

Module 5

AWS Elasticity and Management Tools

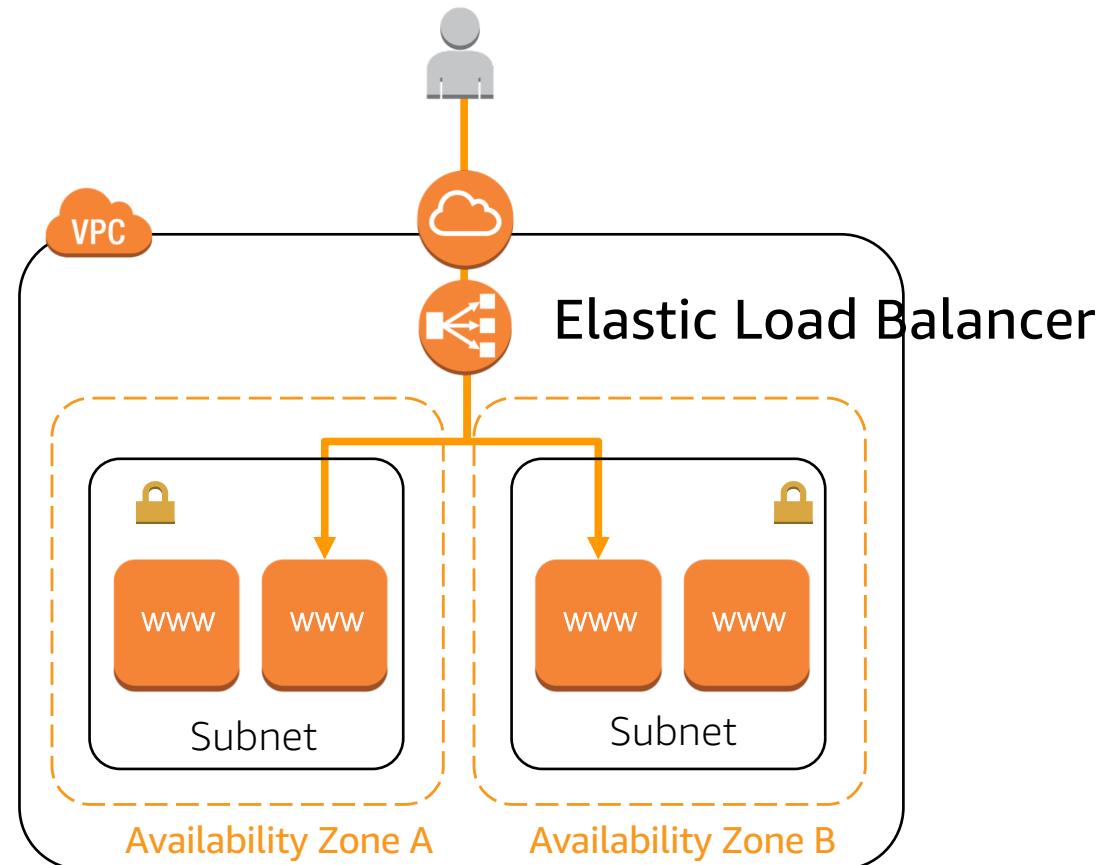
V I R T U A L

AWSOME DAY

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.



How to choose between Availability Zone



Elastic Load Balancing



Elastic Load
Balancing

- **Distributes** traffic across multiple EC2 instances, in multiple Availability Zones
- Supports **health checks** to detect unhealthy Amazon EC2 instances
- Supports the **routing and load balancing** of HTTP, HTTPS, SSL, and TCP traffic to Amazon EC2 instances

