Microsoft Azure Exam for AZ-300 & 301

Introduction to Cloud Computing

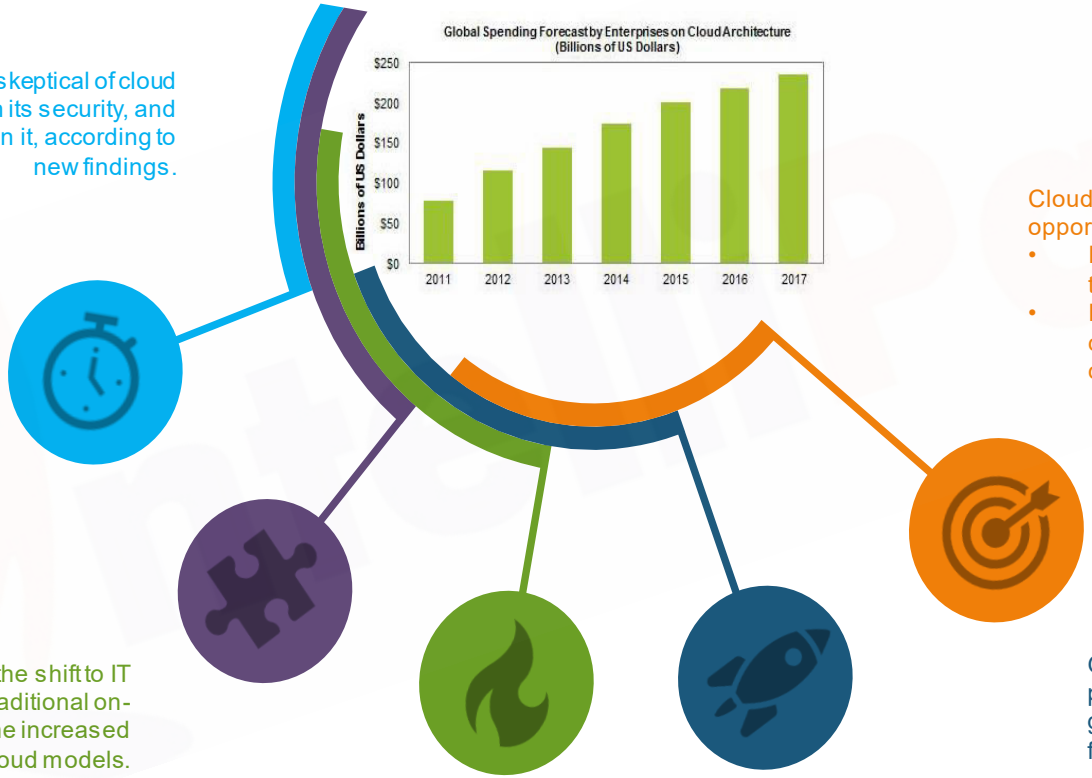
Agenda

- **Why Cloud Computing**
  - Workloads in Cloud
  - Cloud Challenges
- **Overview of Cloud Computing**
  - What is Cloud Computing
  - Definition of Cloud Computing
  - On-premises vs Service Models
  - Advantages & Disadvantages of Cloud Computing
  - Traditional vs Cloud Computing
  - Security issues
  - Pricing Model
  - Use cases

Why Cloud Computing?

Why Cloud Computing?

Businesses have become less skeptical of cloud computing, more confident in its security, and more inclined to invest money in it, according to new findings.



Cloud will continue to disrupt traditional IT models as the growing amount of data generated by people, machines, and things will increasingly be handled in cloud.

