Speeding Up with CloudFront and ElastiCache

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Overview

The war on latency

Distributing a pizza monolith

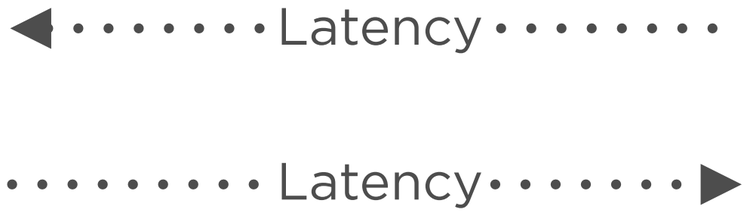
ElastiCache all the things!

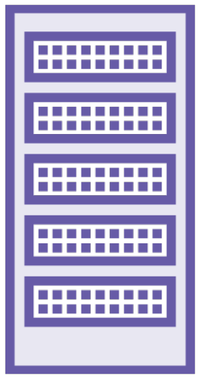
A cluster of pizzas

CloudFront Overview

Requester

Web Server





Steps to Improve Latency

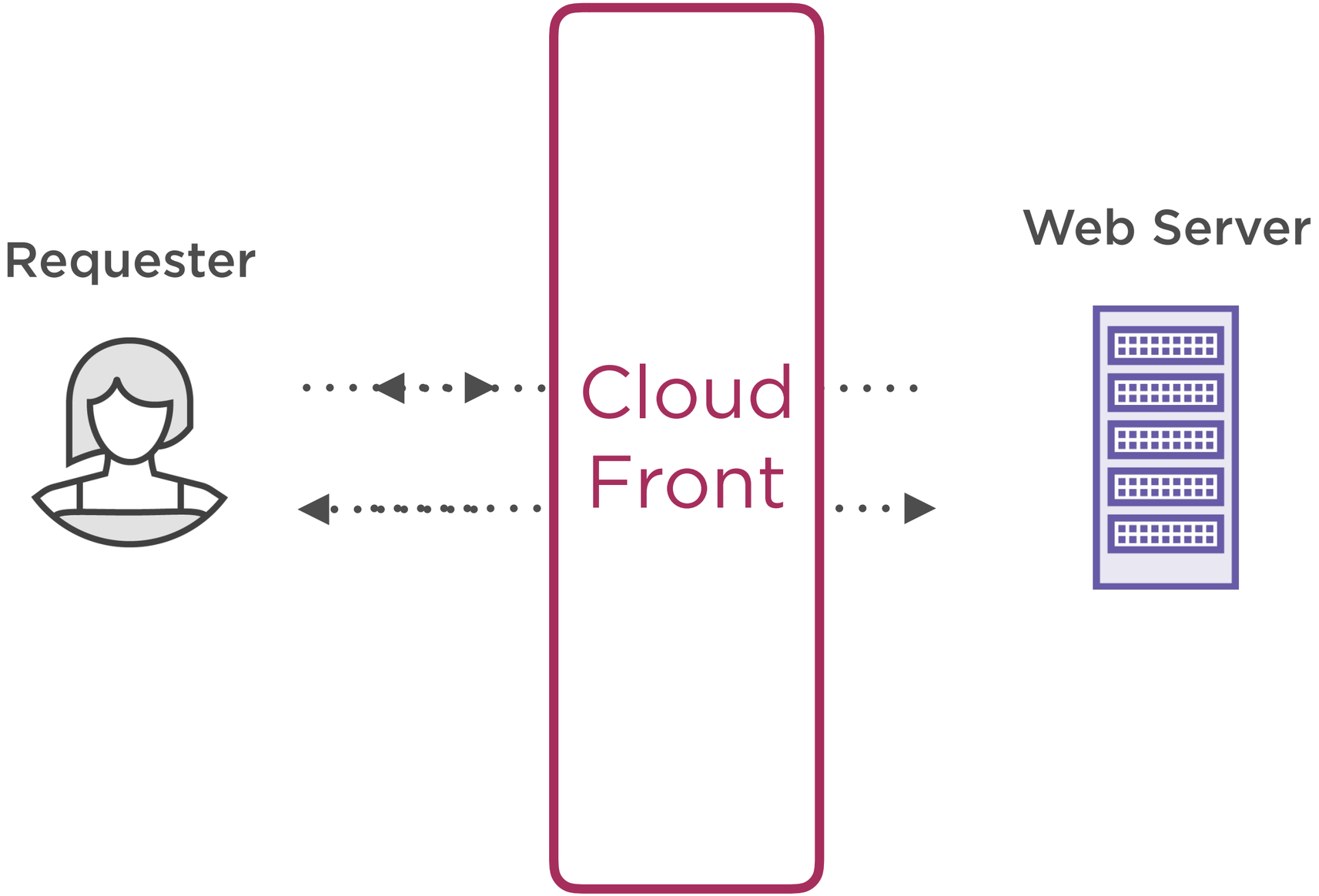
Improve application performance

Use larger EC2 instances

