

Red Hat System Administration I

UNIT 1

Accessing The Command Line

Objective

- User bash shell syntax to enter commands at linux console
- Launch applications in a GNOME desktop environment
- Use Bash feature to run commands for shell prompt using fewer keystrokes

The bash shell

- A command line is a text-based interface which can be used to input instructions to a computer system
- GUN Bourne-Again shell (bash)
- `[kiosk@foundation0 ~]$`
 - common user
- `[root@foundation0 ~]#`
 - supper user
- `su - username`
 - Switch user

Virtual Consoles

- Users access the bash shell through a terminal
- Ctrl+Alt+F(1|7)
- Ctrl+Alt+F(2~6)

Shell basics

- Command input mode
- Options
- How to get help

Command input mode

- Input command must at the ending of shell Prompt
- `command+[space]+options+[space]+target`
- `ctrl +c`
 - cancel command

Options

- specified command function
- "-word" is abbreviation
- "--word" is full spelling

How to get help

- one options --help can get help for the command
 - "[options]" is selective add
 - "<options>" is must add
 - "..." is arbitrary length
- if the command don't have --help please use "man"

how to use command "man"

- `man + [command]`
- `man 5 + [filename]`
- `"/string"` for select
- `"q"` for quit

GNOME Desktop

- **How to login**
 - for text
 - for graphical
- **Workspace**
 - ctrl+alt+uparrow or ctrl+alt+downarrow
- **Starting a terminal**
 - Applications>Utilities>Terminal
- **Locking the screen or logging out**
 - lock:select [USER]>lock or ctrl+alt+L
 - logging out:select [USER]>log out
- **Powering off or rebooting the system**
 - powering off [poweroff] [shutdown -h now] [init 0]
 - rebooting [reboot] [shutdown -r now] [init 6]

Executing Commands Using the Bash Shell

- **Examples of simple commands**
- **Tab completion**
- **Command history**
- **Editing the command line**

examples of simple commands

- **date**

```
[test@westos Desktop]$ date
Thu Sep 25 14:54:05 CST 2014
[test@westos Desktop]$ date +%R
14:54
[test@westos Desktop]$ date +%x
09/25/2014
```

- **passwd**

```
[test@westos Desktop]$ passwd
Changing password for user test.
Changing password for test.
(current) UNIX password: old_passowrd
New password: new_passowrd
Retype new password: new_password
passwd: all authentication tokens updated successfully.
```

- **file**

```
[test@westos Desktop]$ file /etc/passwd
/etc/passwd: ASCII text
[test@westos Desktop]$ file /bin/passwd
/bin/passwd: setuid ELF 64-bit LSB shared object, x86-64, version 1 (SYSV), dynamically linked (uses shared libs), for GNU/Linux 2.6.32, BuildID[sha1]=0x91a7160a019b7f5f754264d920e257522c5bce67, stripped
```

examples of simple commands

- **head and tail**

```
[test@westos Desktop]$ head /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
[test@westos Desktop]$ tail -n 3 /etc/passwd
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
tcpdump:x:72:72:::/sbin/nologin
test:x:1000:1000:test:/home/test:/bin/bash
```

- **WC**

```
[test@westos Desktop]$ wc /etc/passwd
  38   66 1908 /etc/passwd
[test@westos Desktop]$ wc -l /etc/passwd
38 /etc/passwd
[test@westos Desktop]$ wc -c /etc/passwd /etc/hosts
1908 /etc/passwd
 158 /etc/hosts
2066 total
```


Tab completion

- "<TAB>" can automatic completion of command ,file name and some command options

Command history

- !number
- !string
- ctrl +r
- Up Arrow
- Down Arrow
- Left Arrow
- Right Arrow

Command history

- !number
- !string
- Up Arrow
- Down Arrow
- Left Arrow
- Right Arrow
- ctrl + a
- ctrl + e
- ctrl + u
- ctrl + k
- ctrl + Left Arrow
- ctrl + Right Arrow
- ctrl + r

Lab

- log into your desktopx system's graphical login screen as student
- open a terminal window that will provide a bash prompt
- change student's password to T3st1ngt1me
- display the current time and date
- display the current time in the following format: HH:MM:SS A/PM
- what kind of file is /usr/bin/clean-binary-files?
- use the wc command and bash shortcuts to display the size of /usr/bin/clean-binary-files
- display the first 10 lines of /usr/bin/clean-binary-files
- display the last 10 lines at the bottom of the /usr/bin/clean-binary-files file.
- how to execute 44 instructions in history
- execute last contains "date" character command

That's all