AWSOME DAY
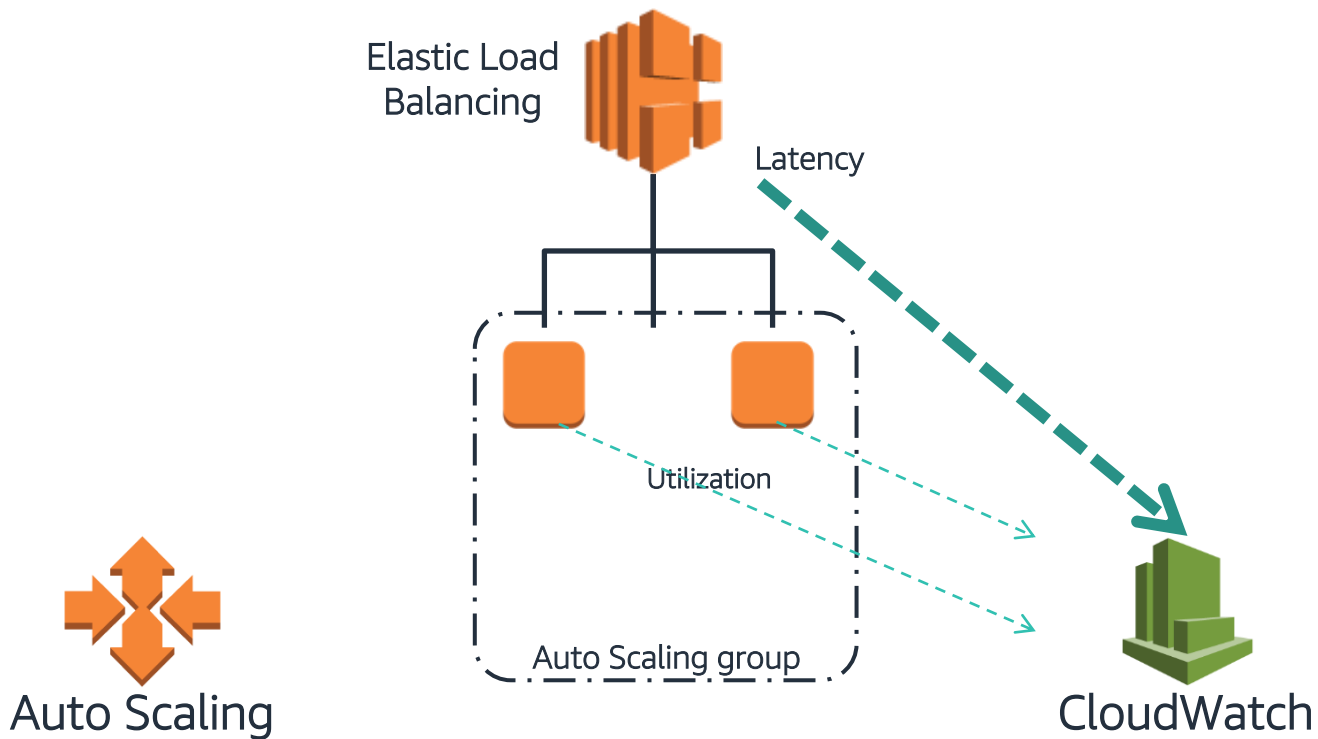## ONLINE CONFERENCE
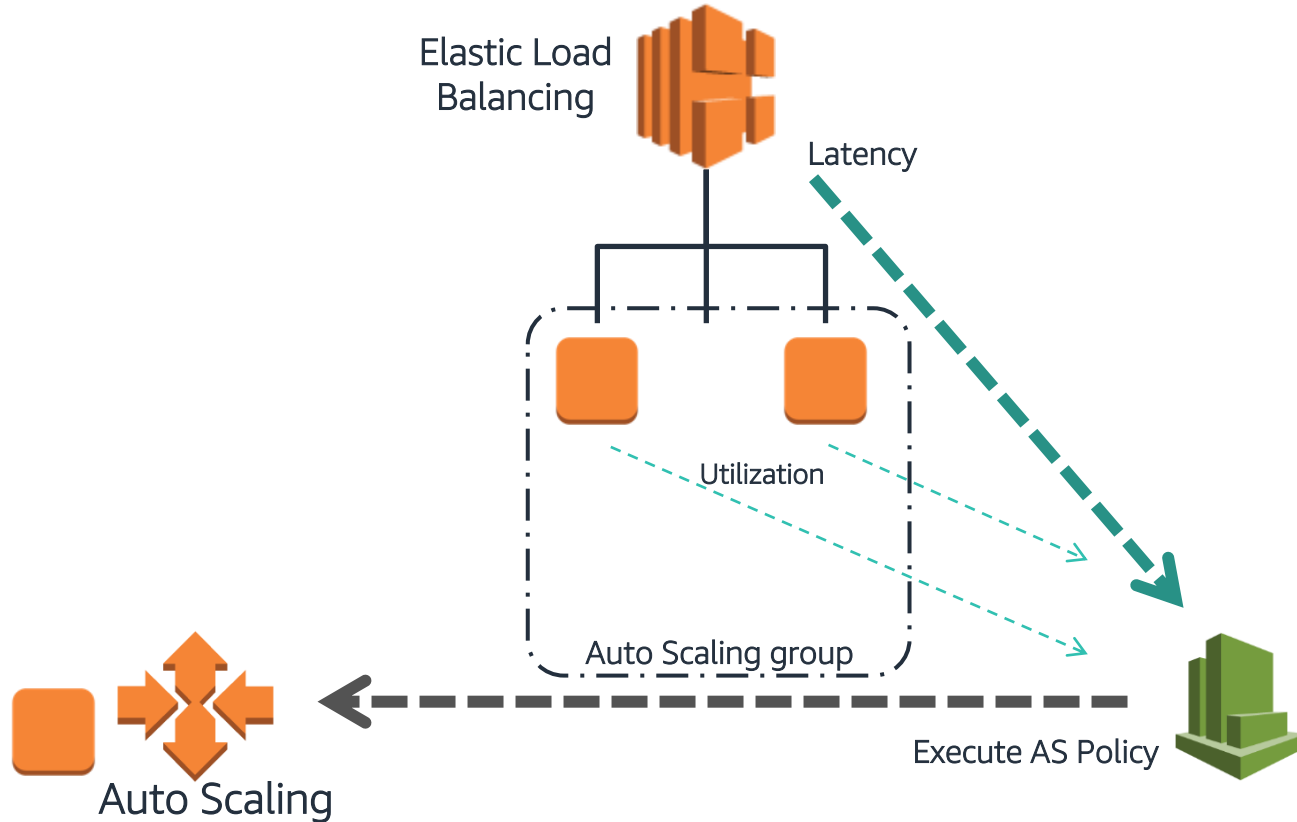
