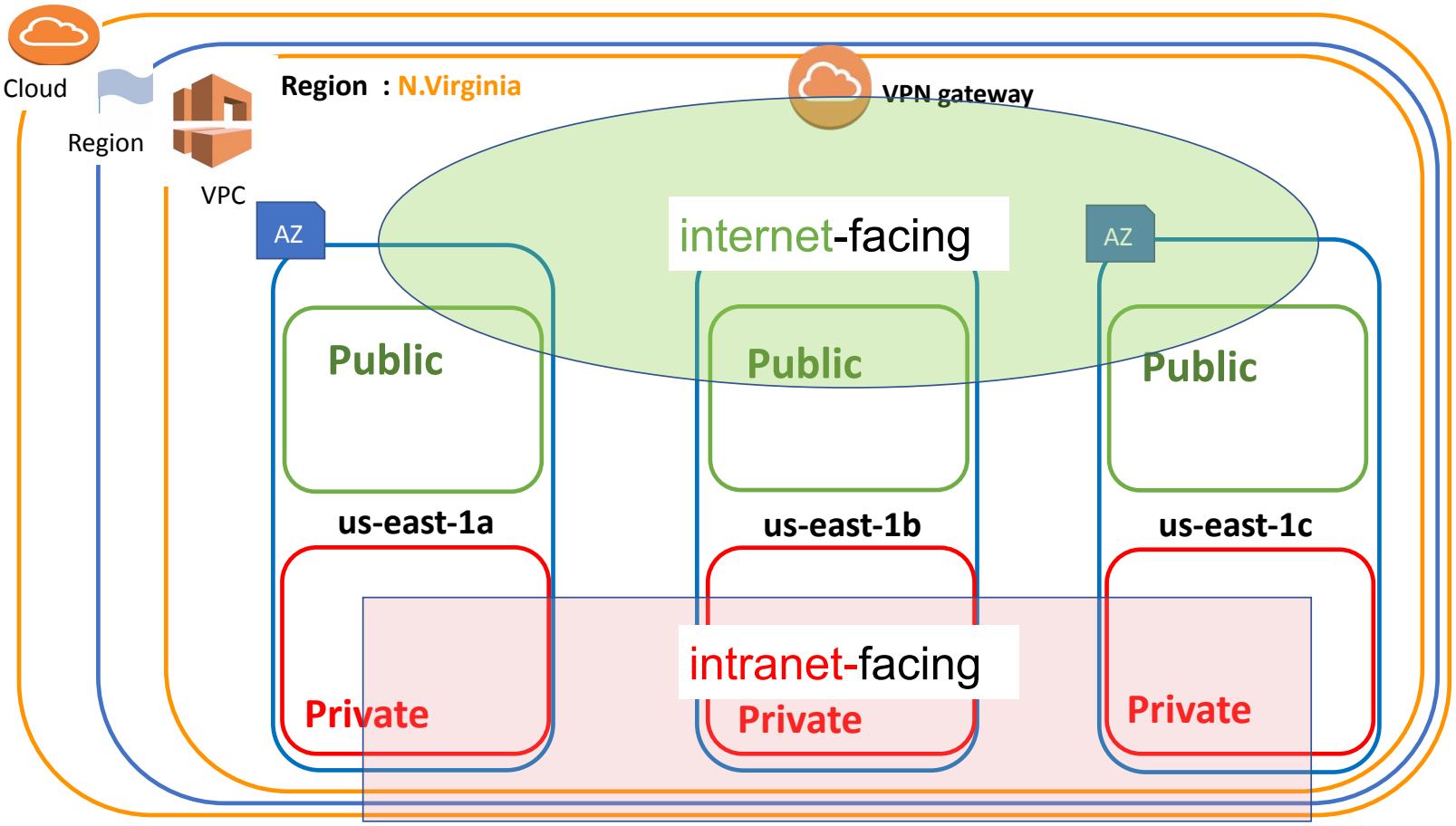
There is an urgent requirement to monitor some database metrics for a database hosted on AWS and send notifications. Which AWS services can accomplish this? (Select Two)

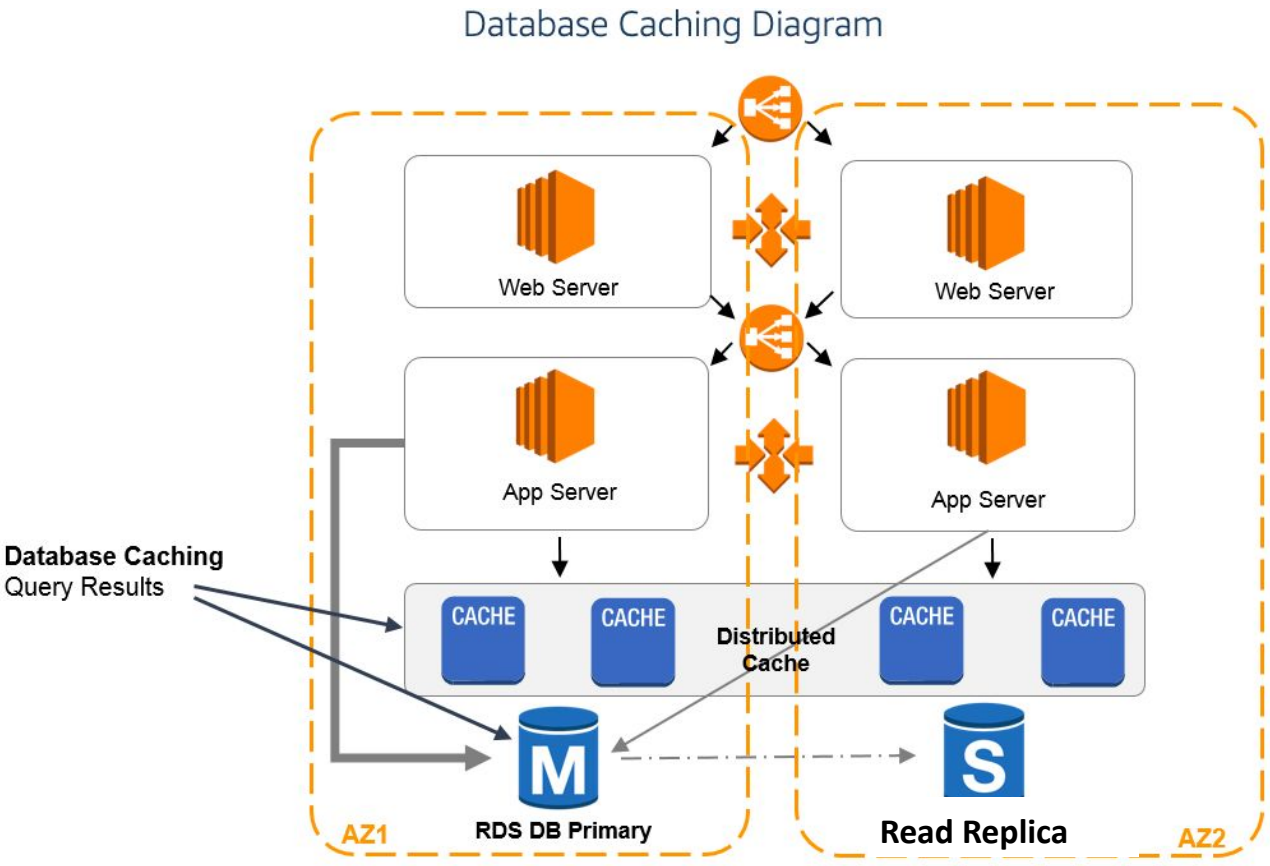
- A. Amazon Simple Email Service
- B. Amazon CloudWatch
- C. Amazon Simple Queue Service
- D. Amazon Route 53
- E. Amazon Simple Notification Service