ELB Features

Automatically distribute traffic across multiple targets



High availability



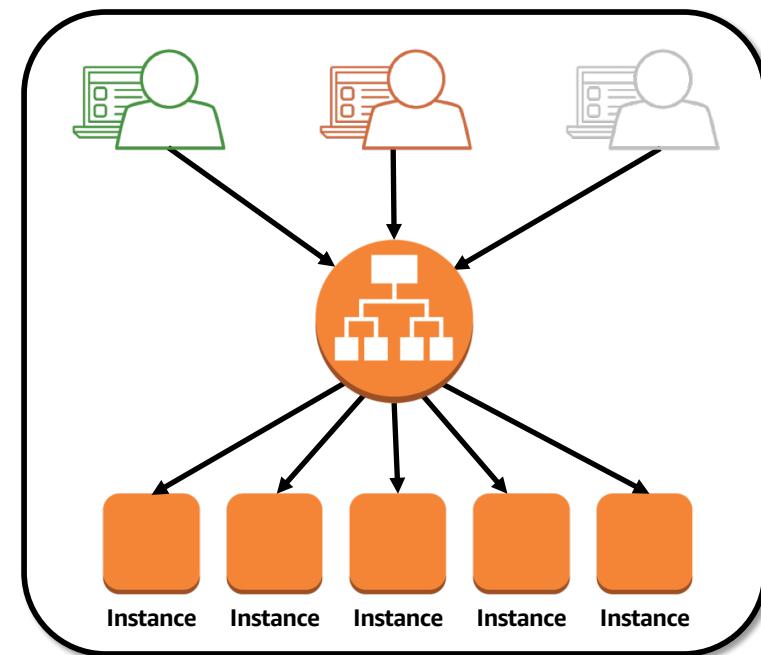
Health checks



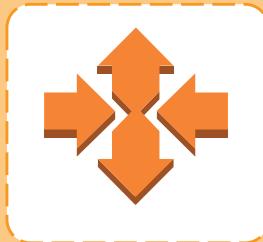
SSL/TLS termination



Operational monitoring



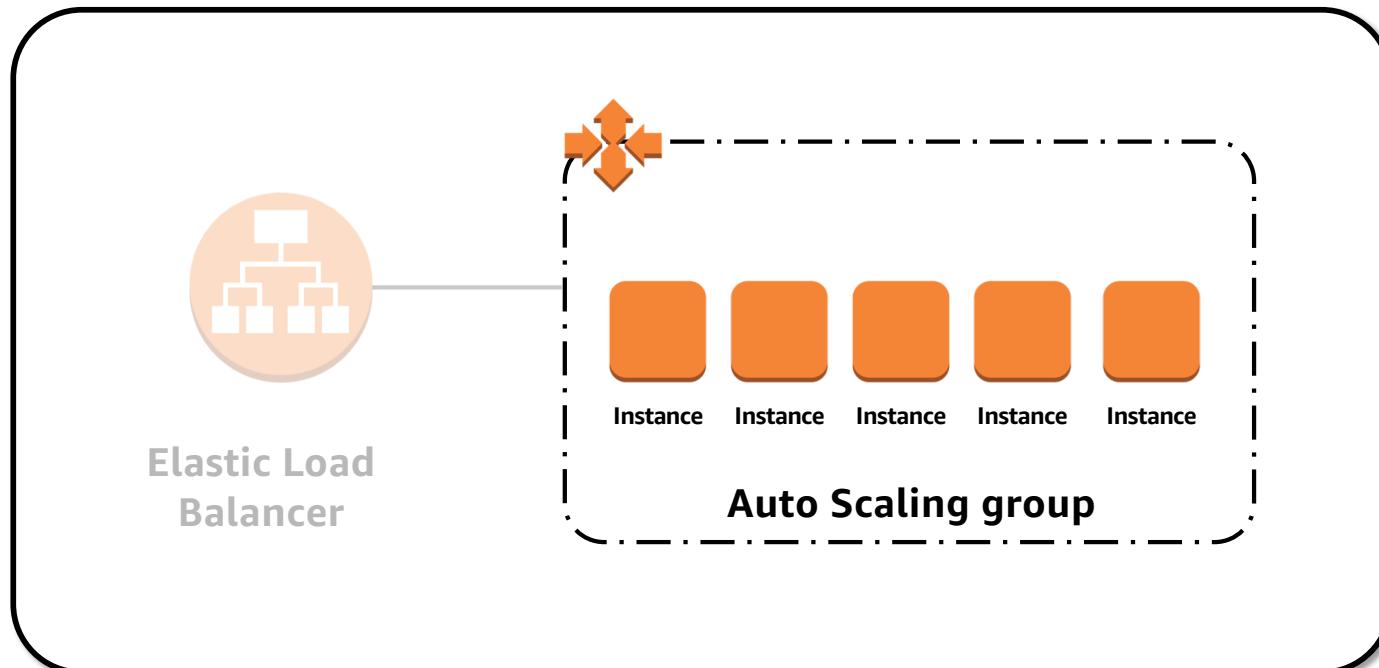
Auto Scaling



Auto
Scaling

- **Scale your Amazon EC2 capacity automatically**
- Well-suited for applications that experience **variability in usage**
- Available at no additional charge

Amazon EC2 Auto Scaling



Dynamic Scaling with EC2 Auto Scaling

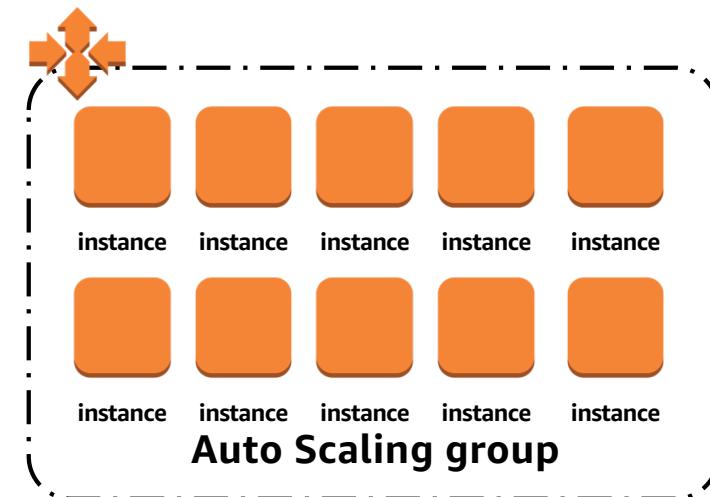
Follow the demand curve for your applications

