STM32MP1 Workshop

Getting Started With Virtual Machine

Preferred configuration

Important prerequisites

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VMware pre-built image for workshop

- A pre-built VMware image will be provided to attendees by ST in separate email with download link.

- Prebuild image contains
  - Ubuntu 16.04 configured for STM32MP1 build, STM32MP1 starter and developer packages and tools

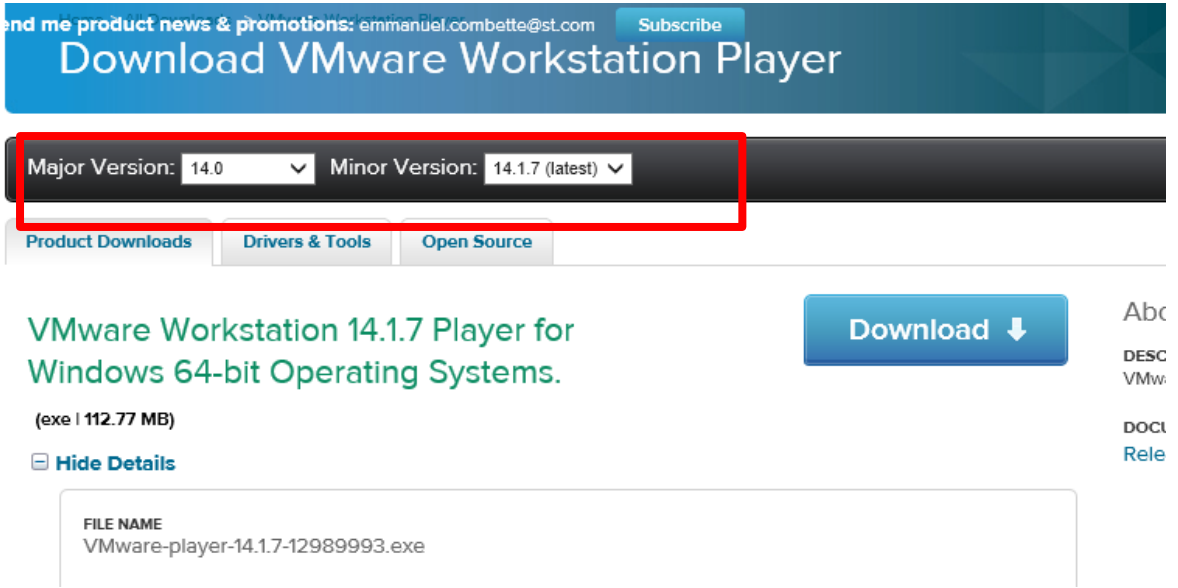
- VMware image login details

  login name: *osboxes.org*

  password: *osboxes.org*

PC Configuration

- Windows PC configuration
  - **BIOS virtualization feature enabled**
  - RAM 8GB (recommended), HDD 20GB
  - VMware workstation Player 14.1.7
    (demo, no need of license key to install)
  - 3 USB ports or powered USB Hub



- Use version **14.1.7** as ST has prepared the workshop with this version.
  https://my.vmware.com/web/vmware/free#desktop_end_user_computing/vmware_workstation_player/14_0

