RHCE Study Notes

- Systemnotes.org, RedHat Linux Flash Cards
- Stuff to remember:
  - Look at the latest objectives for the exam.
  - Remember the commands required.
  - If you don't understand a slide, take that as a clue that you need further study, or contact us.
  - Practice, practice, practice!

Boot Single

- boot into single user mode
- at grub screen, "a", "space", "1", enter

Network Configuration

- system-config-network
- Files
    - /etc/sysconfig/network-scripts/ifcfg-eth0
    - /etc/sysconfig/network

Hostname Resolution

- /etc/resolv.conf
- /etc/hosts

X Window System

- /etc/X11/xinit/xinitrc.d
- /etc/X11/xorg.conf
- /etc/inittab
- system-config-display
- /tmp and /home have enough space
- Ctrl-Alt-F1 to F8
- Ctrl-Alt-Backspace

Hard Disk Commands

- fdisk /dev/hda

- partprobe

- mdadm -C /dev/md0 -l 5 -n 3 /dev/hda6 /dev/hda7 /dev/hda8

- mke2fs -j /dev/md0

- e2label /dev/hda2 /data

- mount -t ext3 /dev/hda7 /data7

Configure Printing

- system-config-printer
- /etc/cups/cupsd.conf
- lpadmin
- lpstat, lpq
- reject   disable
- accept /usr/bin/enable

Cron and at Jobs

- copy script to /etc/cron.daily, /etc.cron.monthly, etc. or

- Modify /etc/crontab: crontab -e

- List cron jobs: crontab -l

- Add an at job: at [-f file] TIME

- View at queue: atq

- Remove at jog: atrm job

Install NIS or LDAP

- Install ypbind, portmap

- system-config-authentication

  - check: Enable NIS Support, or Enable LDAP Support

  - click: Configure NIS..., or Configure LDAP...

- configure firewall, if required

Test NIS or LDAP

- ypwhich
- nisdomainname -y
- genent services
- getent passwd smith
- rpcinfo -p

NIS or LDAP Files

- /etc/yp.conf

- /etc/sysconfig/network

- /etc/pam.d/system-auth

- /etc/nsswitch.conf

Configure autofs

- /etc/auto.master
    - /home/guests   /etc/auto.guests --timeout=60
- /etc/auto.guests
    - *   -rw,soft,intr   server1:/home/guests/&
- service autofs restart
- chkconfig portmap on
- chkconfig autofs on

Manage Users, and Groups

- groupadd -g 1000 groupname

- useradd username

- usermod -G groupname username
    - (-G for primary group)

Manage Quotas

- quotacheck -cuf /home

- quotaon /home

- edquota username

- quota username

- repquota /home

Filesystem Permissions

- mkdir -p /depts/finance
- chgrp sales /depts/finance
- chmod 770 /depts/*
- chmod g+s /depts/*
- chown sam /depts/managers
- ls -l /depts/

Install and Update rpms

- rpm -ivh filenamex.i386.rpm

- rpm -Uvh filenamex.i386.rpm

- Verify an RPM:
    - rpm --import /usr/share/rhn/RPM-GPG-KEY
    - rpm -K /tmp/rpmversion.i386.rpm

Install from yum Repository

- /etc/yum.conf
- /etc/yum.repos.d/

System Bootloader

- /boot/grub/grub.conf
- # root (hd0,0)
- # kernel /vmlinuz-version ro root=/dev/vg00/lv00
  crashkernel=128M@16M
- # initrd /initrd-version.img

Implement Software RAID

- partprobe

- mdadm -C /dev/md0 -l 5 -n 3 /dev/hda6 /dev/hda7 /dev/hda8

- mke2fs -j /dev/md0

- /etc/fstab

- mdadm --detail /dev/md0

- fail, recover, add:

- mdadm /dev/md0 -a /dev/sda1

Set Kernel Run-time Parameters

- vi /etc/sysctl.conf
  - xxx.xx.xxx=1
- sysctl -p
- sysctl -a | grep xxx

Diagnose and Correct Boot Failures

- /etc/rc.d/rc.sysinit

- /etc/rc.d/rc adn /etc/rc.d/rc?.d

- /etc/rc.d/rc.local

- /boot/grub/grub.conf

- filesystem

- /etc/fstab

- fsck /dev/hda

Create a Logical Volume

- First create physical volume, then volume group, then logical volume

- PV -> VG -> LV

- pvcreate /dev/hda6 /dev/hda7 /dev/hda8

- vgcreate vg0 /dev/hda6 /dev/hda7

- lvcreate -L 500M -n data0 vg0

- ext2online /dev/vg0/data0

SELinux

- getenforce

- setenforce 1

- check context with ls -Z

- chcon -R --reference /var/www/html /var/www/html/wwwnew

Configure HTTP

- install httpd
- modify /etc/httpd/conf/httpd.conf file
- service httpd restart
- chkconfig httpd on
- service httpd configtest

Configure Samba Share

- Install samba

- vi /etc/samba/smb.conf

- configure firewall

NFS

- Modify /etc/exports
- start nfs & portmap
- verify config, & check mounts
  - exportfs -v
  - showmount -e localhost
  - rpcinfo -p localhost
- service nfs reload

Automount

- mkdir /net

- vi /etc/auto.master

- start services -- portmap, autofs

FTP

- install vsftpd
- create incoming directory
  - mkdir -p /var/ftp/incoming
- vi /etc/vsftpd/vsftpd.conf
- start vsftpd
  - service vsftpd start

Web proxy

- Install squid, and start the service
- vi /etc/squid
- service squid reload
- Configure browser to test

SMTP

- Install sendmail, sendmail-cf, sendmail-doc
- modify /etc/mail/sendmail.mc
- m4 sendmail.mc > sendmail.cf (or make)
- service sendmail restart

IMAP, IMAPS, and POP3

- install dovecot

- vi /etc/dovcot.conf

  - protocols = xxx

- service dovecot restart

- chkconfig dovecot on

SSH

- /etc/ssh/
- ~/.ssh/

DNS

- Install bind, bind-utils, and caching-nameserver

- vi /etc/named.conf

- To verify:

  - named-checkconf

  - named-checkzone example.com
    example.com.zone

- Check /etc/resolv.conf on client machines

NTP

- /etc/ntp.conf
- ntpstat
- service ntpd restart

Firewall

- /etc/sysconfig/iptables
- iptables -L
- iptables -F
- service iptables save
- service iptables restart
- chkconfig iptables on

PAM

- /lib/security/
- /etc/pam.d/

Configure Service

- Install RPM
    - rpm -ivh servicename.rpm
- Modify Configuration and Firewall

Start Service
    - service servicename restart
- Set Service to Start on Reboot
    - chkconfig servicename on