# What is cloud computing (technology)?

Simply put, cloud computing is the delivery of computing services – including servers, storage, databases, networking, software, analytics and intelligence – over the Internet (“the cloud”) to offer faster innovation, flexible resources and economies of scale. Typically, you only pay for cloud services you use, helping you lower your operating costs, run your infrastructure more efficiently and scale as your business needs change.

## Top benefits of cloud computing

Cloud computing is a big shift from the traditional way businesses think about IT resources. Here are seven common reasons why organisations are turning to cloud computing services:

### Cost

Cloud computing eliminates the capital expense of buying hardware and software and setting up and running on-site data centres – the racks of servers, the round-the-clock electricity for power and cooling and the IT experts for managing the infrastructure. It adds up quickly.

### Speed

Most cloud computing services are provided as self service and on demand, so even vast amounts of computing resources can be provisioned in minutes, typically with just a few mouse clicks, giving businesses a lot of flexibility and taking the pressure off capacity planning.

### Global scale

The benefits of cloud computing services include the ability to scale elastically. In cloud speak, that means delivering the right amount of IT resources – for example, more or less computing power, storage, bandwidth – right when they’re needed, and from the right geographic location.

### Productivity

On-site data centres typically require a lot of “racking and stacking” – hardware setup, software patching and other time-consuming IT management chores. Cloud computing removes the need for many of these tasks, so IT teams can spend time on achieving more important business goals.

### Performance

The biggest cloud computing services run on a worldwide network of secure data centres, which are regularly upgraded to the latest generation of fast and efficient computing hardware. This offers several benefits over a single corporate data centre, including reduced network latency for applications and greater economies of scale.

### Reliability

Cloud computing makes data backup, disaster recovery and business continuity easier and less expensive because data can be mirrored at multiple redundant sites on the cloud provider’s network.

### Security

Many cloud providers offer a broad set of policies, technologies and controls that strengthen your security posture overall, helping to protect your data, apps and infrastructure from potential threats.

## Types of cloud computing

Not all clouds are the same and not one type of cloud computing is right for everyone. Several different models, types and services have evolved to help offer the right solution for your needs.

First, you need to determine the type of cloud deployment, or cloud computing architecture, that your cloud services will be implemented on. There are three different ways to deploy cloud services: on a public cloud, private cloud or hybrid cloud.

### Public cloud

Public clouds are owned and operated by third-party cloud service providers, who deliver their computing resources such as servers and storage over the Internet. Microsoft Azure is an example of a public cloud. With a public cloud, all hardware, software and other supporting infrastructure are owned and managed by the cloud provider. You access these services and manage your account using a web browser.

### Private cloud

A private cloud refers to cloud computing resources used exclusively by a single business or organisation. A private cloud can be physically located on the company’s on-site data centre. Some companies also pay third-party service providers to host their private cloud. A private cloud is one in which the services and infrastructure are maintained on a private network.

### Hybrid cloud

Hybrid clouds combine public and private clouds, bound together by technology that allows data and applications to be shared between them. By allowing data and applications to move between private and public clouds, a hybrid cloud gives your business greater flexibility, more deployment options and helps optimise your existing infrastructure, security and compliance.