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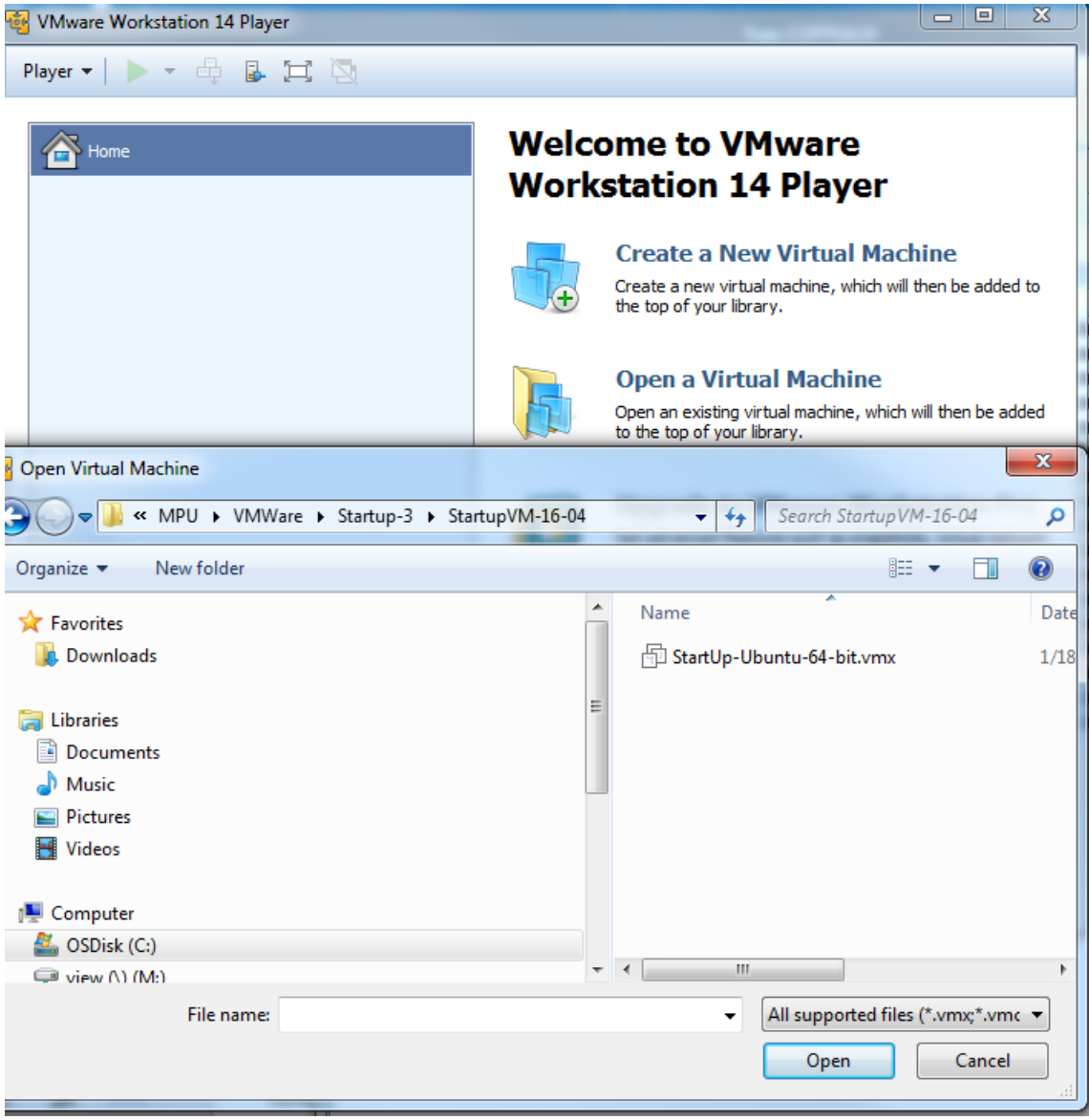
Add to VM player the Pre-built VM image

1. Open a Virtual Machine image you have received from ST.

2. Select the .vmx file from folder:

StartupVM-MassMarket-STM32MP1-Workshop\StartupVM-4\StartupVM-16-04\StartUp-Ubuntu-64-bit.vmx