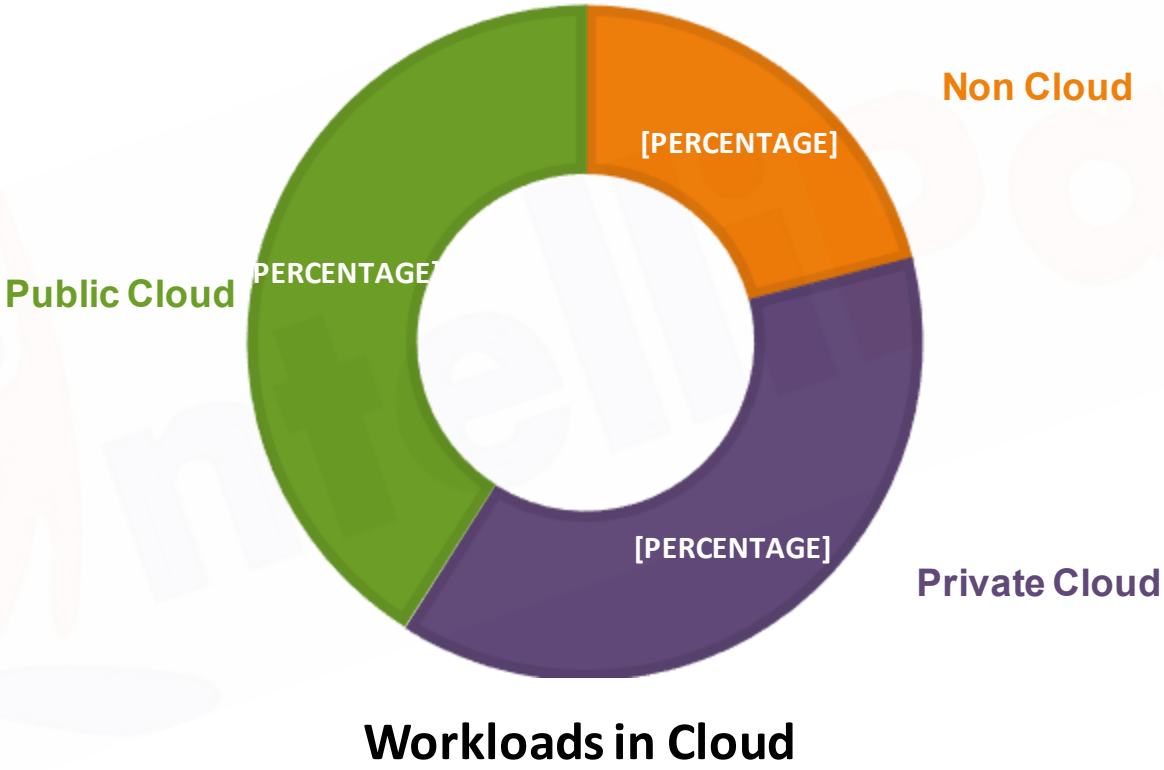
This is highlighted in both the shift to IT spending away from traditional on-premise hardware and the increased adoption of cloud models.

Cloud computing promises new career opportunities for IT professionals.

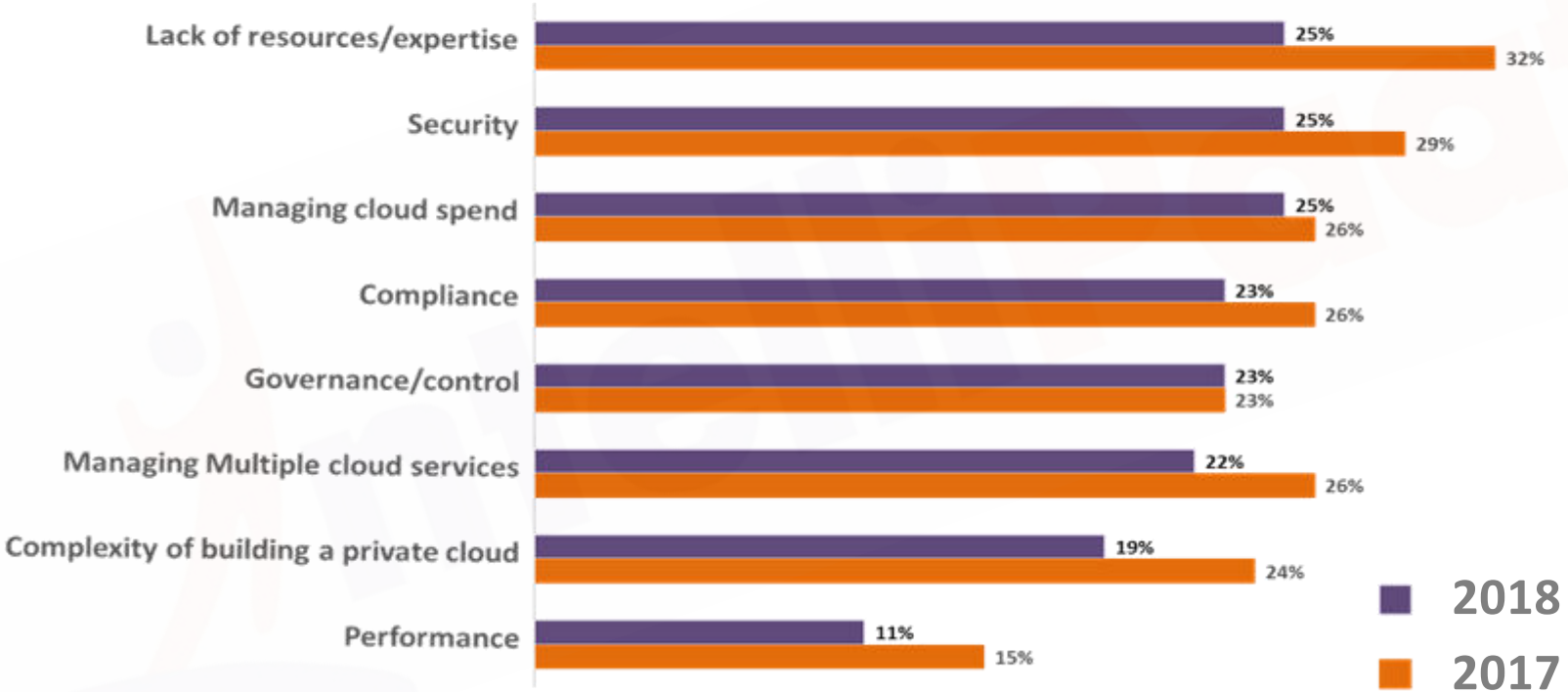
- In many cases, existing core skill sets transfer directly to cloud technologies.
- In other instances, IT pros need to develop new skill sets that meet the demand of emerging cloud job roles.

