1. Cloud computing is the delivery of computing services over the internet, which is otherwise known as the cloud. These services include servers, storage, databases, networking, software, analytics, and intelligence.
2. cloud computing advantages:

* **Reliability:** no apparent downtime even when things go wrong
* **Scalability:** *Vertically*: Computing capacity can be increased by adding RAM or CPUs to a virtual machine. *Horizontally*: Computing capacity can be increased by adding instances of a resource, such as adding more virtual machines to your configuration.
* **Elasticity**: Cloud-based applications can be configured to always have the resources they need.
* **Agility**: Cloud-based resources can be deployed and configured quickly as your application requirements change.
* **Geo-distribution**: Applications and data can be deployed to regional datacenters around the globe, so your customers always have the best performance in their region.
* **Disaster recovery**: By taking advantage of cloud-based backup services, data replication, and geo-distribution, you can deploy your applications with the confidence that comes from knowing that your data is safe in the event that disaster should occur.

1. cloud service models: infrastructure as a service (IaaS), platform as a service (PaaS), and software as a service (SaaS) A
2. There are three deployment models for cloud computing: *public cloud*, *private cloud*, and *hybrid cloud*.

* Public cloud Services are offered over the public internet and available to anyone who wants to purchase them. Cloud resources like servers and storage are owned and operated by a third-party cloud service provider and delivered over the internet.
* Private cloud Computing resources are used exclusively by users from one business or organization. A private cloud can be physically located at your organization's on-site datacenter. It also can be hosted by a third-party service provider.
* Hybrid cloud This computing environment combines a public cloud and a private cloud by allowing data and applications to be shared between them.

