Cloud Concepts Overview

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What's In This Module

- Part 1: What is Cloud Computing?
- Part 2: Six Advantages of Cloud Computing
- Part 3: What is Amazon Web Services (AWS)?
- Part 4: The AWS Cloud Adoption Framework (CAF)

Module Objectives

Discuss key concepts related to cloud computing and the advantages of cloud computing:

- Define different types of cloud computing.
- Describe six advantages of cloud computing.
- Describe cloud deployment models.
- Review the AWS Cloud Adoption Framework (CAF).

Part 1: What is Cloud Computing?

What is Cloud Computing?

What is Cloud Computing?

Cloud computing is the **on-demand** delivery of compute power, database storage, applications, and other IT resources through a cloud services platform **via the internet** with **pay-as-you-go** pricing.

Before Cloud Computing

Cloud computing enables you to **stop thinking of your infrastructure as hardware**, and instead **think of it (and use it) as software.**

Before Cloud Computing

- Hardware solutions are **physical**. This means they require:
  - Space
  - Staff
  - Physical security
  - Planning
  - Capital expenditure
- Guess at theoretical maximum peaks
  - Is there enough resource capacity?
  - Do we have sufficient storage?

What if your needs change?

You have to go through the **time, effort, and cost** required to change all these.

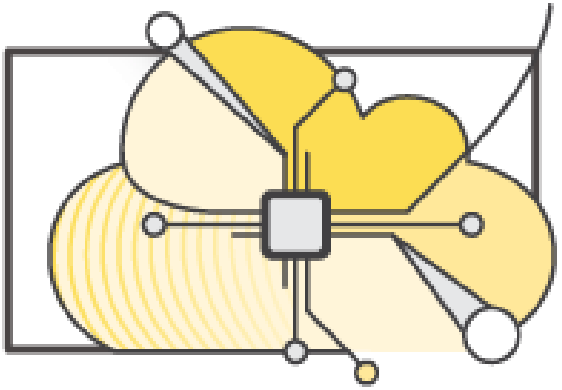
Utilizing Cloud Computing

Software is flexible.

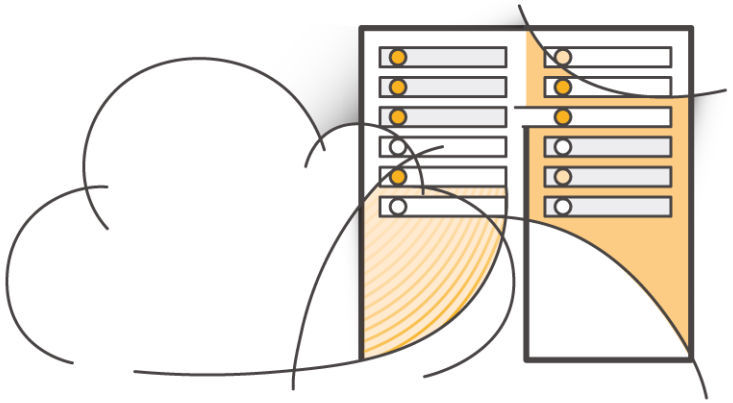
If your needs change, your software can change much more **quickly, easily, and cost-effectively** than your hardware.