Gartner predicts that worldwide public cloud services market will grow 18% in 2019 to $300 B, up from $250 B in 2016.

Why Cloud Computing?



Why Cloud Computing?



Cloud Challenges

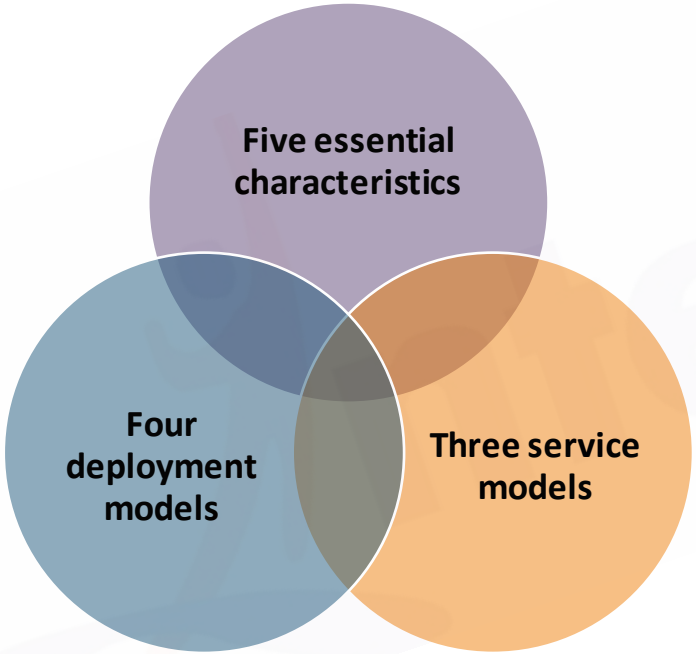
Overview of Cloud Computing

What Is Cloud Computing?

- **Cloud computing** is the delivery of computing services—servers, storage, databases, networking, tools, and software—over the Internet.
- It enables companies to consume a compute resource, such as a server, storage, or an application, as a utility like water or electricity, rather than having to build and maintain computing infrastructures in house.
- Companies offering these computing services are called **cloud providers**, and they charge for cloud computing services based on usage.

