Installing Xilinx ISE (VirtualBox)

Starting Notes

- These slides were made in January 2018 for installing
- "ISE Design Suite for Windows 10 - 14.7"
- The download runs using VirtualBox, which runs on a variety of operating systems including Windows 10 and Mac
- There are also a few usage notes at the end

Notes

- This is a set of Xilinx tools on a Linux virtual machine (from Virtualbox)
  - In other words, clicking on the shortcuts from the install launch Virtualbox and that virtual machine has the Xilinx tools installed on it
- This should work for Linux too, but this guide doesn't cover that
- For Windows 7, you can instead use the webpack:
  - Link: https://www.xilinx.com/products/design-tools/ise-design-suite/ise-webpack.html (this guide also doesn't cover it)
- Xilinx doesn't explicitly support mac, but, Xilinx provides a virtual machine, which can still be used as long as VirtualBox is installed on the Mac. If that doesn't work, you can instead dual boot with boot camp, or create a Windows 7 Virtual Machine and install it

Finding the Download

Download link:
https://www.xilinx.com/support/download/index.html/content/xilinx/en/downloadNav/design-tools/14_7-windows.html

Whether you are a Mac or Windows user, download the compressed file. (Despite, if you on Mac, the fact that the download says "windows")

You may need to create an account with Xilnix and provide a company,

I just used the campus address and contact info.

If that works, skip the next slides and proceed to either "Windows Install" or "Mac Install"

Finding the Download

- Navigate to Xilinx's Products listing, and look for the product page for the "Spartan 6"

- Look for the associated downloads tab

- Look for the Windows 10 Installer compressed download (tar or zip)
  - Note: even if you are installing for Mac, we will use the Windows 10 install files

- The next few slides are screenshots walking through the website to find the link at the time this guide was made

Finding the Download

Finding the Download

Finding the Download

Finding the Download

Windows Install

Installer

- Just unzip the installer and click "xsetup"
- It's pretty straightforward, but there's a couple options that you might want to pay attention to (see next two slides before install)

This PC > Downloads > Xilinx_ISE_S6_Win10_14.7_ISE_VMs_1211_1

Name	Date modified	Type	Size
bin	8/01/2018 7:49 AM	File folder	
data	8/01/2018 7:49 AM	File folder	
lib	8/01/2018 7:47 AM	File folder	
ova	8/01/2018 7:47 AM	File folder	
payload	8/01/2018 7:49 AM	File folder	
tps	8/01/2018 7:49 AM	File folder	
msvcp110.dll	8/12/2017 4:55 PM	Application extension	523 KB
msvcr110.dll	8/12/2017 4:55 PM	Application extension	855 KB
vccorlib110.dll	8/12/2017 4:55 PM	Application extension	247 KB
xsetup	8/12/2017 4:56 PM	Application	433 KB

Installer – File Location

- At this stage, you can select the install directory. Xilinx takes up a large swath of memory so it's a good idea to set this to a bigger hard drive
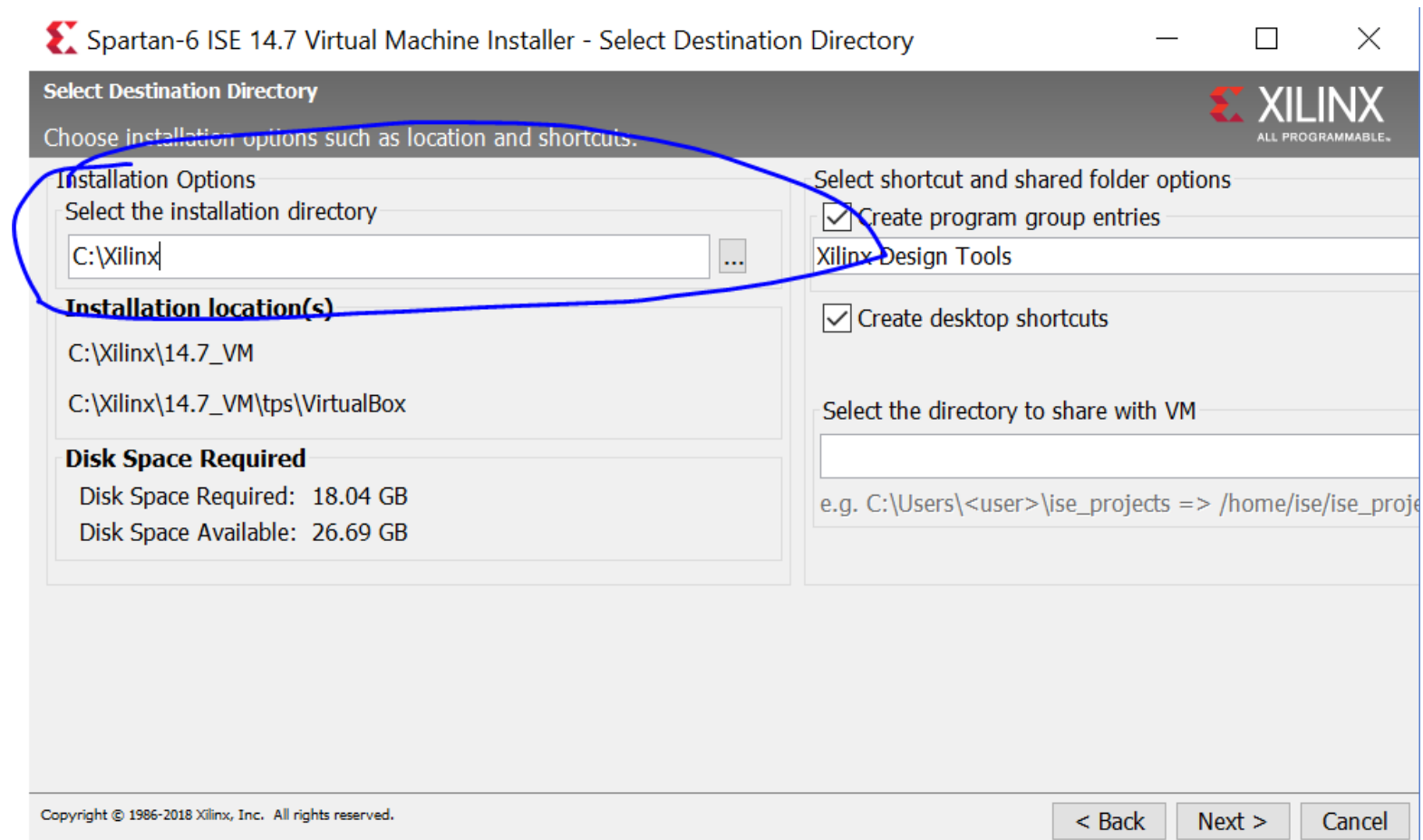
Installer – Shared Folder

