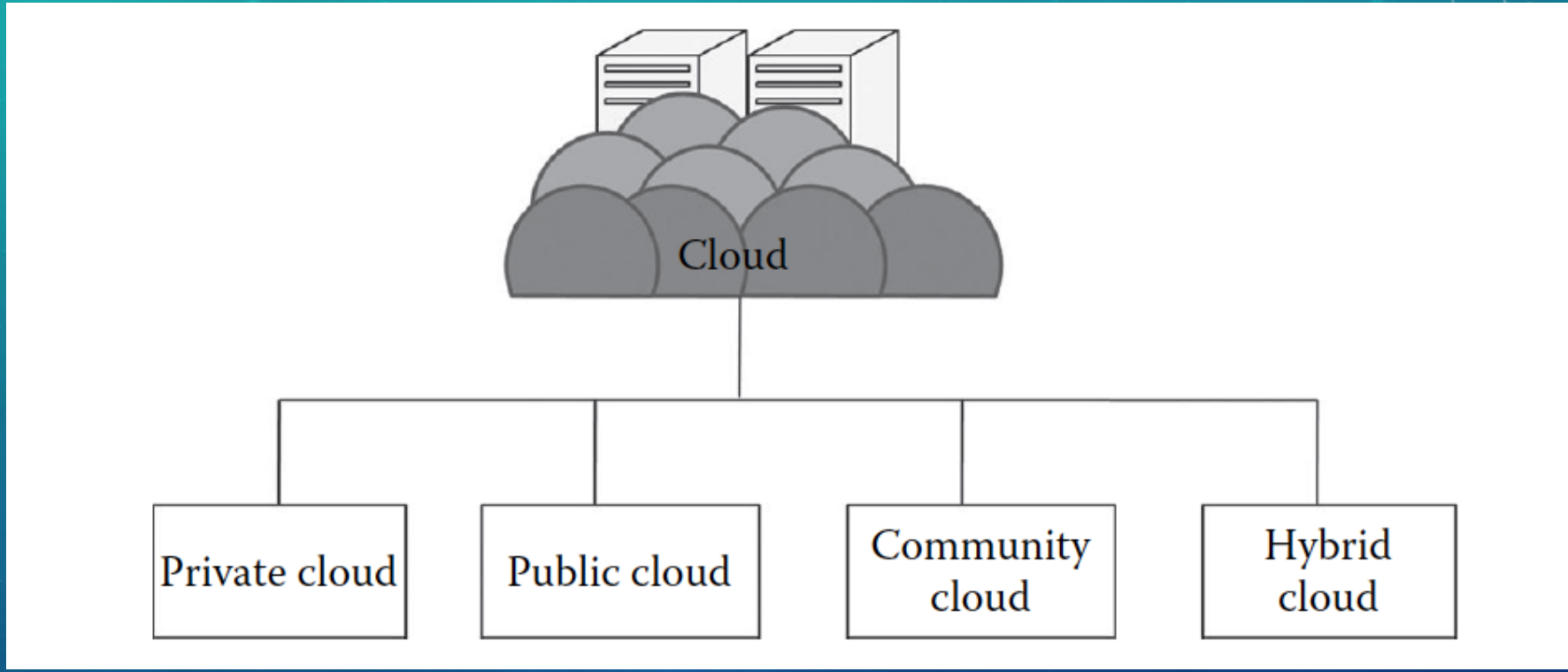
SESSION 4

DEPLOYMENT MODELS(PART 1)

OBJECTIVES

- Private cloud
- Public cloud

INTRODUCTION



PRIVATE CLOUD'S CHARACTERISTICS

- *Secure*: Usually the private cloud is deployed and managed by the organization itself, and hence there is least chance of data being leaked out of the cloud.
  - In the case of outsourced cloud, the service provider may view the cloud (though governed by SLAs), but there is no other risk from anybody else as all the users belong to the same organization.
- *Central control:* The organization mostly has full control over the cloud, private cloud is managed by the organization
- *Weak SLAs:* Formal SLAs may or may not exist in a private cloud
  - But if they exist they are weak as it is between the organization and the users of the same organization

