

# setup 2FA with google authenticator for SSH

setting up two factor authentication for ssh with google authenticator is actually very simple. here is how it can be done in just a few steps on ubuntu:

do this as **root** or use sudo

```
apt install libpam-google-authenticator
echo "auth required pam_google_authenticator.so" >> /etc/pam.d/sshd
sed -i 's/ChallengeResponseAuthentication no/ChallengeResponseAuthentication yes/' /etc/ssh/sshd_config
```

now run this for each user to create the google authenticator key for each user:

```
google-authenticator
```

you will be asked a couple of questions, answer them as you please, they are well explained.

the google-authenticator script will show a large QR code.. scan this code with the google authenticator app on your smartphone to set up your key.

now finally restart the sshd service as root

```
systemctl restart sshd
```

from now on you should be asked for your OTP once you have successfully entered your password. Note that this authentication is bypassed when using a private key authentication.

Users that haven't configured google authenticator yet won't be able to login anymore until they have done the google authenticator config.

## ssh key authentication

now if you use ssh key authentication you won't be asked for your second factor anymore. if you don't like that, you can do the following to force a three factor authentication, where you need to have an authorized private key + password + google authenticator code:

make sure these options are sett as follows in your /etc/ssh/sshd\_conf file:

```
ChallengeResponseAuthentication yes
UsePAM yes
AuthenticationMethods publickey,password publickey,keyboard-interactive
PasswordAuthentication no
```

restart sshd, and **don't logout** form your working session, try in a new window to connect via ssh to verify everything is working.. if not, you still have your active session to intervene and fix it :)

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