Virtual Machine

A program on computer that work like seperate computer inside the main computer , it can runs applications and more than one OS (each of this OS will behave as if they were hosted on a physical device ) in the same time also it’s isolated from the rest of the system.

How it work ?

1. The Hypervisor manges the hardware system and separate the physical resources from the virtual environement
2. When a user from a VM do a task that requires additional resources from physical environement
3. The Hypervisor manges the request so that the guest OS could access to the ressources of the pysical environement

Hypervisor

A piece of software that runs on top of hardware that creats a virtualisation platform , this software is the one who creat virtual machines and responsable for isolating the VN resssources from the system hardware and making the necessary implementation so that the VM can use resources,

SSH = Secure Shell

A network protocole ( a sets of rules govering echange of information in a easy reliable and secure way) that allows one computer to securely connect to another computer over a network ( Internet ) , SSH encrypt automatically the packet data between computers without worring about hacking .

SSH makes network connection between computers with strong guarantes that the parties of the connection genuis ,

The Mecanism of Working ;

|  |  |  |  |
| --- | --- | --- | --- |
| **User**  **Key** | **Session**  **Key** | **Host**  **key** | **Server**  **Key** |

A strong end to end encryption , the end to end encryption based on randion keys that are securely negotiated for that session and then destroyed when the session over ,

UFW = Uncomplicated Firwewall

A firewall interface configuration tool that runs on top of iptables ( is a user space utility program that allows set up and maintain a system administrator to configure the IP ( Internet Protocole used to identify machines connected to a network ) packet filter rules ) , a tool that is geared to simplifying the process of configuring a Fiewall traffic (the amount of data moving across a network at a given point of time).

UFW a software application responsible for ensuring that the system administrator can manage iptables in a simple way since it’s difficult to work with iptable, UFW provides us with an interface to modify the firwall of our device (netfilter) , once we have UFW installed we can chose which ports we want to allows connections , and which ports we want to close , this will akso be very useful with SSH (securily communcation between devices )

Cron

A system process that will automaically perform tasks ( each task has defined through a single line ) as per the spercific schedule, a sets of commands that are used for running regular scheduling tasks , run small and quick commands on scheduled basics,

\* \* \* \* \* SCRIPT / COMMAND

Day of the weeek (0,7)

Month of year (1,12)

Day of month (1,31)

Hours (0,23)

Minute (0,59)