

Kneron Inc

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Detailed History of Changes:

Version	Date	Author	Description of Changes
0.1	5/22/2020	YC	Initial Draft
0.2	5/27/2020	YC	Add OpenCV example
0.3	6/6/2020	YC	Add introduction about all examples
0.4	6/9/2020	YC	Update executable and example code according to refactored file structure of host lib
0.5	6/16/2020	YC	Update device name, building method, and examples
0.6	6/10/2020	YC	Removed chapter 2 and provide link for Kneron Document Center

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1. Prepare the Test Environment

This chapter describes the preparation of test environment.

1.1 Set of Files

The folder of OVF file includes 3 files. Copy the files into Windows or Mac.

File Name	Description	Size
Ubuntu 64-bit.mf	Manifest file	191 Bytes
Ubuntu 64-bit.ovf	Open virtualization format file	7.45 KB
Ubuntu_64-bit-disk1.vmdk	Virtual machine disk image file	7.92 GB

1.2 VMware Software Installation

Different VMware software are used on Windows and Mac.

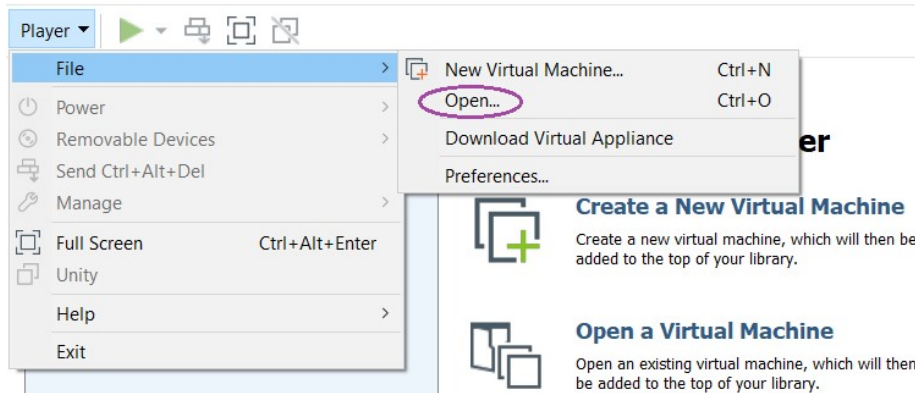
Software Name	Version	Platform	Download Link
VMware Workstation Player	15.5	Windows	https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html
VMware Workstation Fusion	11.5	Mac	https://www.vmware.com/products/fusion/fusion-evaluation.html

1.3 Import .ovf File in VMware Workstation

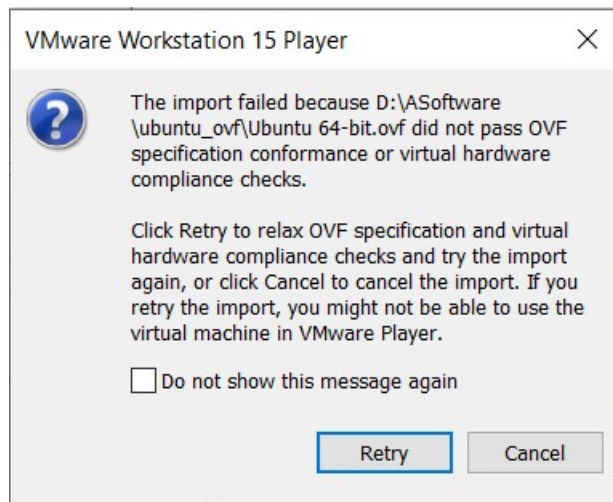
1.3.1 VMware Workstation Player in Windows

(1) Select Player -> File -> Open to open the .ovf file on hard disk.

