



Games in the Cloud

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Who is Amazon.com?

Amazon's three businesses

Consumer Business

US, UK, DE, FR, JP, CA, CN, IT, ES

amazon.com


Seller Business

amazon.com


IT Infrastructure Business


amazon
web services™

Cloud Computing

What is Cloud Computing?

A style of Computing in which
Elastic IT-enabled capabilities
Are delivered “As a Service”
To External customers
Using Internet technologies.

Gartner, 2008

Amazon's Cloud Computing

- 1) Elastic Capacity
- 2) Faster time to market
- 3) No initial investment (No Capex)
- 4) Pay as you go, pay for what you use
- 5) Focus on your business

1) Elastic Capacity

Scaling up and down in minutes
No need to provision
Optimize resources based on your needs



2) Faster time to market

Infrastructure is no longer a barrier
Easier to test a solution
Easier to deploy worldwide

3) No initial investment (No CapEx)

Cloud Computing doesn't require initial investments
You pay for it in a different way

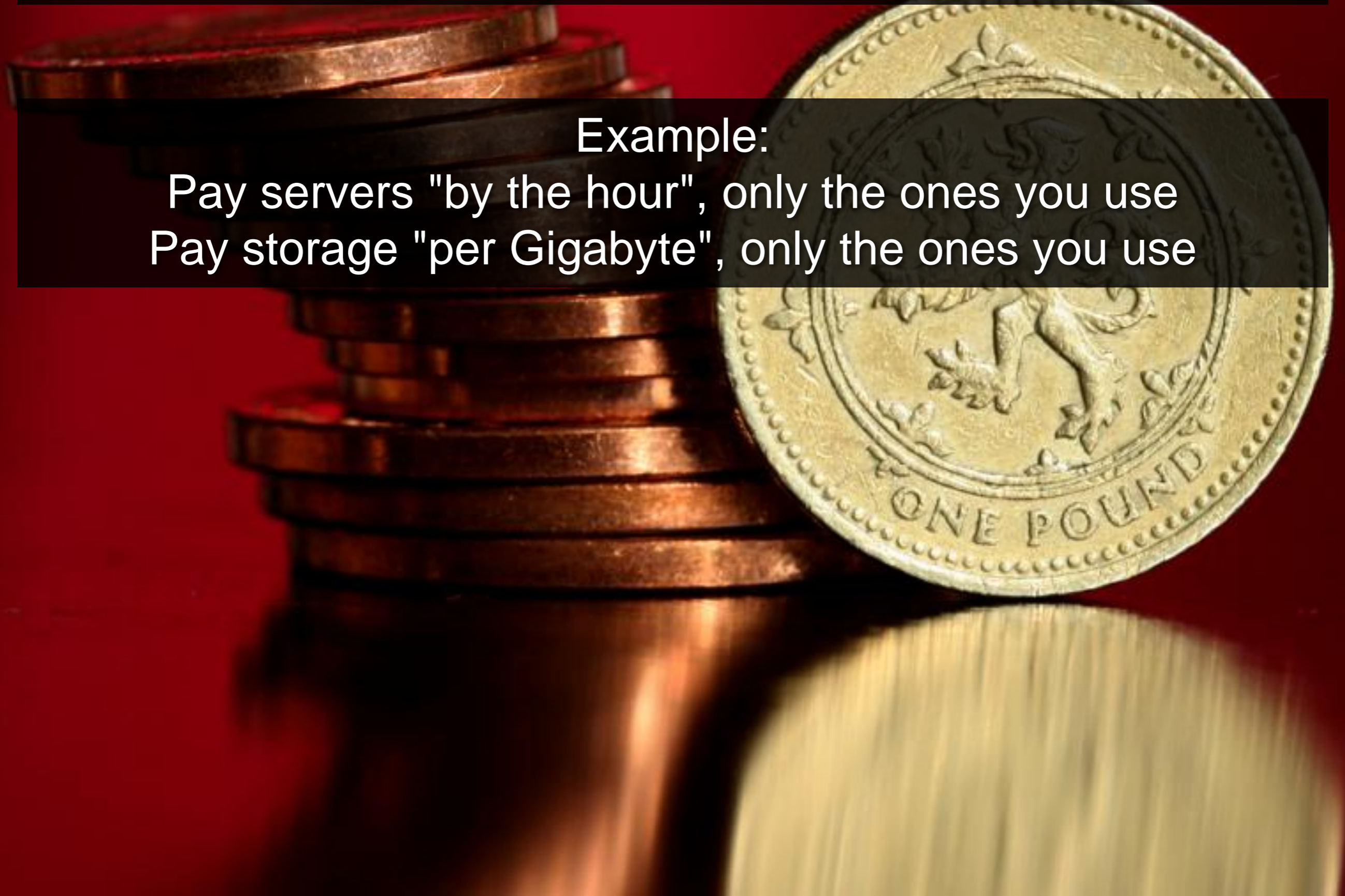


4) Pay as you go, pay for what you use

Example:

Pay servers "by the hour", only the ones you use

Pay storage "per Gigabyte", only the ones you use




5) Focus on your business

Automation + Better management tools
Less time is spent on repetitive tasks



What is Amazon Web Services?

A close-up photograph of Werner Vogels, CTO of Amazon.com, speaking at a conference. He is a middle-aged man with a beard and mustache, wearing a dark suit jacket, a dark shirt, and a dark tie. He has a small black microphone clipped to his beard. The background is blurred, showing a stage with blue and green lighting.

"AWS offers an Infrastructure
web services platform in the cloud"

Werner Vogels, CTO, Amazon.com

AWS Global Infrastructure



AWS Global Infrastructure

A dark gray world map is centered in the background, showing the outlines of continents and countries. The map is semi-transparent, allowing the text to be clearly visible over it.

Edge Locations

Regions

Availability Zones

Regions

US West

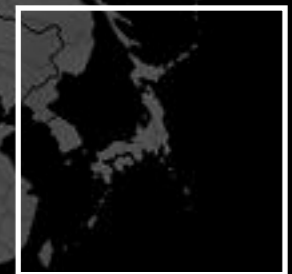


US East

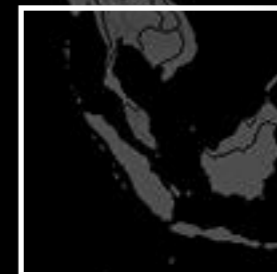


EU West

AP Japan



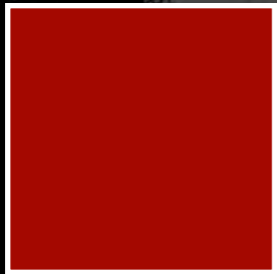
AP Singapore



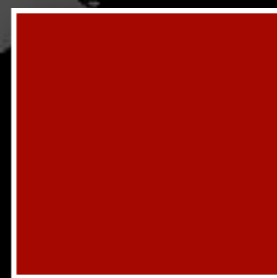
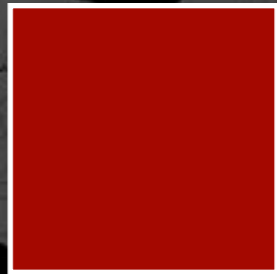
Regions

Region: Set of multiple Data Centers

US West

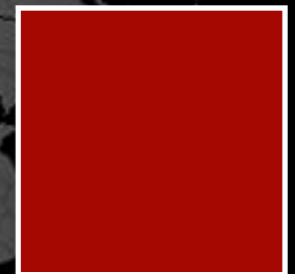


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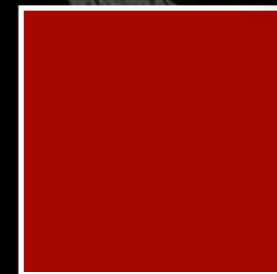


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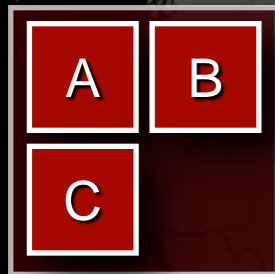
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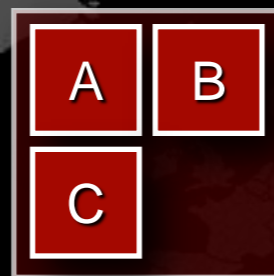
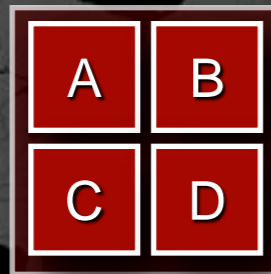
Availability Zones (AZ)

