

Proxmox VE 虛擬化管理平台

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安裝Proxmox VE

1. 選擇第一個「Install Proxmox VE」進入安裝。



2. 按下右下角的「I agree」。



END USER LICENSE AGREEMENT (EULA)

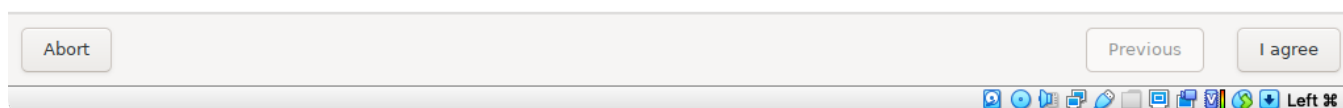
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3. 選擇要將Proxmox系統安裝在哪個磁碟步驟，先按下「Options」進行進階設定。

補充：假設現在環境中，有5個硬碟，你可以有以下幾種安裝方式：

- 直接選擇1個硬碟安裝Proxmox系統，其他4個硬碟做RAID，用來存放vm。
- 選擇1個硬碟做zfs (RAID 0)安裝Proxmox系統，其他4個硬碟做RAID，用來存放vm。
- 選擇2個硬碟做zfs (RAID 1)安裝Proxmox系統，其他3個硬碟做RAID，用來存放vm，Proxmox系統可以容許一個硬碟故障。
- 選擇2個硬碟做zfs (RAID 0)安裝Proxmox系統，其他3個硬碟做RAID，用來存放vm，但是非常不建議，因為一個硬碟故障，系統就會掛了。
- 把所有硬碟都拿來做RAID，然後安裝Proxmox系統，但不建議這樣，因為這樣Proxmox系統會跟vm放在一起，萬一vm的io過高，容易影響Proxmox系統的運作。

補充：如果機器本身有RAID卡，也可以使用機器本身RAID卡進行磁碟陣列後直接安裝，使用RAID做磁碟陣列後就千萬別再使用zfs去做RAID功能。原則大致如下：

- 主機板做RAID功能跟zfs的RAID功能不要同時使用(硬體RAID上在疊加一層軟體RAID會導致影響效能)。
- Proxmox系統跟vm盡量別放在同一個磁碟空間，避免vm的io過於忙碌，導致Proxmox系統不穩。
- 如果Proxmox系統有多台cluster架構，則不用做RAID mirror保護，因為Proxmox對硬碟寫入不高，只要做好設定備份，萬一系統硬碟故障，只要換上一個新硬碟重新安裝好Proxmox系統以及設定還原，修復時間算快速。

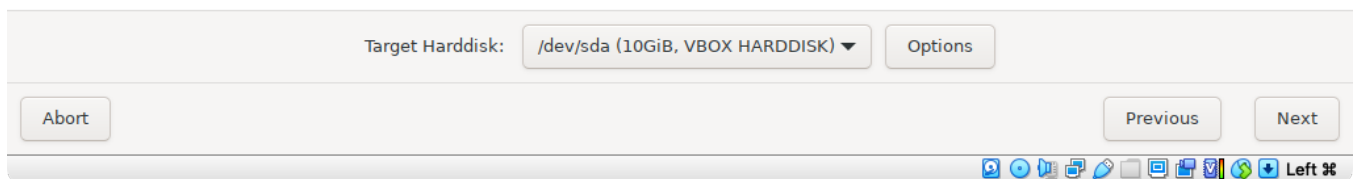


Proxmox Virtual Environment (PVE)