Reduce distance between user and app

CloudFront

Global Content Delivery Network designed to reduce latency and reduce application load

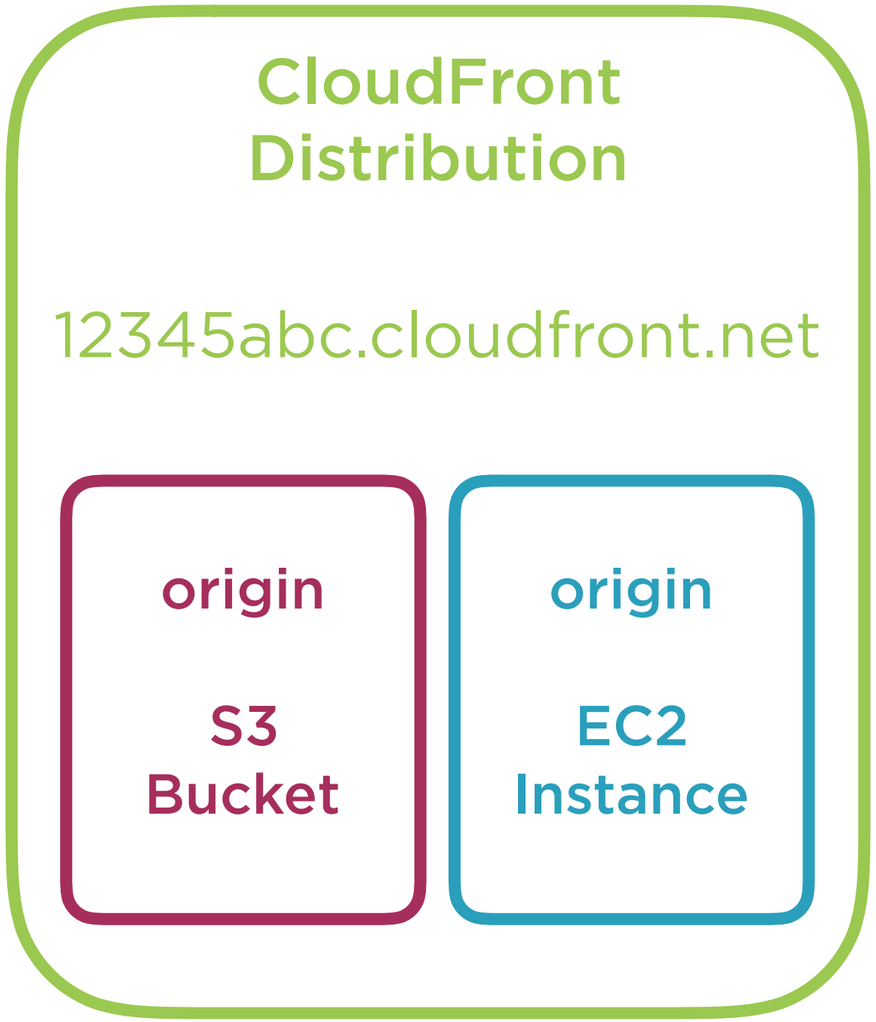

Requester
Cloud
Front
Web Server

CloudFront

Integrates with S3, EC2, and Load Balancers

Edges “Objects” and serves them directly

Proxies dynamic content to origin source


CloudFront
Distribution
12345abc.cloudfront.net
origin
S3
Bucket
origin
EC2
Instance