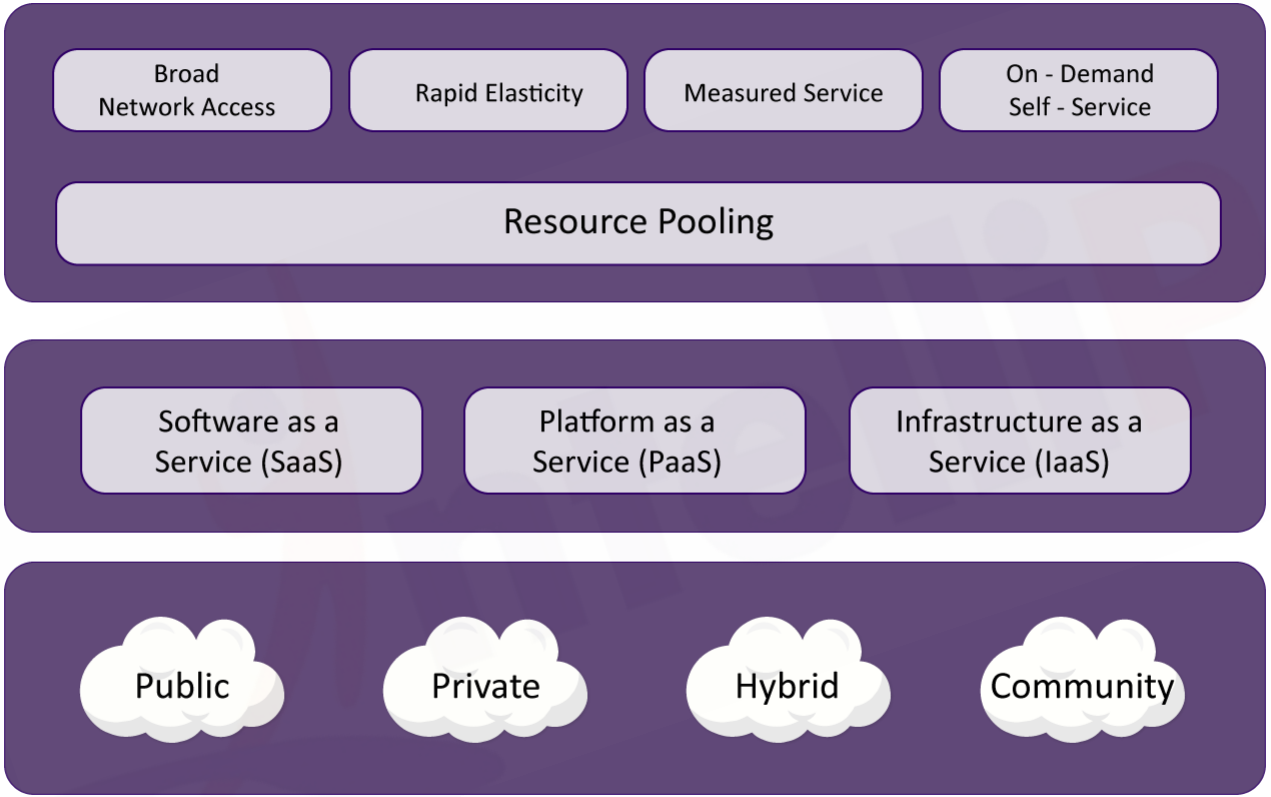
Cloud Computing: Definition

The cloud model is composed of



Cloud computing is a model for enabling **ubiquitous**, **convenient**, **on-demand** network access to a **shared pool** of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Cloud Computing: Definition



