

Practical GNU/Linux

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- 1 Shell
- 2 Basic commands
- 3 Permissions
- 4 Text editors
- 5 Search for files
- 6 Grep/Egrep
- 7 Diff
- 8 SCP
- 9 Download files
 - Wget
 - CURL
- 10 Redirecting things



- Extremely Powerful



Introduction To Shell

- Extremely Powerful
- `cs`**h**,`ba`**sh**,`z`**sh**



Introduction To Shell

- Extremely Powerful
- csh,bash,zsh
- Changing your login shell



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Basic Commands

- ls



Basic Commands

- ls
- cd



Basic Commands

- ls
- cd
- man



Basic Commands

- ls
- cd
- man
- ~ and /



Basic Commands

- ls
- cd
- man
- ~ and /
- . (dot) and .. (dotdot)



Basic Commands

- ls
- cd
- man
- ~ and /
- . (dot) and .. (dotdot)
- **tab-completion**



Basic Commands

- ls
- cd
- man
- ~ and /
- . (dot) and .. (dotdot)
- tab-completion
- **command history**



Basic Commands

- ls
- cd
- man
- ~ and /
- . (dot) and .. (dotdot)
- tab-completion
- command history
- Escaping from 'Trap': Ctrl+C, Ctrl+D and Ctrl+Z



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- ls -l - View permissions



Permissions in Linux

- ls -l - View permissions
- **chmod - Modify permissions**



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Real Programmers

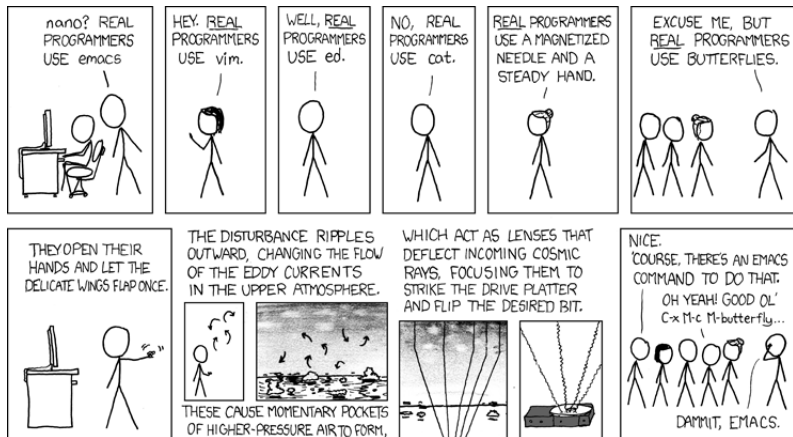


Figure: <http://xkcd.com/727/>



- Vim



- Vim
- Emacs



- Vim
- Emacs
- Other editors



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- `find <path> <command> <name>`



Finding files

- `find <path> <command> <name>`
- `find . -name "*resume*"`



Finding files

- `find <path> <command> <name>`
- `find . -name "*resume*"`
- `find . -perm a=rwx,g=rwx,u=rwx`



Finding files

- `find <path> <command> <name>`
- `find . -name "*resume*"`
- `find . -perm a=rwx,g=rwx,u=rwx`
- `find . -name "*resume*" -exec ls -l \;`



Finding files

- `find <path> <command> <name>`
- `find . -name "*resume*"`
- `find . -perm a=rwx,g=rwx,u=rwx`
- `find . -name "*resume*" -exec ls -l \;`
- **locate**



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Searching in files

- `grep <pattern> <file>`



Searching in files

- `grep <pattern> <file>`
- `grep "stack" tcp.c`



Searching in files

- `grep <pattern> <file>`
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Searching in files

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Searching in files

- `grep <pattern> <file>`
- `grep "stack" tcp.c`
- `grep "s[nmt]ck" tcp.c`
- `grep "s.ack" tcp.c`
- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`



Searching in files

- `grep <pattern> <file>`
- `grep "stack" tcp.c`
- `grep "s[nmt]ck" tcp.c`
- `grep "s.ack" tcp.c`
- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`
- `egrep "[0-9]{5}" tcp.c`



Searching in files

- `grep <pattern> <file>`
- `grep "stack" tcp.c`
- `grep "s[nmt]ck" tcp.c`
- `grep "s.ack" tcp.c`
- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`
- `egrep "[0-9]{5}" tcp.c`
- `egrep "hello{3}" tcp.c`



