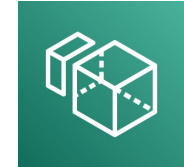


Other AWS Services

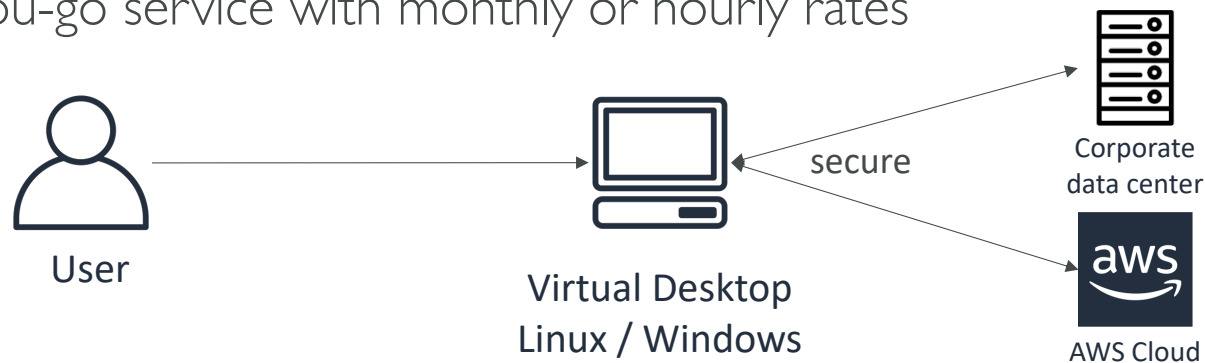
Other AWS services section

- Other services represent services I couldn't group with the other ones
- They are services reported by students as **sometimes, but rarely**, appearing on the AWS exam
- The lectures are short and brief and most likely without hands-on
- *No summary lecture at the end of the section to keep things flexible!*

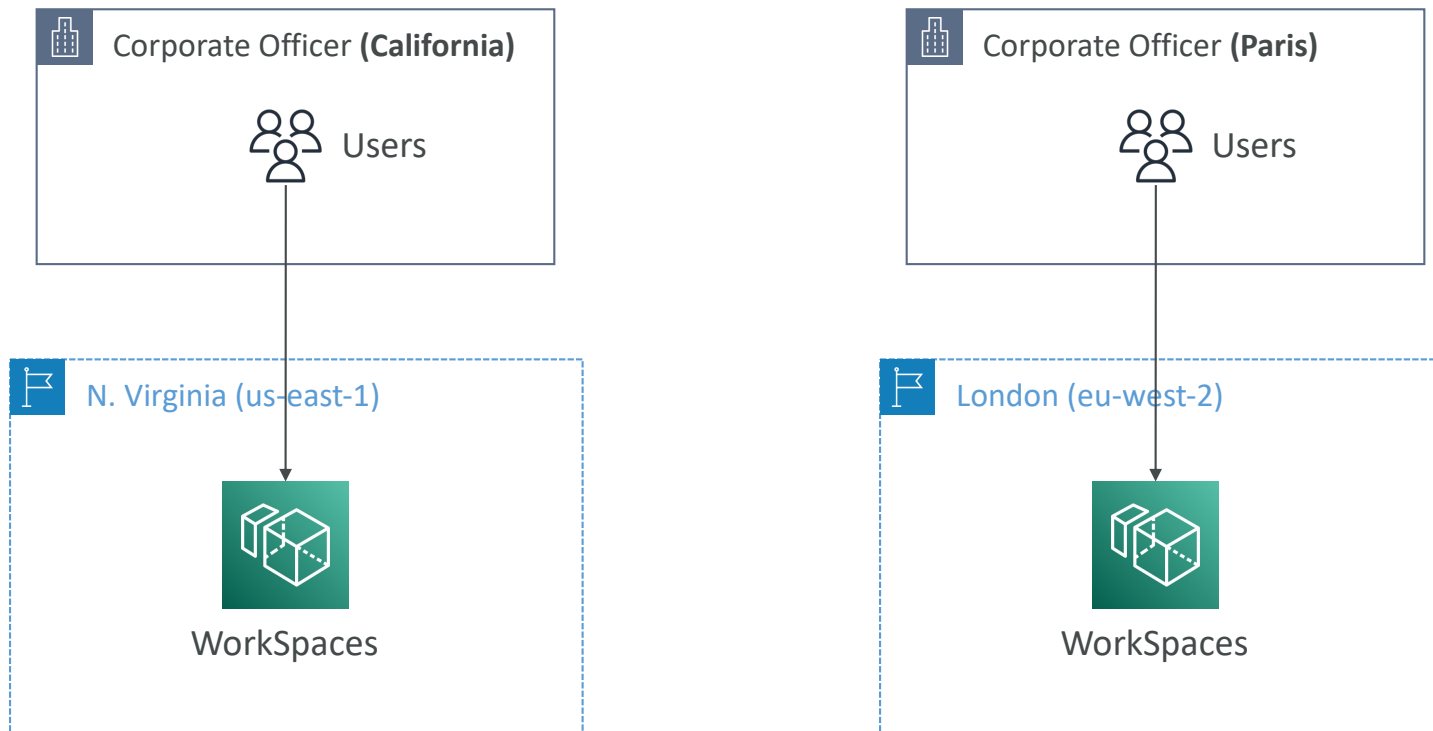
Amazon WorkSpaces



- Managed Desktop as a Service (DaaS) solution to easily provision Windows or Linux desktops
- Great to eliminate management of on-premise VDI (Virtual Desktop Infrastructure)
- Fast and quickly scalable to thousands of users
- Secured data – integrates with KMS
- Pay-as-you-go service with monthly or hourly rates



