Cloud Concepts pt1

Whatr is the cloud?

Onpremised infomation system architecture

- Workload
- Services
- Virtual machines
- Virtualizacion
- Physical infrestructure
- Physical factility

When you start over this blocks , happend the following
Physical factility - you need cost of space , physical secure, personnel
Physicial infrastructure - it needs the power , network, rack and storage for the virtual machines
Virtualization - in needs a platform, maintenance and licensing

Our Architecture vs Cloud Architecture

| Our Architecture	Cloud Architecture
• Workload	• Workload
• Service	• Services
• Virtual machine	• Virtual machine
• Virtualization	• Virtualization
• Physical infrastructure	• Physical infrastructure
• Physical facility	• Physical facility

The easy way to understand the cloud, its thinking that the cloud, its only a personal computer (based on architecture).
The principal diferences in this structure, its that you are not responsable for this 3 layers: Physical facility , Physical infrastructure and Virtualization; Thats Its because the cloud services gives to you.

You can take it like another layer, whose array this 3 layers only in one : this new layer have the name of managment plane.

Types of Cloud Services

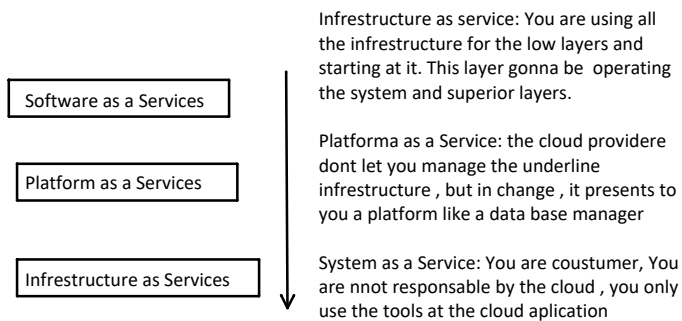At this moment we only considerate 3 layers essencialy:
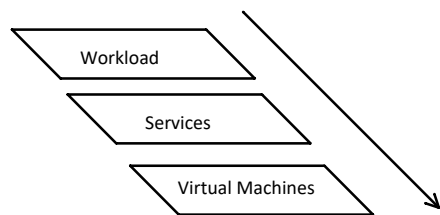
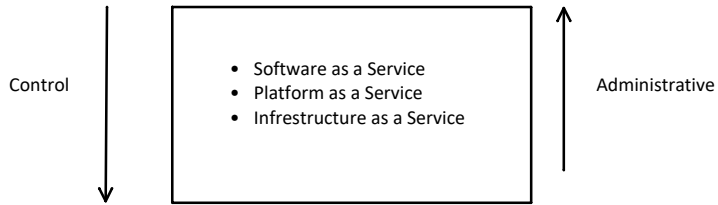The virtual machines layer is the layer for a operative system.
The services who could be the platform , the web services or the data base server.
The workload who could be your code on the code for the anyone else.

We can see this structure transform to this new structure considering the cloud:

Infrastructure as service: You are using all the infrestructure for the low layers and starting at it. This layer gonna be operating the system and superior layers.

Software as a Services

Platforma as a Service: the cloud providere dont let you manage the underline infrestructure , but in change , it presents to you a platform like a data base manager

Platform as a Services

System as a Service: You are coustumer, You are nnot responsable by the cloud , you only use the tools at the cloud aplication

Infrestructure as Services

use the tools at the cloud aplication

Control

- Software as a Service
- Platform as a Service
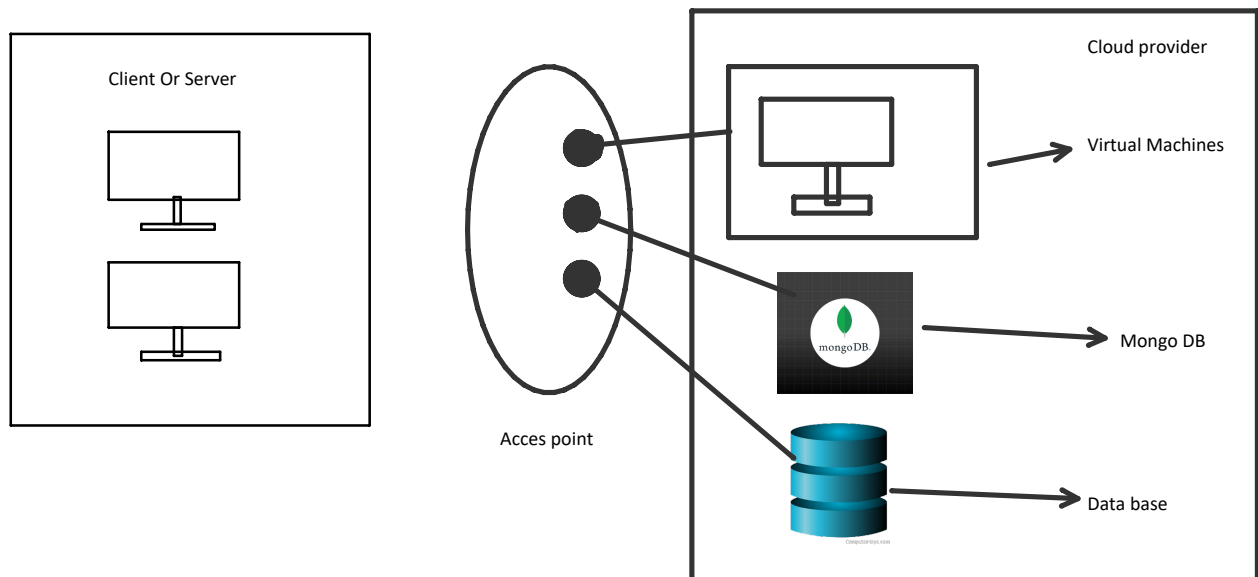- Infrestructure as a Service