Distinct locations, insulated from failures

US West

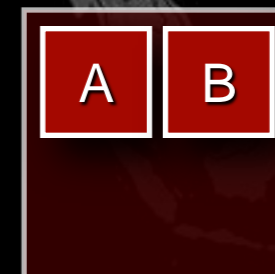
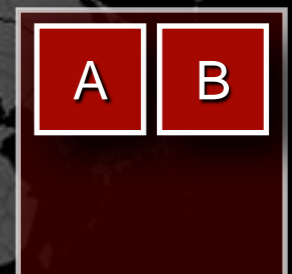


US East



EU West

AP Japan



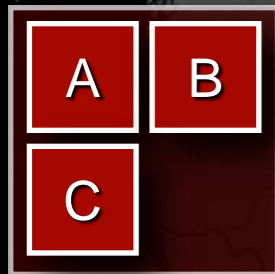
AP Singapore

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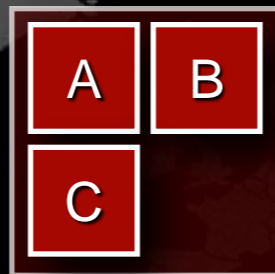
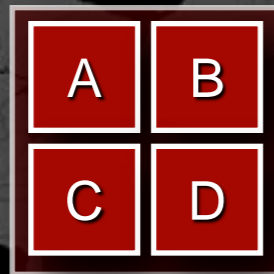
Distinct locations, insulated from failures

Low latency connectivity within same Region

US West

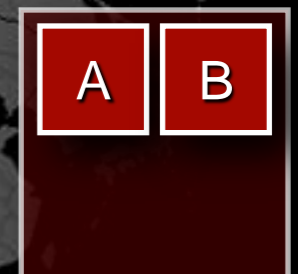


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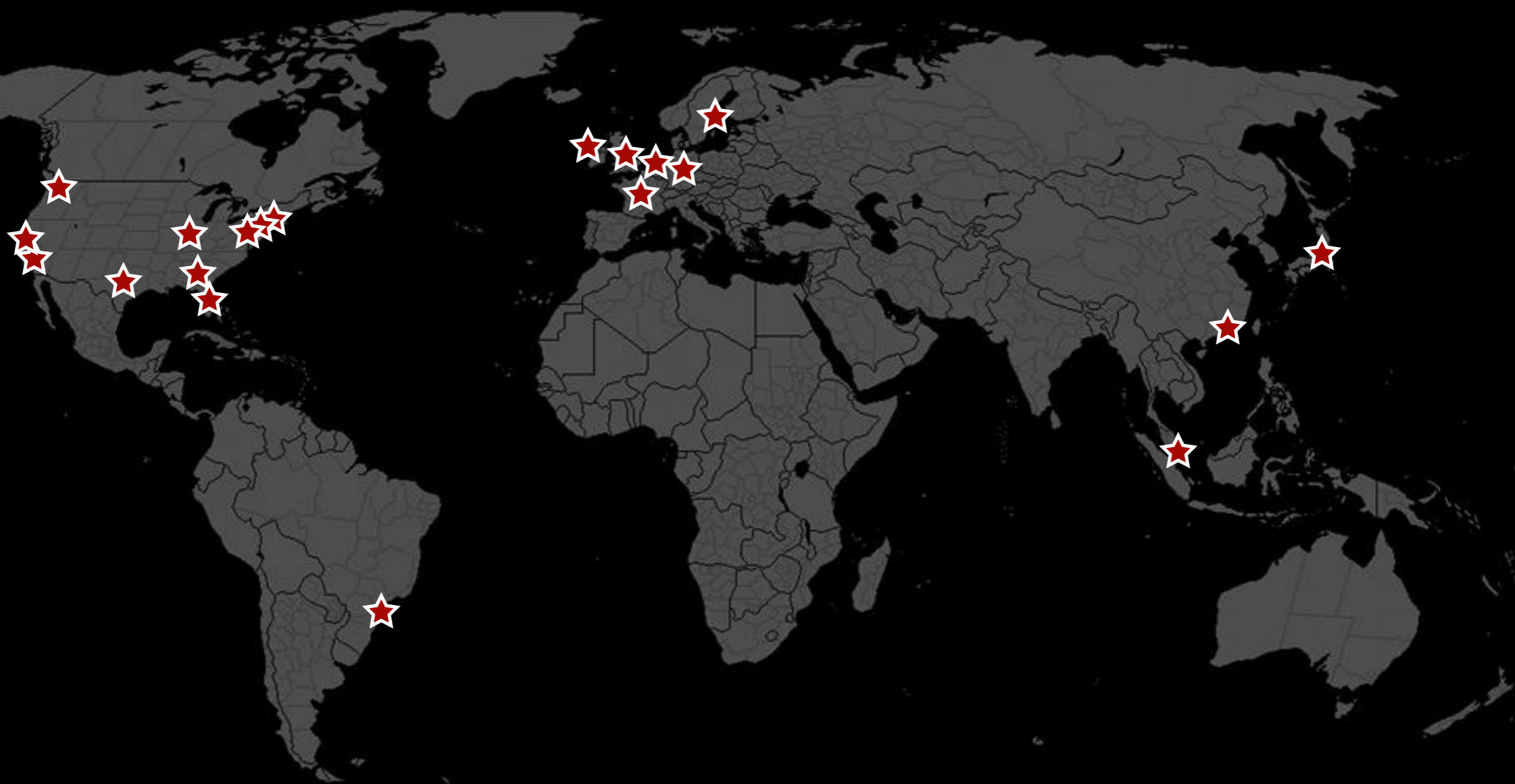
EU West

AP Japan



Amazon Cloudfront + Route 53

Content Delivery Network (CDN) + DNS



What is unique about Amazon Web Services?



Flexibility, Freedom of Choice

Multiple Operating Systems (Linux, Windows, etc.)
Multiple Platforms / Databases
Multiple licensing options



Security



Scale

We operate at Large scale
Multiple Data Centers, multiple Regions
Economies of Scale -> Reduced Costs -> Happy Customers



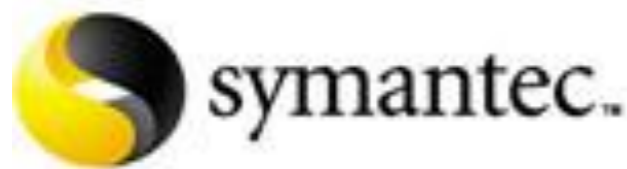
Support

Basic: Forums, Technical FAQs, Service Health Dashboard

Premium: Bronze, Silver, Gold, Platinum



Global Partner Ecosystem



Pace of innovation at Amazon Web Services



AWS Building Blocks

Compute

Amazon Elastic Compute Cloud (EC2)
Amazon Elastic MapReduce
Auto Scaling

Content Delivery

Amazon CloudFront

Database

Amazon SimpleDB
Amazon Relational Database Service (RDS)
Amazon ElastiCache

Deployment & Management

AWS Elastic Beanstalk
AWS CloudFormation

E-Commerce

Amazon Fulfillment Web Service (FWS)

Industry-specific Clouds

AWS GovCloud (US)

Messaging

Amazon Simple Queue Service (SQS)
Amazon Simple Notification Service (SNS)
Amazon Simple Email Service (SES)

Monitoring

Amazon CloudWatch

Networking

Amazon Route 53
Amazon Virtual Private Cloud (VPC)
Elastic Load Balancing
AWS Direct Connect

Payments & Billing

Amazon Flexible Payments Service (FPS)
Amazon DevPay

Storage

Amazon Simple Storage Service (S3)
Amazon Elastic Block Store (EBS)
AWS Import/Export

