

Hybrid Cloud Customer Use Cases on AWS : Part 2

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Learning Objectives

- Transformation to cloud
- Customer's hybrid cloud strategy
- The hybrid cloud foundational layers and AWS Landing Zones
- Customer AWS hybrid cloud success stories for common hybrid cloud use cases

Transformation to cloud

Transform your business in the cloud

RE-HOST

"Lift and Shift"

AWS Migration Hub

VMware Cloud on AWS

QUICK WINS

RE-PLATFORM

"Lift and Reshape"

AWS Database Migration Service

AWS Marketplace

EASY OPTIMIZATIONS

RE-PROVISION

"Pick and Choose"

Fully managed services

SaaS

CLOUD BACK OFFICE

RE-ARCHITECT

"Rewrite and decouple"

Microservices

Serverless

MODERNIZE LEGACY

Customer's Hybrid Cloud Strategy

What customers are saying



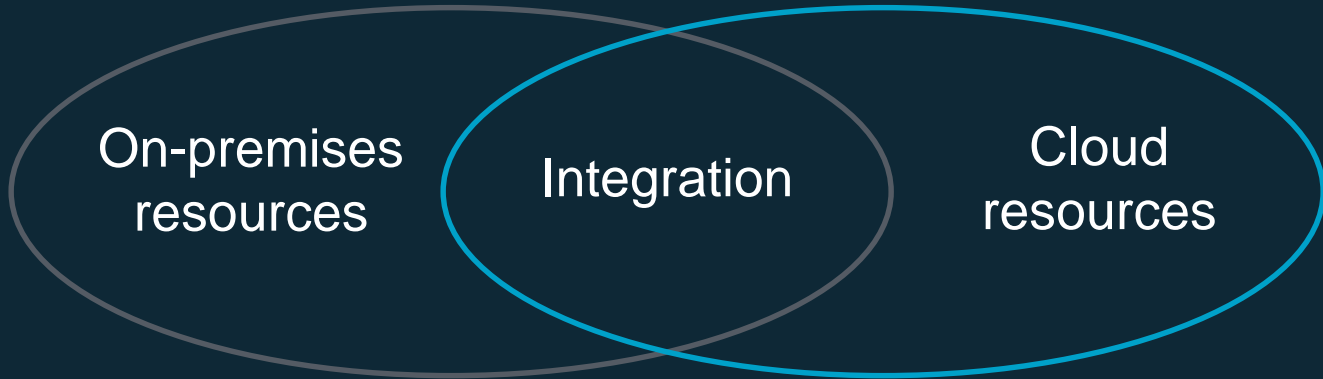
80% organizations committed to hybrid architectures

“Enterprise Adoption Driving Strong Growth of Public Cloud Infrastructure as a Service, According to IDC.”
Press release. IDC. July 14, 2016

83%

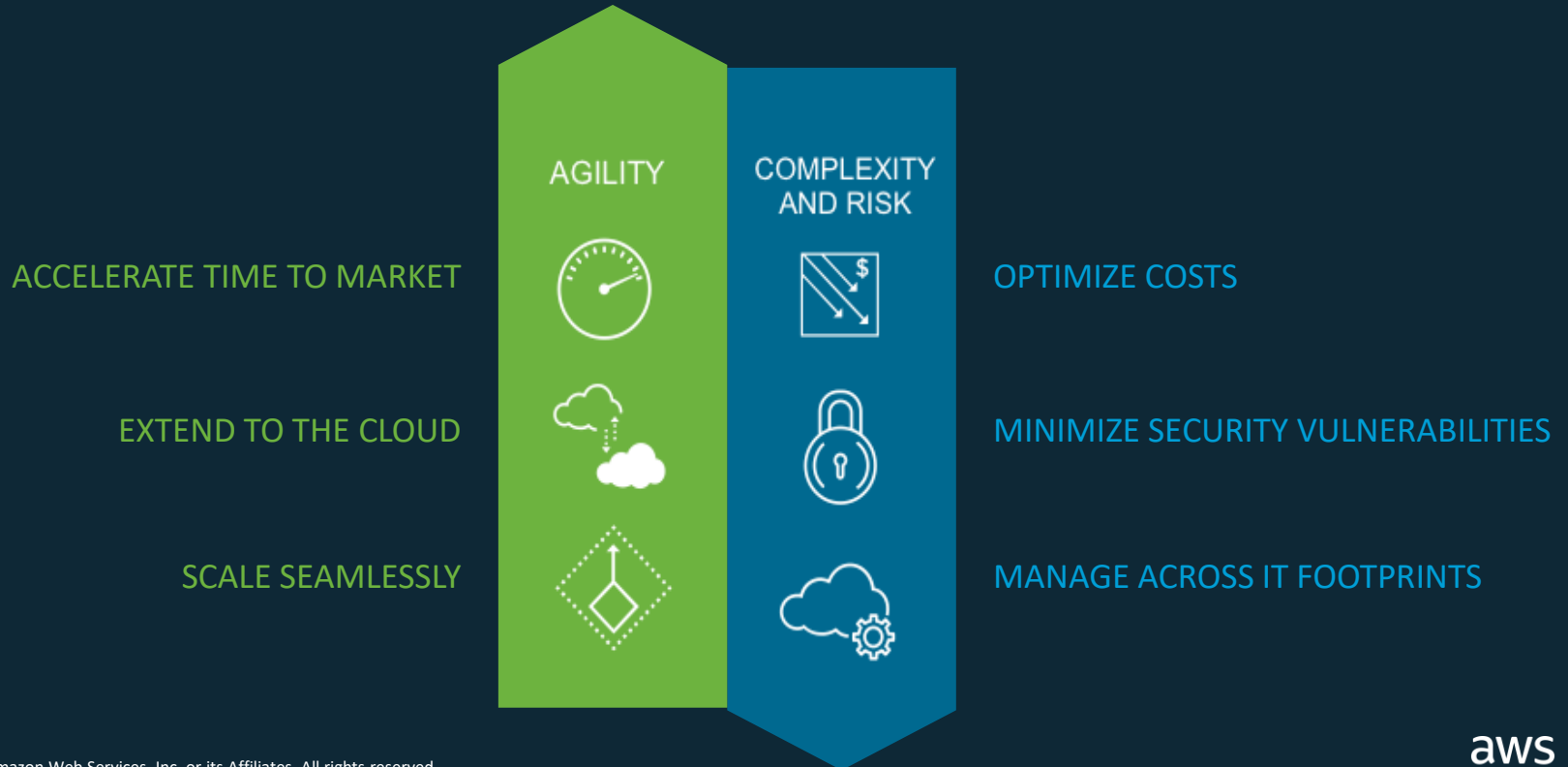
of workloads are virtualized today
(IDC)