Select a load metric for your application

Conditional and/or scheduled

Can be used with CloudWatch

| | |
|---------|----|
| Max | 10 |
| Min | 2 |
| Desired | 2 |



All **High Demand**

Fleet Management with EC2 Auto Scaling

Replace impaired Amazon EC2 instances without intervention

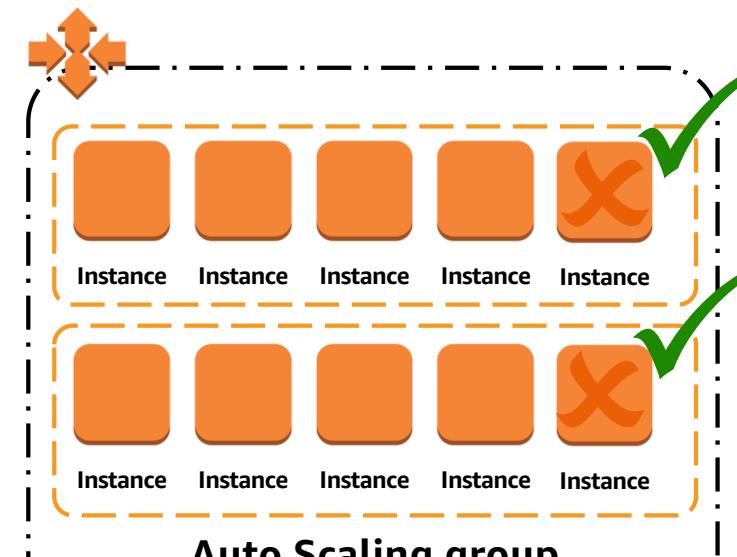
Monitor the health of running instances

Replace impaired instances automatically

Balance capacity across Availability Zones

Max
Min
Desired

| |
|----|
| 10 |
| 2 |
| 10 |



Amazon CloudWatch



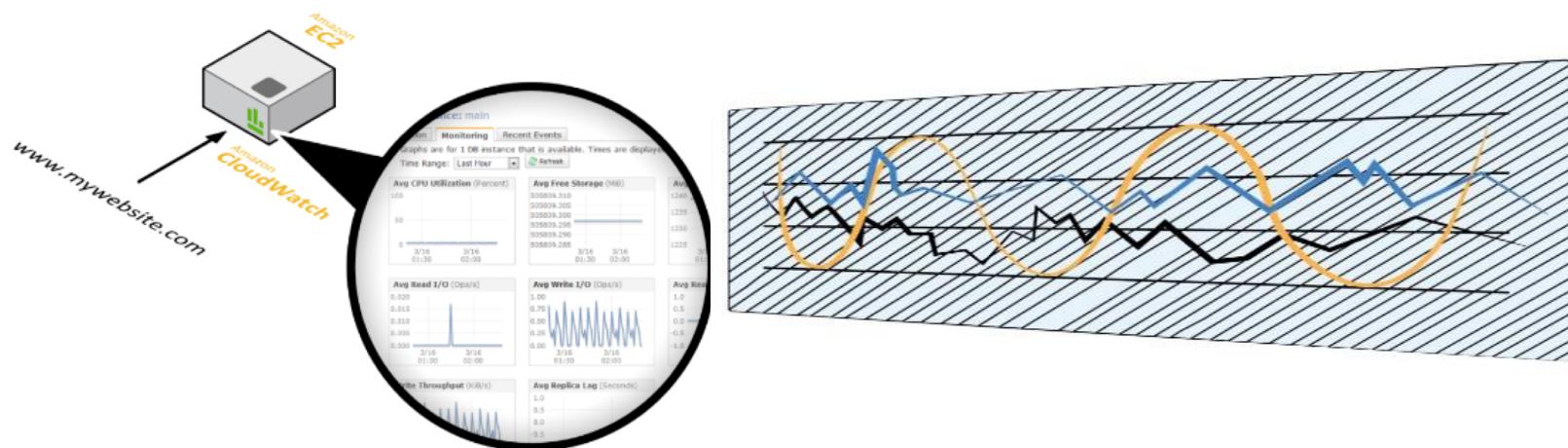
Amazon
CloudWatch

- A **monitoring service** for AWS cloud resources and the applications you run on AWS
- **Visibility** into resource utilization, operational performance, and overall demand patterns
- **Custom application-specific metrics** of your own
- **Accessible** via AWS Management Console, APIs, SDK, or CLI

