

Introduction To Cloud Computing





Software as a Service (SaaS)

- SaaS is a cloud-based method of providing software to users.
- SaaS users subscribe to an application rather than purchasing it once and installing it.
- Users can log into and use a SaaS application from any compatible device over the Internet.
- The actual application runs in cloud servers that may be far removed from a user's location.

Non-SaaS Application



Application logic runs
on user's computer

SaaS Application



Application logic runs
in the cloud

● Top SaaS Companies



2

Advantages of The Cloud



Advantages of The Cloud

- Run operating systems where the physical hardware is unavailable
- **Easier to create new machines, backup machines**, etc.,
- Emulate **more machines** than are physically available,
- **Timeshare** lightly loaded systems on one host,
- **Debug** problems (suspend and resume the problem machine),
- **Easy migration** of virtual machines (shutdown needed or not).
- Run legacy systems!





Advantages of The Cloud

- Cloud computing enables companies and applications, which are system infrastructure dependent, to be **infrastructure-less**.
- By using the Cloud infrastructure on "**pay as used and on demand**", all of us can save in capital and operational investment!
- Clients can:
 - **Put their data on the platform** instead of on their own desktop PCs and/or on their own servers.
 - They can put their applications on the cloud and use the servers within the cloud to do processing and data manipulations etc.





More Advantages of The Cloud

- ◉ **Cost Saving:** Companies can increase their computing capabilities while reducing their expenses.
 - ◉ This is a lower barrier to entry and also requires fewer or zero in-house IT resources to provide system support.
- ◉ **Scalability/Flexibility:** Companies can start with a small deployment and grow to a large infrastructure fairly rapidly, and then scale back if necessary.
 - ◉ Also, the flexibility allows companies to use extra resources at peak usage times, enabling them to satisfy consumer demands and face less lags in their apps and systems.
- ◉ **Reliability:** It provides multiple redundant sites that can support business continuity and disaster recovery.
- ◉ **Maintenance:** Cloud service providers do the system maintenance and do not require application installations onto PCs.
- ◉ **Mobile Accessible:** Mobile workers have increased productivity due to systems accessible in infrastructure-available-from-anywhere



Question?

Should the United States Government move all of its national database containing information on all citizens over to the Cloud?

- If you answered yes, which type of cloud should it use?
- If you answered no, please justify your answer