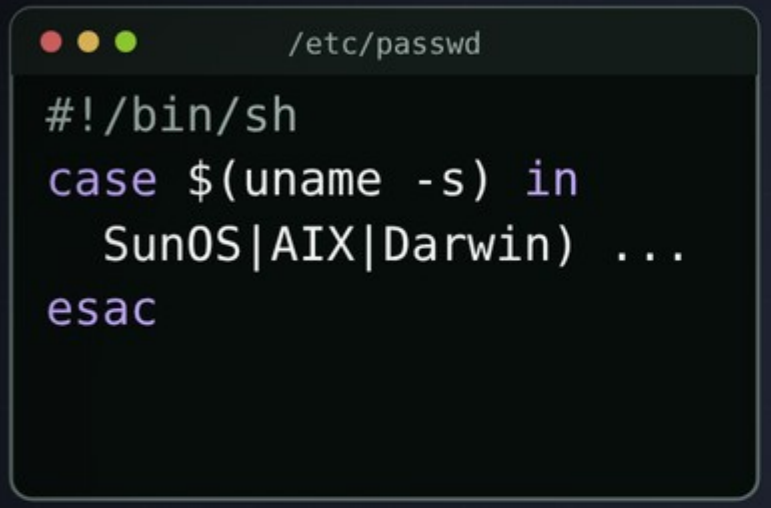
LESSON 12



UNIX

Portable Scripts

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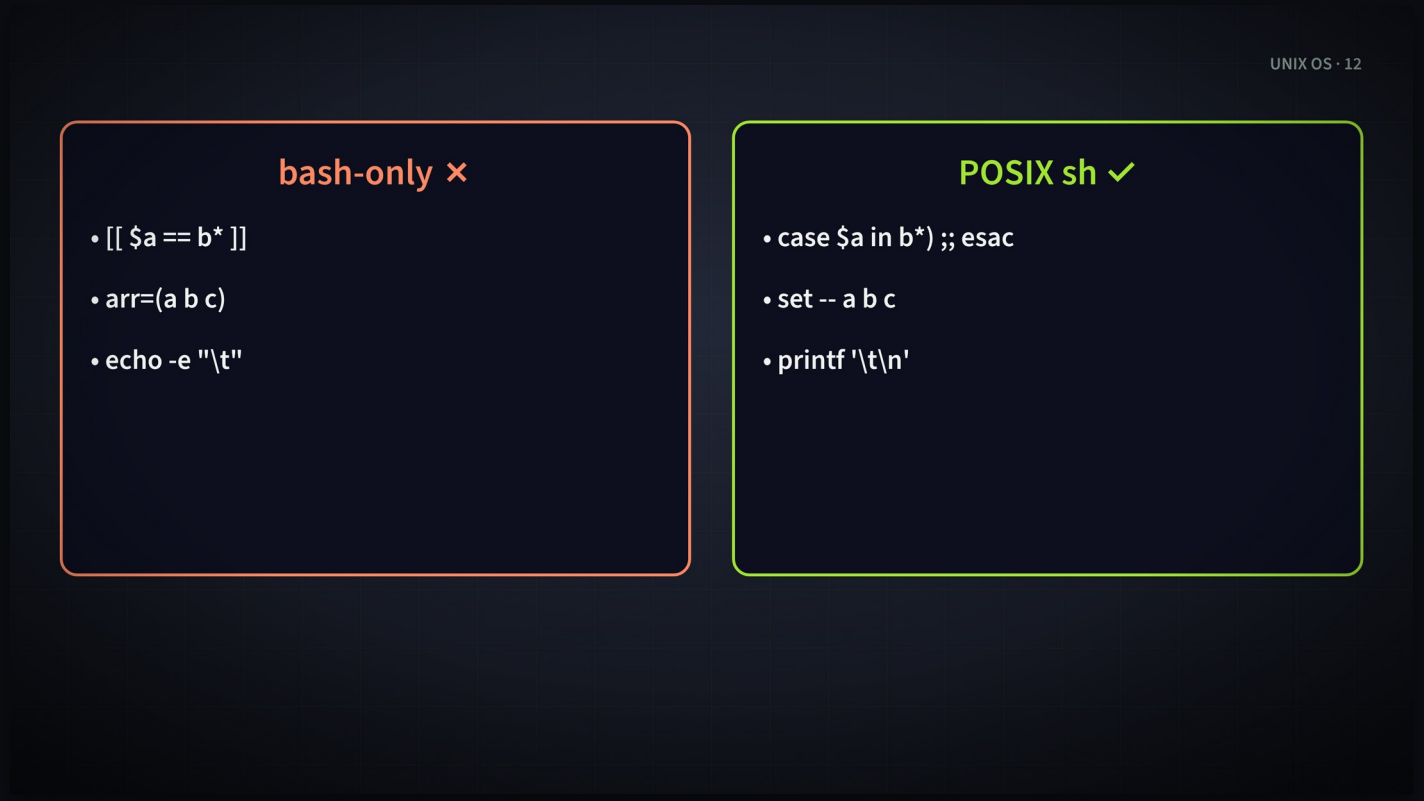
UNIX OS