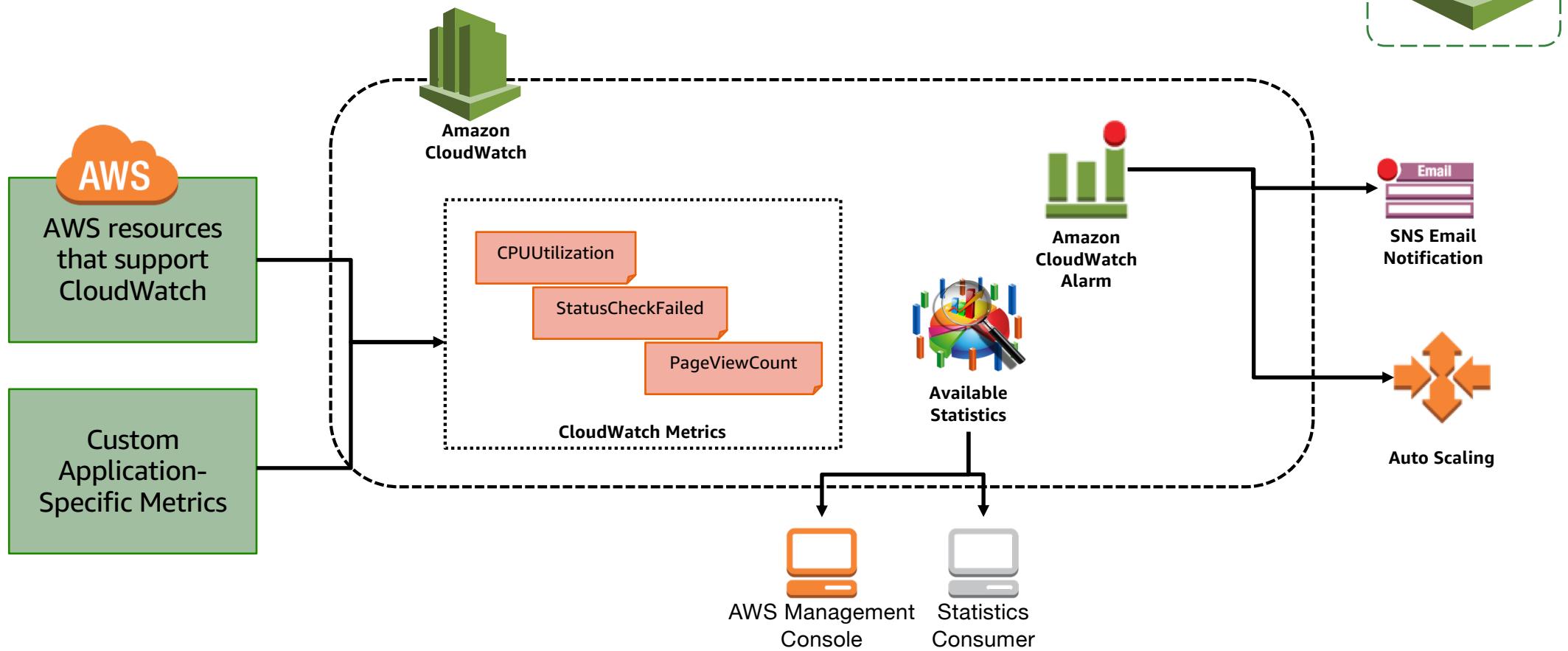
Amazon CloudWatch Facts



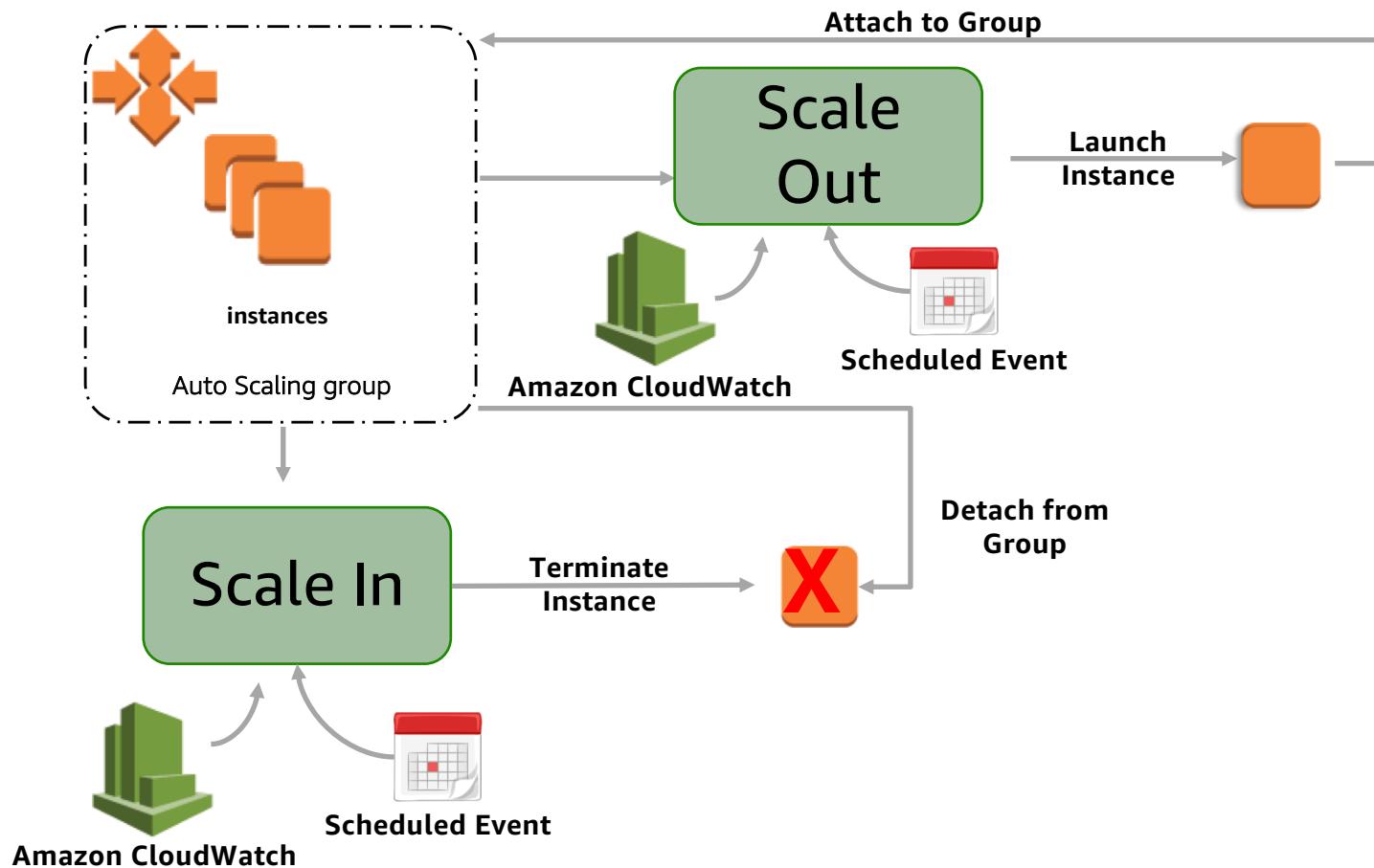
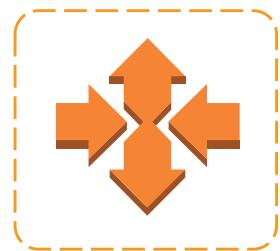
- Monitor other AWS resources
 - View graphics and statistics
- Set Alarms