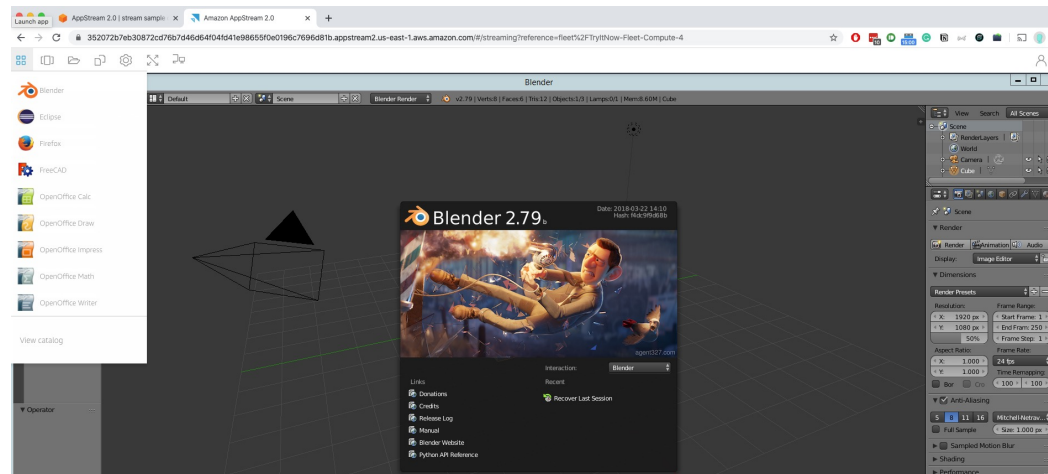
Amazon WorkSpaces – Multiple Regions



Amazon AppStream 2.0



- Desktop Application Streaming Service
- Deliver to any computer, without acquiring, provisioning infrastructure
- The application is delivered from within a web browser



Amazon AppStream 2.0 vs WorkSpaces

- Workspaces

- Fully managed VDI and desktop available
- The users connect to the VDI and open native or WAM applications
- Workspaces are on-demand or always on

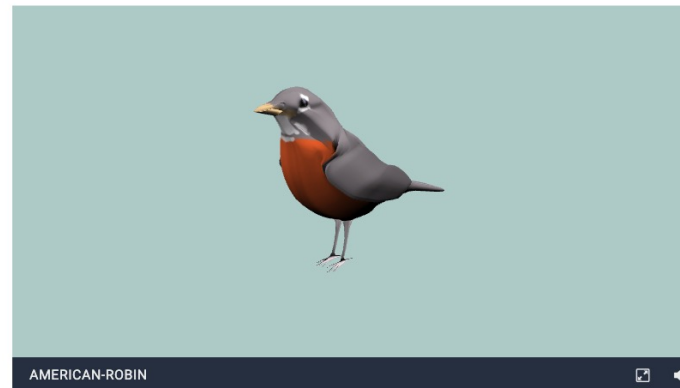
- AppStream 2.0

- Stream a desktop application to web browsers (no need to connect to a VDI)
- Works with any device (that has a web browser)
- Allow to configure an instance type per application type (CPU, RAM, GPU)

Amazon Sumerian

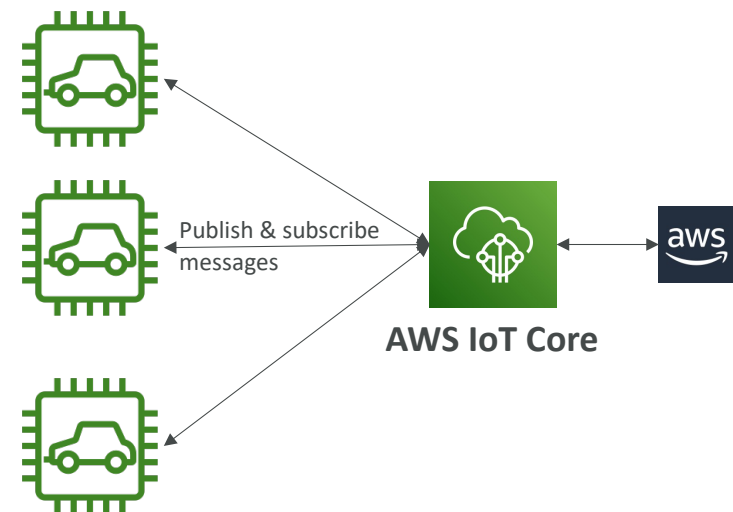


- Create and run virtual reality (VR), augmented reality (AR), and 3D applications
- Can be used to quickly **create 3D models with animations**
- Ready-to-use templates and assets - no programming or 3D expertise required
- Accessible via a web-browser URLs or on popular hardware for AR/VR
- Example: <https://docs.aws.amazon.com/sumerian/latest/userguide/gettingstarted-showcase.html>