Requirement for hybrid cloud



Customer opportunity with Hybrid Cloud

Increase IT agility while reducing complexity and risk

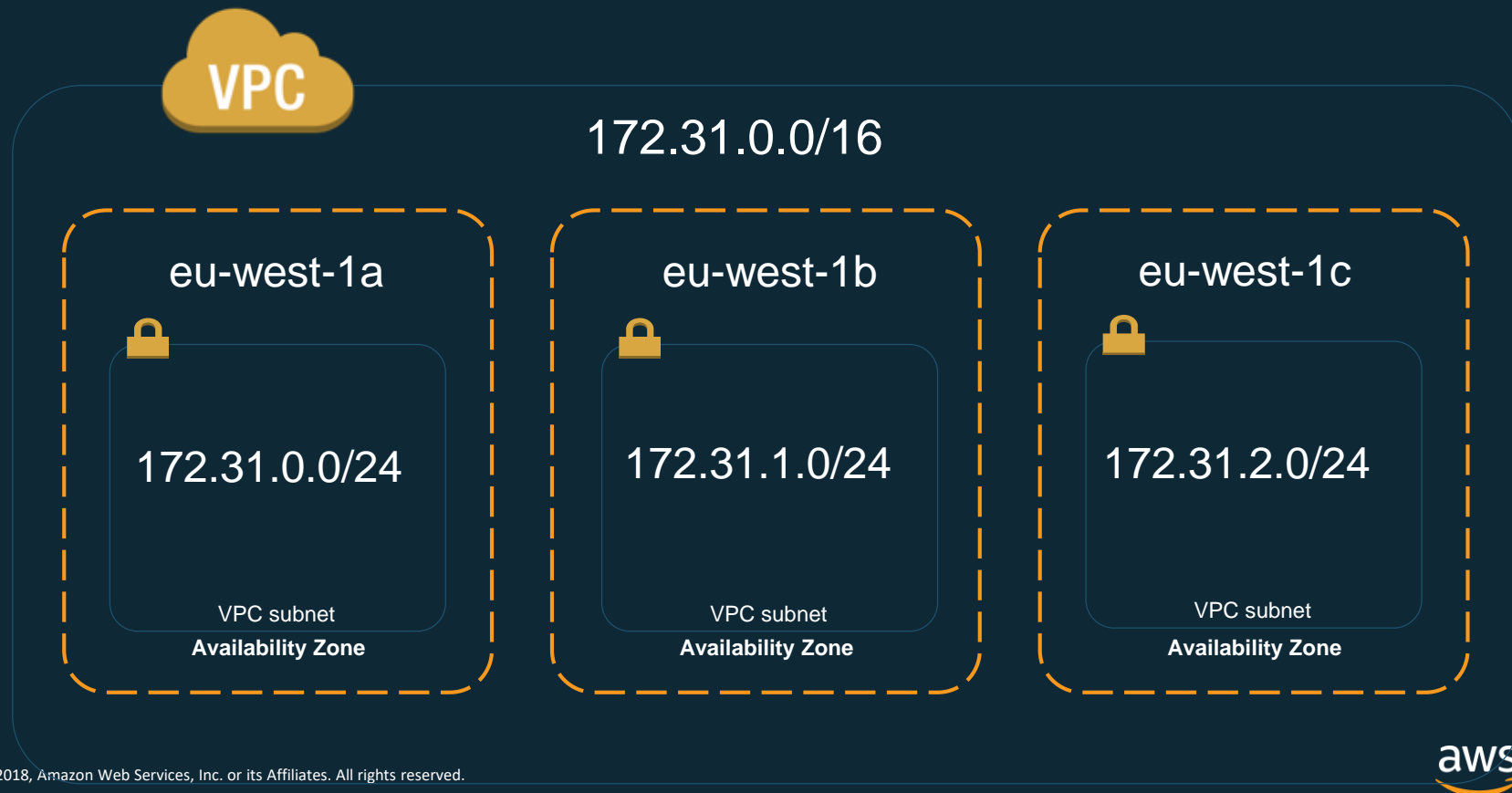


AWS Hybrid Cloud success stories

The Foundation

Integrated Network
Integrated Identity and Access
Data Integration

Integrated Network



Integrated Identity and Access Management



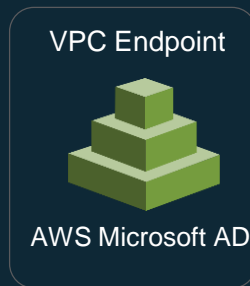
You manage

1



You manage

2



AWS manages

3

AWS Directory Service
for Microsoft Active Directory
also known as AWS Managed Microsoft AD

Data Integration



AWS
Storage
Gateway



Amazon
S3



Amazon
Glacier



Amazon
EBS
snapshots



AWS
Snowball



Amazon
RDS



Amazon
MQ

Gateway Appliance

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AWS Storage Gateway pre-loaded on a Dell EMC PowerEdge server

by [Dell](#)

[Be the first to review this item](#)

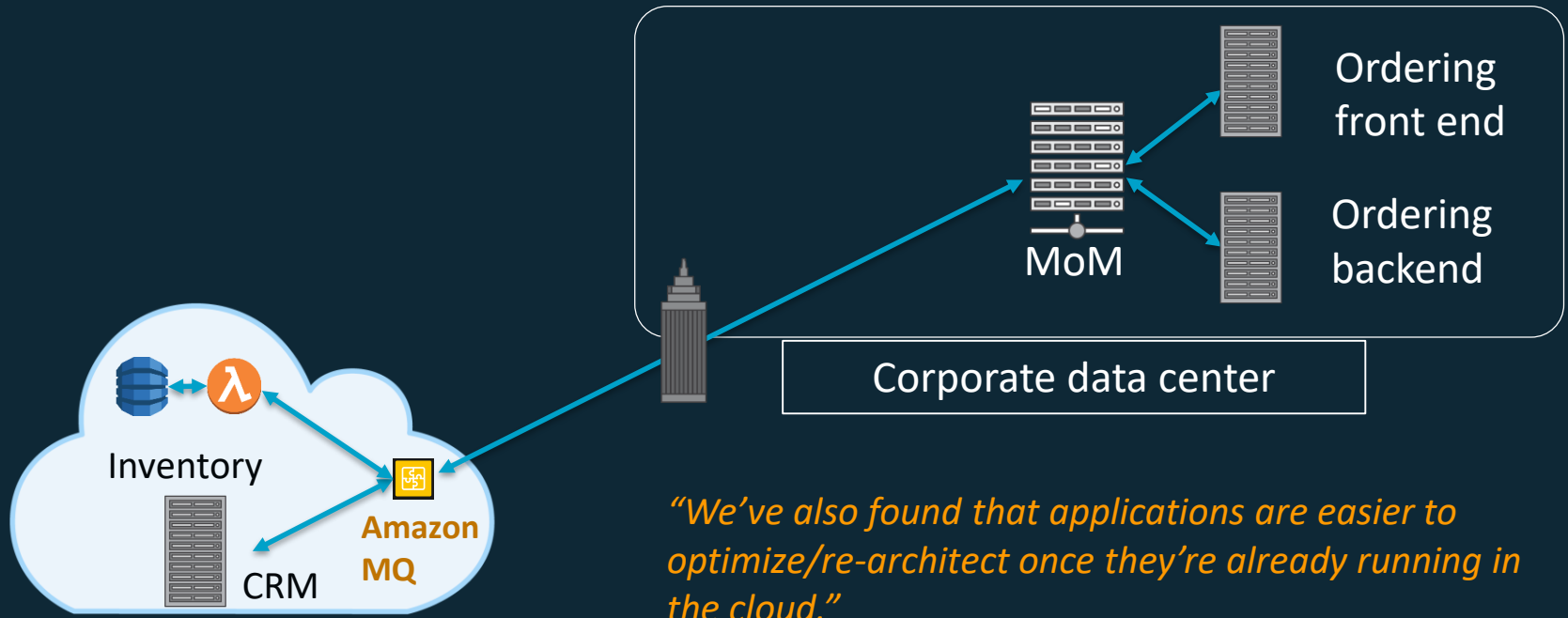
Price: **\$12,250.50** ✓prime

Note: Signature required upon delivery due to high value of this item. [Details](#) ▾

- Dell EMC PowerEdge R640XL server, pre-loaded with AWS Storage Gateway software
- AWS Storage Gateway on a packaged hardware appliance further simplifies procurement, deployment, and management of hybrid cloud storage for remote office and departmental IT needs.
- Use for hybrid cloud backup, archiving and DR, tiered storage, application file storage, and data processing workflows
- Supported by AWS and Dell; Standard 3 year warranty

Amazon MQ **NEW!**

Data integration, delivering new services, data center extension



"We've also found that applications are easier to optimize/re-architect once they're already running in the cloud."

Hybrid Cloud Landing Zone



The AWS Landing Zone solution

An **easy-to-deploy solution** that automates the setup of new AWS environments

Based on AWS best practices and recommendations



Initial security and governance controls

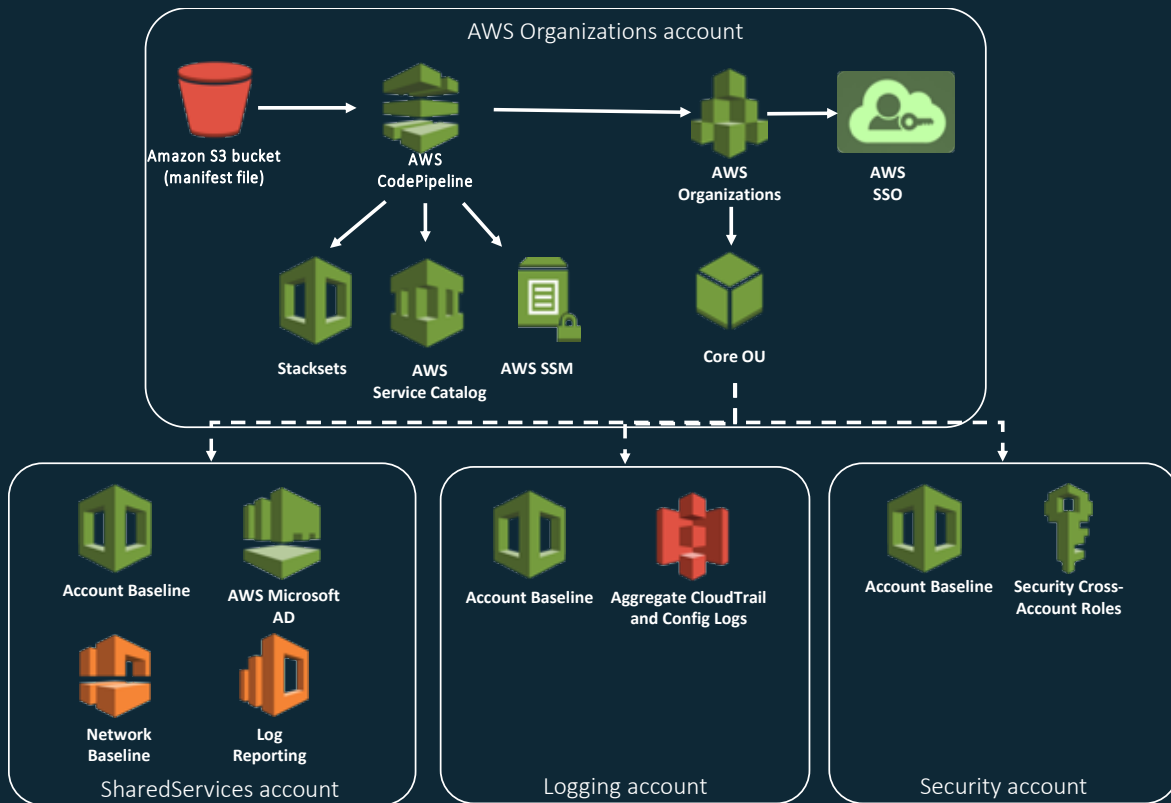


Baseline accounts and account vending machine



Automated deployment

AWS Landing Zone structure



Organizations account:

Account Provisioning
Account Access (SSO)

Shared Services account:

Active Directory
Log Analytics

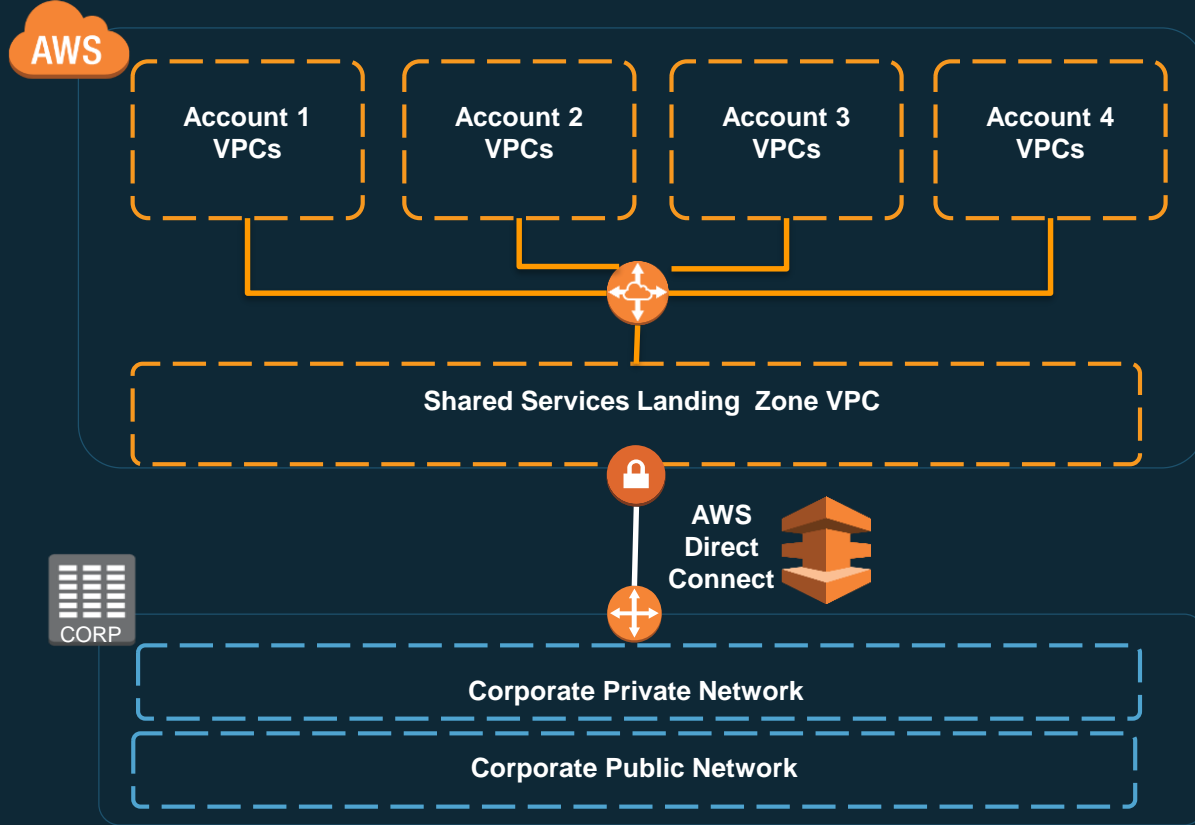
Logging account:

CloudTrail/Config logs

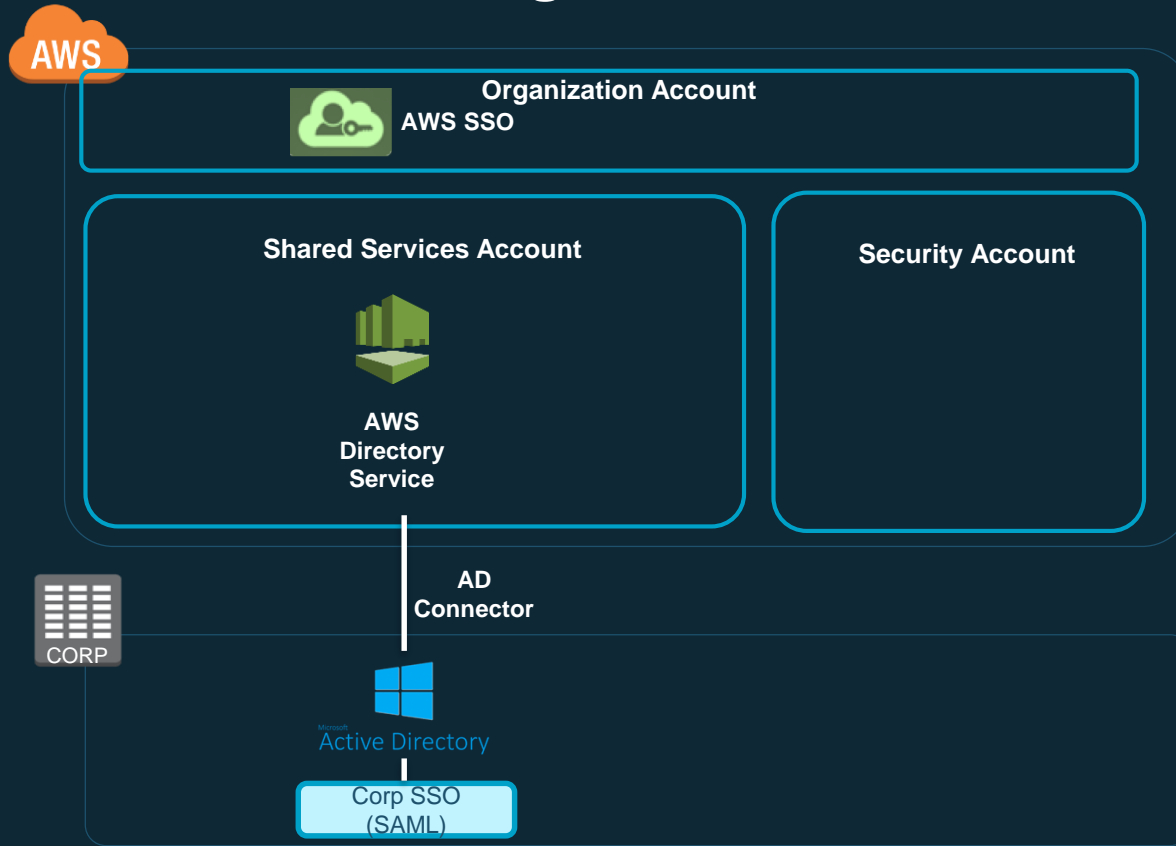
Security account:

Audit/Break-glass

AWS Hybrid Cloud Landing Zone - Network



AWS Hybrid Cloud Landing Zone – IAM



Use Cases and Customer Successes

Integrated Resource and Deployment Management

Cloud Bursting

Data Center Extension

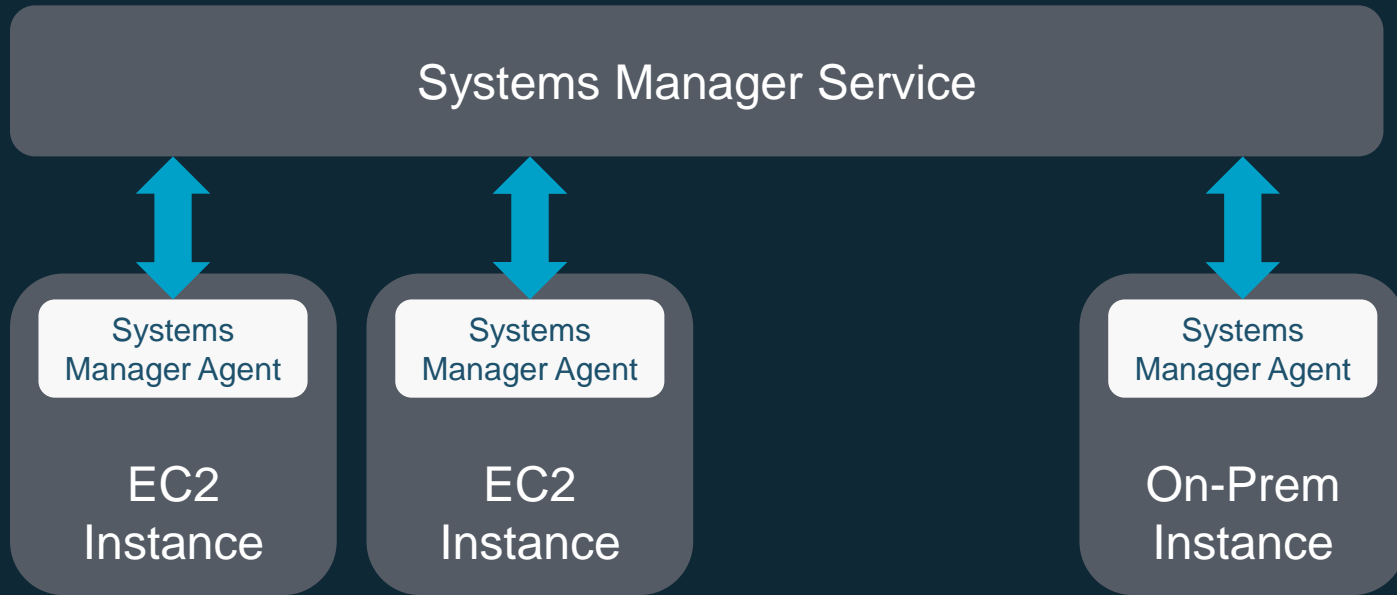


Integrated Resource and Deployment Management

Delivery of new services through infrastructure and application
automation



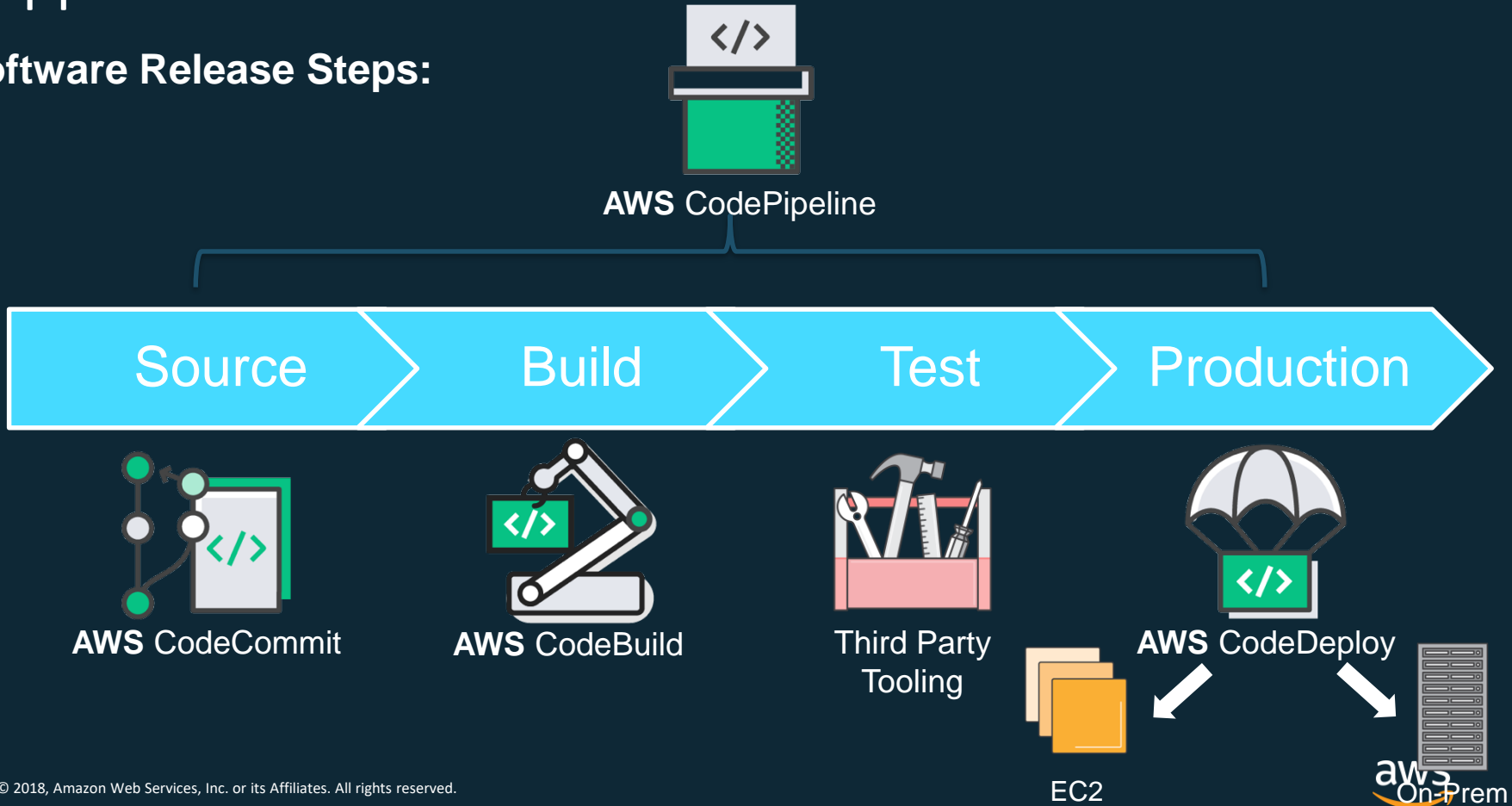
Infrastructure Automation



Manage your Amazon EC2 and on-premises instances

Application Automation

Software Release Steps:

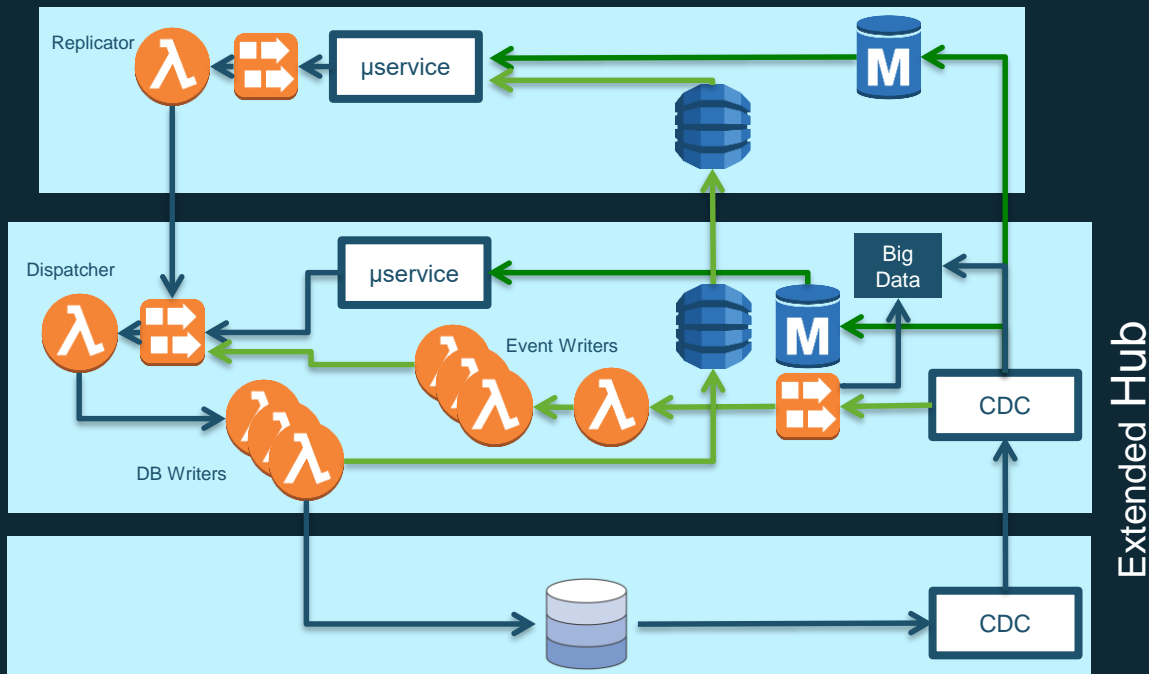


Building blocks for serverless applications

<p>Compute</p> <ul style="list-style-type: none"> AWS Lambda AWS Lambda@Edge	<p>Storage</p> <ul style="list-style-type: none"> Amazon S3	<p>Database</p> <ul style="list-style-type: none"> Amazon DynamoDB
<p>API Proxy and GraphQL</p> <ul style="list-style-type: none"> Amazon API Gateway AWS AppSync	<p>Messaging and Queues</p> <ul style="list-style-type: none"> Amazon SQS Amazon SNS	<p>Analytics</p> <ul style="list-style-type: none"> Amazon Kinesis Amazon Athena
<p>Orchestration and State Management</p> <ul style="list-style-type: none"> AWS Step Functions	<p>Monitoring and Debugging</p> <ul style="list-style-type: none"> AWS X-Ray	<p>User Management and IdP</p> <ul style="list-style-type: none"> Amazon Cognito