- You can set up a folder to be visible from both your (host) operating system and the virtual machine's (guest) operating system. This is good for quickly moving files around. (See Usage Notes)
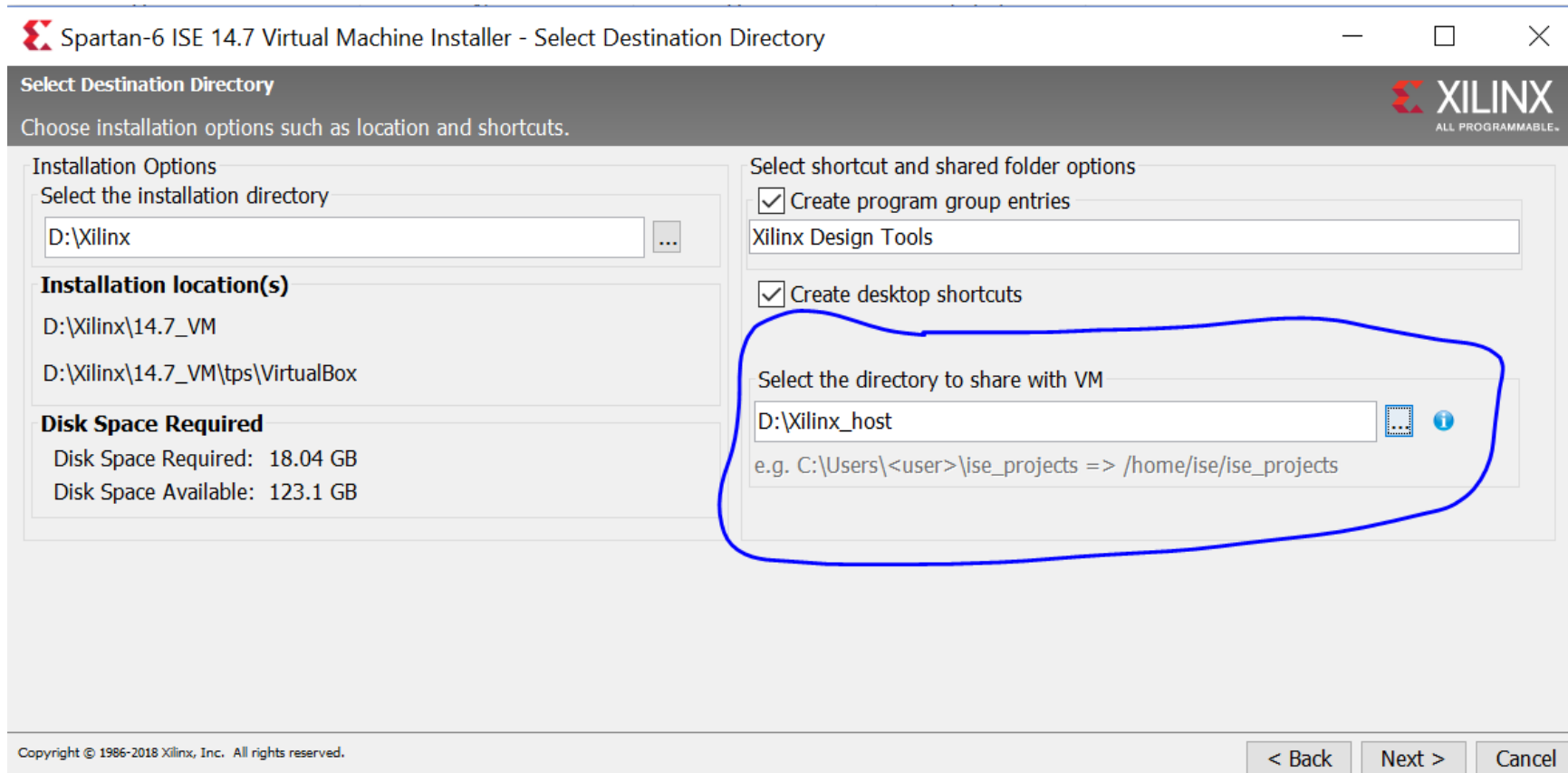
Shared Folder

- The shared folder in the VM should have a desktop shortcut
- If you forgot to do this in the installer, you can create a new shared folder following the Mac instructions for a shared folder later in these slides.
- (See next slide for screenshot)

