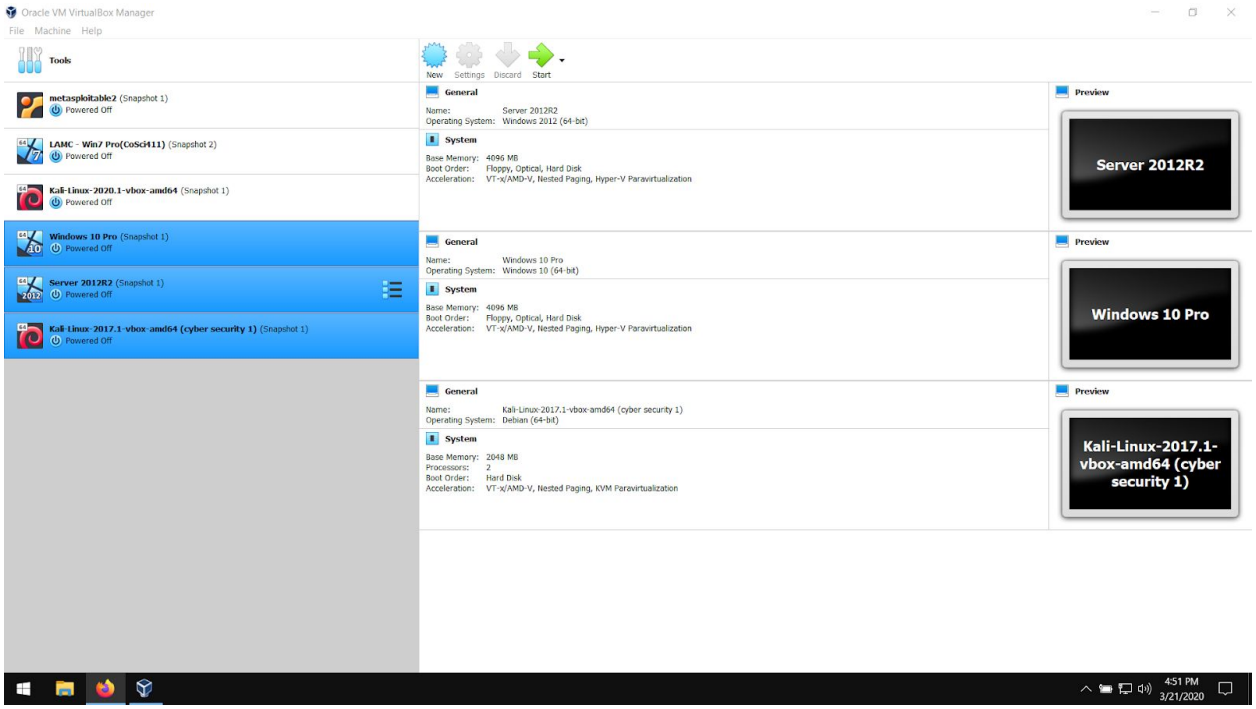
Cyber Report - Create an OVA

1. Each assignment has a goal. What is the assignment and how will you find the solution?

> The goal of this lab is to create three OVA files that will run as stand alone appliances within the VirtualBox environment. OVA files are complete copies of a virtual machine created locally that can be shared amongst users as an appliance file. Changes and image settings made within each virtual machine will be saved within the OVA appliance file.

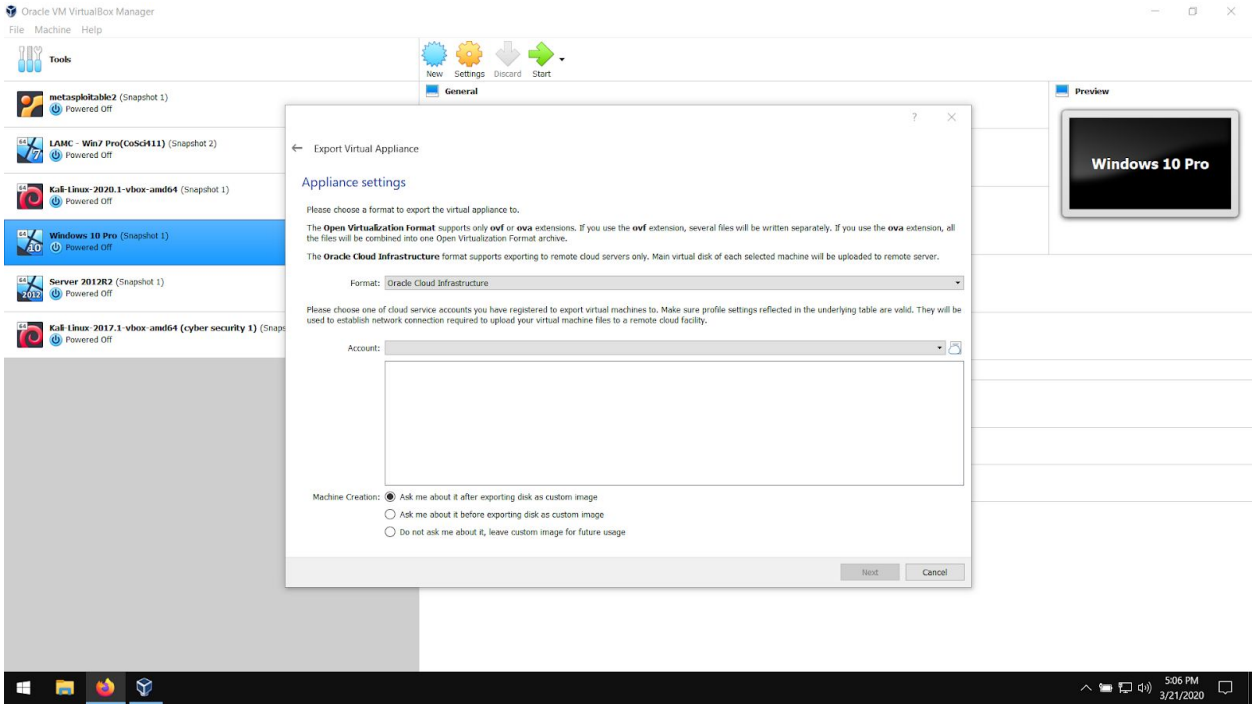
2. Demonstration of the steps taken with screenshots (snipping tool) from your computer. You need to show the steps you took as you took them.

