



Cloud in Azure

Understanding Public, Private, and Hybrid Clouds



Introduction to Azure

Azure is Microsoft's cloud computing platform, providing a variety of cloud services including analytics, storage, and networking.



1. Public Cloud

It refers to the standard cloud computing model where resources are hosted off-site and accessible over the internet. Azure's public cloud offers scalability, pay-as-you-go model, and vast global infrastructure.

Key Characteristics:

- Everything runs on cloud provider hardware.
- No local hardware.
- Some services share hardware with other services.



Advantages:

- Cost-Efficient
- Scalable and Elastic
- No Maintenance
- No deep technical skills required

Disadvantages:

- Security & Compliance
- Ownership
- Specific scenarios with unique business requirement



2. Private Cloud

It refers to cloud resources used exclusively by a single business. Azure Stack is an example that allows organizations to run Azure in their own datacenters.

Key Characteristics:

- Everything runs on your own datacenter
- Self-service should be provided



Advantages:

- Enhanced Security
- Customization
- Compliance and Regulatory Control
- Predictable Performance

Disadvantages:

- Initial CapEx
- Limited agility
- IT skills & expertise are mandatory



3. Hybrid Cloud

This combines both public and private clouds. It allows data and applications to be shared between them, offering greater flexibility and optimization of existing infrastructure.

Key Characteristics:

- Combine public & private clouds
- Great flexibility



Advantages:

- Flexibility
- Utilize existing infrastructure
- Security Compliance

Disadvantages:

- Can be more expensive
- Complicated to manage
- IT skills & expertise are mandatory



Azure's Hybrid Capabilities

Azure offers a variety of services and tools tailored for hybrid environments. From consistent cloud-native applications to seamless integration between on-premises datacenters and the Azure cloud.

Azure's Hybrid Cloud Solution:

- Azure Arc
- Azure Stack

Comparison



Characteristics	Public	Private	Hybrid
Ownership	Shared	Dedicated	Shared and dedicated
Access	Over the internet	On-premises or through a private network	Both over the internet and on-premises
Deployment	Fast and easy	More complex and time-consuming	Most complex, but also most flexible
Scalability	Highly scalable	Less scalable	Highly scalable, but requires careful planning and management
Cost	Pay-as-you-go	Higher upfront costs, but lower long-term costs	Can be more cost-effective than public cloud for certain workloads
Security	Shared security model	Dedicated security model	Hybrid security model
Compliance	Must meet Azure's compliance standards	Must meet your organization's compliance requirements	Must meet both Azure's and your organization's compliance requirements



Thank You !!