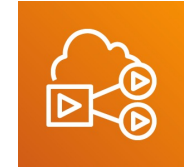


AWS IoT Core

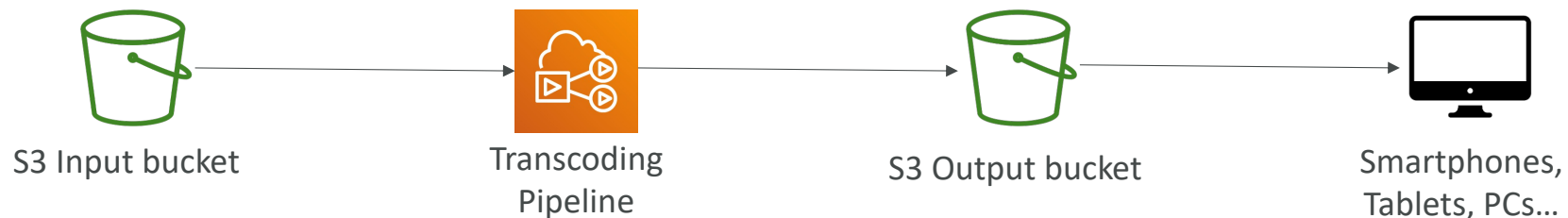
- IoT stands for “Internet of Things” – the network of internet-connected devices that are able to collect and transfer data
- AWS IoT Core allows you to **easily connect IoT devices to the AWS Cloud**
- **Serverless, secure & scalable** to billions of devices and trillions of messages
- Your applications can communicate with your devices even when they aren't connected
- Integrates with a lot of AWS services (Lambda, S3, SageMaker, etc.)
- Build IoT applications that gather, process, analyze, and act on data



Amazon Elastic Transcoder

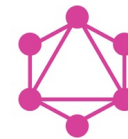


- Elastic Transcoder is used to convert media files stored in S3 into media files in the formats required by consumer playback devices (phones etc..)
- Benefits:
 - Easy to use
 - Highly scalable – can handle large volumes of media files and large file sizes
 - Cost effective – duration-based pricing model
 - Fully managed & secure, pay for what you use



AWS AppSync

- Store and sync data across mobile and web apps in real-time
- Makes use of GraphQL (mobile technology from Facebook)
- Client Code can be generated automatically
- Integrations with DynamoDB / Lambda
- Real-time subscriptions
- Offline data synchronization (replaces Cognito Sync)
- Fine Grained Security
- AWS Amplify can leverage AWS AppSync in the background!