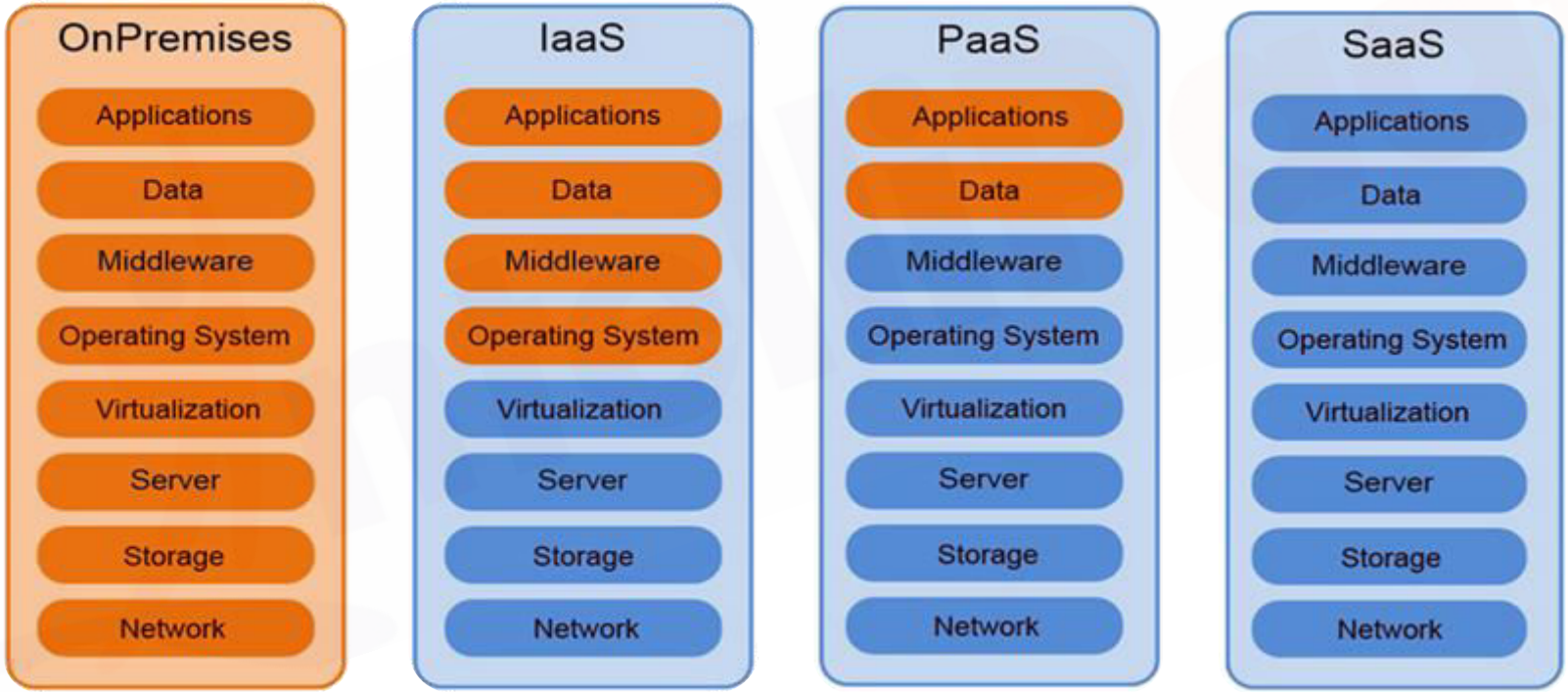
Essential Characteristics

Service Models

Deployment Models

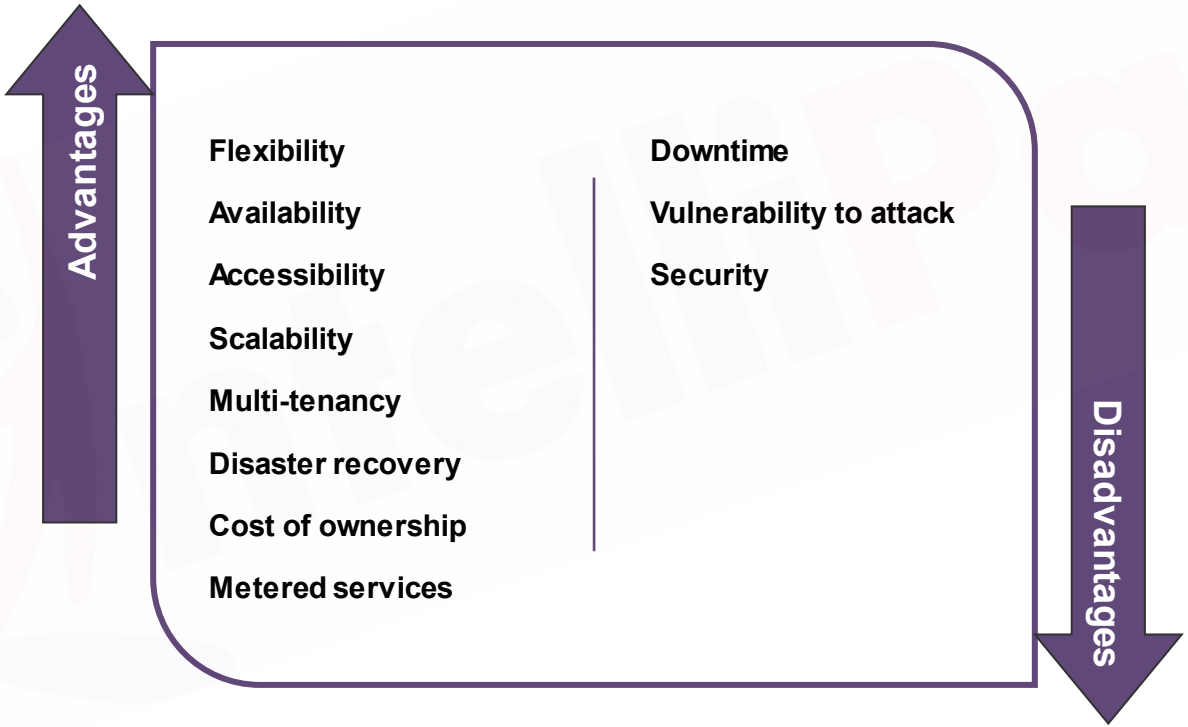
Cloud Computing

On-premises Vs. Service Models



Cloud Computing

Advantages and Disadvantages



Cloud Computing

Traditional Vs. Cloud Computing

Buying

1. Money up-front
2. Road taxes
3. Ownership
4. Maintenance cost
5. Insurance cost
6. Driver cost (optional)
7. Fuel cost
8. Repair