Three Models of Cloud Computing

Three Cloud Deployment Models



All-In Cloud

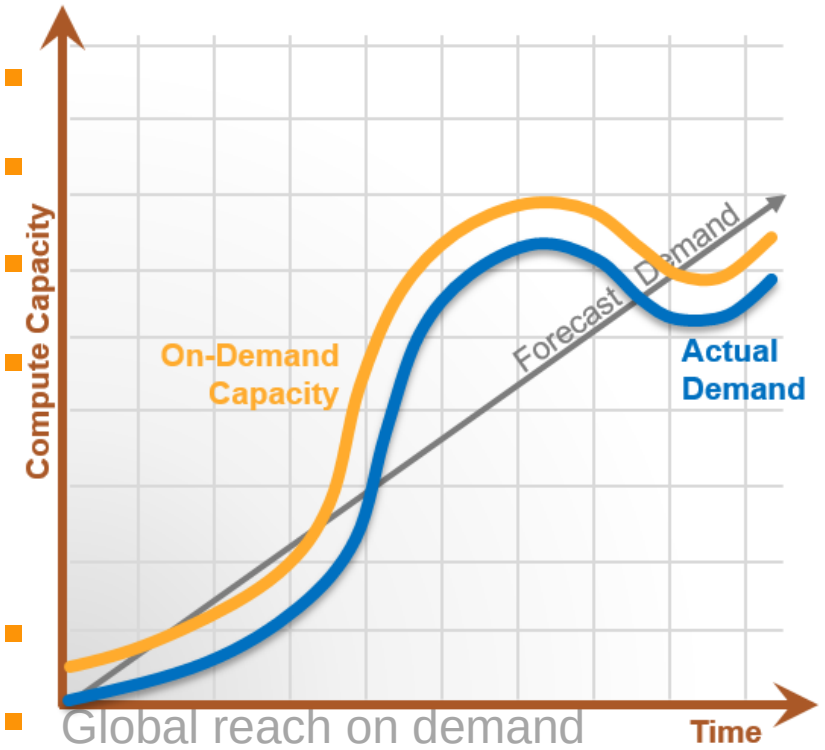


Hybrid

Private Cloud (On-premises)

All-In Cloud versus On-Premises

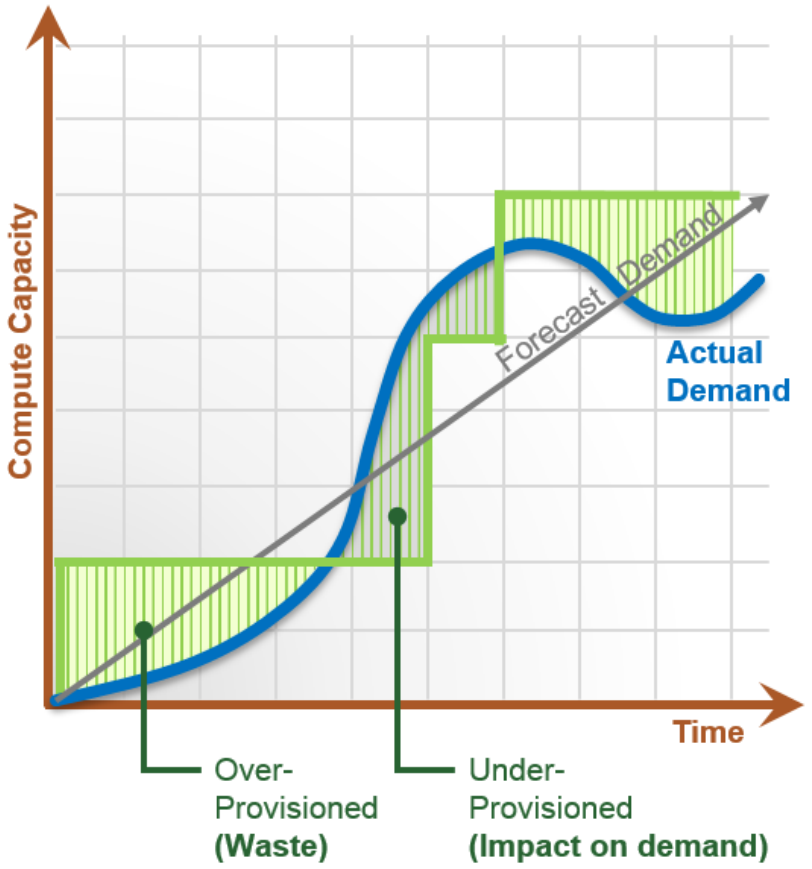
All-In Cloud



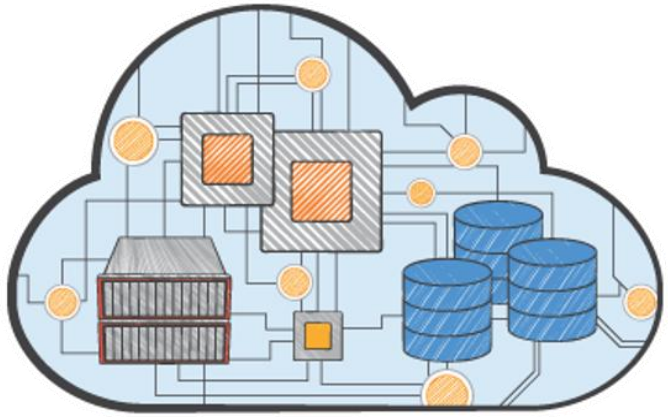
Global reach on demand

- ✓ No waste
- ✓ Meets demand

On-Premises



All-In Cloud versus On-Premises



All-In Cloud

- No upfront investment
- Low ongoing costs
- Focus on innovation
- Flexible capacity
- Speed and agility
- Global reach on demand

