**Module - 3**

1) Provisioning is a method of loading machines with OS automatically. In Linux and Windows servers take lots of time in installation on all the servers ( like 1oo) . many people are required for the installation on several nodes which cannot be standardized. For this there are some methods where in you can boot using some orthomated methods like PXE ( For all the linux system ) and KICKSTART ( Linux and UNIX OS). Following tools available for Linux server provisioning :

* Kickstart - it's a plain file where you can write the steps/scripts where it will follow .
* Open QMR, Cobbler, Space walk - They are provisioning tolls and third party soft wares which is installed in your system and can talk to your server and perform the installation and most commonly used is cobbler.
* Fully automated installation - Its also a kind like Kickstart works.

2) PXE Environment - One of the key requirements of provisioning is the hardware servers availability to boot over the network instead of the DVD player etc. They depend on the three protocols they are - DHCP(it provides the ip address to your protocol ) , TFTP, NFS.

3) Steps of PXE Booting :

* A target machine should be booted.
* PXE works with network Interface Card. Once you connect your server to the lan the nic card sends a request to the DHCP server. Once its receives the request it will broadcast the ip address to the server.
* Then the DSCP server responds back with the information on IP, subnet mask , gateway, DNS etc . and also Information on TFTP server and the boot information.
* Once the server receives the information it contacts the TFTP server and gets the boot image which is required for installation.
* The boot image is config to search for pxelinux.cfg file . This file will have the info about all the other files which helps in the installation. The target machine will be rebooted itself and then we will have the fully rebooted installation done.

4)