[bcct tweet=" According to <u>Statista</u>, In 2021, around 67 percent of service seekers were using Microsoft Azure for their cloud services. Another interesting thing is, Amazon Web Services (AWS) topped the list until 2020 when Microsoft grabbed the first place"]

There is no single cloud deployment model that fits every development approach and requirement.





Moreover, organizations must choose a model depending on the expected workload.

- You need to assess your needs and consider the kind of execution your application requires.
- Keep in mind your business goals as well. What is it that you want to achieve?
- Try to understand that your requirements may fluctuate over scenarios and with time.





Here are a few aspects you can consider before making the decision:

Ease of Use – How savvy and technically trained are your resources? Do you have the time, team, effort, and money to put them through training?

Cost – How much can you spend on a deployment model? Moreover, how much can you fulfill upfront, on subscription, maintenance, updates, and other models?

Scalability – What is the status of your current activity? Does your system even lead to high demanding situations?

Legal— Are there any specific laws or regulations in your nation/region that can impact the execution? What are the industry standards that you must stick to?

Privacy - Have you established strict privacy regulations for the data you





Undoubtedly, each cloud deployment model has an exclusive service offering and can immensely add value to your business.

For small to medium-sized businesses: a **public cloud** can work ideally to start with.

Further, as your requirements develop, you can easily switch to another deployment model.





1)A small business with 25–30 employees has decided to move its data and working functionalities onto the cloud. They are looking for extremely accessible data, easy data backup, costefficient. They also need accounting software, customer service tools. Which deployment model is best suited for the considered business?

Answer: A public cloud system is great for organizations that want more elasticity, cost-effectiveness, and the latest technology.





2)A national bank requires cloud deployment services with high security, privacy, and reliability, allowing only authorized persons to access resources. Which deployment model is best suited for these requirements?

Answer: A private cloud system is flexible, secured, and has high scalability, which allows organizations to customize their infrastructures per their necessities





3) A retail company has websites that require high performance at all times. They have on-premise servers to handle the working, but sometimes during seasons of sales, they experience periods of spikes in traffic. Which deployment model will handle their traffic spikes and also provide the on-premise model?

Answer: Hybrid cloud efficiently handles the on-premise model during the off-season and allows for users to offload overage traffic when their on-premise systems are overloaded.





4) A global company has decided to offer video streaming solutions for business to share their ideas and presentations and pitch them to clients. They wish to adopt cloud scaling to enable larger bandwidth and speed. Which deployment model is best suited for the considered global company?

Answer: Public cloud allows streaming platforms to increase their bandwidth to provide better video streaming performance and viewing experience.





5) An organization wants to build infrastructure designed for users to access books by members through electronic devices. The borrowed books can be verified using the cloud by sharing resources between devices. Which deployment model will help them build such a system?

Answer: Private cloud can come to a rescue when an organization wants to share resources only with its members.





Real-time use cases

Netflix is by far the best case study for the public cloud. Before 2008, Netflix used relational databases on its own data centers. Storing customer details, preferences, and the thousands of video content, the company eventually faced a major issue in the database in 2008.

With the growing business needs, customer base, and data storage, Netflix had to rethink the data center situation. Being the genius it is, Netflix saw the potential in cloud computing way before cloud was the scene. Netflix migrated its functioning, content, and delivery network to Amazon's public cloud — AWS. What is interesting is, Amazon has its video-streaming service. Amazon's cloud has benefitted the streaming service provider by no doubt by supporting the amazingly fast growth in the global market. It has almost 25 times as many streaming members as it had in 2008. It is very rare to see downtime errors in Netflix.





References

- Cloud Computing, Sandeep Bhowmik
- Cloud Deployment Model
 - https://www.javatpoint.com/cloud-deployment-model
- Best cloud deployment models in 2021: How to choose one for your Business?
 - https://ideausher.com/blog/best-cloud-deployment-models-in-2021/
- Cloud Deployment Models and Real-Time Use Cases
 https://www.payoda.com/cloud-deployment-models-and
 - real-time-use-cases/

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