Deep dive into Amazon ECS

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Solutions Architect at Amazon Web Services

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Overview of Amazon ECS

High Availability & Resilience in Amazon ECS

Architecture patterns

Amazon ECS overview

	Amazon ECS Anywhere	Amazon ECS on AWS Outposts	Amazon ECS on AWS Wavelength	Amazon ECS on AWS Local Zones	Amazon ECS on Amazon EC2	AWS Fargate for Amazon ECS
Hardware	Customer-owned	AWS	AWS	AWS	AWS	AWS
Location	On premises	On premises	Wavelength Zones	Local Zones	AWS Region	AWS Region
Data plane	On premises	Outposts	Wavelength Zones	Local Zones	Customer account	AWS account
Control plane	AWS Region	AWS Region	AWS Region	AWS Region	AWS Region	AWS Region

Customer managed

AWS managed

ECS core constructs

Cluster

Logical grouping of services, tasks, capacity providers in a region

Service

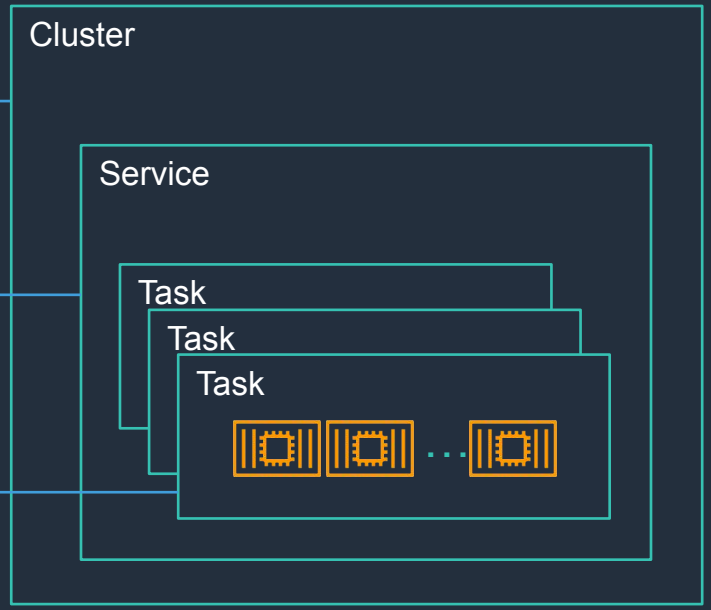
- One or more identical tasks
- Check and replace unhealthy tasks

Task

- One or more containers
- Specify compute, networking, IAM, config

Compute

Use EC2, EC2 Spot, Fargate, or Fargate Spot



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Over 2.4 billion

Tasks launched every week

38 AWS Regions, 6 continents

Global presence

65% of all new AWS containers customers

Use Amazon ECS

78% of all new AWS containers customers

Run workloads on AWS Fargate

Amazon uses ECS as a building block too

Amazon SageMaker

Amazon Lex

Amazon Polly

AWS Batch

Amazon.com recommendation engine

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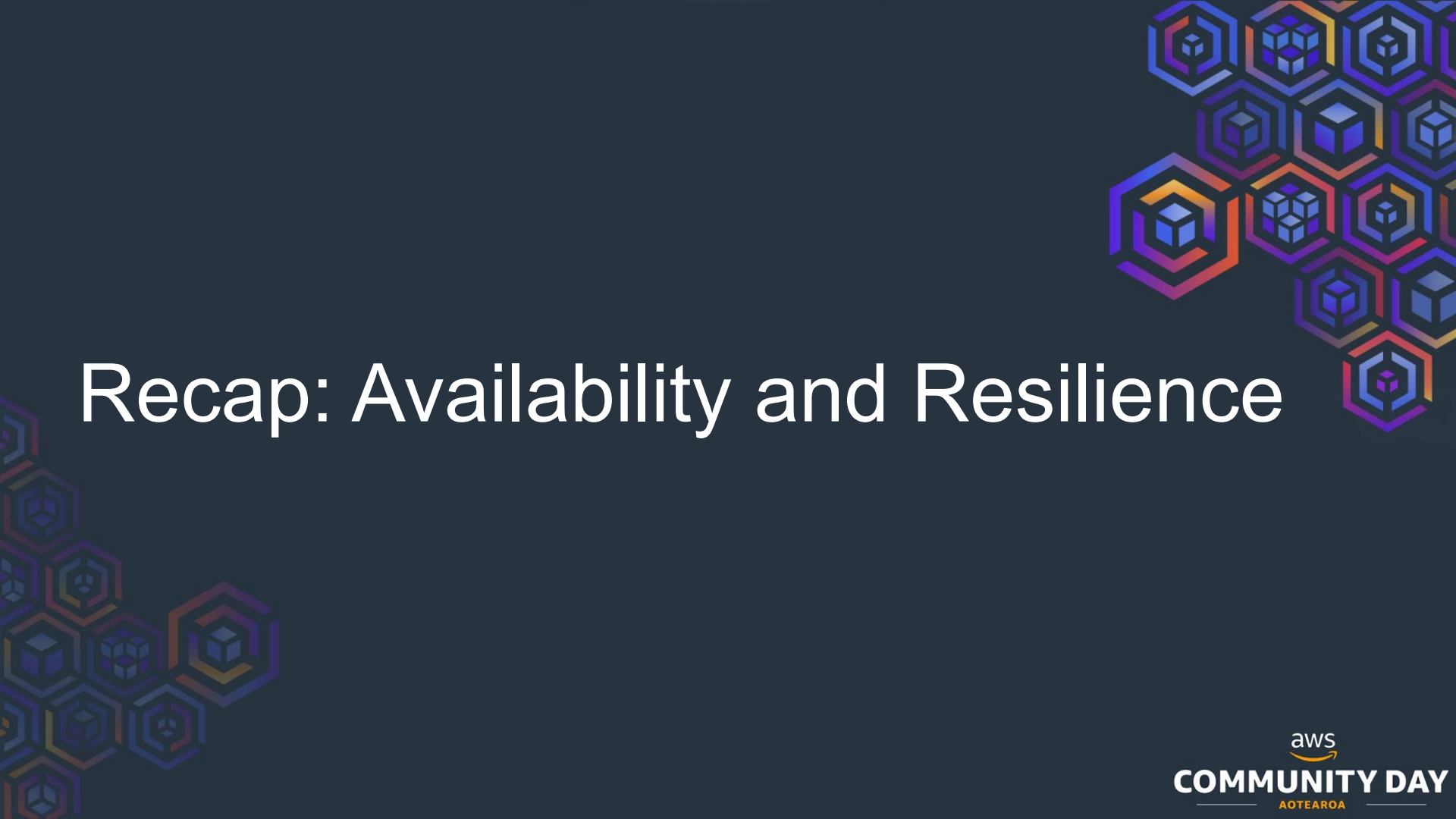
Recap: Availability and Resilience



Availability

Resilience

Amazon ECS:
Architected For Availability

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Infrastructure

Software

Scale

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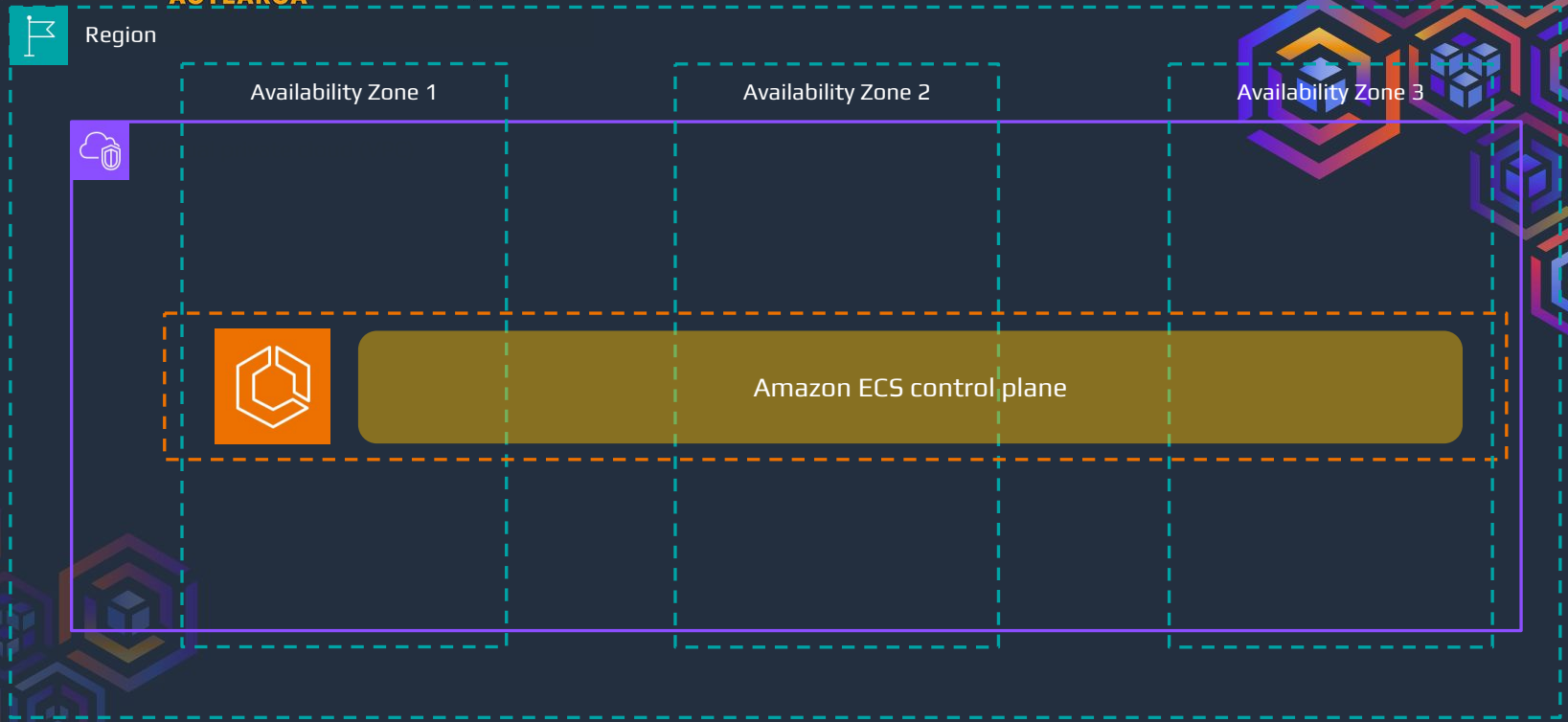

