



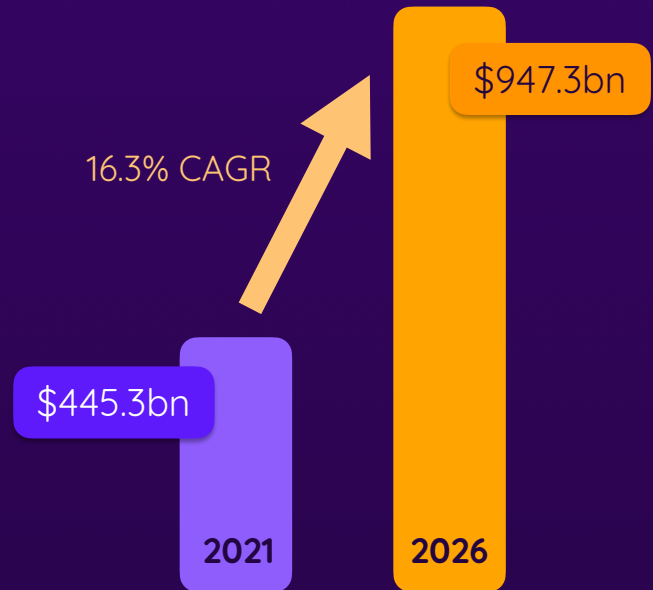
Get Started with AWS

AWS leads the market



Gartner Magic Quadrant for Cloud Infrastructure and Platform Services
(<https://www.gartner.com/doc/reprints?id=1-271OE4VR&ct=210802, 2021>)

Strong cloud computing forecasts



MARKETSANDMARKETS (2021)
(<https://www.marketsandmarkets.com/Market-Reports/cloud-computing-market-234.html>)



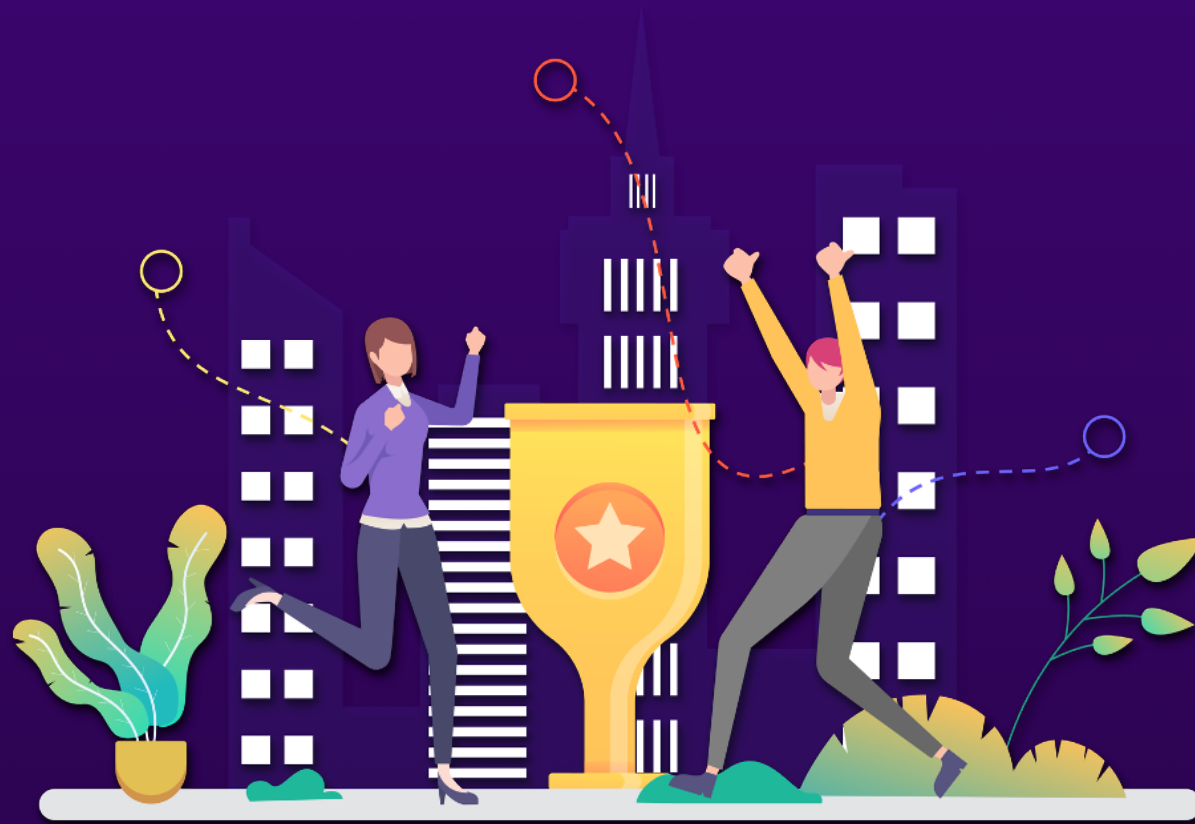
All key AWS concepts & services
explained from the ground up



