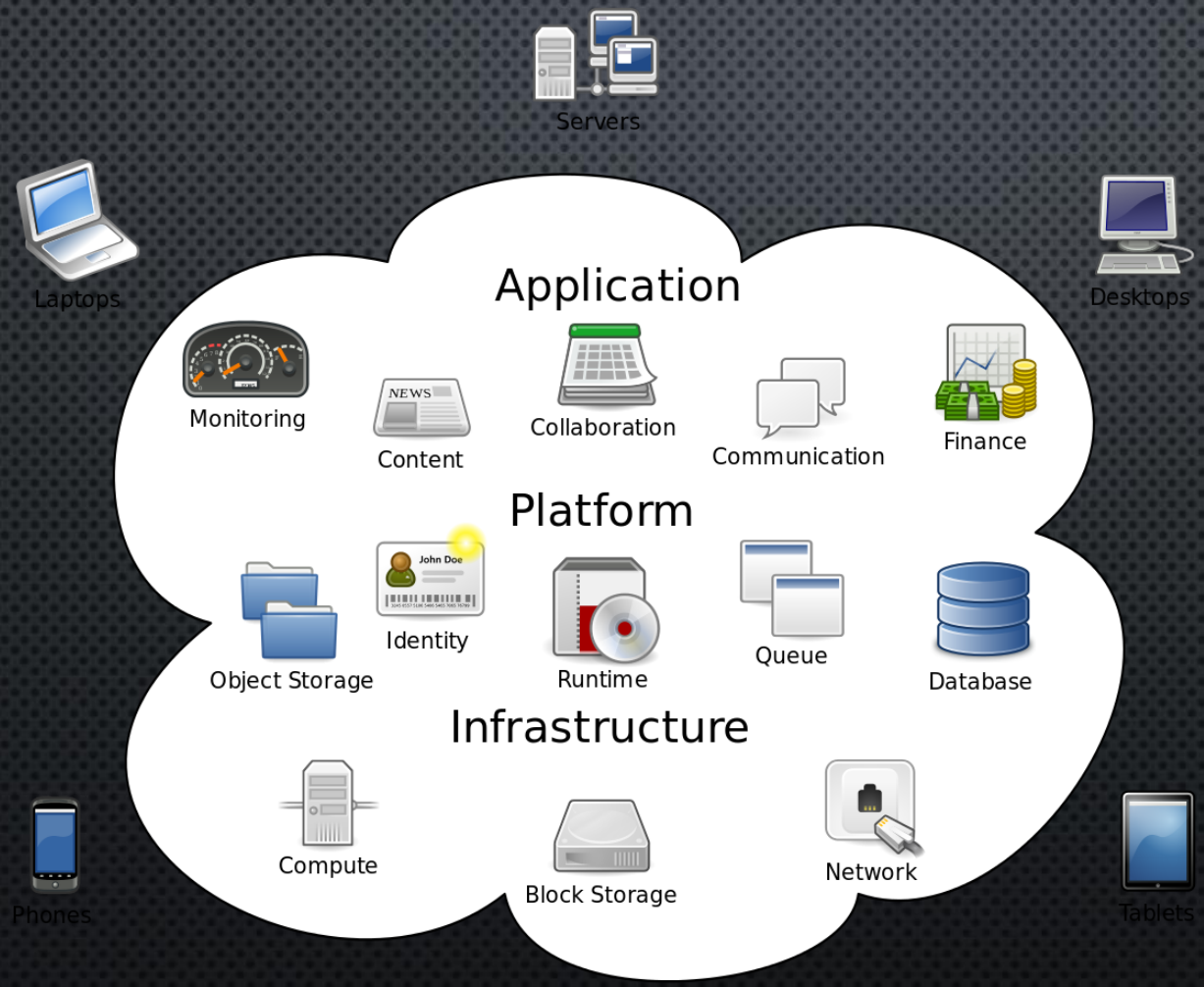
- ✓ **Introductions**
- ✓ **Expectations from the course ?**
- ✓ **Azure Trial Subscription**
- ✓ **Agenda**
  - ✓ 1. Overview of Microsoft Azure IaaS Components
  - ✓ 2. Azure Compute Landscape
  - ✓ 3. Azure Virtual Machines
  - ✓ 4. Extending your datacenter to cloud
  - ✓ 5. Azure Networking
  - ✓ 6. Microsoft Azure Active Directory
  - ✓ 7. Azure AD Premium
  - ✓ 8. Business Continuity & Disaster Recovery

INTRODUCTION TO CLOUD TECHNOLOGY

CLOUD IS A DELIVERY OF COMPUTE SERVICES SERVER,STORAGE,DATABASES,SOFTWARE ANALYTICS OVER THE INTERNET.



