

Linux, day 3



LAB: Files and directories



Command hints

sudo	Switch User and DO
mkdir	MaKe DIRectory
nano	Friendly editor
vi	Less-than-friendly editor
cp	CoPy
mv	MoVe
rm	ReMove
man	MANual (documentation)

Assignment

- Create two new directory trees:
 - "*~/staff/files*" and "*~/dummies/files*"
- Use "nano" or "vi" to put some text into:
 - *~/staff/files/staff-demo.txt*
 - *~/dummies/files/dummies-demo.txt*
- Move:
 - *~/staff/* to */home/staff/*
 - *~/dummies* to */home/dummies*

Spoilers

```
$ cd ~  
$ mkdir -p staff/files dummies/files  
$ vi staff/files/staff-demo.txt  
$ vi dummies/files/dummies-demo.txt  
$ sudo mv staff /home/  
$ sudo mv dummies /home/
```

LAB: File permissions



Command hints

chmod	CHange MODe
chown	CHange OWNer
chgrp	CHange GRouP

Assignment

- */home/staff* and contents should have group "staff".
 - New files should automatically get group "staff".
 - Files should only be deletable by their creator.
 - Group "staff" should have full rights on all contents.
- Apply similarly for "dummies" on */home/dummies*.

Spoilers (staff)

```
$ sudo chgrp -R staff /home/staff /home/staff/files
```

```
$ sudo chmod g+s /home/staff /home/staff/files
```

```
$ sudo chmod o+t /home/staff /home/staff/files
```

```
$ sudo chmod g+rx /home/staff /home/staff/files
```

```
# You can also write:
```

```
# chmod g+rws,o+t ...
```

```
# chmod 3775 ...
```

Spoilers (dummies)

```
$ sudo chgrp -R dummies /home/dummies /home/dummies/files
```

```
$ sudo chmod g+s /home/dummies /home/dummies/files
```

```
$ sudo chmod o+t /home/dummies /home/dummies/files
```

```
$ sudo chmod g+rx /home/dummies /home/dummies/files
```

```
# You can also write:
```

```
# chmod g+rws,o+t ...
```

```
# chmod 3775 ...
```

LAB: Archives, backups, etc.



Assignment 1

- Make a *zipped tar*-archive of your home directory.
- SCP archive to the other VM and unpack in */tmp*.
- Careful, these three have different results!

```
$ tar zcf /tmp/home1.tgz /home/tess/  
$ cd /home; tar zcf /tmp/home2.tgz tess/  
$ cd ~; tar zcf /tmp/home3.tgz ./
```

Assignment 2

- Use rsync to synchronize */home/dummy*,
 - From one VM to */home/dummy* on the other.
 - Or to *localhost:/tmp/dummy* if you have one VM.
- Make sure that the source has some files and data.
- Be careful how you specify source and destination!

Closing



Homework

- Reading:
 - Chapter 4
 - Chapter 25

Reference materials



Resources

- [Linux file paths](#)
- [FHS on Wikipedia](#)
- [Identifying file types in Linux](#)
- [Graphical vi cheatsheet](#)
- [Vim Adventures!](#) (game to practice hotkeys)
- [Nano cheatsheet](#)

Resources

- [Why switch to XZ from gzip/bzip2](#)
- [How to use rsync](#)