

Operating System fundamentals

Simple text commands

WORKING WITH TEXT FILES



head
tail
cat
file
less
more
wc

Contents

1. information about a file
2. display contents of a file
3. selecting first or last lines
4. counting lines, words, characters

Course text

- chapter 2: Access the Command Line



Information about a file

Text files

Linux uses a lot of text files

- information about users, groups, ...
- configuration of web server, ssh, network, ...

Text files only contain text (characters), no formatting

In Windows you can open these files in notepad

Getting information about a file

In Windows you can recognise the type of a file by looking at the extension

In Linux the extension does not define the file type
use the “file” command to get information about a file
examples:

- **file** .bashrc
- file /tmp
- file /bin/bash

Getting information about a file

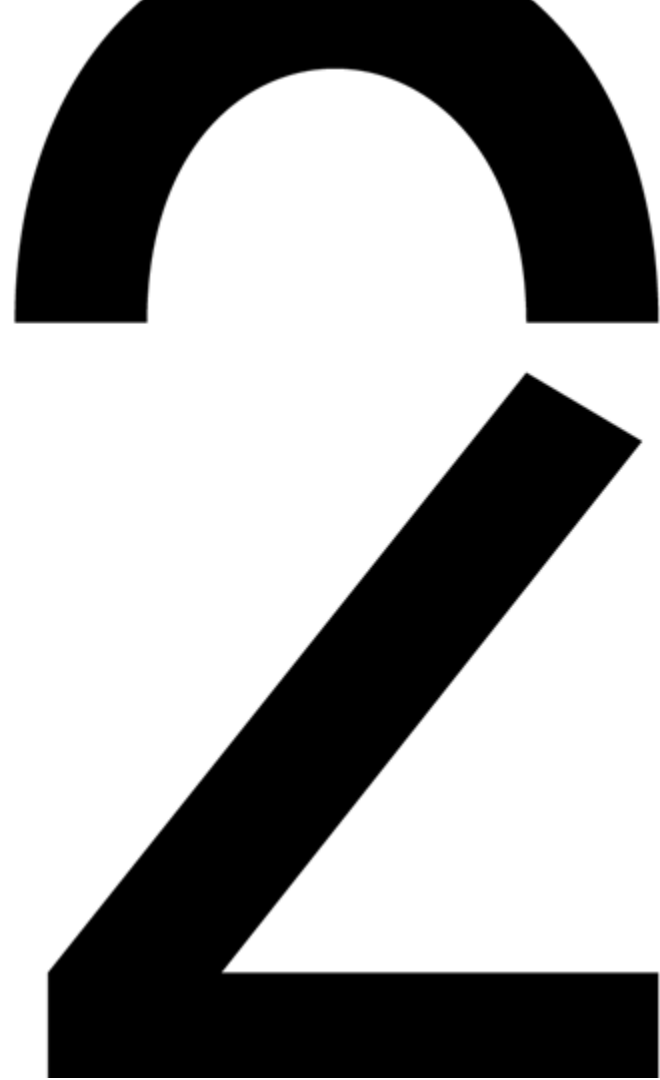
You can get more information using the “stat” command:

- **stat** file
- stat directory

This shows a.o.:

- size of the file on the disk
- timestamps for access, modified, changed, birth

Display contents of a file



Display contents of a file

When you know a file is a text file you can see its contents with the “cat” command:

cat /etc/passwd

Display contents of a file

When the file is too long you can use “more” or “less” to see the contents screen-by-screen:

more /etc/passwd

- > space shows the next page

- > enter shows the next line

less /etc/passwd

- > you can go back and forth using the arrow keys

Type “q” to quit the view

Selecting first or last lines



Log files

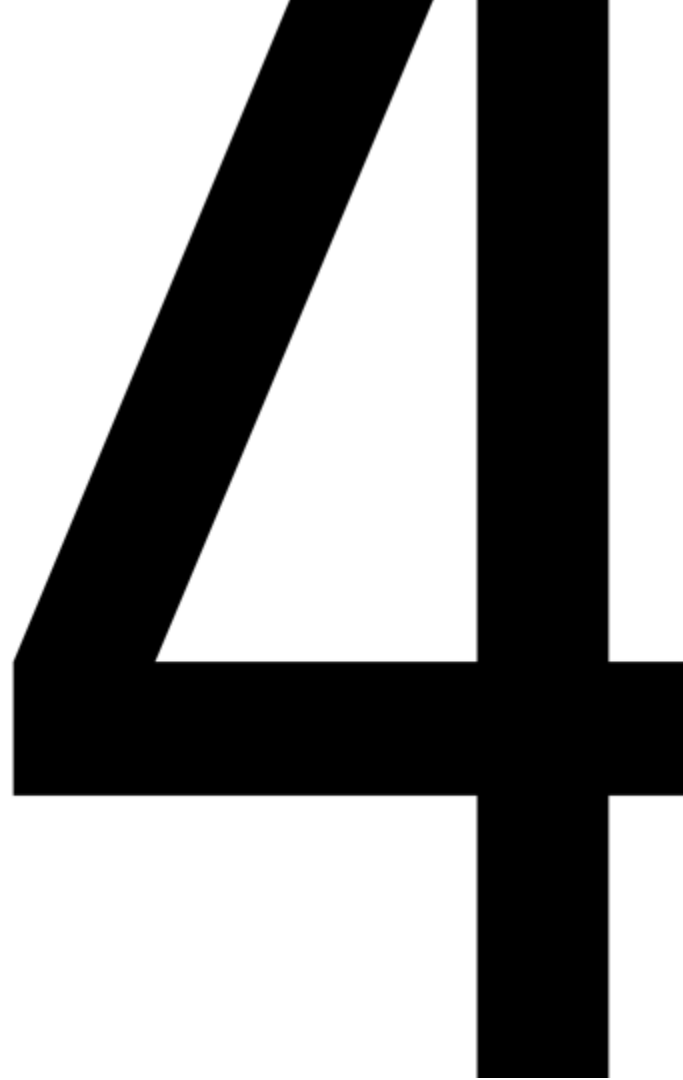
- Almost everything is logged on a Linux system (what users do, what web pages are requested, which errors occur, ...)
- All these events are stored in log files
- These files continue to grow
- So sometimes you only want to see the last lines of these files

Tail

- Use the “tail” command to see the last lines of a file
- **tail** /etc/passwd -> shows the last 10 lines
- **tail -3** /etc/passwd -> shows the last 3 lines
- **tail -n+30** /etc/passwd -> shows all lines from line 30 till the end

Head

- Sometimes you want to see the first lines of a file (e.g. to quickly inspect a file)
- Use the “head” command for this
- **head** /etc/passwd -> shows the first 10 lines
- **head -3** /etc/passwd -> shows the first 3 lines



Counting lines, words, characters

Counting

- Sometimes you want to know how many lines, words, or characters are in a file
- Use the “wc” command for this (word count)
- **wc** /etc/passwd -> 3 numbers: #lines, #words, #bytes
- **wc -l** /etc/passwd -> only the number of lines
- **wc -c** /etc/passwd -> only the number of bytes
- **wc -m** /etc/passwd -> only the number of characters
- **wc -w** /etc/passwd -> only the number of words
- **wc -L** /etc/passwd -> the length of the longest line

Exercises

Exercises

- KdG
 - ex0202
 - ex0203
- RedHat
 - ch02s06
 - ch02s07