Cloud computing

- Cloud computing is renting resources, like storage space or CPU cycles, on another company's computers.
- The company providing these services is referred to as a cloud provider

INTRODUCTION TO CLOUD TECHNOLOGY

Cloud Service Providers

Figure 1. Magic Quadrant for Cloud Infrastructure as a Service, Worldwide

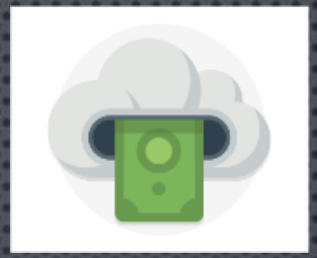
Source: Gartner (July 2019)

Magic Quadrant

Figure 1. Magic Quadrant for Public Cloud Professional and Managed Services

Source: Gartner (February 2019)

BENEFITS OF CLOUD COMPUTING



Its Cost effective.

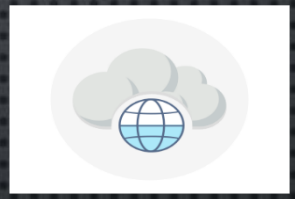
- **Pay-as-you-go** or **consumption-based** pricing model
- No upfront infrastructure costs
- No need to purchase and manage costly infrastructure that you may not use to its fullest
- The ability to pay for additional resources only when they are needed
- The ability to stop paying for resources that are no longer needed

It's secure

It's scalable

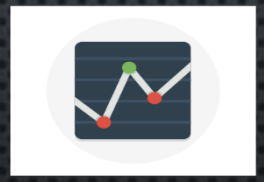
- Vertical scaling
- Horizontal scaling

It's global



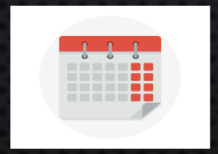
It's elastic

- changes due to a spike or drop in demand



It's current

- the computer hardware is maintained and upgraded by the cloud provider.



It's reliable

redundancy is often built into cloud services architecture so if one component fails, a backup component takes its place

CLOUD ECONOMICS

Economies of scale

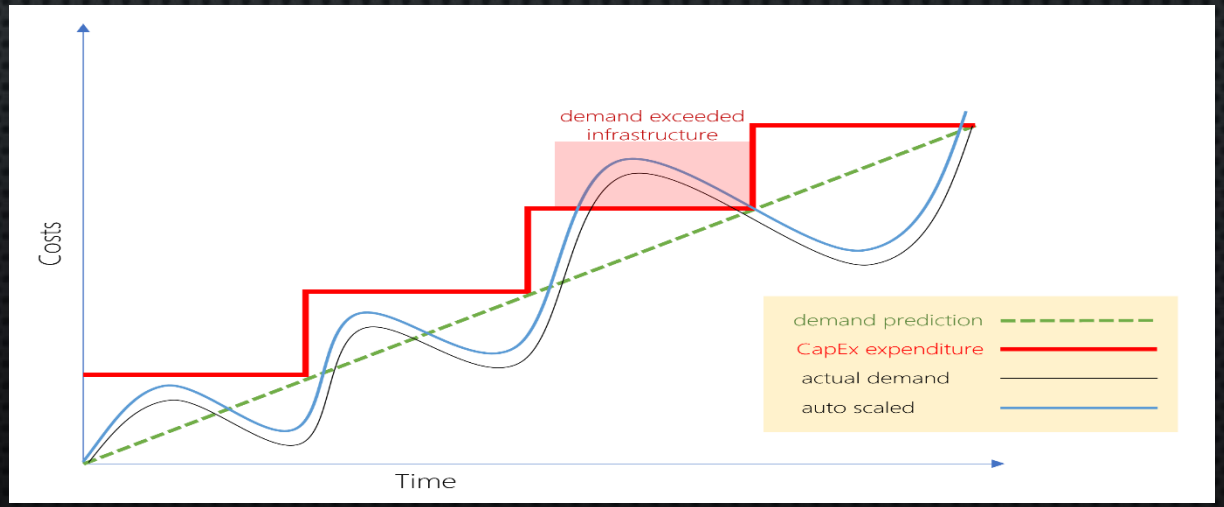
- ability to do things more efficiently or at a lower-cost per unit when operating at a larger scale
- Cloud providers such as Microsoft, Google, and Amazon are large businesses leveraging the benefits of economies of scale.