CloudFront Distribution Behaviors

Determines cache behavior based on path

Set time-to-live for specific content

Fine-tuned control over caching behavior

Edging Your App with CloudFront

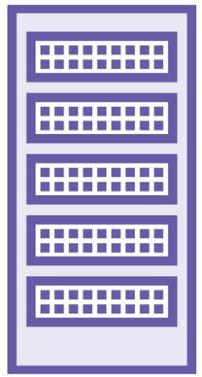
Objective

Create CloudFront Distribution for Pizza Luvrs

Configuring a CloudFront Distribution

ElastiCache Overview

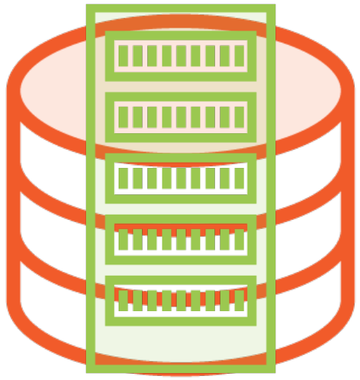
Web Server



Response

Query

In-Memory Database



ElastiCache

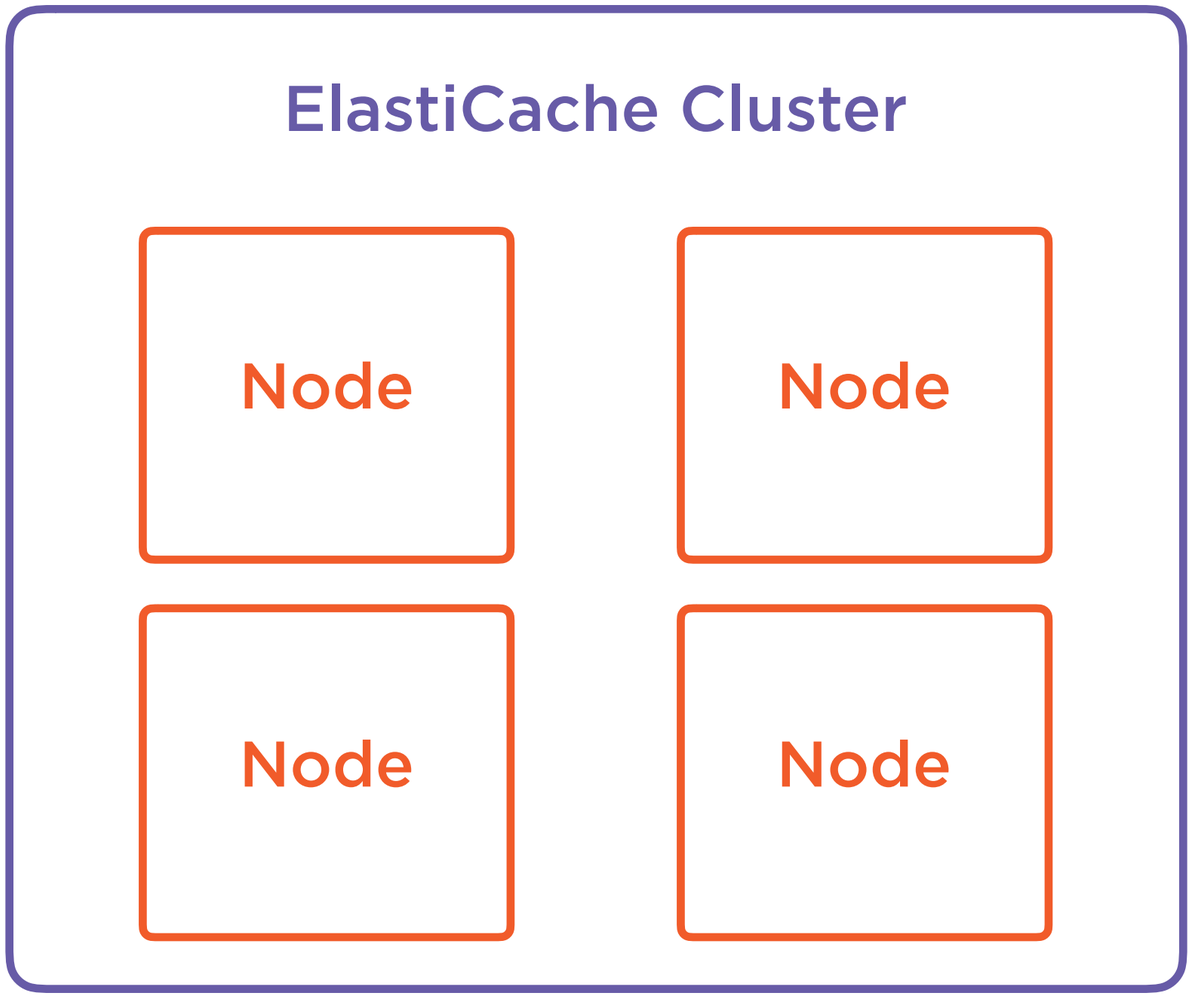
Managed service for In-memory cache datastore

