

Linux Filtering and Viewing Tools

This guide summarizes key Linux tools used to filter and view file contents and command output.

Viewing File Contents: **more** and **less**

more

- Views file contents one screen at a time.
- Leaves output in the terminal.

```
cat /etc/passwd | more
```

less

- More feature-rich than **more**.
- Output does **not** stay in terminal after exiting.

```
less /etc/passwd
```

Head & Tail

head

- Shows first 10 lines by default.

```
head /etc/passwd
```

tail

- Shows last 10 lines.

```
tail /etc/passwd
```

Sorting with **sort**

- Alphabetically sorts file content.

```
cat /etc/passwd | sort
```

Searching with **grep**

Basic search

```
cat /etc/passwd | grep "/bin/bash"
```

Exclude lines

```
cat /etc/passwd | grep -v "false\|nologin"
```

Cutting with **cut**

- Extract specific fields using delimiters.

```
cat /etc/passwd | grep -v "false\|nologin" | cut -d":" -f1
```

Replacing with **tr**

- Replaces characters.

```
cat /etc/passwd | grep -v "false\|nologin" | tr ":" " "
```

Formatting with **column**

- Neatly formats output in columns.

```
cat /etc/passwd | grep -v "false\|nologin" | tr ":" " " | column -t
```

Parsing with **awk**

- Prints selected fields (**\$1** = first, **\$NF** = last).

```
cat /etc/passwd | grep -v "false\\|nologin" | tr ":" " " | awk '{print $1, $NF}'
```



Editing with **sed**

- Replace text using regular expressions.

```
... | sed 's/bin/HTB/g'
```



Counting with **wc**

- Count lines of output.

```
... | wc -l
```



Example: Count Active Bash Users

```
cat /etc/passwd | grep -v "false\\|nologin" | tr ":" " " | awk '{print $1, $NF}' | wc -l
```

Study and practice each tool to gain confidence with processing output on the command line!