No prior AWS or cloud computing
knowledge required



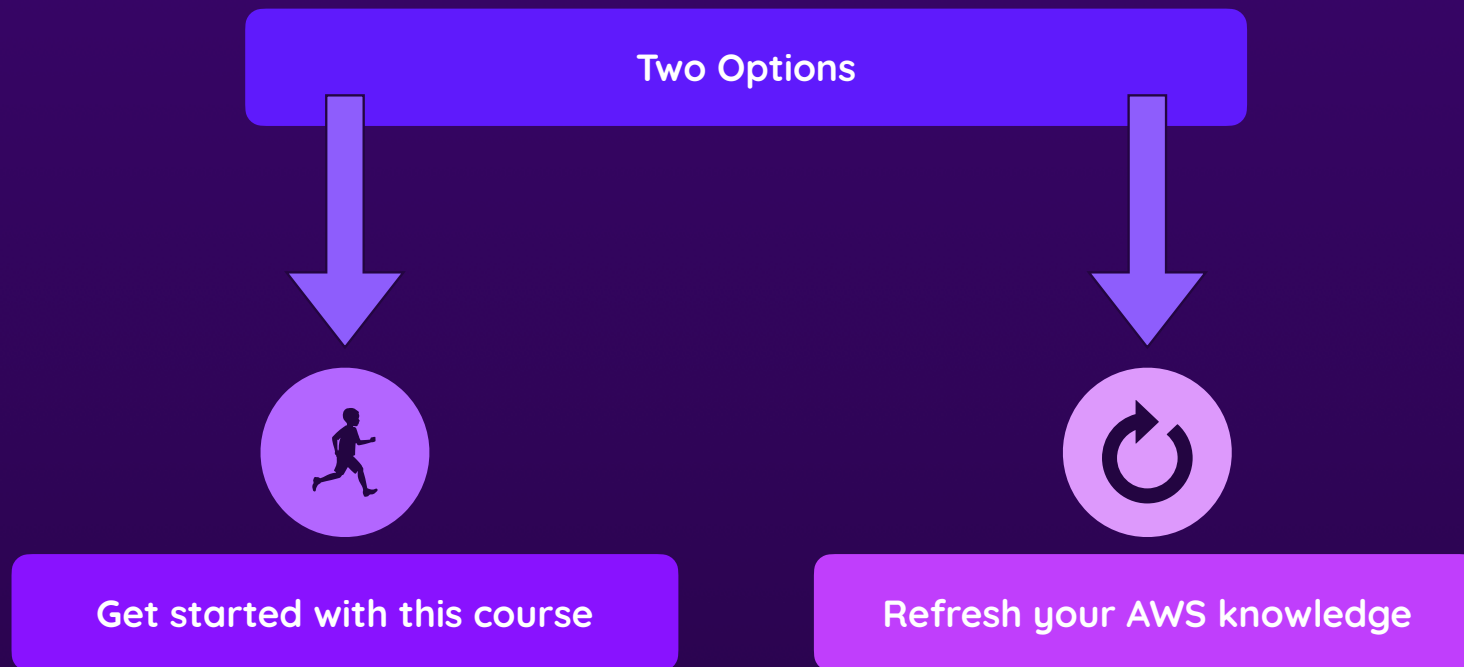
Basic IT knowledge suffices



Let's succeed together!



Try the course
risk-free!



What Is AWS?

Amazon Web Services

A subsidiary of Amazon (amazon.com)