Module 5 AWS Elasticity and Management Tools
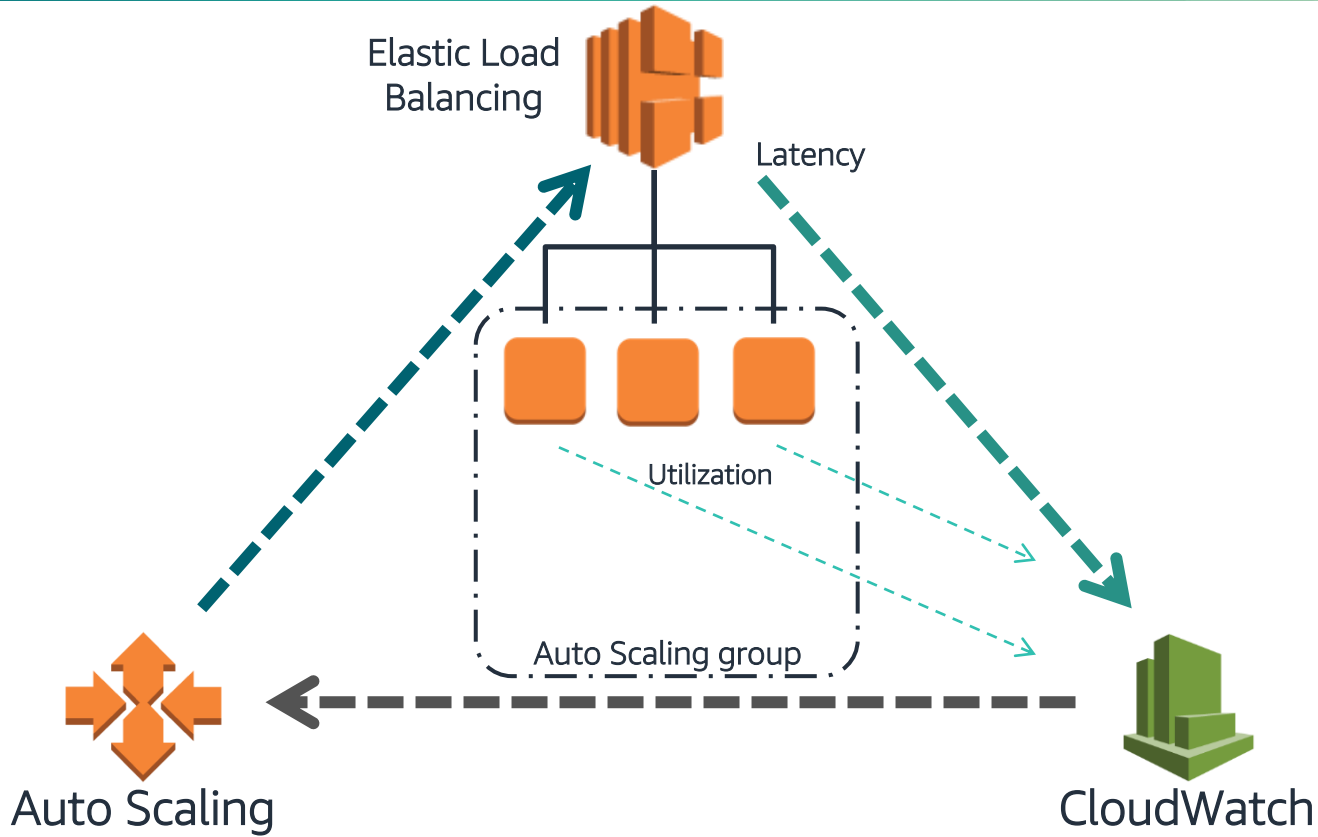
Triad of Services

