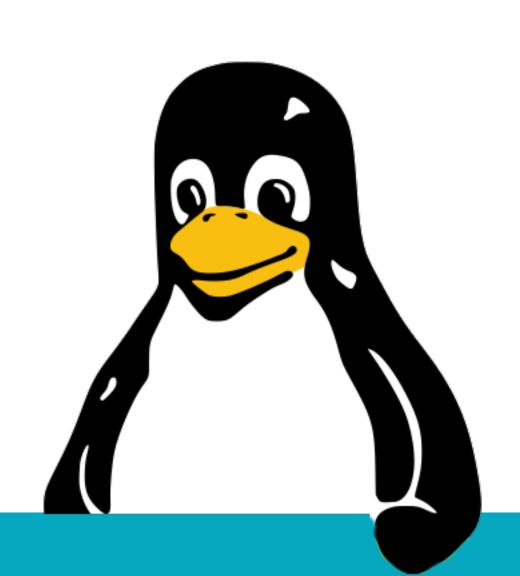
Linux, day 16





Objectives covered

Objective	Summary	Boek
4.4	Troubleshoot user and permission issues	22
4.5	Troubleshoot common issues	6

LAB: User issues





Verbose logging on SSH

- Setup a user account with password.
- SSH to localhost as that user, but add "-v".
 - Read the detailed logging. What's SSH doing?
 - Enter the password incorrectly, then correctly.
- Setup SSH key auth for this test-user, then repeat.
 - Does the logging show which keyfile is used?

Verbose logging on SSH

- Setup SSH key auth for this test-user, then repeat.
 - Does the logging show which keyfile is used?
- Let's make it fail.
 - Replace the client-side key pair,
 - But do NOT fix the authorized_keys file.
 - Can you spot the errors in "ssh -v"?

Failed actions

- Do a few failed logins, on SSH, FTP, console. Whatever.
- Do a few failed sudo attempts.
- Check the relevant log files in /var/log and journalctl.

Variable scope

- In your running shell, do "TESTVAR=testing".
- Does it show up with "echo \$TESTVAR"?
- Now run "sh" in that shell.
 - Does "echo \$TESTVAR" work now?
- Exit "sh", then run "export TESTVAR". Start "sh" again.
 - Does "echo \$TESTVAR" work now?

Mess up your \$PATH

- Run: unset PATH
- Can you run "Is" or other commands?
 - Which commands CAN you run without problems?
 - How would you run "Is" in this situation?
- What's the quickest way to restore your \$PATH?
 - And how would you do it manually?

LAB: Application issues





Downgrading OpenSSL: APT

- Check the current and available versions:
 - apt-cache policy openssl
- Do not remove OpenSSL.
- But you can downgrade.
 - apt install openssl=<older version>

Downgrading OpenSSL: YUM

- Check the current and available versions:
 - yum --showduplicates list openss! | expand
- Do not remove OpenSSL.
- But you can downgrade.
 - yum install openssl-<version>

LAB: Hardware issues





"Hidden" data

- You may run into disk usage that you cannot trace!
 - Let's do a demo.
 - You will need a spare volume to mount.
 - Like /dev/sdc from our previous labs...

Take a note of your current usage on /

"Hidden" data (2)

- Make a directory, "/testdir/".
- Run:

```
$ sudo dd if=/dev/random \
of=/testdir/testfile bs=10M count=100
```

Check your disk usage. It should have increased.