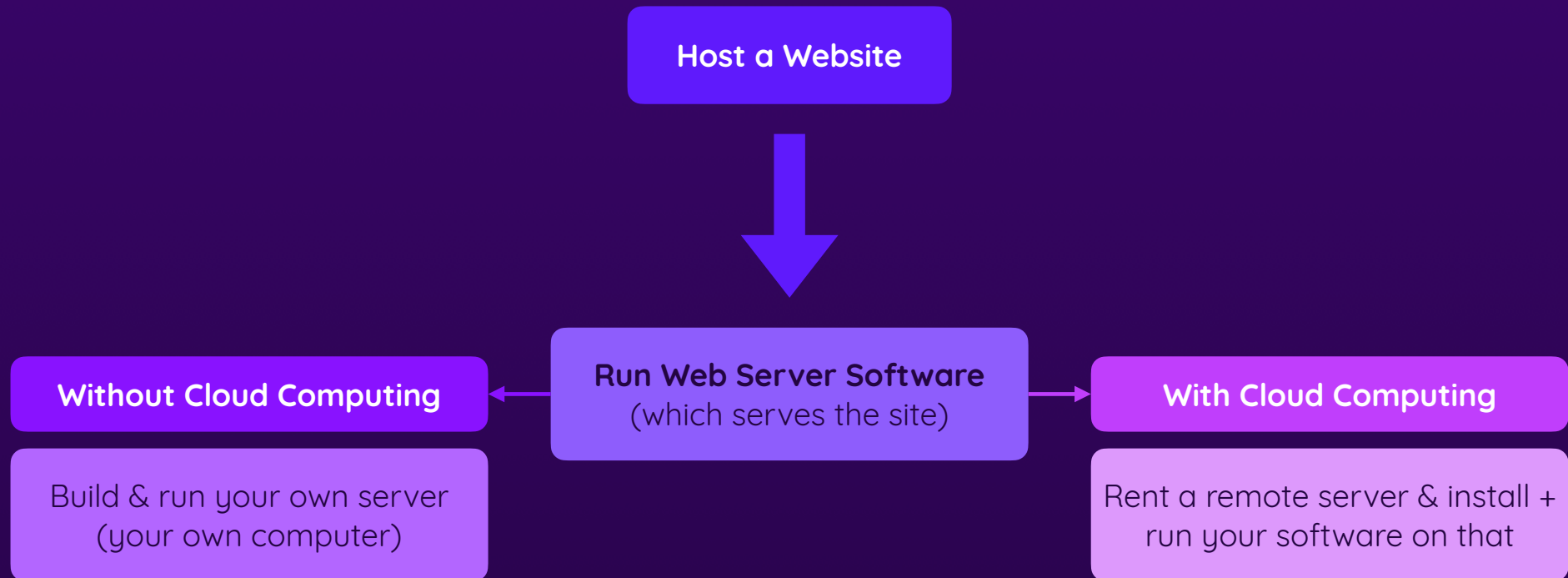


A Cloud Services Provider

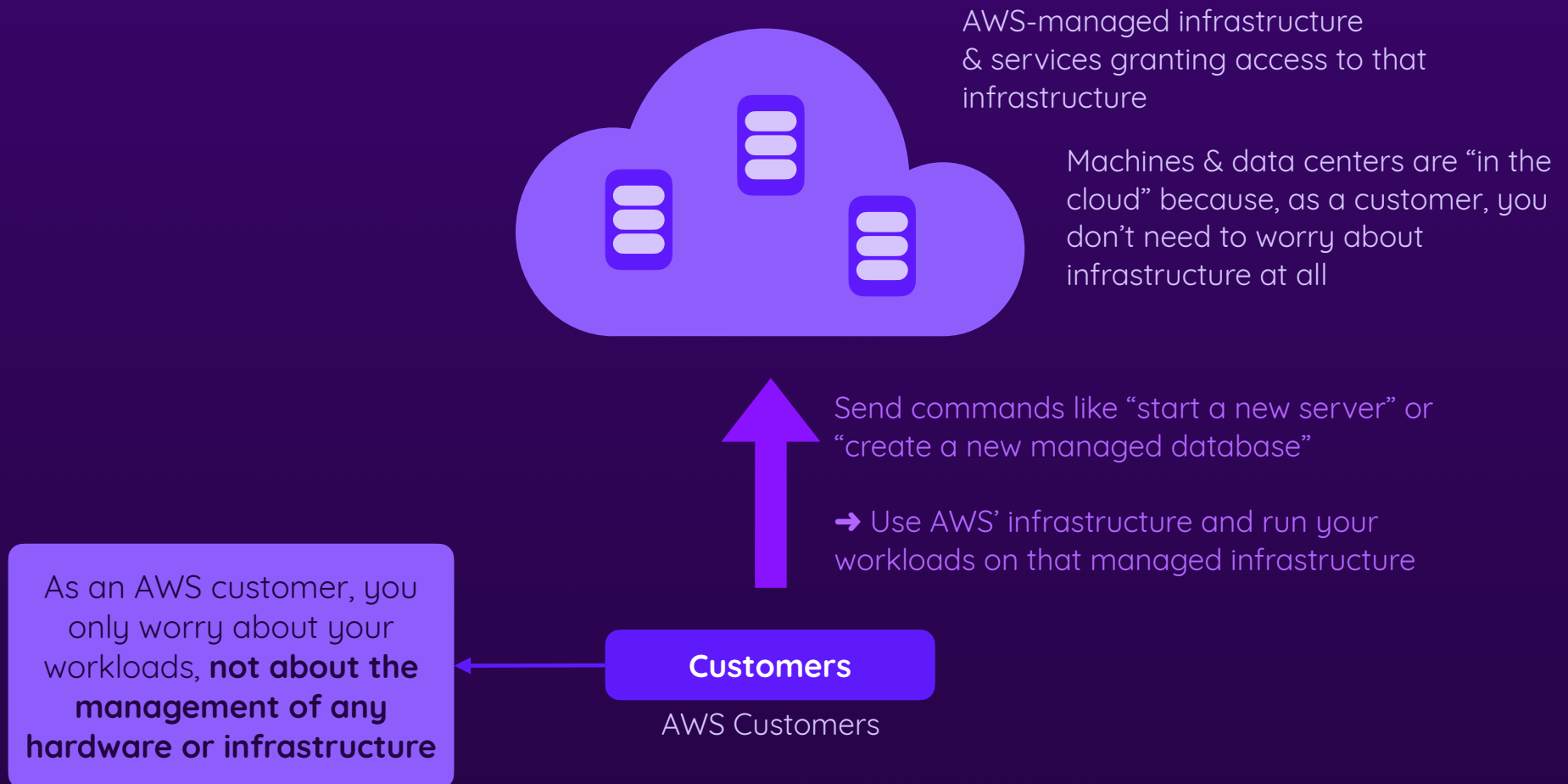


What Is “Cloud Computing”?

