Introduction to Cloud Computing

Part-2

22AIE305

Introduction to Cloud Computing

2-0-3-3

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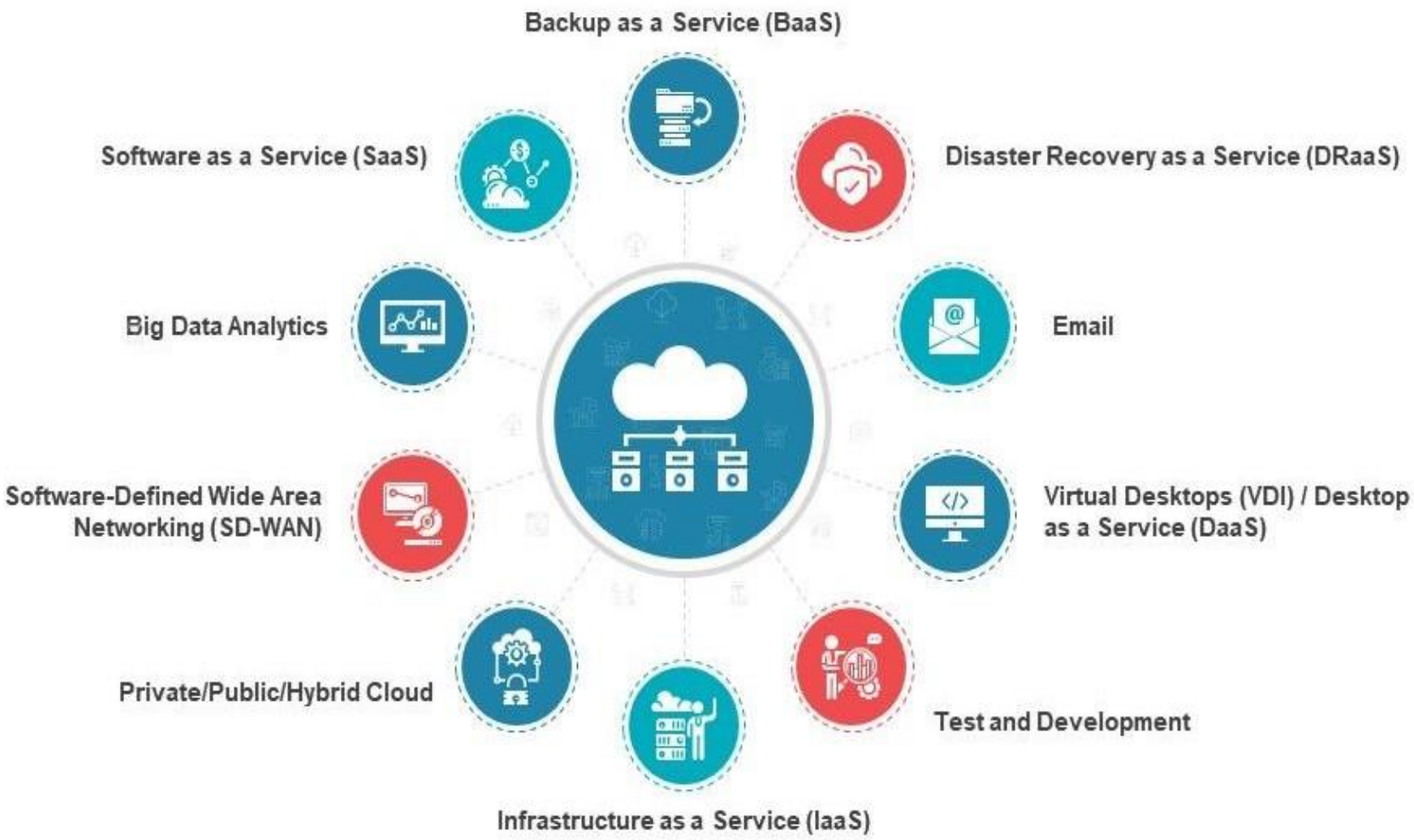
CLOUD COMPUTING: CHARACTERISTICS

- **On-demand self service**
  - The Cloud computing services does not require any human administrators, users automatically access computing resources (e.g. servers, storage etc.) as needed.
- **Broad network access**
  - Services available over the network can be accessed using mobile/smart phones, tablets, laptops and desktops.
- **Resource pooling**
  - Computing resources (including memory and bandwidth) can be pooled to serve multiple customers at the same time.
  - Location independence
- **Rapid elasticity**
  - Ability to quickly scale in/out service with demand, at any time.
- **Measured service**
  - Control, optimise services based on metering (i.e. pay-per-use pricing model)
  - Type of service include storage, processing, bandwidth etc.

