

VMware

This is a generic guide to installing CUBE OS on VMware, the host can be an old PC, or a MCU.

1. Preparation:

1 Download the CUBE OS image

Visit this [repo ↗](#) to download the latest `.vmdk` image. Please extract the image after downloading.

2 Install VMware

Download and install a virtual machine manager, with [VMware Workstation ↗](#) being recommended.


- Have other virtual machine managers? The following steps can theoretically be used as well.
- Unfamiliar with virtual machines and owning a Raspberry Pi? You can choose to install CUBE OS on a [Raspberry Pi](#).
- If none of these options are viable, you can purchase an iHost with built-in CUBE OS from the SONOFF official website or platforms like Amazon.

3 Zigbee Adapter (Optional)


If you need to add Zigbee devices, prepare a Zigbee Dongle. Tested Zigbee Dongles include:

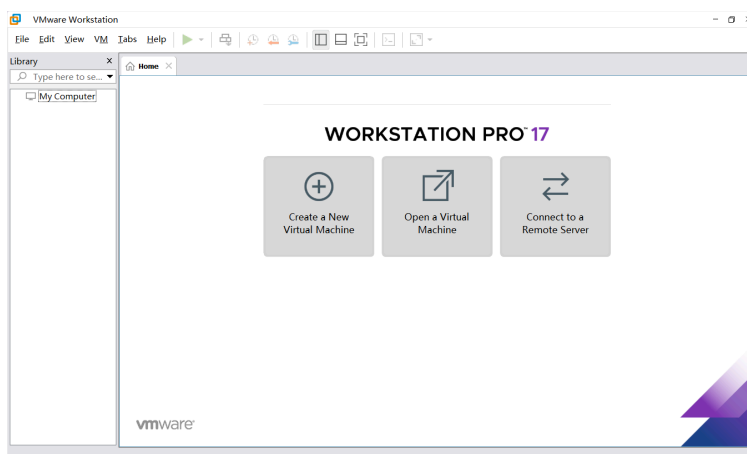
- SONOFF ZBDongle-E(Recommended)
- Easyiot ZB-GW04
- SMLIGHT SLZB-07
- SMLIGHT SLZB-06M

 Visit [How to Flash Dongle Firmware](#) for more details.

 For more information on Zigbee configurations and compatibility, please refer to this [guide](#).

2. Create a Virtual Machine

- 1 Launch VMware, Select "Create a New Virtual Machine" .



2

Choose **Custom**, click **Next**. Hardware-**Workstation 17.5 or later**, click **Next**.

The image displays two sequential screenshots of the VMware Workstation 17 New Virtual Machine Wizard.

First Screenshot: Welcome to the New Virtual Machine Wizard

The window title is "New Virtual Machine Wizard". The VMware logo and "WORKSTATION PRO™ 17" are on the left. The main heading is "Welcome to the New Virtual Machine Wizard". Below it, the question "What type of configuration do you want?" is asked. There are two radio button options:

- ☐ Typical (recommended)
Create a Workstation 17.5 or later virtual machine in a few easy steps.
- ☒ Custom (advanced)
Create a virtual machine with advanced options, such as a SCSI controller type, virtual disk type and compatibility with older VMware products.

At the bottom, there are buttons for "Help", "< Back", "Next >" (highlighted with a blue border), and "Cancel".

Second Screenshot: Choose the Virtual Machine Hardware Compatibility

The window title is "New Virtual Machine Wizard". The heading is "Choose the Virtual Machine Hardware Compatibility". Below it, the question "Which hardware features are needed for this virtual machine?" is asked.

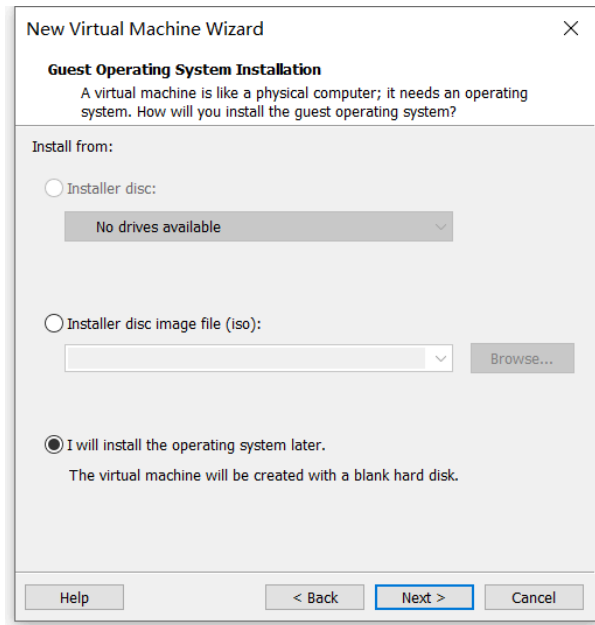
The "Virtual machine hardware compatibility" section contains:

- A "Hardware" dropdown menu set to "Workstation 17.5 or later".
- A "Compatible" checkbox labeled "ESX Server" which is checked.
- Two list boxes: "Compatible products" (containing "Fusion 13.5 or later" and "Workstation 17.5 or later") and "Limitations" (containing "128 GB memory", "32 processors", "10 network adapters", "8 TB disk size", and "8 GB shared graphics memory").

At the bottom, there are buttons for "Help", "< Back", "Next >" (highlighted with a blue border), and "Cancel".

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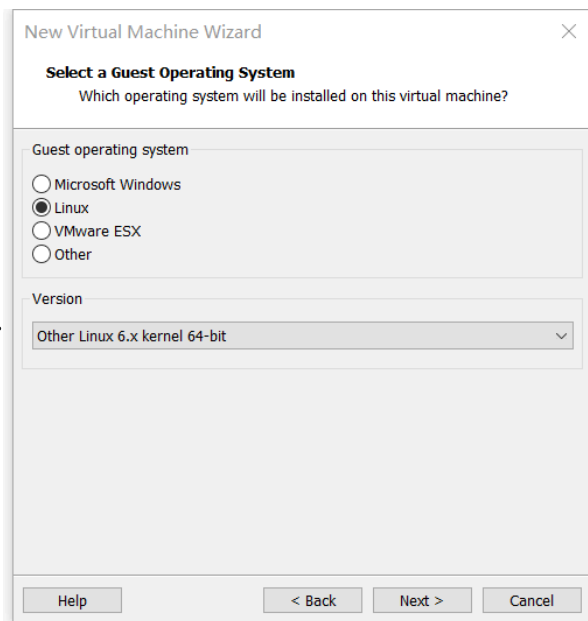
Choose **I will install the operating system later**, click **Next**.



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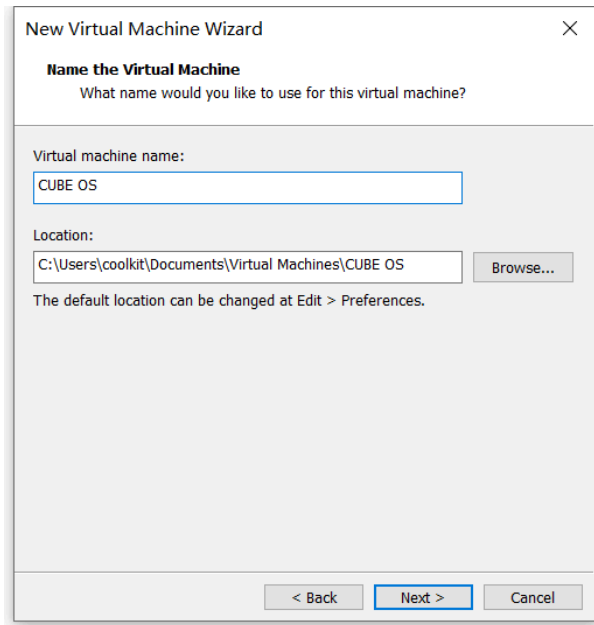
Select **Linux > Other Linux 6.x kernel (64-bit)** as the guest operating system

type.



5

Name the VM as **CUBE OS** and choose a storage location.



The screenshot shows a 'New Virtual Machine Wizard' dialog box with a close button (X) in the top right corner. The title bar reads 'New Virtual Machine Wizard'. The main heading is 'Name the Virtual Machine' with a subtitle 'What name would you like to use for this virtual machine?'. Below this, there are two input fields: 'Virtual machine name:' containing 'CUBE OS' and 'Location:' containing 'C:\Users\coolkit\Documents\Virtual Machines\CUBE OS'. To the right of the 'Location:' field is a 'Browse...' button. Below the input fields, a note states 'The default location can be changed at Edit > Preferences.' At the bottom of the dialog are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

New Virtual Machine Wizard

Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:
CUBE OS

Location:
C:\Users\coolkit\Documents\Virtual Machines\CUBE OS Browse...

The default location can be changed at Edit > Preferences.

< Back **Next >** Cancel

- **Processors:** 2 cores
- **Memory:** 4096MB (4GB) or more

The image displays two screenshots of the 'New Virtual Machine Wizard' dialog box.