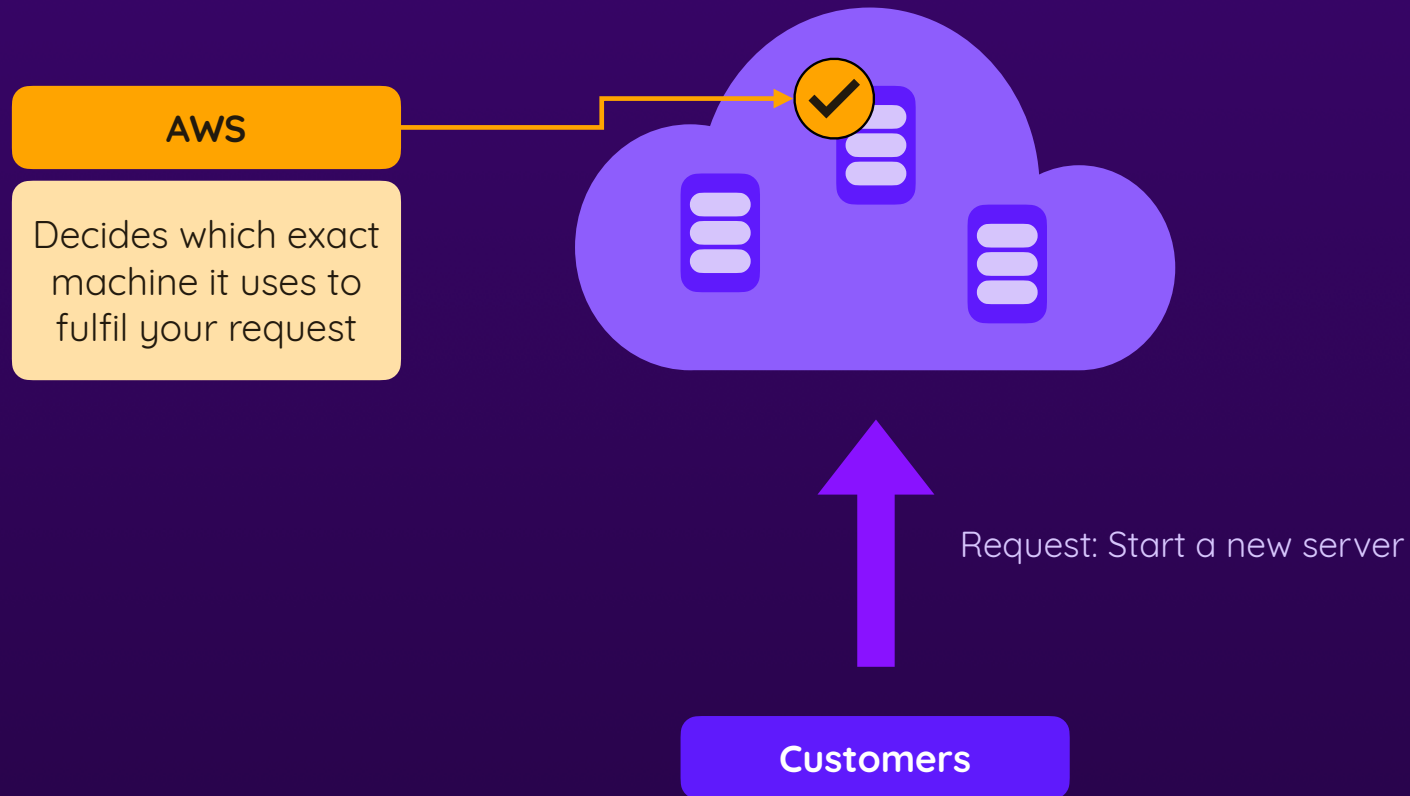
Example Time



What Is “Cloud Computing”?



AWS Does The Heavy Lifting



What Is AWS?

Amazon Web Services



A Cloud Services Provider



What Is “The Cloud”?



Cloud Computing

On-demand usage & delivery of IT resources

Examples

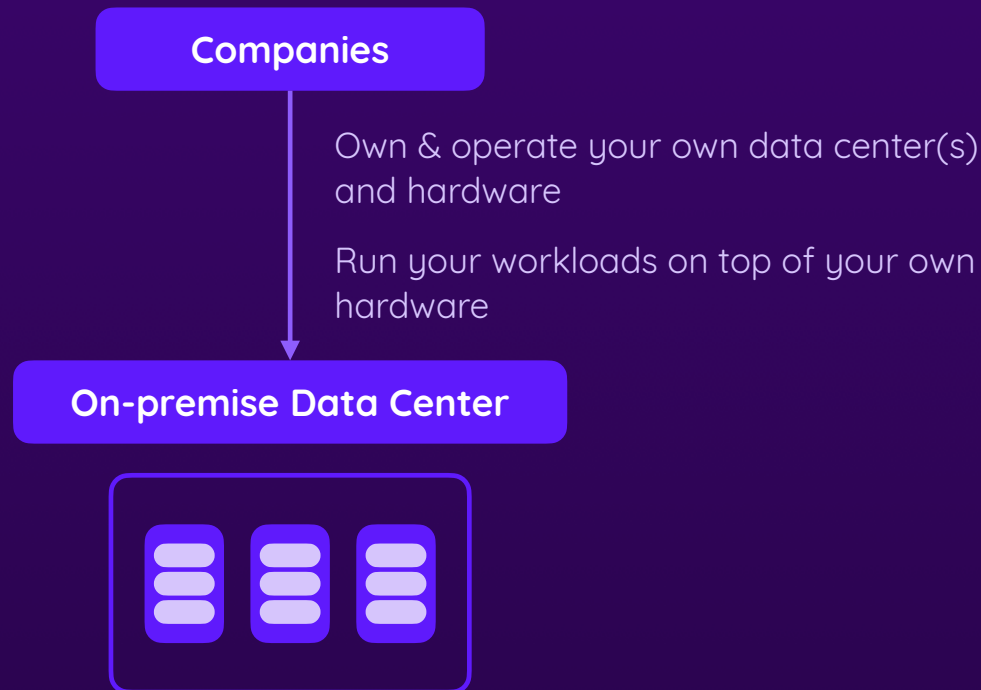
Rent a server & serve a website
Rent file storage volumes

