AWS Certified Cloud Practitioner

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1 Cloud Computing

1.1 What is

Cloud computing is the **on-demand delivery** of it resources (database storage, compute power, etc), which you can access and **provision the right type and size of computing almost instantly** and have a **pay-as-you-go** pricing.

1.2 Deployment Models of the Cloud

1. **Private:**

   - Complete control, meet specific business needs
   - Used by single organization
   - Cloud owned by third-party

2. **Public:**

   - Cloud resources owned and operated by third-party.

3. **Hybrid:**

   - Keep the control of some servers and extend some capabilities to the Cloud

1.3 Five Characteristics of Cloud Computing (Amazon POV)

- **On-demand self service:** Users can provide it resources without human interaction.

- **Broad network access:** Can access the AWS panel from the internet.

- **Multi-tenancy and resource pooling:** Multiple users share the same physical resources yet their it resources are isolated with security and privacy.

- **Rapid elasticity and scalability:** Automatically and quickly add or remove it resources.

- **Measured service:** Usage is measured and you pay what you use.

1.4 Advantages of Cloud Computing

- **Trade CAPEX for OPEX:** Pay on-demand don't own hardware.

- **Benefit from economies of scale:** If more people use AWS, AWS will acquire more hardware and become more efficient, then the pricing goes lower.

- **Use what you need:** Scale based on actual usage measure.

- **Increase speed and agility:** Instance resources almost immediately.

- **Globality:** Instance IT resources in many geographical locations.

1.5 Problems solved by the Cloud (Business with IT needs POV)

- **Flexibility:** Add, remove and change IT resources when needed.

- **Cost-effectiveness:** Pay as-you-go.

- **Scalability:** Increase IT resources when receiving larger loads.

- **Elasticity:** Scale-in and scale-out when needed.

- **High-availability and' Fault-tolerant:** You gotta trust AWS.

- **Agility:** Quick development process, test and launch software applications.

1.6 AWS Global Infrastructure