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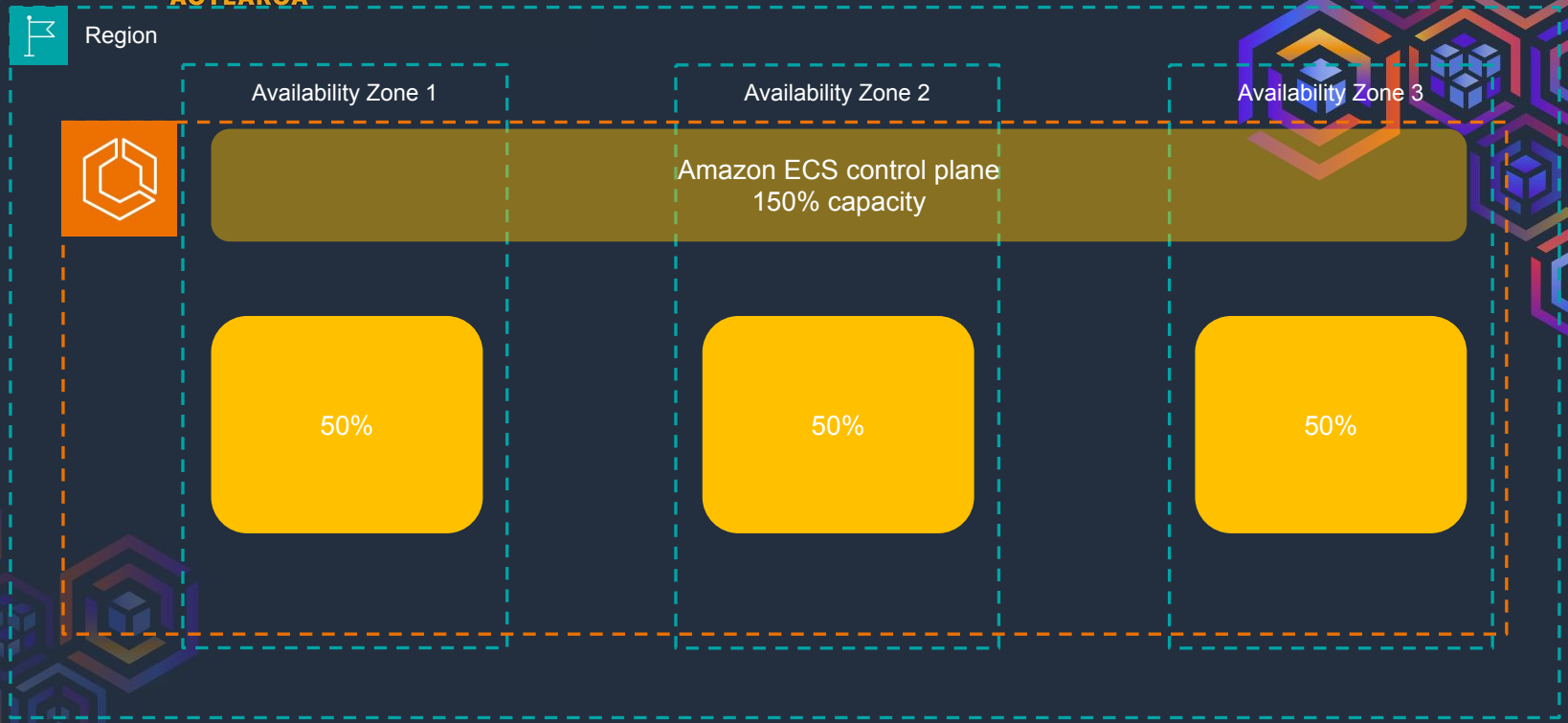

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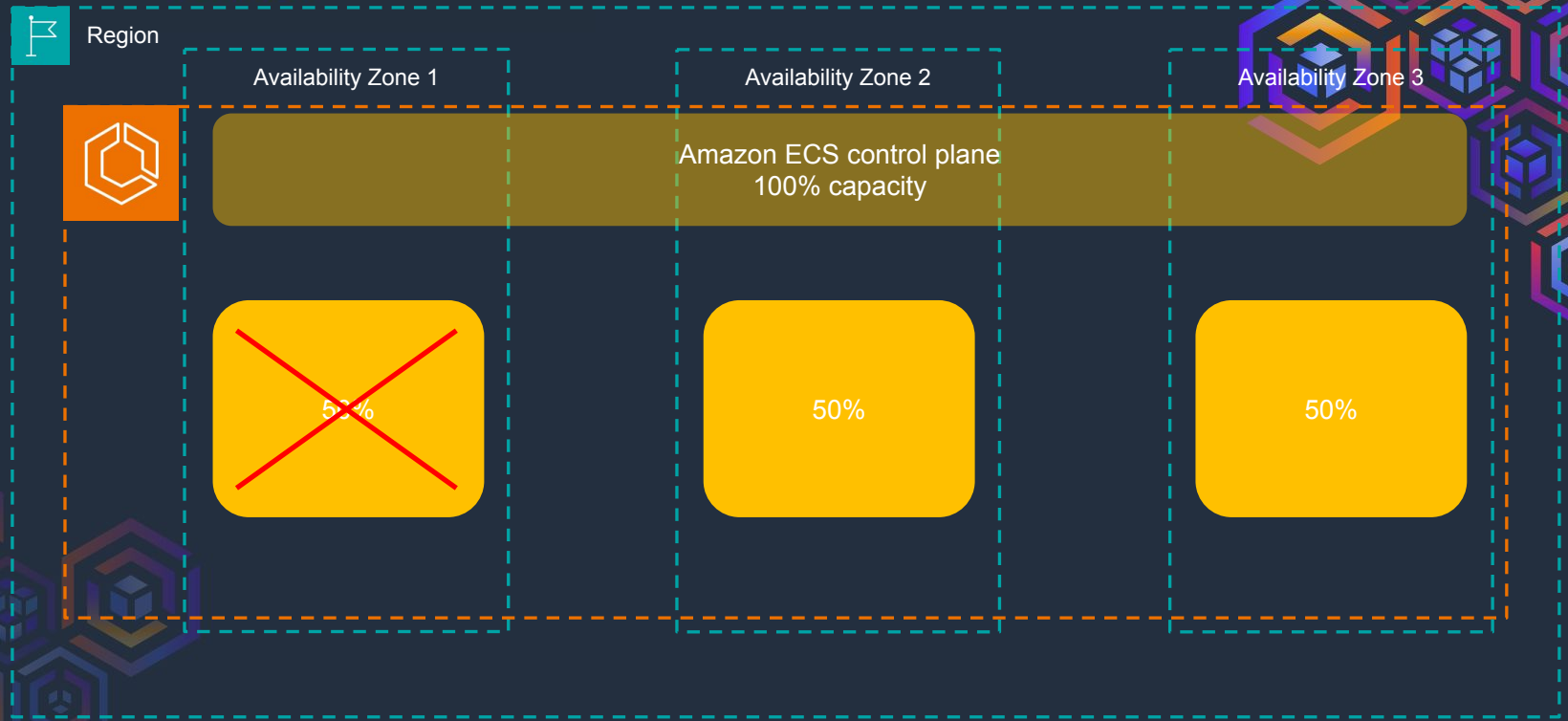

