# IT Technologies

Clouds services, servers

What does it do?

Cloud Computing is an Emerging Technology that is revolutionising IT infrastructures and flexibility and has become a new paradigm for hosting and delivering services over the Internet. There are three main service models of cloud computing:

**Software as a Service (SaaS),** also known as cloud application, services, represents the most commonly utilized option for businesses in the cloud market. A majority of SaaS applications run directly through your web browser, which means they do not require any downloads or installations on the client side. It can be a beneficial for start-ups or small companies that need to launch ecommerce quickly and don’t have time for server issues or software, vendors manage all potential technical issues, such as data, middleware, servers, and storage, resulting in streamlined maintenance and support for the business.

**Platform as a Service (PaaS),** provide cloud components to certain software while being used mainly for applications. All servers, storage, and networking can be managed by the enterprise or a third-party provider while the developers can maintain management of the applications. It is similar to SaaS, except instead of delivering the software over the internet, PaaS provides a platform for software creation, giving developers the freedom to concentrate on building the software without having to worry about operating systems, software updates, storage, or infrastructure.

**Infrastructure as a Service (IaaS),** provides the same technologies and capabilities as a traditional data centre without having to physically maintain or manage all of it. You can purchase resources on-demand and as-needed instead of having to buy hardware outright. However, it is fully [self-service](https://www.bmc.com/blogs/self-service-thrives-clouds/) for accessing and monitoring computers, networking, storage, and other services. Anytime you are unsure of a new application’s demands, IaaS offers plenty of flexibility and scalability.

The main enabling technology for cloud computing is virtualization, which is the process of creating a software-based, or virtual, representation of something, such as virtual applications, servers, storage and networks. It is created using virtualization software to divide a physical (bare metal) server into multiple virtual servers.

Cloud servers are built, hosted, and delivered via a cloud computing platform via the web, and can be accessed remotely through any device with an internet connection.

Some examples of new state-of-art technology being developed using a cloud technology include:

**Microsoft Azure** is a cloud computing service created by Microsoft for building, testing, deploying, and managing applications and services through Microsoft-managed data centres.

**Google Cloud Platform** is service is suite of cloud computing services that runs on the same infrastructure that Google uses internally for its end-user products, such as Google Search, Gmail, file storage, and YouTube.

**Salesforce** is the leader in cloud computing, offering applications for all aspects of your business, including CRM, sales, ERP, customer service, marketing automation, business analytics, mobile application building, and much more.

**IBM Cloud** provides a full-stack, public cloud platform with a variety of products in the catalogue, including options for compute, storage, networking, end-to-end developer solutions for app development, testing and deployment, security management services, traditional and open source databases, and cloud-native services.

Cloud hosting is the single most effective way to reduce IT expenses while boosting efficiency. However, cloud technology is currently at its infancy.

The latest trends in cloud computing include Artificial Intelligence (AI), Hybrid Cloud Computing, Quantum Computing, Serverless Computing, its popularity is increasing at a rapid rate and it is predicted that this technology will virtually replace traditional data centres within the next three years.

The 5 innovative trends in Cloud Computing that can benefit small to large businesses altogether:

* The Emergence of Digital Natives in the Workforce.
* Artificial Intelligence (AI)
* Hybrid Cloud Computing.
* Quantum Computing.
* Serverless Computing.

What is the likely impact?

Cloud computing reduces the expenses of the company as the resources are only acquired when needed and only paid for when used as the billing model works as per usage and there is no up-front cost. One of the concerning ongoing issues is any time you store data on the Internet, you are at risk for a cyberattack.

This is particularly problematic on the cloud, where volumes of data are stored by all types of users on the same cloud system. This issue can be overcome through getting up a Virtual Private Network, allows you to create a secure connection to another network over the Internet.

On a larger scale, AI capabilities are working in the business cloud computing environment to make organizations more efficient, strategic, and insight-driven. [Artificial Intelligence](https://intellipaat.com/blog/what-is-artificial-intelligence/) is the future of technology and [Cloud computing](https://intellipaat.com/blog/tutorial/amazon-web-services-aws-tutorial/definition-of-cloud-computing/) is already gained popularity and can continue the same. Integration of Artificial Intelligence and Cloud computing can create wonders and can become [new technology](https://intellipaat.com/blog/top-trending-technologies/).

How will this affect you?

It has not only impacted our lives but also how businesses and organizations manage their data and customers. Cloud computing offers access to data storage, processing, and analytics on a more scalable, flexible, cost-effective, and even secure basis than can be achieved with an on-premises deployment.

Cloud computing can offer a competitive edge over competitors. It helps you to access the latest and applications any time without spending your time and money on installations.

Rather than purchasing expensive systems and equipment it can reduce my cost as a business by using the resources on the cloud. Hosted virtual desktops are used to access files from anywhere, at any time, cloud computing enables employees to work remotely.