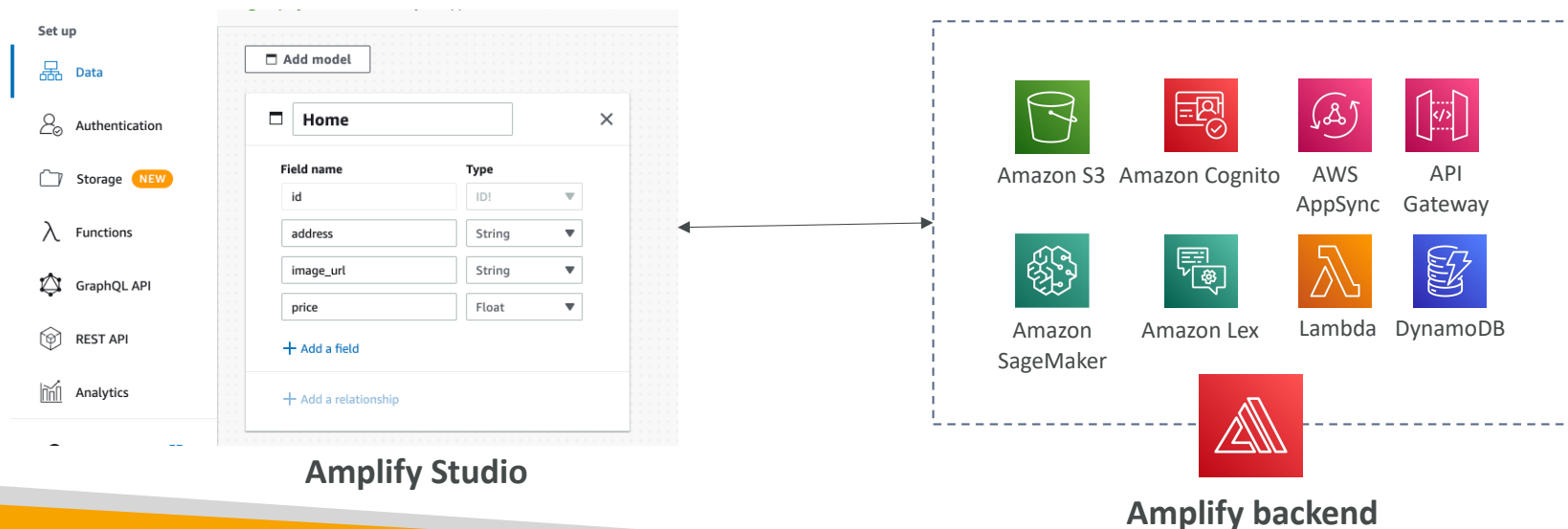


GraphQL

AWS Amplify



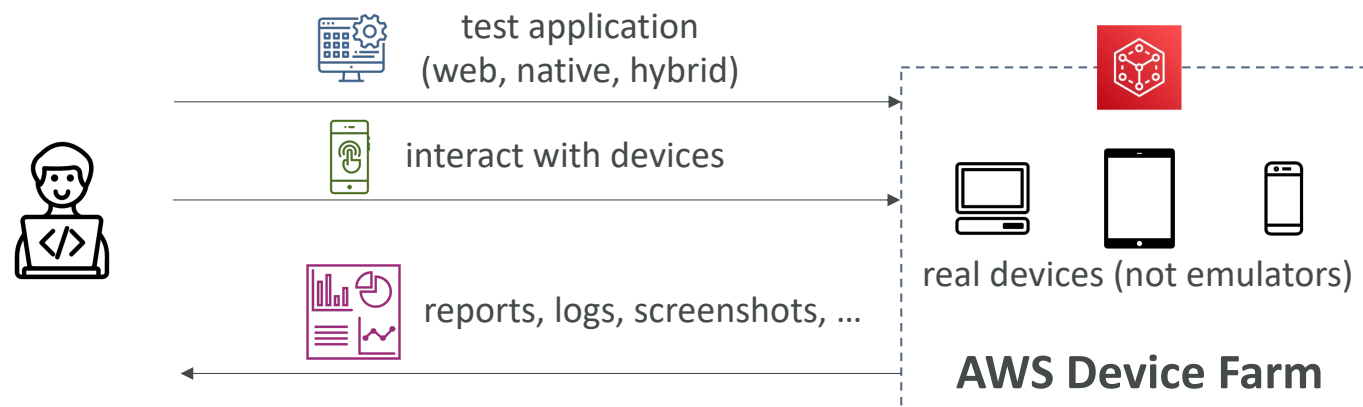
- A set of tools and services that helps you develop and deploy scalable full stack web and mobile applications
- Authentication, Storage, API (REST, GraphQL), CI/CD, PubSub, Analytics, AI/ML Predictions, Monitoring, Source Code from AWS, GitHub, etc...



AWS Device Farm



- Fully-managed service that tests your web and mobile apps against desktop browsers, real mobile devices, and tablets
- Run tests concurrently on multiple devices (speed up execution)
- Ability to configure device settings (GPS, language, Wi-Fi, Bluetooth, ...)



AWS Backup



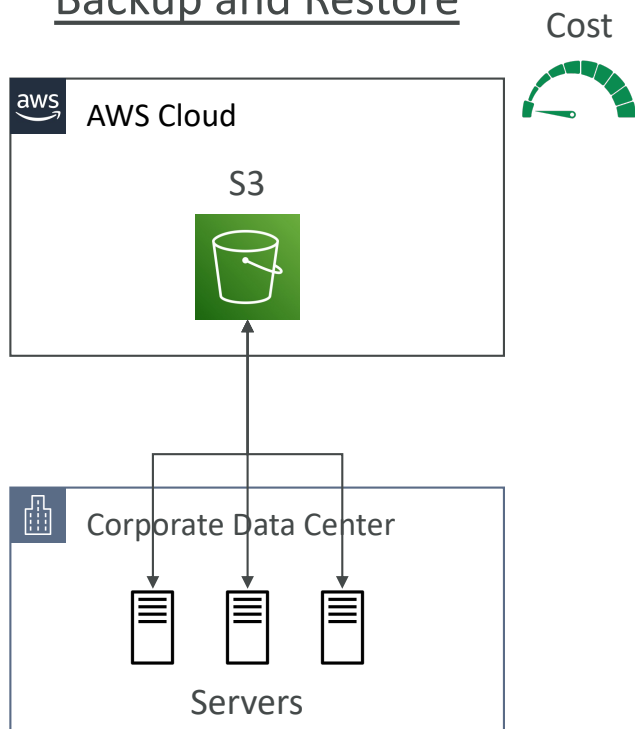
- Fully-managed service to centrally manage and automate backups across AWS services
- On-demand and scheduled backups
- Supports PITR (Point-in-time Recovery)
- Retention Periods, Lifecycle Management, Backup Policies, ...
- Cross-Region Backup
- Cross-Account Backup (using AWS Organizations)

