Cloud computing allows multiple users to interact with the resources that might be available on a single server. Virtualization creates an environment in which each customer’s unique need is accomplished. In short, virtualization in a computing environment can help you manage your system efficiently, which maximize your utilization and minimize your downtime.

## Types Of Virtualization

### Application Virtualization

As the name suggests, it helps the user to have remote access to an application from a server. The server will store your personal information as well as the basic characteristics of an application. Furthermore, it can run on a local workstation through the internet. For instance, a user who wants to run two different versions of the same software would use application virtualization.

#### Benefits:

There are many benefits to this type of virtualization, such as:

* Portability
* cross-platform operation
* ability to run multiple instances of the application

### Network Virtualization

You may have come across the term computer network, which refers to the connection of different networks to communicate with each other. Similarly, network virtualization refers to the combination of network resources for a single software-based network. Thus, it creates a virtual network where you have the administrative rights to control the hardware and software resources.

#### Benefits:

It provides a facility to create and provision virtual networks (within days or even in weeks) such as:

* logical switches
* routers, firewalls
* load balancer
* Virtual Private Network (VPN)
* workload security

### Desktop Virtualization

It allows the user to create a virtual desktop within a centralized data center (host). If you want to have an operating system other than Windows Server, you will need a virtual desktop. The user can access the desktop virtually from any machine. Thus, it creates a portable workstation.

#### Benefits:

The main benefit of using it is:

* user mobility
* portability
* easy management of software installation
* updates
* patches

### Storage Virtualization

As the name suggests, it is linked with the virtual storage system. An array of servers do not know where the data is stored, but the virtual storage system manages them. You can manage different storage from multiple sources, which are utilized as a single repository. In short, it is the compiling of multiple physical storage devices into a single storage cluster, which is managed from a central device.

#### Benefits:

It maintains:

* smooth operations
* consistent performance

## Conclusion

Virtualization has many applications. The various types of virtualization work to make your hardware’s performance excellent.