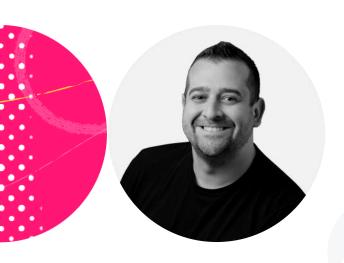
Microsoft Security, Compliance, and Identity Fundamentals: Concepts

Cloud Computing: Who Secures What?

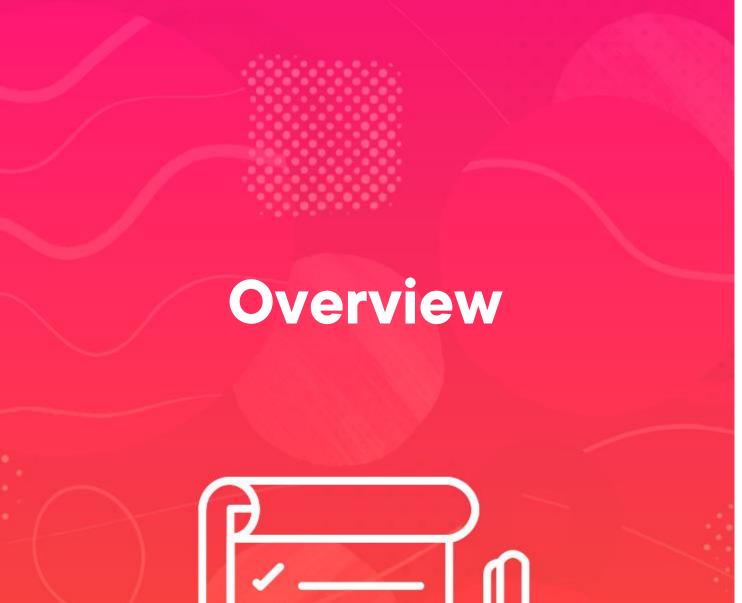


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Types of cloud computing services

- IaaS Vs. PaaS Vs. SaaS

Cloud computing: who secures what?

- The shared responsibility model

Cloud Computing: Who Secures What?



Types of Cloud Computing Services

Infrastructure as a Service (laaS) Platform as a Service (PaaS)

Software as a Service (SaaS)



Types of Cloud Computing Services

On-premises

Applications

Data

Runtime

Middleware

OS

Virtualization

Servers

Storage

Networking

laaS

Applications

Data

Runtime

Middleware

OS

Virtualization

Servers

Storage

Networking

PaaS

Applications

Data

Runtime

Middleware

OS

Virtualization

Servers

Storage

Networking

SaaS

Applications

Data

Runtime

Middleware

OS

Virtualization

Servers

Storage

Networking

You manage

Managed by vendor



Pizza as a Service

On-premises

Dining table

Soda

Electric/Gas

Oven

Fire

Pizza dough

Tomato sauce

Toppings

Cheese

Made at home

laaS

Dining table

Soda

Electric/Gas

Oven

Fire

Pizza dough

Tomato sauce

Toppings

Cheese

Take and bake

PaaS

Dining table

Soda

Electric/Gas

Oven

Fire

Pizza dough

Tomato sauce

Toppings

Cheese

Pizza delivery

SaaS

Dining table

Soda

Electric/Gas

Oven

Fire

Pizza dough

Tomato sauce

Toppings

Cheese

Dine out

Most Companies Use Products from Each Service Type

laaS

Azure Compute (Virtual Machines)

Azure Storage

PaaS

Azure Logic Apps

Azure Functions

Azure Web Apps

Azure Automation

SaaS

SharePoint

OneDrive for Business

Microsoft Teams



Security in the Cloud Is a Partnership



The cloud provider operates and secures

- The base infrastructure
- Host operating system layers

You control and secure

- Identities
- Additional application settings (ex: MFA)

The responsibilities and controls for the security of applications and networks vary by the service type



Who Secures What? - The Shared Responsibility Model

On-Premises

Information and data

Devices (Mobile and PCs)

Accounts and identities

Identity and directory infrastructure

Application

Network controls

Operating system

Physical hosts

Physical network

Physical datacenter

laaS

Information and data

Devices (Mobile and PCs)

Accounts and identities

Identity and directory infrastructure

Application

Network controls

Operating system

Physical hosts

Physical network

Physical datacenter

PaaS

Information and data

Devices (Mobile and PCs)

Accounts and identities

Identity and directory infrastructure

Application

Network controls

Operating system

Physical hosts

Physical network

Physical datacenter

SaaS

Information and data

Devices (Mobile and PCs)

Accounts and identities

Identity and directory infrastructure

Application

Network controls

Operating system

Physical hosts

Physical network

Physical datacenter





It's your duty to know what your security responsibilities are for each type of workload you leverage in the cloud

Module Conclusion



Types of cloud computing services

- Infrastructure as a Service
- Platform as a Service
- Software as a Service

Shared responsibility model

- Different responsibilities depending on cloud service type
- Some responsibilities are **always** retained by the customer!
 - Information and data
 - Devices
 - Accounts and identities



Up Next:

Security Concepts and Methodologies in the Microsoft Cloud

