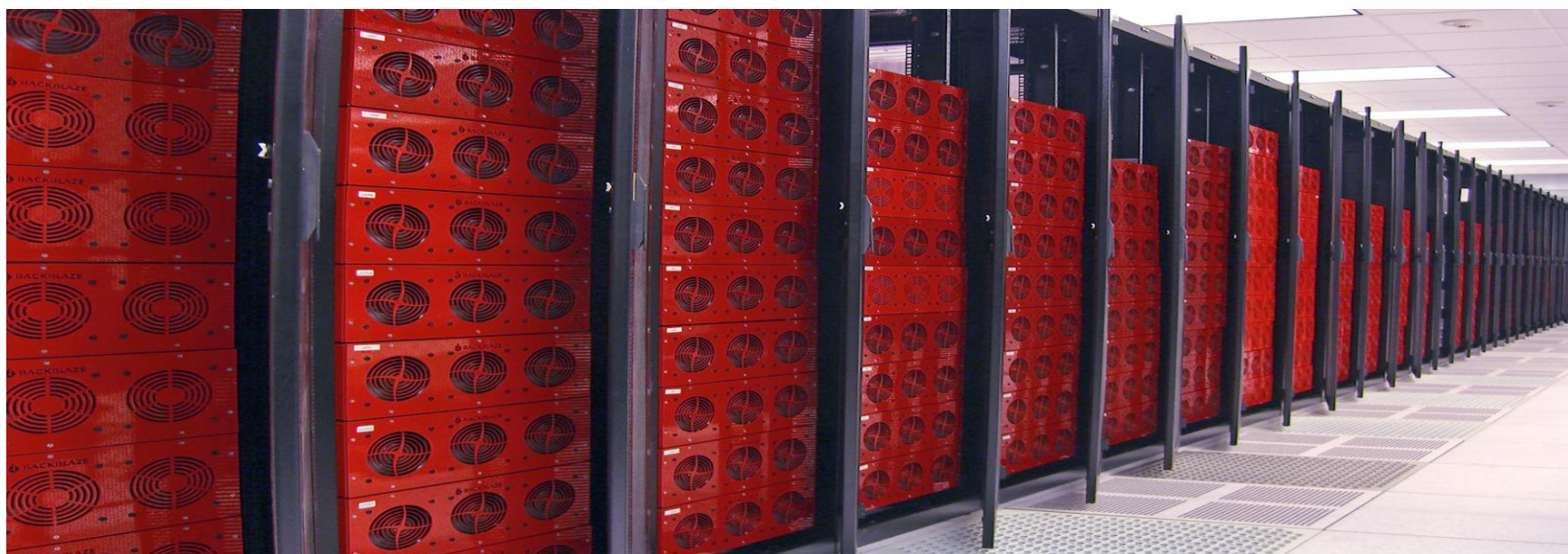# Files and Directories

Unit objectives

After completing this unit, you will learn to:

- Copy Files

- Move Files

- Create symbolic or hard link

- View file content with cat, pg and more

- Perform word counts
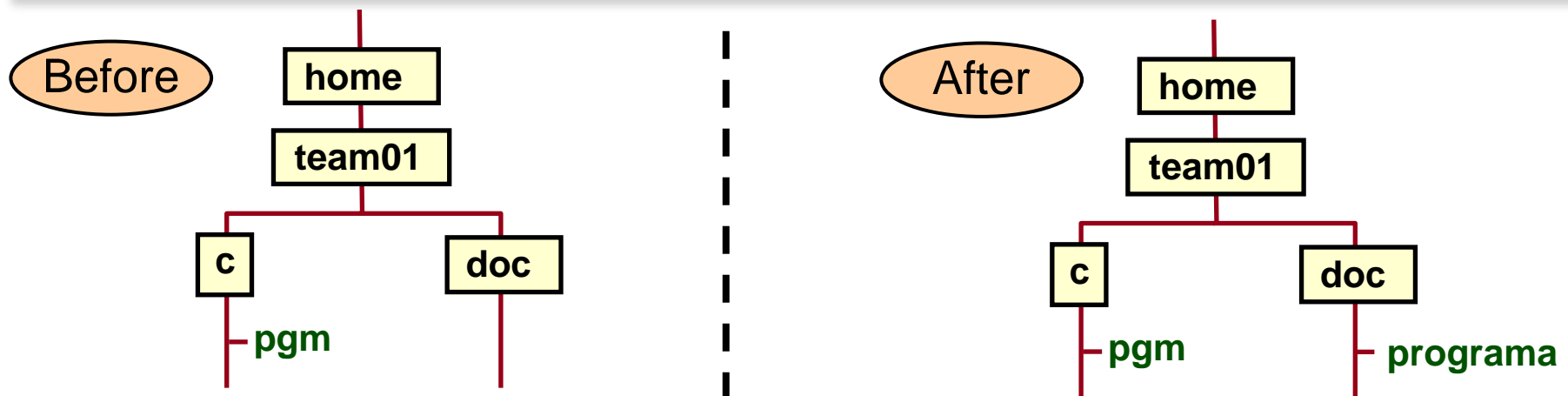
- Use head and tail command

