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## **Artemis**

As all projects, this one needed to have a name as well. *Artemis* originates from the old Greek and means - amongst others - unharmful or safe. And exactly this Artemis should deliver to you: safety for your data and no harm to your communications.

### Requirements

Hardware	Quantity
RaspberryPi + MicroUSB / Power Adapter	1
MicroSD Card	1
USB Thumbdrive	1
RJ45	1

## **Prerequisites**

### **Creating temporary environment**

Ensure that you download and install the ArchLinux ARM to a non-infected SD card on a secured computer. We recommand the following way of proceeding.

- 1. Download the latest ArchLinux ISO and its checksum.
- 2. Check against each other.
- 3. Copy the ISO to a clean USB thumbdrive.

<sxh bash;># dd bs=1m if=./archlinux-YYYY.MM.DD-dual.iso of=/dev/sdX</sxh>

1. Plug in a computer and boot it up.

### **ArchLinux ARM**

1. Start fdisk to partition the SD card:

#### fdisk /dev/mmcplk0

- 1. At the fdisk prompt, delete old partitions and create a new one:
  - 1. Type o. This will clear out any partitions on the drive.
  - 2. Type p to list partitions. There should be no partitions left.
  - 3. Type n, then p for primary, 1 for the first partition on the drive, press ENTER to accept the default first sector, then type +100M for the last sector.
  - 4. Type t, then c to set the first partition to type W95 FAT32 (LBA).
  - 5. Type n, then p for primary, 2 for the second partition on the drive, and then press ENTER twice to accept the default first and last sector.
  - 6. Write the partition table and exit by typing w.
- 2. Create and mount the FAT filesystem:

```
mkfs.vfat /dev/sdX1
mkdir boot
mount /dev/sdX1 boot
```

1. Create and mount the ext4 filesystem:

```
mkfs.ext4 /dev/sdX2
mkdir root
mount /dev/sdX2 root
```

1. Download and extract the root filesystem (as root, not via sudo):

```
wget http://archlinuxarm.org/os/ArchLinuxARM-rpi-latest.tar.gz
tar -xf ArchLinuxARM-rpi-latest.tar.gz -C root
sync
```

1. Move boot files to the first partition:

```
mv root/boot/* boot
```

1. Unmount the two partitions:

umount boot root

- 1. Insert the SD card into the Raspberry Pi, connect ethernet, and apply 5V power.
- 2. Use the serial console or SSH to the IP address given to the board by your router. The default root password is 'root'.

# Configuration



Note: Ensure to be on a separate secured network or even better, plug yourself in a non-networked computer.

#### **Firewall**

In order to network-secure Artemis tight as possible, we are just going to drop every input and output traffic by default, and whitelist whatever services we need.

#### **Purging iptables**

Safe the following commands in /etc/iptables/purge-all-rules.sh

<sxh bash; Purging all iptable rules> iptables -F iptables -X iptables -t nat -F iptables -t nat -X iptables -t mangle -F iptables -t mangle -X iptables -t raw -F iptables -t raw -X iptables -t security -F iptables -t security -X iptables -P INPUT ACCEPT iptables -P FORWARD ACCEPT iptables -P OUTPUT ACCEPT </sxh>

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<sxh bash;title:Dropping all packages;> # iptables -N TCP # iptables -N UDP </sxh>

### References

[0] RaspberryPi With Root Partition Encryption, Unlocked Using Flash Drive

[1] Archlinux ARM encrypted root

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