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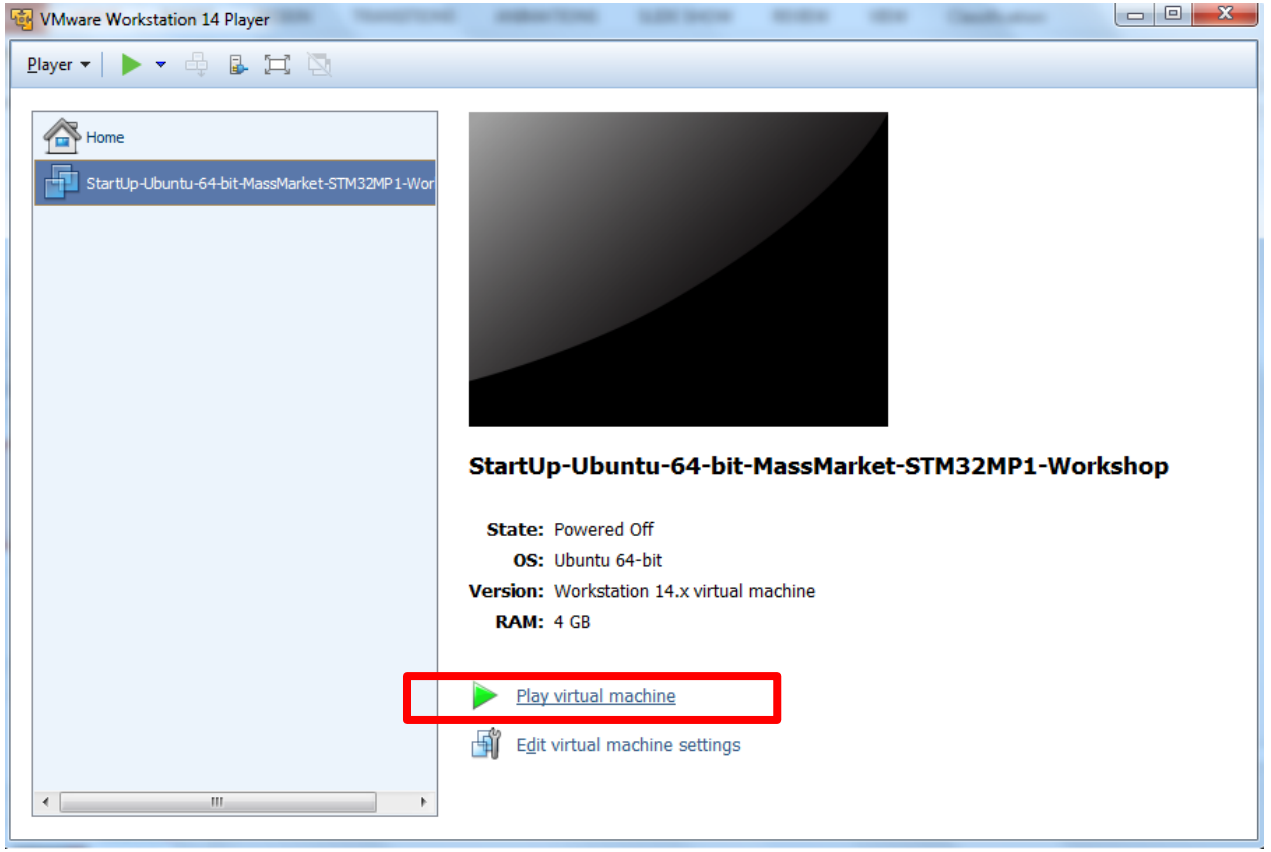