Customer case study: Vanguard

Delivery of new services and applications

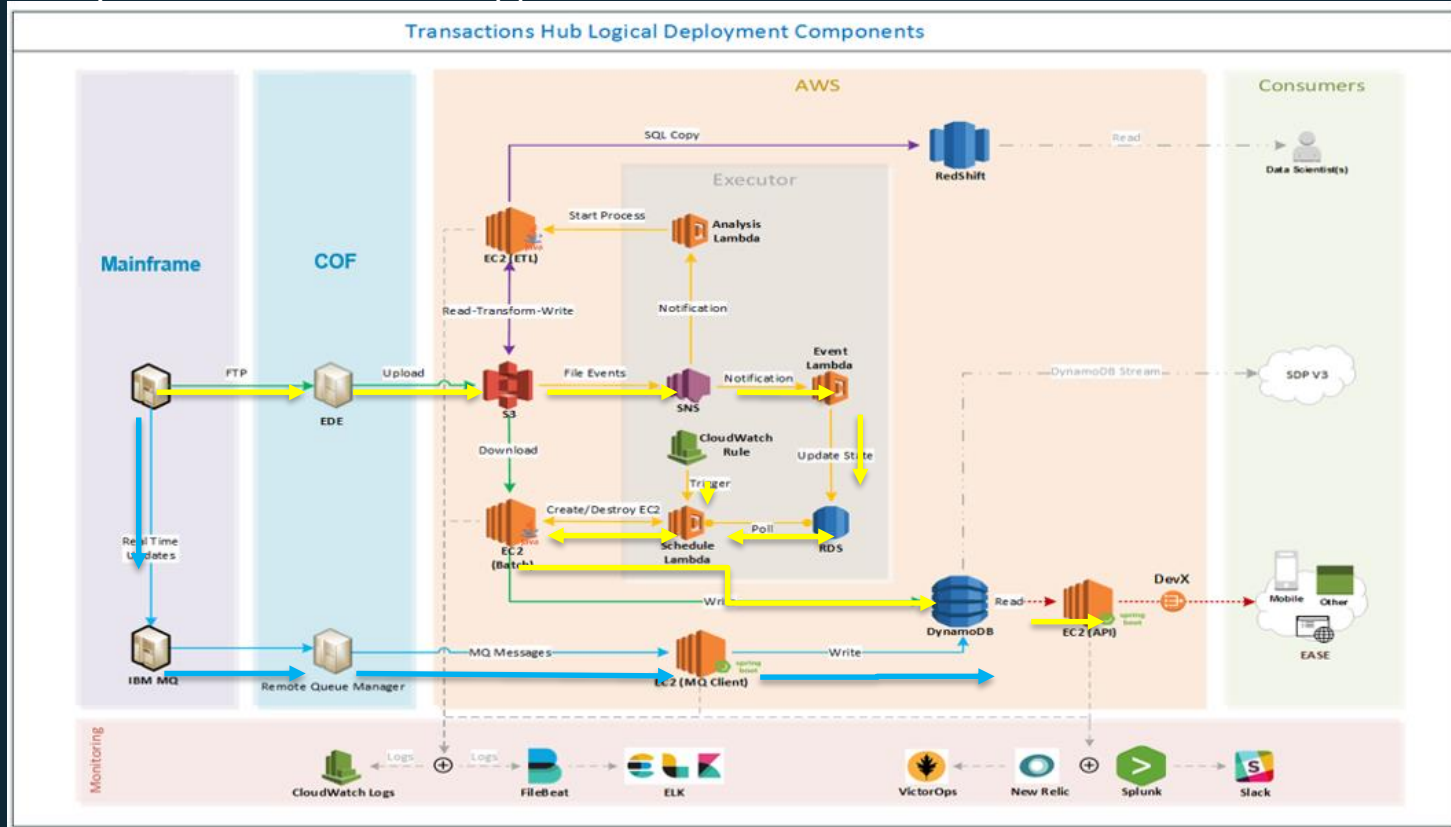


Features:

- Replicate data to the cloud
- Refactor the monolithic apps so web pages make AJAX calls to microservices
- Migrate batch processes to the cloud, using data in the cloud
- Gold copy in cloud—Reverse replication
- Treat mainframe record keeping systems as bounded contexts
 - Integrate with them from the cloud

Customer case study: Capital One

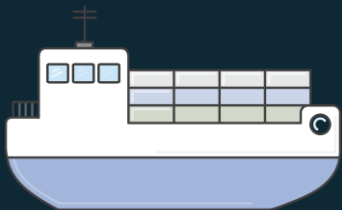
Delivery of new services and applications