Shared Folder
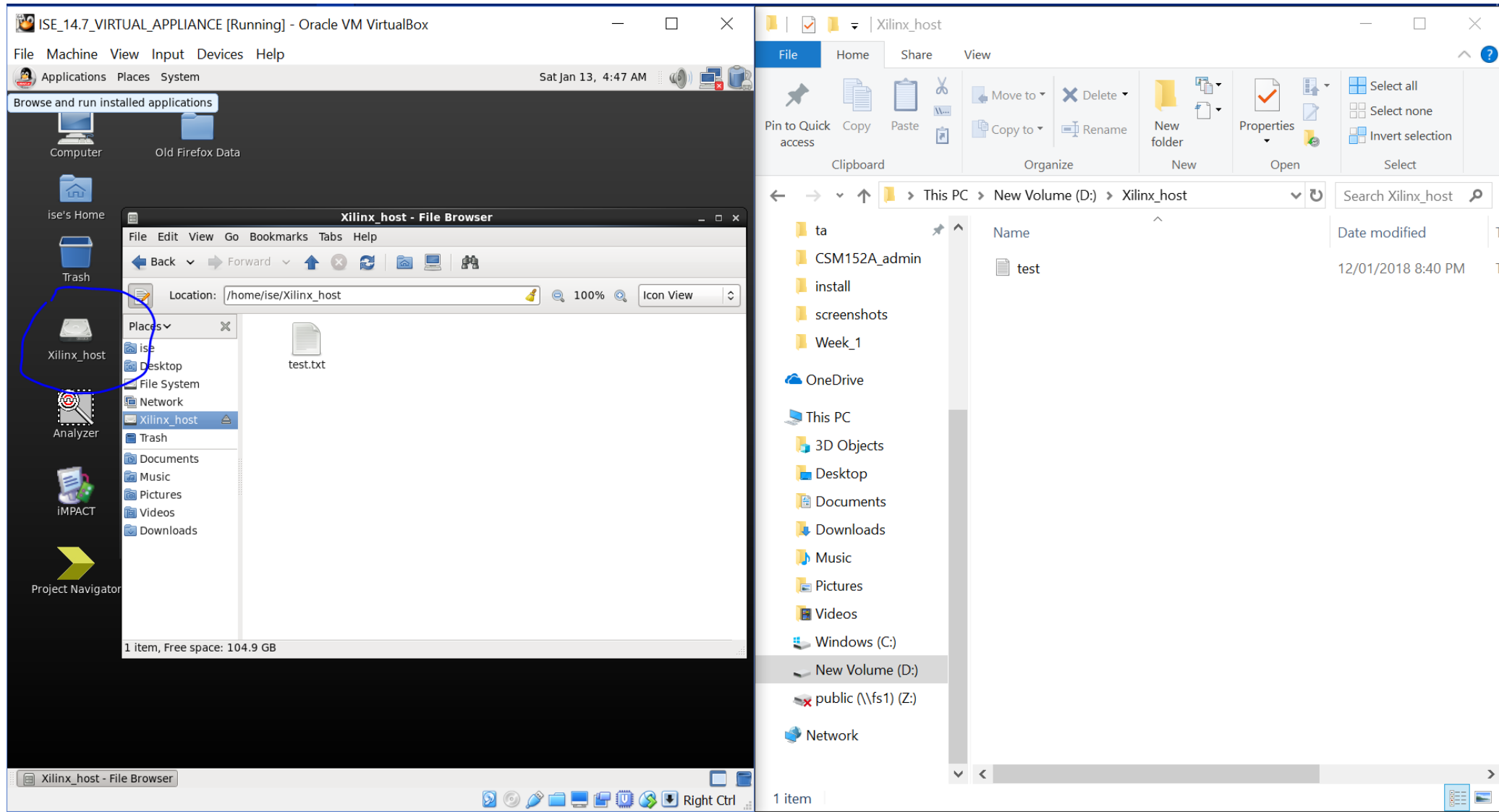
Additional Setup

- You may need to enable hardware virtualization on your computer
- For that, you will need to restart and enter the BIOS and find the setting "virtualization" and enable it
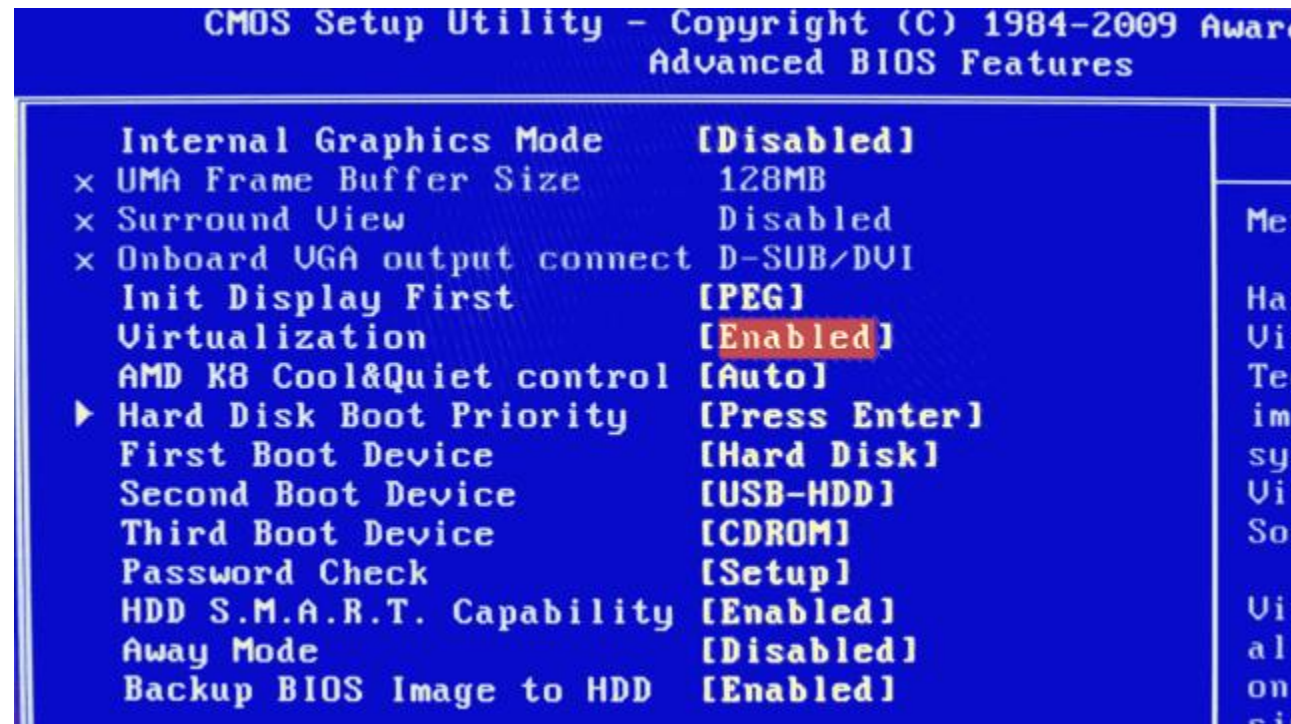
Mac Install

Download VirtualBox

- Link: https://www.virtualbox.org/wiki/Downloads

Importing the Virtual Machine

- Unzip the "Xilinx_ISE_S6_Win10_14.7_ISE_VMs…" folder

- Navigate to the .ova file, and double click it, and click "import"

- There might be a file compression or corruption issue, if that happens, redo the unzip or download step