Flexible usage of compute power & data storage capabilities

No need to provision and maintain your own data center

Only pay for the resources you use, when you use them

Without Cloud Computing



On-premises Advantages & Disadvantages



You have **full control** over your physical infrastructure & hardware



You **know exactly where** your computers (and data) are



You are **responsible for maintaining** the infrastructure



You are responsible for (long-term) **capacity planning & upgrading**



You are responsible for **securing** the infrastructure



You **can't react quickly** to workload spikes (e.g., more requests)

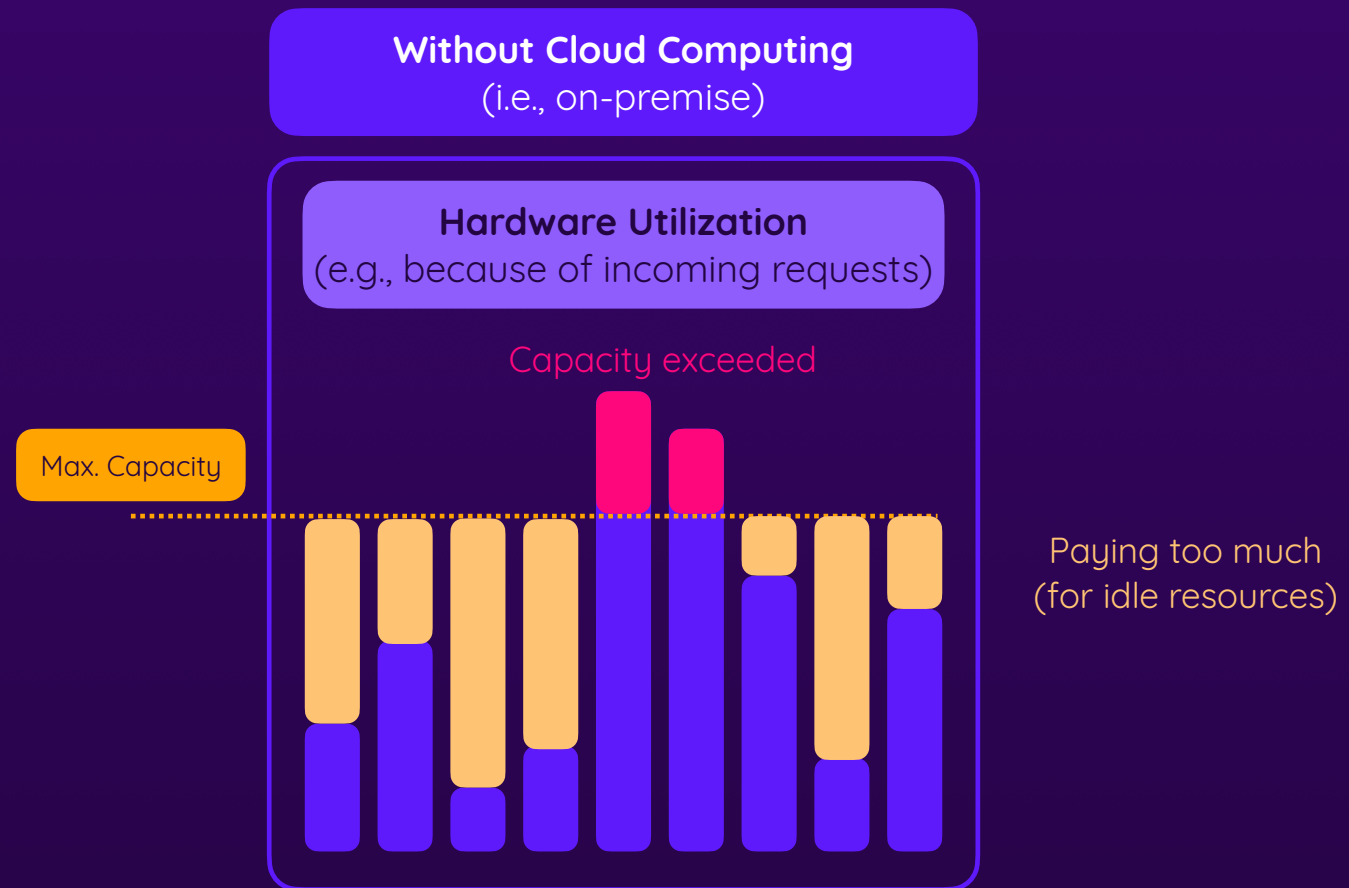


You also **pay for idle resources**



You are typically stuck to **one or a few locations**

Flexible Scaling Required!



Cloud Computing To The Rescue

AWS is responsible for operating & maintaining the infrastructure

Maintenance

Capacity planning & upgrades

Security



Reliability

AWS SLAs & global reach

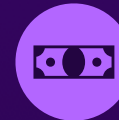
Tools & services for building reliable solutions



Agility, Elasticity & Scalability

Scale up or down as needed, anytime

Instant access to services & resources



Pay-as-you go

Only pay for services used

Don't pay for services you're not using (anymore)