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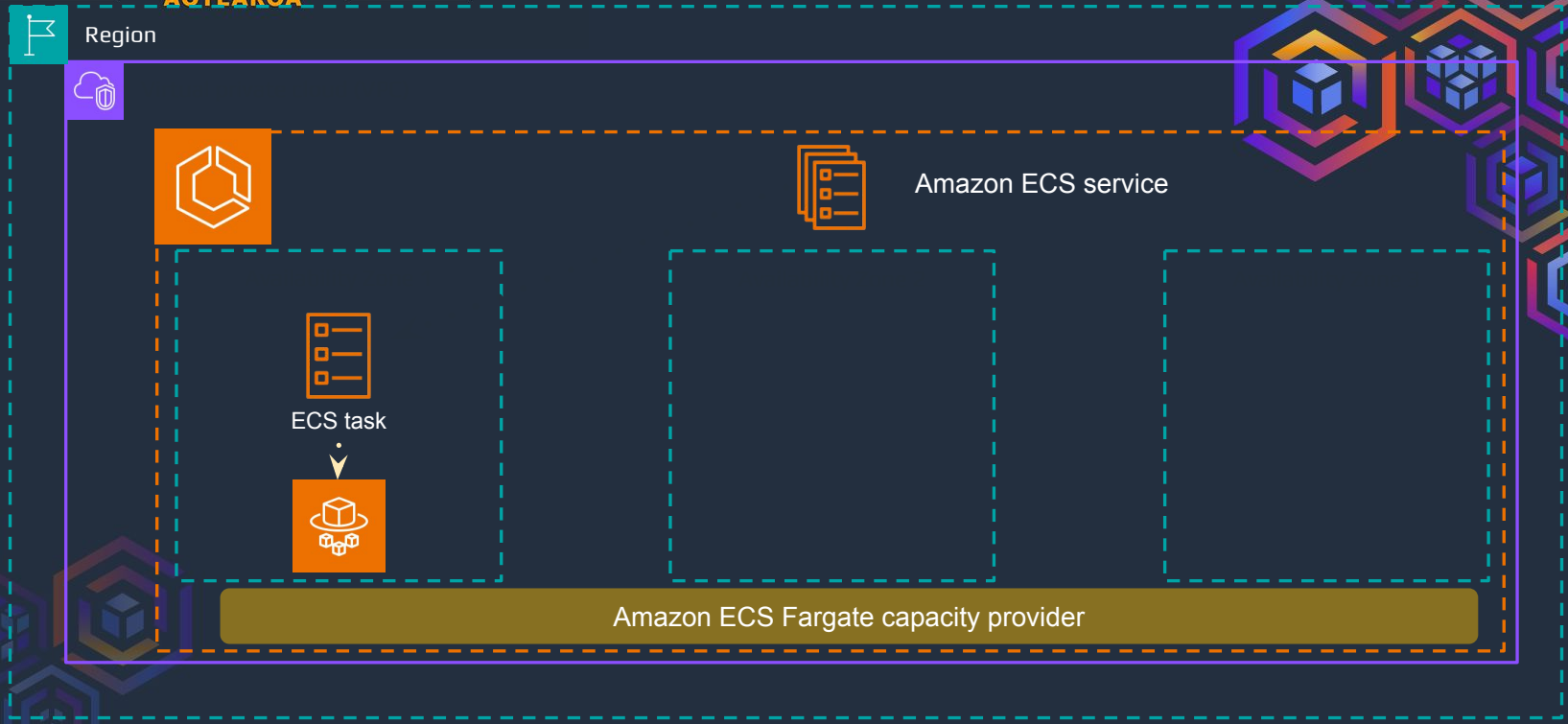

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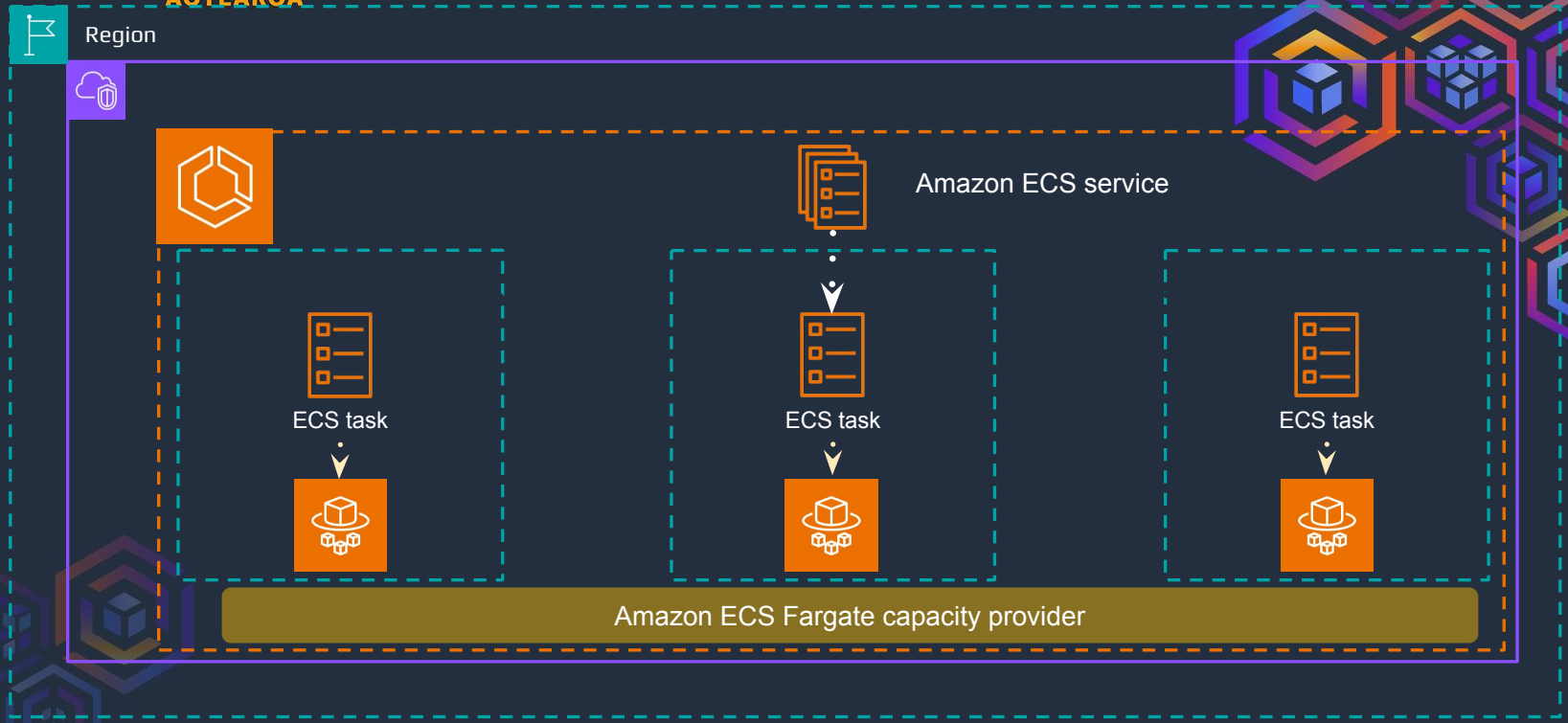
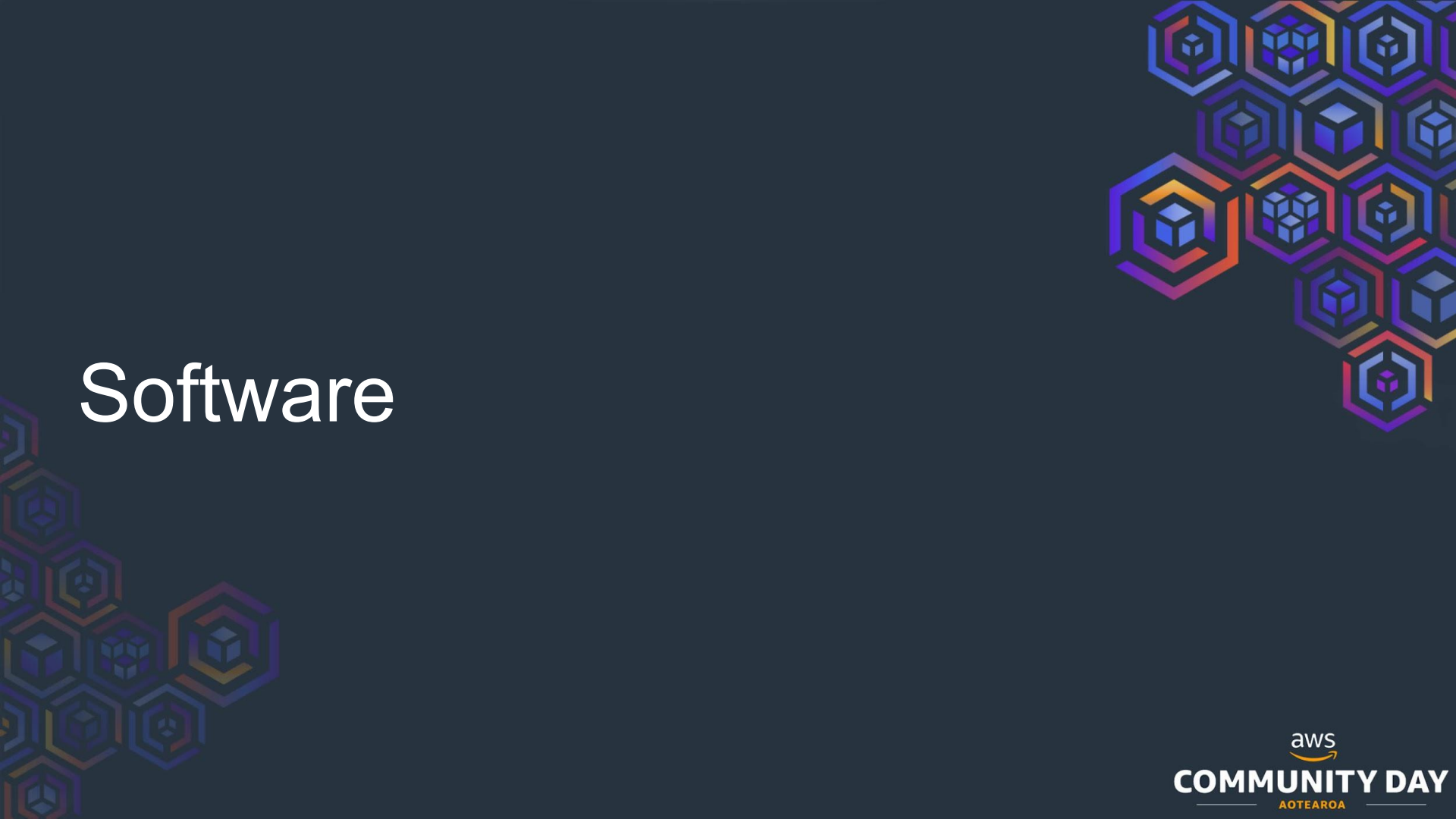