LESSON 12

Portable Scripting and Next Steps

POSIX sh scripts that run on every UNIX, testing portability, and your UNIX career path

Write for POSIX sh



- To run everywhere, start with hash bang slash bin slash sh and use only POSIX features: …
- Use command dash v instead of which, and printf instead of echo dash e.

01

Detecting the System

diskreport.sh

```
#!/bin/sh
os=$(uname -s)
case "$os" in
  Linux|Darwin|FreeBSD) df -h / ;;
  SunOS)  df -h / ;;
  AIX)    df -g / ;;
  HP-UX)  bdf / ;;
  *)      echo "unknown system: $os" >&2; exit 1 ;;
esac
```

- When behavior must differ, check uname dash s and branch with a case statement. One script …
- This is how real installers and monitoring agents work.

02

Testing Portability

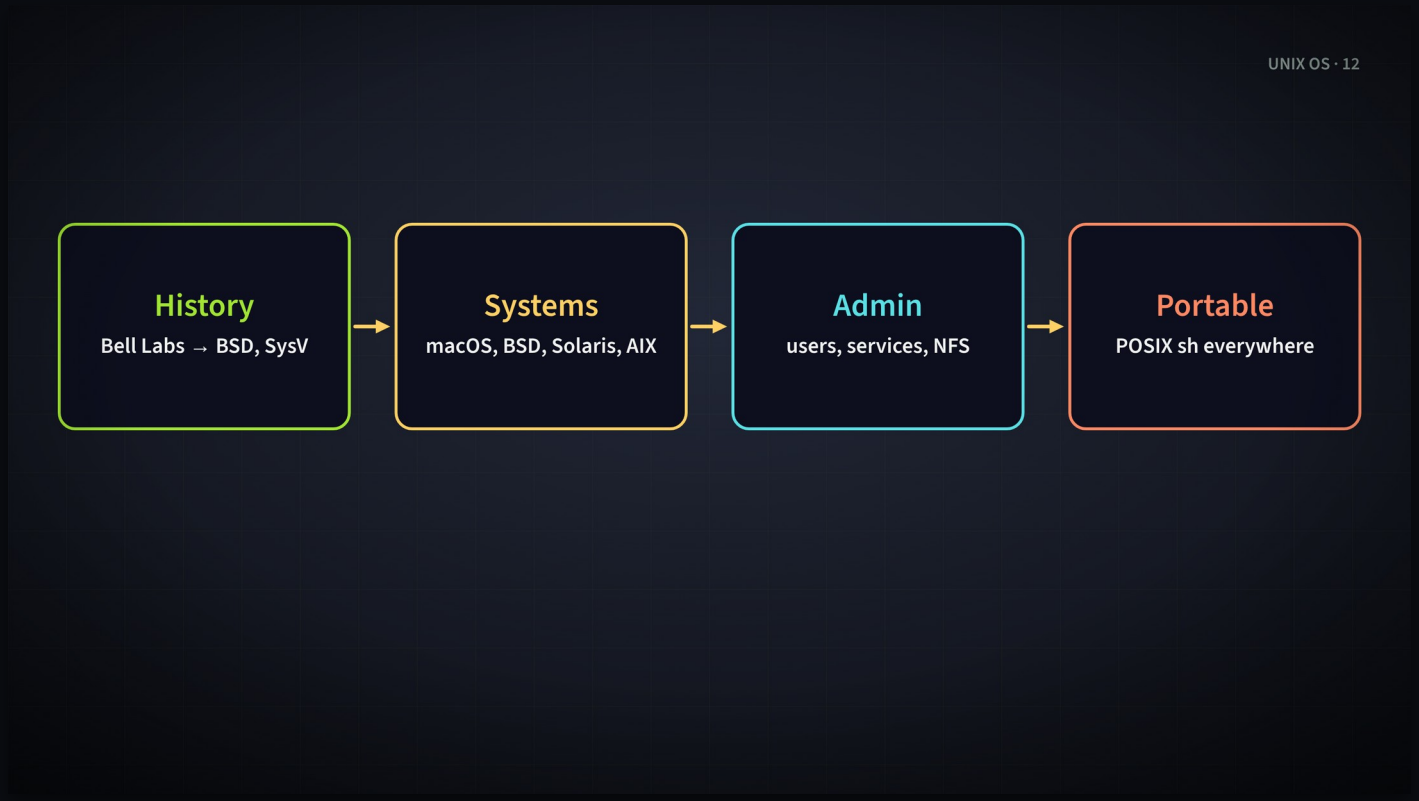
terminal

```
$ shellcheck -s sh diskreport.sh
In diskreport.sh line 7:
if [[ -d /opt ]]; then
   ^-- SC3010: In POSIX sh, [[ ]] is undefined.
$ dash diskreport.sh
/dev/sda2   39G   16G   21G  44% /
```