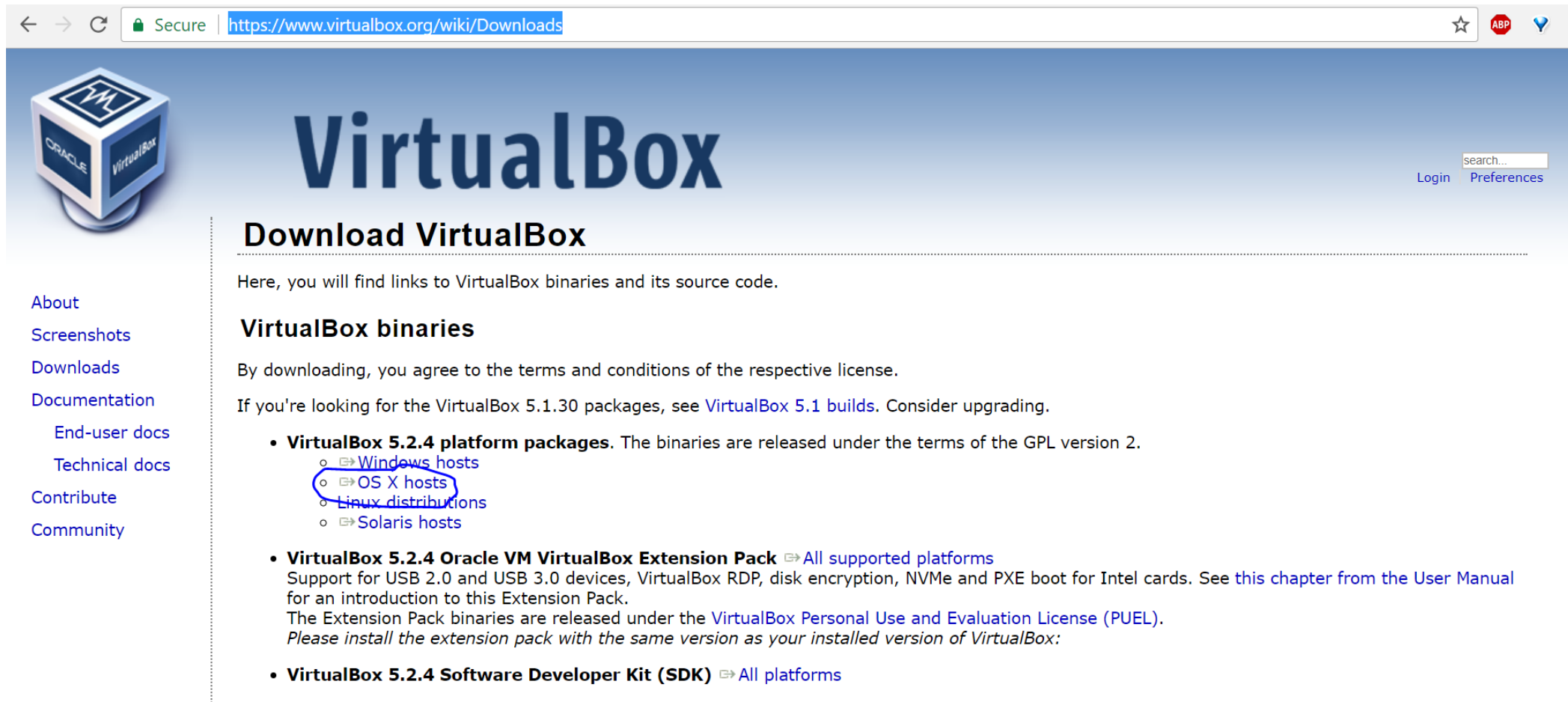|			
▼ 📁 Xilinx_ISE_S6_W…._ISE_VMs_1211_1	Today, 10:40 PM	--	Folder
▼ 📁 ova	Dec 11, 2017, 2:35 PM	--	Folder
📦 ISE_S6_VM.ova	Dec 11, 2017, 2:35 PM	7.25 GB	Open…Archive
▶ 📁 data	Dec 11, 2017, 2:34 PM	--	Folder
▶ 📁 payload	Dec 11, 2017, 2:34 PM	--	Folder
▶ 📁 bin	Dec 11, 2017, 2:33 PM	--	Folder
▶ 📁 lib	Dec 11, 2017, 2:33 PM	--	Folder
▶ 📁 tps	Dec 11, 2017, 2:33 PM	--	Folder
📄 xsetup.exe	Dec 8, 2017, 4:56 PM	443 KB	Micros…lication
📄 msvcp110.dll	Dec 8, 2017, 4:55 PM	535 KB	Micros…library
📄 msvcr110.dll	Dec 8, 2017, 4:55 PM	875 KB	Micros…library
📄 vccorlib110.dll	Dec 8, 2017, 4:55 PM	252 KB	Micros…library
📄 DisplayLink US…d macOS 4.1.zip	Jan 4, 2018, 11:52 AM	4.6 MB	ZIP archive

Importing the Virtual Machine
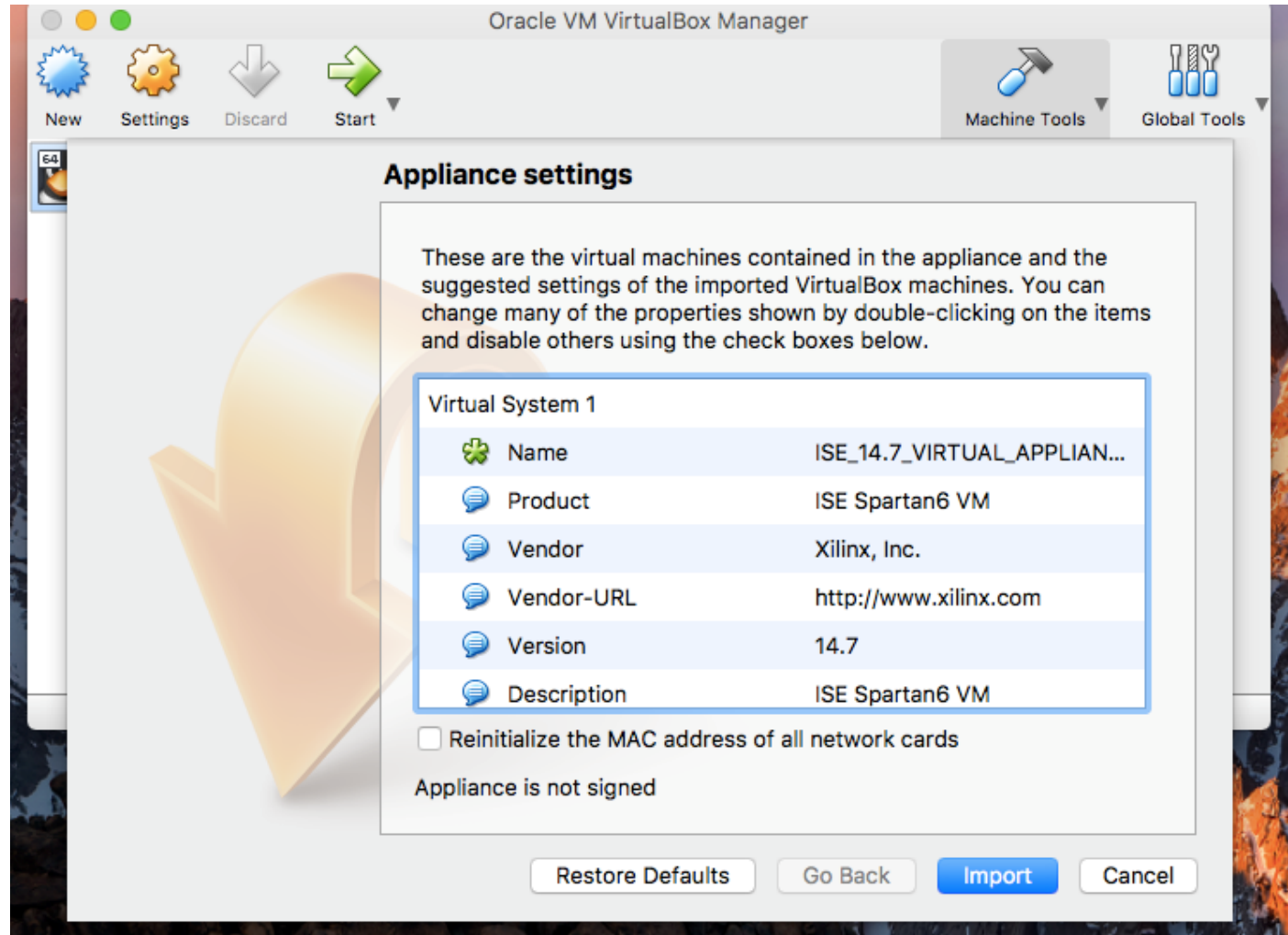
Shared Folder