Software



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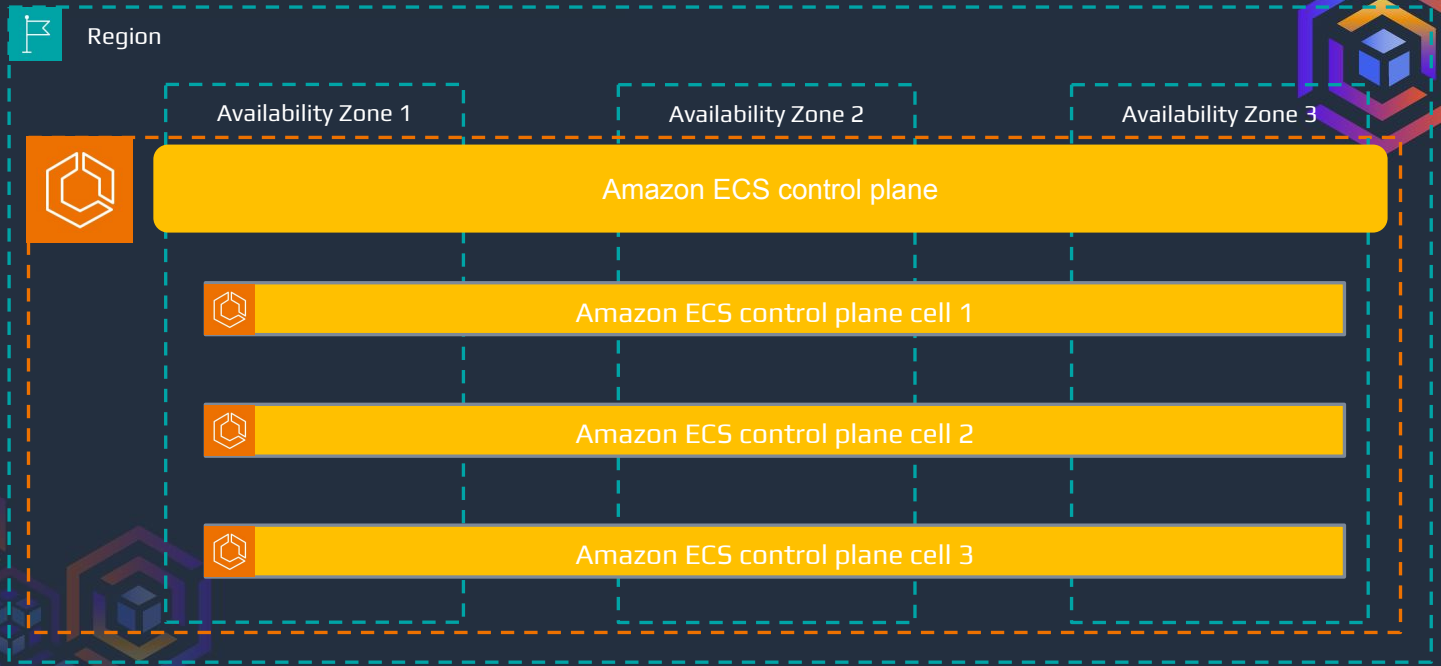

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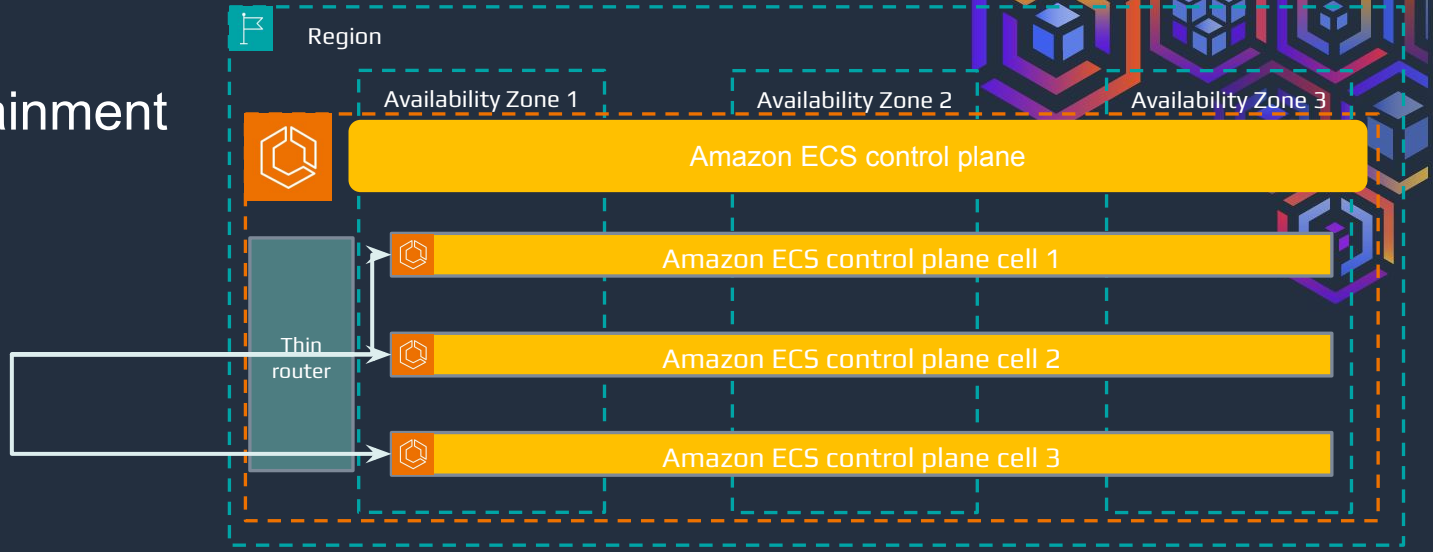
- Failure containment



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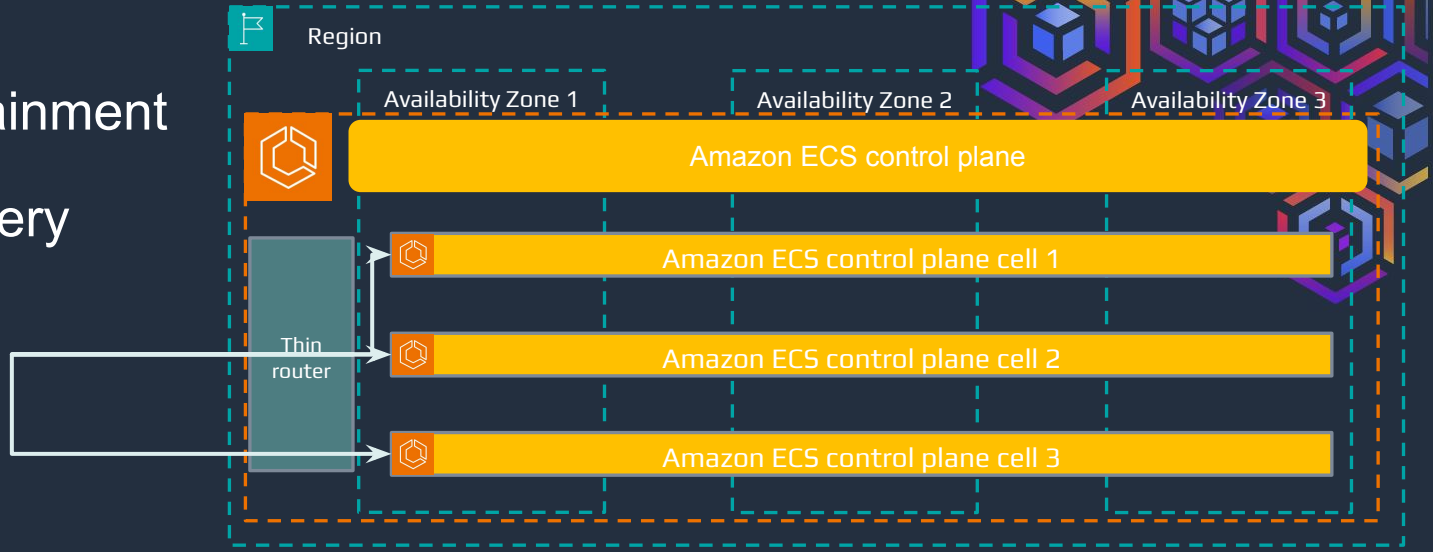
- Failure containment
- Faster recovery



