AWS
re:Invent

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CON313-R

Migrating from Amazon EC2 to Amazon ECS for application modernization

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Agenda

Why modernize

Benefits of containers and Amazon ECS
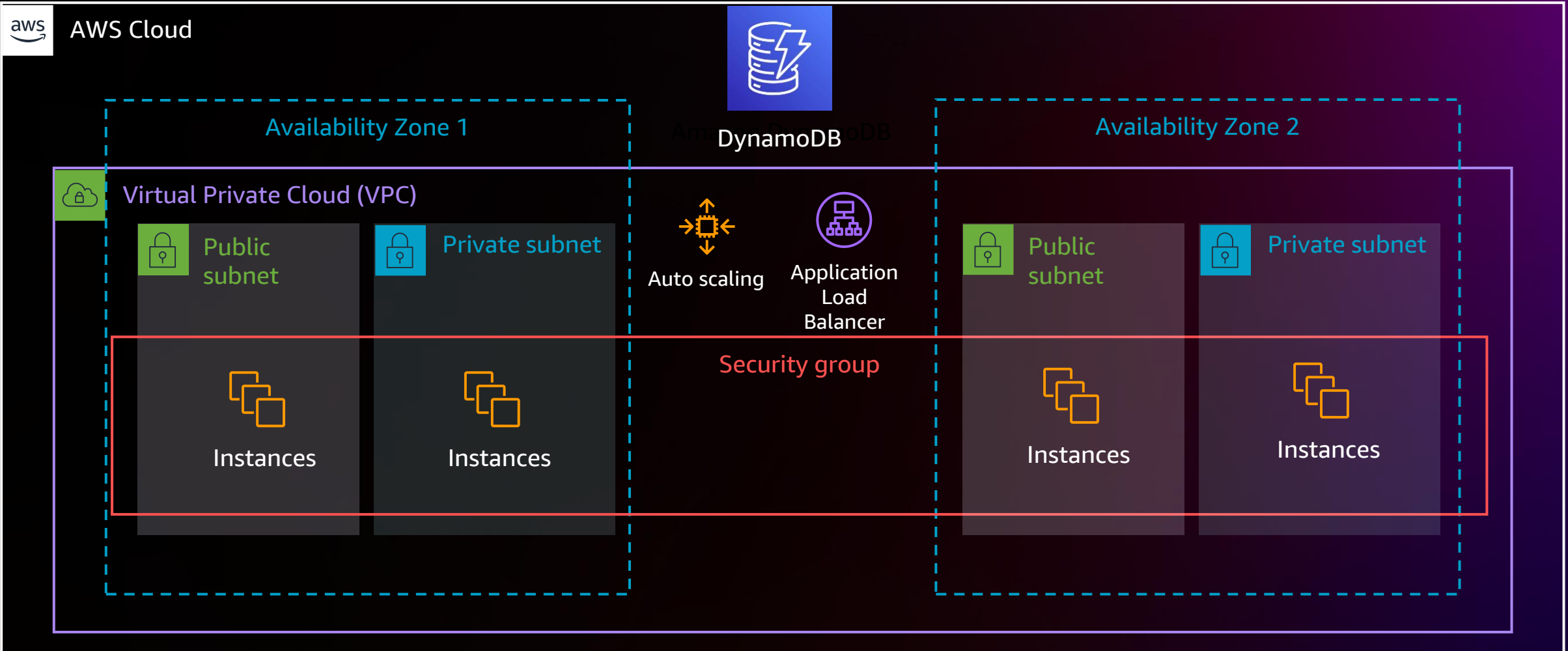
Potential migration challenges

Use AWS Copilot to accelerate the migration

Demo the final solution

Why modernize

Overview of a demo application running on Amazon EC2

AWS Cloud

DynamoDB

Availability Zone 1

Availability Zone 2

Virtual Private Cloud (VPC)

Public subnet

Private subnet

Auto scaling

Application Load Balancer

Security group

Instances

Instances

Public subnet

Private subnet

Instances

Instances

Goals of modernization

Improve resource utilization

Standardize packaging and deployments

Reduce operational overhead and make deployments more consistent

Enable developer ownership and self-service

Improve security and scalability
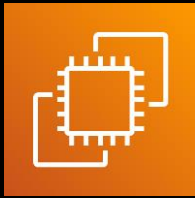
Containers and Amazon ECS

Overview of Amazon ECS

Amazon ECS

Fully managed container service
Highly performant and scalable

Amazon EC2

Regions, Wavelength,
Local Zones, Outposts

AWS Fargate

Serverless container
compute engine

Amazon ECS Anywhere

Customer-owned
container hosts

Amazon ECS scale and performance

Over 2.25 billion
Tasks launched every week

Tens of thousands
API requests served per second
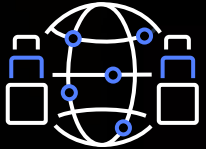
28 AWS Regions, 6 continents
Global presence
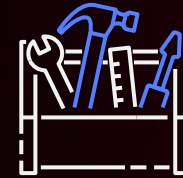
Benefits of containers and Amazon ECS

Cost savings

Higher availability

Better security

Faster time to production

Modern and effective developer tools

Simplification and management

Challenges

- How can we containerize the existing application's code?

