



New trends in Cloud Computing

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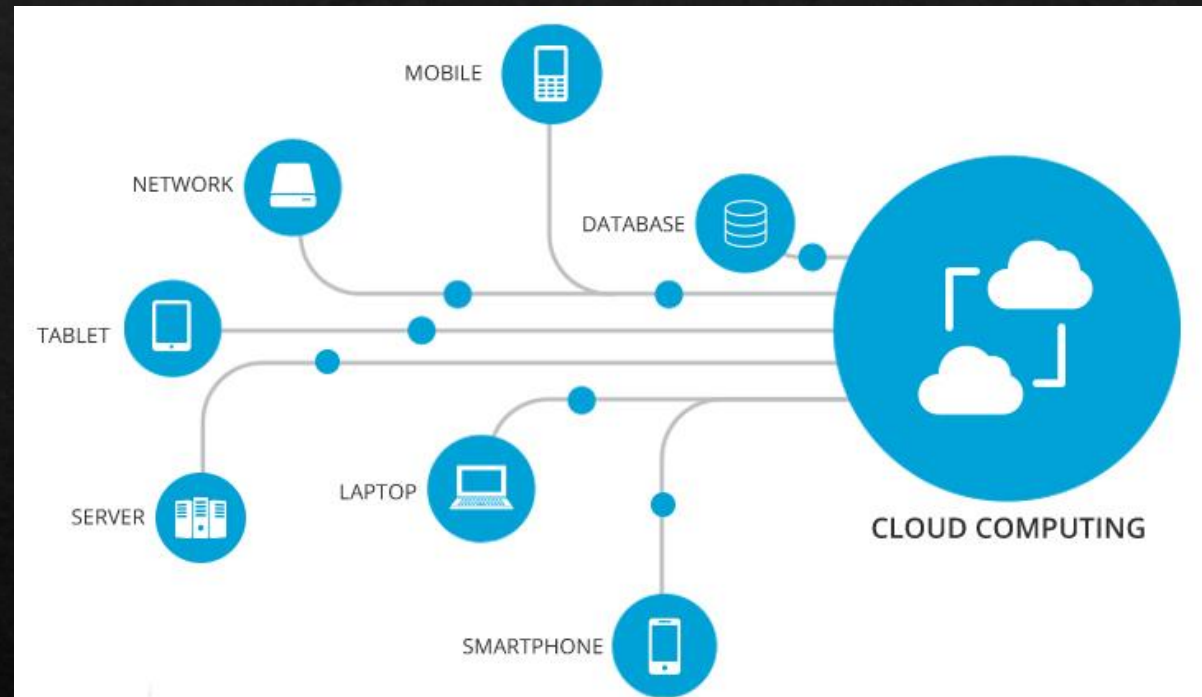
Cloud

◆ What is “the cloud”?

- Servers that are accessed over the Internet, and the software and databases that run on those servers
- Cloud servers are located in data centers all over the world
- By using cloud computing, users and companies don't have to manage physical servers themselves or run software applications on their own machines.

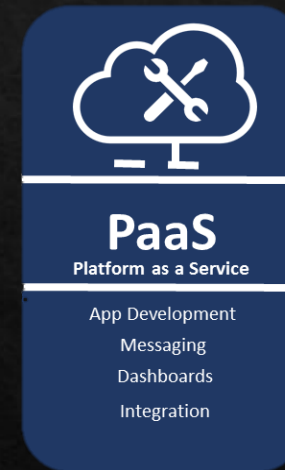
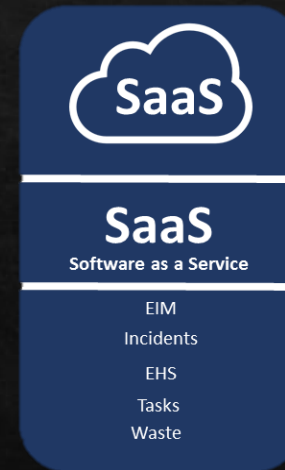
How does cloud computing work?

- Delivery of on-demand computing services from applications to storage and processing power
- Virtualization technology
- Digital-only “virtual” computer acting as a physical one



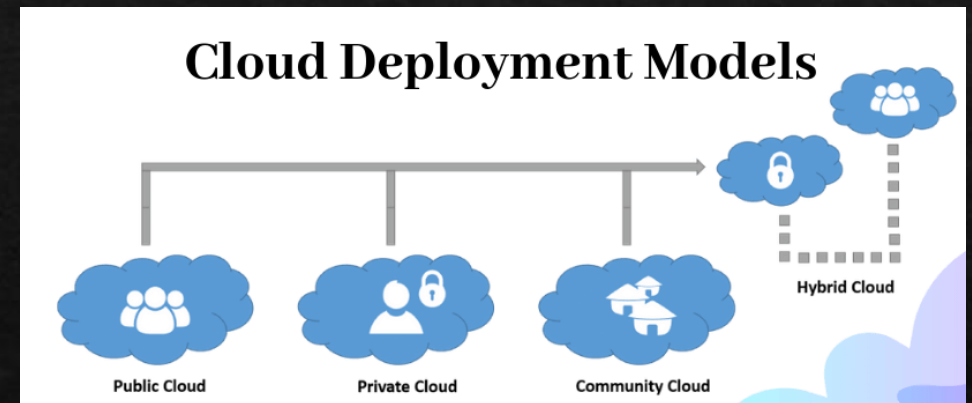
Main service models of cloud computing

- **Software-as-a-Service (SaaS)**
- **Platform-as-a-Service (PaaS)**
- **Infrastructure-as-a-Service (IaaS)**
- **Serverless computing**