Support

AWS Premium Support

Web Traffic

Alexa Web Information Service
Alexa Top Sites

Workforce

Amazon Mechanical Turk

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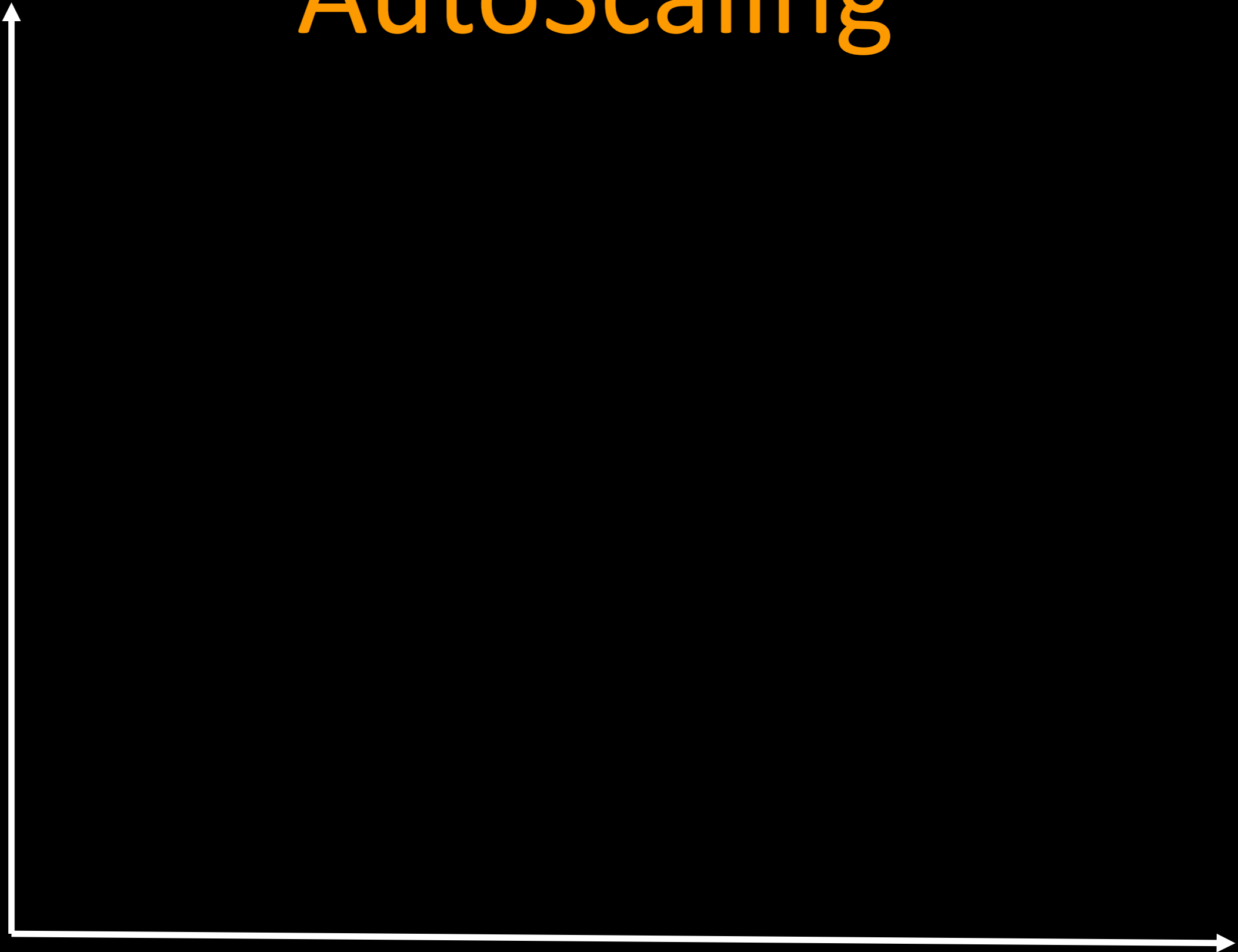
EC2

Elastic Compute
Cloud

AutoScaling

AutoScaling

EC2
instances



Time

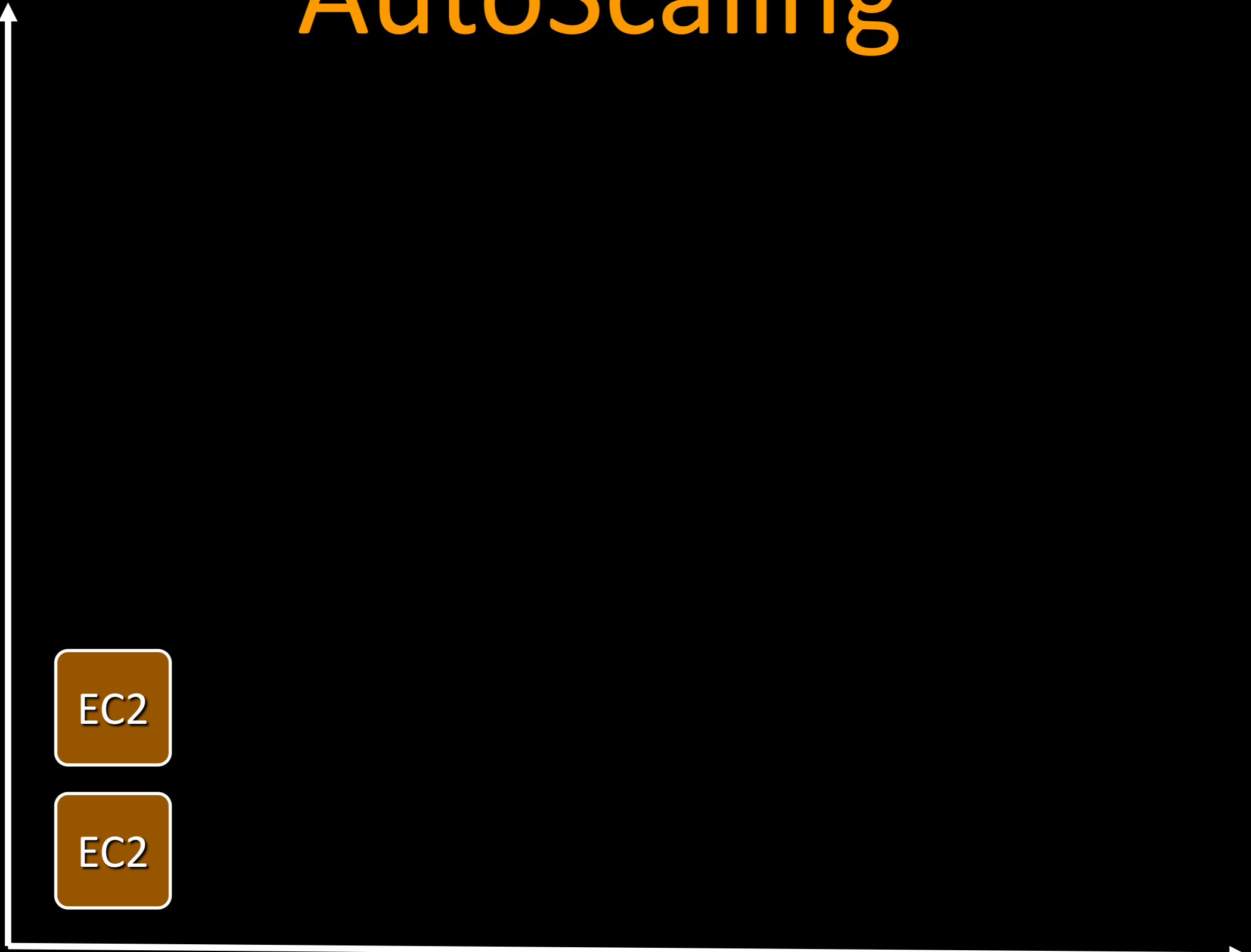
AutoScaling

EC2
instances

EC2

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Time



AutoScaling

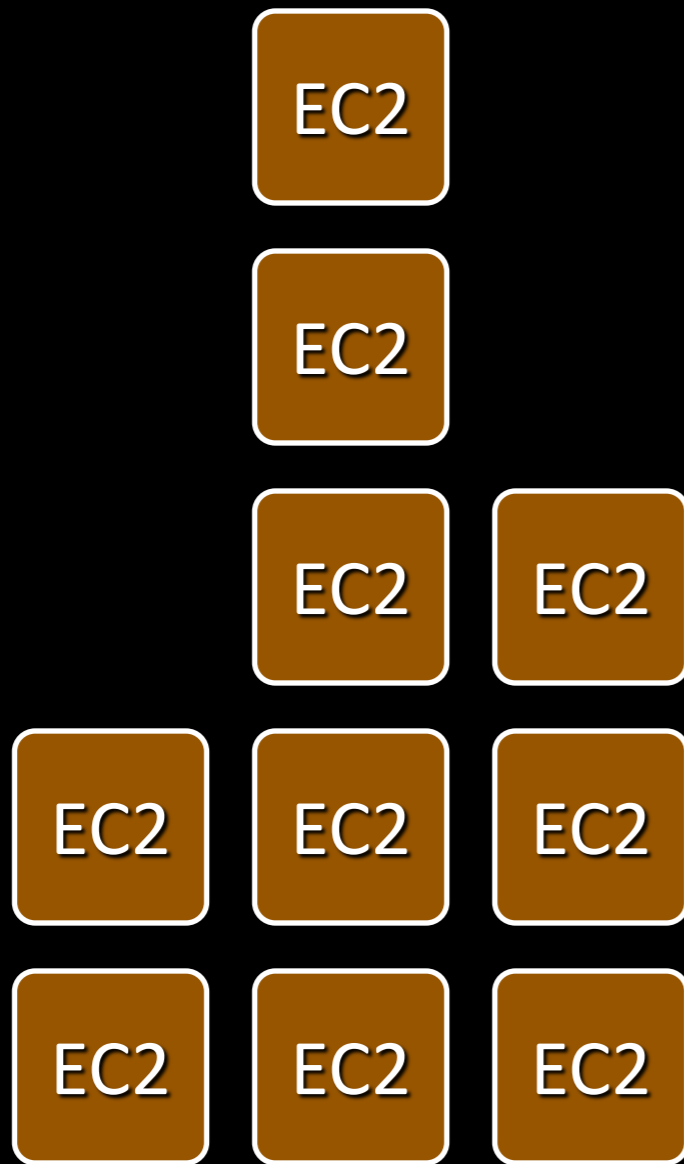
EC2
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AutoScaling