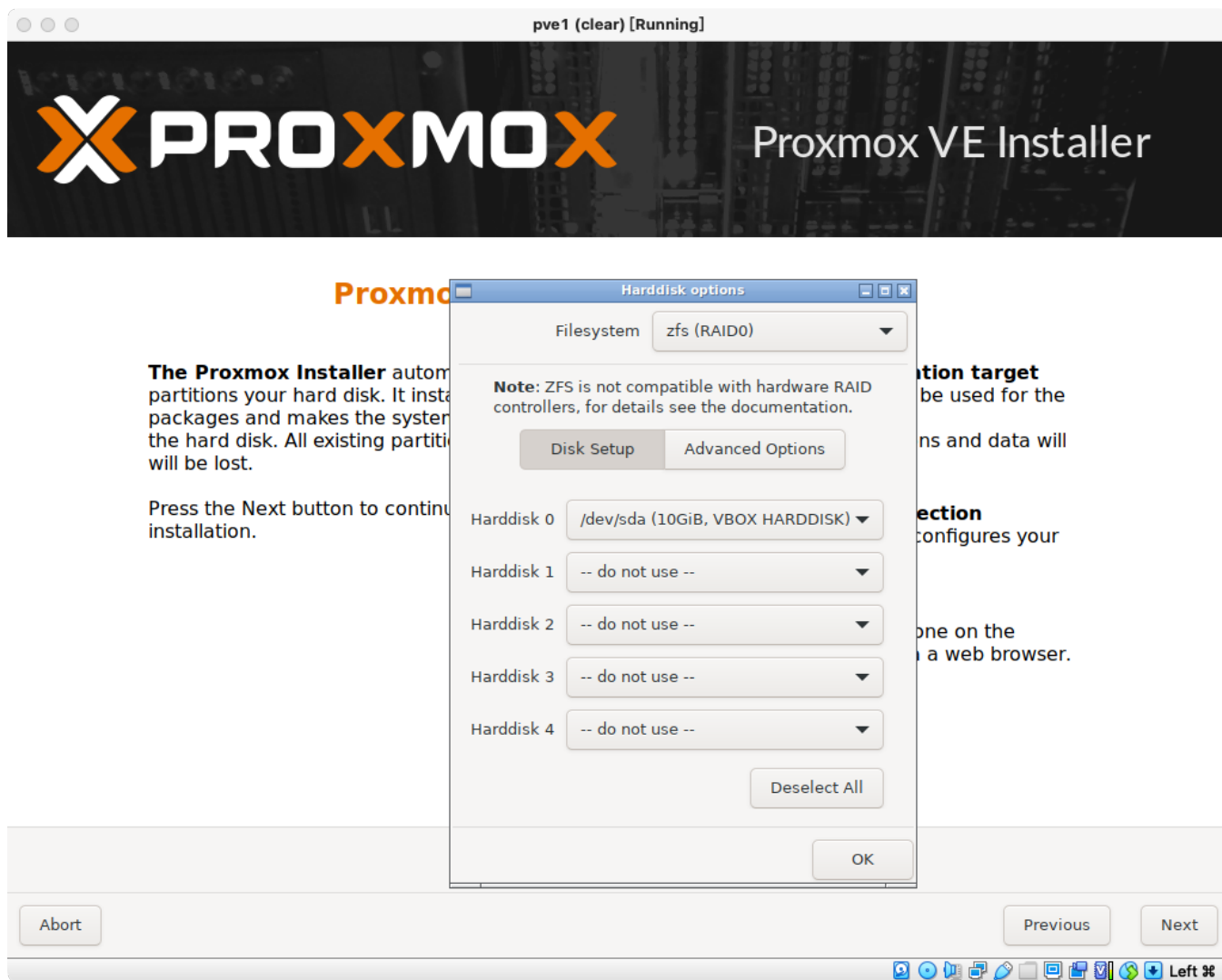
The Proxmox Installer automatically partitions your hard disk. It installs all required packages and makes the system bootable from the hard disk. All existing partitions and data will be lost.

Press the Next button to continue the installation.

- **Please verify the installation target**
The displayed hard disk will be used for the installation.
Warning: All existing partitions and data will be lost.
- **Automatic hardware detection**
The installer automatically configures your hardware.
- **Graphical user interface**
Final configuration will be done on the graphical user interface, via a web browser.



4. 進入硬碟選單，Filesystem請選擇**zfs (RAID 0)**，決定好檔案系統後，接下來要選擇將Proxmox安裝到哪個硬碟上，請直接在底下選擇第一個硬碟Harddisk 0，記得其他沒有要安裝Proxmox的硬碟，記得改成 **--do not use--**，避免該磁碟上的資料被覆寫。如下圖，然後按下「OK」。