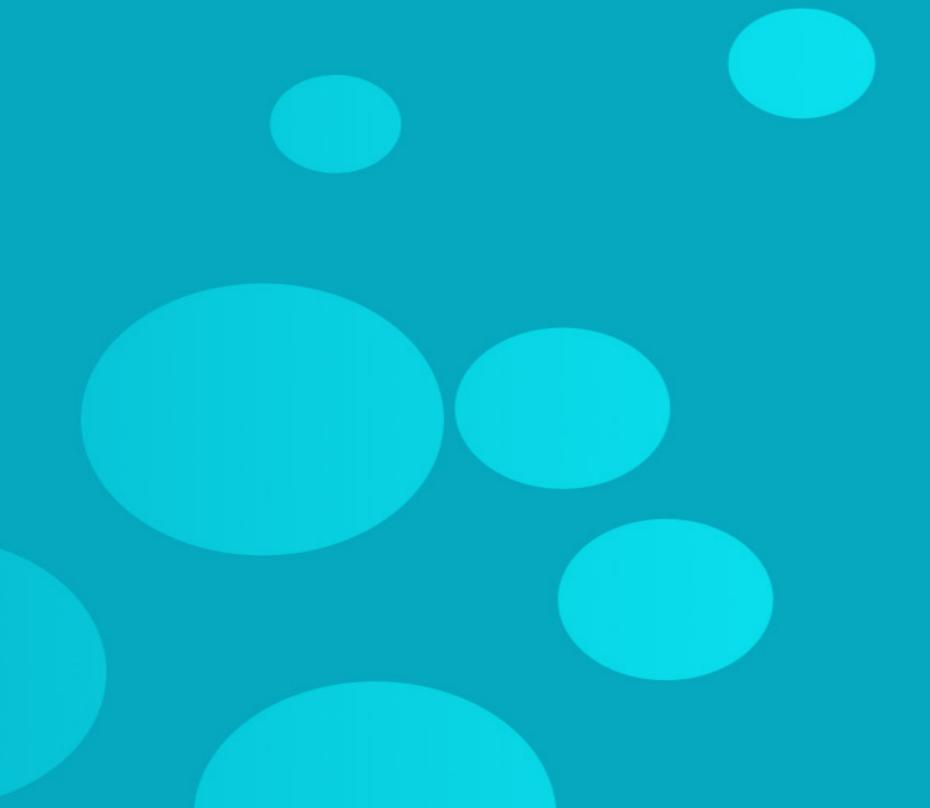
"Hidden" data (3)

- Now take the extra storage device (like /dev/sdc),
 - Make a file system on it, if there isn't one yet.
 - Now mount the file system on /testdir.

- Compare "df" for / and /testdir. Also check with "du".
 - The big, hidden file is still there, but invisible.

Closing





Homework

- Repeat / go over lesson 008.
 - Freshen up your Vagrant and Docker.

• Re-read chapters 28, 29 and 30.

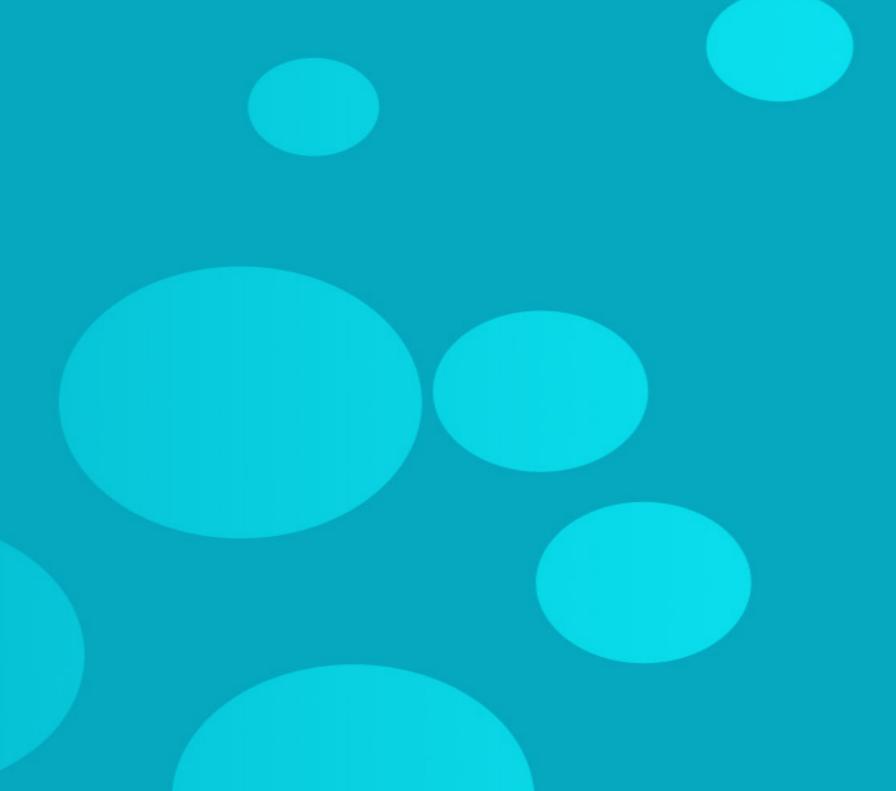
Homework

- Reading:
 - CompTIA Linux+ Exam Objectives

- Go do:
 - One or more CertDepot "daily tasks".
 - Or the more advanced exercises (see day 11).

Reference materials





Resources

- 7 Great apps to view disk usage
- CompTIA Linux+ Exam Objectives