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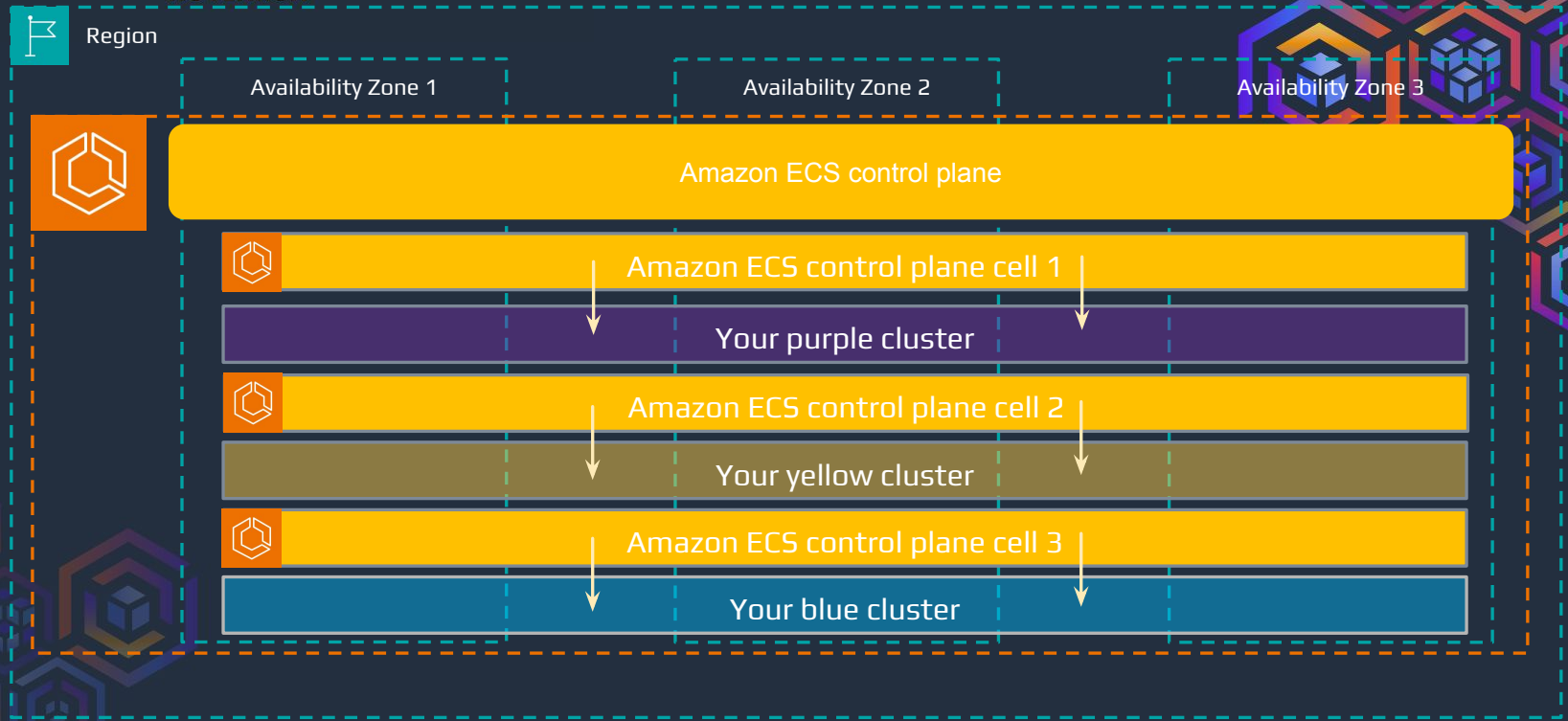

Scale

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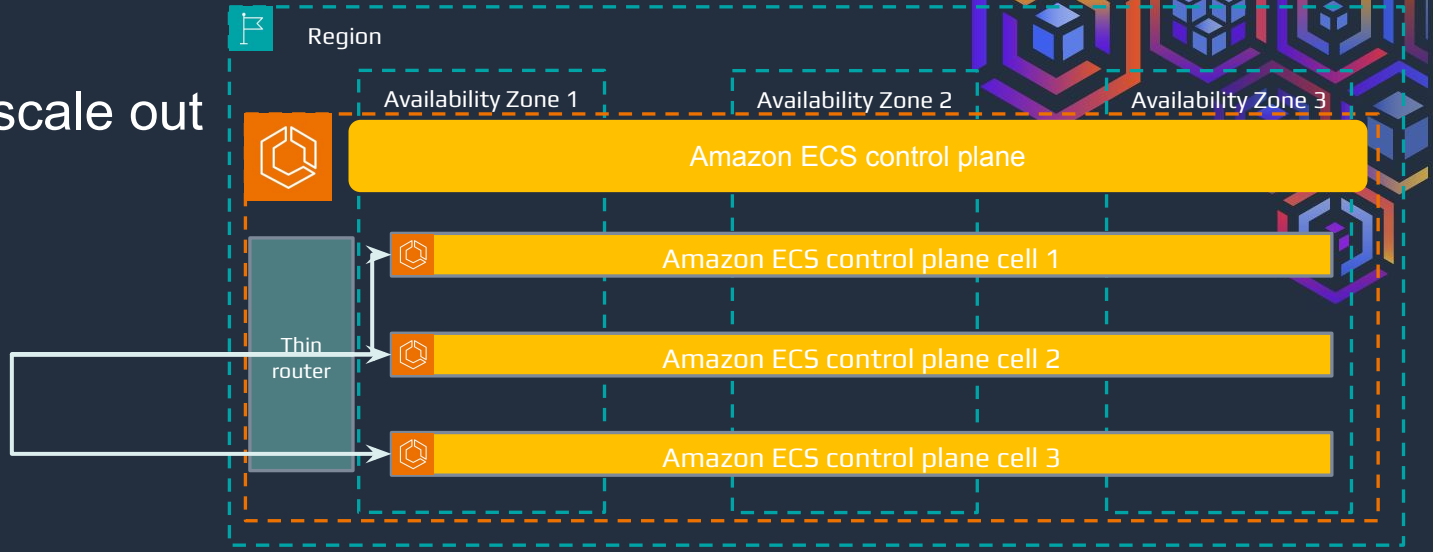
- Scale up vs scale out



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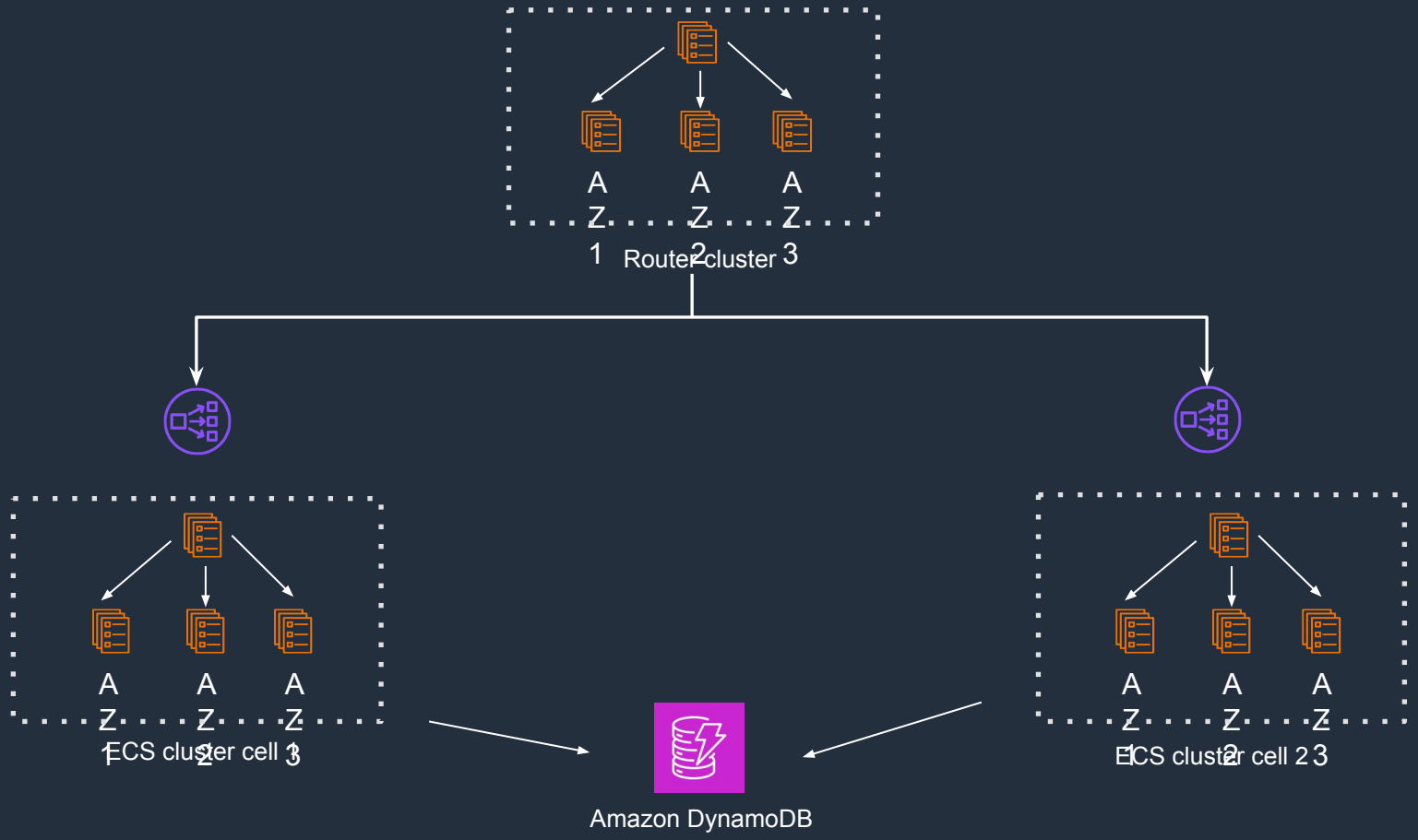
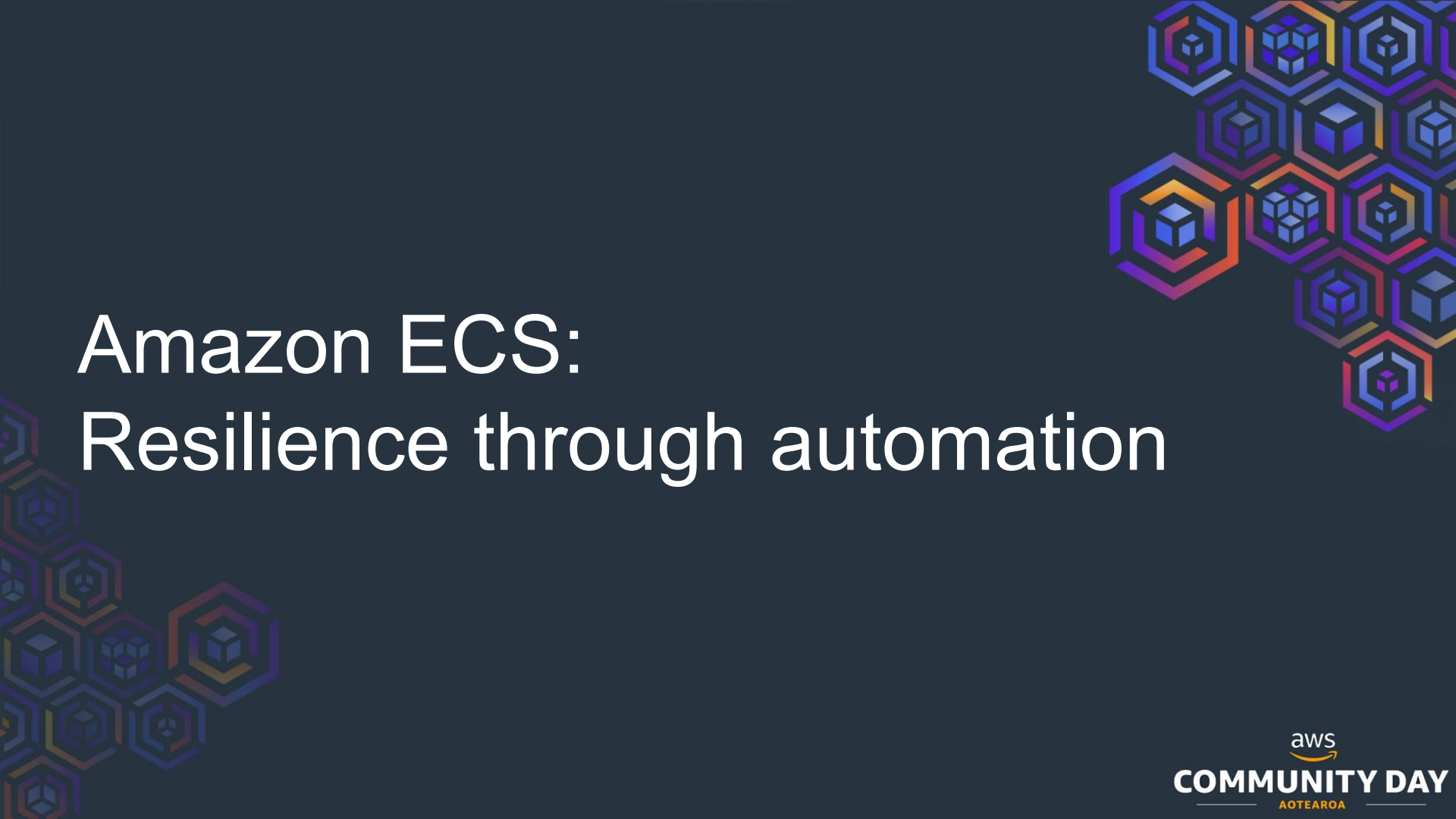
- Scale out vs scale up
- Testability