AWS Backup

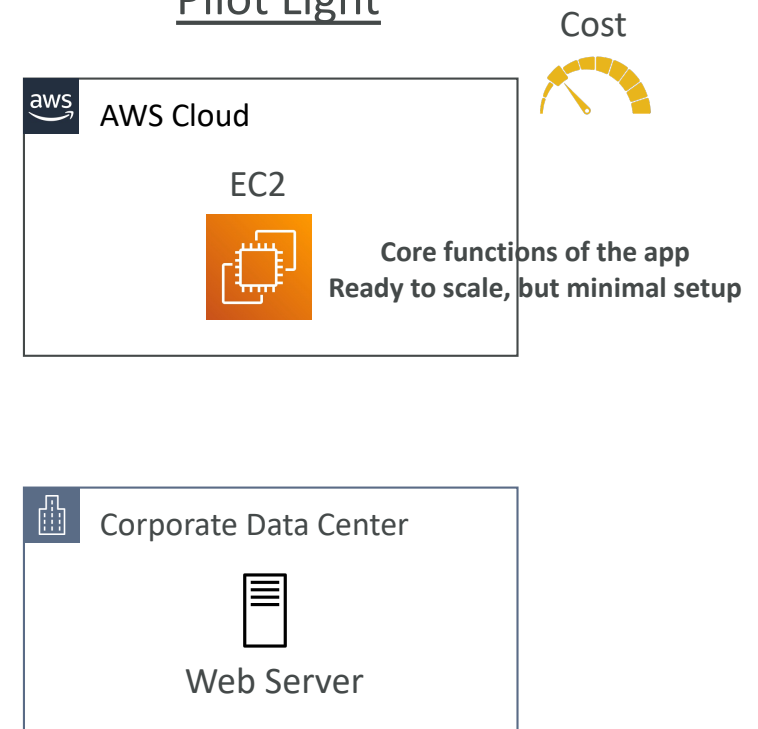


Disaster Recovery Strategies

Backup and Restore

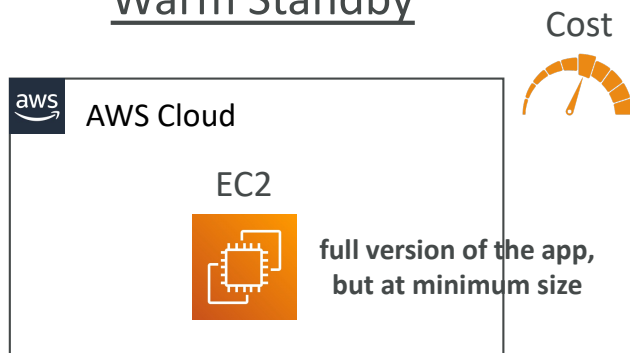


Pilot Light

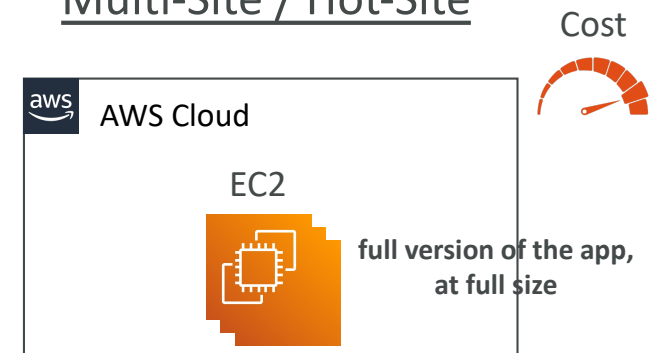


Disaster Recovery Strategies

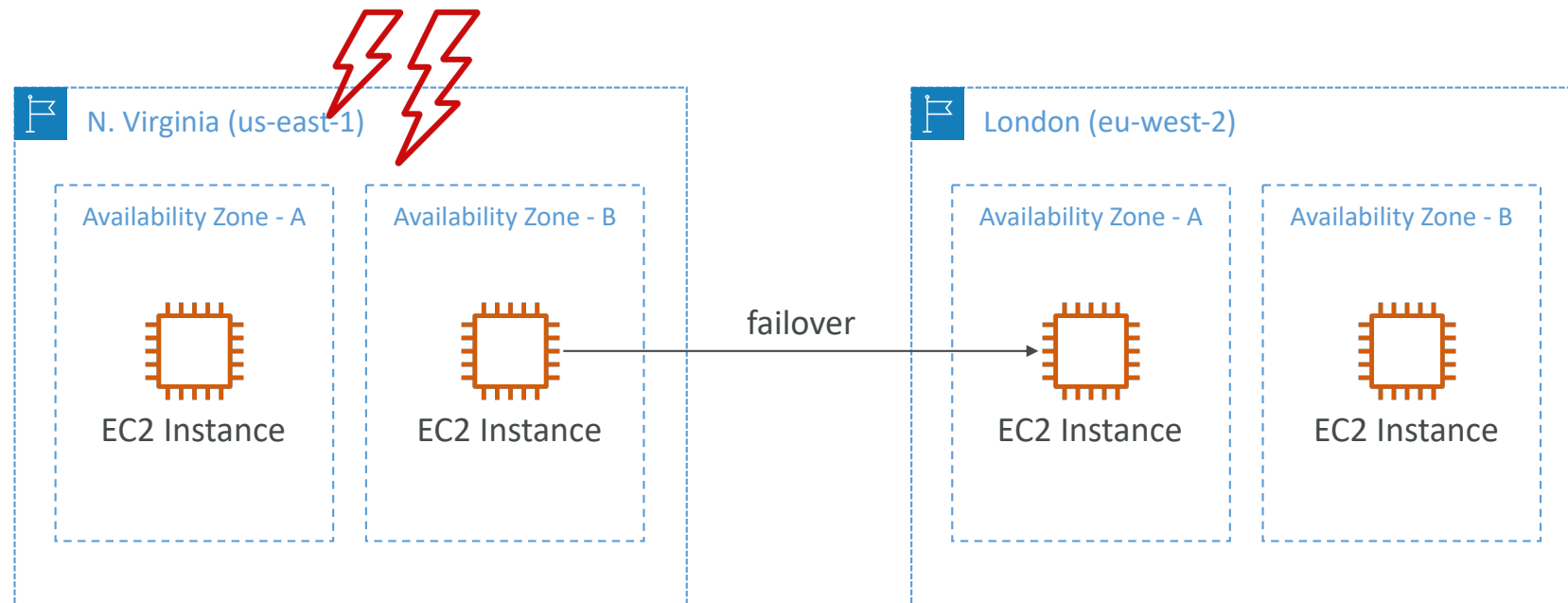
Warm Standby



Multi-Site / Hot-Site



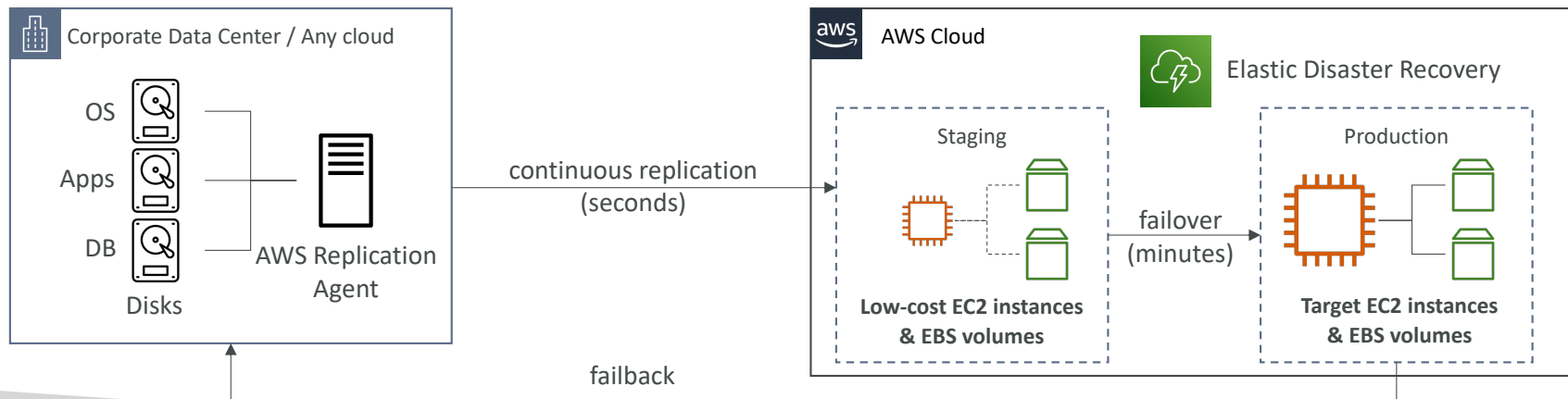
Typical DR Setup for Cloud Deployments



AWS Elastic Disaster Recovery (DRS)



- Used to be named “CloudEndure Disaster Recovery”
- Quickly and easily **recover** your physical, virtual, and cloud-based servers into AWS