Copying files

- Syntax:

  ```
  cp source target
  cp file1 file2 ... target_dir
  ```
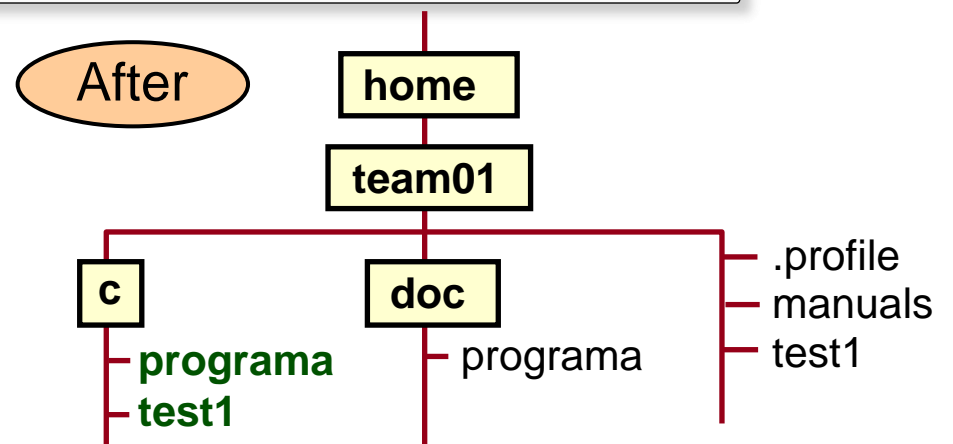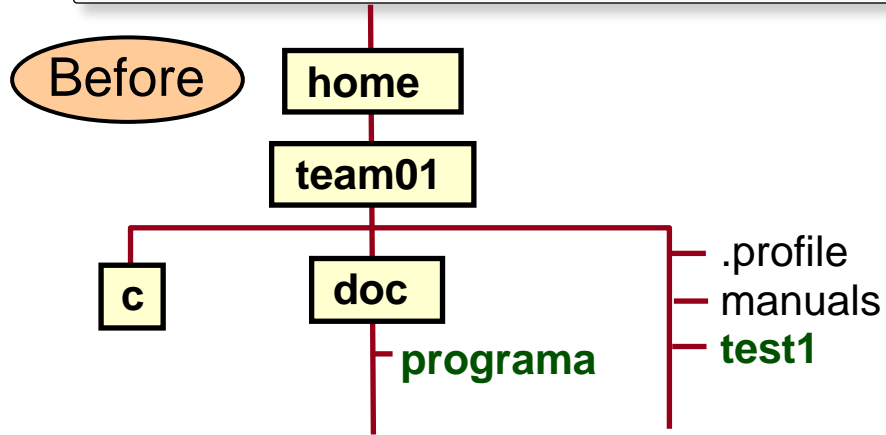
- To copy the file `/home/team01/c/pgm` to `/home/team01/doc` and name it `programa`:

```
$ pwd
/home/team01/doc

$ cp /home/team01/c/pgm programa
```
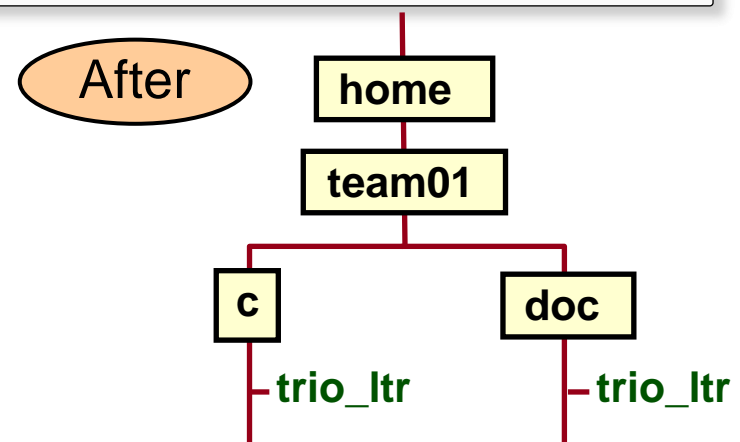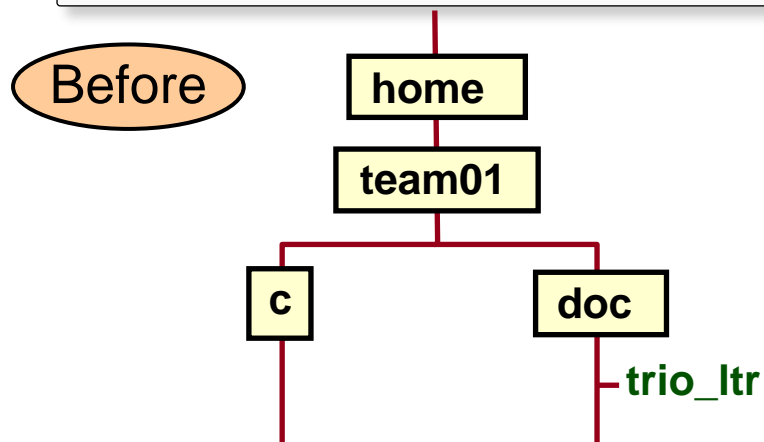
Before

```
home
  team01
    c
      pgm
    doc
```