Option B %33 %33 %33 = %66

Option C %50 %50 %50 = %100


Cloud
Region
Region : N.Virginia
VPC
VPN gateway
AZ
internet-facing
AZ
Public
Public
Public
us-east-1a
us-east-1b
us-east-1c
intranet-facing
Private
Private
Private

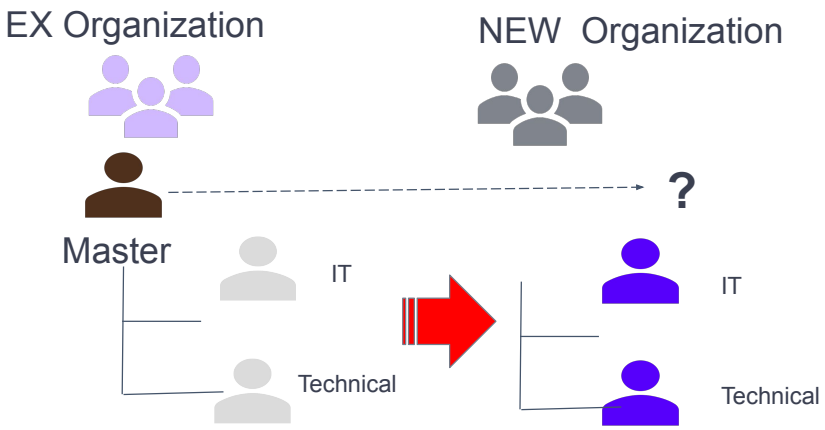

Database Caching Diagram
Web Server
Web Server
App Server
App Server
Database Caching
Query Results
CACHE
CACHE
Distributed
Cache
CACHE
CACHE
M
S
AZ1
RDS DB Primary
Read Replica
AZ2

MEMBER AND MASTER ACCOUNT LEAVING PROCESS

1. Remove the **member account** from the old Organization.
2. Send an invite to the member account from the new Organization.
3. Accept the invite to the new Organization from the member account.

---

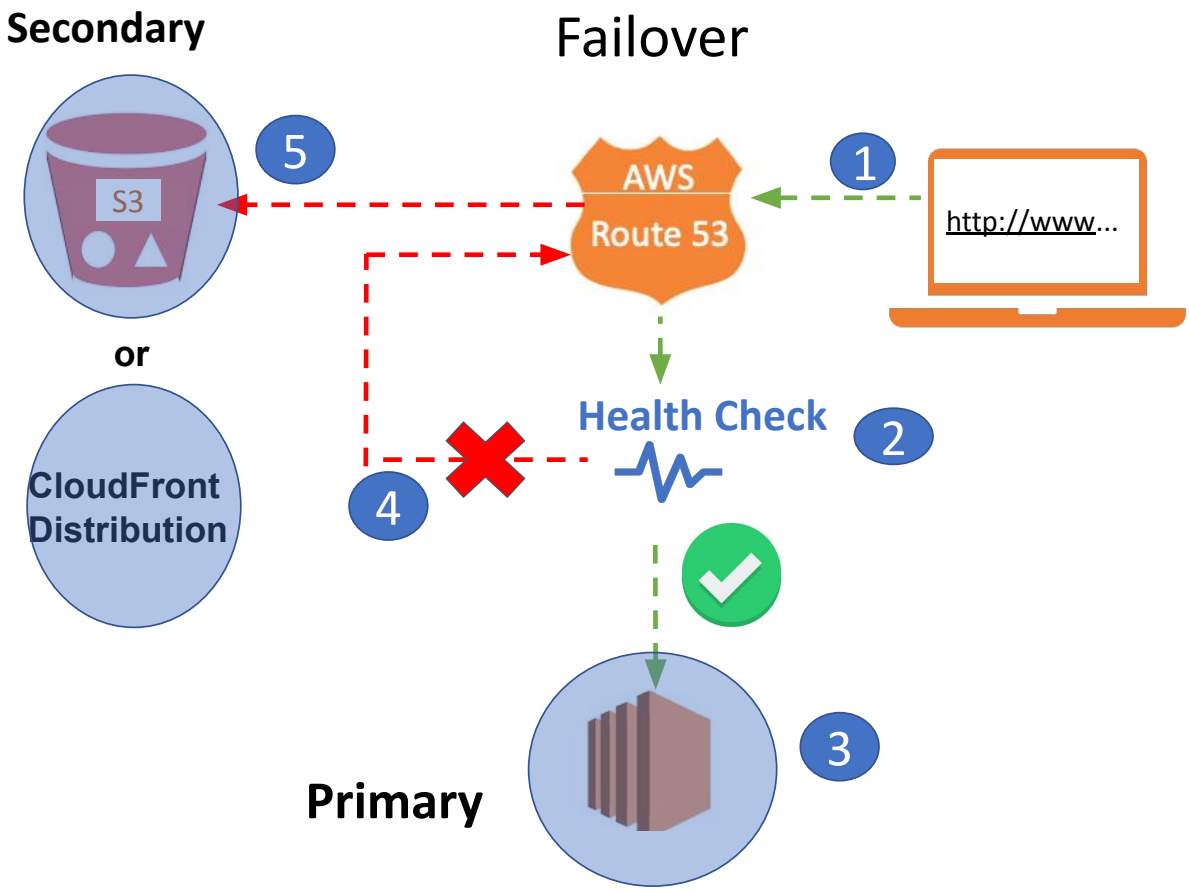
4. Delete the old Organization.
5. Send an invite to the master account
6. Accept the invite to the new Organization from the master account