Integrated Devices and Edge Systems



Snowball Edge use cases



Offline Staging



IoT



Local Tiering and Compute



Local Transformation

Moving to the Edge



Things

Devices
Sense & Act



AWS
Greengrass



Cloud
Storage & Compute



AWS IoT
Core



AWS IoT Device
Management



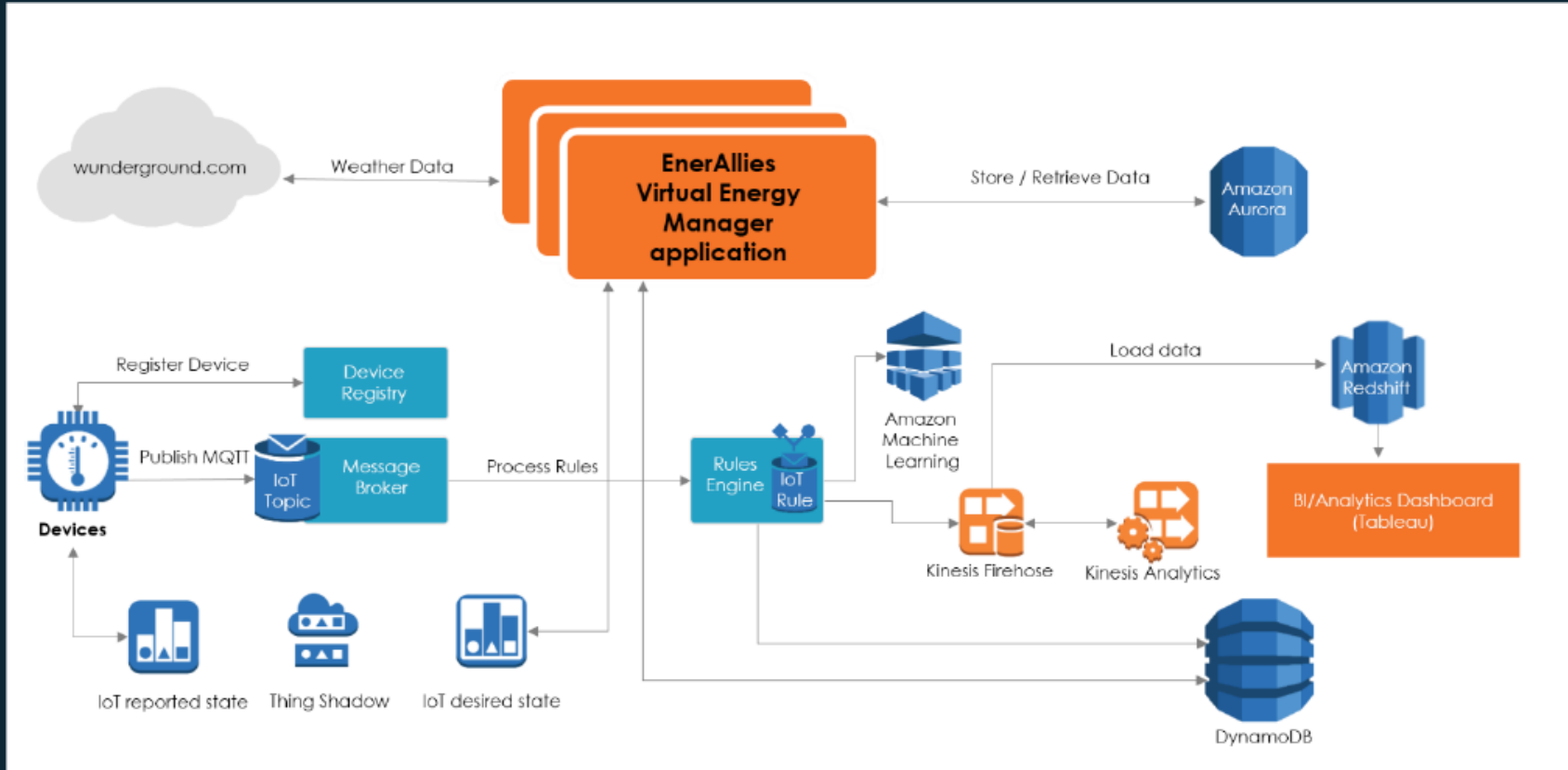
Intelligence
Insights & Logic → Action



AWS IoT
Analytics

Customer case study: EnerAllies

Moving to the Edge

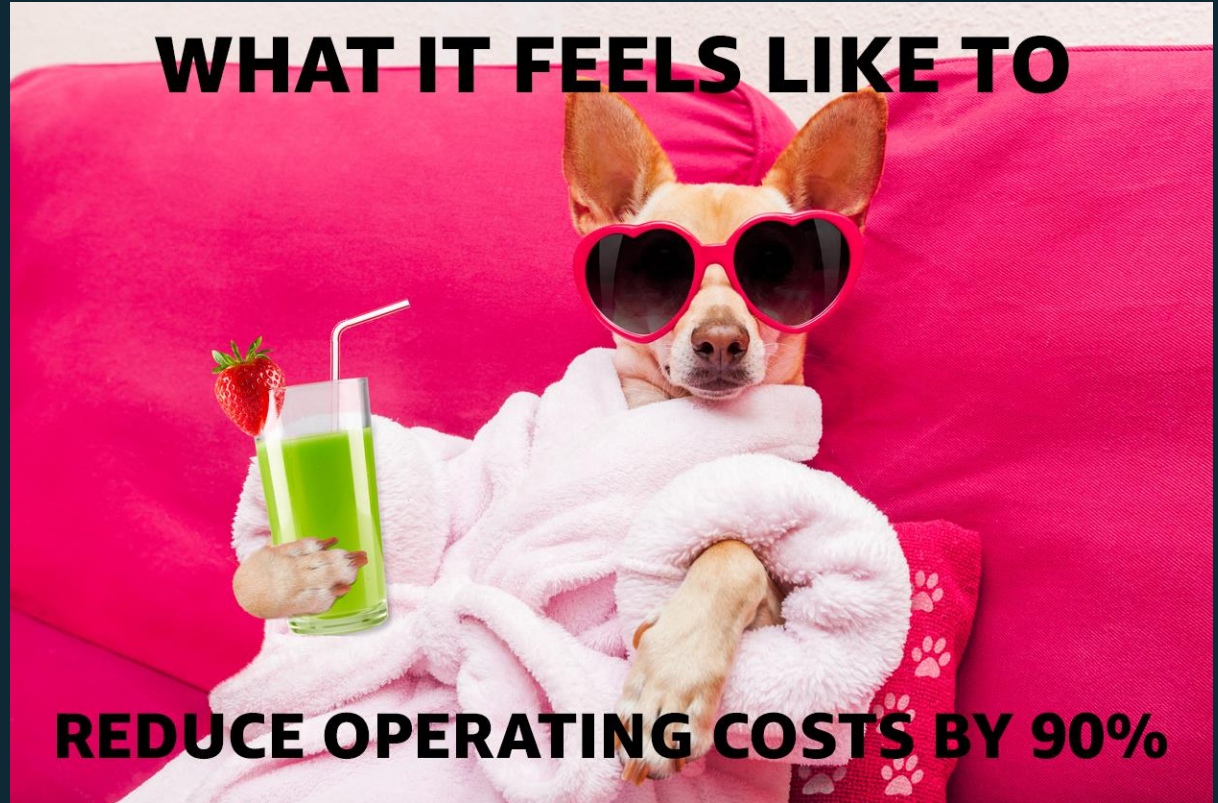


Cloud Bursting



EC2 Spot is legit

Spare capacity at scale



Customer case study: FuseFX

Why Cloud Bursting using Spot

Physical Server Rental

- Limited by Power / Cooling Capacity
- 24 to 48 Hour Setup time
- Over spec to be safe
- Hard to return

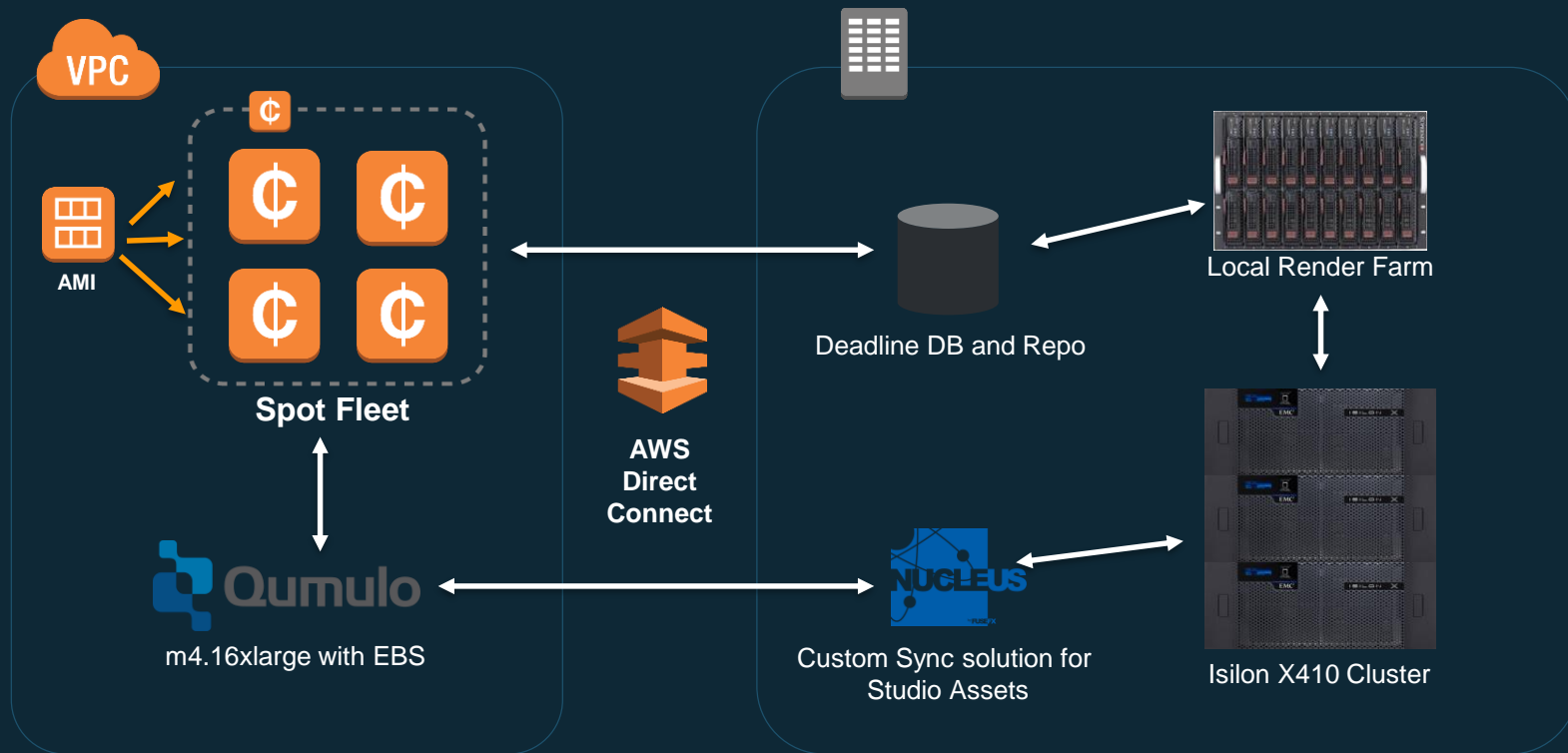
Cloud Bursting

- Unlimited capacity
- 10 min setup time
- Pay for what you use
- Flexible Machine Specs
- Automated Termination
- Leverage SPOT Instances for Inexpensive Compute usage