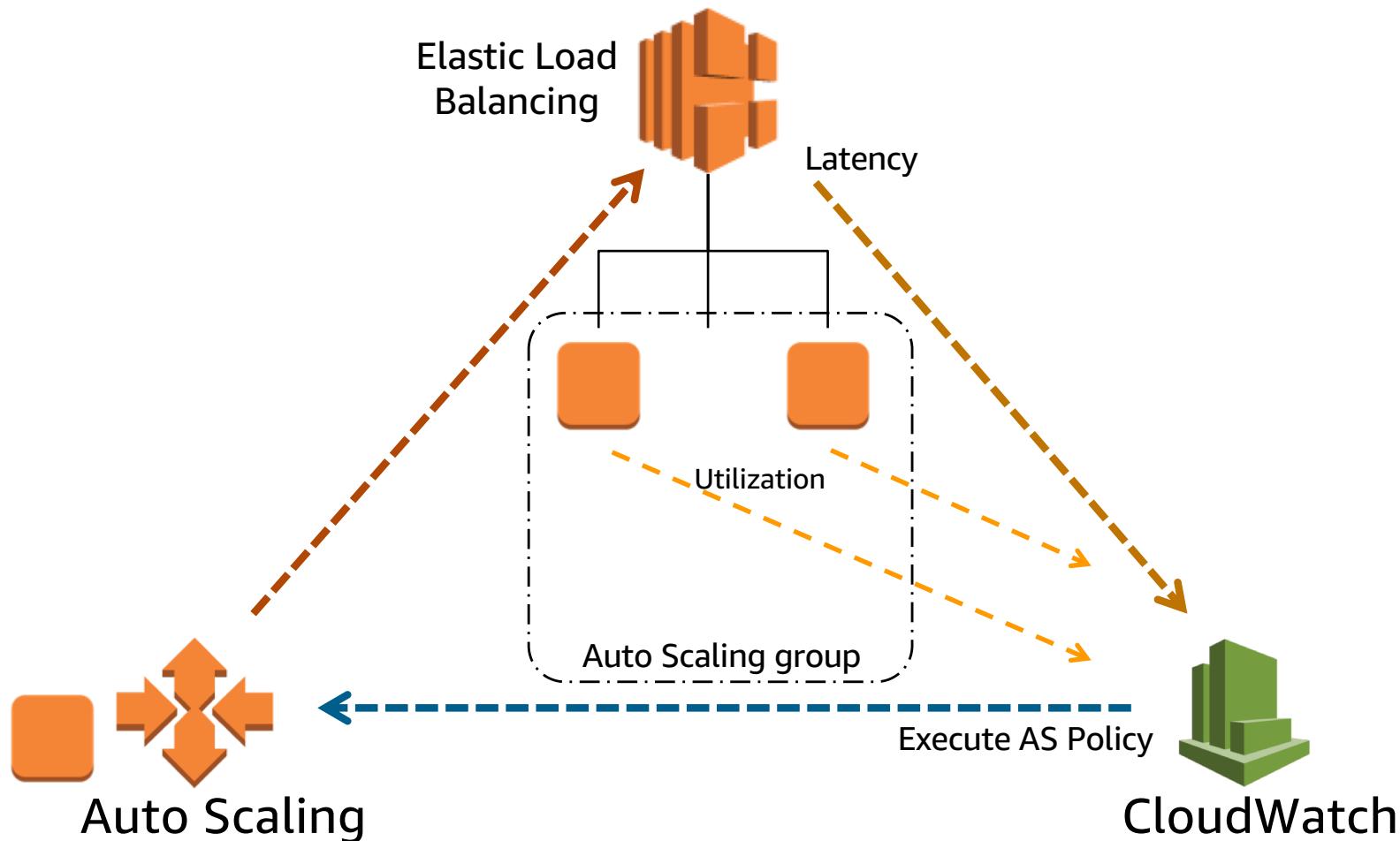
Amazon CloudWatch Architecture



Auto Scaling Basic Lifecycle



Triad of Services



AWS Trusted Advisor



AWS Trusted
Advisor

- **Best practice** and recommendation engine.
- Provides AWS customers with performance and security recommendations in four categories:
 - **Cost optimization**
 - **Security**
 - **Fault tolerance**
 - **Performance improvement.**

What is Trusted Advisor?

A service providing guidance to help you reduce cost,
increase performance, and improve security

Cost Optimization



0 ✓ 9 ⚠ 0 !

\$7,516.87

Potential monthly savings

Performance



3 ✓ 7 ⚠ 0 !

Security



2 ✓ 4 ⚠ 11 !

Fault Tolerance



0 ✓ 15 ⚠ 5 !

Service Limits



37 ✓ 0 ⚠ 1 !

