ANNEX A · VERIFY AN ISO, BOOT MEDIA

Name: _____ **Date:** _____ **PC:** _____

Before you install anything: is the file the real one, and will the machine start from it?

TASK 1 **The fingerprint of the ISO**

Server: _____ User: _____

The ISO is on the **class server**. Open a terminal on your PC (**Ctrl + Alt + T**) and log in to the server (same password as in virt-manager). The prompt changes to `<user>@si`. Type each line and press Enter. The last one takes a few seconds.

```
ssh <user>@<server>
cd /srv/isos
sha256sum debian-13.7.0-amd64-netinst.iso
```

First 8 characters: _____ Last 4 characters: _____ Characters in total: _____

DONE WHEN you have a long line of letters and digits followed by the file name.

TASK 2 **Compare with the maker's list**

```
cat SHA256SUMS
sha256sum -c --ignore-missing SHA256SUMS
```

In the list, find the line of your ISO. Do the first 8 and the last 4 characters match yours? _____

What does the last command answer? _____

DONE WHEN the answer ends in `OK` (or `La suma coincide`).

TASK 3 **The forgery: change one byte**

Still on the server: copy the ISO to your home folder, glue one letter `x` to its end, and take the fingerprint again. When you finish, type `exit` to come back to your PC.

```
cp /srv/isos/debian-13.7.0-amd64-netinst.iso ~/copy.iso
printf 'x' >> ~/copy.iso
sha256sum ~/copy.iso
rm ~/copy.iso
```

First 8 characters of the copy: _____ How many are the same as in Task 1? _____

The copy is one byte longer than a file of 756 million bytes. What does this tell you about checksums?

_____

_____

DONE WHEN the two fingerprints are different and you ran the last line (`rm`) to delete the copy.

TASK 4 **Boot order**

1. Virtual Machine Manager → `File` → `Add Connection` → `Custom URI...` → `qemu+ssh://<user>@<server>/session` → `Connect` (today's address). Select it.
2. Double-click `live-test` → `View` → `Details` → `Boot Options`.
3. Remove the tick of the **CD-ROM** → `Apply`. Then `View` → `Console` and press ▸.

What does the screen say? _____

Why? _____

4. `Virtual Machine` → `Shut Down` → `Force Off`. Back in `Boot Options`: tick the CD-ROM again, tick `Enable boot menu` → `Apply`. Start the VM and press **Esc** at once.

DONE WHEN you saw the error, and then the Debian menu again after choosing the CD in the boot menu.

TASK 5 **Clean up**

Shut the VM down. In the main window: right-click `live-test` → `Delete` → keep `Delete associated storage files` ticked → `Delete`.

DONE WHEN `live-test` is no longer in the list.

EXIT TICKET

Alone, no notes. Tick one answer.

1. Your ISO's SHA-256 matches the one on the maker's site. What do you know?

- ☐ a) The file has no bugs
- ☐ b) Your copy is identical to the maker's file
- ☐ c) The file is encrypted
- ☐ d) The download was fast

2. Someone changes one byte of a 756 MB file. Its SHA-256…

- ☐ a) stays the same
- ☐ b) changes in its last character
- ☐ c) changes completely
- ☐ d) gets one character longer

3. You write an ISO to `/dev/sda` but your stick was `/dev/sdb`. What happens?

- ☐ a) The disk `sda` is overwritten
- ☐ b) Nothing: the system refuses
- ☐ c) The ISO is copied to both
- ☐ d) The stick is erased anyway

4. A PC with Windows on its disk ignores your bootable USB and starts Windows. Most likely…

- ☐ a) the ISO checksum was wrong
- ☐ b) the stick needs more RAM
- ☐ c) Windows deleted the stick
- ☐ d) the disk comes first in the boot order