

# Raspbian 10

## Prepare SD card

- Download and install the [RaspBerry Pi Imager](#)
- Copy “RaspBerryPi OS Lite” to the SD card

## Install OS

- Boot from SD card
- Update all packages
- Enable SSH server in *Interface Options* and set location and keyboard in *Localisation Options*:

```
sudo raspi-config
```

- Change host name
- Config [SSH](#) and generate SSH keys
- Exchange public key files
- Install missing packets:

```
apt install autossh vim
```

## Install AutoSSH

Install AutoSSH on a **remote\_host** to connect to my main server (**local\_host**) to allow connections from **any\_host** (either at the local location, or at any other remote location) back to the remote host.

### Remote location

1. Verify access from local\_host and any\_host: SSH from **remote\_host** to **local\_host**:<ssh\_port\_local\_host> with key pair authentication and establish tunnel, requires <ssh\_port\_local\_host> to be open on local location:

```
remote_host$ ssh -R <port_to_access_remote_from_local>:localhost:22  
user@<domain_name_of_local_host> -p <ssh_port_local_host>
```

2. Once confirmed, create file *autossh-tunnel.service* in */etc/systemd/system/*:

```
[Unit]  
Description=AutoSSH tunnel service Remote port  
<port_to_access_remote_from_local> to local 22  
After=network.target  
  
[Service]
```

```
Environment="AUTOSSH_GATETIME=0"  
ExecStart=/usr/bin/autossh -o "ServerAliveInterval 10" -o  
"ServerAliveCountMax 3" -N -R  
<port_to_access_remote_from_local>:localhost:22  
user@<domain_name_of_local_host> -p <ssh_port_local_host> -i  
/home/pi/.ssh/id_ecdsa
```

```
[Install]  
WantedBy=multi-user.target
```

We need to tell SSH the identity file as systemd will run as root. The environment variable is added so the autossh service can run in the background.

## Local location

1. Verify: SSH from **local\_host** to **remote\_host** through tunnel at <port\_to\_access\_remote\_from\_local>

```
local_host$ ssh pi@localhost -p <port_to_access_remote_from_local>
```

## Any location

1. Verify: SSH to **local\_host** and establish tunnel from (any\_host) <port\_to\_access\_remote\_from\_local> to localhost:<port\_to\_access\_remote\_from\_local>
2. Verify: SSH from any\_host to localhost:<port\_to\_access\_remote\_from\_local>

## Links

- [SSH tunneling with Autossh](#)

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