Linux and SQL

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Abstract: This document provides information for interview purpose so the content is selective. Linux knowledge is not for system administration or basic usage of the windowing system or programming toolsor software. It is about system build-in commands and scripting capability.

Chapter 1 Linux Knowledge

1. Basic command checklist

Directory: ～，cd, rm, mkdir,mv, ls, cp, cat, chown, chgrp,chmod, ln

Process: **ps, kill**, at, bg,fg, crontab, nice, time, **id, whoami, who, what,** which,df, du,nohup

Text: touch, vi, wc, tr, split, cut, sort, join, file, head, tail, tee, uname

Permission: ulimit, umask,

Scripting: **alias, unalias,** sh, **sed, awk**, pr, sleep, test, read, diff, dirname, uniq, basename, nl, less, more, echo, printf

Searching: **find, grep, exec, xargs**

Network: netcat

Documentation: man

Software Development: ar, make, nm, yacc, lex, strip, ctags

System administration: mount, umount , lsof...etc

1. Disk and partition (24-30)

IDE:

SCSI:

Logical partition:

Extended partion:

Install linux to logical partition? (21)

1. Runlevel

3: multiuser without GUI

5: multiuser with GUI

(TODO: how to switch runlevel when login , where to set runlevel when boot in)

4/ Firewall (less important)

/etc/iptables

(TODO:)

1. Startup scripts

/etc/init.d/rc1.d, rc2.d...

/etc/rc.d/init.d

Redhat (fedora)

Canonical LTD (ubuntu)

iso, sun virtual box

1. Networking

34, 35, ifconfig

7. Profile files

/etc/profile

~/.bash\_profile

~/.bash\_rc

8/ /etc/passwd

/etc/shadow

/etc/fstab

(Need to write a little bit)

1. Server config

Ssh: /etc/ssh/sshd\_config

/etc/hosts.allow, /etc/hosts.deny

(TODO: write a little bit about it)

1. Security
2. 1text process

Find, grep, -exec, pipe, redirection

touch, vi

How to kill all the processes with a name? For example, kernels processes.

How to find out a file named xxx in all the directory underneath?

How to delete a file in all places with a name xxx?

How to show a pid and ppid of a process?

Chapter 2 SQL Knowledge

What is primary key?

What is a key?

What is a index?

What is the difference between index and key?

What is group by?

What is having?

If programs runs slow, how to optimize?

1. Code, dao.db call
2. To many join, relation complex, use big flat table, reduce join.
3. Network, bandwidth, switch...etc
4. Architecture, distributed database,
5. db shading, keep certain amount of records in one db, and move other records to different db.

Chapter 3 Relational DBMS

MySQL

MariaDB

HBase

Chapter 4 NoSQL

Mongo db

Cassendra

Chapter 5

OrientDB

InfluxDB (graph db)