Capital expenditure (CapEx) versus operational expenditure (OpEx)

- **Capital Expenditure (CapEx)** is an upfront cost, which has a value that reduces over time.
  On Premises Setup – e.g. Server Cost, Networks Cost , Cooling,DR
- **Operational Expenditure (OpEx)** is spending money on services or products now and being billed for them now
  Billing at the user or organization level.

Benefits of OpEx

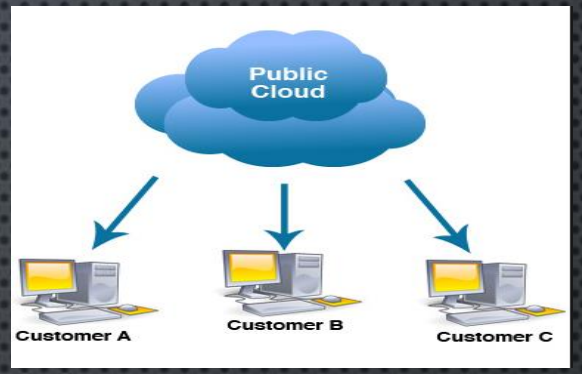
Demand and growth can be unpredictable and can outpace expectation, which is a challenge for the CapEx model as shown in the following graph.



CLOUD DEPLOYMENT MODELS

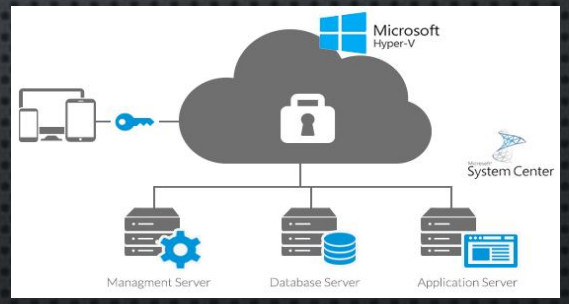
Public Cloud - Owned and operated by a third party provider which deliver cloud resources over the internet.

- High scalability/agility – you don't have to buy a new server in order to scale
- Pay-as-you-go pricing – you pay only for what you use, no CapEx costs
- You're not responsible for maintenance or updates of the hardware
- Minimal technical knowledge to set up and use - you can leverage the skills and expertise of the cloud provider to ensure workloads are secure, safe, and highly available



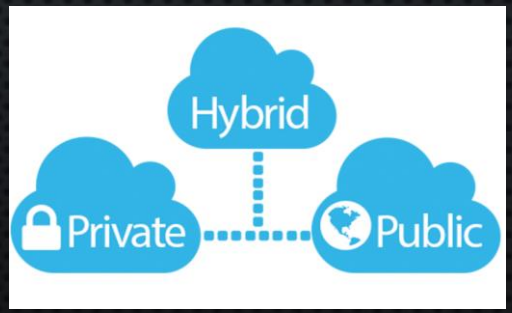
Private Cloud - Refers to cloud computing resources used exclusively by single business or Organization.

- You can ensure the configuration can support any scenario or legacy application
- You have control (and responsibility) over security
- Private clouds can meet strict security, compliance, or legal requirements



Hybrid Cloud - Combines Public and Private cloud.

- You can keep any systems running and accessible that use out-of-date hardware or an out-of-date operating system
- You have flexibility with what you run locally versus in the cloud
- You can take advantage of economies of scale from public cloud providers for services and resources where it's cheaper, and then supplement with your own equipment when it's not
- You can use your own equipment to meet security, compliance, or legacy scenarios where you need to completely control the environment



USES OF CLOUD COMPUTING

You may be using cloud services right now without knowing through TV,emails,streaming music etc. Following are some of the uses of cloud computing

- Create New Applications and services.
- Store Backup and recover data.(Azure Blobs, Azure Files, Azure Queues, Azure Tables)
- Host Website and Blogs. Ex Adobe hosts its website on Azure.
- Stream Audio and Video Netflix.
- Deliver Software on Demand - Paas and SaaS capabilities
- Analyze Data for patterns and make predictions.

TYPES OF CLOUD