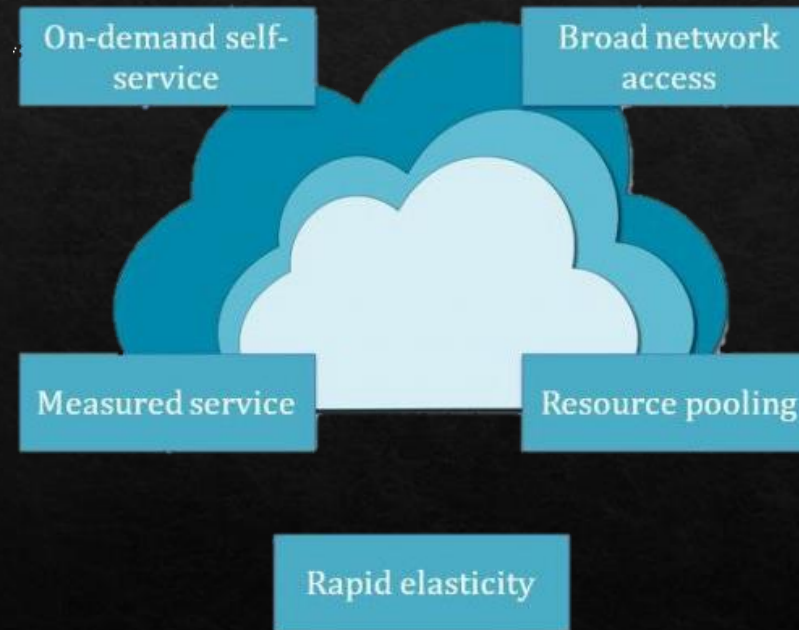
Cloud deployment model

- Public cloud – all services are accessed through internet.
- Private cloud – all services are accessed through the organization network.
- Hybrid cloud – a combination of both models.



Characteristics of Cloud technology

- On-Demand self service
- Broad Network access
- Resource pooling
- Rapid Elasticity
- Measured Service



