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DEVOPS SEMINAR
HARDENING

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Task 01 - Virtual machine

Create a new Debian 11 virtual machine without graphical interface.

Task 02 - Password policy

Edit the correct file so that the password policy is equivalent to:

PASS_MAX_DAYS 180
PASS_MIN_DAYS 90
PASS_WARN_AGE 7
PASS_MIN_LEN 12

Check file /etc/login.defs

Task 03 - Users & groups

Create the users `david`, `alexia`, `john`, `martine` and `karim`.

Create the groups `hr_team`, `it_team` and `admin`.

Then assign each user to the proper group(s) according to this table:

User	hr_team	it_team	admin
alexia		X	
david	X		
john		X	
martine	X		
karim	X	X	X

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Task 04 - Sudoers

The user `john` must be able to run all commands as with *sudo*.
Users in the `it_team` group should only be able to use the following command with *sudo*:

- ✓ *cat* ;
- ✓ *ls* ;
- ✓ *grep*.

Task 05 - ssh

Change the default port from `22` to `1337`.
Disable login for the `root` user.

Task 06 - Disable ipv6

Disable ipv6 permanently.
Do not forget the following points:

- ✓ disable ipv6 for all network interfaces ;
- ✓ disable autoconfiguration for all network interfaces ;
- ✓ disable ipv6 for new interfaces ;
- ✓ disable autoconfiguration for new interfaces.

sysctl

Task 07 - Firewall

Configure the firewall *iptables* with the following characteristics:

- ✓ rules have to be written in `/etc/iptables/rules.v4` ;
- ✓ allow port `1337` (input and output) ;
- ✓ allow *HTTP* protocol (output) ;
- ✓ allow *HTTPS* protocol (output).

The other ports must be blocked and *iptables* configurations must NOT be wiped at reboot !

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Task 08 - Fail2ban

Configure *fail2ban* for the ssh service.

Respect the following rules:

- ✓ maximum 3 connection attempts ;
- ✓ blocking for 30 minutes in case of failure.

Task 09 - SE Linux

Install and activate *SeLinux*.

Task 10 - AntiVirus

Install *clamAV* on the machine.

Create a script that launches *clamAV* and scan all the folders on the machine.

Create a *cron* job that runs the script every day at 23:42.

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