



Modernize Content Management Systems with Containers

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Agenda

- Why content management systems, and why modernization?
- Why are containers and persistent storage the right solution for modern content management systems?
- Demo
- Next steps

Why Content Management Systems?

- Simplify the creation and modification of digital content
 - Enterprise content management
 - Web content management
- No coding required
- Libraries of templates & plugins
- Powerful publishing tools
- Social Media Integration
- Built-in SEO Tools
- Detailed Analytics



Content Management System requirements

Long running,
stateful applications



WordPress
Drupal
Joomla

- Always on data availability
- Concurrent access from anywhere, anytime
- Dynamic scale with no performance impact
- Shared plug-ins & themes across containers
- High aggregate throughput and IOPS

Why modernize content management systems

Speed



Consistent environment improves time-to-market

Agility



Automation simplifies testing and iterating

Simplicity



Reduce operational burden by removing undifferentiated heavy lifting

Security



Uniform security across environment, maintained with automation

AWS Fargate containers + Amazon EFS

Better together for Content Management Systems

Simple

Fully serverless, no instances to manage. Developers focus on applications, not infrastructure

Elastic

Scale up or down rapidly based on demand. Pay only for what you use

Available

Regional services enable applications to span multiple availability zones, with automatic failover



Agile

Easily share plug-ins and themes across containers and applications

Secure

Restrict data access based on role; enable granular access when multiple applications share a file system

Amazon Container Services

Simplify container deployments



Amazon ECS

- A fully managed container orchestration service
- Application needs determine compute capacity, enabling focus on building & managing applications instead of infrastructure



Amazon EKS

- Enables the flexibility to start, run, and scale Kubernetes applications in the AWS cloud or on-premises
- Provides highly-available, secure clusters and automates key tasks such as patching, node provisioning, and updates



AWS Fargate

- A serverless compute engine for containers that works with ECS and EKS
- Allocates the right amount of compute on demand, eliminating the requirement to choose compute instances and scale cluster capacity

Amazon Elastic File System (EFS)