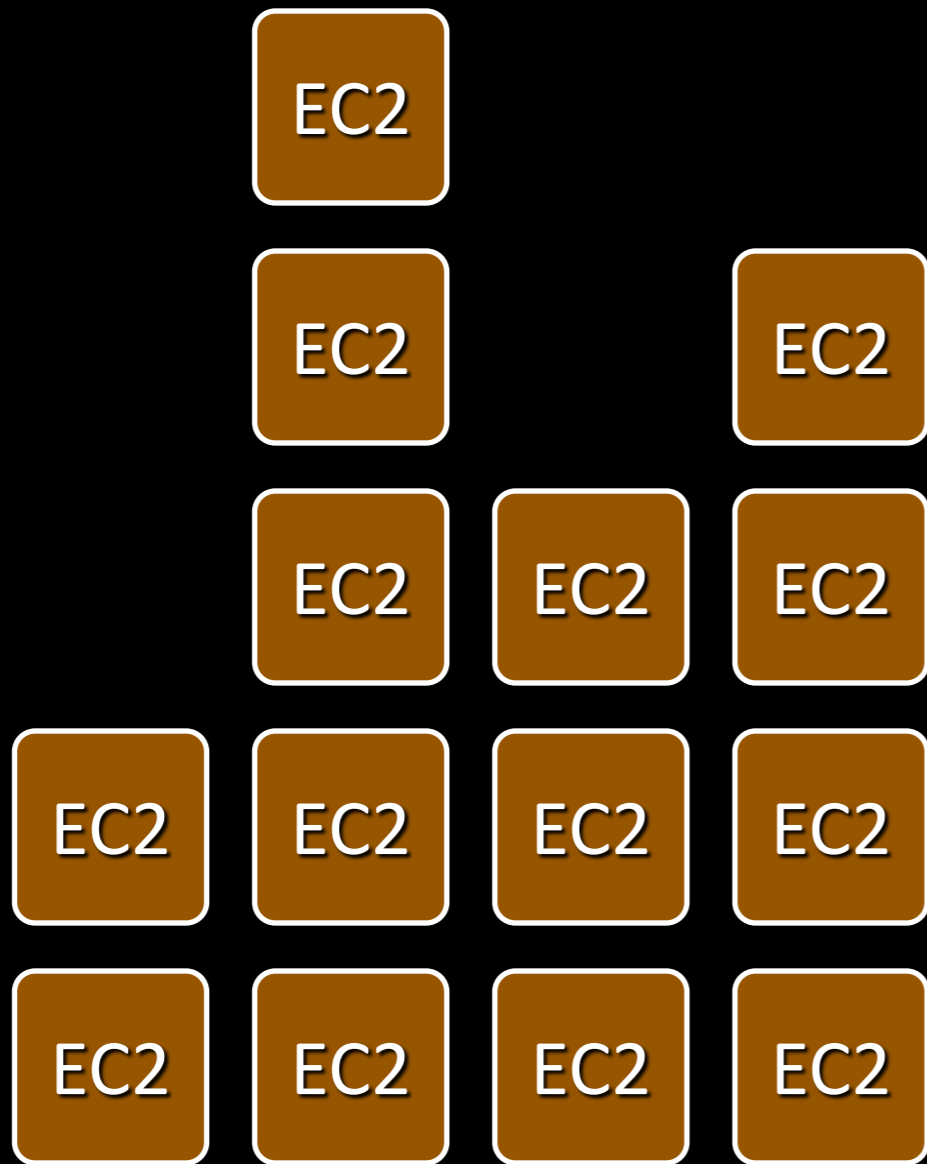
EC2
instances



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AutoScaling

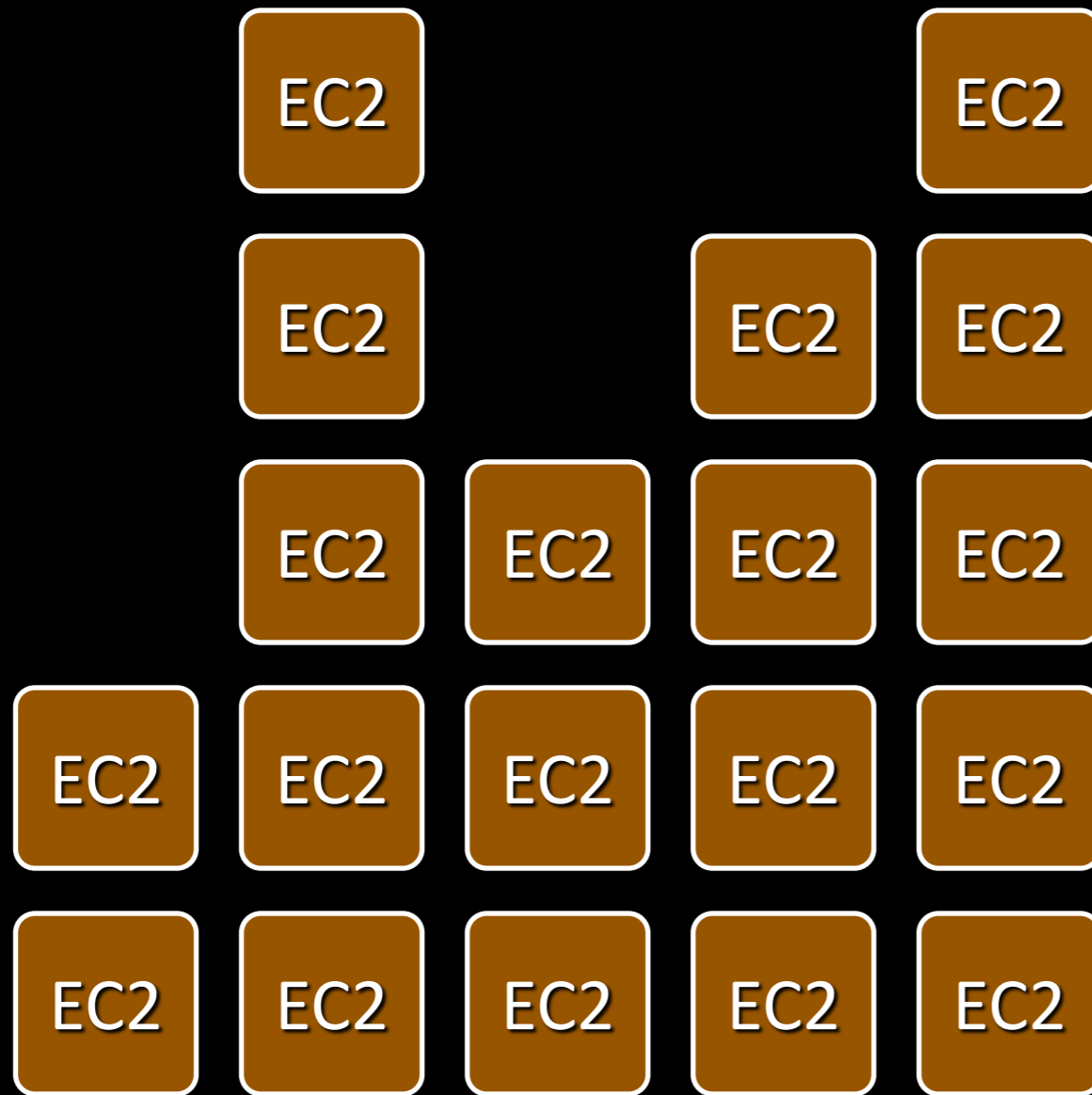
EC2
instances



Time

AutoScaling

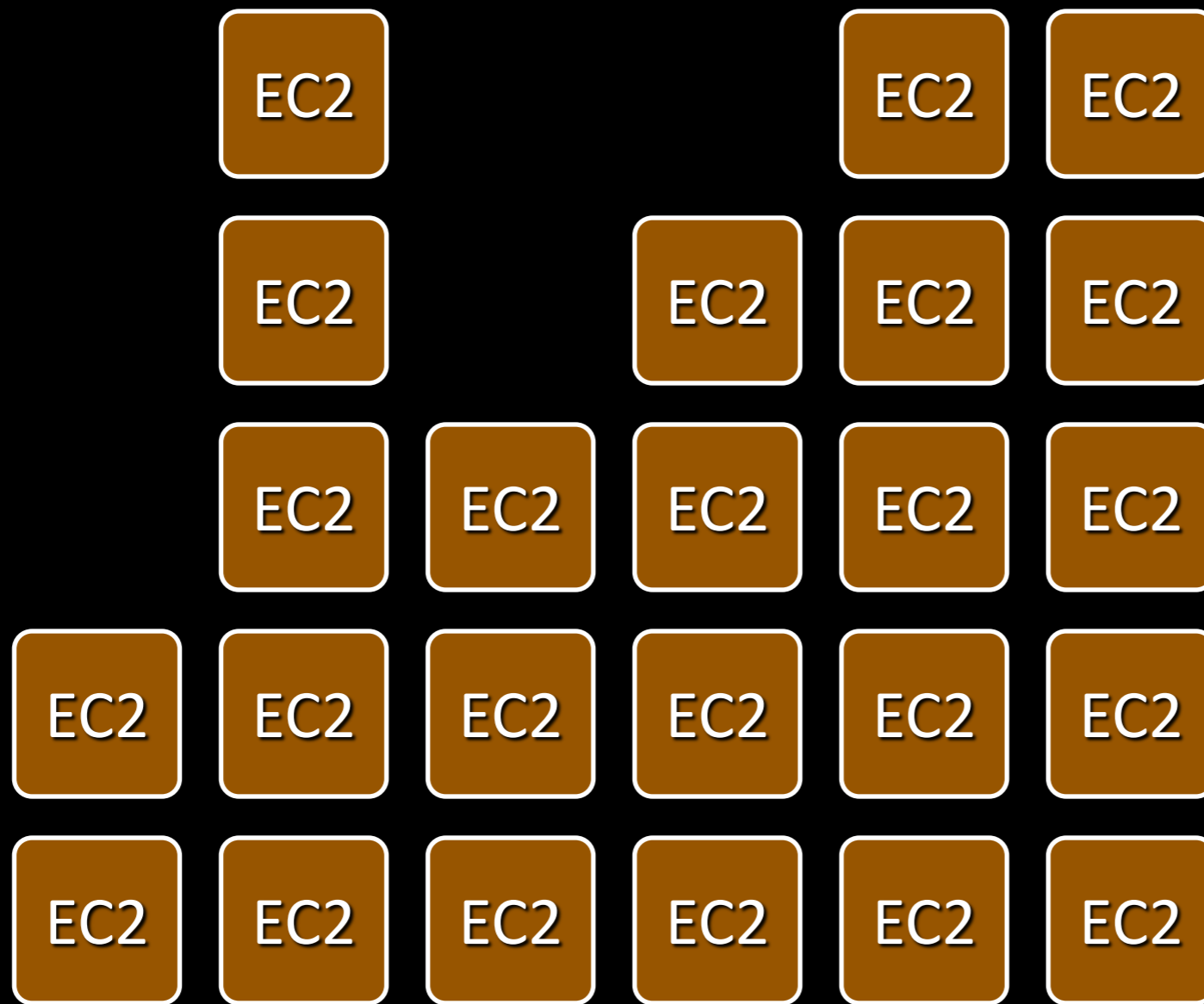