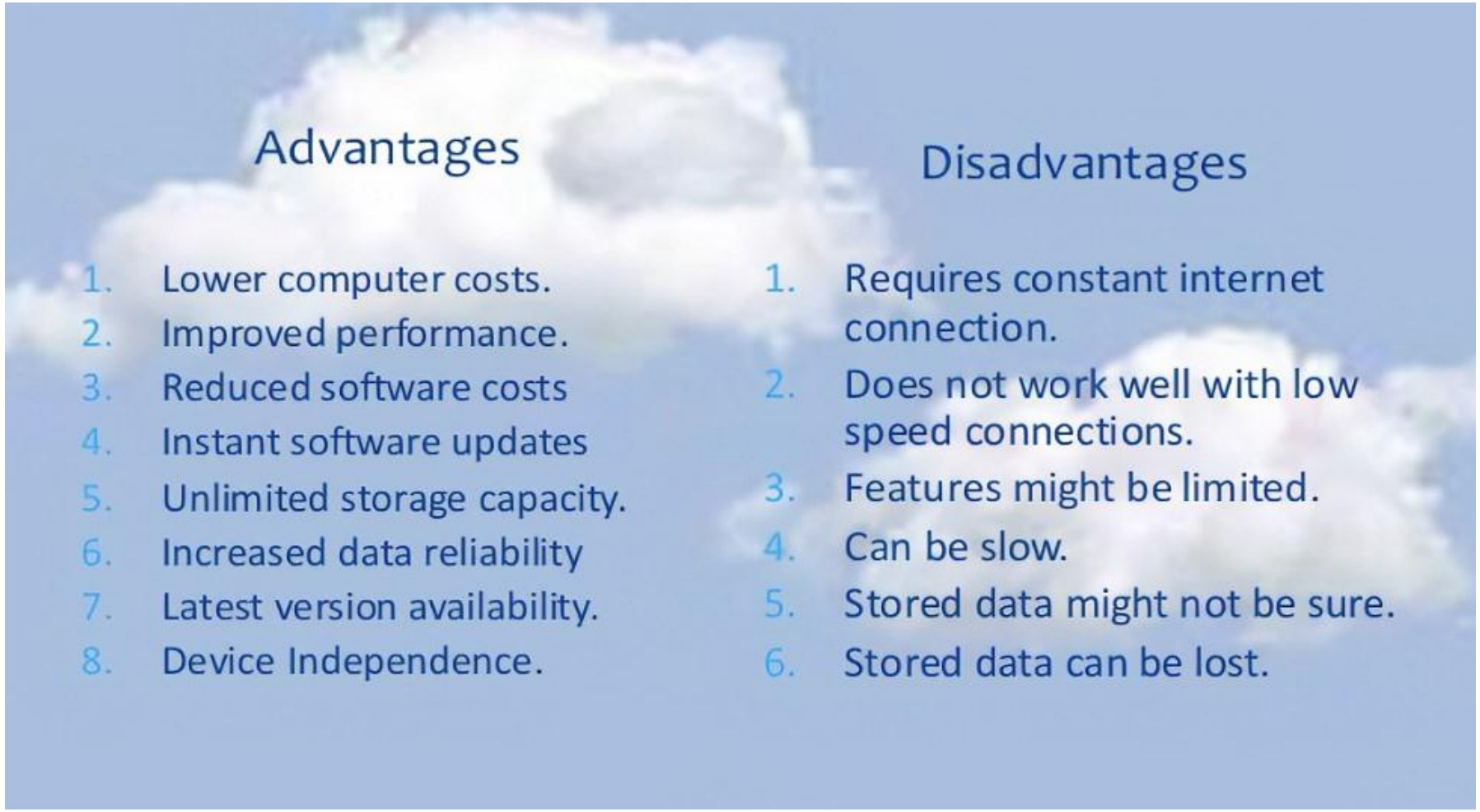
MAJOR USE CASES OF CLOUD

- **Storage**
- **Test and Development**
- **Serverless Computing**
- **High Performing Applications**
- **Infrastructure as a service (IaaS)**
- **AI as a service (AIaaS)**
- **Disaster Recovery Plan**
- **Building Fault Tolerant Systems**
- **Security**
- **Hybrid IT**

MAJOR USE CASES OF CLOUD



ADVANTAGES AND DISADVANTAGES



MAJOR CLOUD PLAYERS IN THE MARKET

SECURITY ISSUES AND CHALLENGES

SECURITY ISSUES/ CONCERNS

- Third Party (no 100% security)
- Cyber Attacks
- Insider attacks
- Govt. –Intrusions –supervision of data
- Legal Liability
- Lack of support
- Lack of Standards

SECURITY CHALLENGES

- Cloud computing is an emerging technology and has many challenges in various aspects of "Information Handling".
- Security and Privacy–Secure applications, encrypted files, Data loss software, etc.
- Interoperability
- Portability– From one Cloud to another and should operate correctly.
- Service Quality – Service level agreements, assurance.
- Computing Performance
- Reliability and Availability

NIST DEFINITION:

- The U.S. National Institute of Standards and Technology (NIST):
- Cloud computing is a model for enabling ubiquitous (computing is made to appear any time and every where), convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

THANK YOU