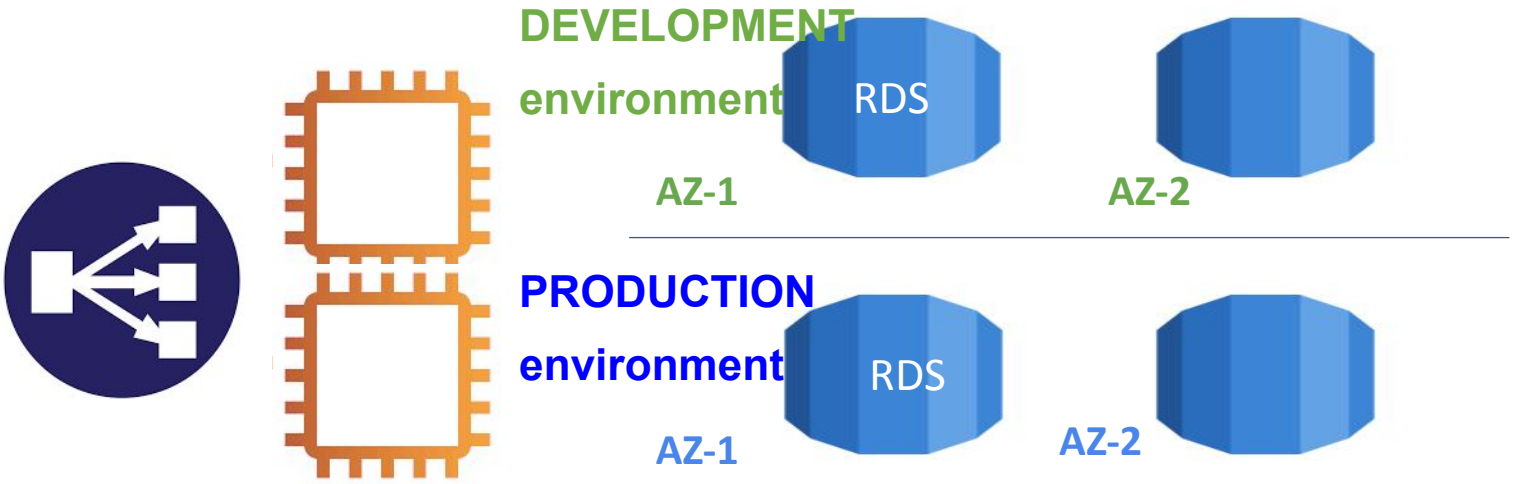


On-Premises
Data Center

AWS Server Migration Service

VM Import/Export





A company is running three production web server reserved EC2 Instances with EBS-backed root volumes. These instances have a consistent CPU load of 80%. Traffic is being distributed to these instances by an Elastic Load Balancer. They also have production and development Multi-AZ RDS MySQL databases. What recommendation would you make to reduce cost in this environment without affecting the availability of mission-critical systems? Choose the correct answer from the options given below.

