

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 `"/s"` or other commands?
 - Which commands CAN you run without problems?
 - How would you run `"/s"` 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 openssl | 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](#)