- Check scripts with ShellCheck using dash s sh, which warns about bash-only features. Run …
- Test on real systems when you can: FreeBSD and illumos run fine in free virtual machines.

03

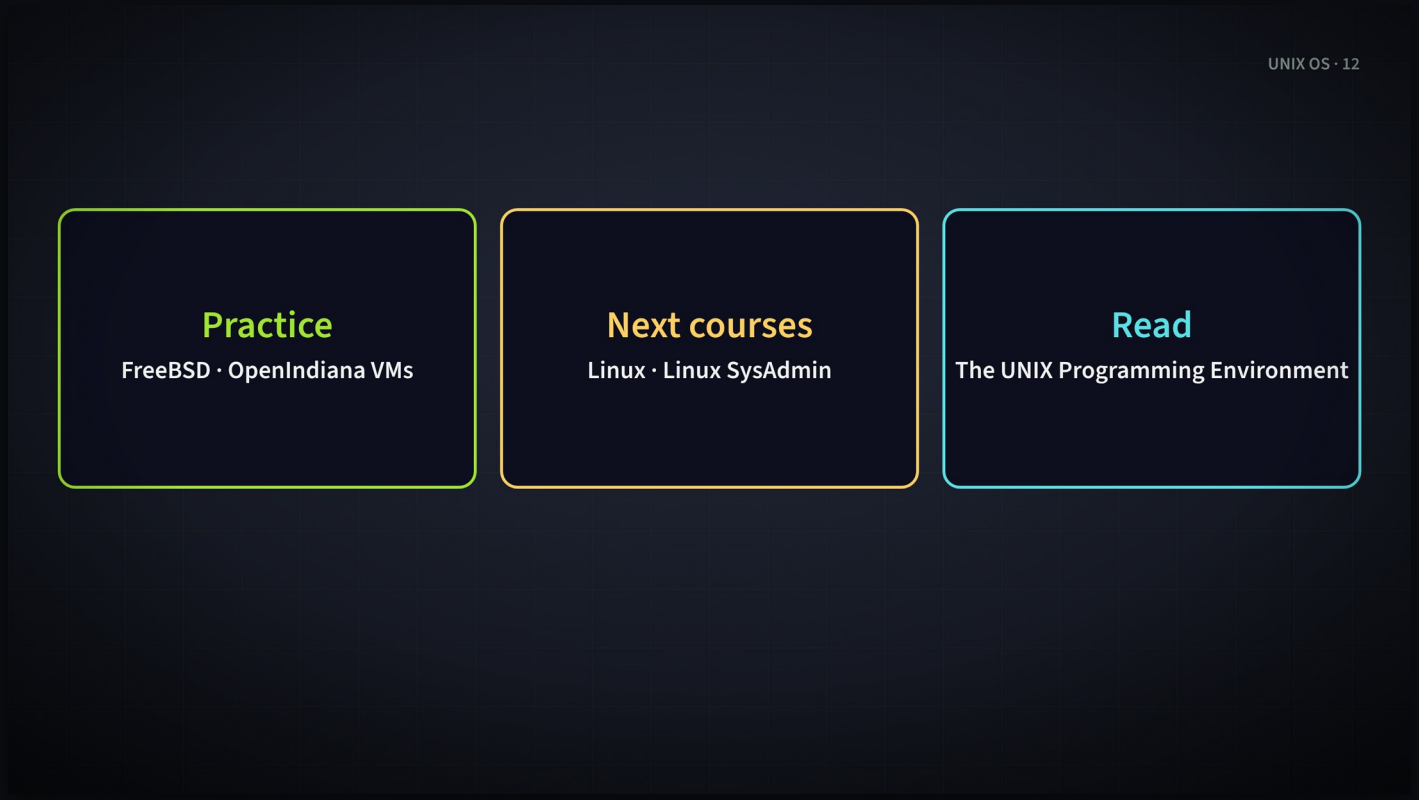
What You Learned



- History — Bell Labs → BSD, SysV
- Systems — macOS, BSD, Solaris, AIX
- Admin — users, services, NFS

04

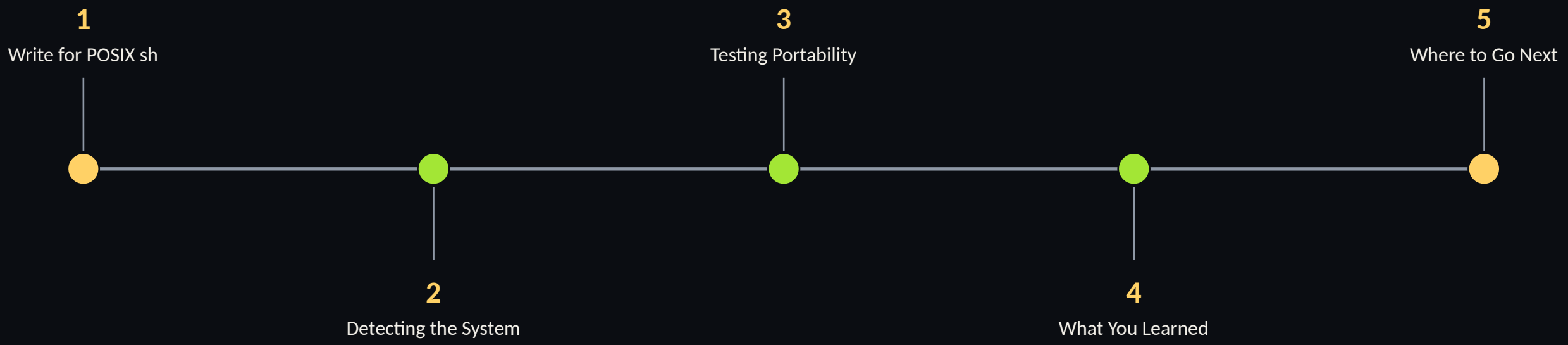
Where to Go Next