VirtualBox Main menu



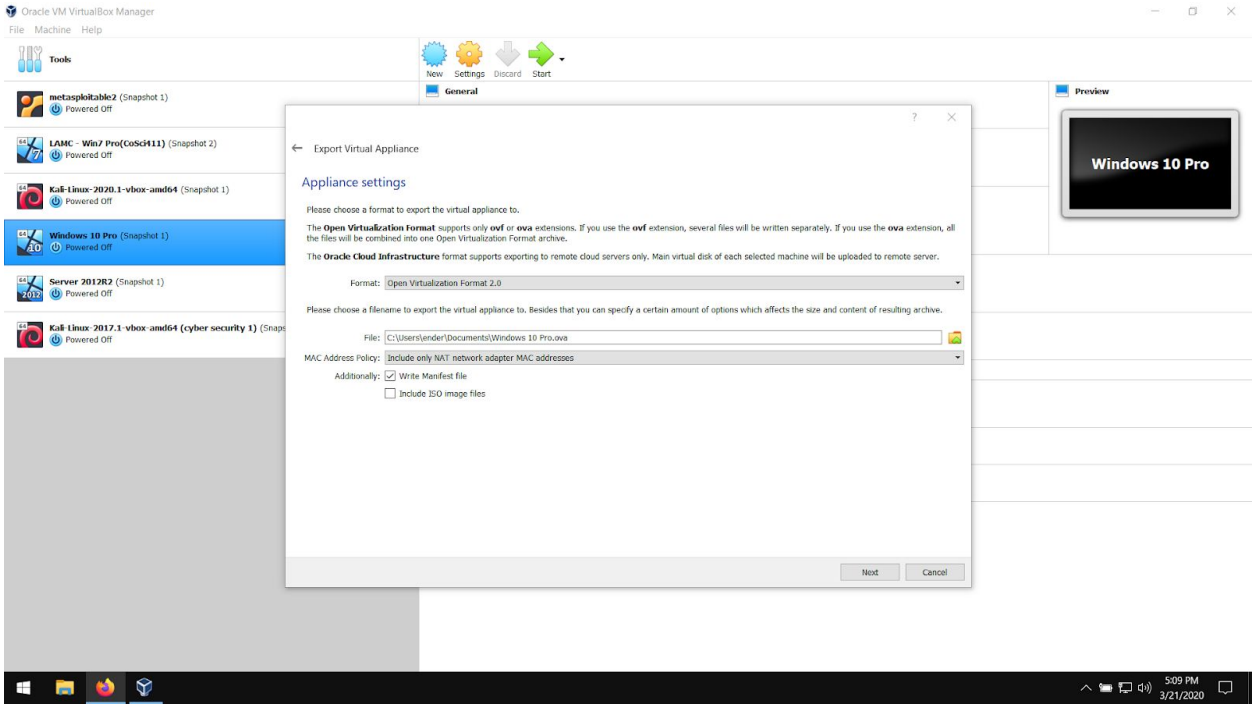
Starting at the VirtualBox main menu, I've highlighted the virtual images we will be focusing on: Windows 10 Pro, Kali Linux 2017, and Server 2012R2.