Triad of Services

Elastic Load Balancing

Latency

Utilization

Auto Scaling group

Auto Scaling

Execute AS Policy

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Triad of Services

Elastic Load Balancing

Latency

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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
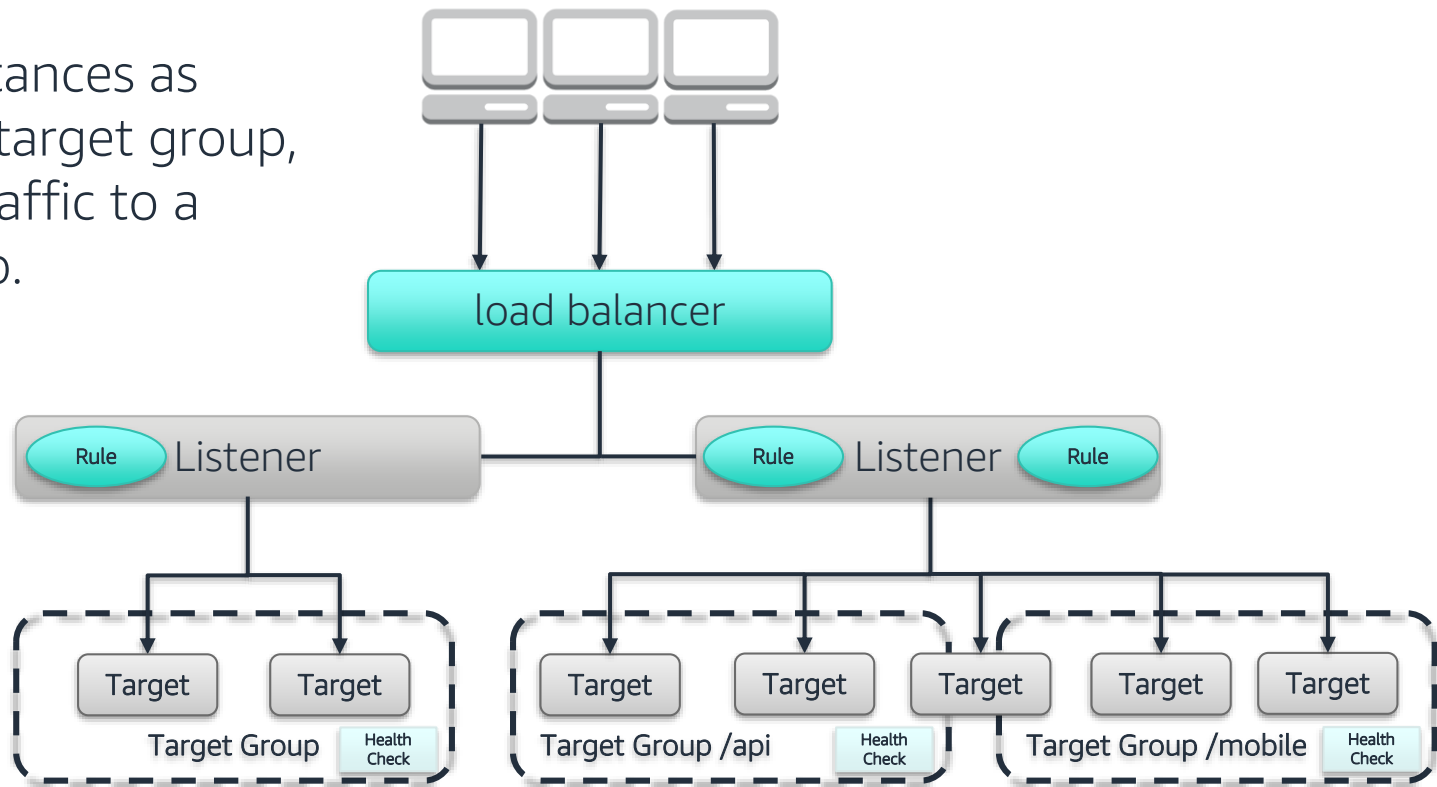- Supports the **routing and load balancing** of HTTP, HTTPS, SSL, and TCP traffic to Amazon EC2 instances