Top Screenshot: Processor Configuration

Processor Configuration
Specify the number of processors for this virtual machine.

Processors

Number of processors: 2

Number of cores per processor: 1

Total processor cores: 2

Buttons: Help, < Back, Next >, Cancel

Bottom Screenshot: Memory for the Virtual Machine

Memory for the Virtual Machine
How much memory would you like to use for this virtual machine?

Specify the amount of memory allocated to this virtual machine. The memory size must be a multiple of 4 MB.

Memory for this virtual machine: 4096 MB

Maximum recommended memory: 13.0 GB

Recommended memory: 768 MB

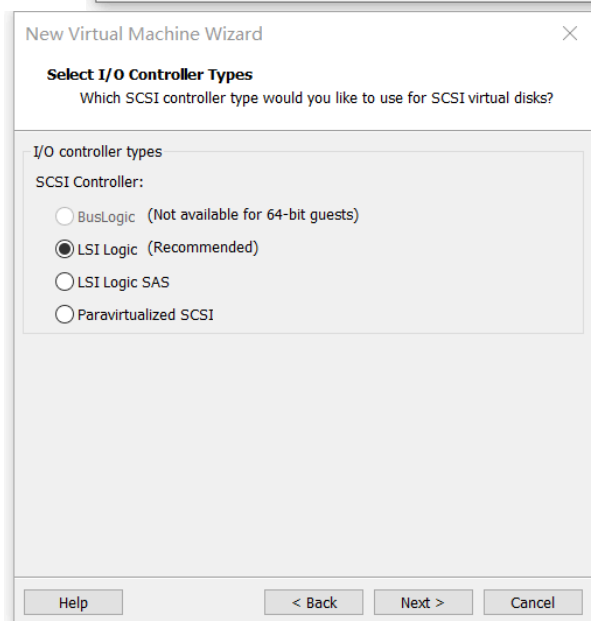
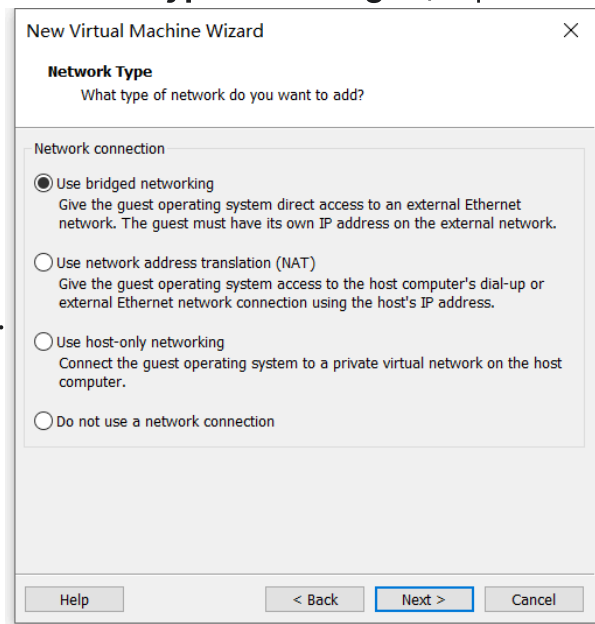
Guest OS recommended minimum: 32 MB

Buttons: Help, < Back, Next >, Cancel

Network / I/O Controller Types:

- Set **Network Adapter** to **Bridged** mode (important for LAN access and discovery).
- Set **Controller Type** to **LSI Logic** (required for compatibility with the virtual

disk).



The image displays two sequential screenshots of the 'New Virtual Machine Wizard' dialog box, specifically the 'Select a Disk Type' and 'Select a Disk' steps.

