

LINUX Admin Quick Reference

Author: Jialong He
Jialong_he@bigfoot.com
http://www.bigfoot.com/~jialong_he

User Management

Files

/etc/group /etc/passwd /etc/shadow	User account information.
/etc/bashrc /etc/profile \$HOME/.bashrc \$HOME/.bash_profile	bash system wide and per user init files.
/etc/csh.cshrc /etc/csh.login \$HOME/.cshrc \$HOME/.tcshrc \$HOME/.login	tcsh system wide and per user init files.
/etc/skel	contains init files for newly created user.
/etc/default	default for certain commands.

Commands

adduser	script to create an new user interactively (slackware) or link to useradd (Redhat).
useradd , userdel , usermod	create, delete, modify an new user or update default new user information..
newusers	update and create new users (batch mode).
groupadd , groupdel , groupmod	add, delete or modify group.
chage , chfn , chsh	modify account policy (password length, expire data etc.) or finger information (full name, phone number etc.) change default login shell.
linux init=/bin/sh mount -w -n -o remount /	gain root access during boot prompt without password, can be used to fix some problems.

Network Configuration

Files

/etc/rc.d/rc.inet1 (Slackware) /etc/sysconfig/network-scripts/ifcfg-eth0 (Redhat)	IP address, Network mask, Default gateway are in these files. Can be edited manually to change these parameters.
/etc/HOSTNAME (Slackware) /etc/NETWORKING (Slackware)	hostname is set by “/bin/hostname” during boot and the name is read from these files. Can be changed manually.

[/etc/sysconfig/network](#)
(Redhat)

[etc/resolv.conf](#)

[/etc/hosts](#)

[/etc/host.conf](#)

[/etc/nsswitch.conf](#)

[/etc/networks](#)

[/etc/protocols](#)

[/etc/services](#)

[/etc/rpc](#)

[/etc/sysconfig/iptables](#)

specify name server, DNS domain and search order.

host name to IP mapping file.

host name information look up order.

new way to specify information source.

TCP/IP services and ports mapping.

RPC service name to their program numbers mapping.

saved iptables with /sbin/iptables-save command. see http://tiger.la.asu.edu/iptables_summary.htm

Commands

netconfig	menu driven Ethernet setup program.
pppsetup	setup PPP connection (Slackware). setup Ethernet during boot, for example /sbin/ifconfig eth0 \${IPADDR} broadcast \${BROADCAST} netmask \${NETMASK} ifconfig /sbin/route add -net \${NETWORK} netmask \${NETMASK} eth0 /sbin/route add default gw \${GATEWAY} netmask 0.0.0.0 metric 1
host	lookup host name or IP (similar to nslookup).
dnsdomainname	show DNS domain name.
arping ; arp	find out Ethernet address by first arping then arp.
ipchains	firewall and NAT (/etc/sysconfig/ipchains on Redhat)

NFS File Sharing

Files

/etc/fstab	file systems mounted during boot.
/etc/exports	NFS server export list.
/etc/auto.master	auto mount master file.

Commands

mount	mount a file system or all entries in fstab.
exportfs	export file system listed in exports
showmount -e hostname	show file systems exported

X Window

Files

/etc/X11/XF86config	X window configuration file.
/etc/X11/xinit/xinitrc \$HOME/.xinitrc	clients to run after X server started
/etc/X11/xinit/xinitrc \$HOME/.xinitrc	clients to run after X server started
/etc/X11/fs/config	configure X11 font path.

Commands

startx	start X window system.
Xconfigurator (Redhat) xfree86setup (Slackware) xf86config	setup X server and generate XF86config.
Ctrl+Alt+Del	stop X server (on some system Ctrl+Alt+ESC).
Ctrl+Alt+F1 Ctrl+Alt+F7	F1 temporary switch to text mode, F7 switch back to graphic mode.
XFree86 -configure SuperProbe	XFree86 auto configuration (Plug-n-Play). detect graphic hardware.
xvidtune	adjust X server origin and size.
xmodmap	modifying key map and mouse button map.
xhost	server access control program for X.
xsetroot	root window parameter setting utility for X.
xlsfonts	server font list displayer for X.

