Raspberry Pi

From Alpine Linux

This tutorial will help you install Alpine Linux on your Raspberry Pi.

Contents

Preparation

This section will help you format and partition your SD card:

1. Download (http://alpinelinux.org/downloads/) Alpine for Raspberry Pi tarball which is named as `alpine-rpi-<version>-armhf.rpi.tar.gz`. You will need version 3.2.0 or greater if you have a Raspberry Pi 2.
2. Mount your SD card to your workstation
3. Use gnome-disks (https://en.wikipedia.org/wiki/GNOME_Disks) or fdisk (http://linux.die.net/man/8/fdisk) to create a FAT32 partition. If you are using fdisk, the FAT32 partition type is called *W95 FAT32 (LBA)* and its ID is 0xC.
4. Mark the newly created partition as bootable and save
5. Mount the previously created partition
6. Extract the tarball contents to your FAT32 partition
7. Unmount the SD Card.

Installation

Alpine Linux will be installed as diskless mode, hence you need to use Alpine Local Backup (lbu) to save your modifications between reboots. Follow these steps to install Alpine Linux:

1. Insert the SD Card into the Raspberry Pi and turn it on
2. Login into the Alpine system as root. Leave the password empty.
3. Type `setup-alpine`

4. Once the installation is complete, commit the changes by typing `lbu commit`

Type `reboot` to verify that the installation was indeed successful.

Post Installation

Update the System

Upon installation, make sure that your system is up-to-date:

```
apk update
apk upgrade
```

Don't forget to save the changes:

```
lbu commit
```

Clock-related error messages

During the booting time, you might notice errors related to the hardware clock. The Raspberry Pi does not have a hardware clock and therefore you need to disable the hwclock daemon and enable swclock:

```
rc-update add swclock boot    # enable the software clock
rc-update del hwclock boot    # disable the hardware clock
```

Since Raspberry Pi does not have a clock, the Alpine Linux needs to know what the time is by using a Network Time Protocol (NTP) (https://en.wikipedia.org/wiki/Network_Time_Protocol) daemon. Make sure that you a NTP daemon installed and running. If you are not sure, then you can install NTP client by running the following command:

```
setup-ntp
```

Busybox NTP client might be the most lightweight solution. Save the changes and reboot, once the NTP software is installed and running:

```
lbu commit
reboot
```

After reboot, make sure that the `date` command outputs the correct date and time.

See Also

- Create a bootable SDHC from a Mac

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