PRIVATE CLOUD'S SUITABILITY

- Require a separate cloud for their personal or official use.
- The organizations or enterprises that have a sufficient amount of funds as managing and maintaining a cloud is a costly affair
- Consider data security to be important
- Want autonomy and complete control over the cloud
- Have a less number of users
- Have prebuilt infrastructure for deploying the cloud and are ready for timely maintenance of the cloud for efficient functioning
- Special care needs to be taken and resources should be available for troubleshooting

THE PRIVATE CLOUD PLATFORM IS NOT SUITABLE FOR THE FOLLOWING

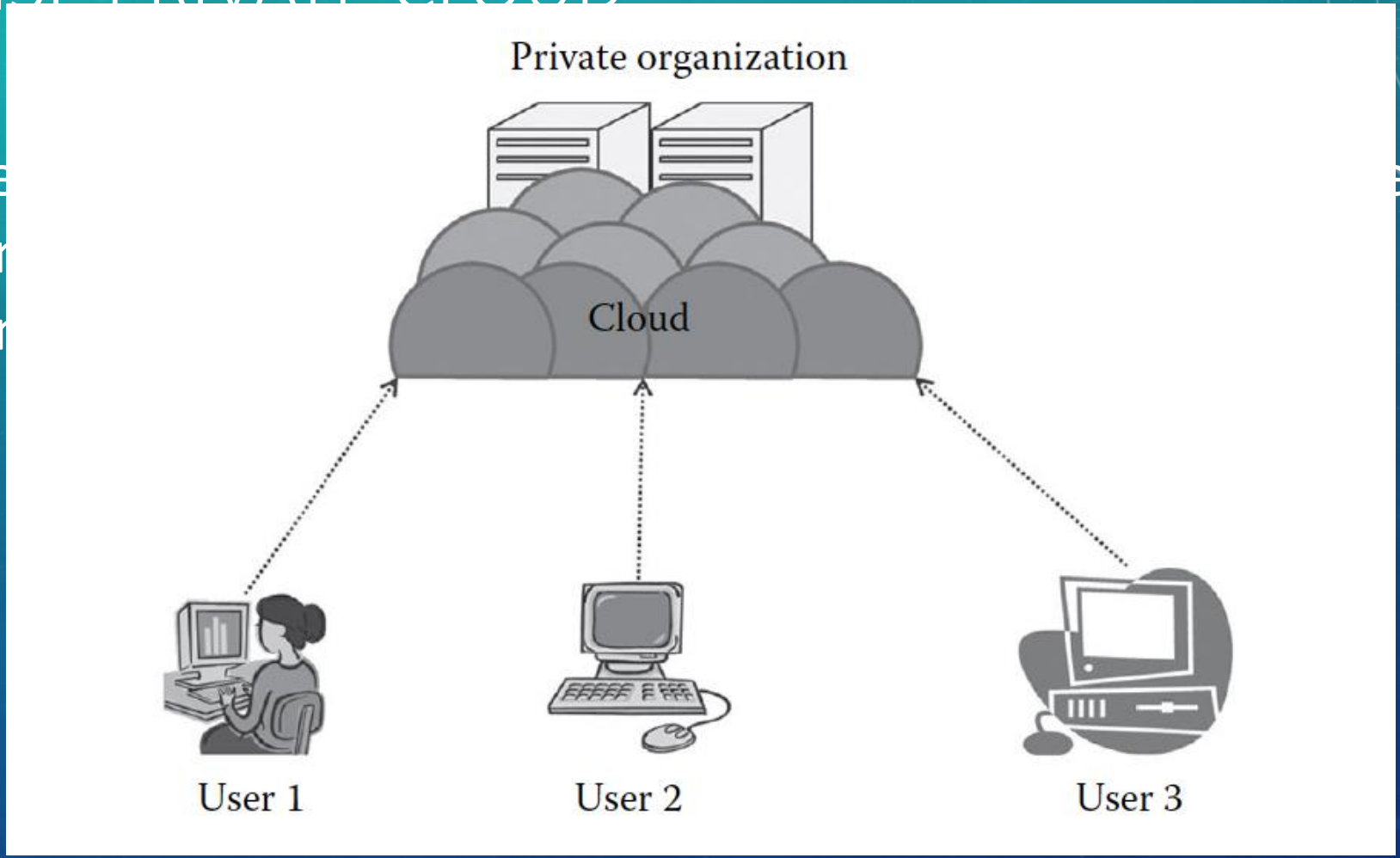
- The organizations that have high user base
- The organizations that have financial constraints
- The organizations that do not have prebuilt infrastructure
- The organizations that do not have sufficient manpower to maintain and manage the cloud