Top Screenshot: Select a Disk Type

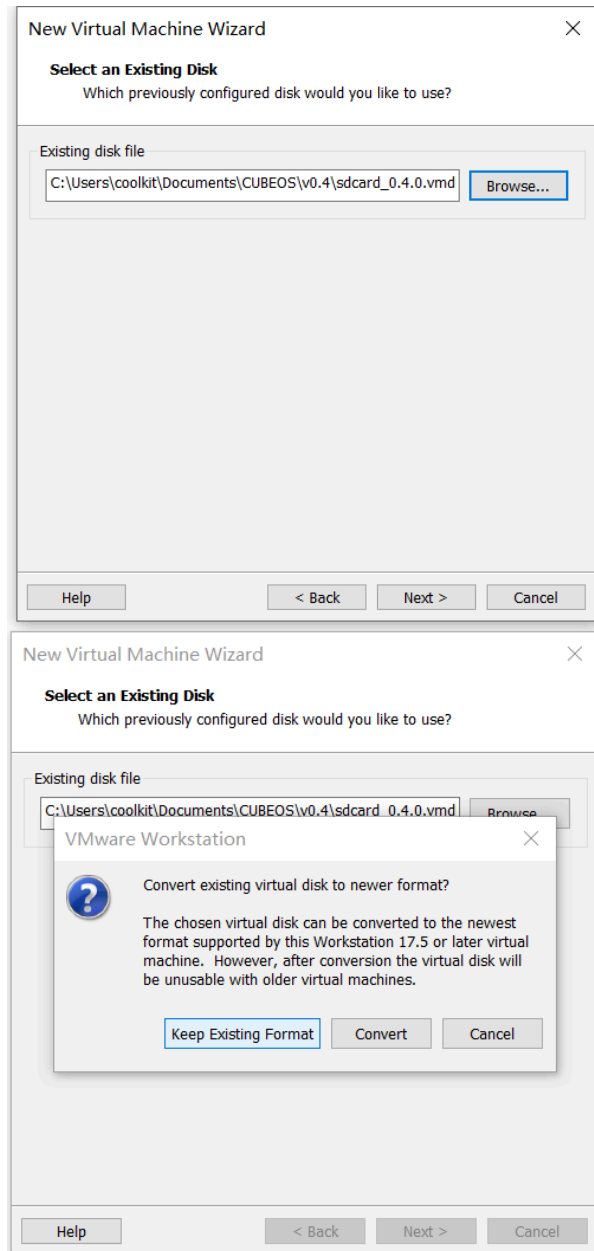
The dialog box is titled 'New Virtual Machine Wizard' with a close button (X) in the top right corner. The main heading is 'Select a Disk Type' with the subtitle 'What kind of disk do you want to create?'. Below this, the 'Virtual disk type' section contains four radio button options: IDE, SCSI (Recommended), SATA, and NVMe. The 'SCSI (Recommended)' option is selected. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

Bottom Screenshot: Select a Disk

The dialog box is titled 'New Virtual Machine Wizard' with a close button (X) in the top right corner. The main heading is 'Select a Disk' with the subtitle 'Which disk do you want to use?'. Below this, the 'Disk' section contains three radio button options: 'Create a new virtual disk', 'Use an existing virtual disk', and 'Use a physical disk (for advanced users)'. The 'Use an existing virtual disk' option is selected. Descriptive text is provided for each option: 'Create a new virtual disk' explains that a virtual disk is composed of one or more files on the host file system; 'Use an existing virtual disk' instructs to choose this option to reuse a previously configured disk; and 'Use a physical disk (for advanced users)' instructs to choose this option to give the virtual machine direct access to a local hard disk, requiring administrator privileges. At the bottom, there are four buttons: 'Help', '< Back', 'Next >' (highlighted with a blue border), and 'Cancel'.

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Click **Browse**, then select the CUBE OS .vmdk and **Keep Existing Format**.

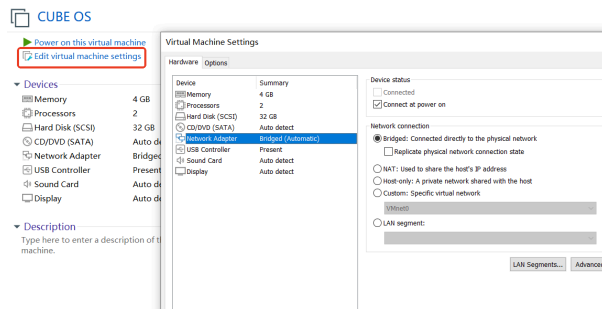


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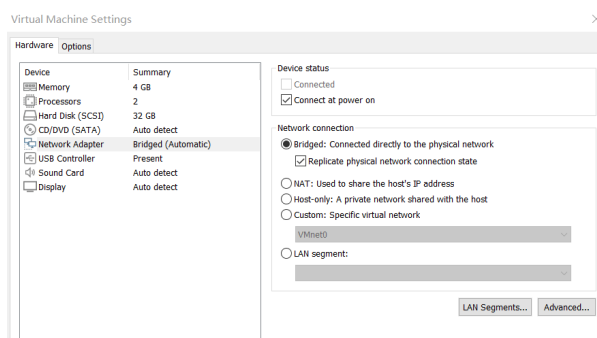
Click "Finish" to create the virtual machine.