Simple, serverless, set-and-forget, elastic file system for AWS compute

Serverless shared storage



Serverless and scalable

No provisioning, scale capacity, connections, and IOPS



Full AWS compute integration

EC2 Instances, containers, and serverless
Supports 10,000s of connections

Simple and highly reliable



Elastic

Pay only for capacity used
Performance built-in, scales with capacity



Highly durable and available

Designed for 11 9s of durability
99.99% availability SLA

Performant and cost-optimized



Performant

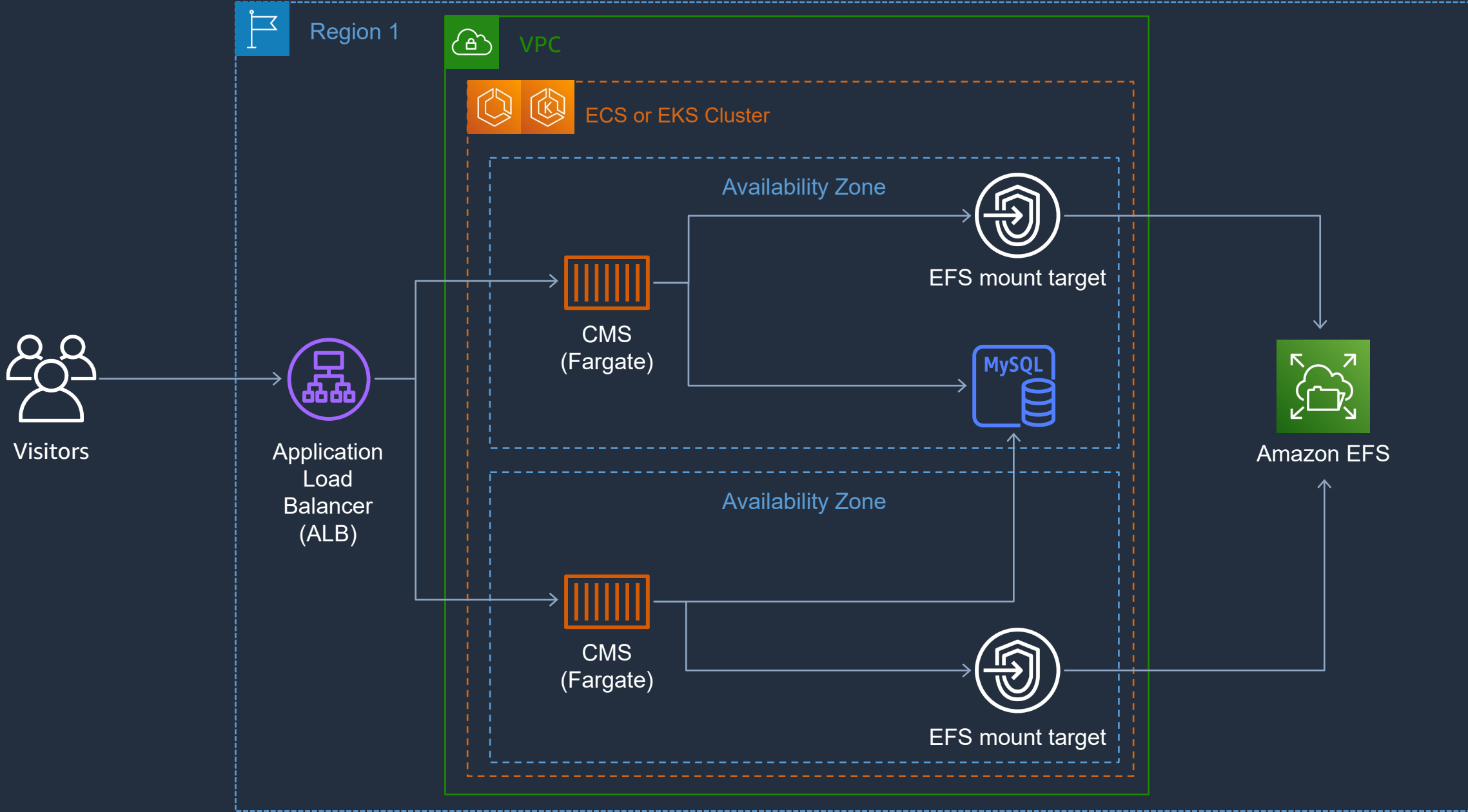
10s of GB/s of throughput and 500,000+ IOPS