VirtualBox - appliance settings



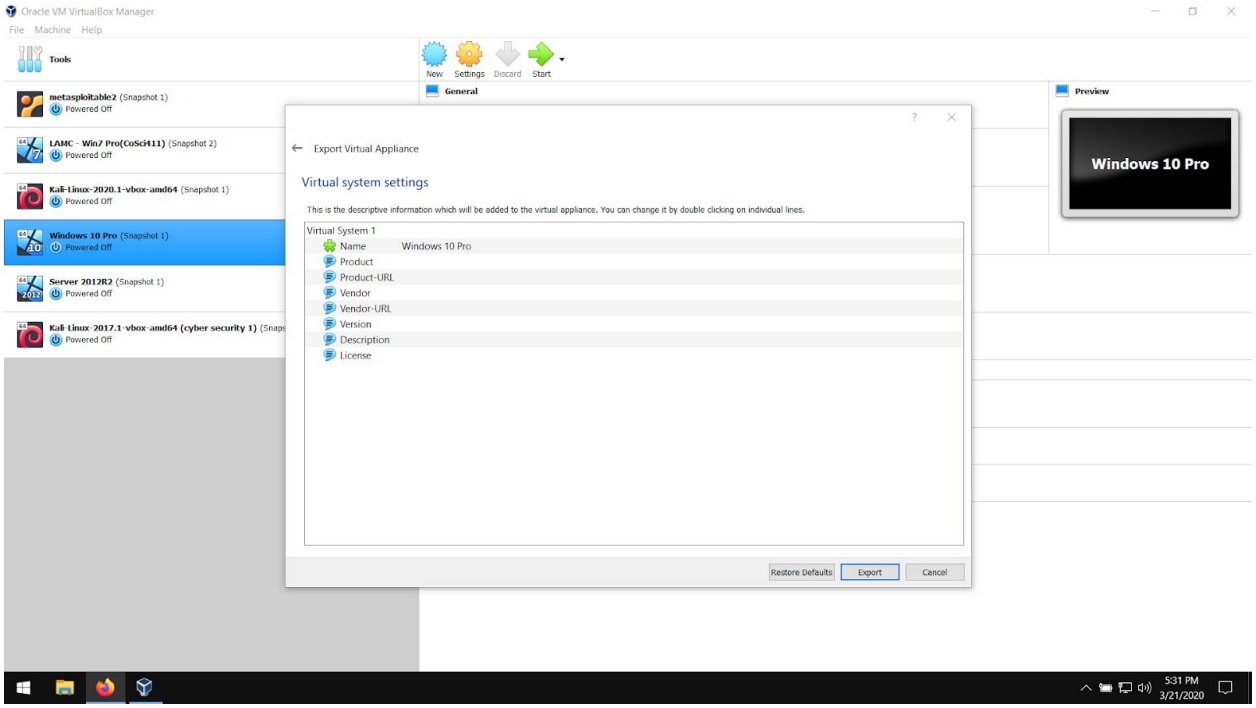
From the VirtualBox menu system, the open Virtualization Format supports OVA file extensions.

VirtualBox - appliance settings



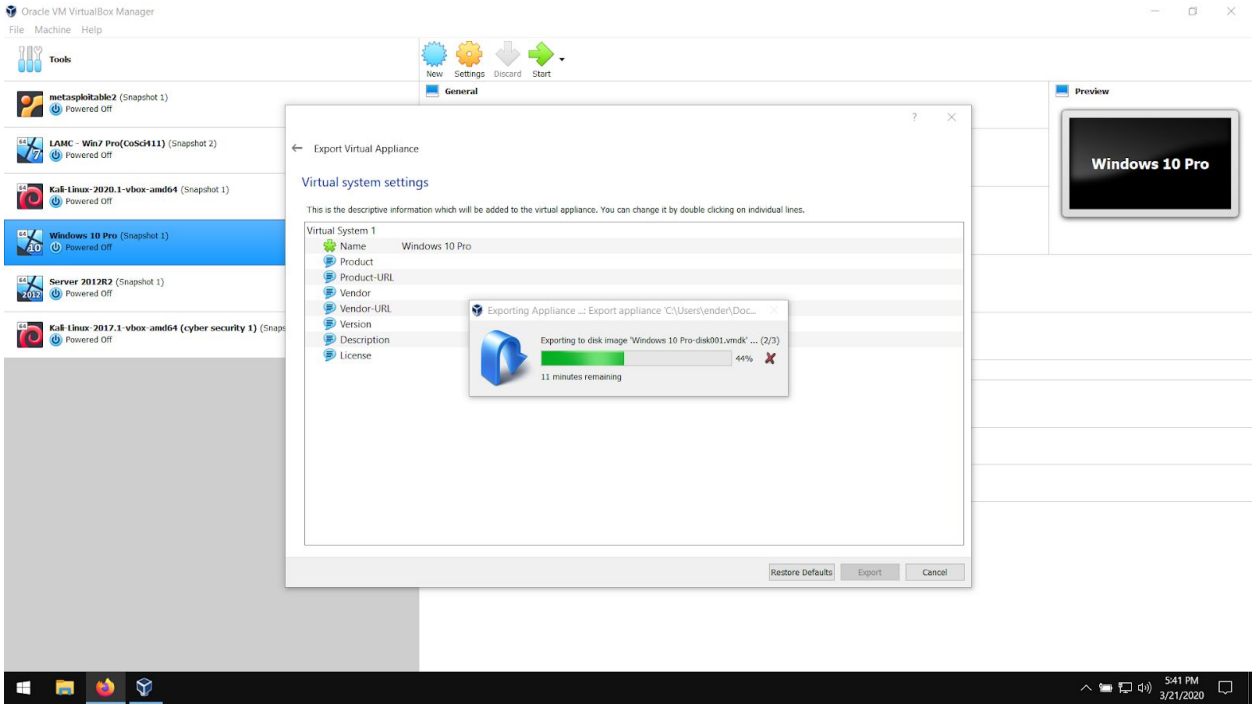
Choosing Open Virtualization Format 2.0 will be utilized. The OVA file will be saved in the path listed. The MAC address policy will be striped but all other settings left at default.