Searching in files

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- `grep "s[nmt]ck" tcp.c`
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- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`
- `egrep "[0-9]{5}" tcp.c`
- `egrep "hello{3}" tcp.c`
- `egrep "(hello){3}" tcp.c`



Searching in files

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- `egrep "[0-9]{5}" tcp.c`
- `egrep "hello{3}" tcp.c`
- `egrep "(hello){3}" tcp.c`
- `grep "^int" tcp.c`



Searching in files

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- `grep "stack" tcp.c`
- `grep "s[nmt]ck" tcp.c`
- `grep "s.ack" tcp.c`
- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`
- `egrep "[0-9]{5}" tcp.c`
- `egrep "hello{3}" tcp.c`
- `egrep "(hello){3}" tcp.c`
- `grep "^int" tcp.c`
- `grep ";$" tcp.c`



Searching in files

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- `grep "stack" tcp.c`
- `grep "s[nmt]ck" tcp.c`
- `grep "s.ack" tcp.c`
- `grep "[0-9][0-9][0-9][0-9][0-9]" tcp.c`
- `egrep "[0-9]{5}" tcp.c`
- `egrep "hello{3}" tcp.c`
- `egrep "(hello){3}" tcp.c`
- `grep "^int" tcp.c`
- `grep ";$" tcp.c`
- `egrep "^[^0-9]*$" tcp.c`



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Compare files line by line

- `diff file1 file2`



Compare files line by line

- `diff file1 file2`
- `diff dir1/ dir2/`



Compare files line by line

- `diff file1 file2`
- `diff dir1/ dir2/`
- `diff file3 file4 -B`



Compare files line by line

- `diff file1 file2`
- `diff dir1/ dir2/`
- `diff file3 file4 -B`
- `diff file4 file5 -b`



Compare files line by line

- `diff file1 file2`
- `diff dir1/ dir2/`
- `diff file3 file4 -B`
- `diff file4 file5 -b`
- `diff file1 file2 -y`



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Secure copy - Remote copy program

- `scp [user1@host1:]file1 [user2@host2:]file2`



Secure copy - Remote copy program

- `scp [user1@host1:]file1 [user2@host2:]file2`
- `scp sagarun@fedorapeople.org:public_html/misc/sysfs_screenshot.png ~/Desktop`



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Wget - Network Downloader

- `wget <URL>`



Wget - Network Downloader

- `wget <URL>`
- `wget -c http://sagarun.fedorapeople.org/misc/fedora-live-base.ks`



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CURL - transfer a URL

- curl <URL>



CURL - transfer a URL

- curl <URL>
- curl <http://www.google.com/>



CURL - transfer a URL

- `curl <URL>`
- `curl http://www.google.com/`
- `curl -L http://www.google.com/`



CURL - transfer a URL

- `curl <URL>`
- `curl http://www.google.com/`
- `curl -L http://www.google.com/`
- `curl -O http://www.google.co.in/index.html`



CURL - transfer a URL

- `curl <URL>`
- `curl http://www.google.com/`
- `curl -L http://www.google.com/`
- `curl -O http://www.google.co.in/index.html`
- `curl -I http://yahoo.com/`



CURL - transfer a URL

- curl <URL>
- curl http://www.google.com/
- curl -L http://www.google.com/
- curl -O http://www.google.co.in/index.html
- curl -I http://yahoo.com/
- curl http://icanhazip.com/



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Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`
- `cat /etc/passwd » temppasswd`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`
- `cat /etc/passwd » temppasswd`
- `ls!`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`
- `cat /etc/passwd » temppasswd`
- `ls|`
- `ls| 2> /dev/null`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`
- `cat /etc/passwd » temppasswd`
- `ls|`
- `ls| 2> /dev/null`
- `./conversation.py < name`



Input/Error/Output Redirection

- `cat /etc/passwd | grep zer0c00l`
- `cat /etc/passwd > temppasswd`
- `cat /etc/passwd » temppasswd`
- `ls|`
- `ls| 2> /dev/null`
- `./conversation.py < name`
- `ping google.com | tee ping`



Questions?



- Inspired by <http://openclassroom.stanford.edu/MainFolder/CoursePage.php?course=PracticalUnix>



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- Created using beamer <http://latex-beamer.sourceforge.net/>



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- Created using beamer <http://latex-beamer.sourceforge.net/>
- Source: <https://gitorious.org/~sagarun>



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