

RISC-V tools Environment Setup

Environment Setup

- In order to compile and run the program in RISC-V, some tools is essential.
 - RISC-V-tools
 - RISC-V-toolchain
 - Spike ...etc.
- TA has provided an virtual machine image. By using the image, there is no need to install the tools again.

Download Image

- Download URL:

<https://drive.google.com/file/d/1E5R6zKtg75qVub0G51HKRjSXric6TKaa/view?usp=sharing>

- The image size is about 5GB. Please make sure there is enough disk space.

Install VirtualBox

- URL: <https://www.virtualbox.org/>



VirtualBox

Welcome to VirtualBox.org!

VirtualBox is a powerful x86 and AMD64/Intel64 [virtualization](#) product for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL) version 2. See "[At](#)

Presently, VirtualBox runs on Windows, Linux, Macintosh, and Solaris hosts and supports a large number of [guest operating systems](#) including but not limited to Windows 7, Windows 8, Windows 10), DOS/Windows 3.x, Linux (2.4, 2.6, 3.x and 4.x), Solaris and OpenSolaris, OS/2, and OpenBSD.

VirtualBox is being actively developed with frequent releases and has an ever growing list of features, supported guest operating systems and platforms it dedicated company: everyone is encouraged to contribute while Oracle ensures the product always meets professional quality criteria.

Download
VirtualBox 6.1

Hot picks:

- Pre-built virtual machines for developers at [Oracle Tech Network](#)
- **Hyperbox** Open-source Virtual Infrastructure Manager [project site](#)
- **phpVirtualBox** AJAX web interface [project site](#)

About

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Import Image

- Launch VirtualBox Manager
- Choose File(檔案) >> Import Appliance(匯入應用裝置)



Import Image

- Choose the downloaded image file (ee3450.ova).

? ×


← 匯入虛擬應用裝置

匯入的應用裝置

請選擇要從中匯入應用裝置的來源。這可以是本機檔案系統，用於匯入 OVF 存檔，也可以是一個已知的雲端服務提供商，用於匯入雲端虛擬機器。

來源(S): 本機檔案系統 ▼

請選擇要匯入虛擬應用裝置的檔案。VirtualBox 目前支援匯入以 Open Virtualization Format (OVF) 儲存的應用裝置。若要繼續，選取以下要匯入的檔案。

檔案(F): C:\<Your_PATH>ee3450.ova 
















Import Image

- Press Import (匯入)

← 匯入虛擬應用裝置

應用裝置設定

這些是包含在應用裝置的虛擬機器和匯入 VirtualBox 機器的建議設定。您可以透過按兩下項目來變更顯示的許多內容，並使用以下的核取方塊停用其它內容。

| 虛擬系統 1 | |
|--|---|
|  名稱 | ee3450 1 |
|  客體作業系統類型 |  Ubuntu (64-bit) |
|  CPU | 1 |
|  RAM | 2048 MB |
|  DVD | <input checked="" type="checkbox"/> |
|  USB 控制器 | <input checked="" type="checkbox"/> |
|  音效卡 | <input checked="" type="checkbox"/> ICH AC97 |
|  網路卡 | <input checked="" type="checkbox"/> Intel PRO/1000 MT Desktop (82540EM) |
|  存放裝置控制器 (IDE) | PIIX4 |
|  存放裝置控制器 (IDE) | PIIX4 |
|  存放裝置控制器 (SATA) | AHCI |
|  虛擬磁碟映像 | ee3450-disk002.vmdk |
|  基礎資料夾 | C:\<Your VM path> |
|  主要群組 | / |

機器基礎資料夾(M): C:\<Your VM path>

MAC 位址原則(P): 只包含 NAT 網路卡 MAC 位址

額外選項: ☒ 匯入硬碟磁碟機作為 VDI(I)