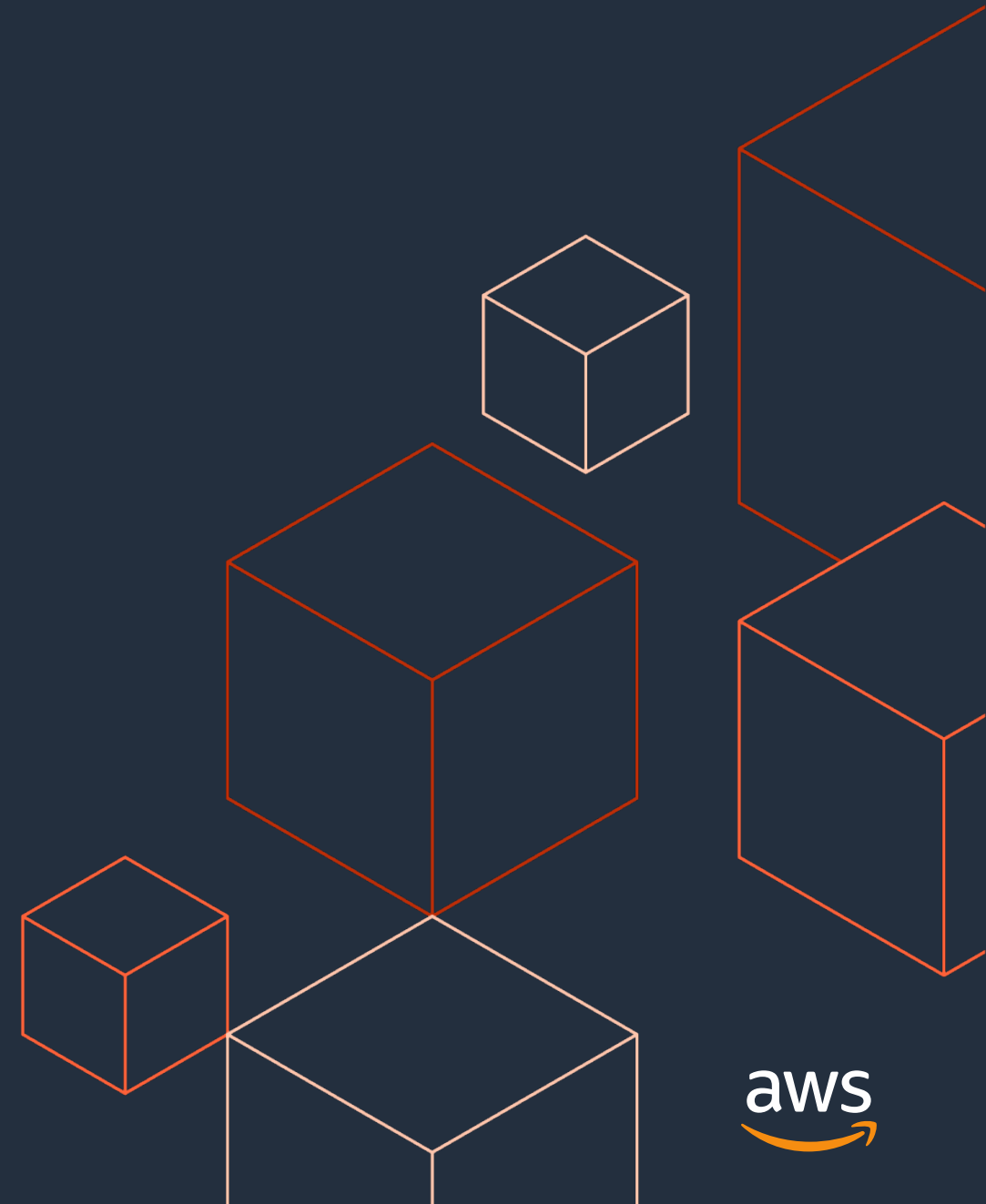
Four storage classes

Automatic lifecycle-based cost optimization

Example: WordPress on AWS Fargate + Amazon EFS



Demo



Acquia Modernizes Web Hosting With Amazon EKS & Amazon EFS

Challenge

Sought to further improve ability to elastically scale across compute and storage to improve their customers' digital experience.

Solution

Containerize hosting application, and run it on Amazon Elastic Kubernetes Service (Amazon EKS), using Amazon Elastic File System (Amazon EFS) for persistent storage.

Benefits

- Dynamic scaling of customer environments
- Lower TCO through improved storage and compute utilization.
- Reduced administrative burden by leveraging fully managed services

“ By containerizing our hosting applications and running them on Amazon EKS and Amazon EFS, we have improved our customer experience, while considerably reducing our infrastructure and operational maintenance overhead. ”

– Jake Farrell, Senior Director of Engineering, Acquia

Acquia

Company: Acquia

Industry: IT

Country: United States

Employees: 1k+

Website: [acquia.com](https://www.acquia.com)

About Acquia

Acquia's software and services are built around Drupal to give enterprise companies the ability to build, operate, and optimize websites, apps, and other digital experiences.



Getting started and next steps

1. Watch re:Invent 2020 presentations on modernizing applications

<https://aws.amazon.com/blogs/storage/aws-reinvent-recap-modernize-your-applications-with-amazon-efs/>

2. Read the developers guide for using EFS for container storage blog

<https://aws.amazon.com/blogs/containers/developers-guide-to-using-amazon-efs-with-amazon-ecs-and-aws-fargate-part-1/>

3. Read blog on running stateful workloads with AWS Fargate + EFS

<https://aws.amazon.com/blogs/containers/running-stateful-workloads-with-amazon-eks-on-aws-fargate-using-amazon-efs/>

4. Complete the ECS or EKS workshop

- ECS: https://ecsworkshop.com/stateful_workloads/
- EKS: https://www.eksworkshop.com/beginner/190_efs/



Thank You!