https://youtu.be/ThS9JZDCG_8

Customer case study: FuseFX

Cloud Bursting using Spot

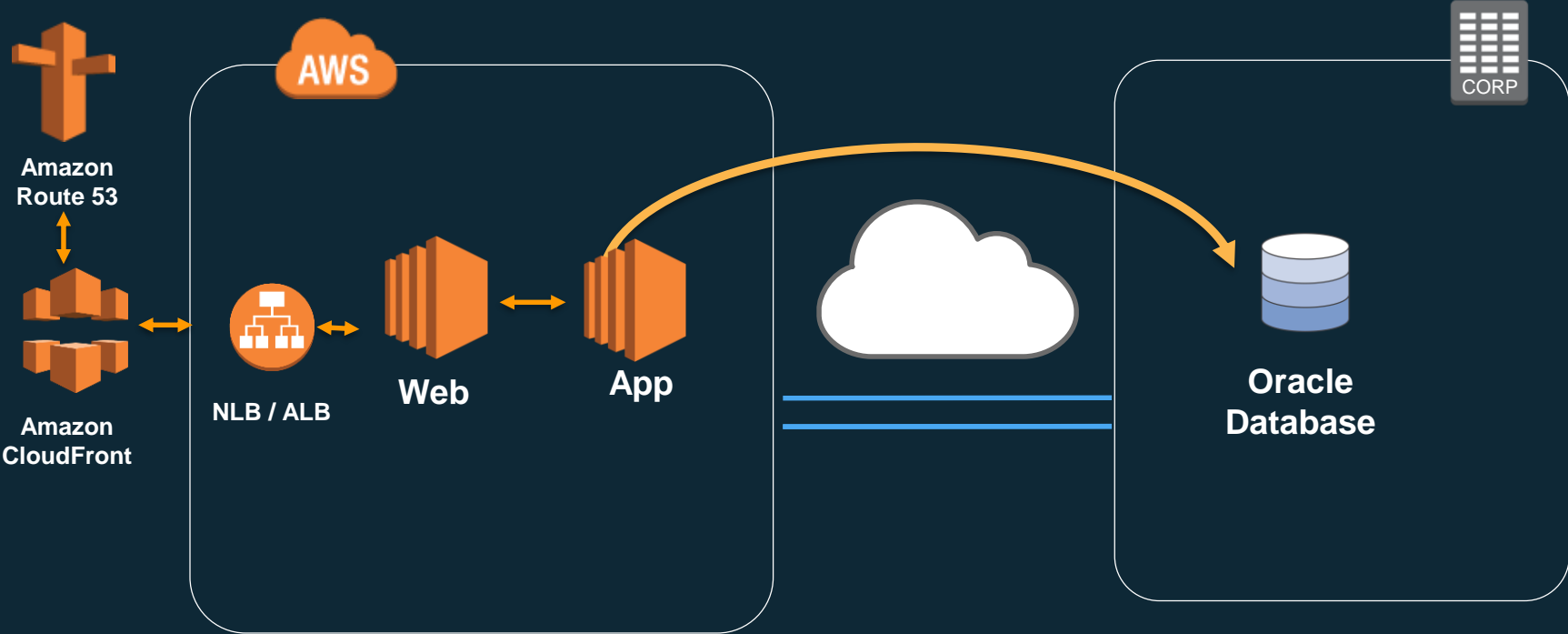


Data center extension



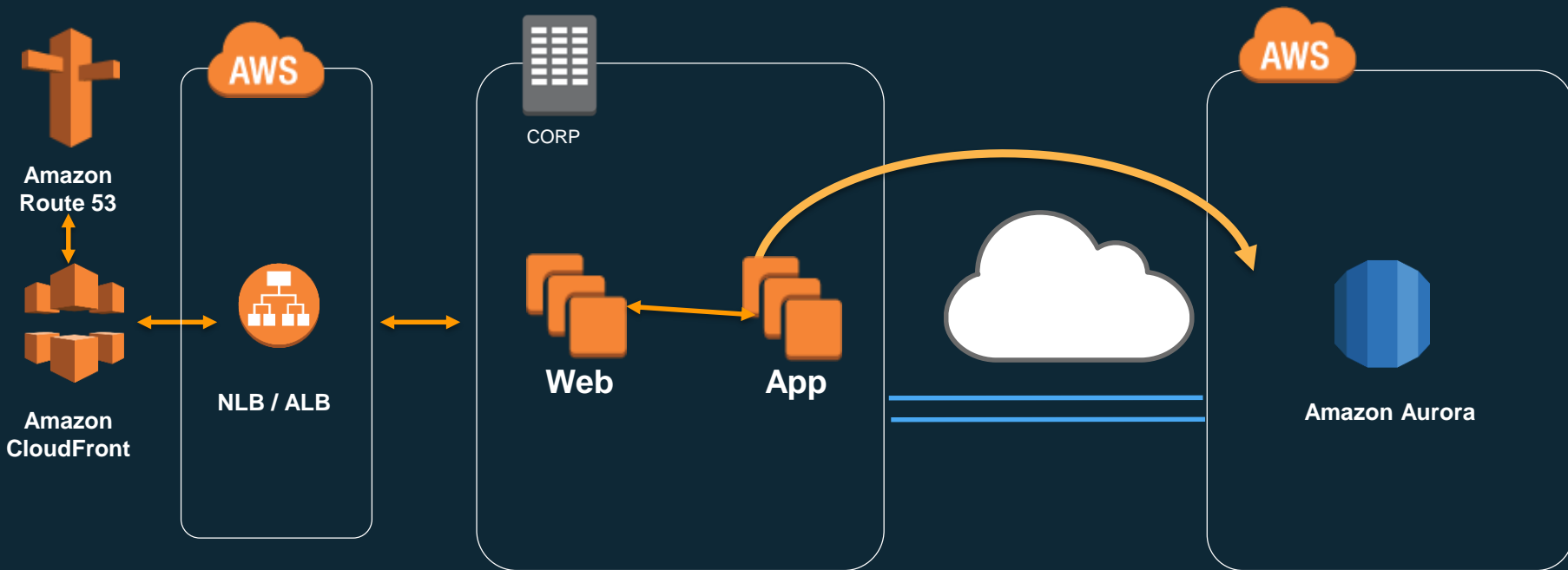
Data Center Extension

Pattern 1: Application Tier on AWS



Data Center Extension

Pattern 2: Database Tier on AWS

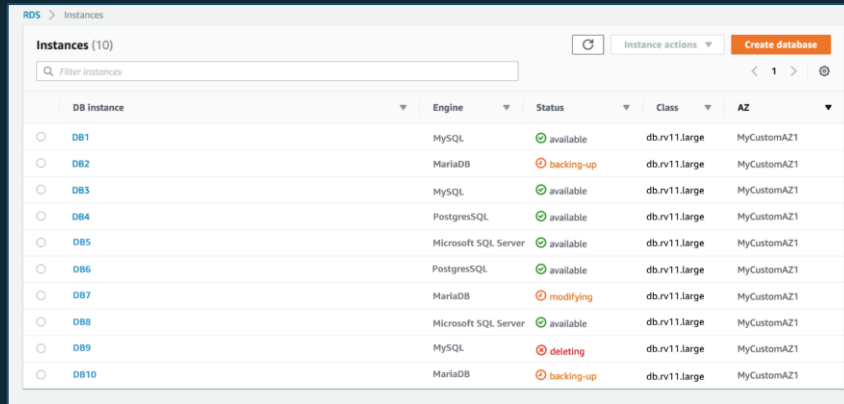


AWS extension into your data center

Amazon RDS on VMware

NEW!

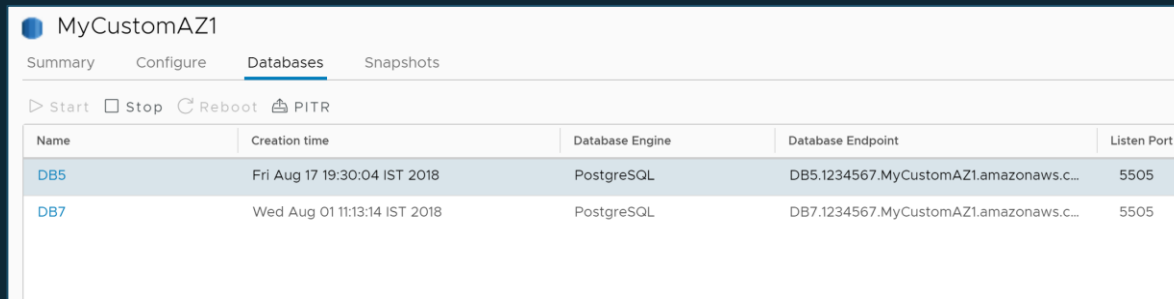
User Experience



The screenshot shows the AWS Management Console 'Instances' page for RDS. It displays a table with 10 instances, each with a unique ID (DB1-DB10), engine type, status, class, and availability zone. The status column shows various states like 'available', 'backing-up', 'modifying', and 'deleting'.