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Classic Load Balancer – How It Works

Register instances with your load balancer.
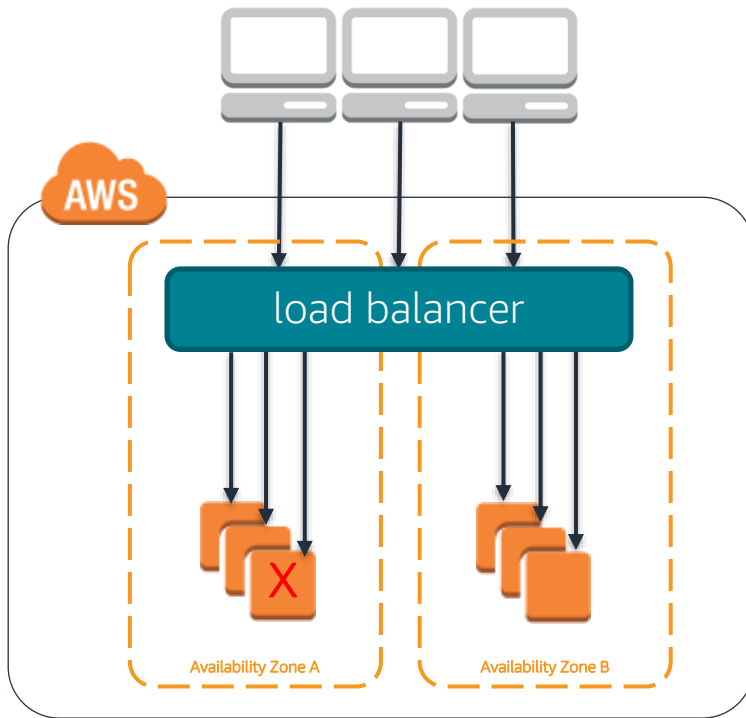
Application Load Balance – How It Works

Register instances as targets in a target group, and route traffic to a target group.