- You probably want to set up a shared folder on Mac as well, so that both the (guest) virtual and (host) native operating systems can access the same files.

- These are steps to add a new shared folder, so if you did not set up a shared folder with the windows installer, you can follow these steps too.

Shared Folder

- Shutdown the virtual machine

- In the VirtualBox manager, click to select the virtual machine

- Navigate to Settings > Shared Folders

- Using the button at the right, add a folder from your native operating system, which you want to be visible from the virtual machine.

- Make sure you select "Auto-mount" when you add this folder.

Shared Folder
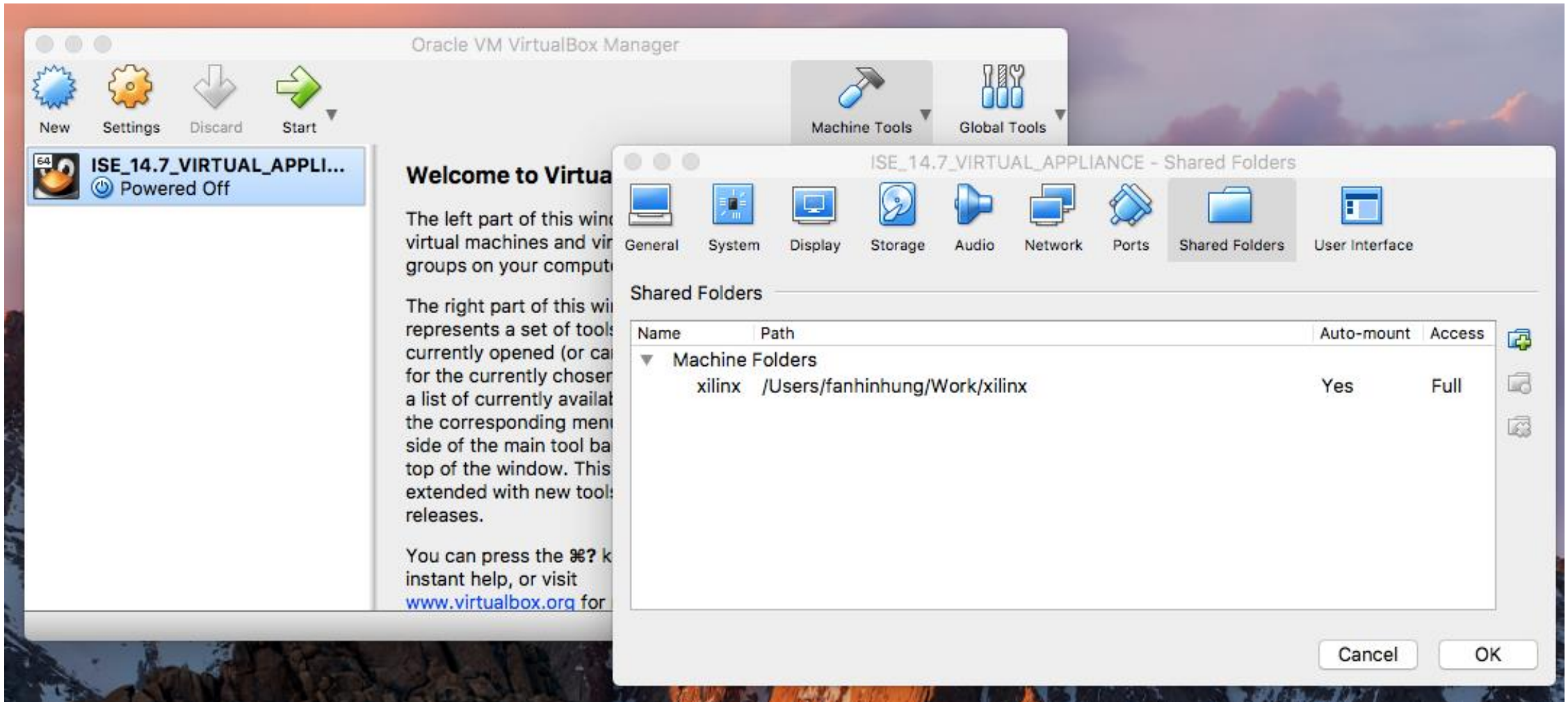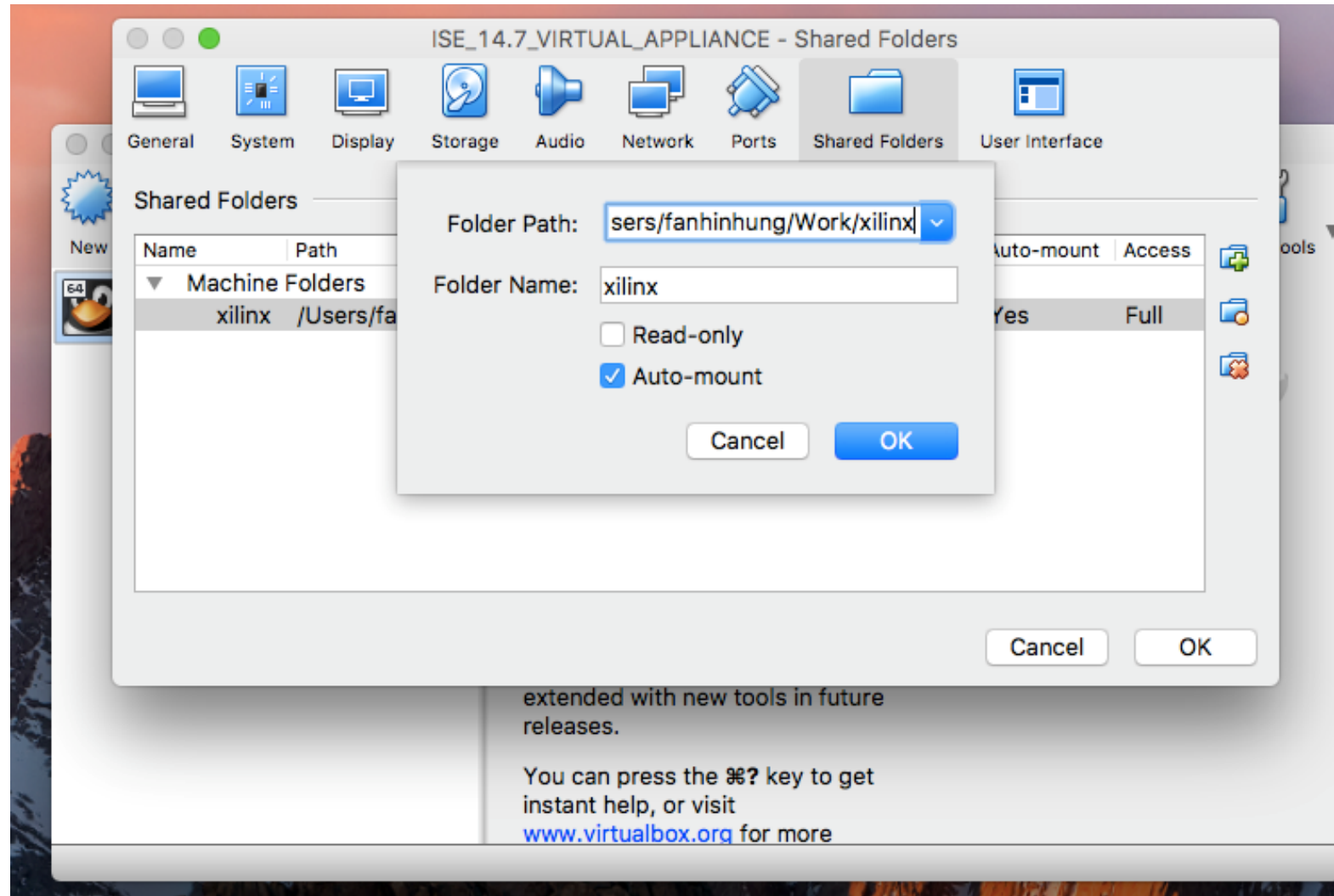
Shared Folder