After

```
home
  team01
    c
      pgm
    doc
      programa
```

cp examples

```
$ cd /home/team01
$ cp doc/programa test1 c
```

Before

- home
  - team01
    - c
      - programa
    - doc
      - .profile
      - manuals
      - **test1**

After

- home
  - team01
    - c
      - **programa**
      - **test1**
    - doc
      - programa
      - .profile
      - manuals
      - test1

```
$ cd /home/team01/doc
$ cp trio_ltr ../c
```

Before

- home
  - team01
    - c
    - doc
      - trio_ltr

After

- home
  - team01
    - c
      - trio_ltr
    - doc
      - trio_ltr

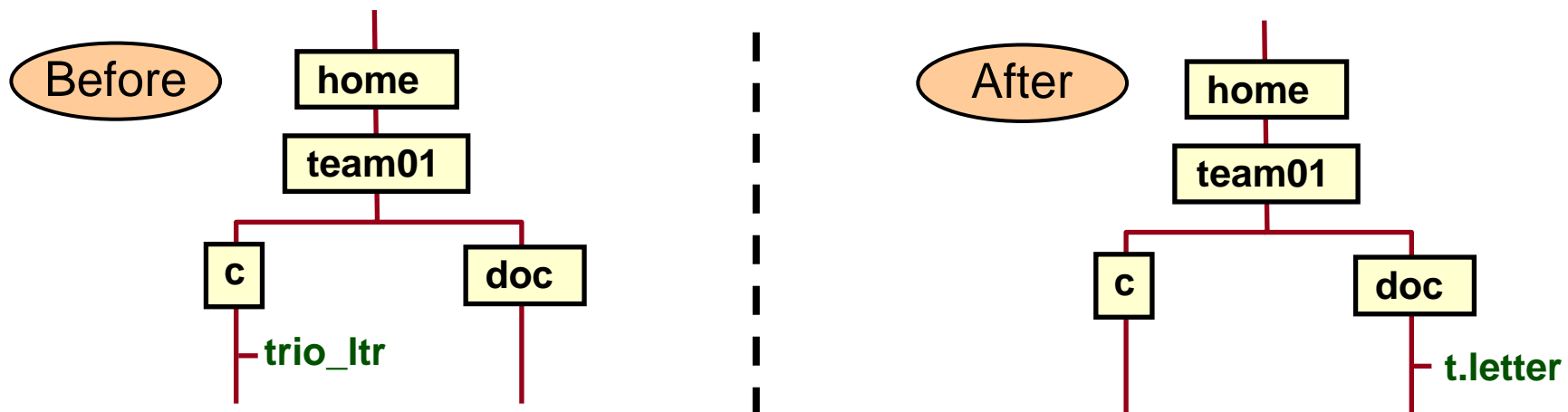# Moving and renaming files

- Syntax:

  ```
  mv source target

  mv file1 file2 ... target_dir
  ```

- To move and rename the file `/home/team01/c/trio_ltr` to `/home/team01/doc/t.letter`

```
$ pwd
/home/team01/c

$ mv trio_ltr /home/team01/doc/t.letter
```
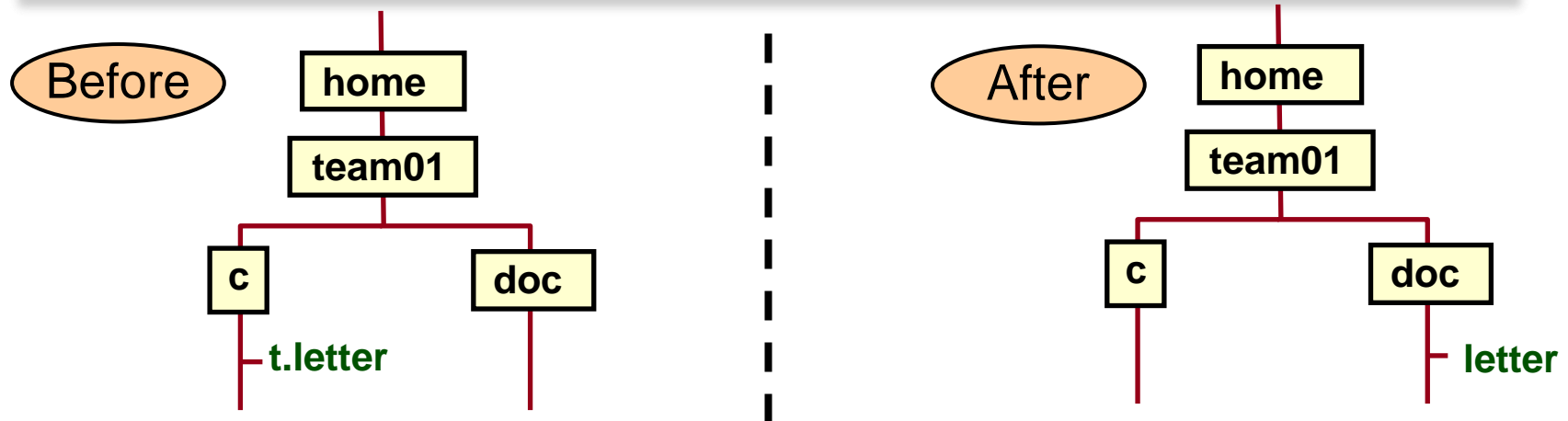
Before

