

### vim

zo	open folded text
zc	close folded text
zr	unfold one level
zm	fold one level
zR	unfold all
zM	fold all
c-w w	switch window
ctrl-w s	split windows
c-w v	split vertically
c-w q	quit window
:set list	show characters
do	diff obtain
dp	diff put
:set diffopt - t+= iwhite	avoid whitespace in diff
:diffu	refresh differences

#### Auto wrap text:

1. :set textwidth=80
2. select text in visual mode
3. gg

### regex

[^bg]	caret negates expression
\s	whitespace
\S	not whitespace
\d	digit
\D	not digit
\w	word
\x	hexadecimal digit
\O	octal digit
(?..)	Passive (non-capturing) group

### screen

C-a S	split horizontally
C-a   or C-a V	split vertically
C-a tab	jump to next region
C-a X	close region

### Syslog severity levels

0	emerg	Emergency
1	alert	Alert
2	crit	Critical
3	err	Error
4	warning	Warning
5	notice	Notice
6	info	Informational
7	debug	Debug

### IO redirection

#### Output of cmd2 as file input to cmd1:

```
cmd1 <(cmd2)
```

#### Stderr of cmd to file:

```
cmd 2> file
```

#### Stdout to same place as stderr:

```
cmd 1>&2
```

#### All output of cmd to file:

```
cmd &> file
```

#### stderr of cmd1 to cmd2:

```
cmd1 |& cmd2
```

### </> DH Groups

- DH Group 1: 768-bit group
- DH Group 2: 1024-bit group
- DH Group 5: 1536-bit group
- DH Group 14: 2048-bit group
- DH Group 15: 3072-bit group
- DH Group 19: 256-bit elliptic curve group
- DH Group 20: 384-bit elliptic curve group

### IPsec VPN:

- UDP 500 (IKE includes ISAKMP)
- UDP 4500 (NAT traversal)
- IP protocol 50 (ESP)
- IP protocol 51 (AH)

### nmap

-sn	no port scan
-PE	only ICMP echo for host disc.
-Pn	no ping
-n	no name resolve
-p80,443	scan port 80 and 443
-p-	scan all ports
-e </I/- ACE>	use specified interface
-O	OS detection

### tcpdump

-A	payload in ASCII
-c <count>	exit after <i>count</i> packets
-e	print link level headers
-G <n>	rotate dump file every <i>n</i> sec
-s <len>	snip first <i>len</i> bytes per packet
-S	absolute TCP seq numbers

### random

#### Backuppaa ACL:t:

```
getfacl -pR /joku/ hak emisto >  
permis sio ns.acl  
setfacl --rest ore =pe rmi ssi -  
ons.acl
```

#### Listaa ladattavat moduulit:

```
cat /lib/m odu les /$( uname -  
r)/mo dul es.dep
```

#### TCP portit:

```
0-1023 - well-known ports  
1024-49151 - registered port  
49152- 65535 - dynamic / private ports
```

#### SSL netcat:

```
openssl s_client -connect  
localh ost:995
```

#### Maalaa osumat:

```
grep -E --color ' (^|haku) '
```

#### Unix epoch aika:

```
date +%s  
date -d @12687 27836
```



### sed: address notation

n	line number
\$	last line
/regexp/	lines matching the pattern
addr1,addr2	range of lines
10~2	start 10, then by 2 intervals
addr1,+n	addr1 and following n lines
addr!	all lines except addr

```
sed -n '1,5p' file.txt
sed '1,5s/old/new' file.txt
```

### sed: editing commands

=	output line number
a	append text after line
d	delete line
p	print line, use -n to override
s/old/new/	substitute

```
sed "1,10 d" file.txt
sed " /snmp/a text to append "
file.txt
sed -n " /snmp/ =" file.txt
sed -i -e '/suodata /{s /et -
si/ kor vaa/}' file
```

### </> Bash: space split

```
INPUT: "word" "spaces yo"
$*      : $1 = word, $2 = spaces,
        $3 = yo
" $*"   : $1 = word spaces yo, $2
=, $3 =
$@      : $1 = word, $2 = spaces,
        $3 = yo
" $@"   : $1 = word, $2 = spaces
yo, $3 =
```

### </> Bash: for in C Form

```
for (( i=0; i<5; i=i+1 )); do
    echo $i
done
```

### </> Bash: variable expansions

**Return *\$parameter* or "word" if empty:**  
`${parameter:-word}`

**Previous + set variable value if it's unset:**  
`${parameter:=word}`

**Exit script with *error message* if empty:**  
`${parameter:?error message}`

**Results nothing if empty. If not empty, substitute and don't change variable value:**  
`${parameter:+word}`

**Return variable names:**  
`${!pre fix*}`

**Return string length:**  
`${#parameter}`

**Return substring:**  
`${parameter:offset}`  
`${parameter:offset:length}`

**Remove leading substring:**  
`${parameter# pat te(shortest match)}`  
`${parameter# #pa tte(longest match)}`

**Remove trailing substring:**  
`${parameter% pat te(shortest match)}`  
`${parameter% %pa tte(longest match)}`

**Search and replace. If string not set, delete matched text.**

**Only first occurrence:**  
`${parameter/ pat ter n/s -
tring}`

**All occurrences:**  
`${parameter/ /pa tte rn/ -
string}`

**Match required at the beginning of string:**  
`${parameter/ #pa tte rn/ -
string}`

**Match required at the end of string:**  
`${parameter/ %pa tte rn/ -
string}`

### </> Bash: number bases

number	base 10 integer
0number	base 8 octal
0xnumber	base 16 hexadecimal
base#number	<i>number</i> is in <i>base</i>

```
echo $((0xff))
▶ 255
echo $((2#1 111 1111))
▶ 255
```

### </> Bash: ternary operator

```
expr1?expr2:expr3
```

If expression *expr1* evaluates to be non-zero (arithmetic true) then *expr2*, else *expr3*.

### </> Bash: case conversion

```
${parameter,,} All to lowercase.
${parameter,} First char to lowercase.
${parameter^^} All to uppercase.
${parameter^} First char to uppercase.
```

### </> Bash: tests

#### Pattern matching:

```
[[ "foo.bar" == foo.* ]]
```

#### Regex:

```
[[ "$INT" =~ ^-[0-9]+$ ]]
```

#### Arithmetic truth tests:

```
(( ((INT % 2)) == 0))
```

