

bash tutorial

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\$ finger paul

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linux-training.be

work in progress...

Linux Fundamentals
Linux System Administration
more RSN

Thanks!!!

Serge van Ginderachter
Wouter Verhelst

Tosh-Kris-Bert: Loadays organisers
all open source people

tutorial?

first time...

do!

test!

learn!

ask!

constant Q&A --> interrupt!

nobody is perfect...

bash

- a shell
- default shell on Linux
- sh+ksh+csh --> Bourne Again Shell
GNU bash

tab-key autocomplete

tutorial contents

arguments
commands
control operators
variables
shell-options
embedded shells
history
globbing
I/O redirection

arguments

echo

white space removal

cutting up in arguments

single and double quotes

commands

type : external or builtin

which : \$PATH

alias unalias

set -x

precedence : alias->builtin->\$PATH

control operators

;

\$?

&&

||

&& + ||

#

\

\\n

variables

\$

case sensitive

\$PS1

\$PATH

answer=42

unset

quotes

set

exporting variables

set
env
export
env -i
bash -c

delineate variables

prefix=Super

`${prefix}man`

`"$prefix"man`

`$prefix'man'`

unbound variables

```
echo $novar  
set -u  
set -o nounset  
set +u  
set +o nounset
```

shell options

man bash -> /nounset
echo \$-
set -u (unbound variables)
set -x (xtrace)
set -C (noclobber)
set -o posix

shell embedding

```
ls -l $(which ls cp ln)  
echo $(var1=42 ; echo $var1)  
backticks  
` vs `
```

shell history

!!

!tou

history 5

!n

\$HISTSIZ

\$HISTFILESIZ

\$HISTFILE

!c:s/1/2

globbing

*

?

[]

[a-z][0-9]

\$LANG

quotes and \

io redirection

stdin 0, stdout 1, stderr 2

>

noclobber

>>

2>

2>&1

<

<<

confused?

pipes and filters

|
cat does nothing ;-)

tee
grep
cut
tr
wc
sort
uniq

more filters

comm

od

sed

How many people are logged on ?

List of bash users ?

Spell checker ?

more tools

find
locate
date
cal
sleep
time

compression

gzip - gunzip

zcat -zmore

bzip2 - bunzip2

bzcat - bzmores

bash scripting

hello world
chmod +x
she-bang
source

bash scripting loops

test

[]

man test

if then else

for

while

until

scripting parameters

\$0
\$1 \$2 \$3 ...
\$#
\$*

shift

script input and options

read
source a config file
getopts
shopt

eval

```
$ answer=42
```

```
$ word=answer
```

```
$ eval x=\$$word ; echo $x
```

```
42
```

numbers

```
(( 42 > 33 ))  
(( 42 == var42 ))
```

```
let x="6 * 9"  
let x="10*2+100/10"  
let x="0xC0"  
let x="8#77"
```

case

```
case $animal in
"lion" | "tiger")
echo "You better start running fast!"
;;
"cat")
echo "Let that mouse go..."
*)
echo "You discovered an unknown animal, name
it!"
;;
esac
```

functions

```
$ function greetings {  
> echo hello world  
> }  
$ greetings  
hello world
```

functions

```
$ function greetings {  
> echo hello world  
> }  
$ greetings  
hello world
```

numbers