

## What we are going to do

We are going to get a Raspberry Pi, a small computer used by hobbyists for projects like this, and get it set up as a Rogue Portal.

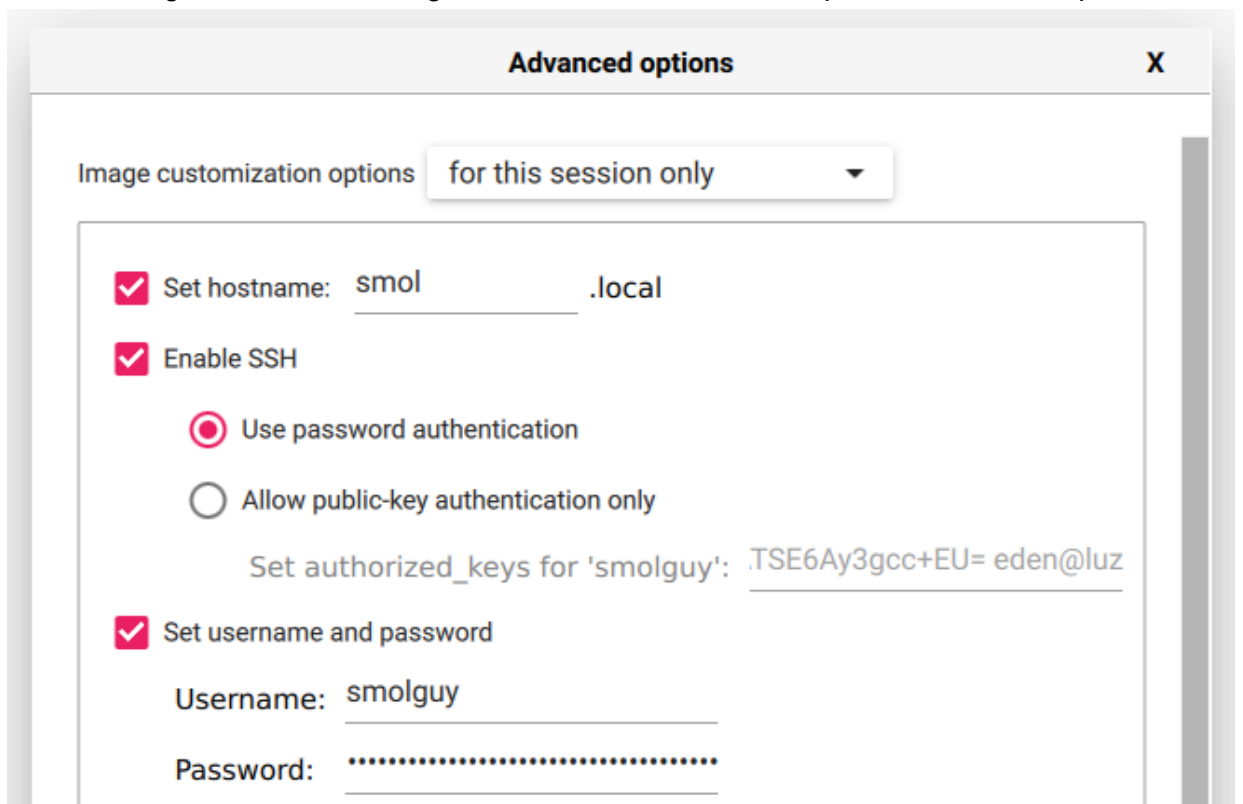
First we are going to install an operating system on the machine (flashing).

Then we are going to install the needed software on this little computer. We do that through SSH, the Secure Shell Protocol, which allows you to access the terminal (command line) of another machine over a network.

And that's basically it. The last part is to decide what to put on your new smolnet node!

## Flashing the Pi

- I swear by the [Raspberry Pi Imager](#)
- I use the Raspberry Pi OS (other) > Raspberry Pi OS Lite (32-bit), as we don't really need a GUI
- Click on the gear at the bottom right and choose some similar options to make setup ez:



The image shows a screenshot of the 'Advanced options' dialog box in the Raspberry Pi Imager. The dialog has a title bar with 'Advanced options' and a close button 'X'. Below the title bar, there is a section for 'Image customization options' with a dropdown menu set to 'for this session only'. The main content area contains several settings:

- Set hostname:  .local
- Enable SSH
  - Use password authentication
  - Allow public-key authentication only
- Set authorized\_keys for 'smolguy':
- Set username and password
  - Username:
  - Password:

Configure wireless LAN

SSID:

Hidden SSID

Password:

Show password

Wireless LAN country:

Set locale settings

Time zone:

Keyboard layout:

Persistent settings

Play sound when finished

Eject media when finished

Enable telemetry

SAVE

- One **VERY BIG GOTCHA!!!** is that the WiFi absolutely must be a 2.4GHz network, no 5GHz allowed. If you are foolish like me and choose a 5GHz network you will spend a lot of time wondering why it won't connect even though you typed the password right.

### Logging into the Pi

- If you set up the WiFi properly it should happily join your network with no fuss
- (enter into your local terminal) **ssh smolguy@smol.local**
- **sudo apt-get update**
- Now we follow the directions from [Rogue Portal](#). It is okay to copy and paste this script into the command line of your raspberry pi, but make sure that the SSID is what you want it to be.
  - **wget**  
**https://github.com/jerryryle/rogueportal/releases/download/v1.3-RaspbianBuster/rogueportal\_1.3\_armhf.deb**
  - **wget**  
**https://github.com/jerryryle/rogueportal/releases/download/v1.3-RaspbianBuster/roguefastboot\_1.3\_armhf.deb**
  - **sudo debconf-set-selections <<< "macchanger macchanger/automatically\_run boolean true"**
  - **sudo debconf-set-selections <<< "iptables-persistent iptables-persistent/autosave\_v6 boolean true"**
  - **sudo debconf-set-selections <<< "iptables-persistent iptables-persistent/autosave\_v4 boolean true"**
  - **# here is where we set the SSID**
  - **sudo debconf-set-selections <<< "rogueportal rogueportal/ssid string STL.smol"**
  - **sudo apt install ./rogue\*.deb**
  - **# put whatever you want in /var/www/html/index.html, this is what will be loaded in the captive portal**
  - **sudo reboot**

### That's it!

- There should be an STL.smol network with a working captive portal.
- The wifi antenna is now occupied, so **it will no longer connect to the original WiFi network**, but if you should still be able to ssh smolguy@smol.local over ethernet, or with additional wifi antenna.