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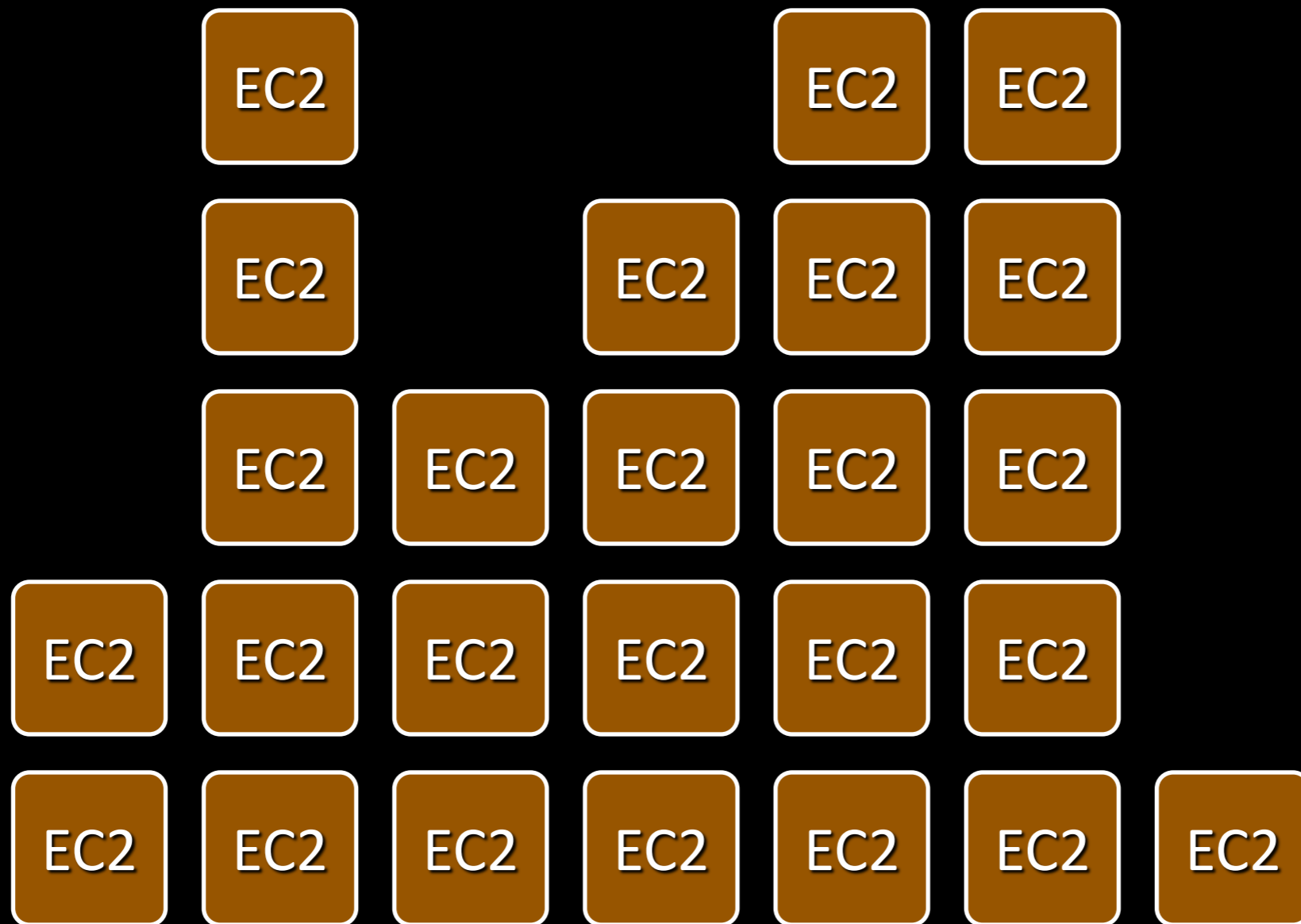
EC2
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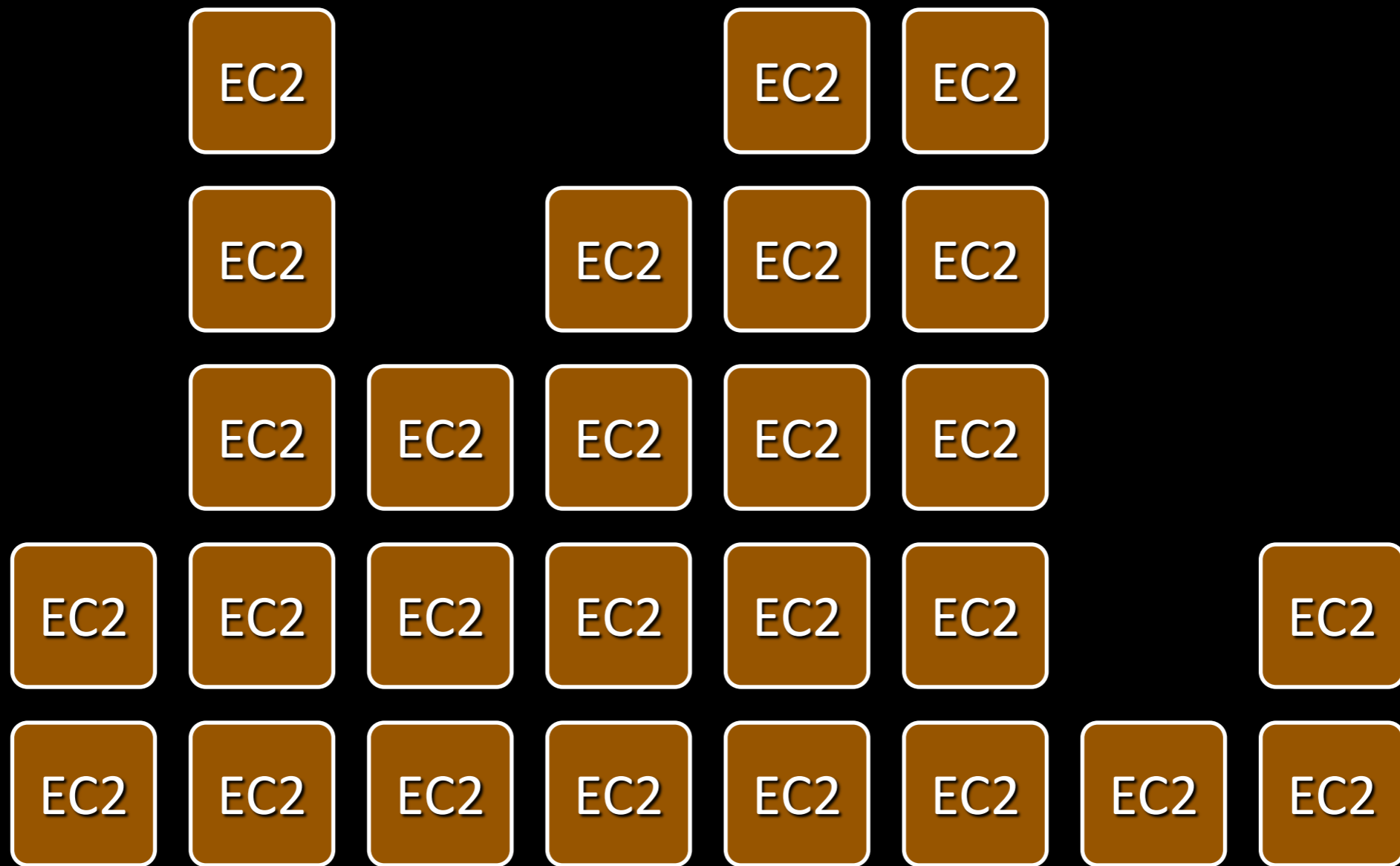