ElastiCache Features

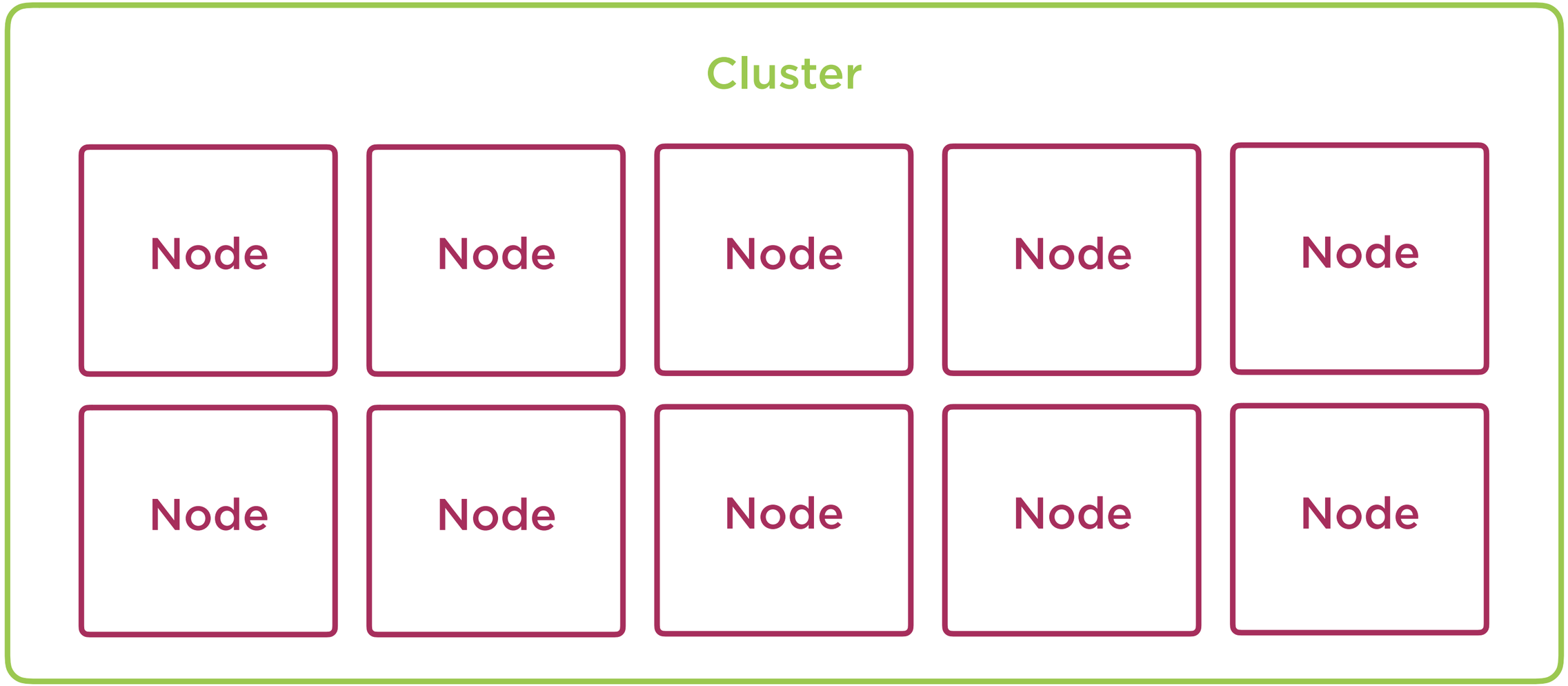
Managed Maintenance, Upgrades, etc.