Module 6

Course Wrap-Up

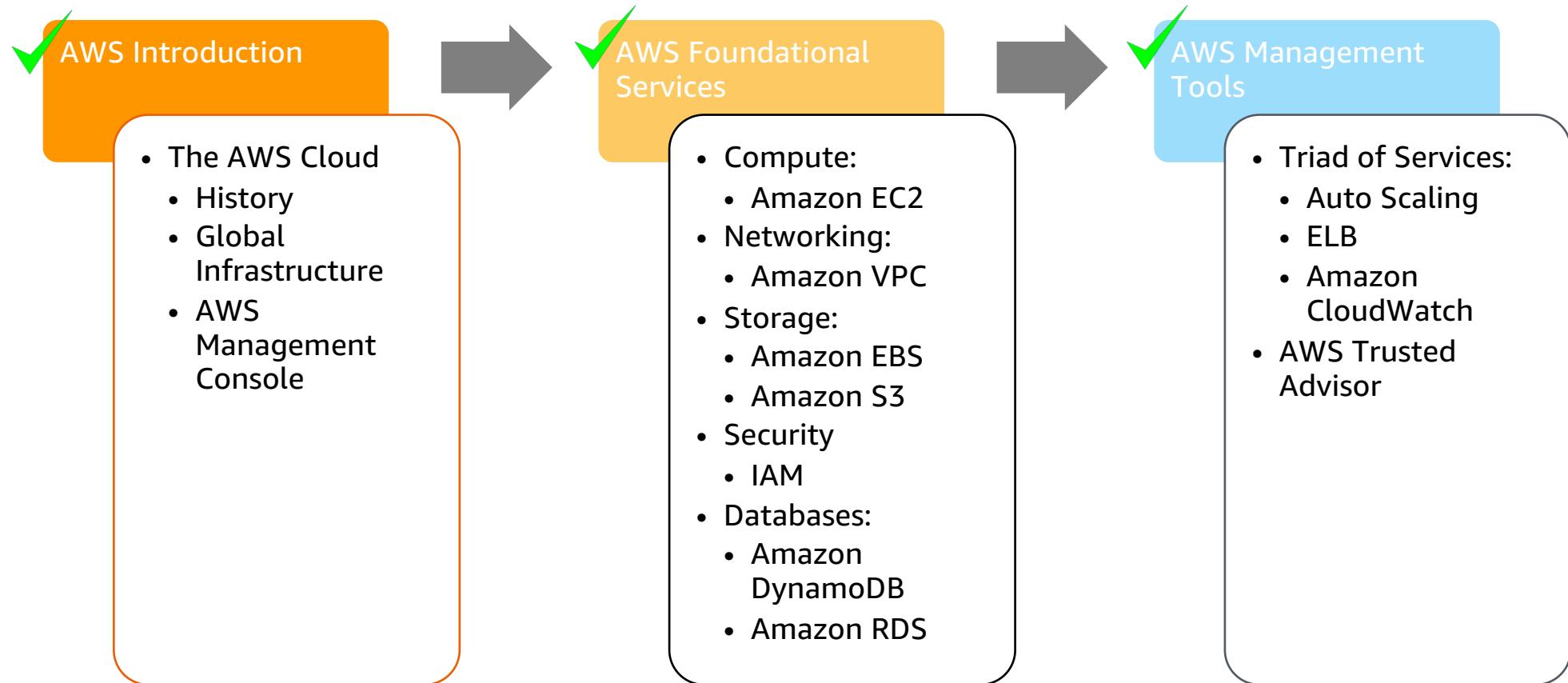
V I R T U A L

AWSOME DAY

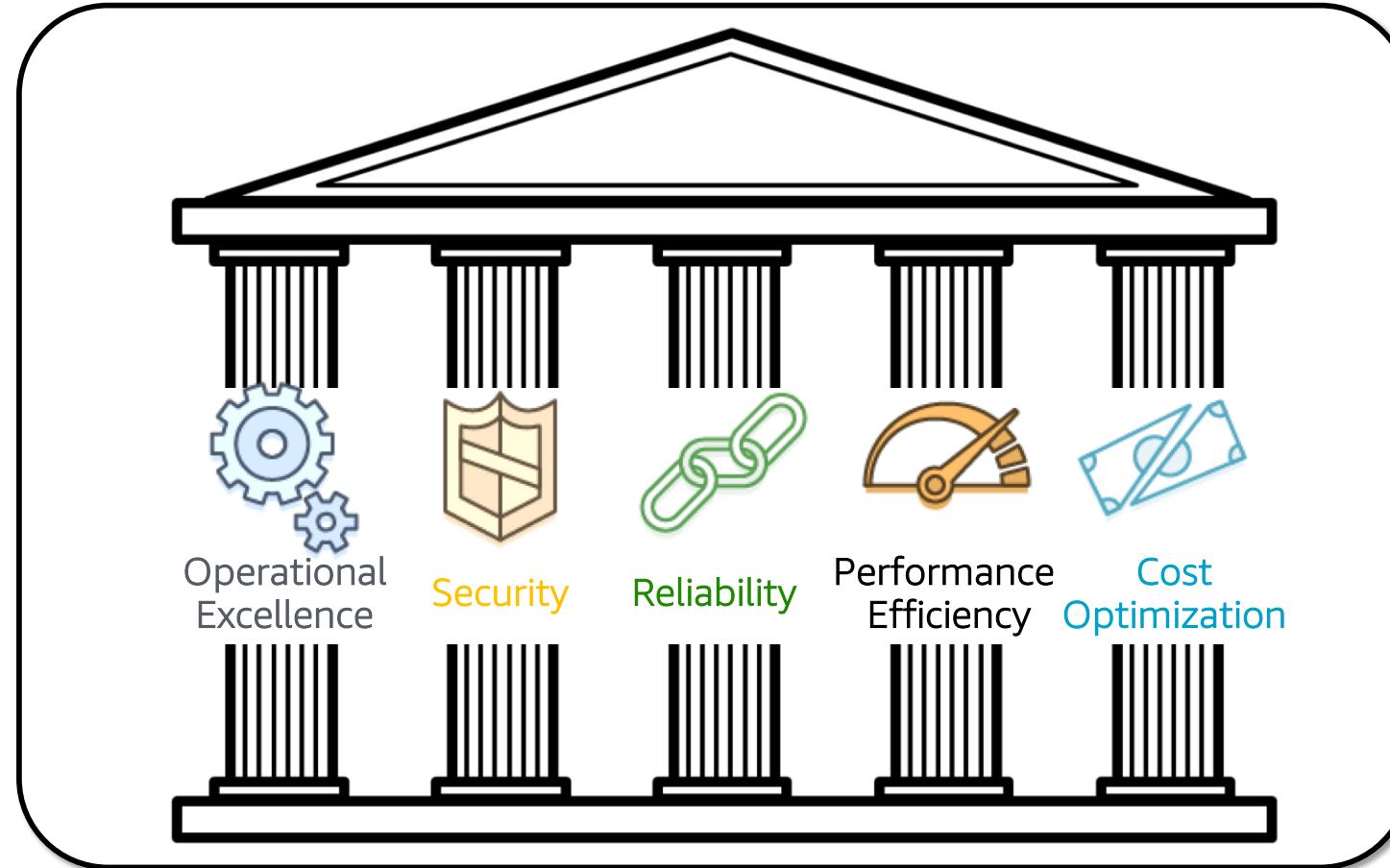
© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Learning Path



