MuntsOS Embedded Linux

Application Note #3: Installing MuntsOS from a Linux Host

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Introduction

This application note describes how to download and install ***MuntsOS Embedded Linux*** to an SD card, from a host computer running some distribution of Linux.

It is also possible to install ***MuntsOS*** from a MacOS or Windows computer, but the procedure for formatting the SD card will vary.

Installation Procedure

Step 1: Download a ***MuntsOS Thin Server*** release `.zip` file appropriate for your target hardware from the following web site:

https://repo.munts.com/muntsos/thinservers

You can either download with a web browser by clicking on the above link, or from the command line with a command similar to the following:

```
wget https://repo.munts.com/muntsos/thinservers/muntsos-RaspberryPi5.zip
```

Step 2: List available disk partitions **before** inserting the SD card into the host computer, by running the following command:

```
cat /proc/partitions
```

You should see output similar to the following:

```
major minor  #blocks  name

   8       16  488386584 sdb
   8       17  488385560 sdb1
   8        0  117220824 sda
   8        1  117219328 sda1
  11        0    1048575 sr0
  11        1    1048575 sr1
```

Step 3: Insert the SD card into the host computer. If the host computer happens to automount the SD card partition(s) and as a result present one or more dialog boxes, just dismiss them and continue.

Step 4: List available disk partitions **after** inserting the SD card into the host computer, by running the following command again:

```
cat /proc/partitions
```

You should see output similar to the following:

```
major minor  #blocks  name

   8       16  488386584 sdb
   8       17  488385560 sdb1
   8        0  117220824 sda
   8        1  117219328 sda1
  11        0    1048575 sr0
  11        1    1048575 sr1
   8       96    4014080 sdg
   8       97    4013056 sdg1
```

By comparing this to the previous output, we can determine that the device node for the whole SD card is **`/dev/sdg`** and that **`/dev/sdg1`** is an existing partition on it. There may be zero, one, or more existing partitions. It doesn't matter how many there are; they will all be overwritten when the SD card is reformatted below.

Note: Double and triple check that you have the correct device node for the SD card, lest you accidentally format another drive!

Step 5: Format the SD card using a script provided in the ***MuntsOS*** source tree, with an appropriate variation of the following command:

```
sudo $HOME/muntsos/scripts/format <device node> <volume label>
```

where **`<device node>`** is the previously determined device node for the SD card, and **`<volume label>`** is an optional MS-DOS disk volume label (up to 11 characters). It is a good practice to use the short hostname of the target computer for the volume label.

For example, to format an SD card for **`snoopy.bogus.com`**:

```
sudo $HOME/muntsos/scripts/format /dev/sdg snoopy
```

The script partitions the SD card, creates a primary data partition (**`/dev/sdg1`**) of type FAT32, and initializes the file system on the data partition.

Step 6: Remove and reinsert the SD card to automount it ***or*** manually mount the new FAT32 file system with an appropriate variation of the following command:

```
sudo mount /dev/sdg1 /mnt
```

Step 7: Unpack the ***MuntsOS Thin Server*** **`.zip`** file to the newly mounted FAT32 file system. If you manually mounted the FAT32 file system, use a command similar to the following:

```
sudo unzip muntsos-RaspberryPi5.zip -d /mnt
```

If you let Linux automount the SD card, you will need to use a command similar to the following

```
unzip muntsos-RaspberryPi5.zip -d /media/fred/SNOOPY
```

The exact name of the mount point directory for the SD card data partition will depend on which Linux distribution you are using and how automounting is configured.

Step 8 (Optional): You can preconfigure wireless networking, if applicable and desired, by editing a text file called **`00-wlan-init`** on the SD card before you eject it:

```
sudo vi /media/fred/SNOOPY/autoexec.d/00-wlan-init
```

If you are not planning to use wireless networking, you can just delete **`00-wlan-init`**:

```
sudo rm /media/fred/SNOOPY/autoexec.d/00-wlan-init
```

Step 9: Unmount SD card data partition with **`umount`** or your favorite file browser.

Step 10: Insert the SD card into the target computer board and power on the target to boot ***MuntsOS Embedded Linux***.