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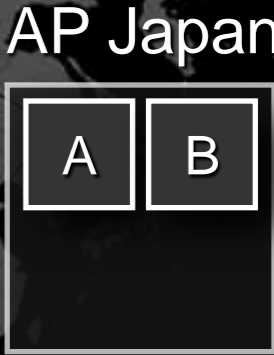
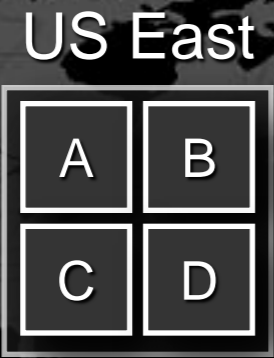
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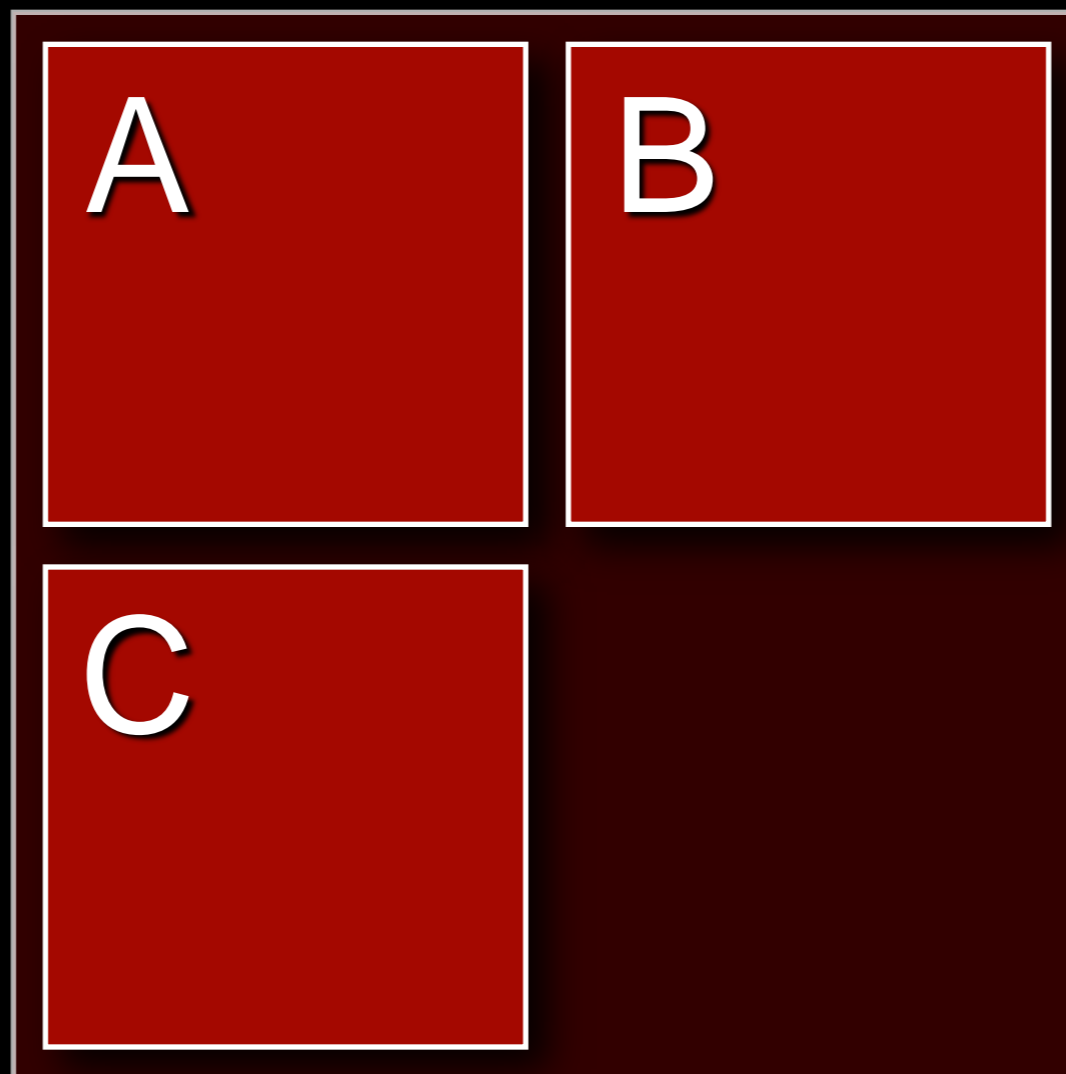