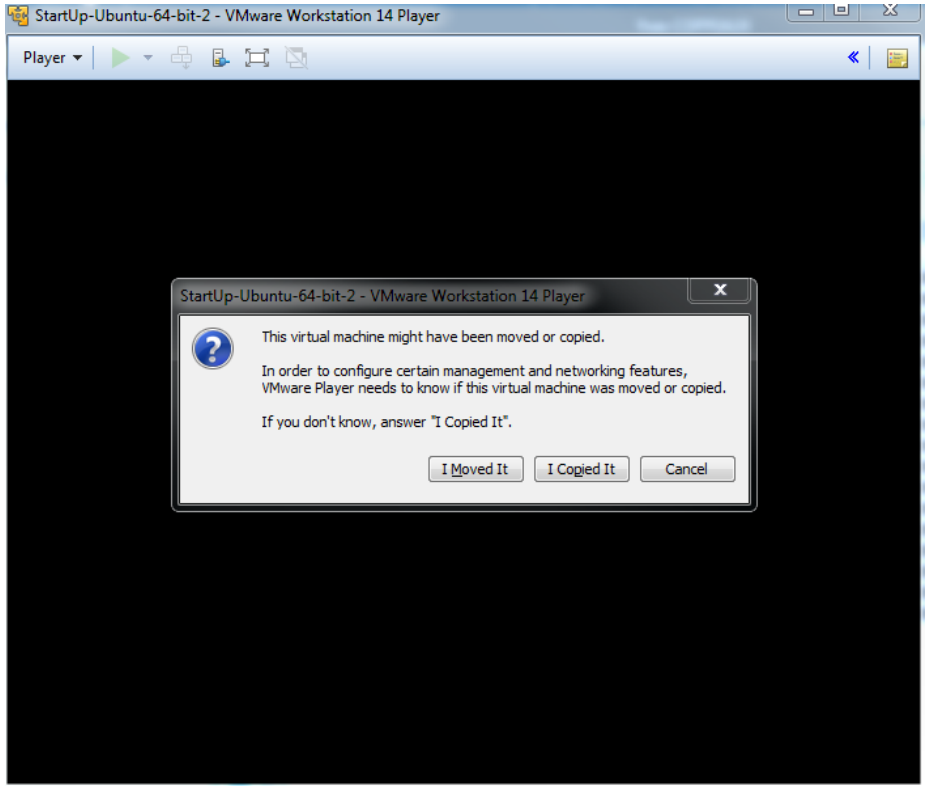
Start the pre-built VM image