Using Amazon ECS clusters to build on cells



Amazon ECS:
Resilience through automation



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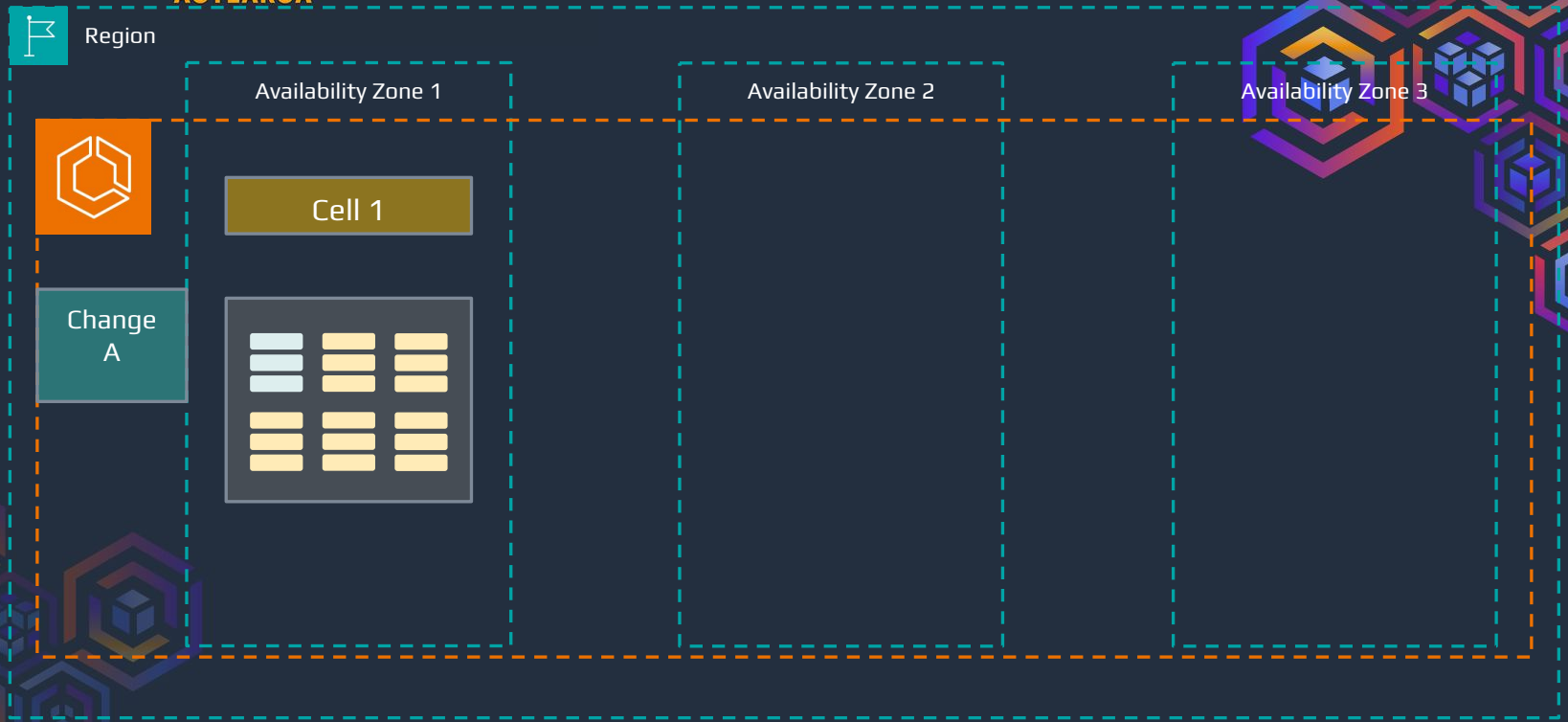

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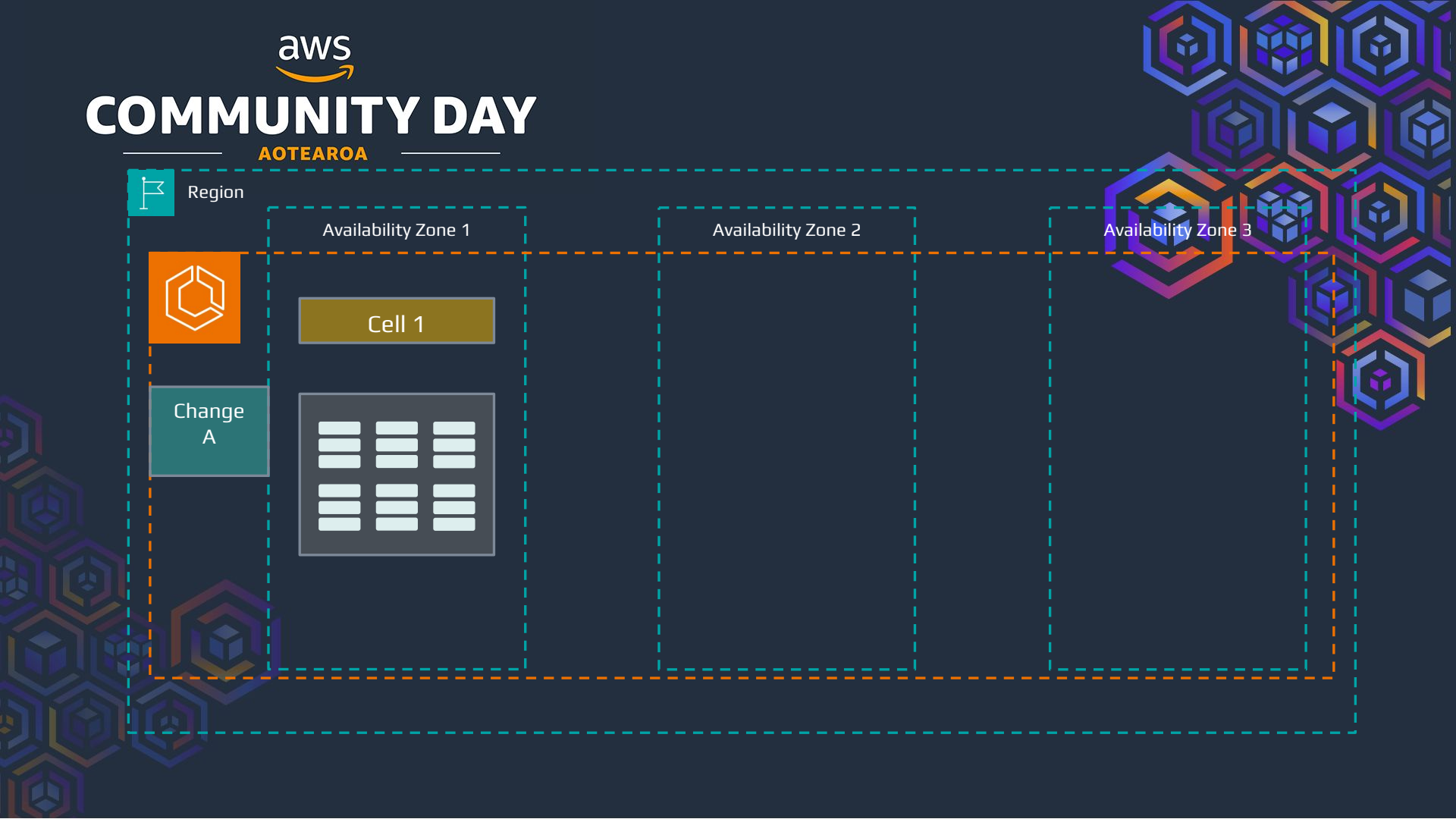