5. 確定Target: 為剛剛建立的 **zfs (RAID 0)** 之後，就可以按下「Next」。

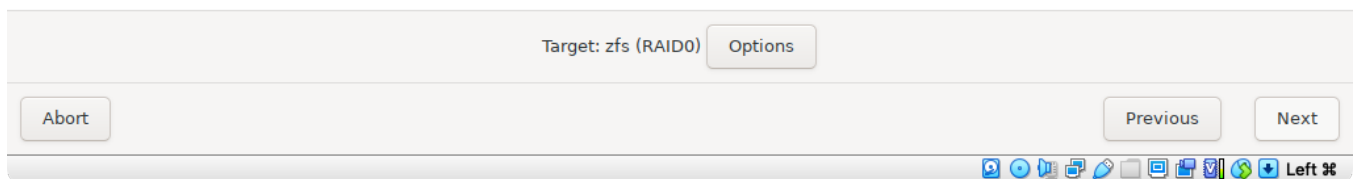


Proxmox Virtual Environment (PVE)

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6. Country請選擇 **Taiwan**，Time zone請選擇 **Asia/Taipei**，keyboard Layout則維持預設值，按下「Next」。



Location and Time Zone selection

The Proxmox Installer automatically makes location-based optimizations, like choosing the nearest mirror to download files from. Also make sure to select the correct time zone and keyboard layout.

Press the Next button to continue the installation.

- **Country:** The selected country is used to choose nearby mirror servers. This will speed up downloads and make updates more reliable.
- **Time Zone:** Automatically adjust daylight saving time.
- **Keyboard Layout:** Choose your keyboard layout.

The image shows the configuration screen of the Proxmox VE Installer. It has a light gray background. In the center, there are three settings: 'Country' with a text input field containing 'Taiwan', 'Time zone' with a dropdown menu showing 'Asia/Taipei', and 'Keyboard Layout' with a dropdown menu showing 'U.S. English'. At the bottom left is an 'Abort' button. At the bottom right are 'Previous' and 'Next' buttons. The bottom of the window features a macOS-style dock with various system icons and a 'Left' keyboard indicator.

7. 輸入管理者root的密碼，跟管理者信箱，按下「Next」。



Administration Password and Email Address

Proxmox Virtual Environment is a full featured, highly secure GNU/Linux system, based on Debian.

In this step, please provide the *root* password.

- **Password:** Please use a strong password. It should be at least 8 characters long, and contain a combination of letters, numbers, and symbols.
- **Email:** Enter a valid email address. Your Proxmox VE server will send important alert notifications to this email account (such as backup failures, high availability events, etc.).

Press the Next button to continue the installation.

The image shows the main form of the Proxmox VE Installer. It has a light gray background. There are three input fields: 'Password' with 8 black dots, 'Confirm' with 8 black dots, and 'Email' with the text 'abowspy@gmail.com'. Below the fields are three buttons: 'Abort' on the left, and 'Previous' and 'Next' on the right. At the bottom right, there is a row of system icons and a 'Left' button with a keyboard icon.

8. 選擇**管理介面**的網卡，設定完整Hostname(FQDN)、IP、DNS，按下「Next」。



Management Network Configuration

Please verify the displayed network configuration. You will need a valid network configuration to access the management interface after installing.

After you have finished, press the Next button. You will be shown a list of the options that you chose during the previous steps.

- **IP address (CIDR):** Set the main IP address and netmask for your server in CIDR notation.
- **Gateway:** IP address of your gateway or firewall.
- **DNS Server:** IP address of your DNS server.

The image shows a configuration form for the management network. It includes fields for 'Management Interface' (a dropdown menu showing 'enp0s3 - 08:00:27:2f:bf:5a (e1000)'), 'Hostname (FQDN)' (a text field with 'pve1.abowspy.com'), 'IP Address (CIDR)' (a text field with '192.168.77.102' and a netmask field with '24'), 'Gateway' (a text field with '192.168.77.253'), and 'DNS Server' (a text field with '8.8.8.8'). At the bottom left is an 'Abort' button, and at the bottom right are 'Previous' and 'Next' buttons. A system tray with various icons is visible at the very bottom.

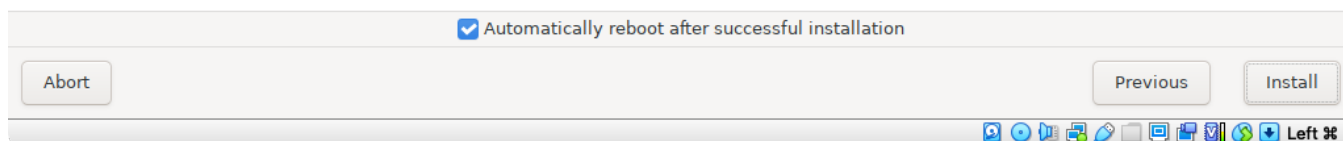
9. 確認資訊沒有問題後，按下「Install」。



Summary

Please confirm the displayed information. Once you press the **Install** button, the installer will begin to partition your drive(s) and extract the required files.