- Example: protect your most critical databases (including Oracle, MySQL, and SQL Server), enterprise apps (SAP), protect your data from ransomware attacks, ...
- Continuous block-level replication for your servers

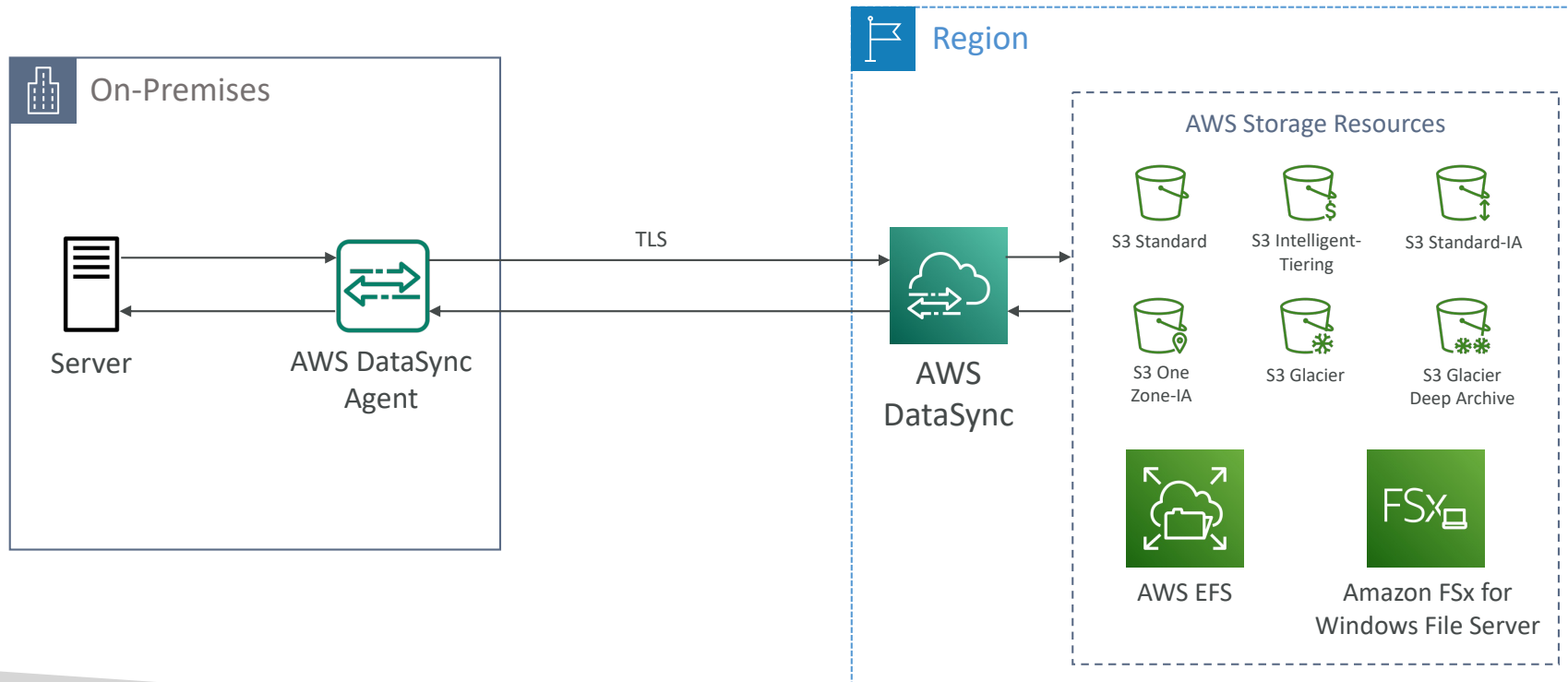


AWS DataSync



- Move large amount of data from on-premises to AWS
- Can synchronize to: Amazon S3 (any storage classes – including Glacier), Amazon EFS, Amazon FSx for Windows
- Replication tasks can be scheduled hourly, daily, weekly
- The replication tasks are incremental after the first full load

