

3. Key Cloud Concepts

On-Demand Resourcing

Available when you need it, for as long as you need it

Scalability



Vertical Scaling

Horizontal Scaling

Scale **up and down**, altering power and performance of instances

Scale **in and out**, changing the number of instances

Economy of Scale

Vendors can buy **huge quantities** of physical resources at one time and can **transfer low resource costs** on to customers

Flexibility and Elasticity

You can choose the amount of resources you use and for how long, and can **automate scaling** up and down

Growth

Significantly reduced costs allow businesses to grow faster. With access to a global network, they can reach a **global customer base**

Utility-Based Metering

You only pay for what you use for as long as you use it

Shared Infrastructure

Much less hardware is required overall and costs are lowered

Highly Available

Data is easily replicated within regions for resilience and across regions

Security

Many organizations still have security concerns, but the Cloud is often more secure than private datacenters.

Cloud vendors have to adhere to global compliance programs and adopt a Shared Responsibility model with the customer