Printer Configuration

Files

/etc/printcap /etc/printcap.local	Printer capabilities data base.
/etc/lpd.conf	LPRng configuration file.
/etc/lpd.perms	permissions control file for the LPRng line printer spooler
/etc/hosts.lpd	Access control (BSD lpd).
/etc/hosts.equiv	trusted hosts.
PRINTER	Environment variable of default printer.
/dev/lp0	parallel port.

Commands

lpc , lpq , lprm	line printer control program, print queue maintain
--	--

Sendmail

Files

sendmail.cf sendmail.mc	sendmail.cf is the configuration file, edit sendmail.mc and then run m4 sendmail.mc > sendmail.cf
aliases	mail aliases, must run “newaliases” after change. use :include: to include external list in a file.
access	mail access control, FEATURE(access_db) should be set in sendmail.mc. For example, in /etc/mail/access <i>cyberpromo.com REJECT</i> <i>mydomain.com RELAY</i> <i>spam@somewhere.com DISCARD</i>
	makemap hash /etc/mail/access < /etc/mail/access
/etc/mail/relay-domains	list all host/domain accepted for relaying.

Commands

newaliases	rebuild the data base for the mail aliases file.
makemap	build access database, e.g. <i>makemap hash access.db<access</i>

Useful Configuration Files

Files

httpd.conf	Apache web server configuration file.
smb.conf	Samba server (file and print for Windows).
lilo.conf	LILO boot loader configuration file.
syslog.conf	System log daemon (syslogd) configuration.
ssh_config sshd_config	SSH client and server configuration files.
ld.so.conf	default dynamic library search path (run ldconfig).
mttools.conf	mttool configuration file (access DOS file).
named.conf	DNS name server (BIND).
sysctl.conf	kernel parameters by sysctl (Redhat).
ntp.conf	net time server.
inetd.conf	Internet super server.
Xinetd.conf, Xinetd directory	Extended inetd configuration.
proftpd.conf	proftpd FTP server.
amanda.conf	network backup server.
/etc/pine.conf /etc/pine.conf.fixed	PINE mail client system wide settings.

Rebuild Kernel

Configure Kernel Parameters

make config make menuconfig make xconfig	Configuring the kernel with interactive, menu or X window interface.
---	--

Compile Kernel Source

make dep make zImage make zdisk make zlilo make bzImage	Building and installing a new kernel.
--	---------------------------------------

Compile Modules

make modules make modules_install	Building and installing modules.
--	----------------------------------

Manage Modules

insmod, lsmod, modinfo, modprobe, rmmod, depmod	Manage loadable modules.
--	--------------------------

Miscellaneous

Files

/etc/shells	allowed login shells
/etc/ftpusers	user names NOT allowed to use ftp.
/etc/host.allow /etc/host.deny	TCP wrapper host control files.
/etc/sysconfig (redhat)	contains system configuration files.
/dev/fd0	floppy drive A
/etc/inittab /etc/init.d	system run level control file.

Commands

fromdos, todos (Slackware) dos2unix, unix2dos (Redhat) pwck, grpck	convert text file from/to linux format.
pwconv, pwunconv, grpconv, grpuncov	convert to and from shadow passwords and groups.
shadowconfig	toggle shadow passwords on and off.
quota, edquota, quotacheck, quotaon, quotaoff, repquota,	Manage disk quota.

lilo -D dos	set LILO default OS (default=dos in lilo.conf)
ldd	find out shared library dependencies.
lsuf	list opened files.
fuser filename	show processes that using the file.
ifdown ifup	bring up/down a network interface (Redhat)
sysctl	configure kernel parameters (Redhat).
socklist	list opened socked.
shutdown [-r h] now	reboot / halt computer
nmap	scan a host for opened ports.
crontab	show or edit cron jobs.
sys-unconfig	unconfigure system
chkconfig --list	list services started at different run level.
kudzu	probe for new hardware (Redhat).
rpm	rpm -i INSTALL a package rpm -e UNINSTALL a package rpm -q QUERY a package rpm -U UPDATE a package
man cmd col -b >cmd.txt	save a man page as a text file and remove control characters.

Useful Web Site

Useful website

http://www.linux.org/
http://www.linuxdoc.org
http://linux.tucows.com/
http://www.sendmail.org
http://www.gnome.org
http://www.kde.org
http://www.xfree86.org/
http://www.samba.org
http://www.apache.org
http://www.linuxapps.com/
http://www.internet.com/sections/linux.html