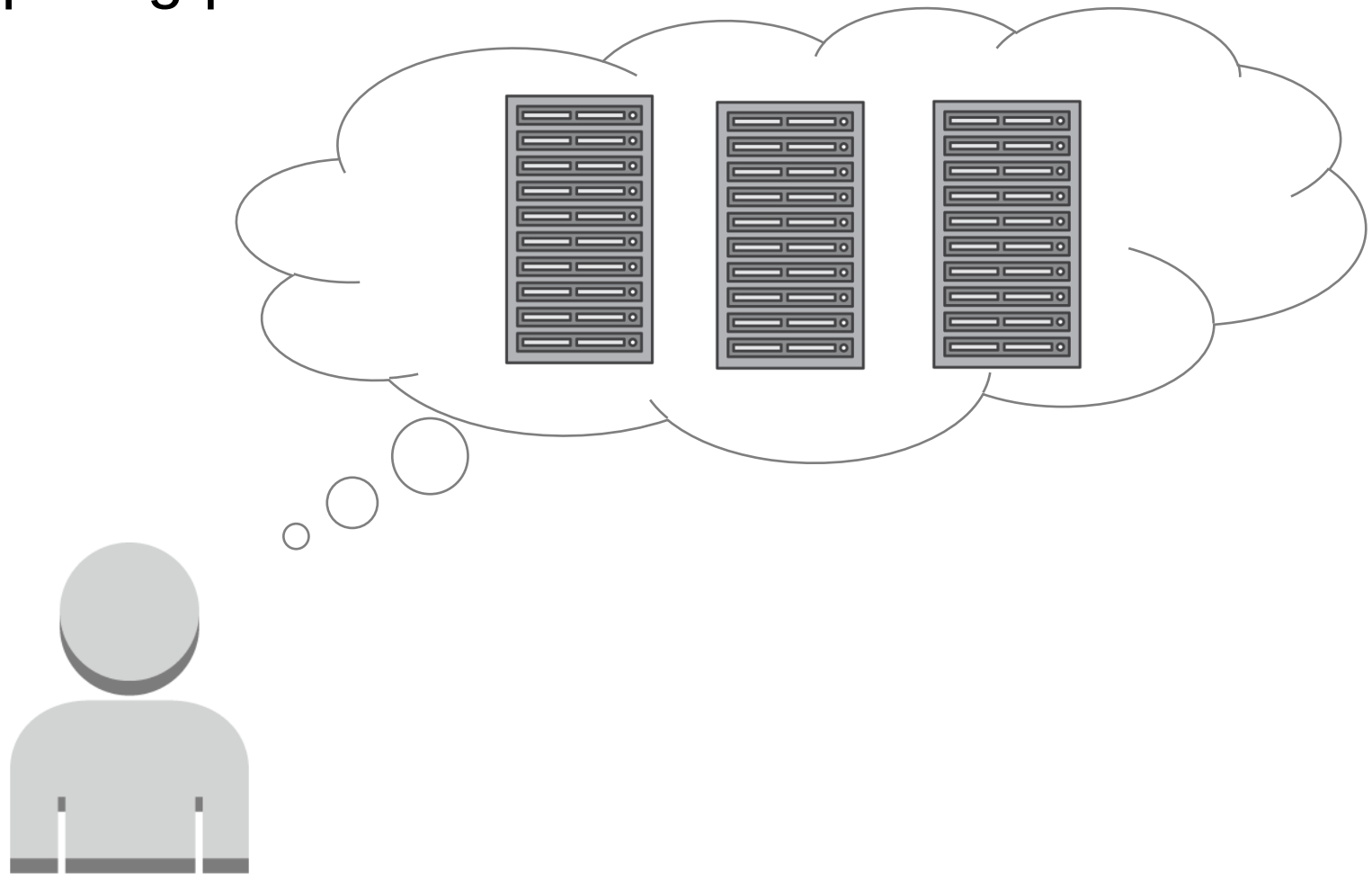
On-Premises

- Large initial purchase
- Labor, patches, and upgrade cycles
- Systems administration
- Fixed capacity
- Long procurement cycle and setup
- Limited geographic regions

