

# Describe Platform as a Service

2 minutes

Platform as a service (PaaS) is a middle ground between renting space in a datacenter (infrastructure as a service) and paying for a complete and deployed solution (software as a service). In a PaaS environment, the cloud provider maintains the physical infrastructure, physical security, and connection to the internet. They also maintain the operating systems, middleware, development tools, and business intelligence services that make up a cloud solution. In a PaaS scenario, you don't have to worry about the licensing or patching for operating systems and databases.




PaaS is well suited to provide a complete development environment without the headache of maintaining all the development infrastructure.

## Shared responsibility model

The shared responsibility model applies to all the cloud service types. PaaS splits the responsibility between you and the cloud provider. The cloud provider is responsible for maintaining the physical infrastructure and its access to the internet, just like in IaaS. In the PaaS model, the cloud provider will also maintain the operating systems, databases, and development tools. Think of PaaS like using a domain joined machine: IT maintains the device with regular updates, patches, and refreshes.

Depending on the configuration, you or the cloud provider may be responsible for networking settings and connectivity within your cloud environment, network and application security, and the directory infrastructure.

	Responsibility	SaaS	PaaS	IaaS	On-prem
Responsibility always retained by the customer	Information and data	Customer	Customer	Customer	Customer
	Devices (Mobile and PCs)	Customer	Customer	Customer	Customer
	Accounts and identities	Customer	Customer	Customer	Customer
Responsibility varies by type	Identity and directory infrastructure	Shared	Shared	Customer	Customer
	Applications	Shared	Shared	Customer	Customer
	Network controls	Shared	Shared	Customer	Customer
	Operating system	Shared	Shared	Customer	Customer
Responsibility transfers to cloud provider	Physical hosts	Microsoft	Microsoft	Microsoft	Customer
	Physical network	Microsoft	Microsoft	Microsoft	Customer
	Physical datacenter	Microsoft	Microsoft	Microsoft	Customer

 Microsoft
  Customer
  Shared

## Scenarios

Some common scenarios where PaaS might make sense include:

- **Development framework:** PaaS provides a framework that developers can build upon to develop or customize cloud-based applications. Similar to the way you create an Excel macro, PaaS lets developers create applications using built-in software components. Cloud features such as scalability, high-availability, and multi-tenant capability are included, reducing the amount of coding that developers must do.
- **Analytics or business intelligence:** Tools provided as a service with PaaS allow organizations to analyze and mine their data, finding insights and patterns and predicting outcomes to improve forecasting, product design decisions, investment returns, and other business decisions.

## Next unit: Describe Software as a Service

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