AWS Organization

Consolidated billing $ — $ SCP — All future

Account A separately : **8TB usage = 8 $**

Account B separately : **4 TB usage = 4 $**

+----------

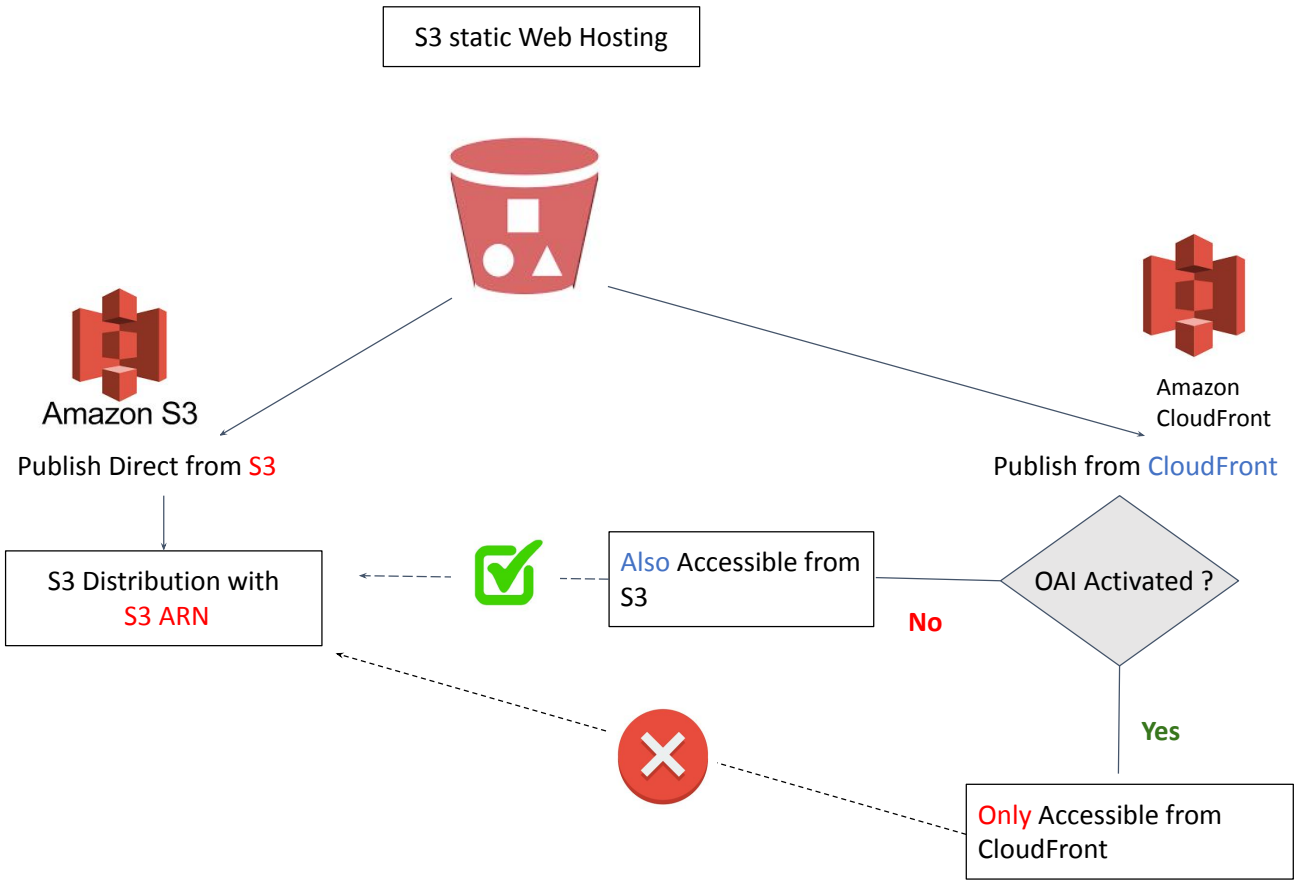
12 $

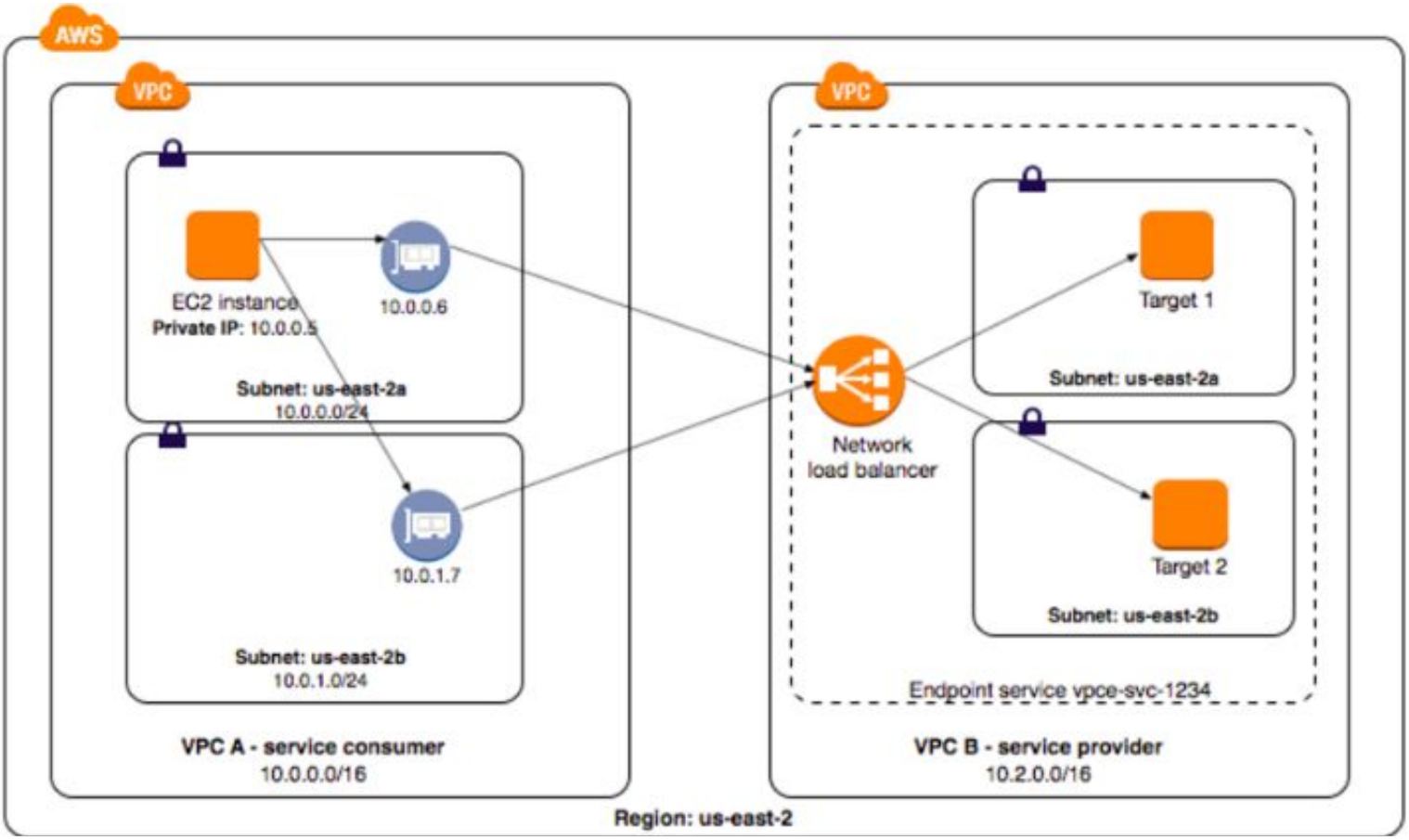
0 — *pay $1 for each TB in the first 10 TB* — 10 TB — *pay $0.5 for TB after 10 TB*