Automatic read replicas

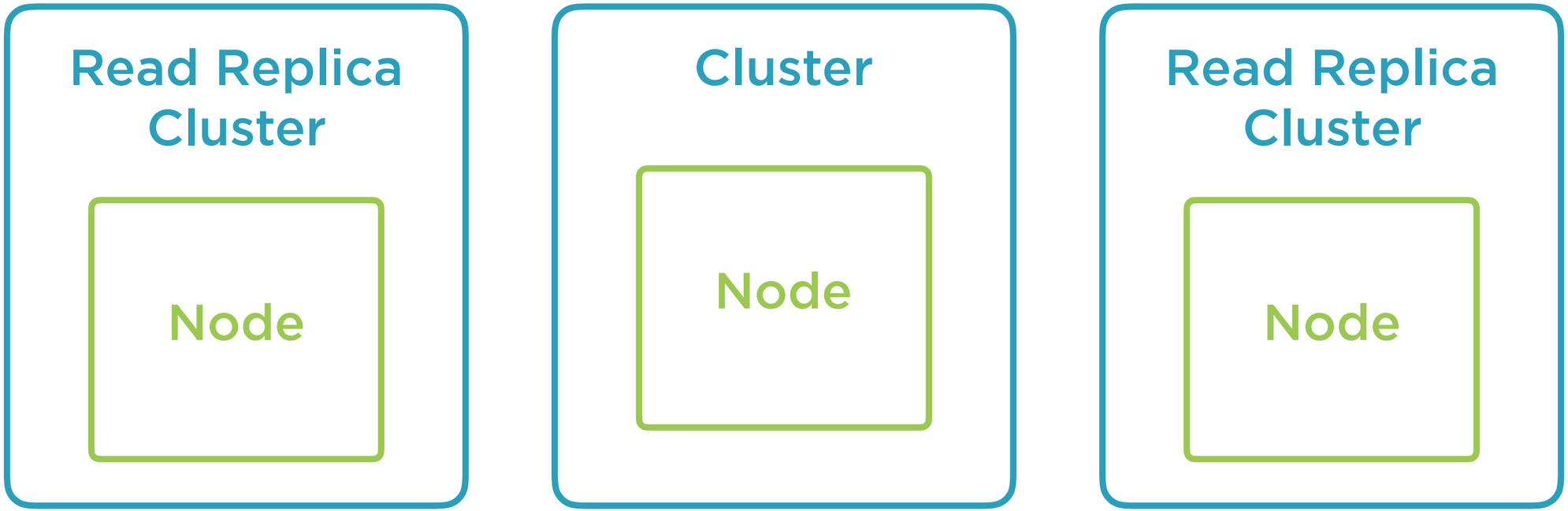
Simple node management


ElastiCache Cluster
Node
Node
Node
Node

Memcached



Redis


Read Replica Cluster
Node
Cluster
Node
Read Replica Cluster
Node

Redis is the industry leader
for in-memory caching

Configuring a Redis Cluster in ElastiCache

Objective

Create Cache Subnet Group in VPC for ElastiCache Cluster

Interacting with ElastiCache in Code

Objective

Add ElastiCache Permissions to EC2 Role

Conclusion

Summary

Distributing CloudFront origins

Pizza from the clouds

ElastiCache for speed

Users love Redis

Thank you!

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