AWS DataSync

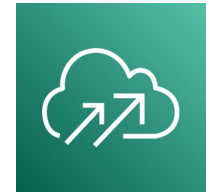


AWS Application Discovery Service

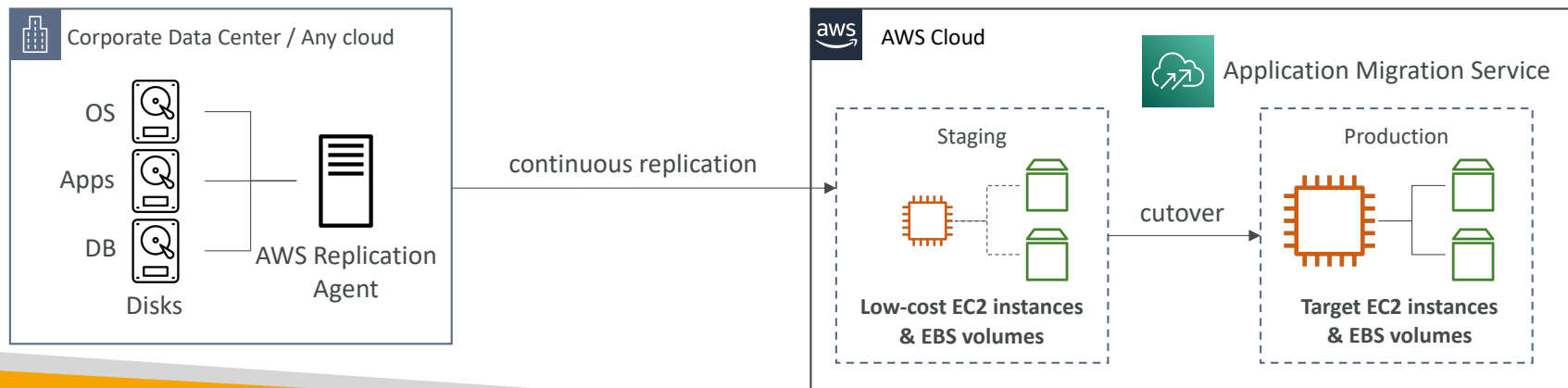


- Plan migration projects by gathering information about on-premises data centers
- Server utilization data and dependency mapping are important for migrations
- **Agentless Discovery (AWS Agentless Discovery Connector)**
 - VM inventory, configuration, and performance history such as CPU, memory, and disk usage
- **Agent-based Discovery (AWS Application Discovery Agent)**
 - System configuration, system performance, running processes, and details of the network connections between systems
- Resulting data can be viewed within AWS Migration Hub

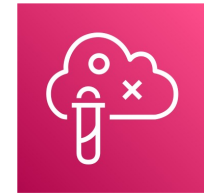
AWS Application Migration Service (MGN)



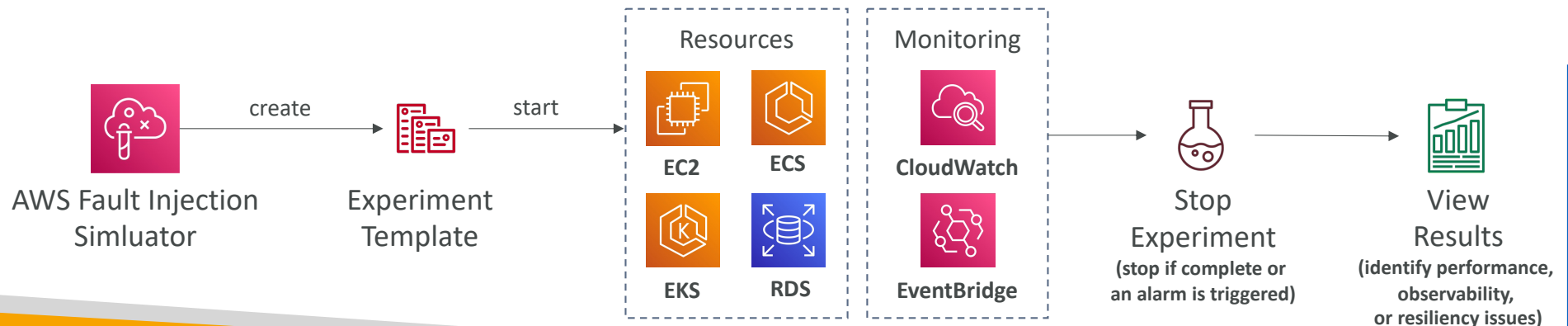
- The “AWS evolution” of CloudEndure Migration, replacing AWS Server Migration Service (SMS)
- Lift-and-shift (rehost) solution which simplify **migrating** applications to AWS
- Converts your physical, virtual, and cloud-based servers to run natively on AWS
- Supports wide range of platforms, Operating Systems, and databases
- Minimal downtime, reduced costs