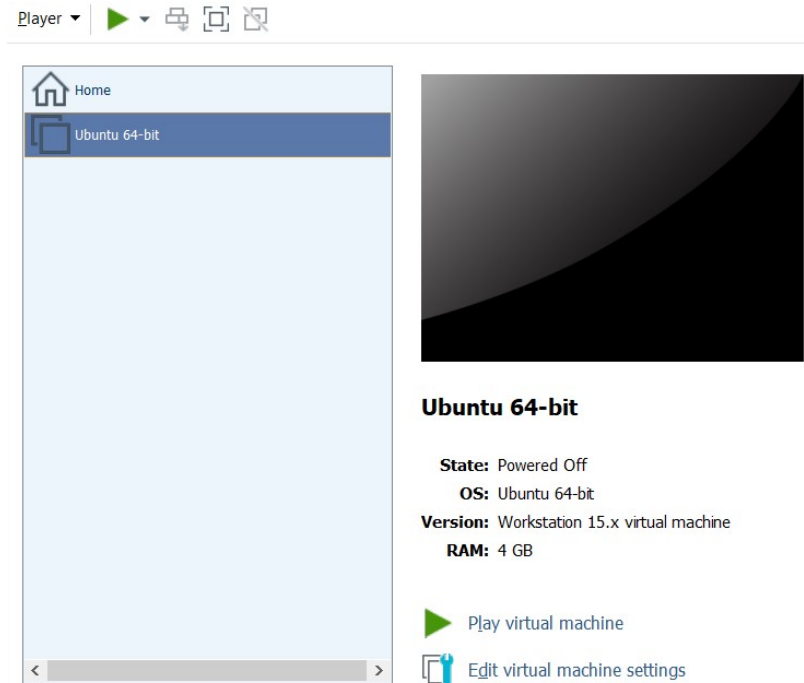
Before importing ovf file, make sure there are more than free space of 18 GB in Windows.



(2) Click “Retry” if VM Player reports importing failure and wait for 10~20 minutes



(3) A new virtual machine is installed and accessible in player



(4) Click “Play virtual machine” for the selected virtual machine, and wait virtual machine power on

Currently, no password is needed for logging in, sudo, etc. If need to provide password, the password of virtual Ubuntu is: Kneron

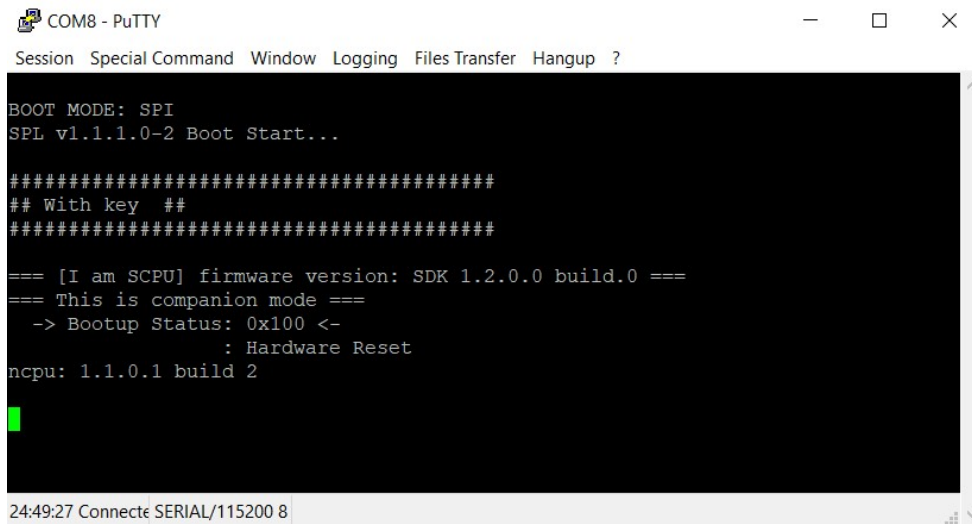
(5) Power on Kneron device and boot it on

If the code in flash is not for companion mode, need re-flash the code for companion mode.

If the boot mode is manual, press power key and select option 1 in serial software, such as putty, to boot the Kneron device on.

If the boot mode is SPI, press power key to boot the Kneron device on.

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```
COM8 - PuTTY
Session Special Command Window Logging Files Transfer Hangup ?

BOOT MODE: SPI
SPL v1.1.1.0-2 Boot Start...