- What infrastructure is required?

- How do we set up CI/CD?

- What about security?

- What are the best practices?

- What about monitoring and troubleshooting?

- Can the migration be done in phases?

- What about "noncontainer" infrastructure resources?

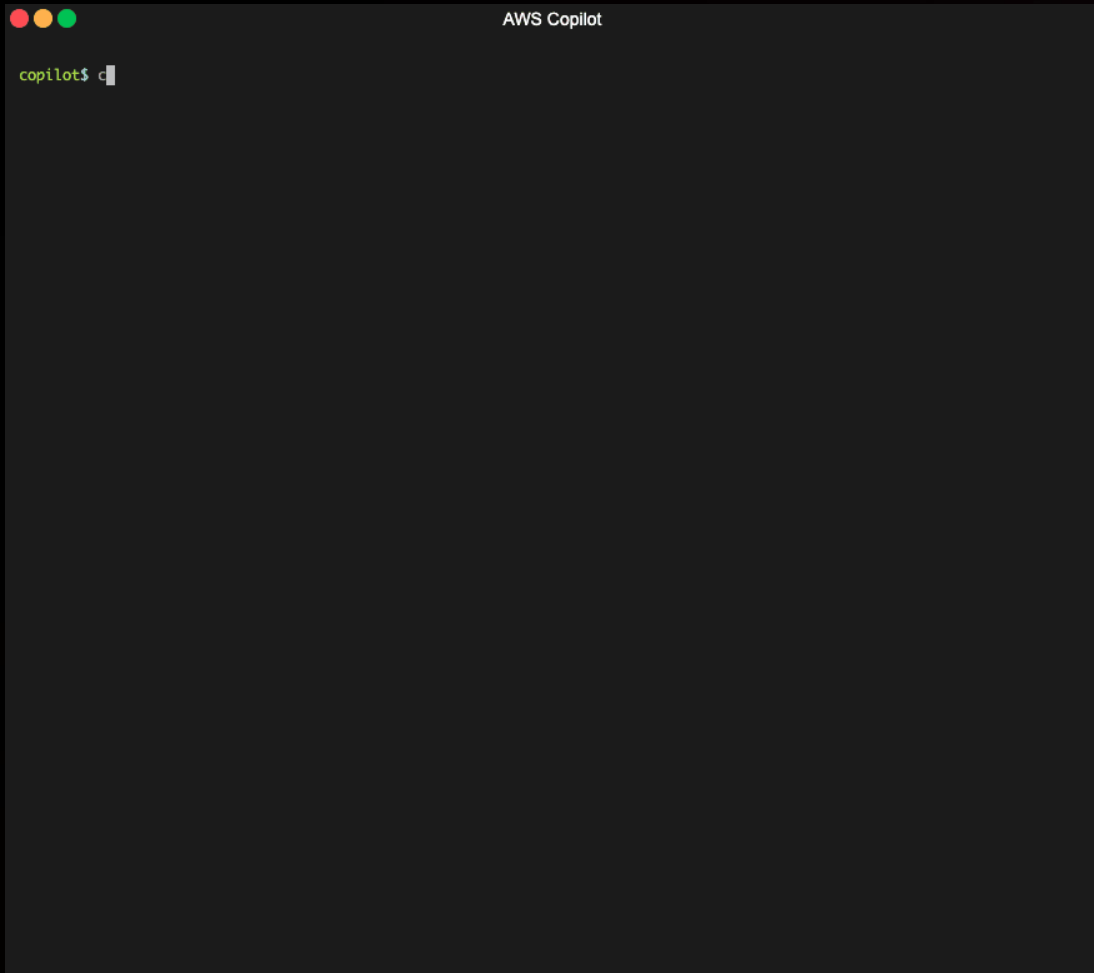# AWS Copilot:
The CLI for containers

"

The amazing thing about Copilot is that it allows us to create a production-ready ECS environment that comes pre-integrated with other components necessary for production workloads, like CI/CD pipelines, all with ease and the barest minimum resources to prepare beforehand. "

Koji Hamada

Manager of CX Div. Modern Application Development Team
Classmethod, Inc.

AWS Copilot: The CLI for containers

```
AWS Copilot
copilot$ c
```

Well-architected
infrastructure setup

Continuous deployment pipelines

Effective troubleshooting
and operations

Additional resources

[AWS Copilot](#)
Get started with AWS Copilot

[Demo application](#)
Try it yourself

[Amazon ECS Workshop](#)
More use cases and hands-on experience with containers and ECS

[Learn more about Amazon ECS](#)
Developer guides, documentation, and customers' use cases

Thank you!

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Please complete the session
survey in the **mobile app**