AWS Fault Injection Simulator (FIS)

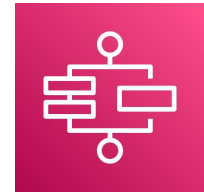


- A fully managed service for running fault injection experiments on AWS workloads
- Based on **Chaos Engineering** – stressing an application by creating disruptive events (e.g., sudden increase in CPU or memory), observing how the system responds, and implementing improvements
- Helps you uncover hidden bugs and performance bottlenecks
- Supports the following AWS services: EC2, ECS, EKS, RDS...
- Use pre-built templates that generate the desired disruptions

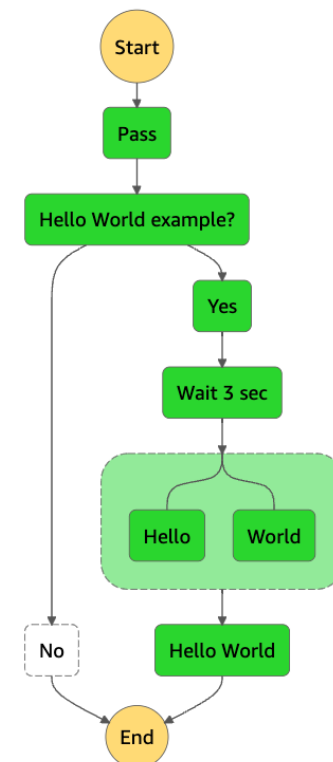


AWS Step Functions

- Build serverless visual workflow to orchestrate your Lambda functions
- **Features:** sequence, parallel, conditions, timeouts, error handling, ...
- Can integrate with EC2, ECS, On-premises servers, API Gateway, SQS queues, etc...
- Possibility of implementing human approval feature
- **Use cases:** order fulfillment, data processing, web applications, any workflow

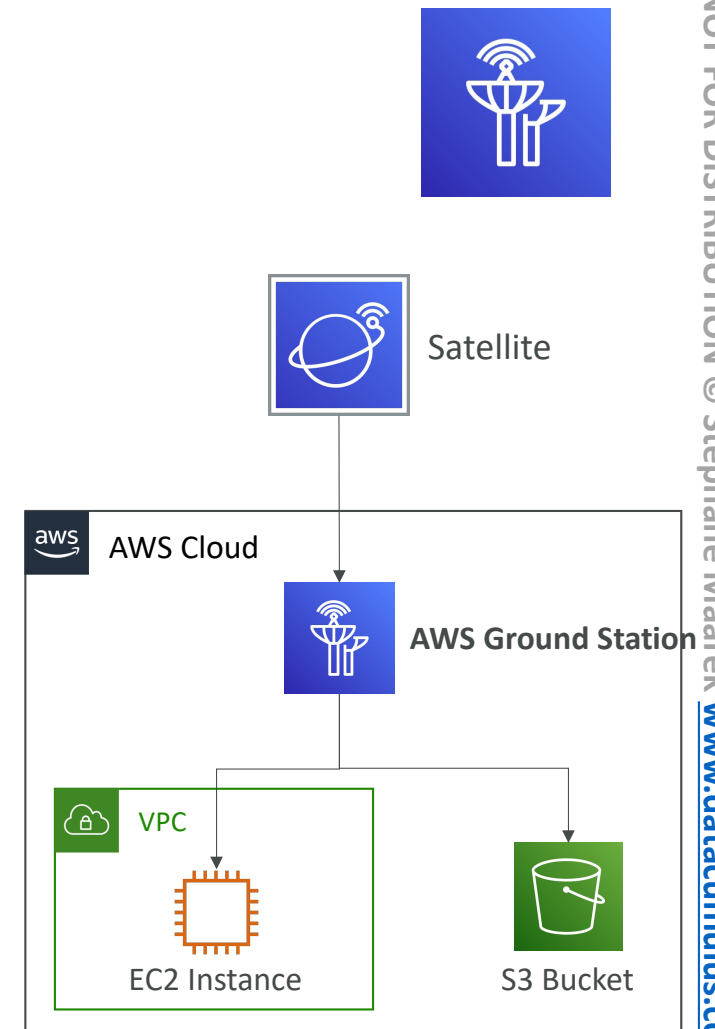


■ In Progress ■ Succeeded ■ Failed ■ Cancelled ■ Caught Error



AWS Ground Station

- Fully managed service that lets you control satellite communications, process data, and scale your satellite operations
- Provides a global network of satellite ground stations near AWS regions
- Allows you to download satellite data to your AWS VPC within seconds
- Send satellite data to S3 or EC2 instance
- Use cases: weather forecasting, surface imaging, communications, video broadcasts



Amazon Pinpoint

- Scalable **2-way (outbound/inbound)** marketing communications service
- Supports email, SMS, push, voice, and in-app messaging
- Ability to segment and personalize messages with the right content to customers
- Possibility to receive replies
- Scales to billions of messages per day
- Use cases: run campaigns by sending marketing, bulk, transactional SMS messages
- **Versus Amazon SNS or Amazon SES**
 - In SNS & SES you managed each message's audience, content, and delivery schedule
 - In Amazon Pinpoint, you create message templates, delivery schedules, highly-targeted segments, and full campaigns