Global Reach & High Availability

Choose perfect location

Spread our workloads to ensure high availability

Reliability



Rely on AWS



AWS is responsible for managing the underlying infrastructure

Service Level Agreements (SLA) are available for many key services



Build Reliable Applications



Various services help you build reliable applications

Your workload performs its intended function correctly & consistently



Rely on Global Reach



Fall back to other regions or go with a multi-region setup right from the start

Move your workload within minutes to hours, instead of days or weeks

Agility, Elasticity & Scalability



Agility

Use cloud resources within seconds or minutes

Launch resources with a click or command



Elasticity

Start using more or less resources, just as needed

No long-term planning required



Scalability

Scale up or down, as required

Use auto-scaling services to reduce manual workload

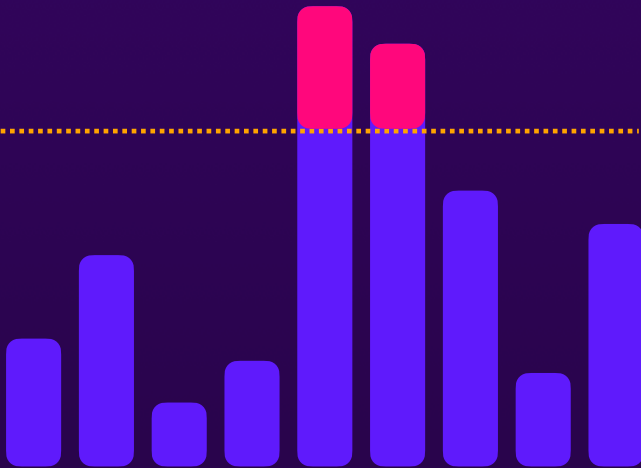
Flexible Scaling Required!

Without Cloud Computing (i.e., on-premise)

Hardware Utilization (e.g., because of incoming requests)

Capacity exceeded

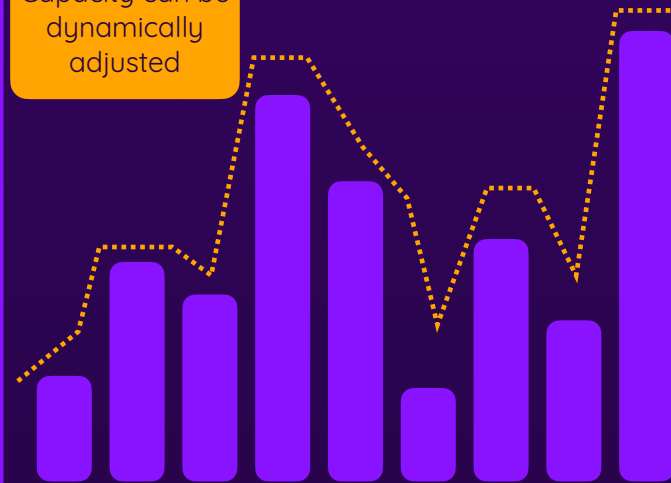
Max. Capacity



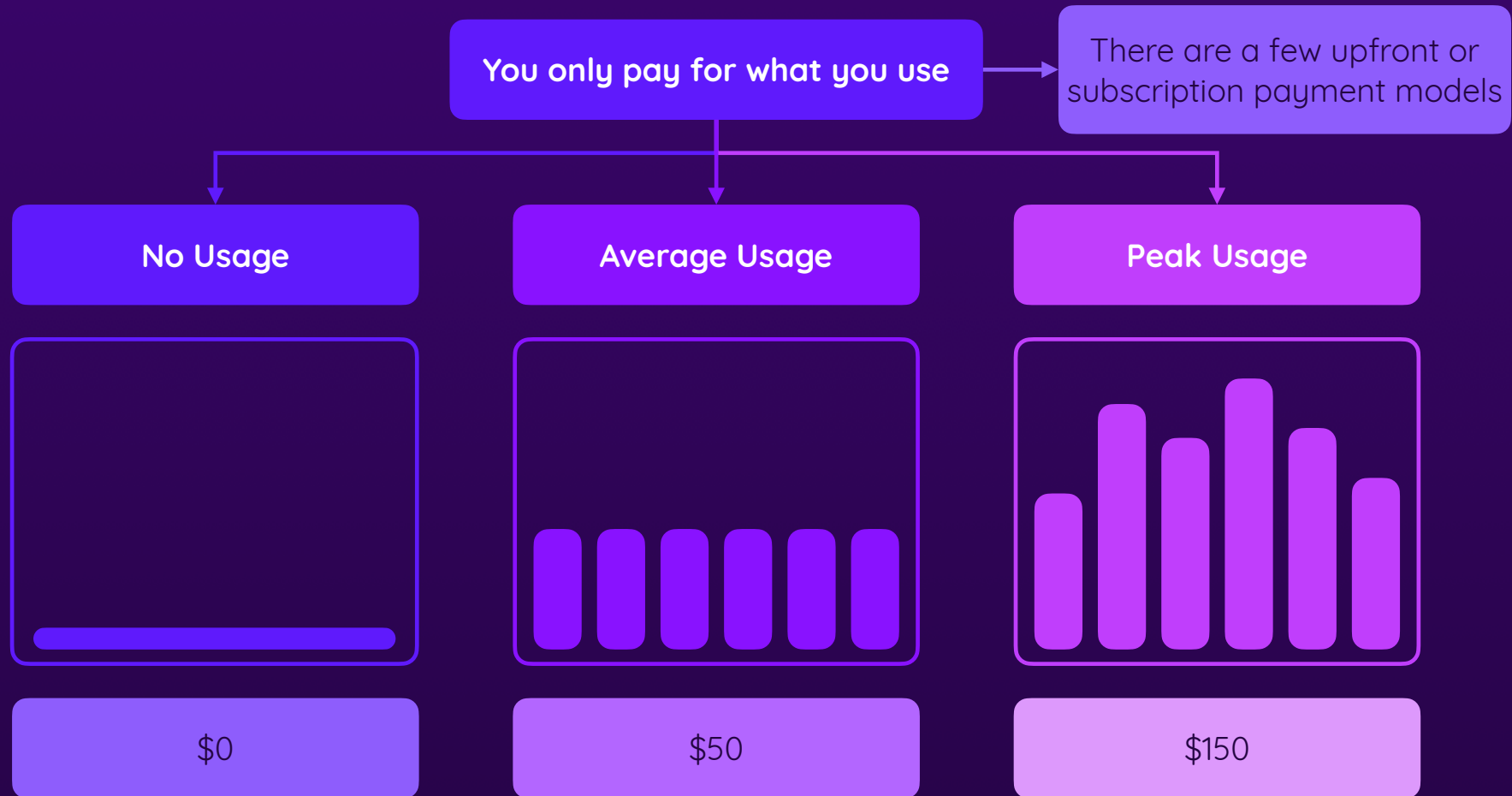
With Cloud Computing (e.g., via AWS services)