load balancer

| Rule | Listener | | Rule | Listener | Rule |

Target | Target

Target Group | Health Check

Target | Target | Target

Target Group /api | Health Check

Target | Target

Target Group /mobile | Health Check
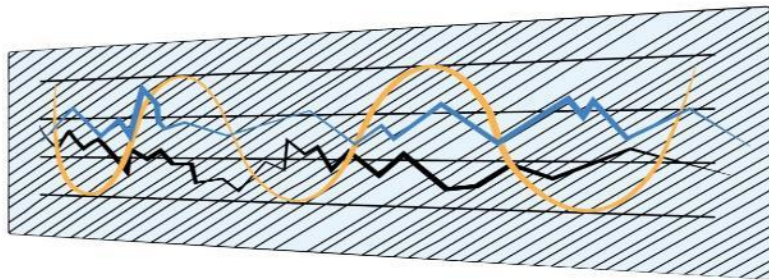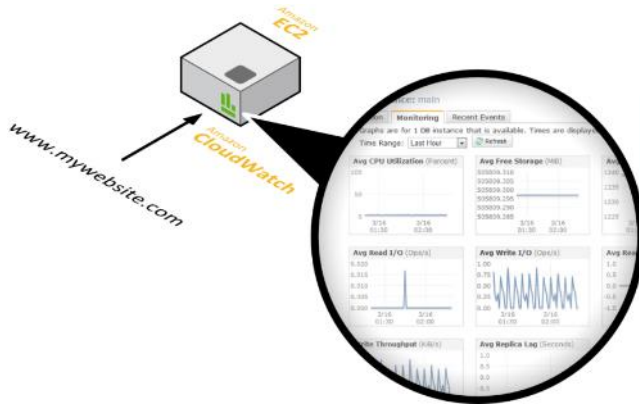
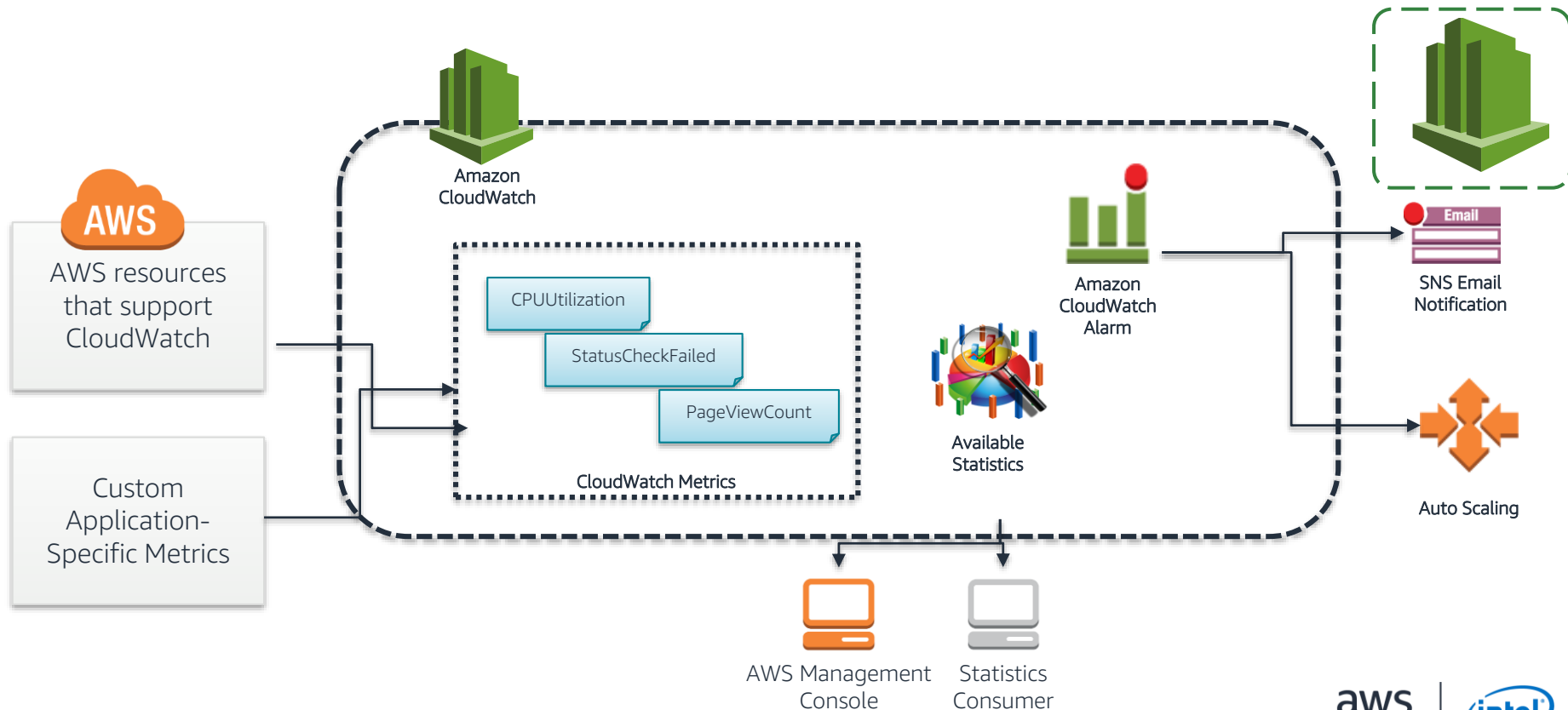aws | intel

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

Amazon
CloudWatch

AWS resources
that support
CloudWatch

Custom
Application-
Specific Metrics

CPUUtilization

StatusCheckFailed

PageViewCount

CloudWatch Metrics

Available
Statistics

Amazon
CloudWatch
Alarm

SNS Email
Notification

Auto Scaling

AWS Management
Console

Statistics
Consumer

Auto Scaling

Auto Scaling

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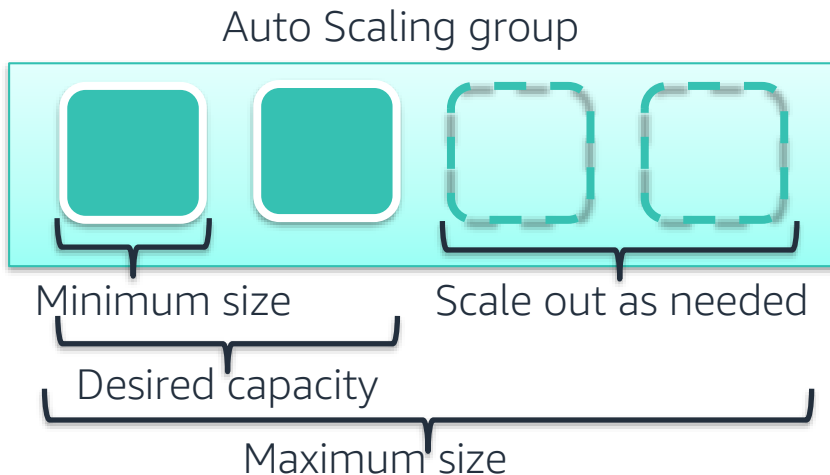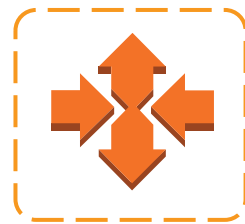- Available at no additional charge

Launch Configurations

- A **launch configuration** is a template that an Auto Scaling group uses to launch EC2 instances.