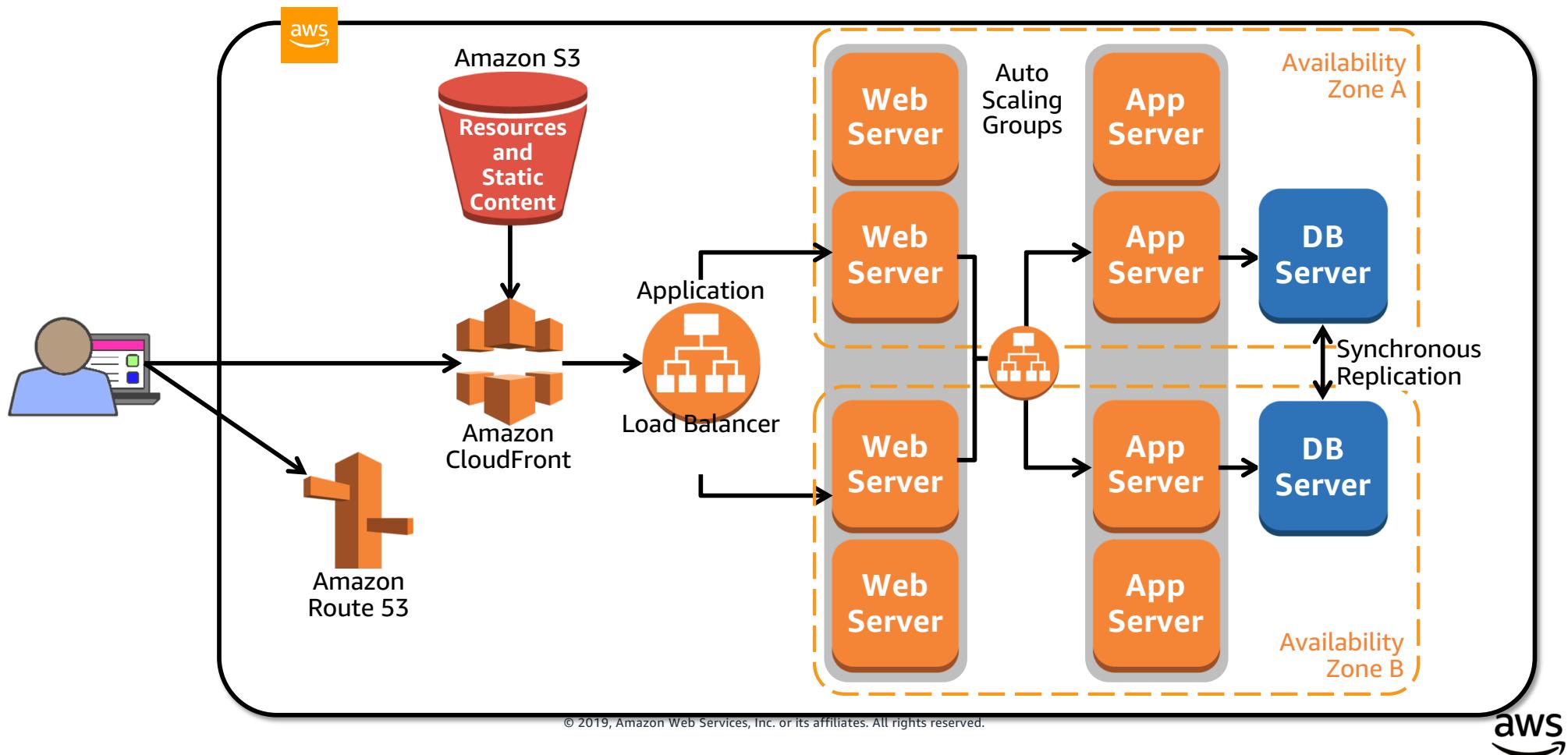
The Five Pillars



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

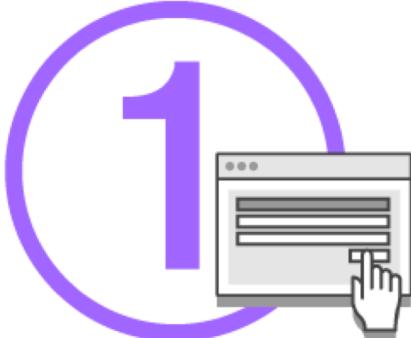


Example: Web Application Hosting



AWS Free Tier

Enables you to gain free, hands-on experience with the AWS platform, products, and services



