

TICT4152 Reference

Examples of the Application of Cloud Technologies in Education

- Google Classroom. Google Classroom is a cloud-based learning management system that is a part of Google Apps for Education. ...
- Blackboard. ...
- Knowledge Matters. ...
- Coursera. ...
- Microsoft Education Center. ...
- Improved Administration. ...
- Access to Information. ...
- Online Education Courses

*****Advantages of Cloud Computing in Social Networking**

Scalability And Flexibility

One of the biggest benefits of cloud computing in social networking is its ability to scale quickly and easily. Cloud computing platforms allow users to scale up or down depending on the demand for their services. It means that social networking sites can handle large amounts of traffic during peak usage periods without experiencing any downtime or slow loading times.

Cost-Efficient

Cloud computing is cost-effective. With cloud computing, social networking platforms can save much money as they don't need to invest in expensive hardware or software; they only need to pay for what they use. Cloud computing also eliminates the need for maintaining and managing physical servers, reducing the costs of IT infrastructure and maintenance. As a result, social networking platforms can redirect their resources towards enhancing user experience and developing innovative features.

Improved Collaboration

Cloud computing has revolutionized collaboration in social networking by enabling users to work on the same project or document in real time, regardless of their location. Cloud-based tools such as Google Docs and Dropbox allow multiple users to edit and share files simultaneously, which has made it easier for remote teams to work together seamlessly

Data Security

One of the primary concerns with cloud computing is that data is stored on remote servers and may be accessed by unauthorized users. This can happen due to vulnerabilities in the software or infrastructure or due to insider threats. However, cloud providers typically have robust security measures to protect against these risks, such as encryption, access controls, and monitoring.

*****Cloud-Based Social Networking Platforms**

Cloud-based social networking platforms like Facebook, Twitter, LinkedIn, and Instagram are built on cloud computing technology. These platforms use cloud computing to store and manage vast amounts of user-generated data.

These social networking platforms use cloud computing in various ways. Firstly, they use cloud storage to store users' data, such as photos, videos, messages, and posts. The cloud storage infrastructure allows these platforms to securely store large volumes of data and access them quickly from anywhere in the world. This also ensures that users can access their data from multiple devices seamlessly.

Secondly, cloud-based social networking platforms process and analyse users' data using cloud computing. These platforms leverage big data analytics tools to analyse users' behaviour, preferences, and interests and use this information to deliver personalized content and advertisements to users. It helps these platforms to enhance user engagement and generate revenue from targeted advertising.

Challenges For Social Networking

While cloud computing has revolutionized the world of social networking, it also brings challenges and risks. Some of the challenges include the following –

Performance

Performance issues can also arise when using cloud computing in social networking. If the server infrastructure cannot handle large amounts of traffic, it can lead to slow response times, downtime, and reduced user engagement.

Integration With Existing Systems

Many companies already have existing IT systems, and integrating cloud services into them can be challenging. It's important for businesses to carefully plan and manage the integration process to ensure that everything works together smoothly.

Regulatory Compliance

Social networking platforms often collect and store sensitive personal information subject to various regulations and laws. Companies must comply with these regulations when using cloud computing for social networking.

*****Security Risks of Cloud Computing**

► Data Loss

- Data loss is the most common cloud security risks of cloud computing. It is also known as data leakage. Data loss is the process in which data is being deleted, corrupted, and unreadable by a user, software, or application. In a cloud computing environment, data loss occurs when our sensitive data is somebody else's hands, one or more data elements cannot be utilized by the data owner, hard disk is not working properly, and software is not updated.

► Hacked Interfaces and Insecure APIs

- As we all know, cloud computing is completely depending on Internet, so it is compulsory to protect interfaces and APIs that are used by external users. APIs

are the easiest way to communicate with most of the cloud services. In cloud computing, few services are available in the public domain. These services can be accessed by third parties, so there may be a chance that these services easily harmed and hacked by hackers.

▶ Data Breach

- ▶ Data Breach is the process in which the confidential data is viewed, accessed, or stolen by the third party without any authorization, so organization's data is hacked by the hackers.

▶ Vendor lock-in

- ▶ Vendor lock-in is the of the biggest security risks in cloud computing. Organizations may face problems when transferring their services from one vendor to another. As different vendors provide different platforms, that can cause difficulty moving one cloud to another.

▶ Increased complexity strains IT staff

- ▶ Migrating, integrating, and operating the cloud services is complex for the IT staff. IT staff must require the extra capability and skills to manage, integrate, and maintain the data to the cloud.

▶ Denial of Service (DoS) attacks

Denial of service (DoS) attacks occur when the system receives too much traffic to buffer the server.

*****Amazon has a list of services:**

- ▶ Compute service
- ▶ Storage
- ▶ Database
- ▶ Networking and delivery of content
- ▶ Security tools
- ▶ Developer tools
- ▶ Management tools

*****What is cloud storage?**

Cloud storage is a cloud computing model that enables storing data and files on the internet through a cloud computing provider that you access either through the public internet or a dedicated private network connection. The provider securely stores, manages, and maintains the storage servers, infrastructure, and network to ensure you have access to the data when you need it at virtually

unlimited scale, and with elastic capacity. Cloud storage removes the need to buy and manage your own data storage infrastructure, giving you agility, scalability, and durability, with any time, anywhere data access.