Before Cloud

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Introduction

Cloud is revolutionary but how? Lets see it here. Before we understand cloud computing concepts, we need to know what was there before cloud computing, how the cloud came into picture and why it is needed.

What was there before cloud computing?

I would say let's not go in details about the past but an overview is mandatory to understand the connection between what we have today and the past methods of developing infrastructure and providing services to the client.

Originally (1970s), it was called "Service Bureaus" The service company would own and operate the computers, giving companies remote access for use. IBM was a big service bureau provider. Later as the computers evolved, the idea of service bureau vanished and it was replaced by personal computers and desktops.

The Traditional Server Concept

Servers are basically machines with computing, storage and networking capacity. They can be named as web server, file server, mail server, exchange server or SQL server as per their functionality.

In traditional methods if a server fails due to any kind of capacity issue System Administrator must add in a new server. Unless there are multiple servers, if a service experiences a hardware failure, then the service is down. System Administrators can implement clusters of servers to make them more faults tolerant. However, even clusters have limits on their scalability, and *not all applications work in a clustered environment.* This raised issues on server maintenance and thus originating the concept of Virtual server.

The Virtual Server Concept

Virtual server concept separates the server software away from the hardware. This includes the OS, the applications, and the storage for that server. Servers end up as mere files stored on a physical box, or in enterprise storage. *A virtual server can be serviced by one or more hosts*, and one host may house more than one virtual server. Virtual servers can still be referred to by their function i.e. email server, database server, etc. Hosts may be removed and introduced almost at will to accommodate maintenance. Virtual servers can be scaled out easily. If the administrators find that the resources supporting a virtual server are being used too much, they can adjust the amount of resources allocated to that virtual server. Server templates can be created in a virtual environment to be used to create multiple, identical virtual servers. Virtual servers themselves can be migrated from host to host almost at will.