

MuntsOS Embedded Linux

Application Note #1: Development Environment Setup for Debian Linux

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Introduction

This application note describes how to install the application software development environment for **MuntsOS Embedded Linux** onto a computer running 64-bit Debian Linux or equivalent (e.g. Ubuntu) **apt** based operating system.

This procedure (including the **Easy Setup Script** below) also works with the following environments:

- [Debian Linux on Windows](#) using [Windows Subsystem for Linux](#) on Windows 10.
- Debian Linux on ChromeOS using the [Crostini](#) Linux virtual machine.
- 32-Bit Raspberry Pi OS.
- 64-bit Debian Linux (even in a container on Raspberry Pi OS).

Installation Procedure

Step 1: Prepare the system for application software development with the following commands:

```
sudo apt install -y openssh-client build-essential git gnat gprbuild  
libncurses5 wget
```

Step 2: Add the [Munts Technologies Debian Package Repository](#) to your system, with the following commands:

```
wget http://repo.munts.com/Debian11/PublicKey.txt  
sudo apt-key add PublicKey.txt && rm PublicKey.txt  
wget http://repo.munts.com/Debian11/<ARCH>/munts-repo.deb  
sudo dpkg -i munts-repo.deb && rm munts-repo.deb  
sudo apt-get update
```

where **<ARCH>** is one of **amd64**, **arm64**, or **raspberrypi** (which is 32-bit ARMv6).

Step 3: Install **MuntsOS** cross-toolchain packages, with one or more of the following commands:

```
sudo apt-get install muntsos-dev-aarch64  
sudo apt-get install muntsos-dev-beaglebone  
sudo apt-get install muntsos-dev-raspberrypi1  
sudo apt-get install muntsos-dev-raspberrypi2
```

Each **MuntsOS** cross-toolchain package contains cross-compilers for the Ada, C, C++, Fortran, Free Pascal, and Go programming languages.

You can also install **all** of the **MuntsOS** cross-toolchain packages at one time with a single command:

```
sudo apt-get install muntsos-dev
```

Step 4: Clone the **MuntsOS Embedded Linux** source code tree with `git`:

```
git clone https://github.com/pmunts/muntsos.git
```

Easy Setup Script

The script available at <http://git.munts.com/muntsos/scripts/setup-debian> makes the setup procedure even easier:

```
wget http://git.munts.com/muntsos/scripts/setup-debian  
chmod 755 setup-debian && ./setup-debian && rm setup-debian
```