3. Start VM by clicking on *“Play virtual machine”*



Add to VM player the Pre-built VM image

When starting the existing virtual machine for first time you may need reply to below question with option "*I copied It*".



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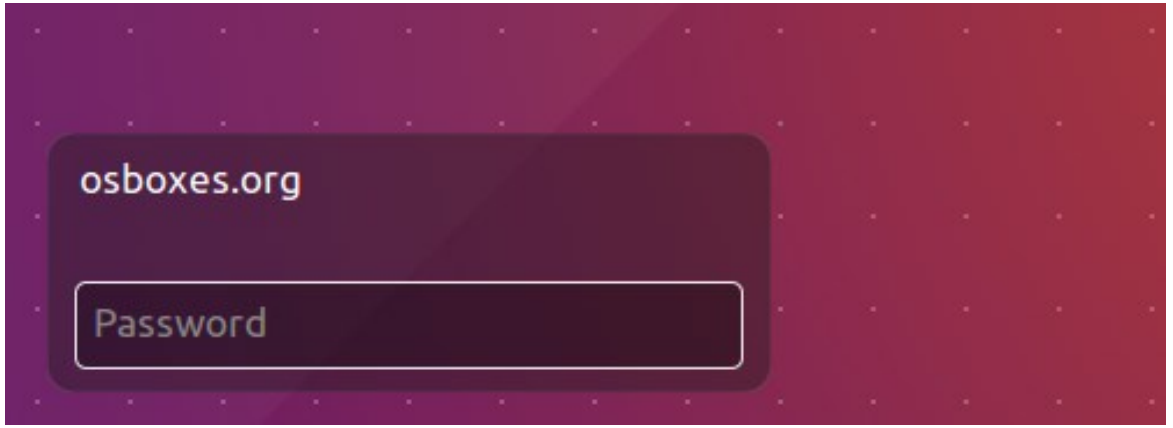
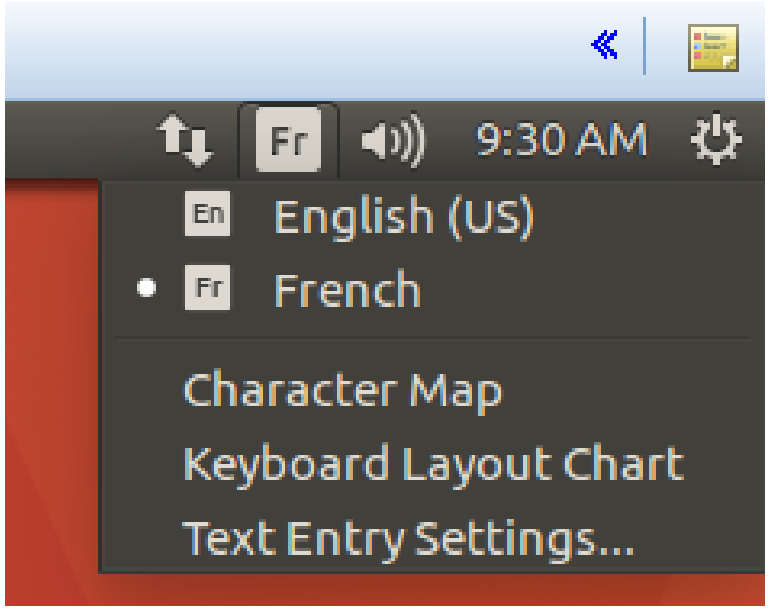
Logging into the console and its basic setup