VirtualBox - virtual system settings



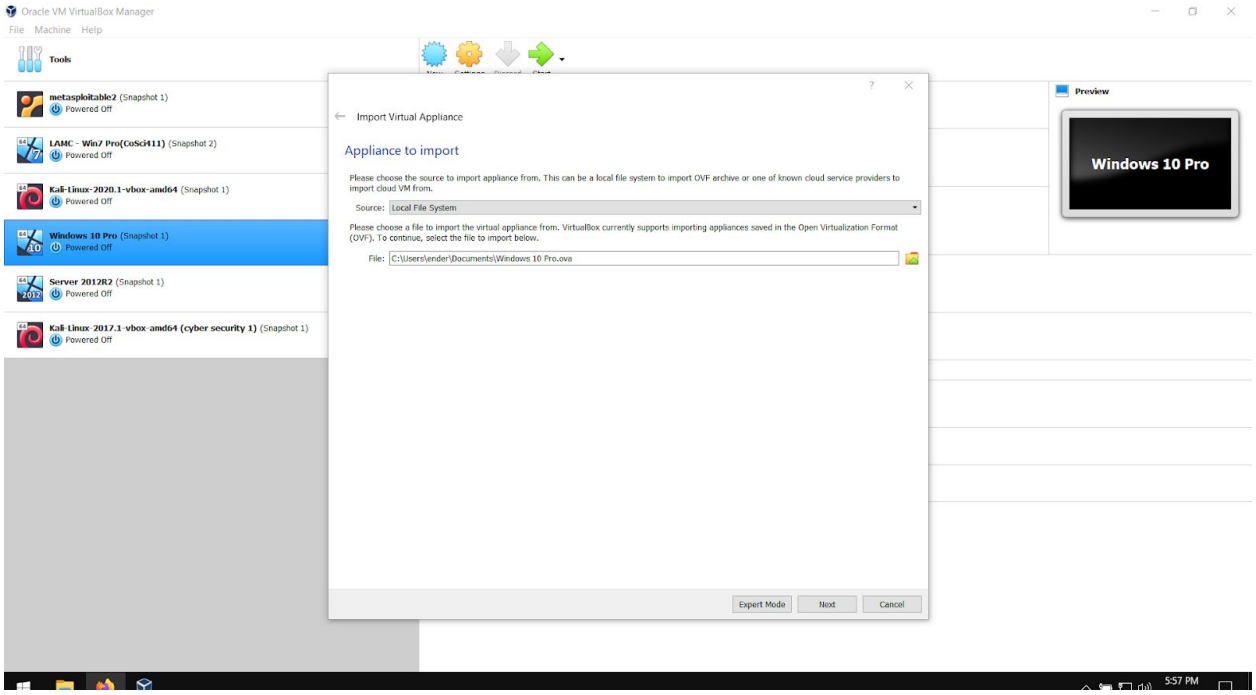
All settings left at default before exporting.