應用裝置未簽署

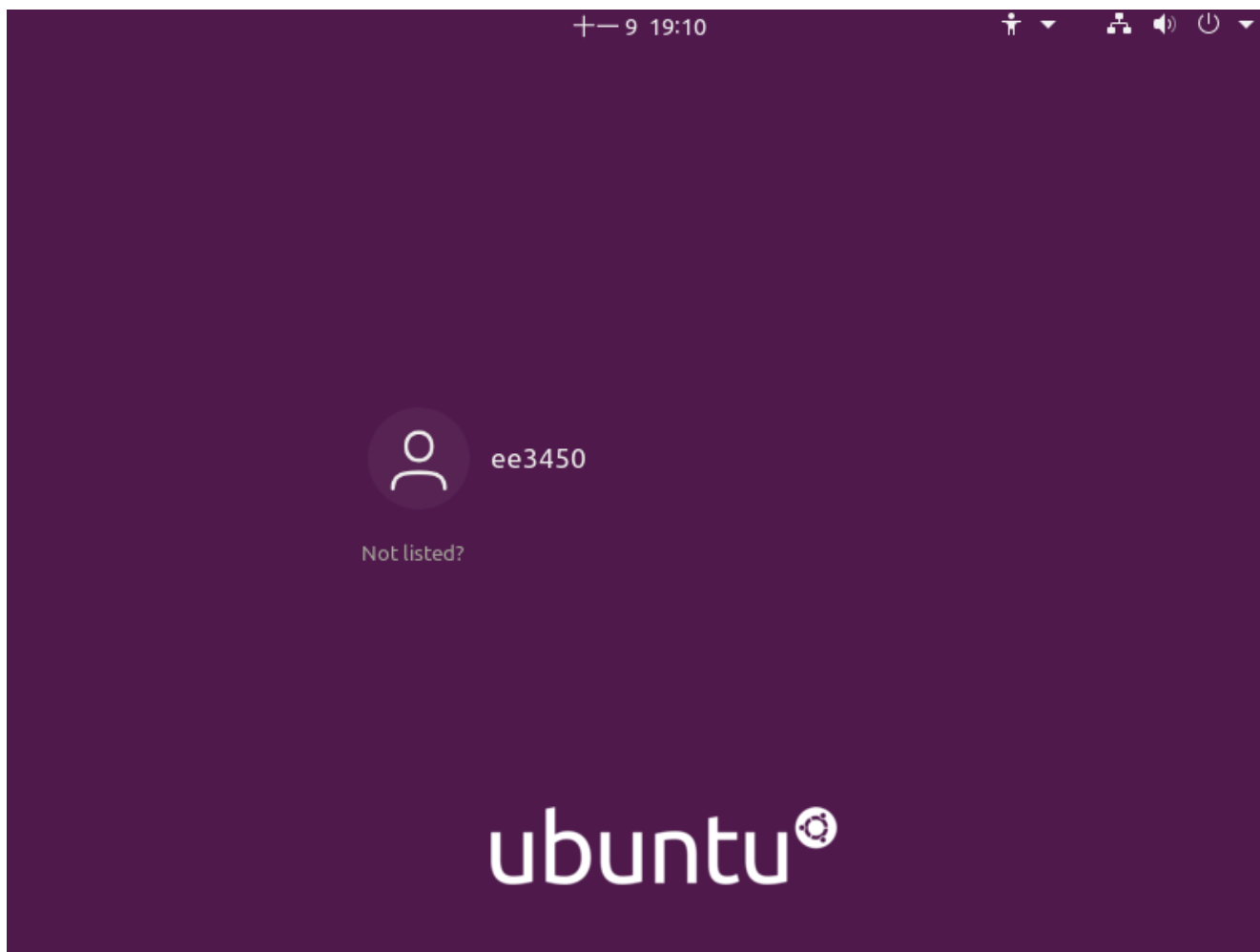
還原預設值 匯入 取消

Start Virtual Machine

- After the installing process is done, press Start (啟動).



Ubuntu Login



Download Template Code

- After the virtual machine is successfully built, login to the ubuntu system.

User Name: ee3450

Password: eenthu3450

- Open the terminal, and download the template code provided by TA.

```
$ git clone https://github.com/JerryWang0520/ee3450_pa1.git
```