

BASH

INTRODUCTION



cesium

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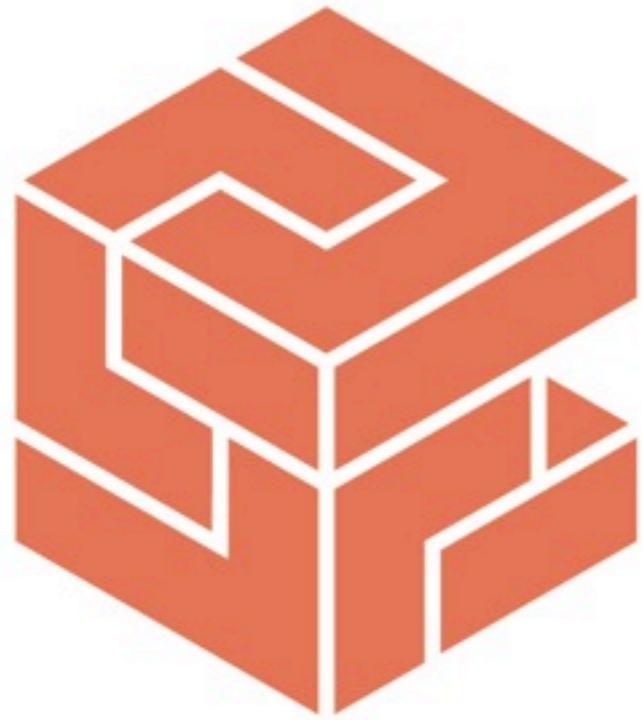
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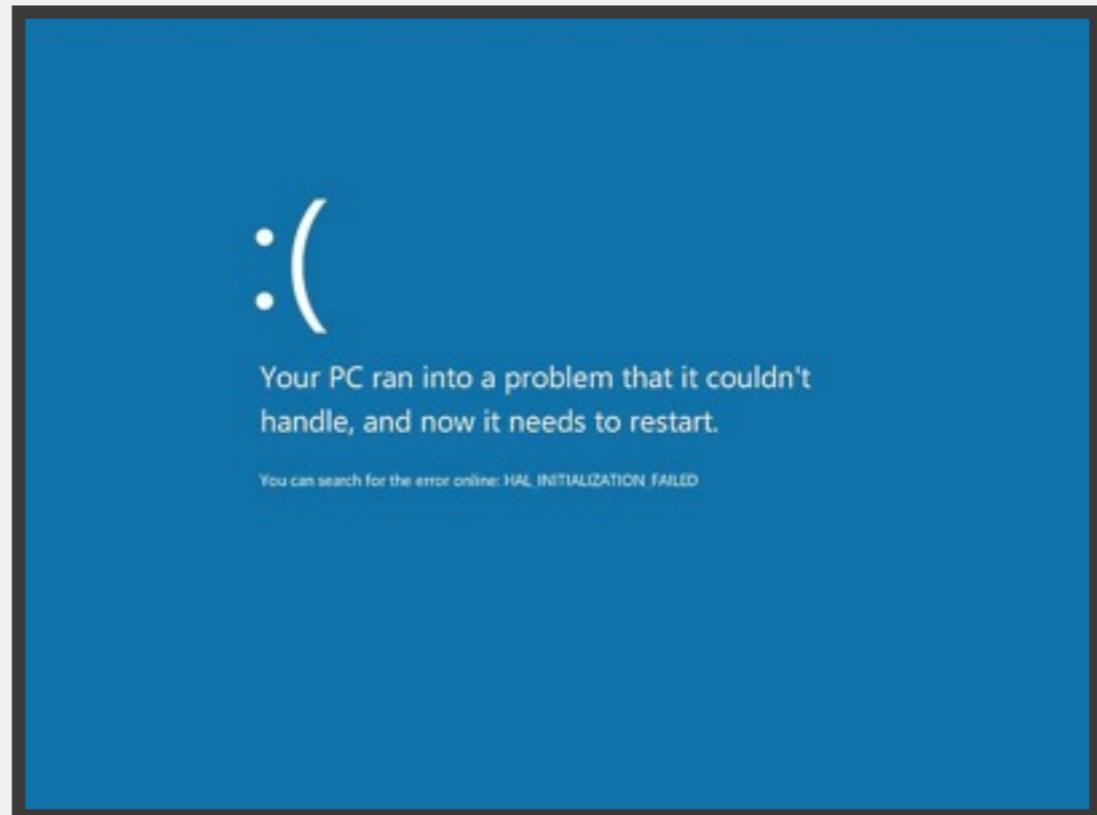
UNIX BASED SYSTEMS



UNIX BASED SYSTEMS

VS WINDOWS

- + STABILITY
- + PERFORMANCE
- + SCALABILITY
- + COMPATIBILITY
- PRICE



WHAT IS BASH?

- ▶ WHAT DOES IT MEAN?
- ▶ ADVANTAGES?

HOW TO DEAL WITH BASH?