- When you create a launch configuration, you can specify:
  - AMI ID
  - Instance type
  - Key pair
  - Security groups
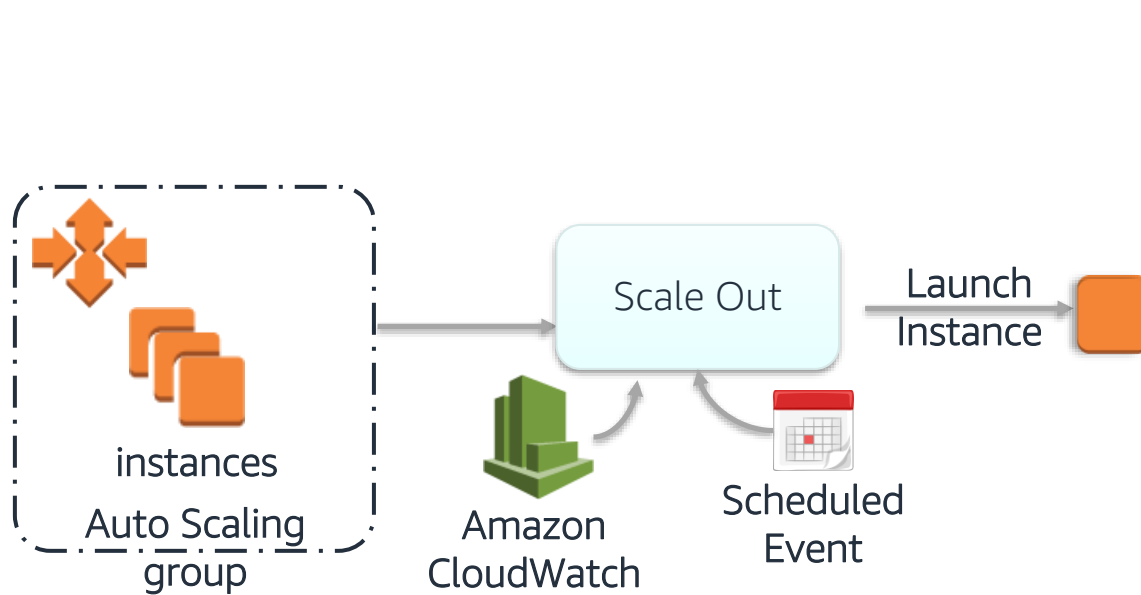 - Block device mapping
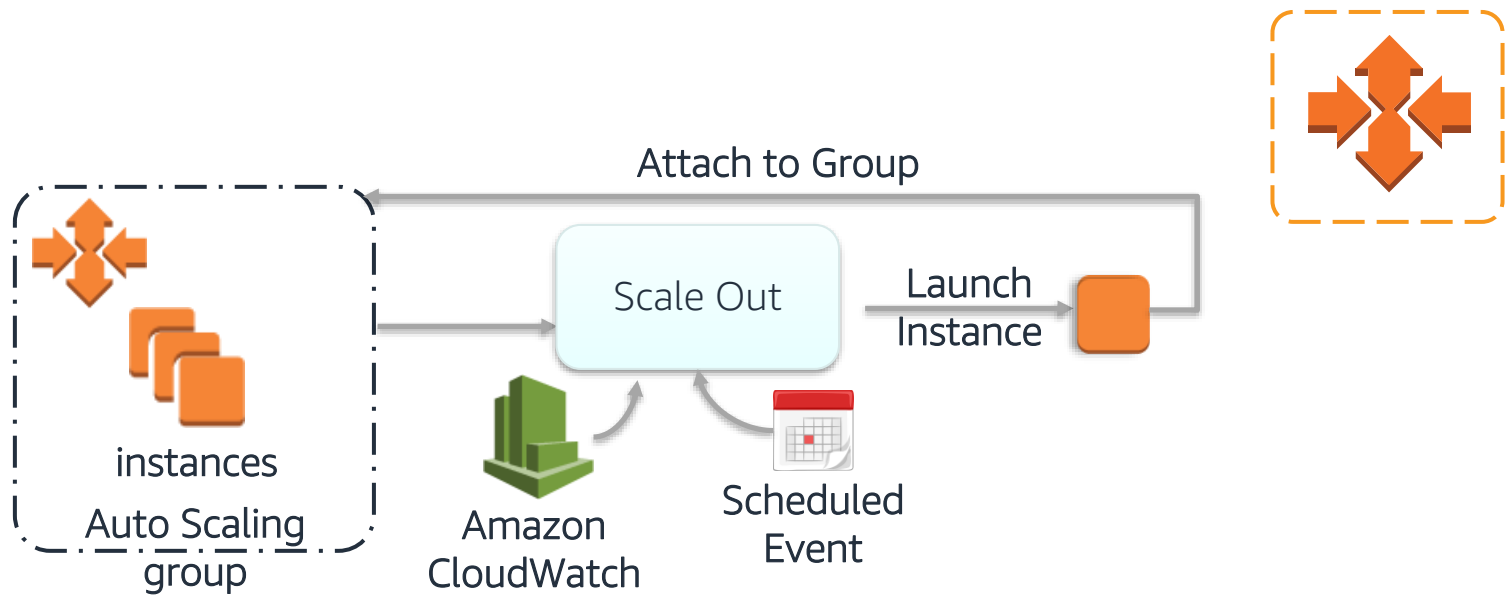 - User data
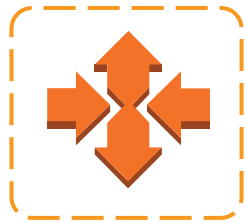
Auto Scaling Groups

