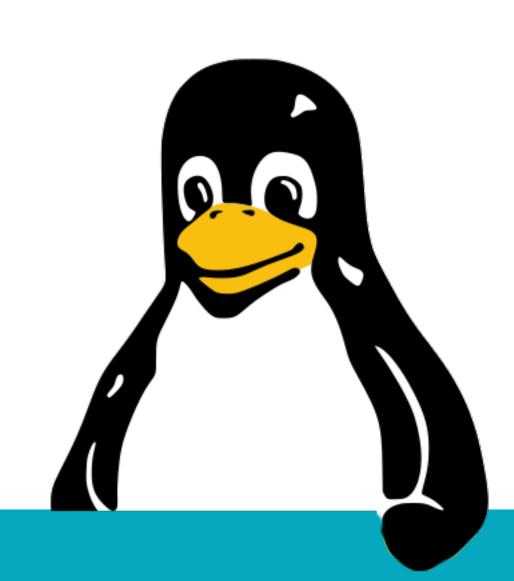
# Linux, day 4



# Objectives covered

3
4
25

### LAB: The shell environment





### Assignment

- Adjust your account's "~/.bashrc".
  - Add "/opt/test" to \$PATH.
- Make the "/opt/test" directory.
  - Copy the "Is" binary to "/opt/test/testls".
- Do a new SSH login (or start a new Bash).
  - Can you now run "testls"?

```
$ echo 'PATH=$PATH:/opt/test' >> ~/.bashrc
$ sudo mkdir -p /opt/test
$ sudo cp -p /usr/bin/ls /opt/test/testls
$ . ~/.bashrc; which testls
```

# LAB: Shell scripting: a start





### LAB: Create a simple script

- Create a script which:
  - Runs ;)
  - Reads a name from the first, passed parameter.
  - Asks for a greeting interactively (with read).
  - Outputs a greeting to the name.

### Example

```
$ ./greeting.sh Tess
How would you like to be greeted?
Hello
Hello Tess
```

```
#!/bin/bash
NAME=$1
read -p "What greeting would you like? " GREET
echo "${GREET} ${NAME}"
```

```
$ chmod +x greeting.sh
$ ./greeting.sh Tess
What greeting would you like? Hello
Hello Tess
```

## LAB: Shell scripting: I/O & Files



### Assignment 1

- Find all files with "passwd" in their name.
- Find all files, literally and exactly called "passwd".
- Find all world-writable files.

## Assignment 2

- SSH from one VM to the other,
- Use a HEREDOC to run these on the other VM:
  - touch /tmp/foobar
  - Is /tmp
  - echo \$(hostname) > /tmp/foobar
  - cat /tmp/foobar

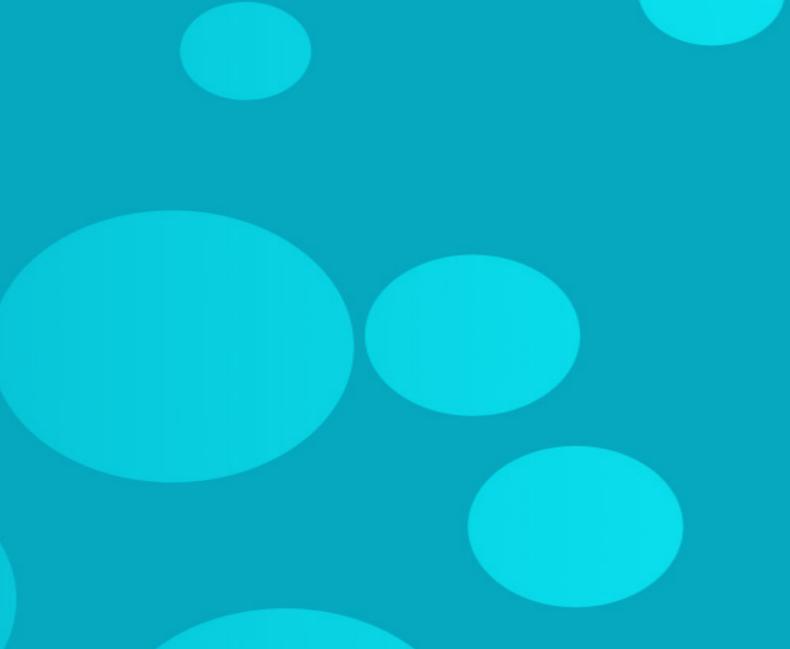
```
# passwd in the name:
$ locate passwd
$ find / -type f -name "*passwd*"
# name is literally passwd:
$ locate -b -r \passwd$
$ find / -type f -name "passwd"
```

```
$ find / -perm -o+w -type f
```

```
$ ssh localhost << EOF
touch /tmp/foobar
ls /tmp
echo \$(hostname) > /tmp/foobar
cat /tmp/foobar
```

# Closing





### Homework

- Reading:
  - Chapter 4: Processing and analyzing text
  - Chapter 25: Shell scripting

- Practice exam
  - Link will be shared in Teams.

### Homework

• Finish the user create/remove script.



#### Other resources

GNU.org Bash manual

- Exercism: gamified learning programming.
  - 80+ assignments for Bash.

TLDP.org has some fun assignments.

### Reference materials





#### Resources

- Creating shell scripts in Enterprise Linux (PluralSight)
- A roundup of 15 popular Linux shells.
- Linux shell metacharacters
- Bash globbing tutorial
- Bash read command
- Bash getopts example

#### Resources

- Really in-depth on pipes, forks and more
- Testing file characteristics in Bash
- Why you don't read lines with "for"
- An excellent, in-depth study guide for shell scripting
- Practice more, take the challenge!
- Or try Tutorials Ground

#### Resources

- Exercism: gamified learning programming.
- TLDP.org has some fun assignments.
- Arithmetic in Bash
- GNU.org Bash manual
- Shell Scripting tutorial for beginners (YouTube)