Rental

1. Money as per usage
2. No other charges
3. Price
4. Affordability
5. Upgrade the car type
6. Dedicated or shared

Cloud Computing

Security Issues

- Data Breach
- Access Management
- Insecure Interfaces
- Account Hijacking
- System Vulnerabilities
- Advanced Persistent Threats
- Data Loss
- Malicious Insiders
- Insufficient Due Diligence
- Abuse and Nefarious Use
- Denial of Service
- Shared Technology Vulnerabilities

Cloud Computing

Pricing Model

- **Fixed Pricing** includes pricing mechanism such as:
  - Pay-per-use Pricing
  - Subscription Pricing
  - Hybrid Pricing Model
  - List Pricing Model
- **Dynamic Pricing** is calculated based on a pricing mechanism whenever there is a request.

Type	Service	Pricing Scheme
Pay-per-use	Azure Virtual Machine	Charges on an hourly basis for usage of instance
Subscription	Dropbox	Pricing assigned for storage in GB
Hybrid	Google/App Engine	Pricing is assigned on a monthly basis If limit exceeds, then charge will be per GB and processing power on an hourly basis

Cloud Computing

Use Cases

File Storage	Email	Test and Development
Cloudbursting	Disaster Recovery	Backup
Virtual Desktop	Proof of Concepts	Going Global

QUIZ

Quiz 1

Point out the correct statement:

A	Cloud architecture can couple software running on virtualized hardware in multiple locations to provide an on-demand service.
B	Cloud computing relies on a set of protocols needed to manage inter-process communications.
C	Platforms are used to create more complex software.
D	All of the mentioned.

Answer 1

Point out the correct statement:

A	Cloud architecture can couple software running on virtualized hardware in multiple locations to provide an on-demand service.
B	Cloud computing relies on a set of protocols needed to manage inter-process communications.
C	Platforms are used to create more complex software.
D	All of the mentioned.

Quiz 2

Point out the wrong statement:

- A cloud cannot be created within an organization's own infrastructure or outsourced to another datacenter.
- A composable component must be modular.
- A composable component must be stateless.
- None of the mentioned.

Answer 2

Point out the wrong statement:

A	A cloud cannot be created within an organization's own infrastructure or outsourced to another datacenter.
B	A composable component must be modular.
C	A composable component must be stateless.
D	None of the mentioned.

Quiz 3

What is the full form of SaaS?

A	Storage-as-a-Service
B	Security-as-a-Service
C	Software-as-a-Service
D	Server-as-a-Service

Answer 3

What is the full form of SaaS?

A	Storage-as-a-Service
B	Security-as-a-Service
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D	Server-as-a-Service

Quiz 4

What is the full form of IaaS?

A	Information-as-a-Service
B	Infrastructure-as-a-Service
C	Indexing-as-a-Service
D	All of the mentioned.

Answer 4

What is the full form of IaaS?

A	Information-as-a-Service
B	Infrastructure-as-a-Service
C	Indexing-as-a-Service
D	All of the mentioned.

Quiz 5

What is the full form of PaaS?

A	Purchase-as-a-Service
B	Provisioning-as-a-Service
C	Pipeline-as-a-Service
D	Platform-as-a-Service

Answer 5

What is the full form of PaaS?

A	Purchase-as-a-Service
B	Provisioning-as-a-Service
C	Pipeline-as-a-Service
D	Platform-as-a-Service

Quiz 6

Hybrid cloud is _____.

A	a third-party cloud
B	a privately accessed cloud
C	a publicly held cloud
D	a mixture of private and public cloud

Quiz 6

Hybrid cloud is _____.

A. a third-party cloud

B. a privately accessed cloud

C. a publicly held cloud

D. a mixture of private and public cloud

Quiz 7

Companies fully hosted on cloud store their data in their on-premise servers.

A	True
B	False

Answer 7

Companies fully hosted on cloud store their data in their on-premise servers.

A	True
B	False

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