Shared Folder
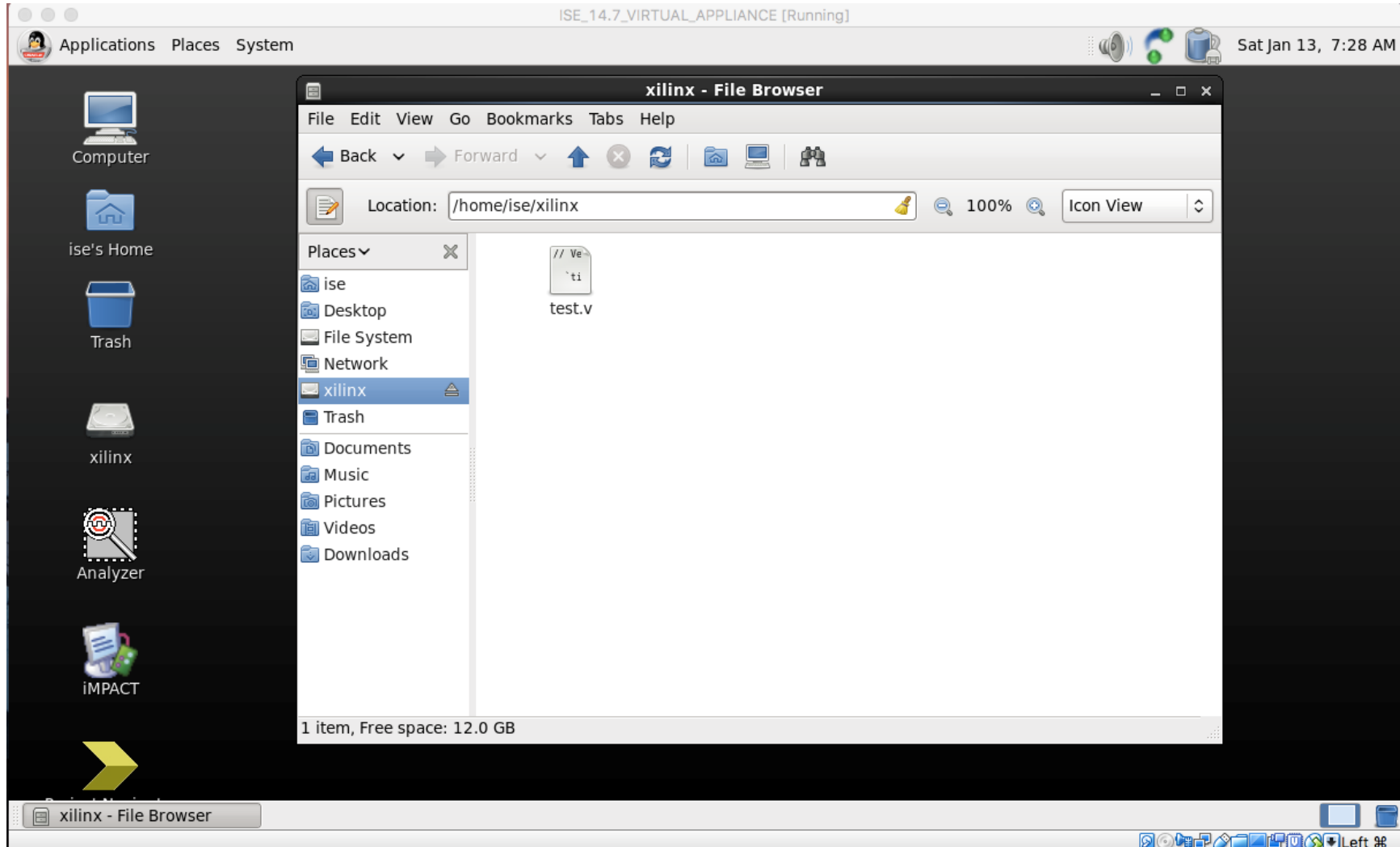
Additional (Usage) Notes

Also some error debugging for both Mac and Windows

Usage Notes – Starting Machine

- To use what you've installed, click on the "Project Navigator" shortcut: (On Windows)