Time

Elastic Load Balancer

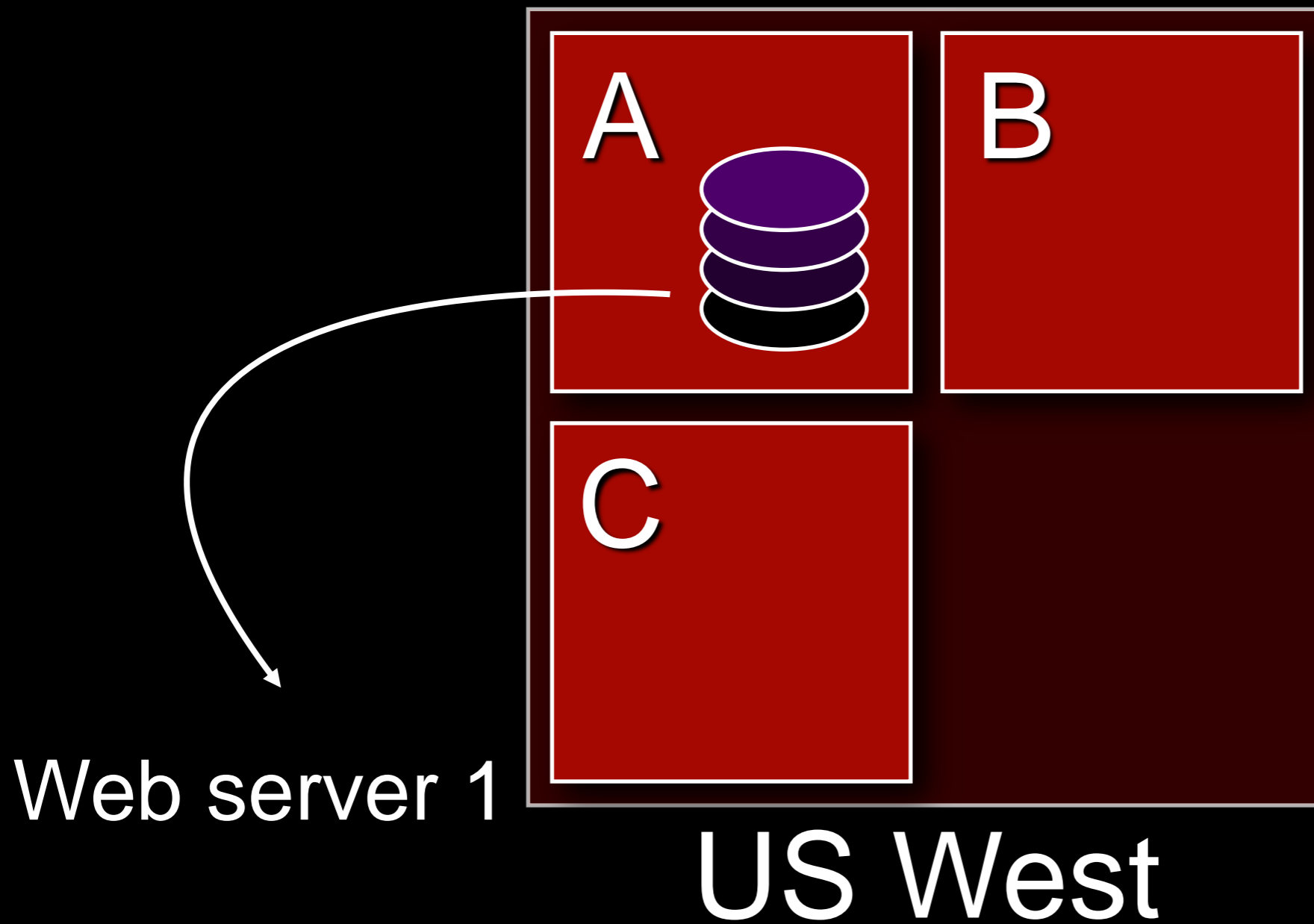


Multi-AZ

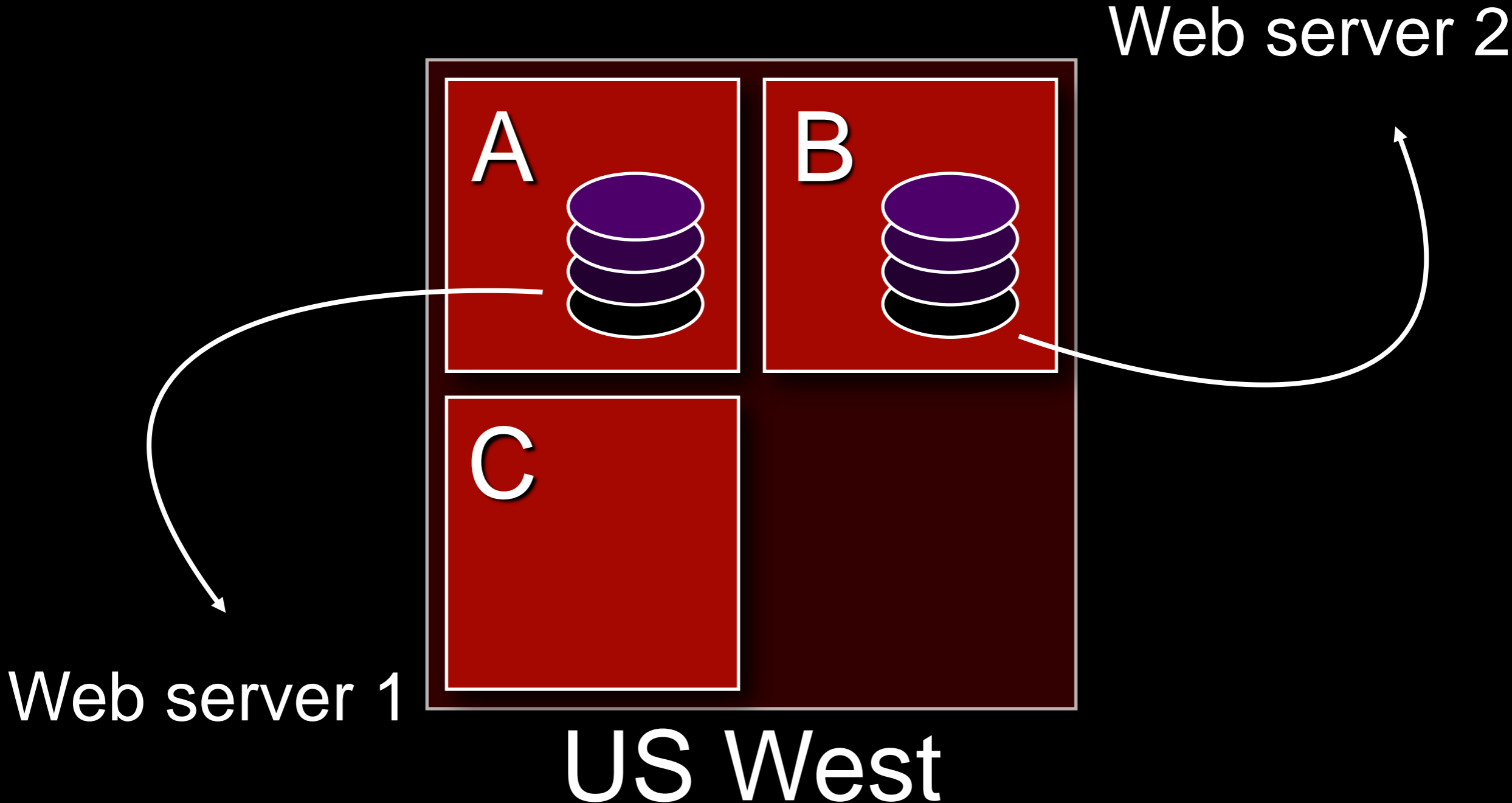


US West

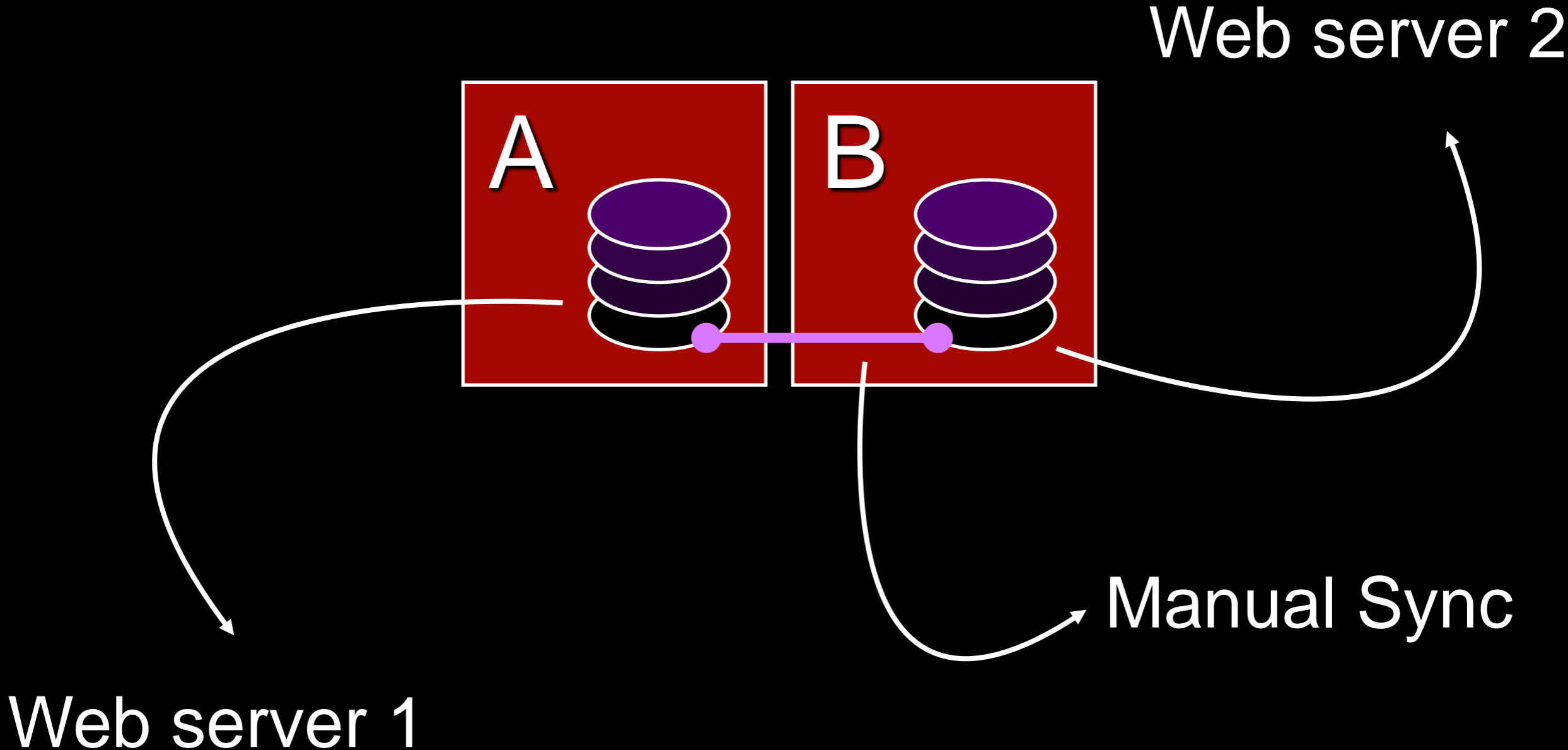
Multi-AZ



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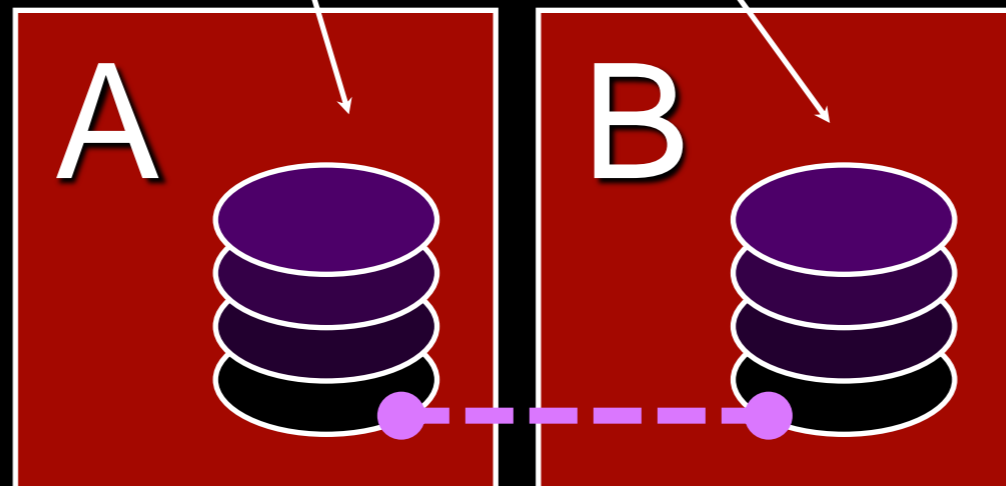


Elastic Load Balancer

Internet traffic

???

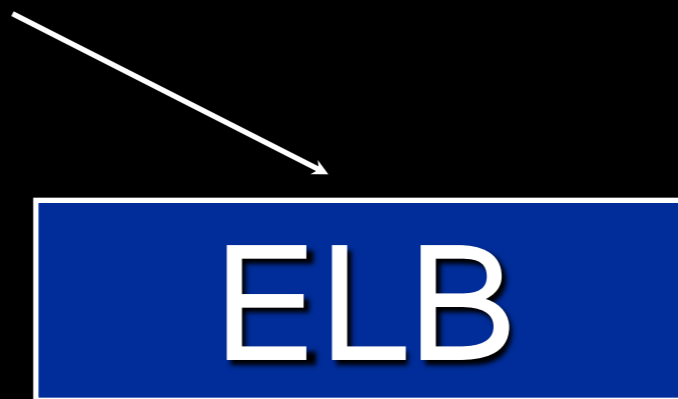
EC2 instance
“web server 1”



EC2 instance
“web server 2”

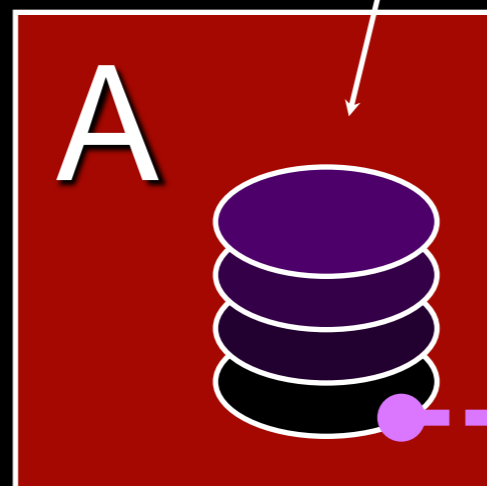
Elastic Load Balancer

Internet traffic

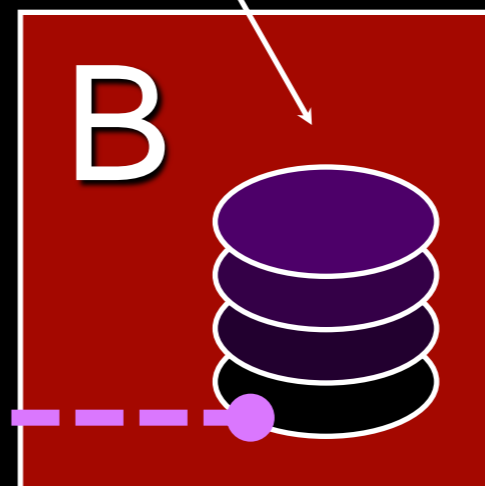


hello.mysite.com

EC2 instance
“web server 1”

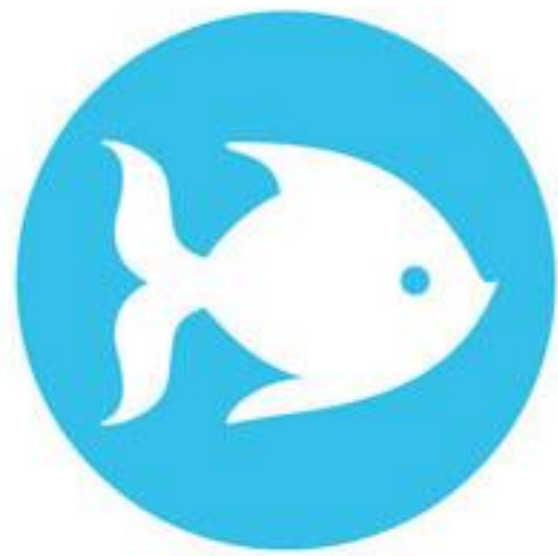


EC2 instance
“web server 2”



Success stories





playfish

IN NUMBERS



55 million people play Playfish games every month. If all these gamers lived in one country, it would have a bigger population than England.



wooga
world of gaming



MonsterWorld





zynga[®]



FARMVILLE



zynga



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CityVille

CityVille



Zynga.com

Creators of the most popular FB games:
Farmville, Mafia Wars, Cityville, etc.

More than 12,000 servers on AWS

CITYVILLE:

0 to 100+ Million users in just 43 days!

Conclusions

Thank you!

SIMONE BRUNOZZI

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