VirtualBox - exporting appliance



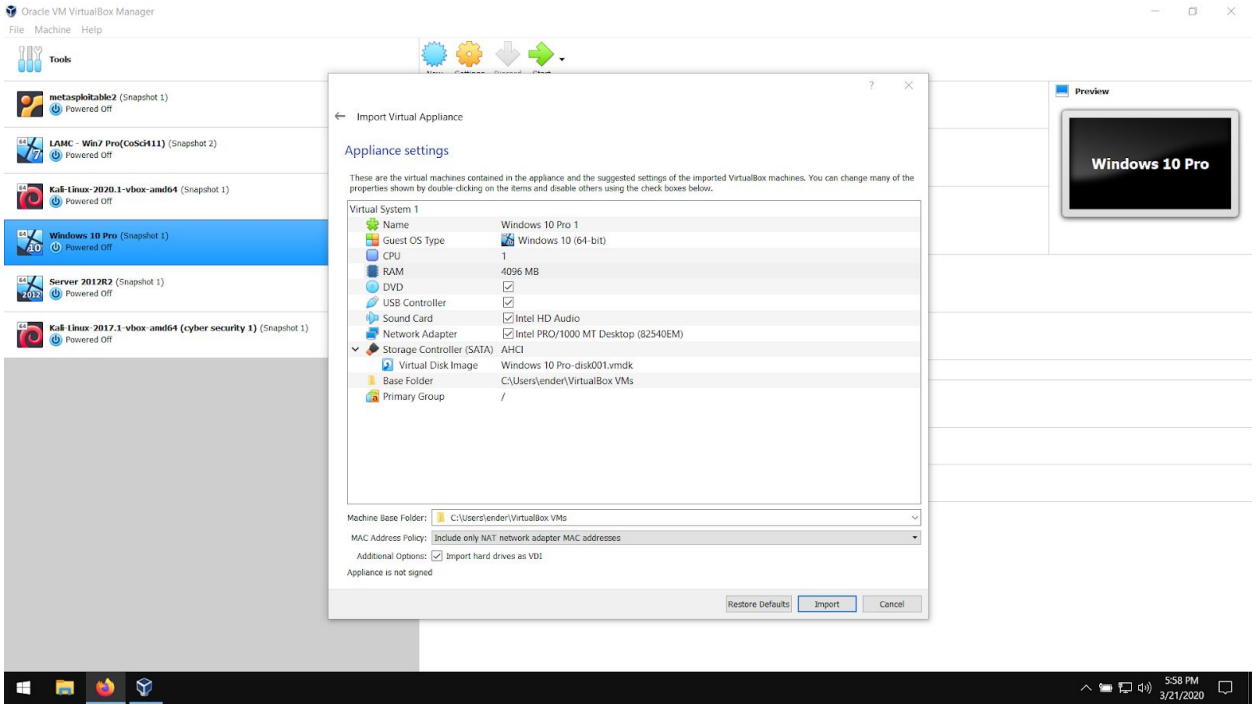
Export began, and looks to take about 20 minutes.

VirtualBox - importing Appliance



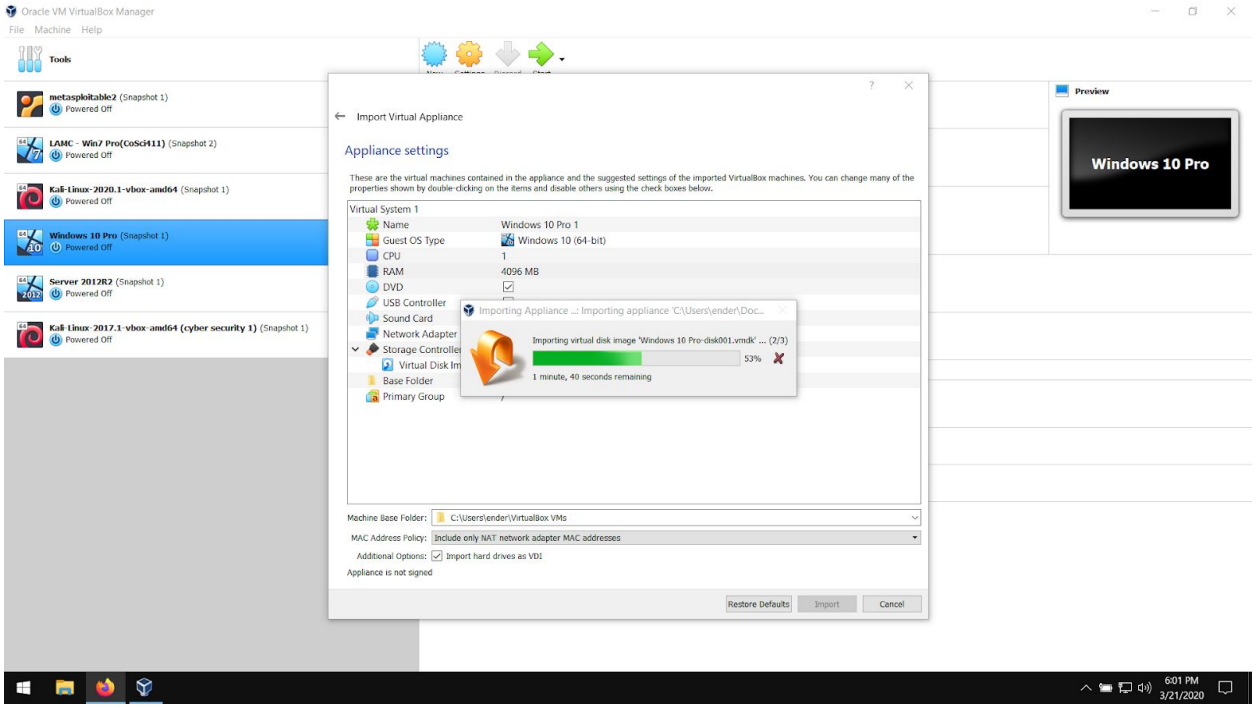
Importing the OVA file into VirturalBox.