- Alternatively, you can open the virtual machine through VirtualBox
  - From your start menu or launcher, open "Oracle VM VirtualBox"
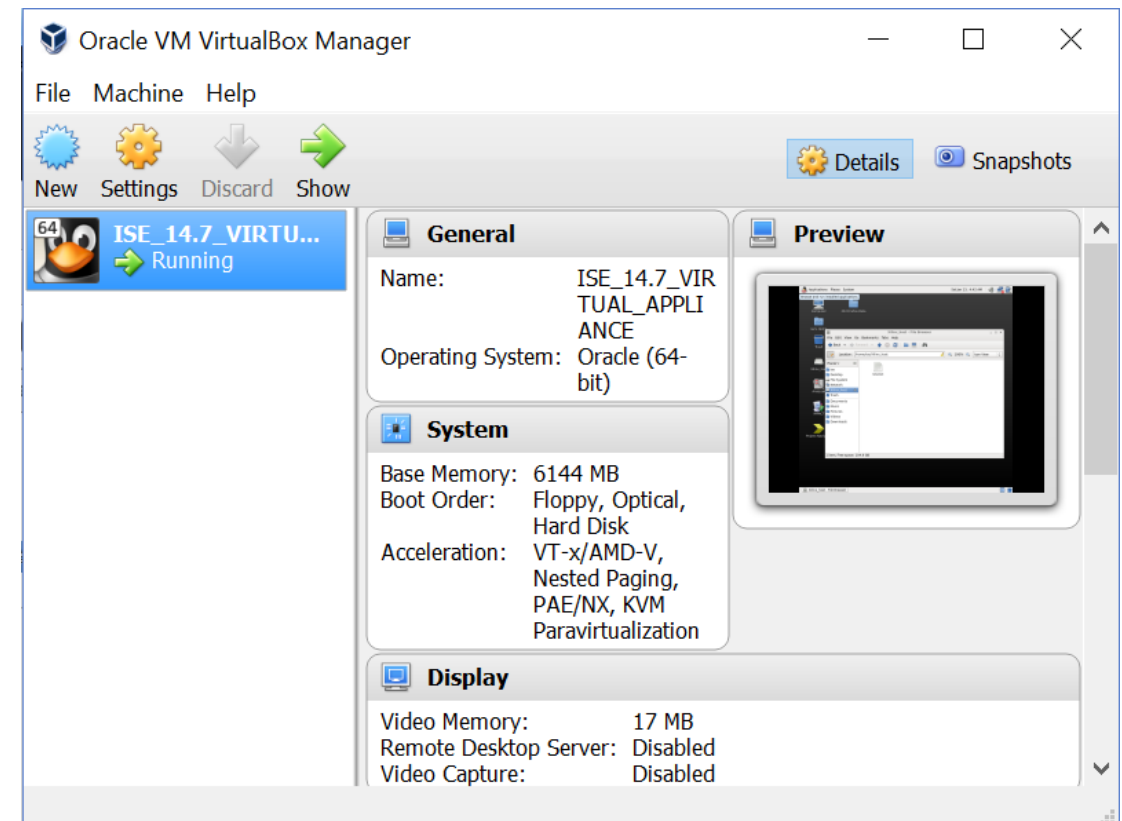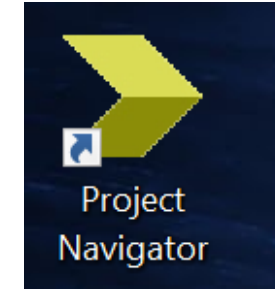 - "ISE_14.7_VIRTUAL_APPLIANCE" is the virtual machine
  - In the VM, the shortcut looks the same

Usage Notes – Network Connection Error

- If there's a problem with the host network connection, preventing you from starting the virtual machine, you can disable the connection by:
  - Opening the "Oracle VM VirtualBox" app
  - Selecting the machine "ISE_14.7_VIRTUAL_APPLIANCE"
  - Navigating to:
    - Settings > Network > Adapter 1
  - And disabling the network adapter
- (See screenshot on next page)

Usage Notes – Network Connection Settings

Usage Notes – Network Connection Alternative

- If the previous doesn't work, you can also set the machine to enable the connection, but not use it. (this might be needed if you see the error "Empty or null host only interface name is not valid)

- Select the machine "ISE_14.7_VIRT…"

- Go to Settings > Network > Adapter 1

- Enable the adapter

- Set "attached to" to "Not attached" and click ok

- (See next slide for screenshot)

Oracle VM VirtualBox Manager

New   Settings   Discard   Start

Machine Tools   Global Tools

ISE_14.7_VIRTUAL_APPLI...
Powered Off

Welcome to Virtua

The left part of this wind
virtual machines and vir
groups on your compute

The right part of this wi
represents a set of tools
currently opened (or ca
for the currently chosen
a list of currently availab
the corresponding men
side of the main tool ba
top of the window. This
extended with new tools
releases.

You can press the ⌘? k
instant help, or visit
www.virtualbox.org for

ISE_14.7_VIRTUAL_APPLIANCE - Network

General   System   Display   Storage   Audio   Network   Ports   Shared Folders   User Interface

Adapter 1   Adapter Network   Adapter 3   Adapter 4

☑ Enable Network Adapter

Attached to: Not attached

Name:

▷ Advanced

Cancel   OK

Usage Notes – Cleanup

- The project files take up a large amount of memory. If you're done with a project, you can "clean up project files" to get rid of some temporary or recreate-able files.

- The simulations also create ".wdb" files which contain the wave form data. These can sometimes get long and are good to delete if you're not using them.

- (See next screenshots on slide)

