Servers

Servers are nothing but a machine that provide services to the other machines or clients that request for the service. It can be a big infrastructure containing unfathomable storage capacity like Google to respond to the ever so increasing amount of clients requesting for services, or it can be a small server like Lenovo ThinkServer TS140 with only 4GB of RAM.
Server basically means a computer program or process but metonymy it refers to the device which is used to run the one or several server programs. The server is a part of client-server model. The main application of server is to share resources, data and to distribute work. Classifying on the nature of data they hold or the scenarios in which they used servers can be classified into close to 15 different types.

However, depending on the infrastructure and the general classification of server, there are two types of servers:-

1. **Physical Servers a.k.a Dedicated Servers**

A physical server is just as the name says, a server (physical computer) on which an Operating System, like Windows or Linux runs just as on any other computer. The physical servers are in almost all aspects like desktop computers, with many improvements that desktop PCs lack featuring things like redundant power supplies, raid controllers, multiple network cards etc. The physical servers are larger in size with much more powerful components in general. They all require a separate space in the server rack. Most of the servers also have two or more physical CPUs with multiple cores each.
These servers are very powerful, as no performances bottlenecks are suffered by it. In contrast to this, they are much more expensive than its counterpart, harder to manage and scalability in terms of upgrading is greatly reduced.

2. **Virtual Servers**

Having a dedicated server not only wastes resources but is quite a tedious job to maintain it. All these shortcomings are removed by the virtual servers. Virtual Servers make use of the underlying OS and the resource so that multiple virtual servers can be hosted on one dedicated server. It has a lot of advantages over physical servers like scalability, inexpensive and easier to manage. One major shortcoming of virtual server is the performance bottleneck caused by overflow of virtual servers on physical servers also leading to resource hogging.

Clients

Clients are the aspect of server-client model which makes the request to the server to fulfill the resources it needs from the server. It can be a program or a hardware or a software that accesses the information from servers.These programs can either be run on the same machine as server or on an independent machines.
Based on the increasing amount of work such as data processing done by the client itself and not heavily relying on the server side the clients can be categorised into three types:-

1. **Thick Client** 2. **Thin Client** 3. **Hybrid Client**