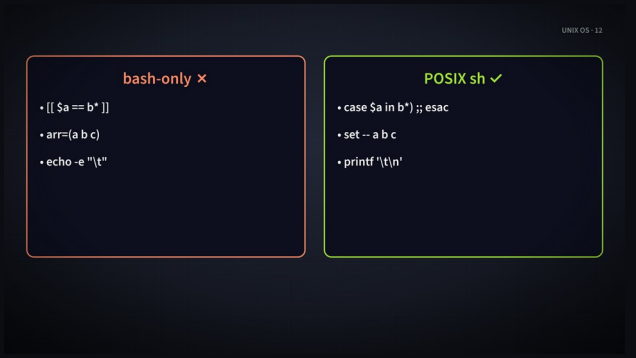
- Practice — FreeBSD · OpenIndiana VMs
- Next courses — Linux · Linux SysAdmin
- Read — The UNIX Programming Environment

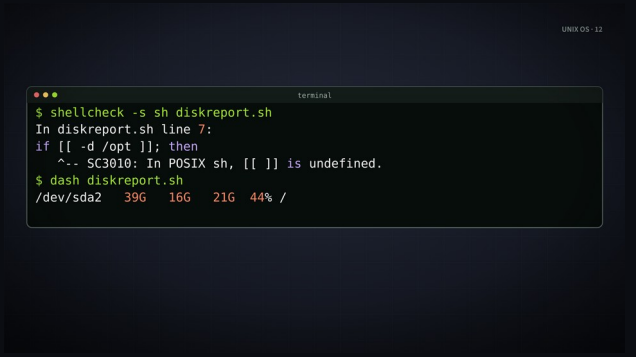
05

Lesson Map


1
Write for POSIX sh
2
Detecting the System
3
Testing Portability
4
What You Learned
5
Where to Go Next

Sources and Further Reading





Thank you for watching

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