Login name: *osboxes.org*
Password: *osboxes.org*



Keyboard selection



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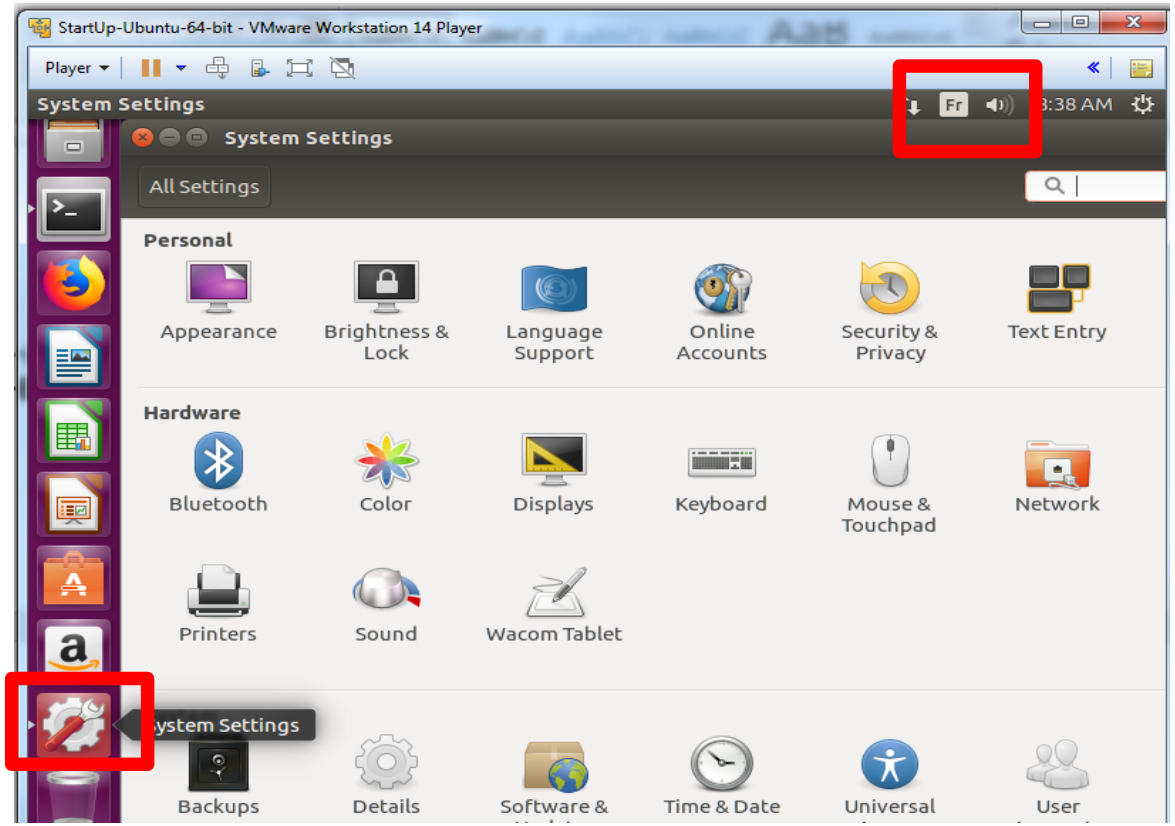
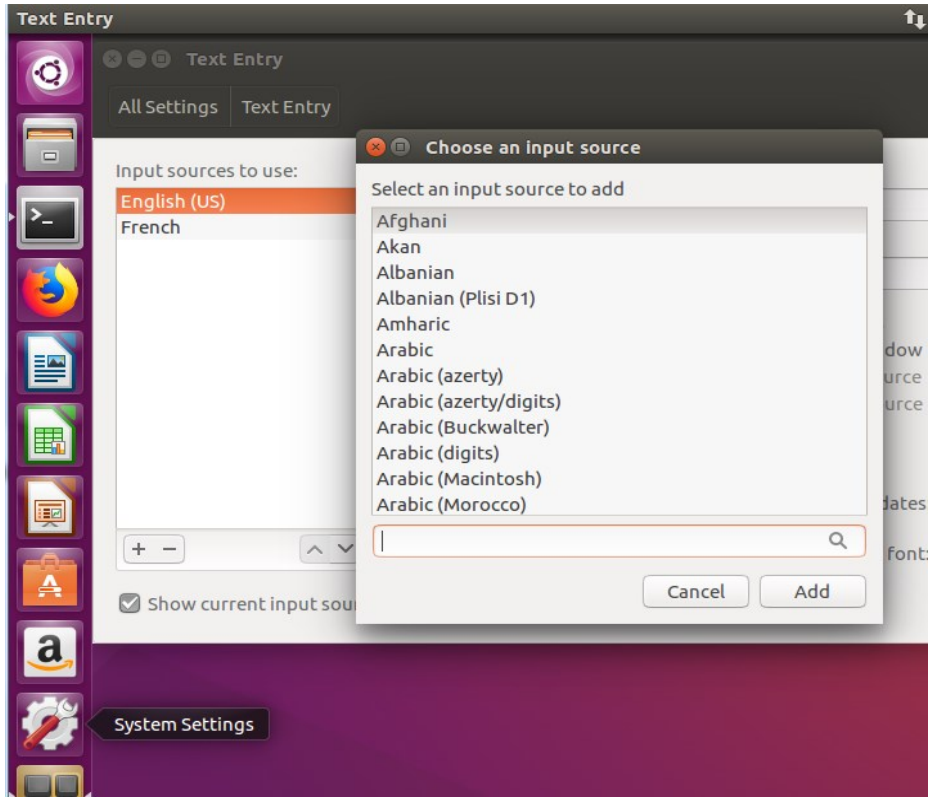
Language selection