Sign up for an AWS Account



Learn with 10-minute Tutorials



Start Building with AWS

<https://www.aws.training/Training>

aws training and certification

Find Training Certification Support

English ▾ Sign In

Keyword

Role +

Skill Level +

Domain +

Language +

Digital +

Select the type of training you would like to browse.

Browse by Role

-  Cloud Practitioner
Cloud fundamentals and best practices
-  Architect
Learn to design highly available systems
-  Developer
Develop applications for the cloud
-  Operations
Automate applications, networks and systems

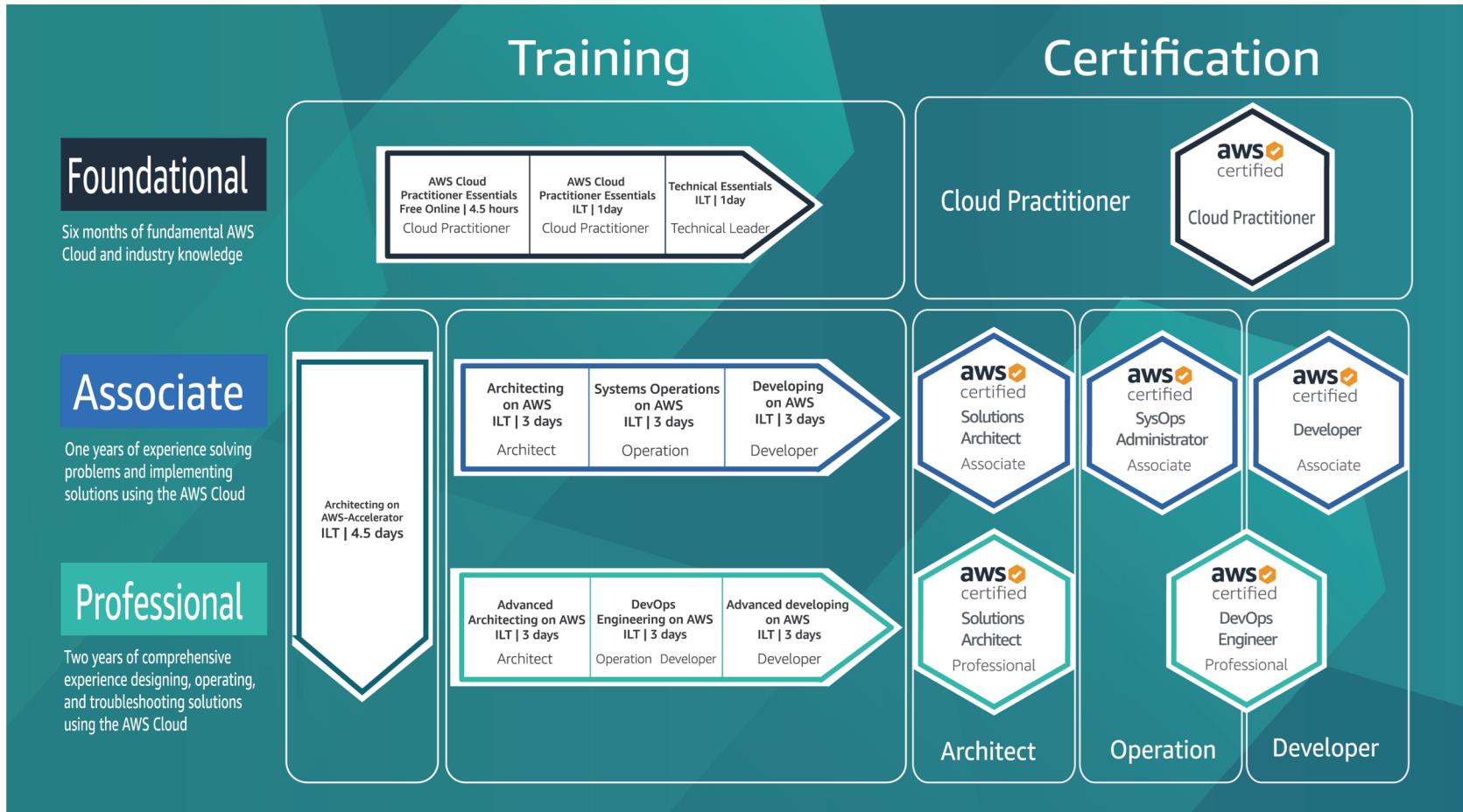
Browse by Content Domain

-  See All
-  Introductory
-  Analytics
-  Applications
-  Artificial Intelligence (AI)
-  Business Planning
-  Compute
-  Contact Center
-  Database
-  Developer Tools
-  Internet of Things (IoT)
-  Management Tools
-  Migration
-  Networking & Content Delivery
-  Security, Identity & Compliance
-  Storage

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Classroom Training – Role based



© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Classroom Training – Role based



Thank you!

Shoi, Chia-Ton

VIRTUAL

AWSOME DAY

© 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.