PRIVATE CLOUD CLASSIFICATION

- According to NIST [4], the private cloud can be classified into several types based on their location and management:
  - On-premise private cloud
  - Outsourced private cloud

ON-PREMISE PRIVATE CLOUD

- On-premise … ed by a single orga… premises a…



ON-PREMISE PRIVATE CLOUD ISSUES

- Base on the textbook on page 49 explain some issues of On-Premise Private Cloud

OUTSOURCED PRIVATE CLOUD

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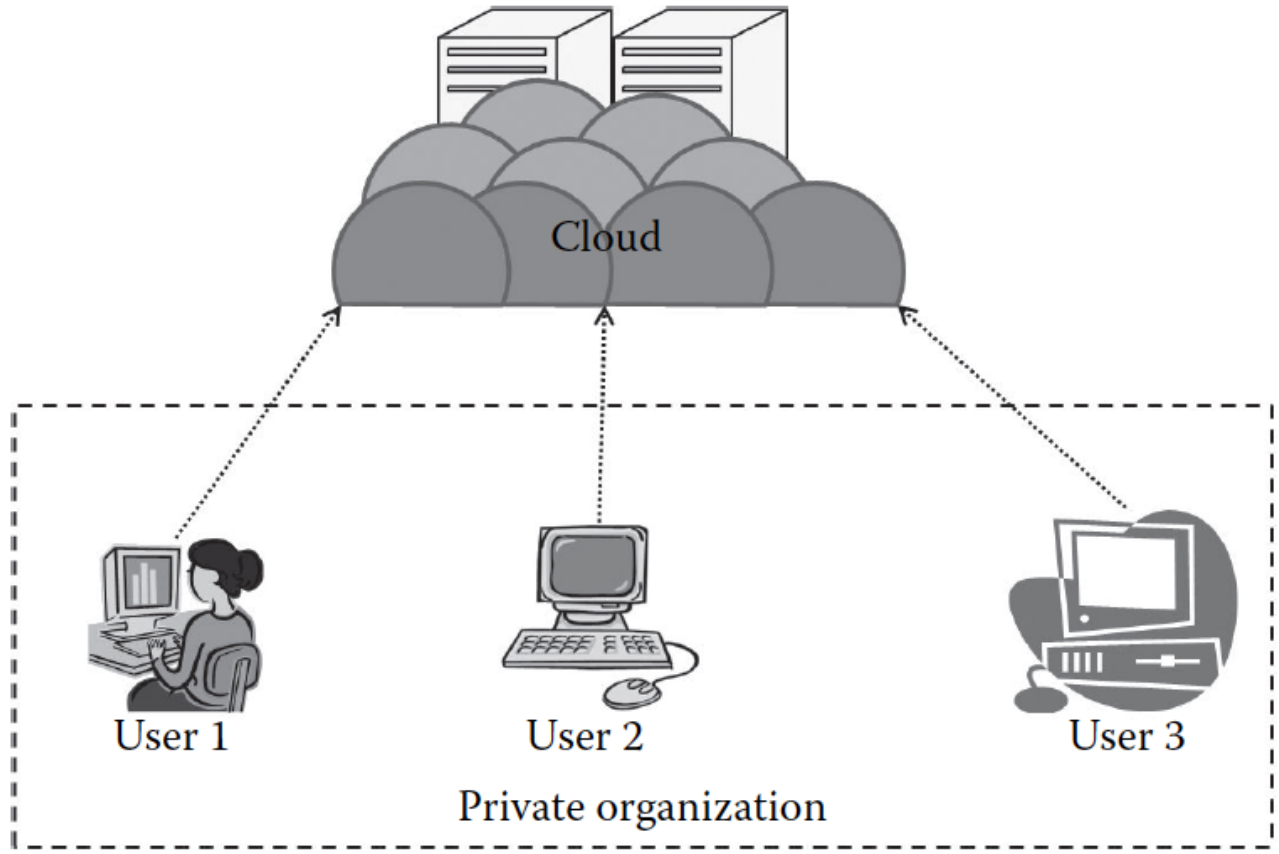
- Everything… …oud is outsource…