System Settings



Text Entry

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See you at the STM32MP1 workshop!

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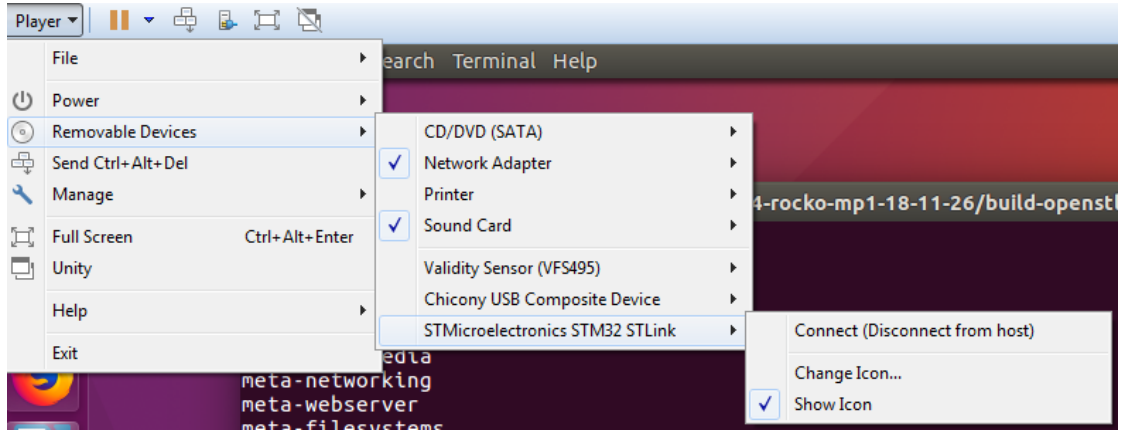
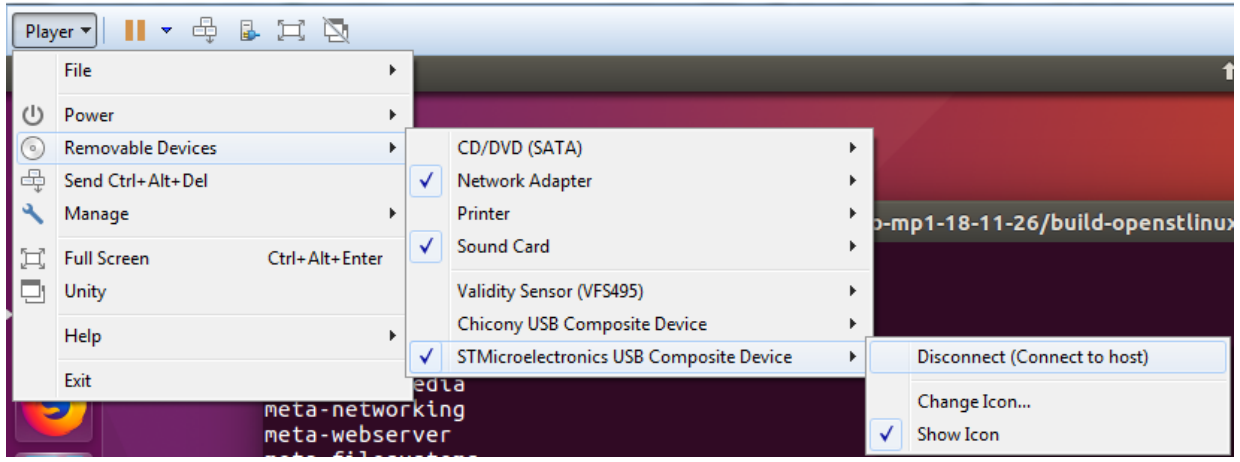
Connect cable with VMware

Menu Player/ Removable devices
connect/disconnect removable devices (usb, stlink, dfu, usb over ethernet)
Connect (Disconnect from host) means device is currently connected to Vmware



Disconnect (Connect to host) means device is currently connected to Windows



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VMware pre-built image content

Part1 : How to rebuild a VM image from scratch : see following part1,2,3,4

1/ Get initial Ubuntu 16.04.5 Xenial ubuntu image that will be run by VM player
From USBkey in folder Tools/Osboxes_1604564.7z

We got it from https://www.osboxes.org/ubuntu/
but now Ubuntu 16.04.5 Xenial is not any more available

2/ Create a Virtual machine with the ubuntu image downloaded from osboxes.org

Carefully follow the document VMwarePlayerHelp.pdf
https://wiki.st.com/stm32mpu/nsfr_img_auth.php/2/24/VMwarePlayerHelp.pdf

also following document is useful to install VMware tools
https://wiki.st.com/stm32mpu/nsfr_img_auth.php/4/49/PreRequisite-Vmware-tools.pdf

VMware pre-built image content

Part 2 : Ubuntu configuration to compile the stm32mp1 software

To configure the VM machine for compilation of the 3 STM32MP1 embedded software distribution *packages*

To be able to compile the ST distribution a set of libraries have to be added to the default Ubuntu machine provide by osboxes.org.

You have all for this configuration in the section 3 of

https://wiki.st.com/stm32mpu/wiki/PC_prerequisites

See the slides LinuxHost-Setup-ForStm32mp1.pdf section Linux Host Setup Ubuntu 16.04