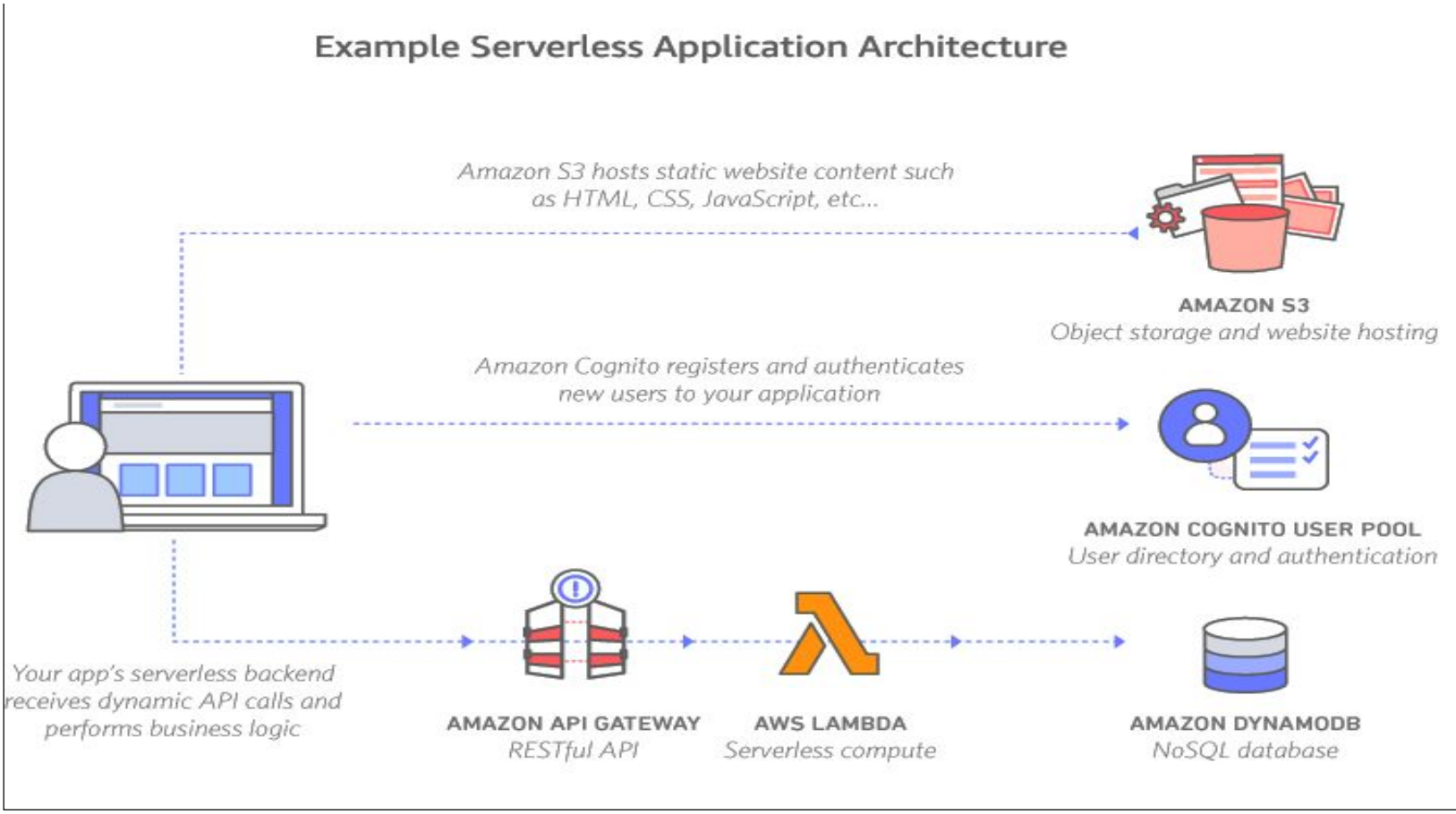
Consolidated billing : 10 TB x 1 $= 10 $ for the first 10 TB
2TB X 0.5 = 1 $ for the next 2 TB

+----------

11 $




AWS
VPC
EC2 instance
Private IP: 10.0.0.5
10.0.0.6
Subnet: us-east-2a
10.0.0.0/24
10.0.1.7
Subnet: us-east-2b
10.0.1.0/24
VPC A - service consumer
10.0.0.0/16
VPC
Network
load balancer
Target 1
Subnet: us-east-2a
Target 2
Subnet: us-east-2b
Endpoint service vpce-svc-1234
VPC B - service provider
10.2.0.0/16
Region: us-east-2


Example Serverless Application Architecture
Amazon S3 hosts static website content such as HTML, CSS, JavaScript, etc...
AMAZON S3
Object storage and website hosting
Amazon Cognito registers and authenticates new users to your application
AMAZON COGNITO USER POOL
User directory and authentication
Your app's serverless backend receives dynamic API calls and performs business logic
AMAZON API GATEWAY
RESTful API
AWS LAMBDA
Serverless compute
AMAZON DYNAMODB
NoSQL database

Currently, you're responsible for the design and architect of a highly available application. After building the initial environment, you discover that your application does not work correctly until port 443 is added to the security group. After adding port 443 to the appropriate security group, how much time will it take for the application to work correctly?

A. Generally, it takes 2-5 minutes for the rules to propagate.

B. Immediately after a reboot of the EC2 Instances, belonging to that security group.

C. Changes apply instantly to the security group, and the application should be able to respond to 443 requests.

D. It will take 60 seconds for the rules to apply to all Availability Zones within the region.

Services

- AWS App Mesh
- Amazon Aurora
- AWS Certificate Manager Private Certificate Authority
- AWS CodeBuild
- Amazon EC2
- EC2 Image Builder
- AWS Glue
- AWS License Manager
- AWS Network Firewall
- AWS Outposts
- AWS Resource Groups
- Amazon Route 53
- Amazon VPC

CORS Domains:

http://www.domainnamea.com,

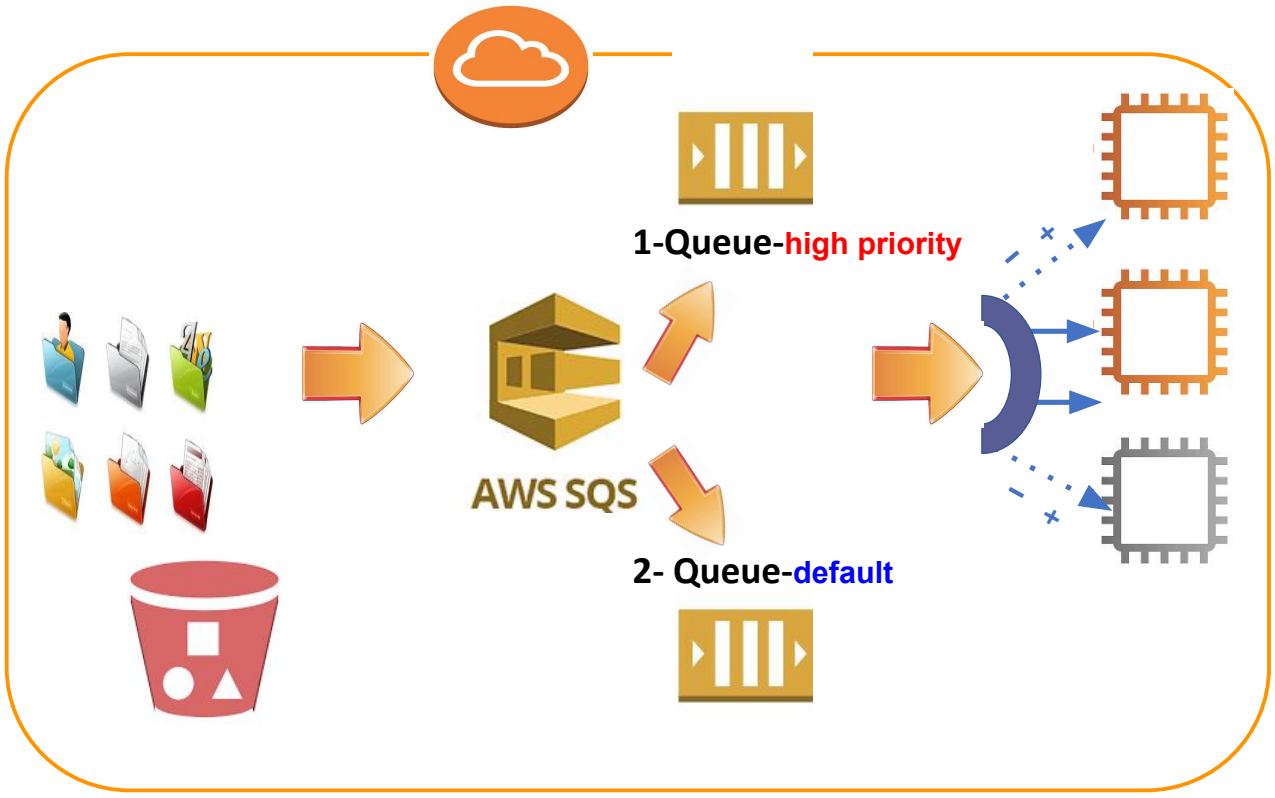
https://www.secure.domainnamea.com,

http://www.domainnameb.com.

Attempts

https://www.domainnameb.com

http://www.domainnameb.com:80



Create VPC

- *Name tag*: **clarus-vpc-a**
- *IPv4 CIDR block*: **10.7.0.0/16**

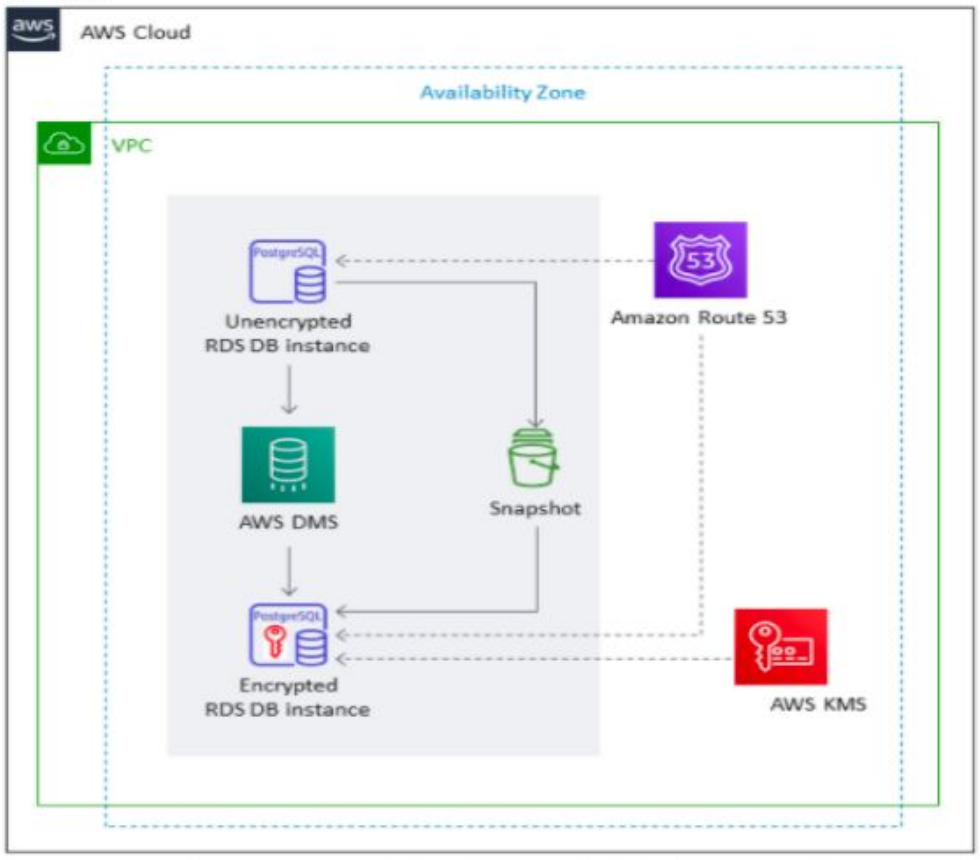
Create IGW

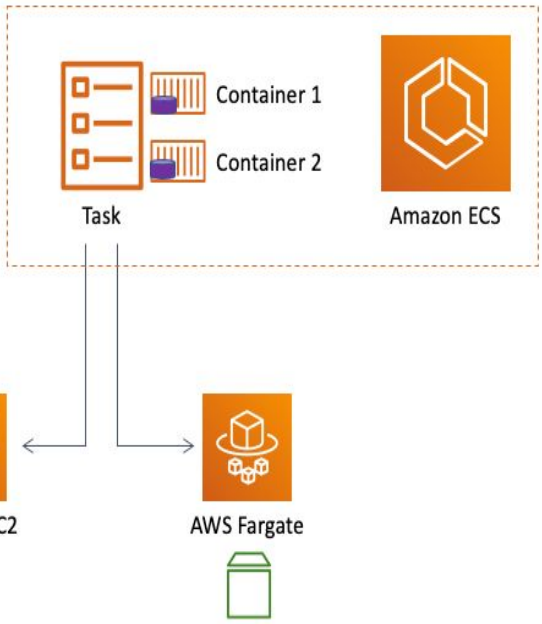
IGW Action Menu: Attach IGW to VPC

VPC Action Menu: Edit DNS Hostname

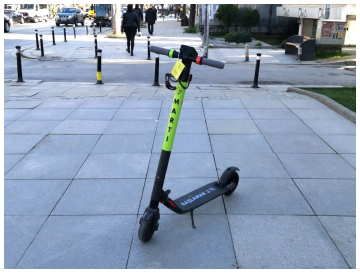
Set the VPC Route Table: 00000:/0 > IGW

Answer: B





LAMBDA



Fargate

EC2

You currently manage a set of web servers hosted on EC2 Servers with public IP addresses. These IP addresses are mapped to domain names. There was an urgent maintenance activity that had to be carried out on the servers. The servers had to be stopped and restarted. Now the web application hosted on these EC2 Instances is not accessible via the domain names configured earlier. Which of the following could be a reason for this?