OUTSOURCED PRIVATE CLOUD ISSUES

- Comparing outsources private cloud issues with on premise private cloud issues. In you opinion which one is the most important: SLA, Network, Security and privacy, Laws, Location, Performance, Maintenance?

PRIVATE CLOUD'S ADVANTAGES

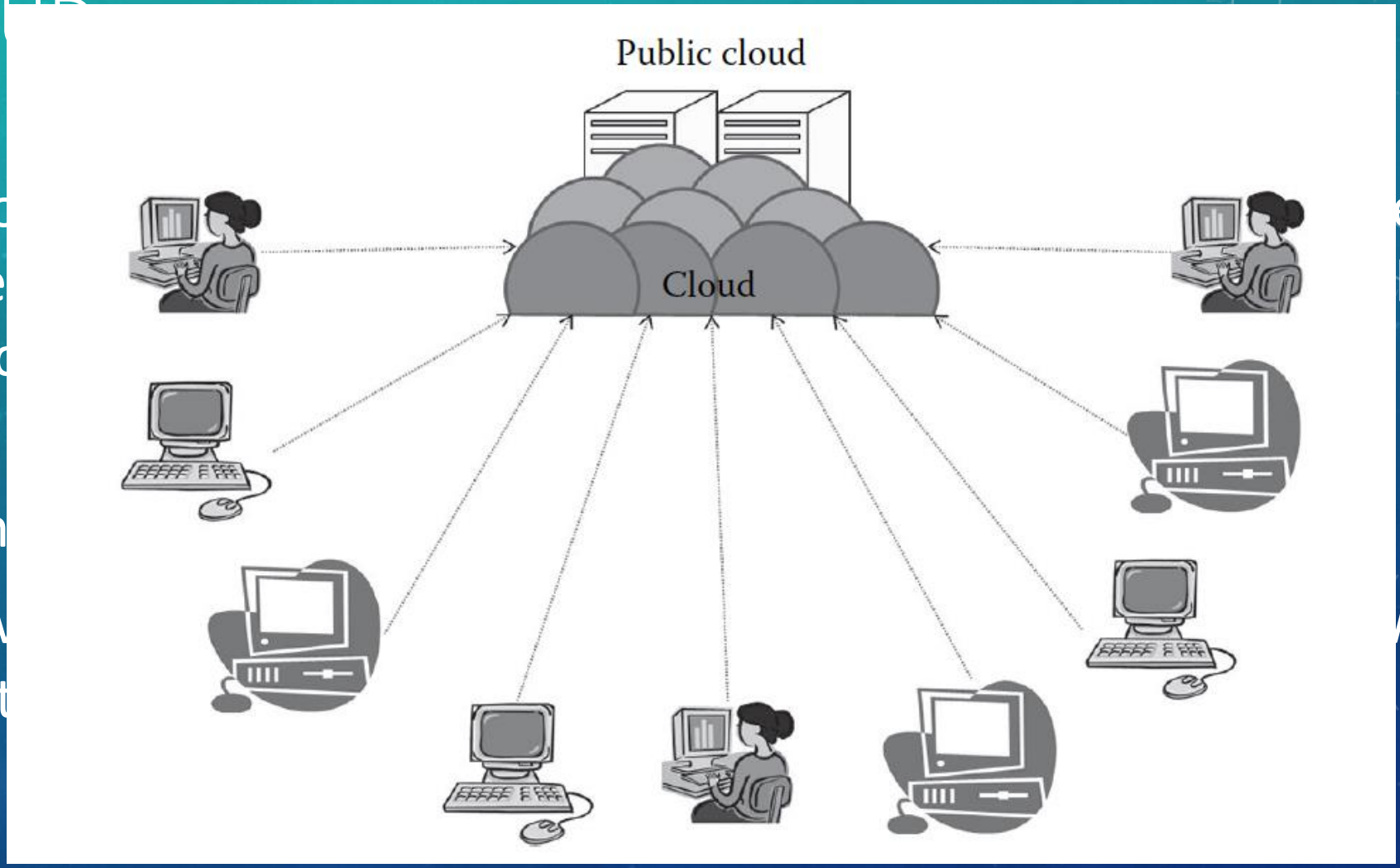
- The cloud is small in size and is easy to maintain.
- It provides a high level of security and privacy to the user.
- It is controlled by the organization.