Administrative

We talking abaout control and administrative,to give a reason to explain why you are losing or winning power at this two controls. For example:

You have more control if you are at the layer of administrative as a service , but, you have less administrative capacity at this layer.

You have more administrative capacity when you are at the software than a service , but you have less control at this layer.
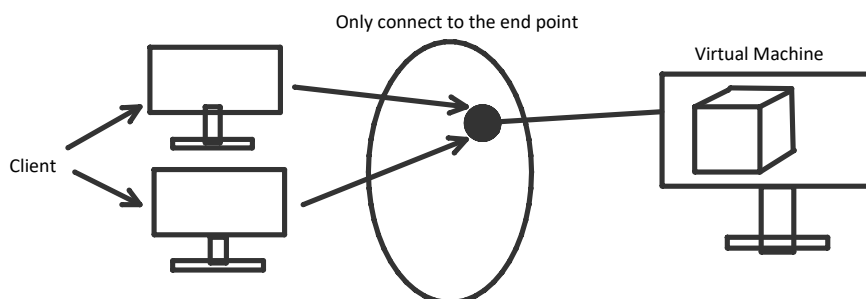
Accesing Cloud Services

We have cloud provider in some server or client that need to get over the functionality , it could be a platforma as a service , like cosmoDB or a database.

Client Or Server

Cloud provider

Virtual Machines

mongoDB

Mongo DB

Acces point

Data base

We can get access by different ways:

In first way , All the services or platforms and your virtual machines , who conforms a part of your infrestructure as a services have the ability to have a public end point , that ist on internet.

Essencially , if i got a virtual machine who haves this functionally , i only need to connect to this end point to set up the cloud provider i wanna use.

Only connect to the end point

Virtual Machine

Client

Other way to don this connection to the cloud services is the followings two options:

Set up a gateway

With one gate way, I have the ability to set up my own device over the side of client and over on this side going to the cloud and connect up to the getway and then my virtual machine going to the local box.

Device

VPN

Modules

Virtual Machine

Client or server

Cloud Service
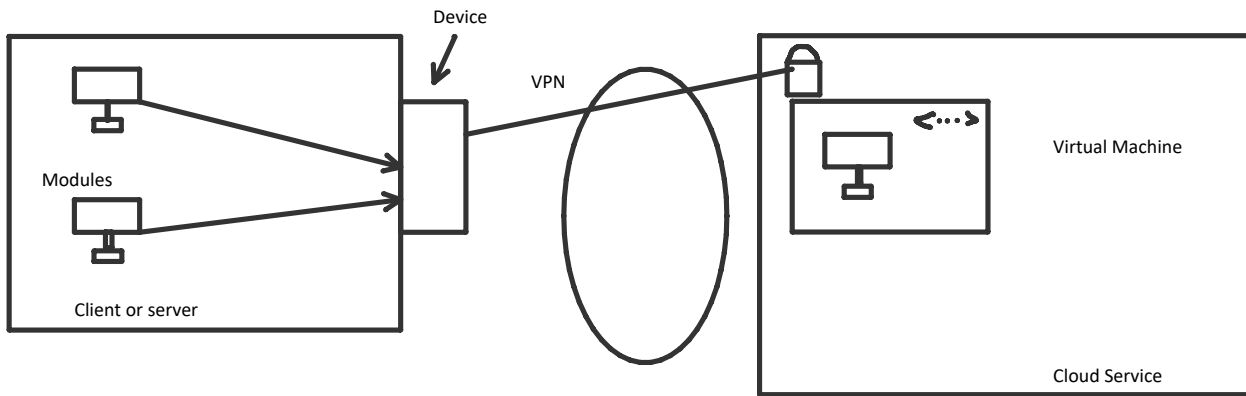
Pasing for the internet , to this gate way .
We give the name of VPN gateway.

Private network connection.

Between my own enviorment and my Azure enviorment the differnce in this , is im not goint to pass over the internet
(very familiar patron liker a WAN)

Private networking connection

Virtual Machine

Client/Server

Cloud Service

Overpasing internet