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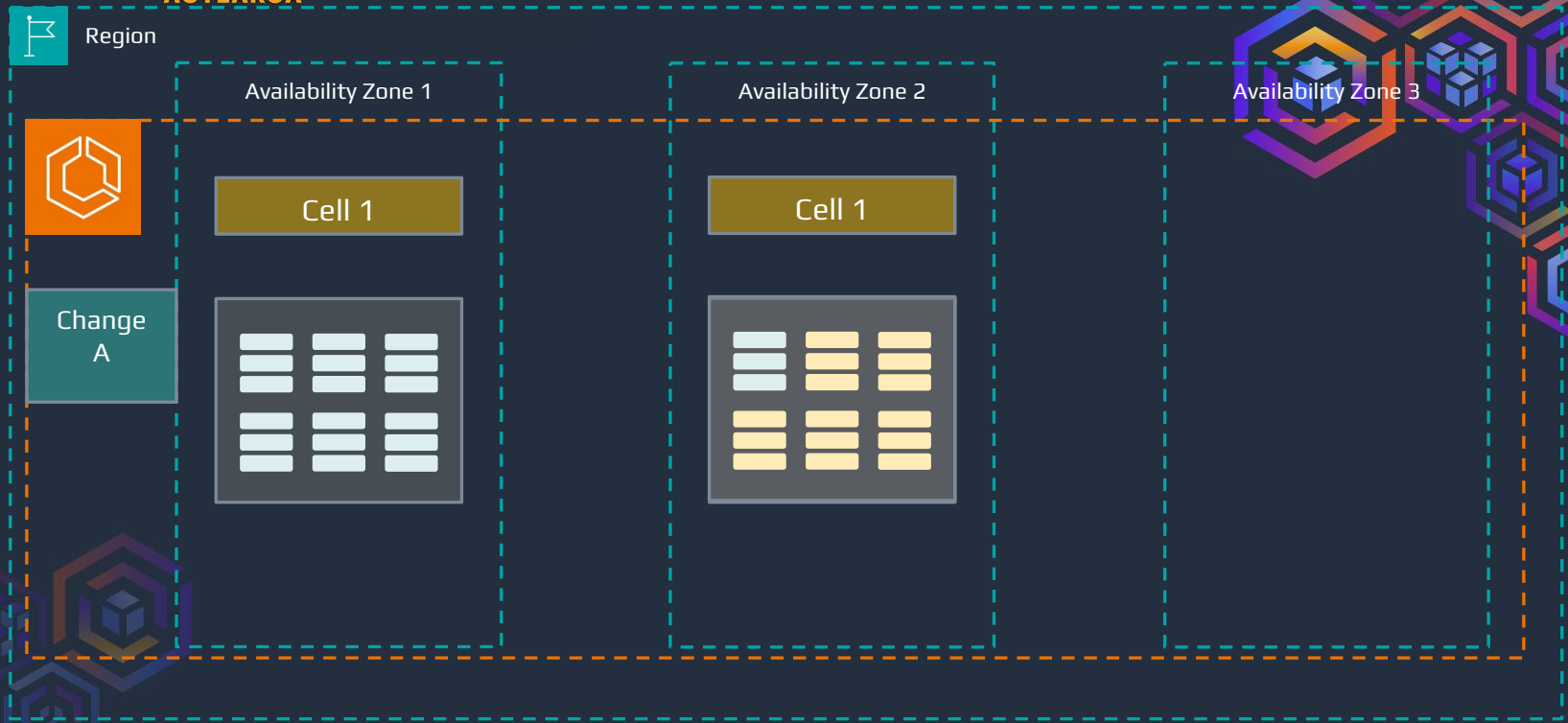

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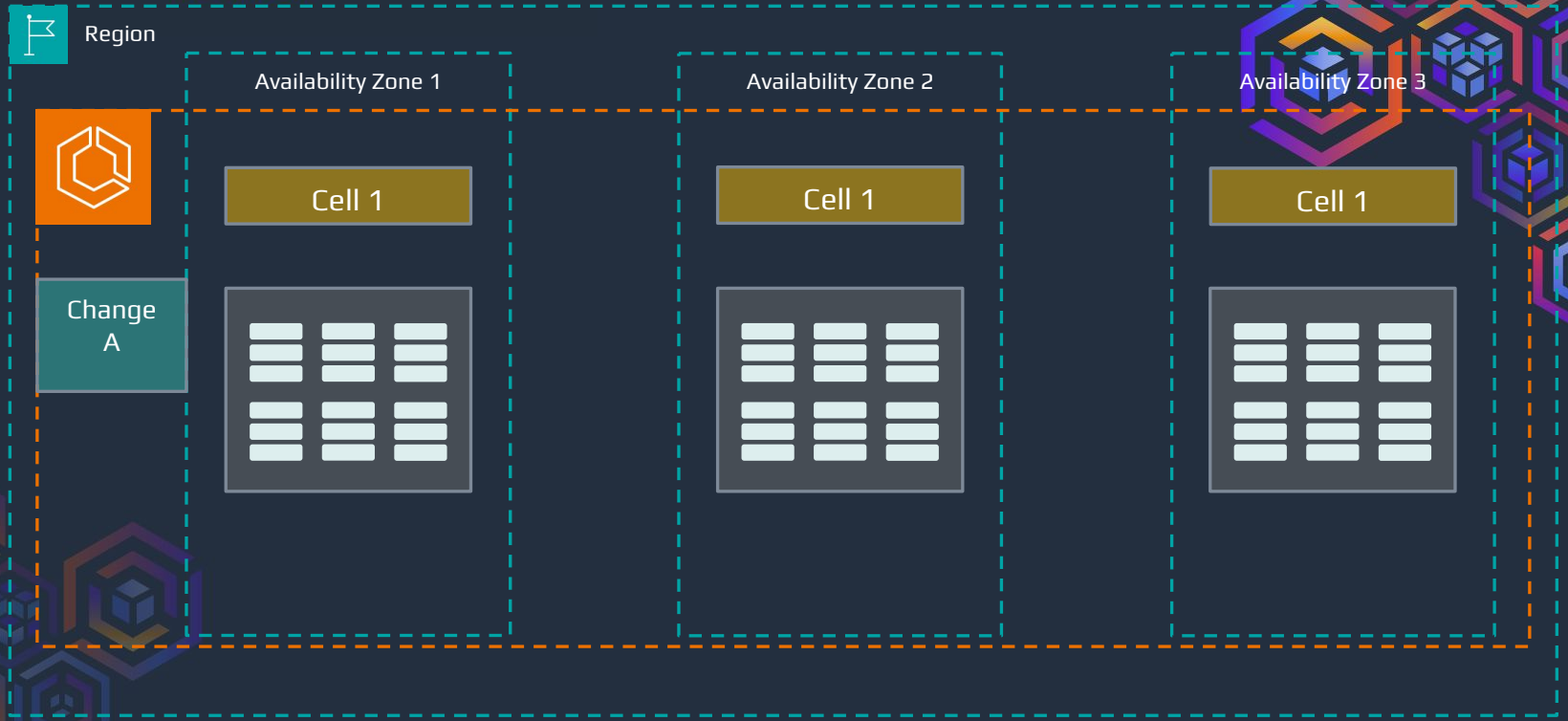