PRIVATE CLOUD'S DISADVANTAGES

- For the private cloud, budget is a constraint.
- The private clouds have loose SLAs.

PUBLIC CLOU

- The public clo … en use by the ge … by a business, ac … combination
- It exists on th …
- Some of the v … WS [5], Microsoft …



PUBLIC CLOUD'S CHARACTERISTICS

- *Highly scalable*
  - The resources in the public cloud are large in number and the service providers make sure that all the requests are granted
- *Affordable*:
  - The public cloud is offered to the public on a pay-as-you-go basis; hence, the user has to pay only for what he or she is using
- *Less secure*
  - The public cloud is less secure out of all the four deployment models. This is because the public cloud is offered by a third party and they have full control over the cloud. Though the SLAs ensure privacy, still there is a high risk of data being leaked

PUBLIC CLOUD'S CHARACTERISTICS

- *Highly available*: The public cloud is highly available because anybody from any part of the world can access the public cloud with proper permission, and this is not possible in other models as geographical or other access restrictions might be there
- *Stringent SLAs:* Providers follow the SLA strictly and violations are avoided. These SLAs are very competitive

PUBLIC CLOUD'S SUITABILITY

- The requirement for resources is large, that is, there is large user base
- The requirement for resources is varying
- There is no physical infrastructure available
- An organization has financial constraints

THE PUBLIC CLOUD IS NOT SUITABLE, WHERE THE FOLLOWING APPLIES

- Security is very important.
- Organization expects autonomy
- Third-party reliability is not preferred

PUBLIC CLOUD'S ISSUES

- Students work in group to discuss those issues, the factors can be found on page 54 of the book

PUBLIC CLOUD'S ADVANTAGES

- There is no need of establishing infrastructure for setting up a cloud.
- There is no need for maintaining the cloud.
- They are comparatively less costly than other cloud models.
- Strict SLAs are followed.
- There is no limit for the number of users.
- The public cloud is highly scalable

PUBLIC CLOUD'S DISADVANTAGES

- Security is an issue.
- Privacy and organizational autonomy are not possible.

SUMMARY

- The types and characteristics of
  - Private cloud
    - On Premise private cloud
    - Outsourced private cloud
  - Public cloud

REFERENCES