A. The Route 53 hosted zone needs to be restarted.

B. The network interfaces need to initialized again.

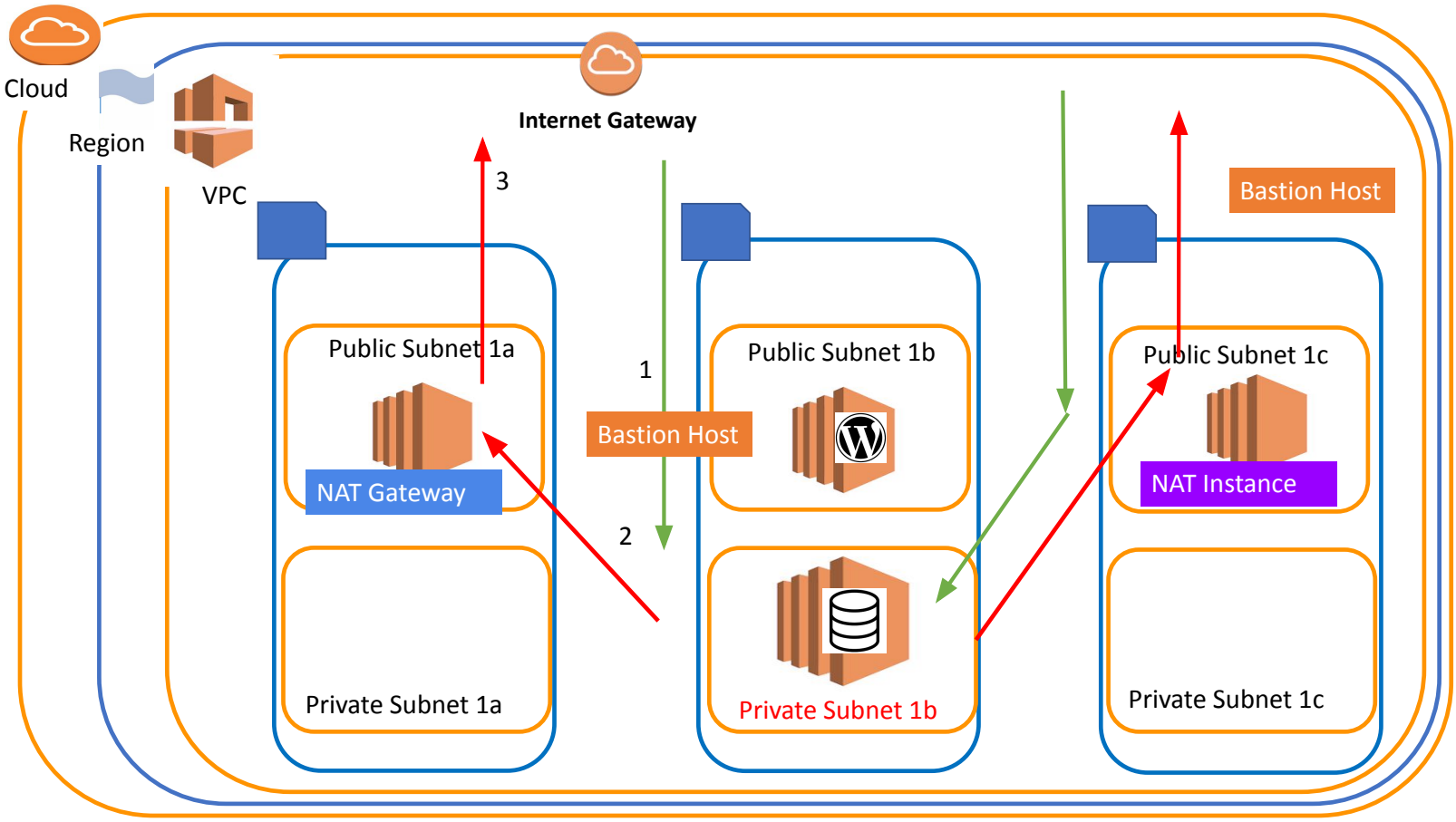
C. The public IP addresses need to be associated with the ENI again.

D. The public IP addresses have changed after the instance was stopped and started again.

The Payment Card Industry Data Security Standard (**PCI** DSS)

The 12 requirements of PCI are:

Install and maintain a firewall configuration to protect cardholder data
Do not use vendor-supplied defaults for system passwords and other security parameters
Protect stored cardholder data
Encrypt transmission of cardholder data across open, public networks
Use and regularly update anti-virus software or programs
Develop and maintain secure systems and applications
Restrict access to cardholder data by business need to know
Assign a unique ID to each person with computer access
Restrict physical access to cardholder data
Track and monitor all access to network resources and cardholder data
Regularly test security systems and processes
Maintain a policy that addresses information security for all personnel



CSAA-03
04 April 2022
Osvaldo

Couples

Amazon FSx for Windows Windows Active directory	Amazon FSx for Lustre S3	Real time processing or near real time Kinesis
Static IP Performance Failover Global Accelerator	Network Load Balancer Endpoint	- Horizontal scaling - Decoupling - Make reliable SQS

Couples

Internal- Intranet- Not public

1.----------

S3 VPC Endpoint

Dynamodb VPC Endpoint

2.----------

VPC Peering

3.----------

Network Load Balancer and Endpoint with PRIVATE Link

Change region, change encryption of volume,database

Take snapshot , Copy

Particular person, S3 , CloudFront

Sign Url, Sign Cookies

Couples

-Read operation

-Lack of performance for database

Read Replica

Elasticache

High availability for database

Multi AZ deployment

Serverless

Elastic Beanstalk (no)

Dynamodb

Lambda

S3

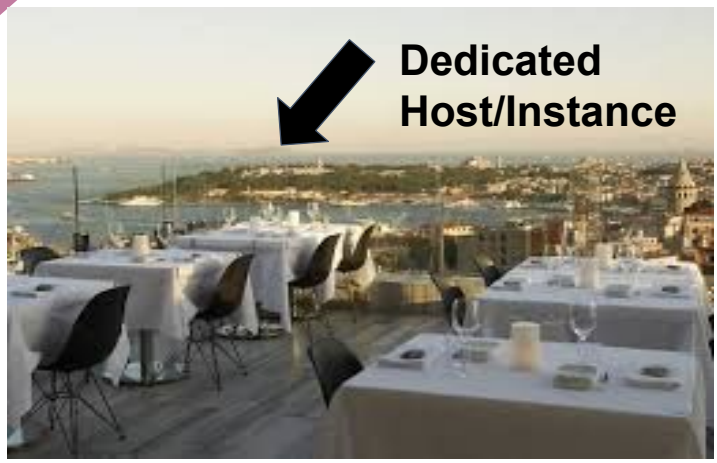
API gateway

ECS

Cognito

ECS (Fargate)