Usage Notes – Cleanup
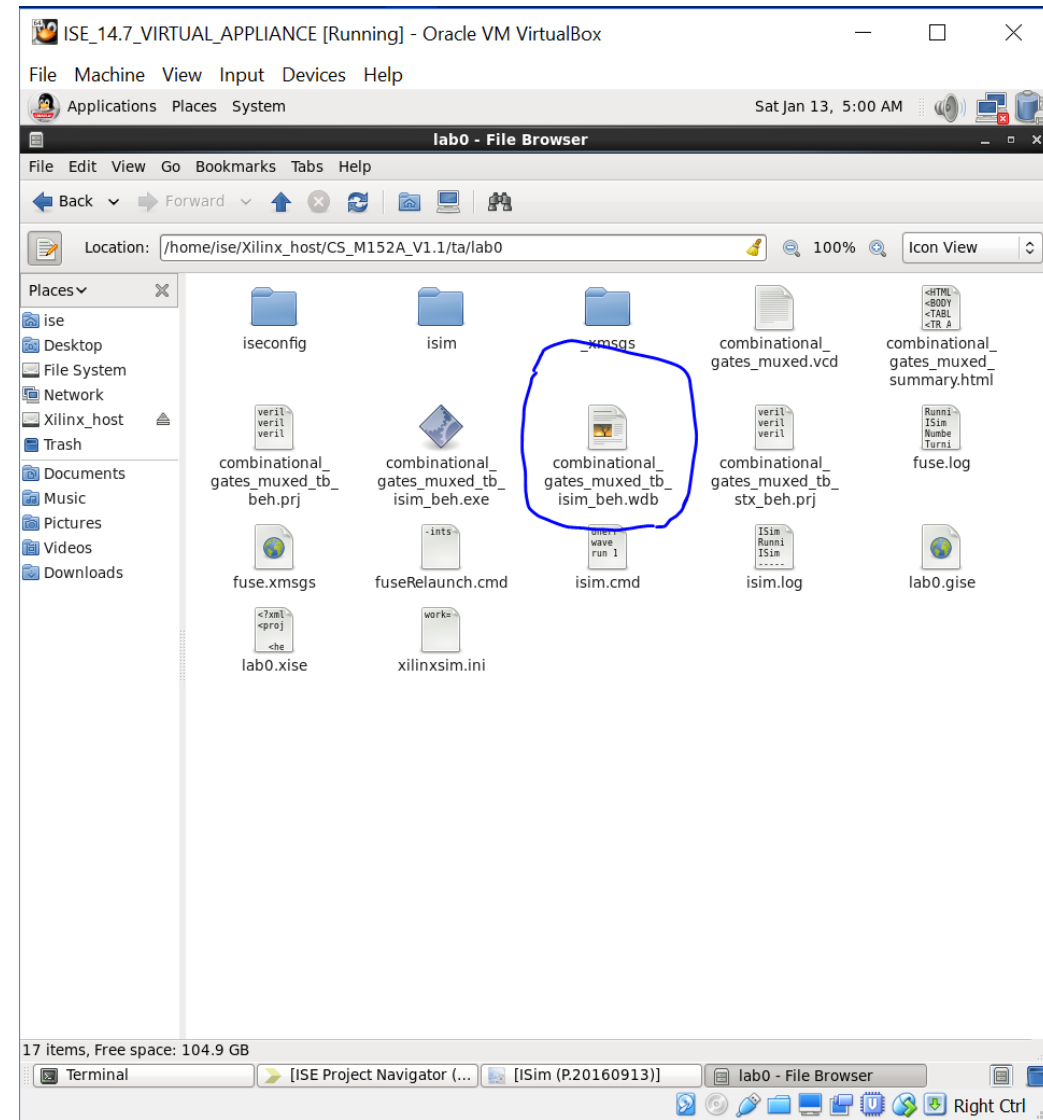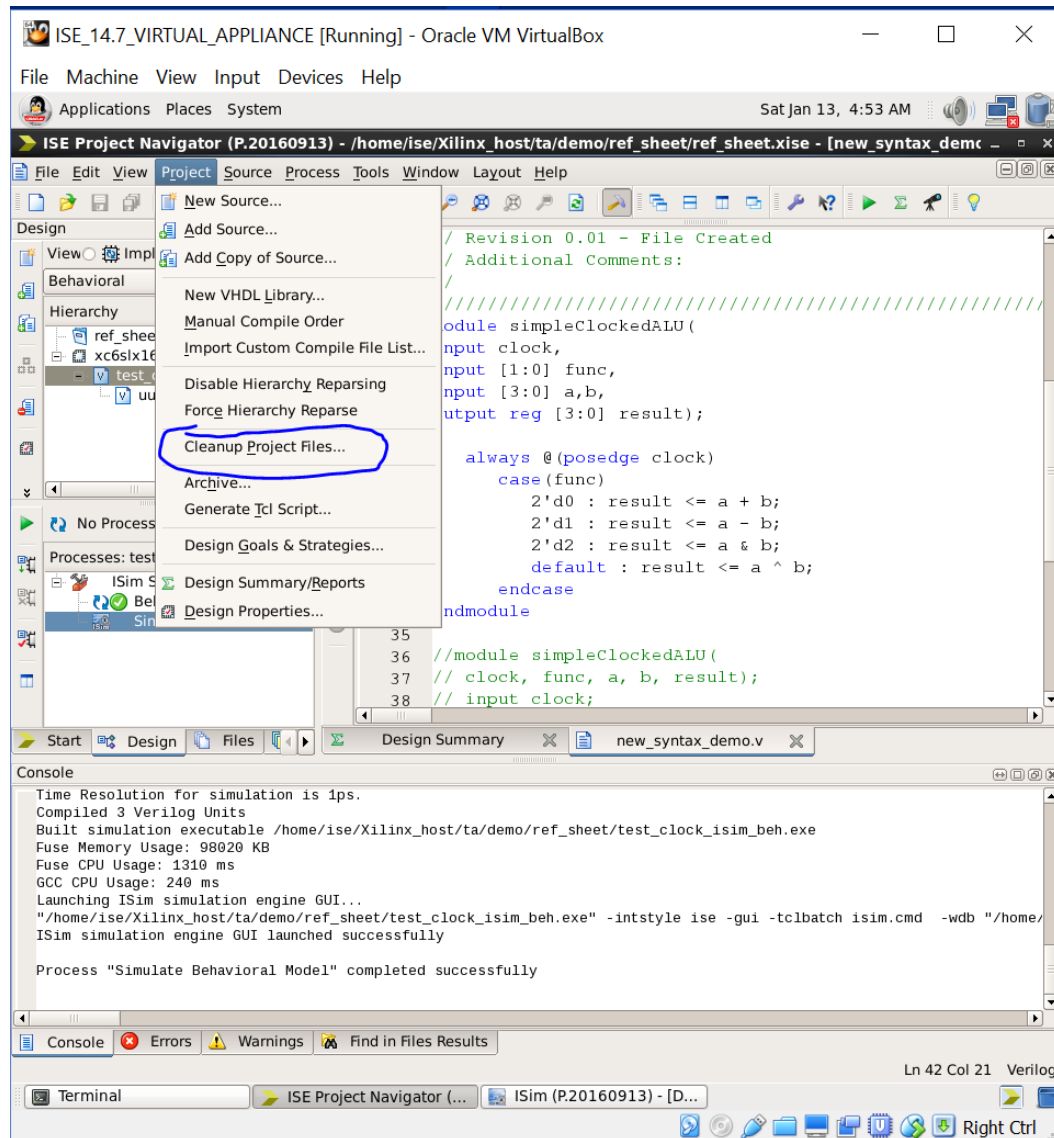
Usage Notes – Linux UI

- If you need to access the terminal, use the "Applications" button at the top left