Option	Value
Filesystem:	zfs (RAID0)
Disk(s):	/dev/sda
Country:	Taiwan
Timezone:	Asia/Taipei
Keymap:	en-us
Email:	abowspy@gmail.com
Management Interface:	enp0s3
Hostname:	pve1
IP CIDR:	192.168.77.102/24
Gateway:	192.168.77.253
DNS:	8.8.8.8



10. 大概不用10分鐘，就會看到以下畫面，就表示安裝完成，會自動重開，如果沒有的話，請按下「reboot」。
(記得順便把安裝光碟/隨身碟退出)



Installation successful!

Proxmox VE is now installed and ready to use.

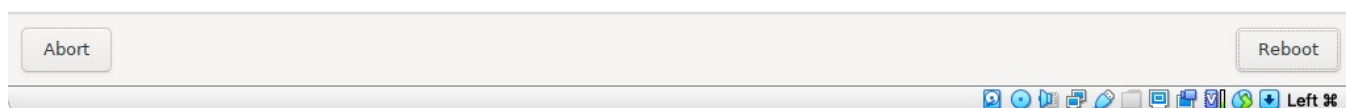
- **Next steps**

Reboot and point your web browser to the selected IP address on port 8006:

`https://192.168.77.102:8006`

Also visit www.proxmox.com for more information.

Automatic reboot scheduled in 0 seconds.



10. 安裝好會自行重開機，如果看到以下畫面，就代表安裝完成。預設管理帳號為root，密碼為安裝時所設定的密碼。接下來我們就可以利用網頁方式登入 <https://ip:8006/>，進行管理Proxmox VE。

Welcome to the Proxmox Virtual Environment. Please use your web browser to
configure this server - connect to:

https://192.168.77.102:8006/

pve1 login:

登入Proxmox & 基本介紹

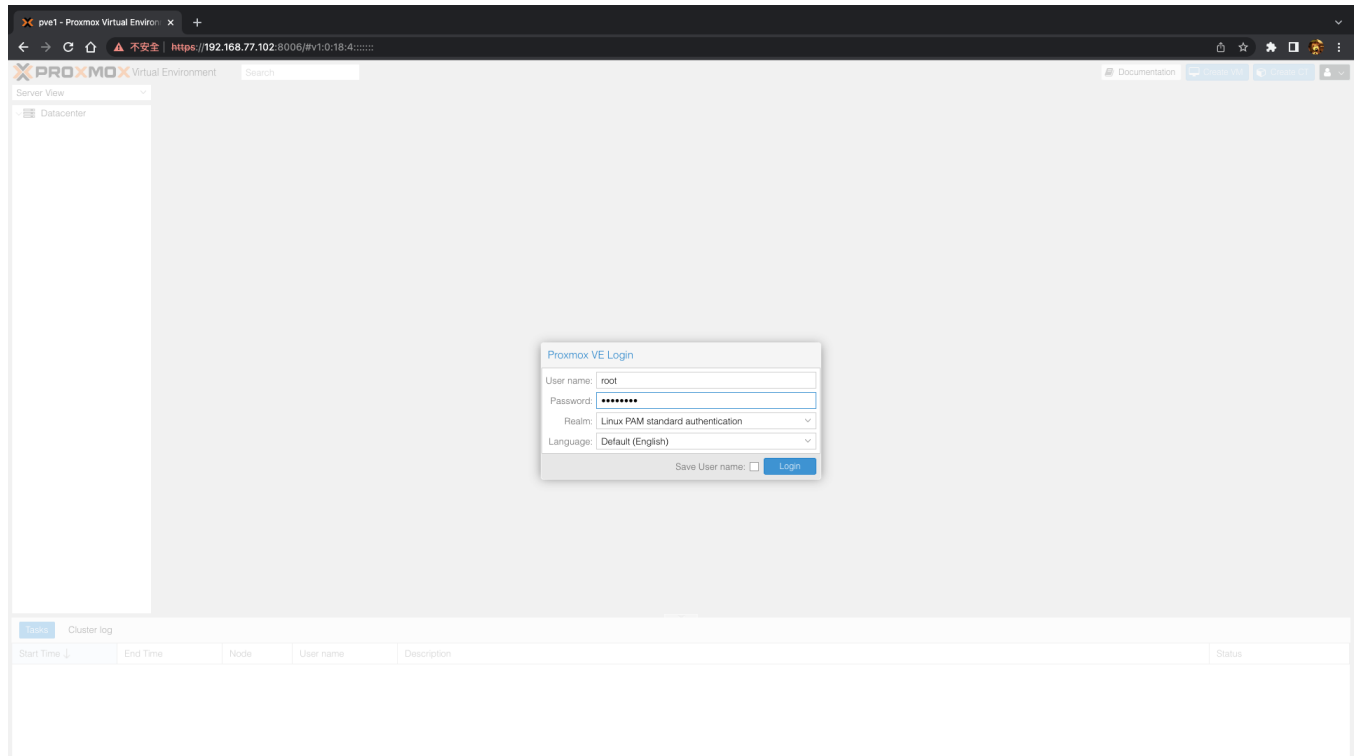
1. 安裝好Proxmox之後，就可以用瀏覽器登入 https://<proxmox_ip>:8006