#####
## With key ##
#####

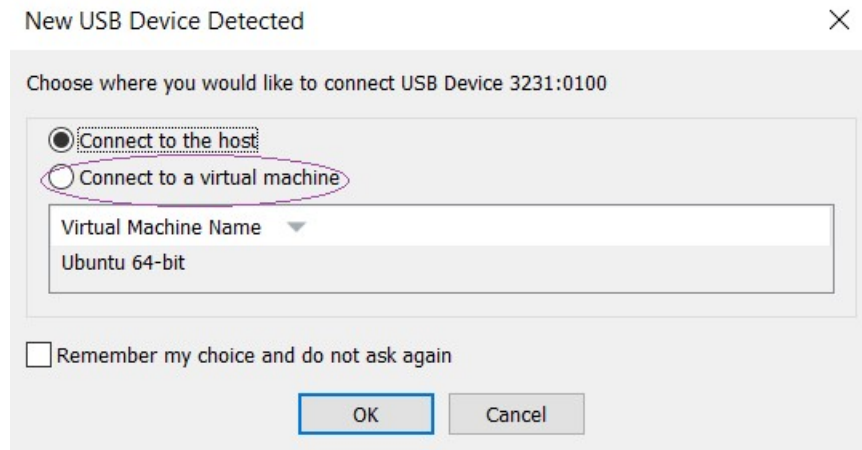
=== [I am SCPU] firmware version: SDK 1.2.0.0 build.0 ===
=== This is companion mode ===
-> Bootup Status: 0x100 <-
      : Hardware Reset
ncpu: 1.1.0.1 build 2

24:49:27 Connect SERIAL/115200 8
```

(6) Connect the Kneron USB device to virtual machine in VM Player

A. Connect USB device to the PC

B. Connect USB device to VM through pop-up window in VM Player



Select “Connect to a virtual machine”, then USB device is connect to virtual machine.

C. Or connect Kneron USB device to VM through menu of WM Player: Player -> Removable Devices -> Kneron USB device

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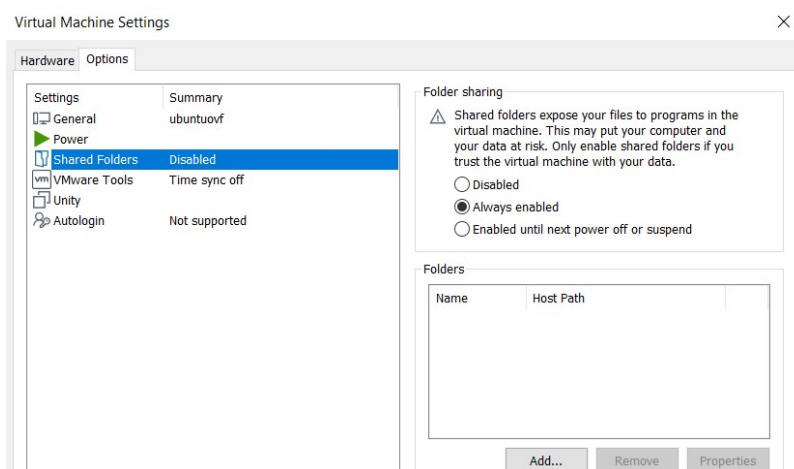


(7) Check Kneron USB device in virtual machine

Execute “lsusb” in terminal of virtual machine to check whether Kneron USB device has been connected into virtual machine

```
derrick@ubuntu: ~  
File Edit View Search Terminal Help  
derrick@ubuntu:~$ lsusb  
Bus 001 Device 002: ID 3231:0100  
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub  
Bus 002 Device 003: ID 0e0f:0002 VMware, Inc. Virtual USB Hub  
Bus 002 Device 002: ID 0e0f:0003 VMware, Inc. Virtual Mouse  
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
```

(8) Share new folder in Windows to virtual machine: Player -> Manage -> Virtual Machine Settings -> Options -> Shared Folders



A. If the shared folder could not be accessed in virtual machine after reboot, re-disable and re-enable the shared folder to get access to it.

B. The folders of SDK release with host lib in Windows is shared into **/mnt/hgfs** of virtual machine

1.3.2 VMware Workstation Fusion in Mac

To be added.

2. Run Examples of Host Lib in Virtual Machine

Tutorial is provided in Kneron Document Center: <http://doc.kneron.com/docs/>