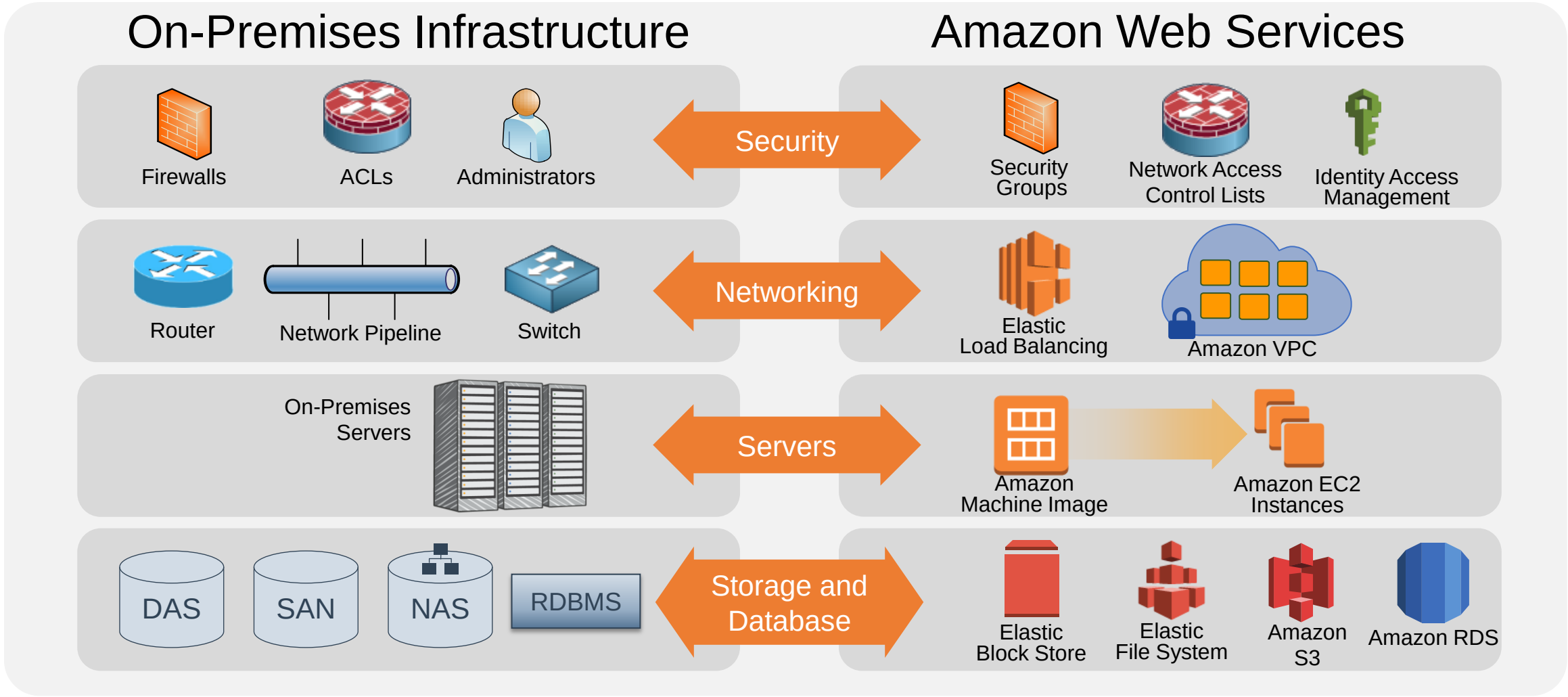
What can you do in the cloud?

You can use a cloud computing platform for:

- Application Hosting
- Backup and Storage
- Content Delivery
- Websites
- Enterprise IT
- Databases



On-Premises and AWS Comparison



Important Cloud Terminology

- **High Availability (Highly Available):**
  - Accessible when you need it
- **Fault Tolerance (Fault Tolerant):**
  - Ability to withstand a certain amount of failure and still remain functional
- **Scalability (Scalable):**
  - Ability to easily grow in size, capacity, and/or scope when required
  - Growth is (usually) based on demand
- **Elasticity (Elastic):**
  - Ability to grow (scale) when required and to reduce in size when resources are no longer needed

Summary

- Cloud computing is the on-demand delivery of IT resources online with pay-as-you-go pricing.
- Three models of cloud computing are:
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)
- All-in cloud, hybrid, and private cloud are three cloud deployment models.
- Cloud services are available to replace traditional on-premises computing activities.

Thanks

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