3. Configure the Virtual Machine

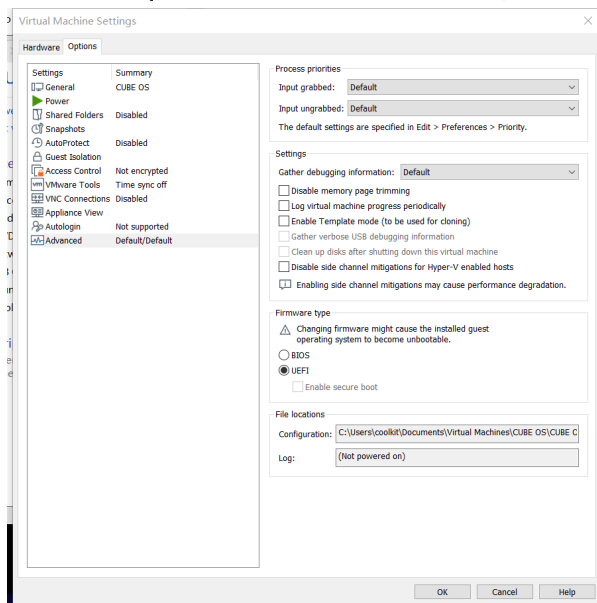
- 1 Select the created virtual machine and click the “Settings”  button.



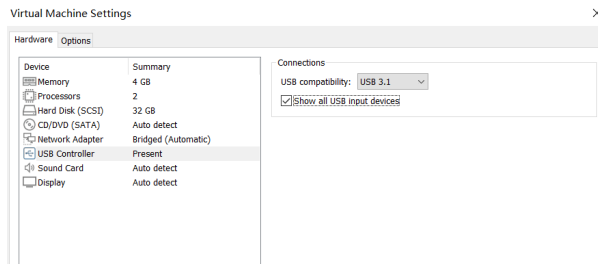
- 2 Under the “Network” tab, confirm the network connection as “**Bridged**” and select **Replicate physical network connection state**.



- 3 Under “Options”-“Advanced” tab, set **Firmware type** to **UEFI**.



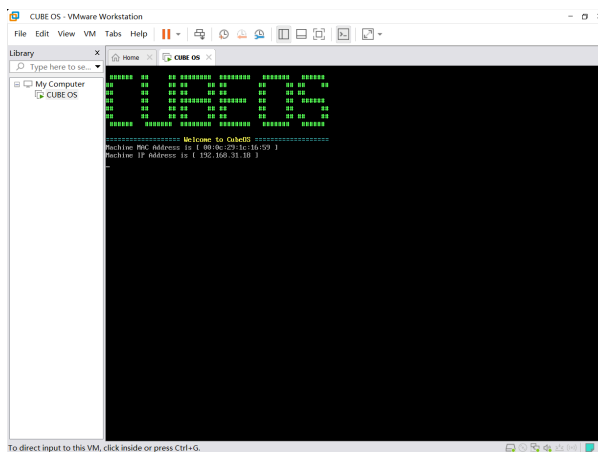
- 4 **Optional:** If using a Zigbee USB dongle, ensure **USB Controller** is added. Under **USB Controller**, enable **Show all USB input devices**.



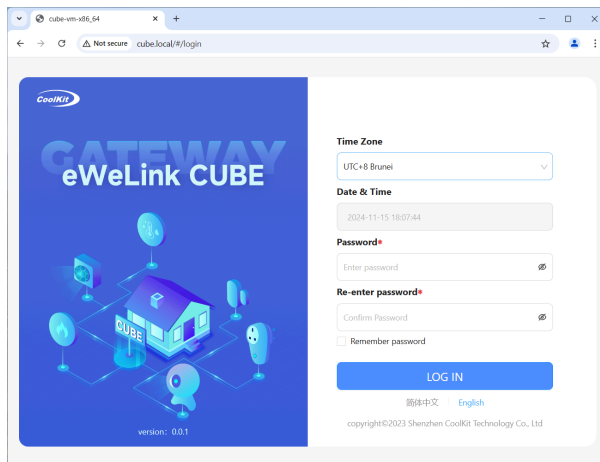
- 5 Click "OK" to save the configuration.

4. Boot CUBE OS

- 1 Start the virtual machine.
- 2 Wait a few moments for CUBE OS to initialize. Monitor the boot screen until the boot is complete.



- 3 Once completed, you will see the CUBE OS' IP displayed on the screen. Use this IP address or cube.local to access the CUBE OS Web management page.



- 4 Upon successful access, a short ID can be viewed on the settings page. Subsequently, access the CUBE OS Web management page using `cube-{short id}.local`, which is useful for differentiating multiple CUBE OS instances on the same local network.