- Contain a collection of EC2 instances that share similar characteristics.

- Instances in an Auto Scaling group are treated as a **logical grouping** for the purpose of instance scaling and management.
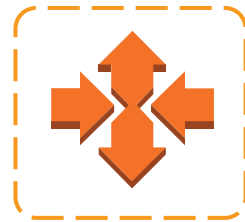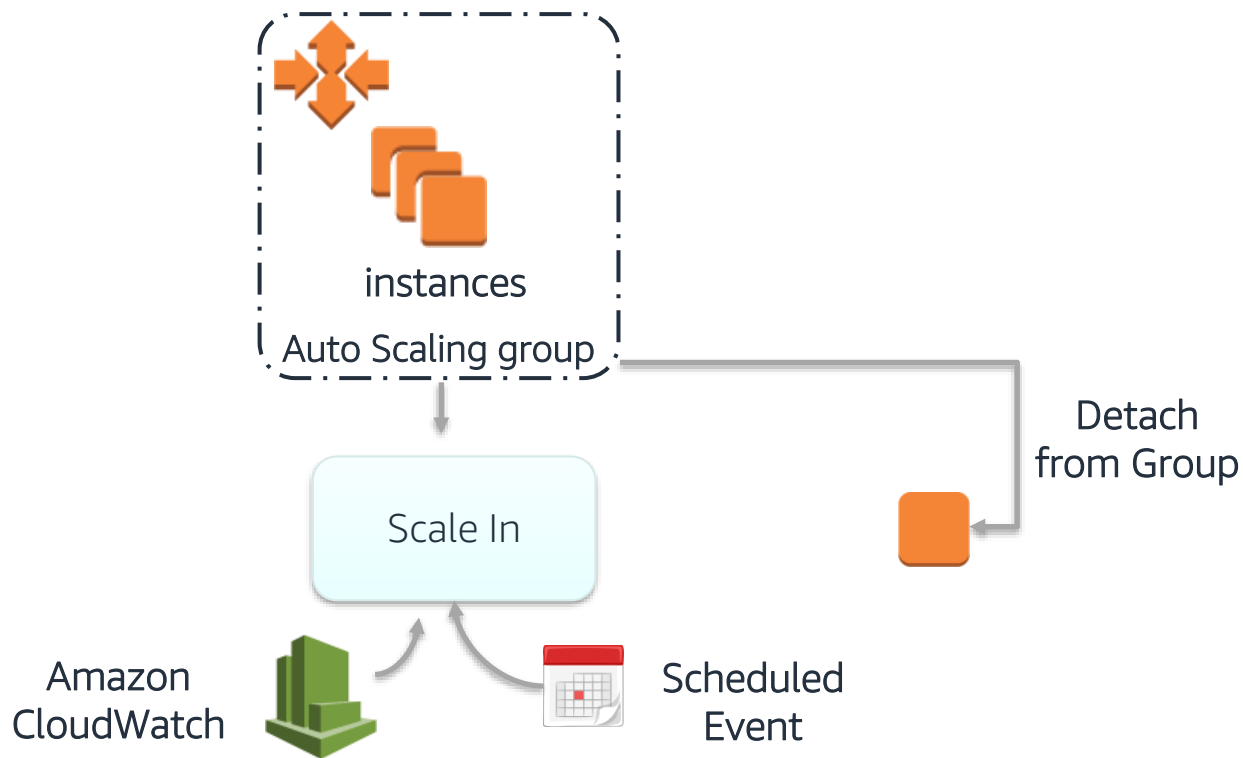
Auto Scaling group

