

# An introduction for making the virtual environment of MathLibre

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MathLibre is a live linux, it's bootable from DVD. But, you may think it's inconvenient for the slow speed of DVD. When you use virtual machine on your operating system(Windows or Mac OS) and putting the ISO image file on your harddisk, you can boot MathLibre computer environment with your operating system at the same time. You can use parsistent home directory and install your favorite Debian packages with this environment.

We use an open source virtual machine, VirtualBox<sup>1</sup>. VirtualBox is an application on your operating system, you can use your favorite operating systems on it. Now, it's developed by Oracle company. We prepare setting files for making virtual environment in *vbox* folder of MathLibre DVD.

## 1 Windows case

### 1.1 Installing VirtualBox

We introduce how to boot MathLibre on Windows.

1. Please check the file VirtualBox-4.3.6-91406-Win.exe in MathLibre DVD, or download the current version of VirtualBox and install with administration mode.
2. Please unzip the file *mathlibre2014-vm.zip* to your favorite place, for example in your *Documents*. We set the name of extracted folder *mathlibre2014-vm*.

### 1.2 Getting MathLibre ISO image file

You have two choices for getting MathLibre ISO image, "Download" and "Making from DVD".

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<sup>1</sup><http://www.virtualbox.org/>

### 1.2.1 Download

If you can use the Internet connection, please download the current ISO image from ftp site<sup>2</sup>. It has around 4GB, it takes some minutes or hours. When you finish downloading the ISO file, move it in the folder *mathlibre2014-vm* and rename this ISO file to *mathlibre2014.iso*.

### 1.2.2 Making from DVD

When you have MathLibre DVD, you do not need the Internet connection for getting ISO image. MathLibre DVD is including the Windows application, InfraRecorder<sup>3</sup>. We can make ISO image file with MathLibre DVD.

1. Unzip the file *ir053\_portable\_x64.zip* in MathLibre DVD.
2. Execute *infrarecorder.exe* in the folder *ir053\_portable\_x64*.
3. Select Read Disc.
4. You can find DVD drive as Source:.
5. Select ISO image file in *mathlibre2014-vm* for Image file:.
6. Push OK button, starting to copy DVD in your harddisk.
7. It takes about 15 minutes for making 4GB ISO image.

## 1.3 Booting virtual machiine

When you finish every procedures, execute VirtualBox with double clicking *mathlibre2014-vm.box* in *mathlibre2014-vm* folder. Push the boot button, you can enjoy mathematical software.

## 2 MacOS X case

### 2.1 How to install VirtualBox

We introduce how to boot MathLibre on Mac OS. You need to use the Internet connection.

1. Download the current Mac OS version from <http://www.virtualbox.org/> and install it.
2. Download *mathlibre2014-vm.zip* from <ftp://ftp.mathlibre.org/pub/mathlibre/> and extract it to your favorite place, for example home directory, we set this directory's name *mathlibre2014-vm*.

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<sup>2</sup><ftp://ftp.mathlibre.org/pub/mathlibre/>

<sup>3</sup><http://infrarecorder.org/>

## 2.2 Getting MathLibre DVD ISO image

Download the current ISO image from <ftp://ftp.mathlibre.org/pub/mathlibre/> and move it to the folder *mathlibre2014-vm*. You need to rename ISO file to *mathlibre2014.iso*.

## 2.3 Booting virtual machine

1. When you finish your every procedures, execute VirtualBox.
2. Select *mathlibre2014-vm* in *mathlibre2014-vm.vbox* with the menu of “Virtual Machine” > “Add”.
3. Pushing Boot button, you can enjoy mathematical software.

## 3 Making 共有フォルダの作成

1. VirtualBox の設定アイコンから「共有フォルダー」の<+>アイコンをクリックし、「フォルダーのパス」で共有したいフォルダーを指定, 表示される「フォルダー名」(この名前は変更可能です. 仮に *X* とします.) を控え, 「自動マウント」(および, もしあれば「永続化する」) にチェックを入れ, 「OK」をクリックしてください.
2. 仮想マシン上では, */media/sf\_X* にマウントされます (*X* は先に控えたフォルダー名). この共有フォルダーを仮に *Y* という名前でシンボリックリンク (ショートカットのようなもの) を作成します. 端末で以下の命令を入力してください.

```
ln -s /media/sf_X Y
```

3. ログアウト後, 再ログイン (ユーザ名: *user*, パスワード *live*) すれば

```
ls Y
```

のようにアクセスできます. もちろんファイルマネージャPCManFM でも利用可能です.