- ▶ AUTOCOMplete
- ▶ MAN PAGES
- ▶ CLEAR SCREEN

SOME REQUIRED COMMANDS

LIST

```
ls
```

```
-a
```

ALL FILES

```
-l
```

LONG FORMAT

MAKE DIRECTORY

```
mkdir [OPT] DIR
```

```
-p
```

MAKE PARENTS

**CHANGE
DIRECTORY**

```
cd PATH
```

```
.
```

```
..
```

```
~
```

CURRENT DIR

PARENT DIR

HOME DIR

**PRINT WORKING
DIRECTORY**

```
pwd
```

**CREATE
EMPTY FILE**

```
touch FILE
```

COPY

```
cp [OPT] FROM TO
```

```
-r
```

COPY DIRECTORIES RECURSIVELY

MOVE OR RENAME

```
mv FROM TO
```

REMOVE

```
rm [OPT] FILE
```

-r

RECURSIVELY REMOVE DIRECTORIES

-f

FORCE

REMOVE DIRECTORY

```
rmdir [OPT] DIR
```

-p

PARENTS

CONCATENATE AND PRINT FILES

```
cat [OPT] FILES
```

```
-l
```

NUMBER THE OUTPUT LINES

VIEW FILE

```
less [OPT] FILE
```

```
-N
```

NUMBER THE OUTPUT LINES

LESS

FREQUENT COMMANDS

Key	COMMAND	Key	COMMAND
Space	NEXT PAGE	/ <code><text></code>	FOWARD SEARCH FOR <code><TEXT></code>
b	PREVIOUS PAGE	? <code><text></code>	BACKWARD SEARCH FOR <code><TEXT></code>
j	NEXT LINE	n	NEXT SEARCH MATCH
k	PREVIOUS LINE	N	PREVIOUS SEARCH MATCH
g	FIRST LINE	=	FILE INFORMATION
G	LAST LINE	h	HELP
<code><n>G</code>	LINE <code><n></code>	q	QUIT

**DISPLAY
FIRST LINES**

```
head [OPT] FILE
```

-n

FIRST N LINES

**DISPLAY
LAST LINES**

```
tail [OPT] FILE
```

-n

LAST N LINES

PRINT LINES MATCHING A PATTERN

```
grep [OPT] PATTERN [FILE...]
```

-c

DISPLAY THE NUMBER OF MATCHED LINES

-i

IGNORE CASE SENSITIVITY

-l

DISPLAY THE FILENAMES

-n

DISPLAY THE LINE NUMBERS

-w

MATCH WHOLE WORD

WORD COUNT

```
WC [OPT] FILE
```

-l

LINE COUNT

-C

BYTE COUNT

-m

CHARACTER COUNT

-w

WORD COUNT

CTRL-KEY COMMANDS

KILL PROCESS

CTRL + C

STOP PROCESS

CTRL + Z

END OF FILE

CTRL + D

1/0

REDIRECTION

REDIRECT STDOUT TO A FILE

OVERWRITE

COMMAND > FILE

APPEND

COMMAND >> FILE

REDIRECT STDIN TO A FILE

COMMAND < FILE

REDIRECT THE OUTPUT FROM ONE COMMAND AS INPUT TO THE NEXT ONE

```
COMMAND1 | COMMAND2 | COMMAND3
```

WILDCARDS

**WHAT ARE
WILDCARDS?**



ANY NUMBER OF CHARACTERS



ANY SINGLE CHARACTER

SYSTEM AND SECURITY

UNIX PERMISSIONS

ALLOWS USERS TO RUN PROGRAMS WITH THE SECURITY PRIVILEGES OF ANOTHER USER

```
sudo [OPT] [USER] COMMAND
```

NORMALLY THE ROOT

UNIX PERMISSIONS

a = all

u			g			o		
user			group			others		
r	w	x	r	w	x	r	w	x
4	2	1	4	2	1	4	2	1

7

CHANGE PERMISSIONS

```
chmod [OPT] MODE FILE
```

-R

RECURSIVELY

+rx

READ AND EXECUTE FOR ALL

g-w

DENY WRITE ACCESS FOR GROUP

777

READ, WRITE AND EXECUTE FOR ALL

UNIX PROCESSES

COMMAND &

RUN PROCESS ON BACKGROUND

jobs

BACKGROUND OR SUSPENDED PROCESSES

kill SIGNAL PROCESS

SEND SIGNAL TO A PROCESS

killall PROCESS

KILL PROCESS BY NAME

DISPLAY TOP CPU PROCESSES

```
top
```

REPORTS THE PROCESS STATUS

```
ps
```

```
-f
```

FULL LISTING

```
-e
```

ALL PROCESSES

**LAST BUT NOT
LEAST**

LAST COMMANDS USED

```
history
```

```
-c
```

CLEAR

```
!*
```

LAST MATCHED COMMAND

TIME COMMAND EXECUTION

```
time COMMAND
```

COMPARE FILES LINE BY LINE

```
diff
```

WALK A FILE HIERARCHY

```
find PATH [OPT] [EXPRESSION]
```

-name

FIND BY NAME

-size

FIND BY SIZE

-iname

CASE INSENSITIVE MODE

