

# Just the commands - fast setup for a secure Linux server

Clément Levallois

2017-04-03

# Table of Contents

What? .....	1
Make sure you have the latest version of all packages: .....	1
Network Time Protocol .....	1
harden the kernel .....	1
changing SSH port .....	1
Installing the sudo command:.....	2
Adding a new user (let's call it "myUser") .....	2
Enabling server connections via myUser.....	2
Disabling connection through root .....	2
enable SSH key auth .....	2
installing the undifficult firewall .....	3
denying all incoming traffic except for SSH port .....	3
install and config of Psad .....	4
to be continued .....	4
the end .....	4

last modified: 2017-04-10

## What?

- Debian jessie 8.7
- vi

→ change for your favorite text editor, and probably valid for Ubuntu as well.

## Make sure you have the latest version of all packages:

```
sudo apt-get update && sudo apt-get upgrade
```

## Network Time Protocol

```
aptitude install ntp
```

Then define your time zone (the one where your server is located):

```
dpkg-reconfigure tzdata
```

## harden the kernel

```
vi /etc/sysctl.d/local.conf
```

- Paste the contents of [this file](#):
- Close the file
- reboot the server

## changing SSH port

```
vi /etc/ssh/sshd_config
```

Text to change in the file:

- change port SSH 22 by a new port (**let's say 1234**), write the new port down somewhere
- ChallengeResponseAuthentication no
- UsePAM no

```
service sshd restart
```

## Installing the sudo command:

```
apt-get install sudo
```

## Adding a new user (let's call it "myUser")

```
adduser myUser -s /bin/bash passwd myUser vi /etc/sudoers
```

and place the following line:

```
myUser ALL=(ALL)
```

## Enabling server connections via myUser

```
vi /etc/ssh/sshd_config
```

```
AllowUsers myUser
```

Then restart the SSH service:

```
service sshd restart
```

## Disabling connection through root

```
vi /etc/ssh/sshd_config
```

Text to change in the file:

```
PermitRootLogin no
```

From there on, you cannot login to the server from root, only from myUser.

To switch to root privileges:

```
su -
```

## enable SSH key auth

- Generate a key with puttygen (SSH-2 RSA 1024).
- Parameters to change in `/etc/ssh/sshd_config`:

```
ChallengeResponseAuthentication no
```

X11Forwarding no

UsePAM no

LogLevel DEBUG3 (this should be added, the parameter is not listed by default)

- Save the file, then:

```
service sshd restart
```

- Add your public key to `/home/myUser/.ssh/authorized_keys`

Make sure that:

- you have put the keys in `/home/myUser/.ssh/authorized_keys` (not just in the root user folder)
- your key starts with "the "ssh-rsa" (the first "s" might be missing ...)
- the key doesn't break in several lines
- do `chmod 700 ~/.ssh` on the home folder
- use `tail -f /var/log/auth.log` for debugging

When SSH key login works, go back to `/etc/ssh/sshd_config` and do:

PasswordAuthentication no

then: `service sshd restart`

Things will not work the first time, useful tips:

- <http://askubuntu.com/a/306832>
- <http://stackoverflow.com/a/20923212/798502>

## installing the undifficult firewall

```
sudo apt-get update
```

```
apt-get install ufw
```

## denying all incoming traffic except for SSH port

```
ufw default deny incoming
```

```
sudo ufw allow 22/tcp
```

```
ufw enable
```

## install and config of Psad

First, making sure the firewall logs the traffic:

```
iptables -A INPUT -j LOG  
iptables -A FORWARD -j LOG
```

```
apt-get install psad
```

Then modify some options in the config file, which is situated here:

```
vi /etc/psad/psad.conf
```

Here are some options I modified: [my psad config file](#)

Then we whitelist our own server:

```
vi /etc/psad/auto_d1
```

where I put just 2 values:

```
127.0.0.1 0; # localhost
```

```
xx.xx.xxx.xxx 0; # Server IP (replace xx.xx.xxx.xxx by your actual server IP)
```

**to be continued**

# the end

Author of this tutorial: [Clement Levallois](#)

All resources on linux security: <https://seinecle.github.io/linux-security-tutorials/>