Hardware Utilization (e.g., because of incoming requests)

Capacity can be
dynamically
adjusted



Pay-as-you Go



Cost-Related Benefits

You're **trading fixed expense for variable expense**

No **CapEx** (capital expenditure) for purchasing or operating your own hardware

Less **OpEx** (operating expenditure) since you only pay for the service usage, not for staff or power

Benefit from AWS' **economies of scale**: AWS can realize discounts & savings on hardware procurements (+ other advantages) which you couldn't

Global Reach & High Availability

AWS own & operates a world-wide network of data centers



→ If one data center or group of data centers would go down, you can run your workloads in one of the many other regions ←

AWS' World-Wide Infrastructure

AWS operates data centers all over the world

Region

One region contains multiple data centers

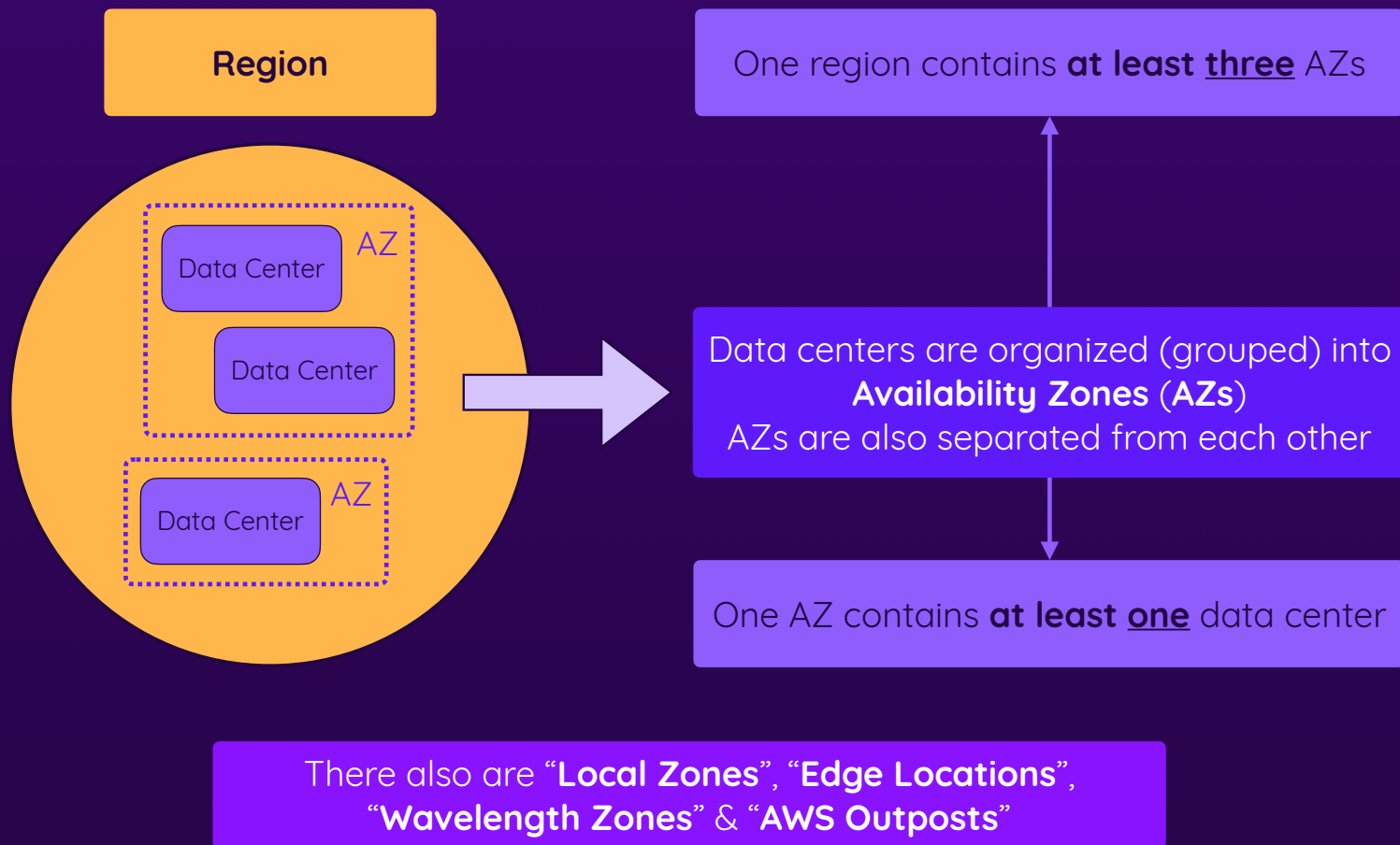


!