Top cloud providers



Google Cloud

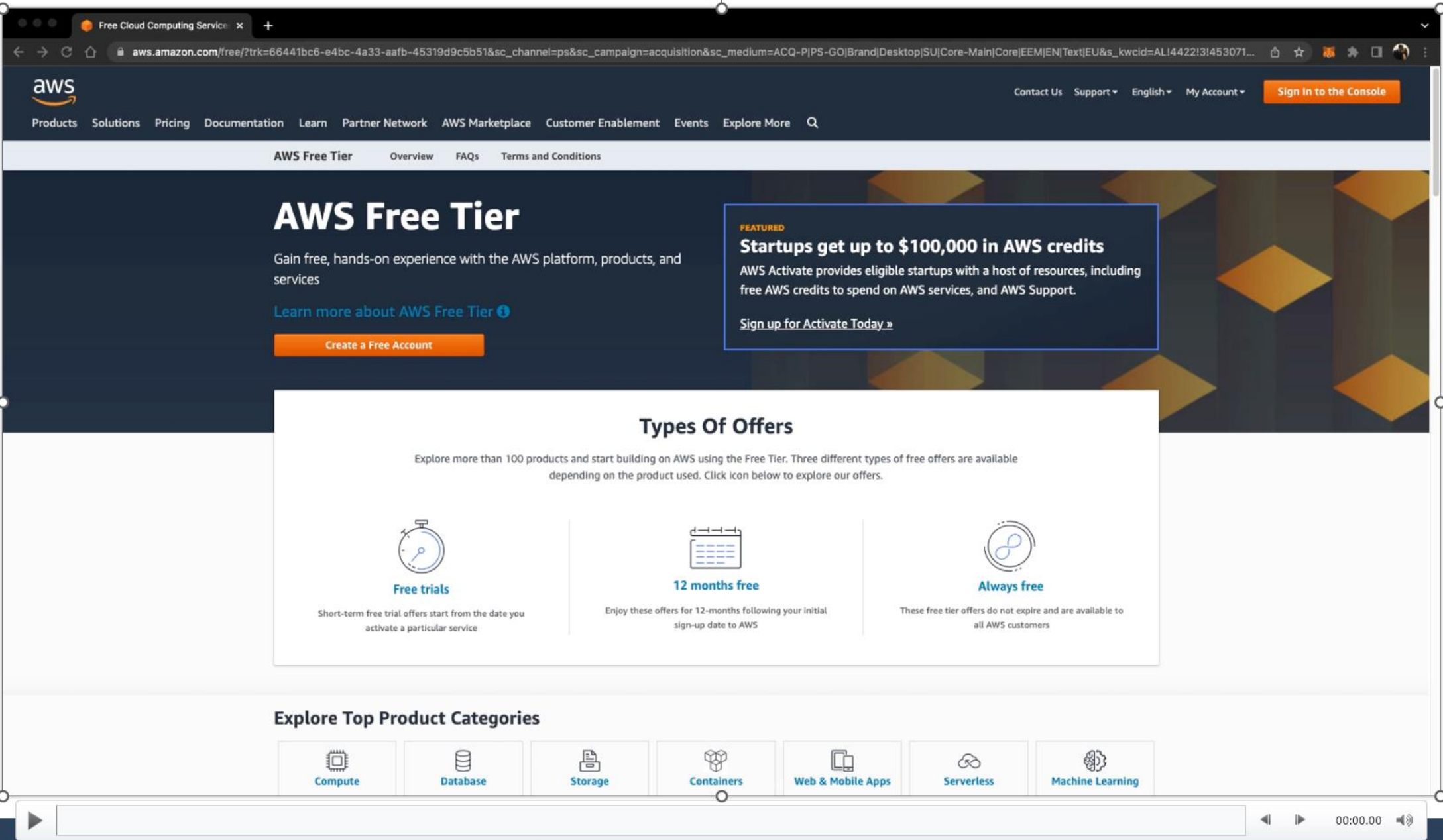


Microsoft Azure

Amazon Web Services Deployment

- ◆ Elastic Compute Cloud virtual server
- ◆ Variety of instance types
- ◆ Different hardware
- ◆ Web application





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Machine Learning



Business Impact

- ◆ Scalability
- ◆ Efficient power
- ◆ Staffing
- ◆ No upfront cost



Cost Comparison

Physical Servers

- ◆ Hardware
- ◆ Staffing
- ◆ Electricity
- ◆ Monthly Bills

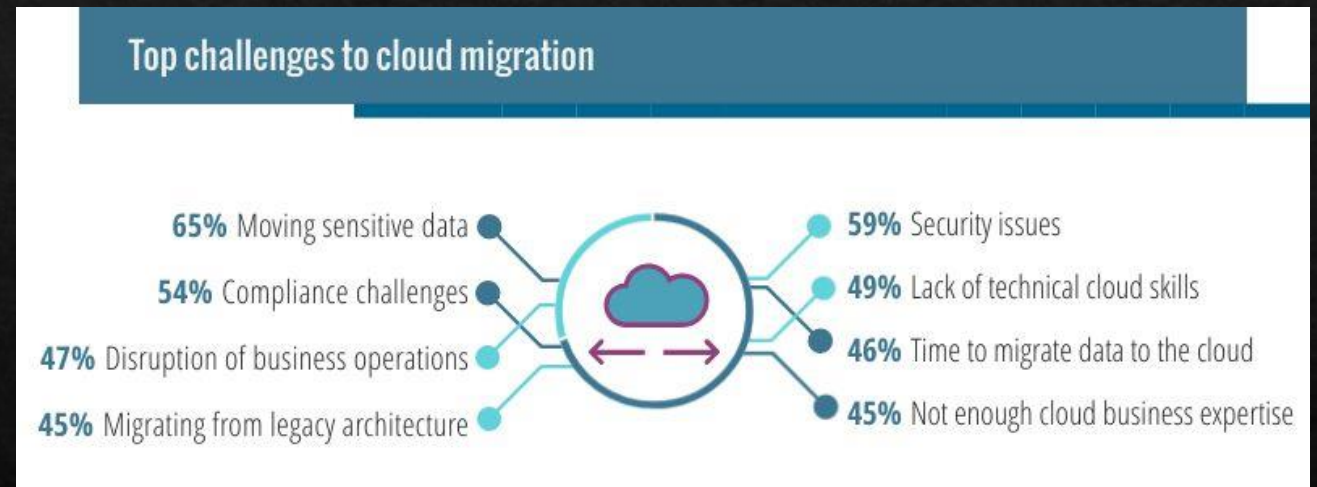
VS

Cloud Servers

- ◆ Subscription

Open challenges in the migration to cloud

- Interoperability
- Cloud security and privacy
- Portability
- Vendor lock-in



Solutions for the challenges of cloud migration

- Use encryption techniques
- Alternate backups
- Invest in education
- Proper cloud provider selection



Machine Learning in cloud computing

- ◆ Most companies made enormous investments in artificial intelligence and machine learning over the last years
- ◆ Obstacles to introducing machine learning capabilities to corporate applications are considerable.



Conclusions

- ◇ The cloud platform reached an astonishing growth over the past years
- ◇ Many business migrate to cloud services
- ◇ More technologies are being developed to overcome the challenges



Thank you!

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