User name：預設為root

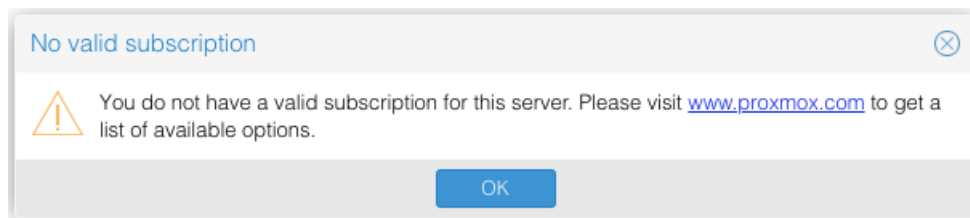
Password：當初安裝時所指定的密碼

Realm：維持Linux PAM standard authentication

Language：預設為英文介面，可依照個人喜好更改語言設定。



2. 登入如果出現以下的訊息，不影響正常使用，可以直接按下「OK」跳過



3. 登入成功後，就會出現以下畫面。

pxve1 - Proxmox Virtual Environ...

← → ↻ 🚫 不安全 | https://192.168.77.102:8006/#v1:0:18:4:.....

🏠 ☆ ⚙️ 🖨️ 👤

PROXMOX Virtual Environment 7.1-7 🔍 Search 1 📄 Documentation 🏠 Create VM 🔄 Create CT 👤 root@pam

Server View

Datacenter

pxve1

🔍 Search

Summary

Notes

Cluster

Ceph

Options

Storage

Backup

Replication

Permissions

Users

API Tokens

Two Factor

Groups

Pools

Roles

Realms

HA

ACME

Firewall

Metric Server

Support

Type ↑	Description	Disk usage...	Memory us...	CPU usage	Uptime	Host CPU ...	Host Mem...
node	pxve1	14.0 %	30.8 %	0.6% of 2 ...	03:11:50		
storage	local (pxve1)	14.0 %		-			
storage	local-zfs (pxve1)	0.0 %		-			

Tasks Cluster log

Start Time ↓	End Time	Node	User name	Description	Status
Mar 28 11:54:28	Mar 28 11:54:32	pxve1	root@pam	Update package database	Error: command 'apt-get up...
Mar 28 11:23:48	Mar 28 11:23:48	pxve1	root@pam	Start all VMs and Containers	OK
Mar 09 14:24:51	Mar 09 14:24:51	pxve1	root@pam	Start all VMs and Containers	OK

- 1 系統工具列：快速搜尋欄位、說明文件、建立客體機、帳戶設定。
- 2 資源檢視區：顯示管理平台中的各種資源，包含節點(實體機)、客體機(虛擬機&容器)、儲存(本地或外部儲存)、集區(依據需求自訂的分區，類似群組的概念)。
- 3

【茶包射手】修復 Proxmox (PVE) “can't lock file '/var/lock/qemu-server/lock-xxx.conf'”

修復 Proxmox (PVE) “can't lock file '/var/lock/qemu-server/lock-xxx.conf' – got timeout”

```
# 刪除相關設定檔，回到管理介面即可  
# cd /var/lock/qemu-server  
# rm -rf lock-111.conf
```