VirtualBox - importing Appliance



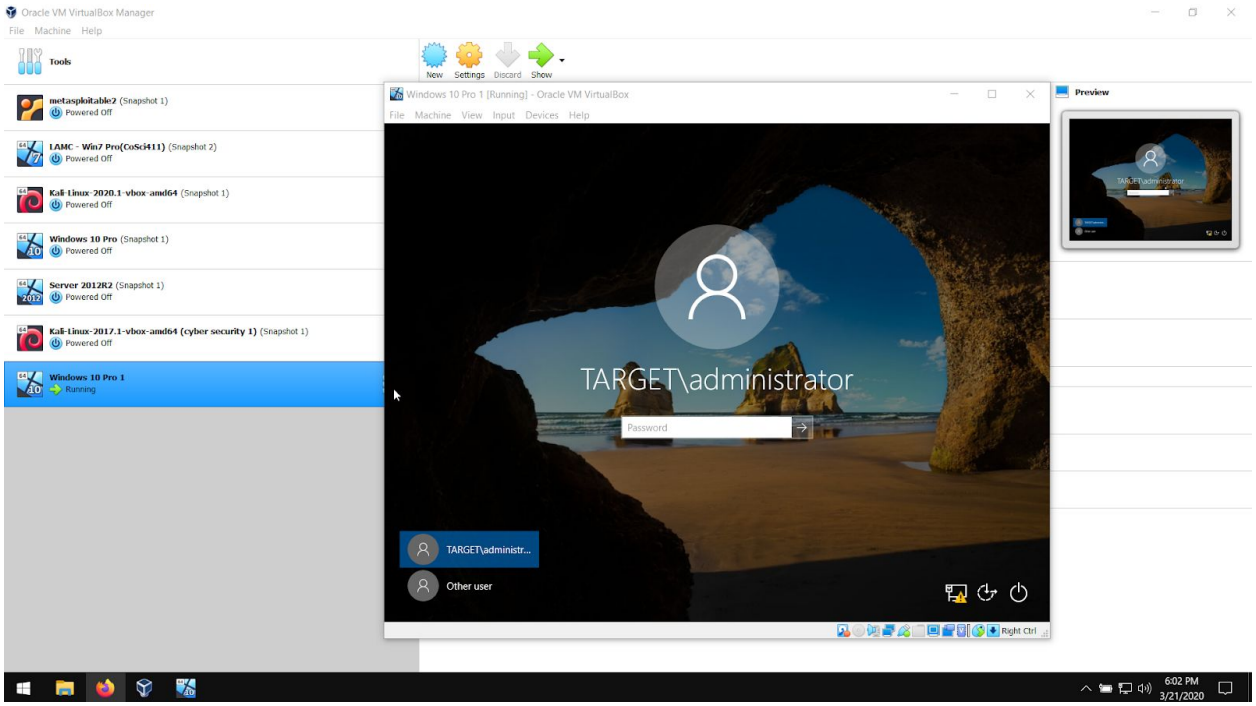
All settings left at default.

VirtualBox - importing Appliance



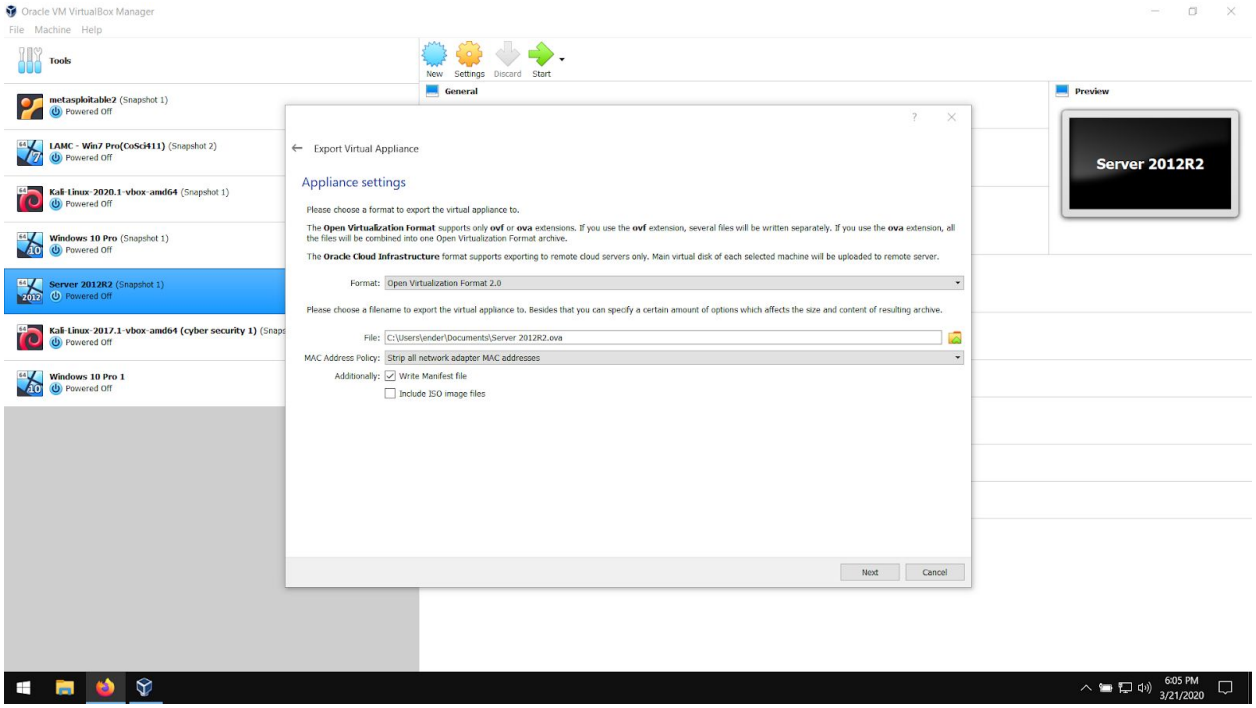
The importing process.

