**company environment**

We are a support based company and have e-learning, ticketing and online medicine related clients.

There are about 60 servers. Most of the servers are on aws and some servers are physical servers and they are in client primaries. We support them through ssh. We have 20–22 people staff and 15 system administrators and 3 teams and each team has 5 members, a team lead and other junior systems administrators.

our morning shift is 7am to 3pm and 3pm to 11pm and night shift is 11pm to 7am.

I could not finish my graduation due to my personal problems but now I am in the final year of graduation.

**backup**

we have backup scripts and this script applied on all web servers and database servers. all backup gets done at 12 am sharp through cron. and its stored on local machine and aws s3 bucket.

**how do you check backup?**

we have backup and monitoring script when we need to check backup then we run that monitor script and this script show all the status of backup also location of backup files.

**how do you take backup manually?**

sir, web server or database server, ---- web and db both

so i will go in document root and copy the web directory with .bkp extension and after that compress this directory.

and for database i will use mysqldump commnad , this full command is mysql -u root -p database name > also database name with .sql extention.

**aws**

**cloud computing**

cloud computing means storing and accessing data and programs over the Internet instead of your local machine.

we can access systems using a web browser from anywhere and any device like PC, mobile phone,

cloud maintenance is easier, because they do not need to be installed on each user's computer, it do not requires high configurations to run.

its Security is better than other traditional systems.

**s3bucket**

how do you mount s3 bucket on your linux instant?

first we need to install all dependencies like automake make tool, gcc.

then download and install fuse package and compile.

after that we need to create user on aws with full permission of s3 bucket.

and copy the access key and secret key.

then create one password file and paste access and secret key. and give permission on that file.

then cerate mount point then mount the s3 bucket using s3fs command .

the check the mounted s3 bucket by using df -h command.

after that make entry in fstab for permanent mount.

**EC2 INSTANCE**

first we to login aws consol then go to launch instance

there are 7 steps for launch instance.

first is choose AMI then choose type of instance,

then configure the instance, so many settings are there like how many instance you want to launch, vpc, subnet, AMI roles .

after that add storage and add tags .

then configure security groups this is firewall mechanism.

and the last is review the all parameters and create instance and download the public key.

**security groups**

AWS security group work like firewall for EC2 instance. its control inbound and outbound traffic. when we launch EC2 instance we need to assingn it particular security group. we can set ports and protocols for users and computers over the internet.

**what is difference between apache and nginx?**

* Apache used as web server only. Nginx is used web server,load balencer and also reverse proxy.
* nginx is lightweight and faster than Apache. and nginx run on low memory configuration.
* by default nginx do not process php. so that we have install php-fpm that is fast process manager to process nginx faster.
* apache run on all unix based system also completely support windows but nginx has limited support for windows.

**SSL**

ssl stand for secure socket layer. SSL certificate provides security for online communications and Online Transaction.

When web browser contacts your web site, the SSL certificate communicate between Web Server and Web Browser in encrypted format.

where is store ssl certificate key?

by defualt path is /etc/ssl/cert or privet but in our environment we store that files in /etc/apache2/ssl

**percona**

Percona XtraDB Cluster is a database clustering solution for MySQL. It provide high availability, scalability and prevents downtime and data loss.

**difference between mysql and percona**

it use multi-master replication

if you add node it will sync automatically.

**ldap**

**do you work on ladap?**

yes, actually i have install and configure ldap on my local machine not on any production environment.

in our environment we manage users and group through phpldapadnim.

when we get request for new user add so we add user in ldapadmin but this user is not create on all client servers we have to add manually , for that we have script written by

our seniors by using this script we add the user.

**what is step of add user in ldap?**

whenever we get user add request they send us users information like UID and group name, so first i login to ldap admin then click on ou=group and create new entry and fill

information about user like user name , common name, password, UID, GID , home directory then click on create object and commit , repeat this process and add UID and commit .

. then user can login on client server,

but in our environment user is not created on all client server, we have to add manually , we have script written by our seniors for add ldap user , for add ldap user we type

'ldapusers' then we get 3 options; add user , delete user , user list. by using this option we add ldap user.

**LAMP**

short for lamp is linux, apache, mysql, php. lamp is combination of open-source software that is linux as the operating system, apache as the web server, mysql as the relational

database management system, and php as the scripting language. by using lamp we can build dynamic web site or web application.

**wordpress**

WordPress is an online, open source website creation tool and content management system (CMS) written in php, by using WordPress we can build and

manage our website using web browser.

**iptables**

it’s the basics of Firewall for Linux it is normally pre-installed on a Unix based operating system which is controll the incoming and outgoing packets. By-default the iptables is running without any rules, we can create, add, edit rules into it. and rules saved in /etc/sysconfig/iptables

**DHCP**

DHCP stand for dynamic host configuration protocol. its network protocol and dhcp is based on client server model, which is use for automatically assing an ip address, subnet mask, DNS address to clien machine over the network. dhcp port number for server is 67 and for client is 68.

**DNS**

dns stand for domain name system, its translate domain name into ip address and ip into domain name. ip address is very hard to remember for humans so thats why dns comes in picture. its by default port number is 53.

**nfs**

nfs stand for network file system. nfs used for share the data across the network. by using nfs we can share remote directries over the network and mount directories on client server and use as local file system. its main configuration file is /etc/export and default port no is 2049.

**samba**

samba is network sharing protocol. we can share files and printers across different operating systems. its main configuration file is /etc/samba/smb.conf. and its port no is 445 and 138.

**security Implementation**

assign security groups for EC2 instance.

enable iptables and firewall.

we use web application for firewall like cloud-flare or succuri, we white list the users IP.

change the port no of ssh in sshd\_config file for security.

keep up to date kernel.

on some servers we disabled root login. by changing shell no login.

**performance tunning /health check of servers**

monitor the servers and whenver get the the cpu load high or disk overloaded or running process full then

run top, sar , vmstat , free , iostat , ps -ef, commands according to error and take action to solve this.

**server provisioning**

install operating system or launch EC2 instance . after that setting up some basic configuration like web server , applying backup script, mount s3 bucket , install monitoring tool, install ldap client,

**git**

git is distributed version control system (DVCS).

by using git programers can clone the central repository on their local hard drive and they can commit changes there local repository without hassle and share with other teammates.

my role is if there is any changes then i take a pull or sometime changes at our end then i do push.

and freeze or unfreeze the braches for maintenance.

make a clone of central repository on server.

**github**

GitHub is a Git repository hosting service, GitHub provides a Web-based graphical interface and it has many features and management tools for every project.