EC2 Instances Recap



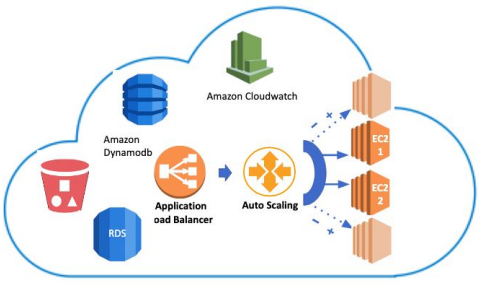
Spot

On Demand

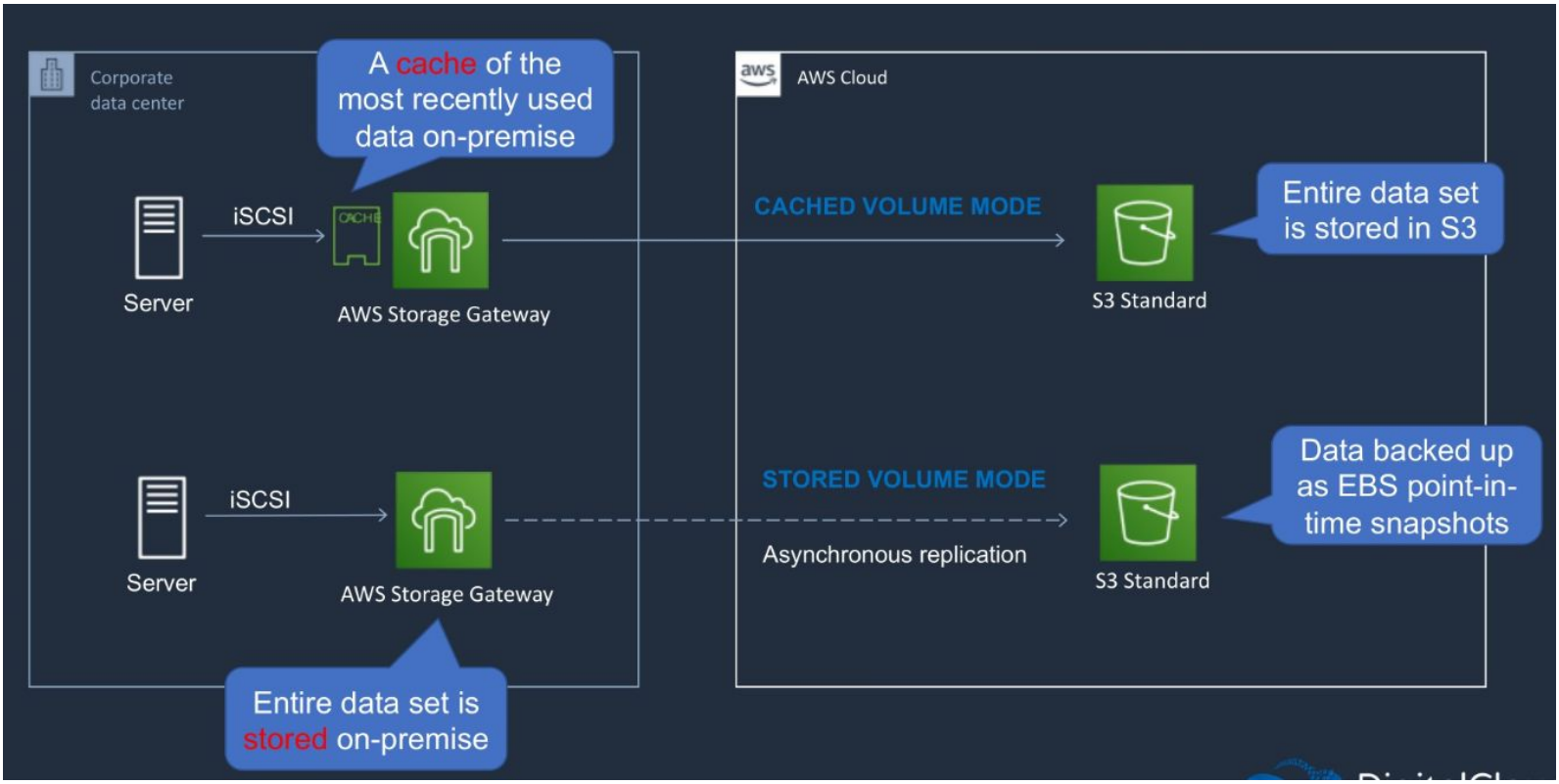
Reserved

Saving Plan

Component	Description
Templates	The JSON or YAML text file that contains the instructions for building out the AWS environment
Stacks	The entire environment described by the template and created, updated, and deleted as a single unit
StackSets	AWS CloudFormation StackSets extends the functionality of stacks by enabling you to create, update, or delete stacks across multiple accounts and regions with a single operation
Change Sets	A summary of proposed changes to your stack that will allow you to see how those changes might impact your existing resources before implementing them



OpsWorks Stacks **CloudFormation** Elastic Beanstalk



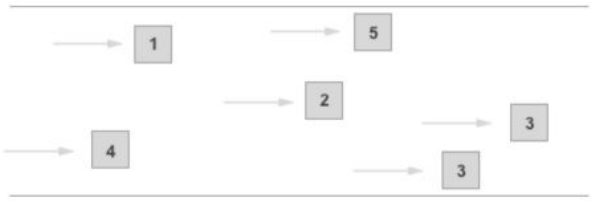
SQS

Standard Queue

High Throughput: Standard queues have nearly-unlimited transactions per second (TPS).

At-Least-Once Delivery: A message is delivered at least once, but occasionally more than one copy or a message is delivered.

Best-Effort Ordering: Occasionally, messages are delivered in an order different from which they were sent.



Send data between applications when the throughput is important, for example:

- Decouple live user requests from intensive background work: let users upload media while resizing or encoding it.
- Allocate tasks to multiple worker nodes: process a high number of credit card validation requests.
- Batch messages for future processing: schedule multiple entries to be added to a database.

FIFO Queue

First-In-First-out Delivery: The order in which messages are sent and received is strictly preserved.

Exactly-Once Processing: A message is guaranteed to be delivered at least once, but all duplicates of the message are removed.

Limited Throughput: 300 transactions per second (TPS).

Send data between applications when the order of events is important, for example:

- Ensure that user-entered commands are executed in the right order.
- Display the correct product price by sending price modifications in the right order.
- Prevent a student from enrolling in a course before registering for an account.

CSAA Practice Test 3
Osvaldo
04.04.2022