Windows 10 Pro - login



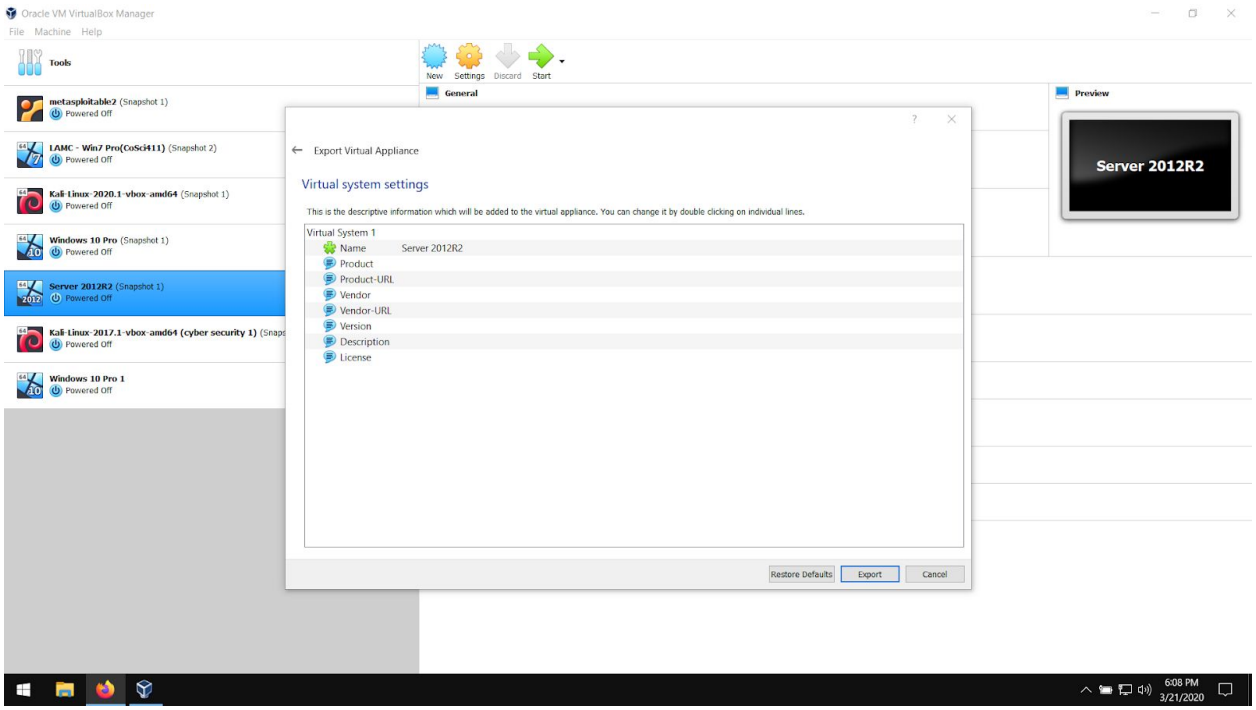
Since the OVA file is a copy of the virtual image, all settings last performed on the machine will be present.