DB instance	Engine	Status	Class	AZ
DB1	MySQL	available	db.rv11.large	MyCustomAZ1
DB2	MariaDB	backing-up	db.rv11.large	MyCustomAZ1
DB3	MySQL	available	db.rv11.large	MyCustomAZ1
DB4	PostgreSQL	available	db.rv11.large	MyCustomAZ1
DB5	Microsoft SQL Server	available	db.rv11.large	MyCustomAZ1
DB6	PostgreSQL	available	db.rv11.large	MyCustomAZ1
DB7	MariaDB	modifying	db.rv11.large	MyCustomAZ1
DB8	Microsoft SQL Server	available	db.rv11.large	MyCustomAZ1
DB9	MySQL	deleting	db.rv11.large	MyCustomAZ1
DB10	MariaDB	backing-up	db.rv11.large	MyCustomAZ1

- **Single Pane of Glass** for management of DB Fleets
- Integration with vSphere Management resources: **vCenter Plug-In**
- **Cloud Monitoring** through AWS Cloud Watch

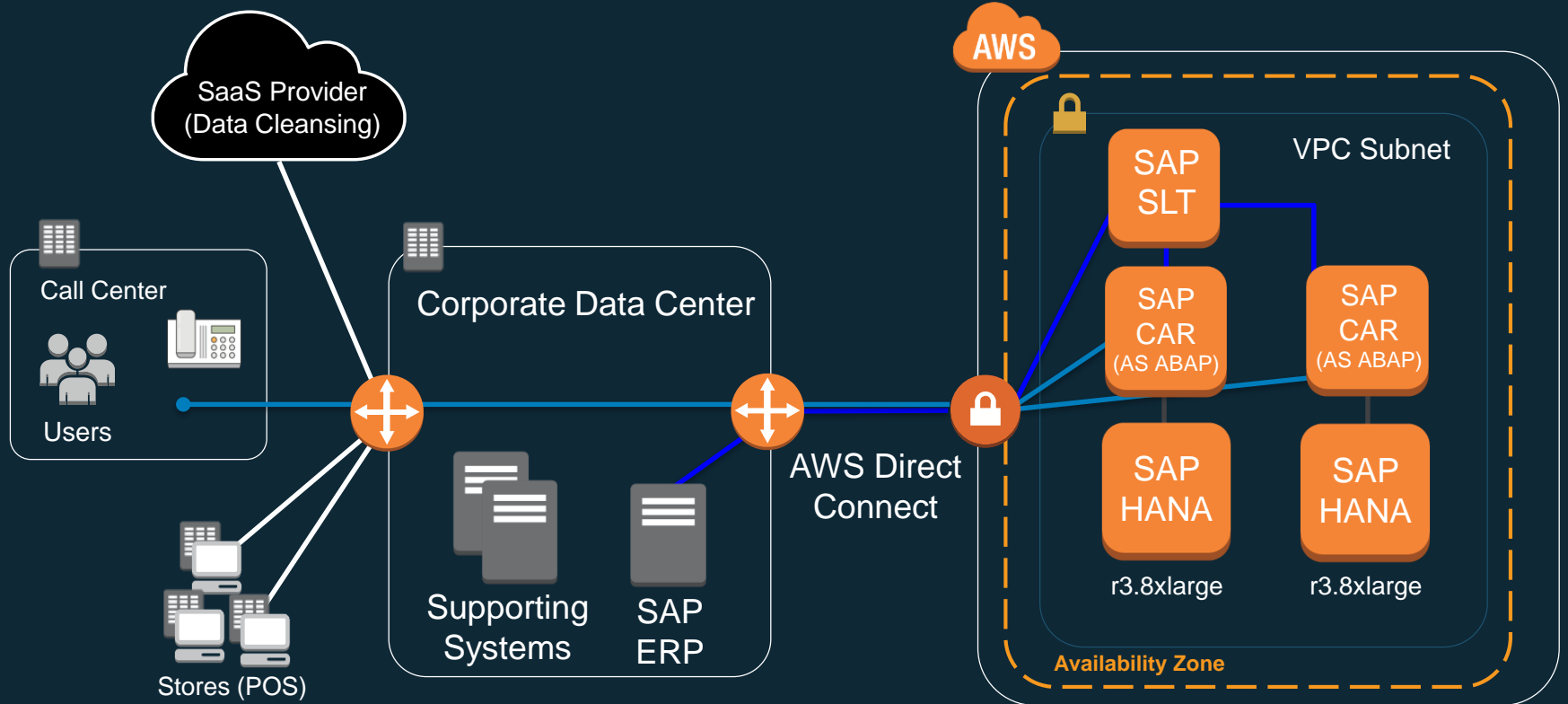


The screenshot shows the 'Databases' tab for a specific instance named 'MyCustomAZ1'. It displays a table with columns for Name, Creation time, Database Engine, Database Endpoint, and Listen Port. Two databases are listed: DB5 and DB7.

Name	Creation time	Database Engine	Database Endpoint	Listen Port
DB5	Fri Aug 17 19:30:04 IST 2018	PostgreSQL	DB5.1234567.MyCustomAZ1.amazonaws.c...	5505
DB7	Wed Aug 01 11:13:14 IST 2018	PostgreSQL	DB7.1234567.MyCustomAZ1.amazonaws.c...	5505

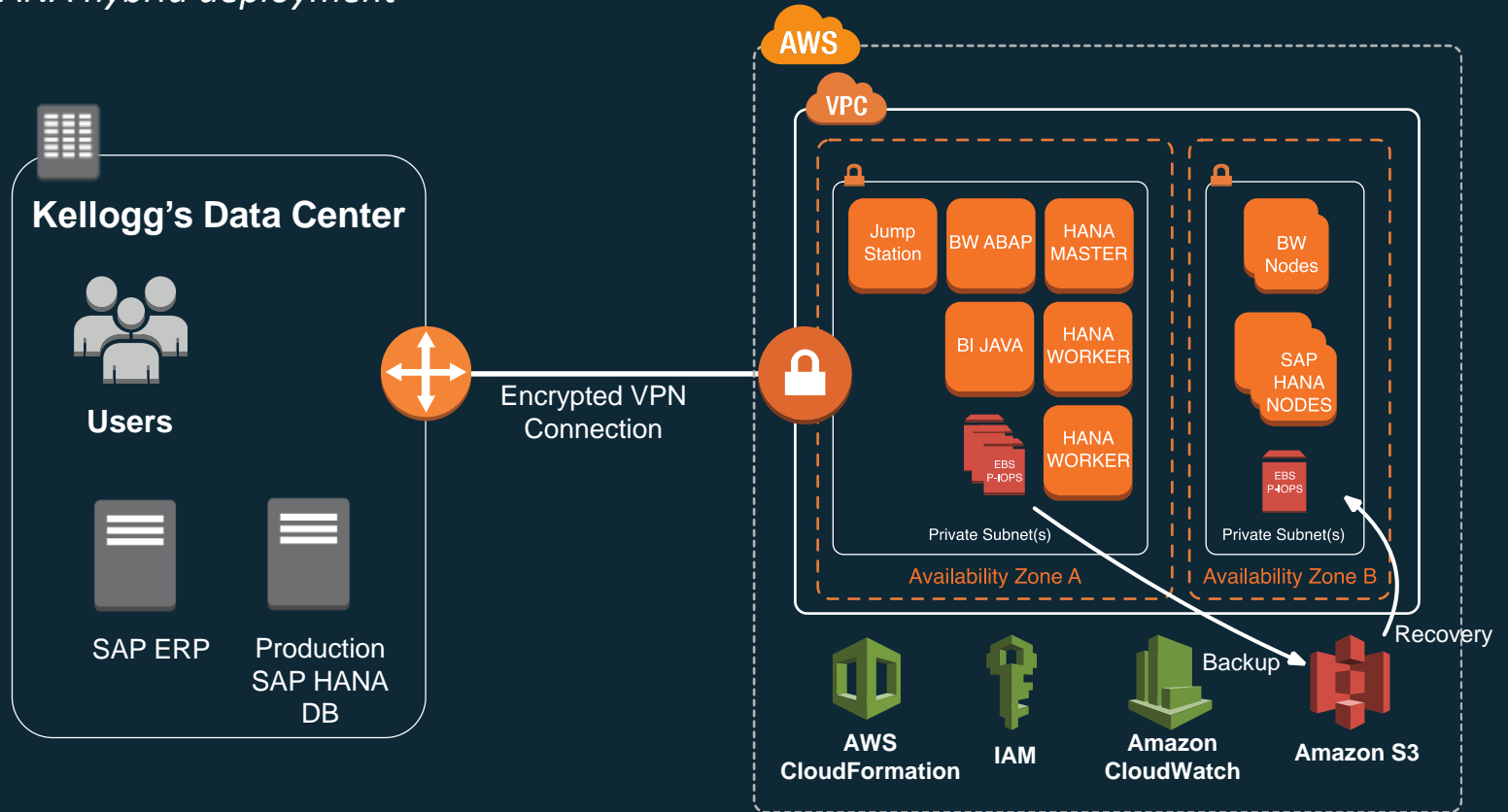
Customer case study: Brooks Brothers

SAP Customer Contact Center application landscape



Customer case study: Kellogg's

SAP HANA hybrid deployment



Thank You!

Hybrid Cloud on AWS -

<https://aws.amazon.com/enterprise/hybrid/>

Enterprise Computing on AWS -

<https://aws.amazon.com/enterprise/>

Cloud Native Architectures book released on August 31st, 2018 -

<https://tinyurl.com/yczo3goa>