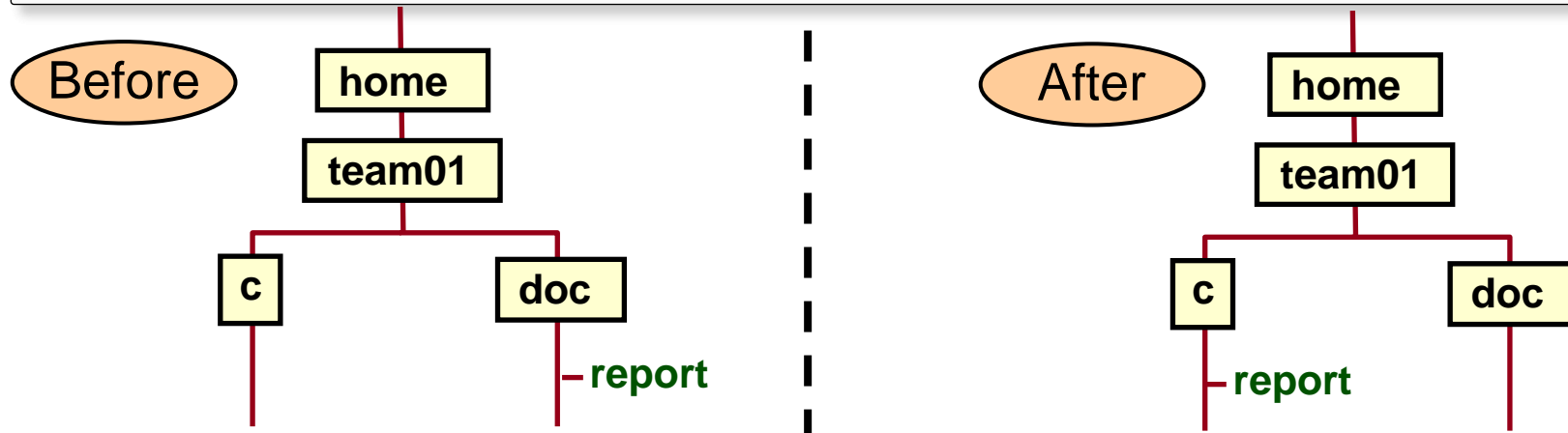```
home
  └─ team01
       ├─ c
       │   └─ trio_ltr
       └─ doc
```

**After**

```
home
  └─ team01
       ├─ c
       └─ doc
            └─ t.letter
```

mv examples

```
$ cd /home/team01/c
$ mv t.letter ../doc/letter
```

Before

- home
  - team01
    - c
      - t.letter
    - doc

After

- home
  - team01
    - c
    - doc
      - letter

```
$ cd /home/team01/c
$ mv ../doc/report .
```

Before

- home
  - team01
    - c
    - doc
      - report

After

- home
  - team01
    - c
      - report
    - doc

Listing file contents

- Syntax:

  `cat file`

```
$ cat walrus
"The time has come," the Walrus said,
"To talk of many things:
Of shoes - and ships - and sealing wax -
Of cabbages - and kings -
And why the sea is boiling hot -
And whether pigs have wings."

From The Walrus And The Carpenter
by Lewis Carroll (1871)
```
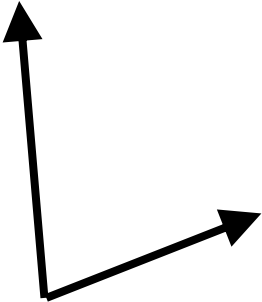
Displaying files

- Syntax: pg *file*

     more *file*

```
$ pg walrus
"The time has come," the Walrus said,
"To talk of many things:
Of shoes - and ships - and sealing wax -
Of cabbages - and kings -
And why the sea is boiling hot -
:  <Enter>
```

One page
at a time

```
$ more walrus
"The time has come," the Walrus said,
"To talk of many things:
Of shoes - and ships - and sealing wax -
Of cabbages - and kings -
And why the sea is boiling hot -
walrus (51%)    <Enter>
```

`wc` command

- The `wc` command counts the number of lines, words, and bytes in a named file

- Syntax:

    `wc [-c] [-l] [-w]` *filename*

- Options:

    `-c` Counts the number of bytes

    `-l` Counts lines

    `-w` Counts words

- Example:

```
$ wc walrus
      9      51     253 walrus
```

Lines

Words

Characters

head command

- The `head` command display first part of files
- Syntax:

  `head [options] filename`

- Options:
  - `-#`   number of lines to print
  - `-c #`   number of characters/bytes to print

- Example:

```
$ head -5 /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
```

`tail` command

- The `tail` command display last part of files

- Syntax:

  `tail [options] filename`

- Options:

  `-#`   number of lines to print

  `-c #` number of characters/bytes to print

  `-f`   follow an output / continuous monitor output

- Example:

```
$ tail -2 /etc/passwd
tcpdump:x:72:72::/:/sbin/nologin
student:x:1000:1000:student:/home/student:/bin/bash

$ tail -2 /var/log/messages
< output trimmed >
```

Unit summary

Having completed this unit, you should be able to:

- Copy Files

- Move Files

- Create symbolic or hard link

- View file content with cat, pg and more

- Perform word counts

- Use head and tail command