Minimum size
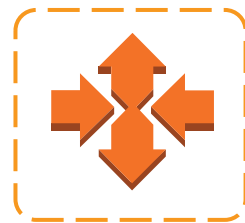
Scale out as needed

Desired capacity

Maximum size

Auto Scaling Basic Lifecycle

instances

Auto Scaling group

Amazon CloudWatch

Scheduled Event

Scale Out

Launch Instance

Auto Scaling Basic Lifecycle

Auto Scaling Basic Lifecycle

instances

Auto Scaling group

Scale In

Detach
from Group

Amazon
CloudWatch

Scheduled
Event

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Auto Scaling Basic Lifecycle

instances

Auto Scaling group

Scale In

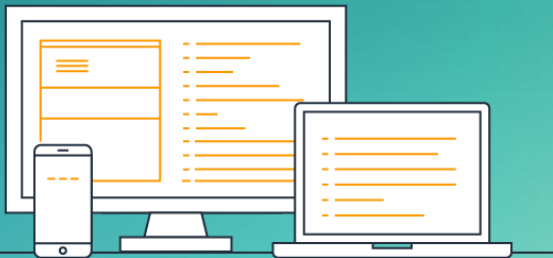Terminate Instance

Detach from Group

Amazon CloudWatch

Scheduled Event

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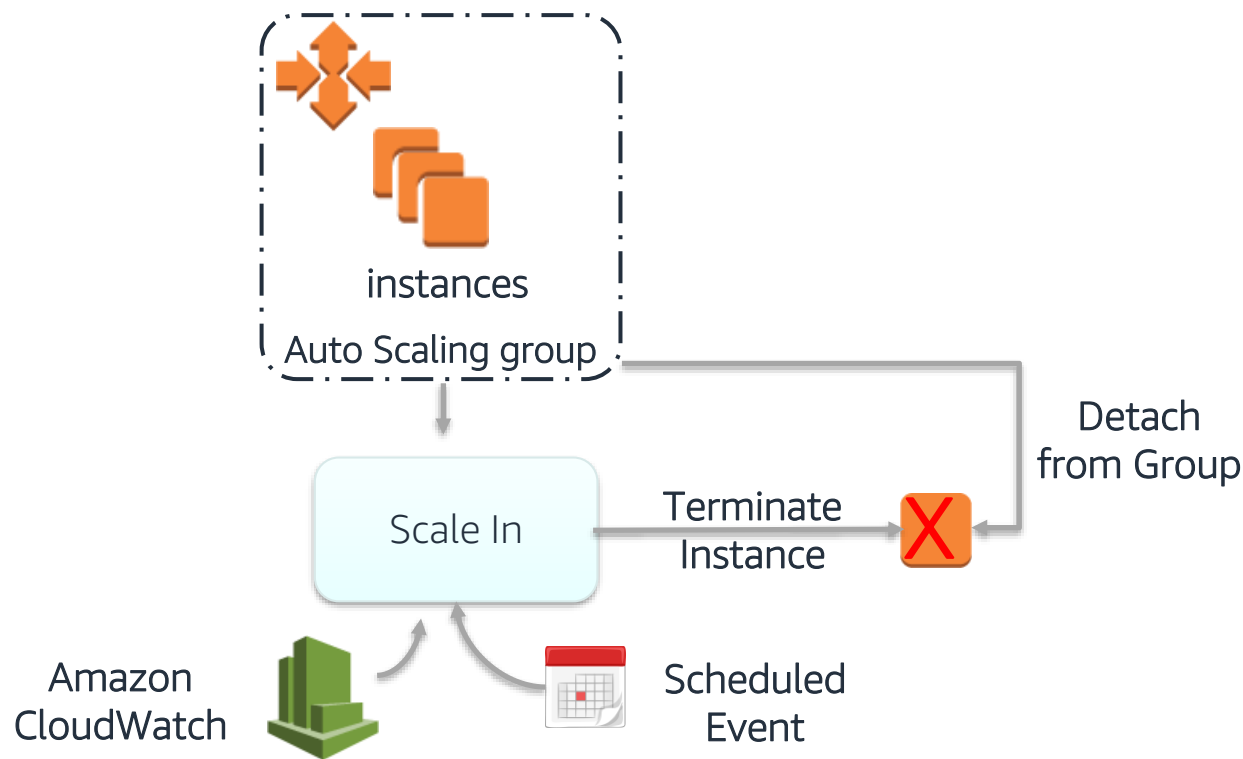
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Certificate of Attendance

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