VMware pre-built image content

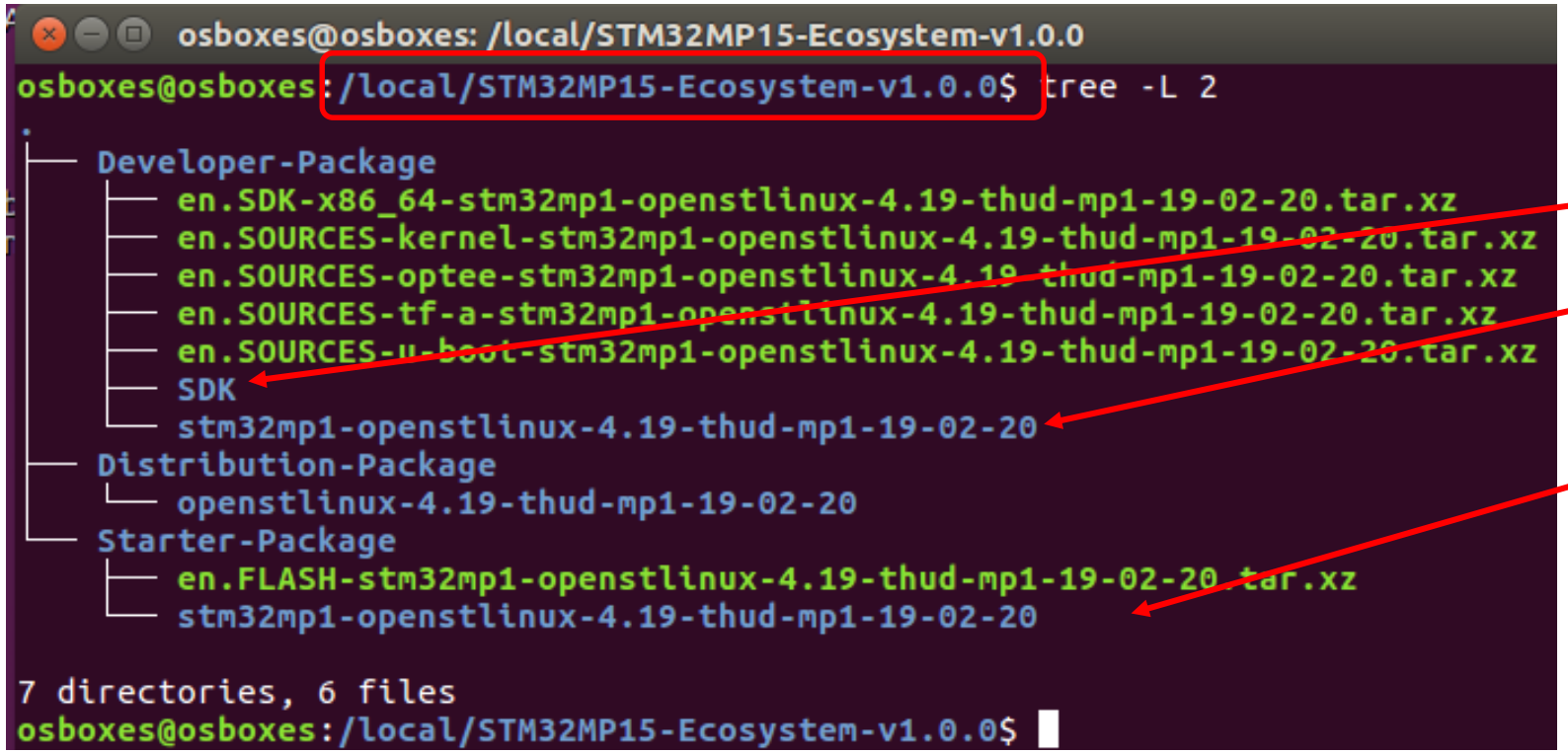
Part 3 : stm32mp1 software packages

Unzip starter package
install developer package (SDK, sources of Kernel, Uboot, Tf-A, Optee)

See the slides LinuxHost-Setup-ForStm32mp1.pdf section 2 and 3

Starter & Developer Packages

- VMware pre-built image directory tree



SDK
Kernel,TF-A,Uboot
Source code

Image
Flash partitions

Note : In the terminal window Developer Package path is already defined by $SDK_ROOT in /local/STM32MP15-Ecosystem-v1.0.0/Developer-Package/

VMware pre-built image content

Part 4 : Tools

- Cube MX
- CubeProgrammer
- System Workbench for M4 development

To setup the tool please see the last section Linux-Host-Setup-ForStm32mp1.pdf section 4

Thanks