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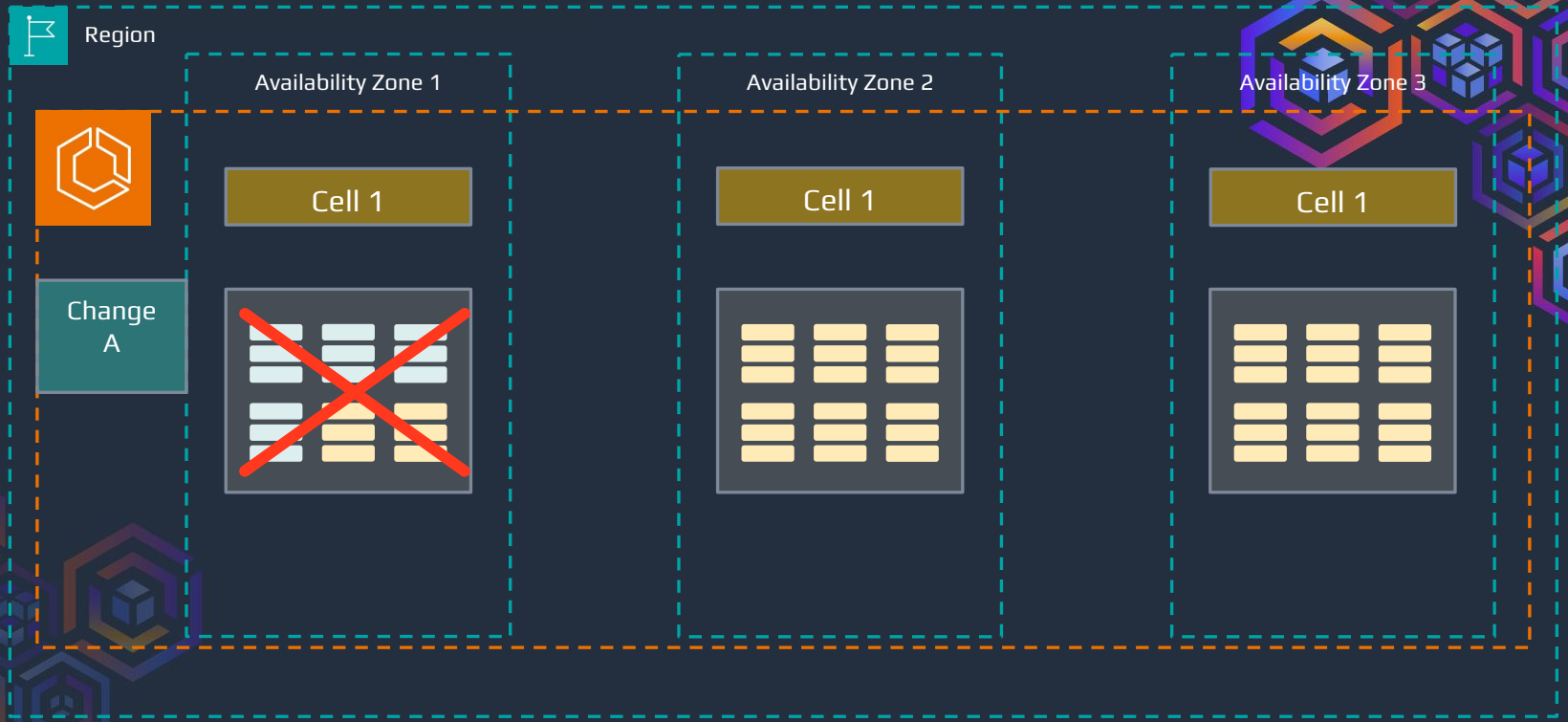

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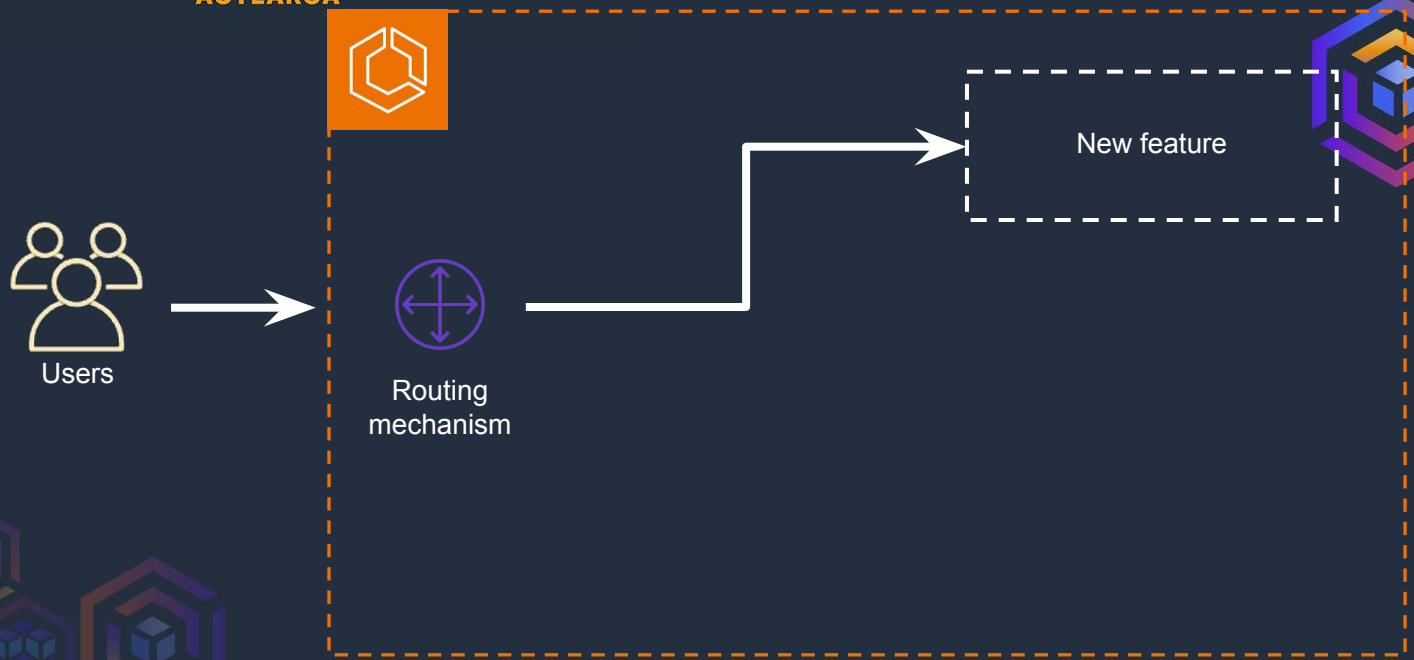

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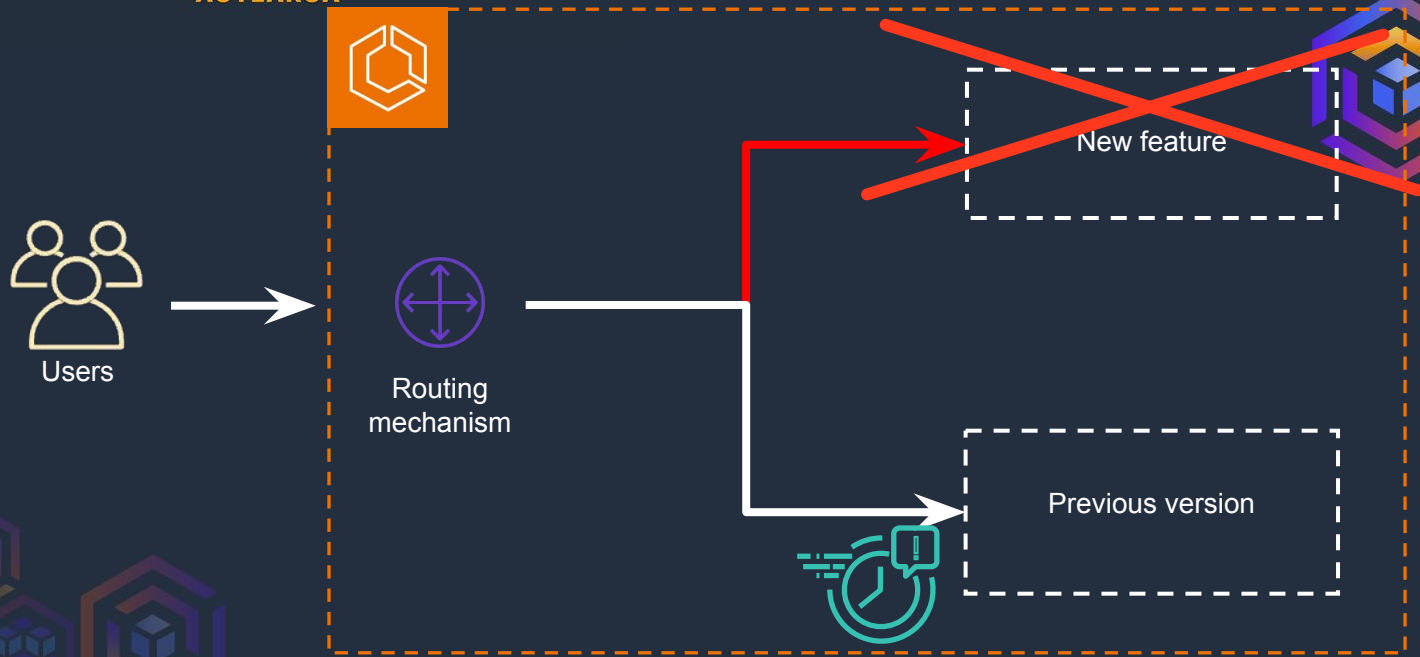

Resources

Amazon ECS Whitepaper

Re:invent video

Amazon ECS

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