Regions are physically **isolated** from each other

For many services, you can **choose** in which region it should run

Regions & Availability Zones (AZs)





Reasons For Picking A Certain Region

Different Pricing

AWS faces different costs for operating its infrastructure in different places of the world

As a result, service prices can differ between Regions

You can use the service pricing pages or the “Pricing Calculator” to learn about pricing differences

Service Availability

Not all services can be used in all Regions

Some services are only available in certain Regions

Legal Reasons

Companies might be legally required to use certain services in certain Regions only

Example: A company must store user data in the EU

Availability & Latency

Workloads can be executed in multiple Regions to increase availability & reliability

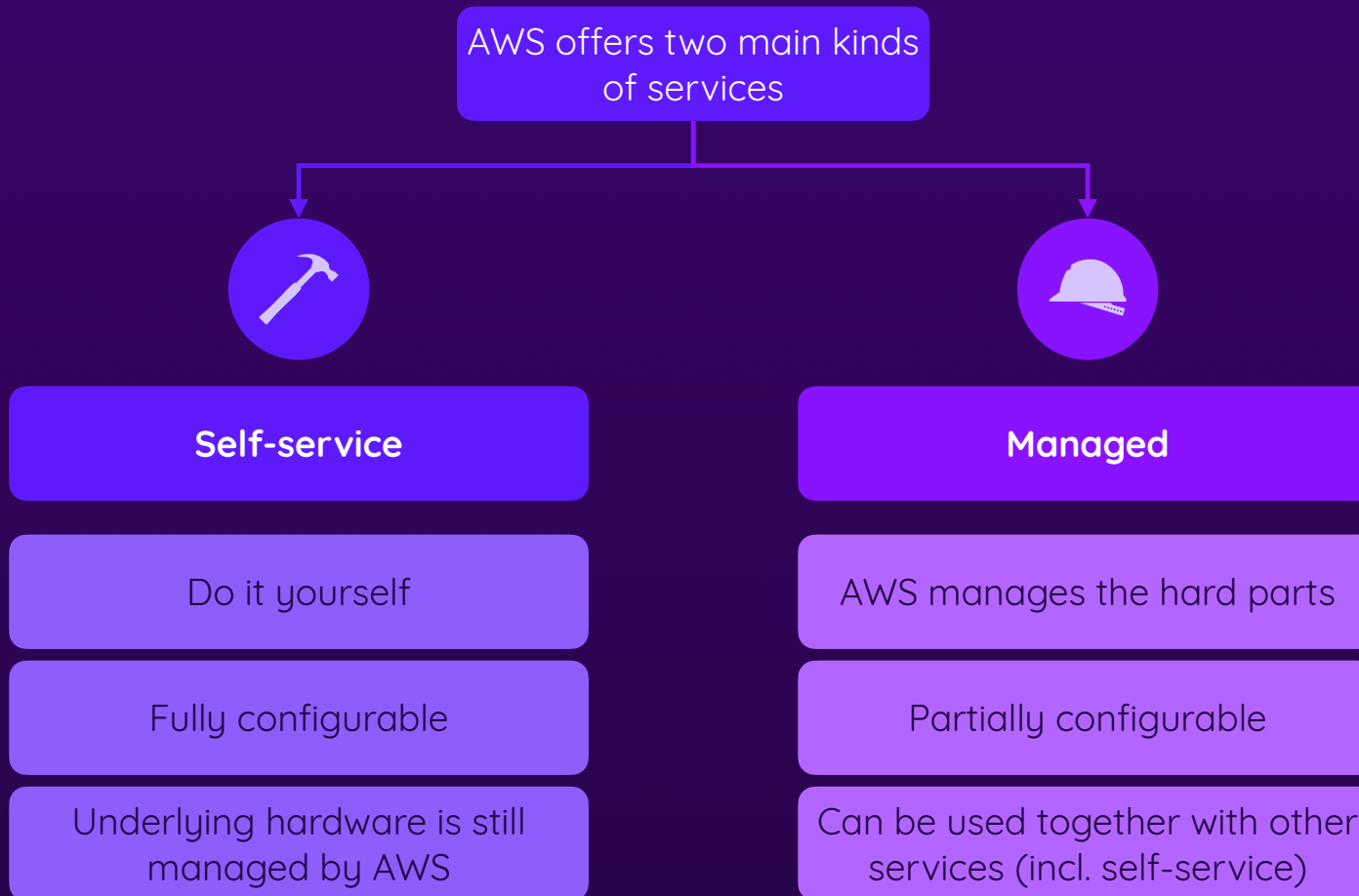
Applications can be run close to end users / customers to reduce latency

AWS' World-Wide Infrastructure

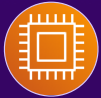
AWS also operates a world-wide network to connect all their regions



Self-Service & Managed Services



Which Services Does AWS Offer?



Compute



Data Storage



Database



Networking & Content
Delivery



Application Integration



Security



Cloud Management



Migration & Edge
Computing



Analytics & Data
Ingestion



Machine Learning &
Artificial Intelligence

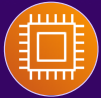


Developer Tools



Business Applications

Which Services Does AWS Offer?



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Cloud Management



Migration & Edge
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Machine Learning &
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Developer Tools



Business Applications

About This Course & The Exam