VirtualBox - appliance settings



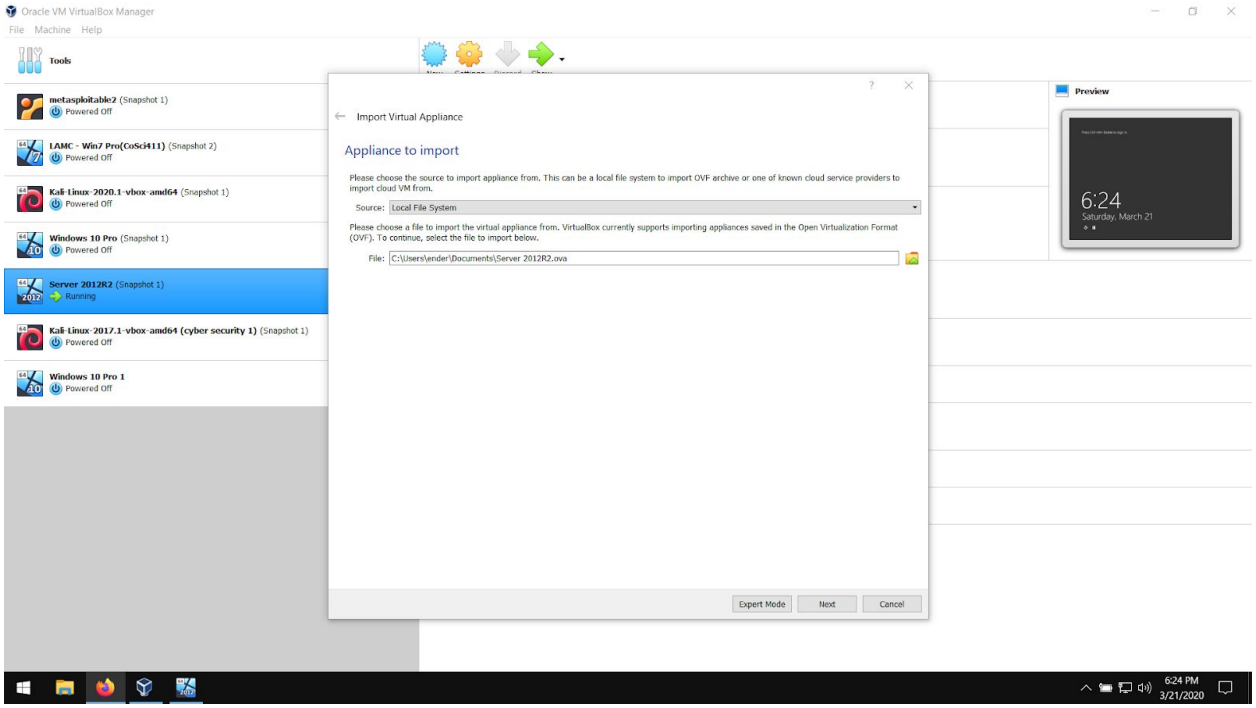
Next the same process for Windows server. All the same settings were set: OVF 2.0, Stripped all MAC addresses, and default other otherwise.

VirtualBox settings - virtual system settings



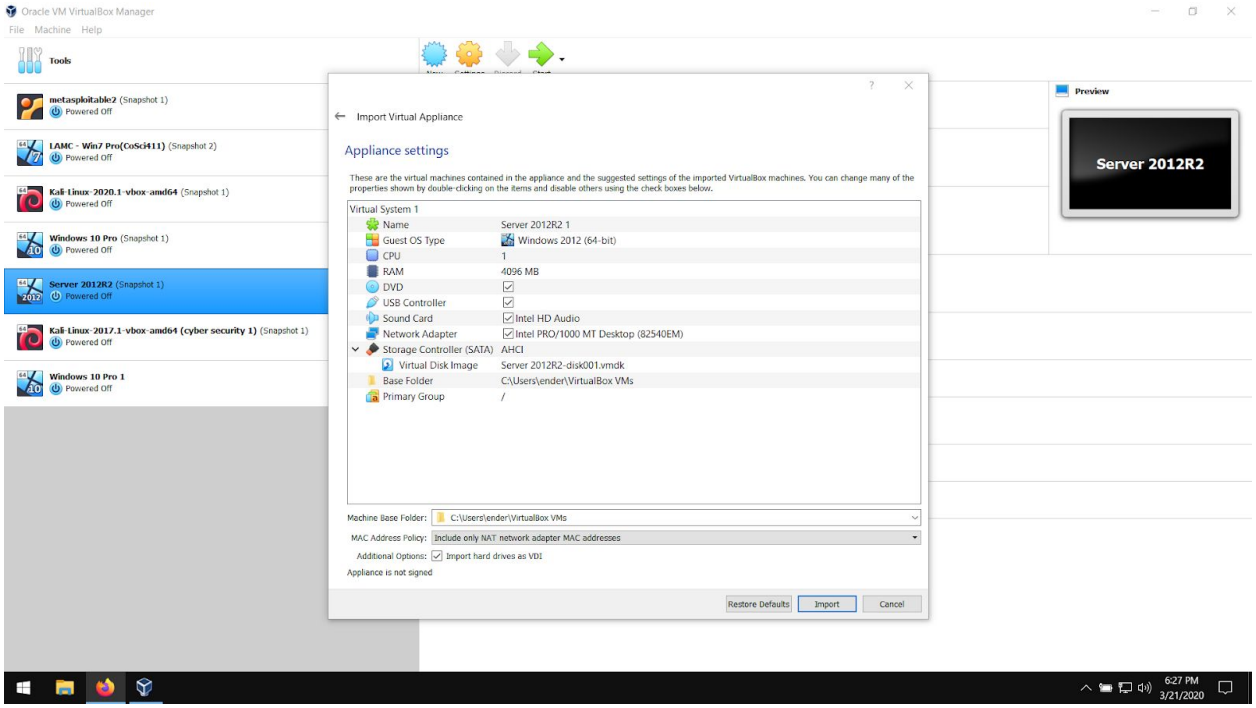
Default settings.

VirtualBox - import appliance



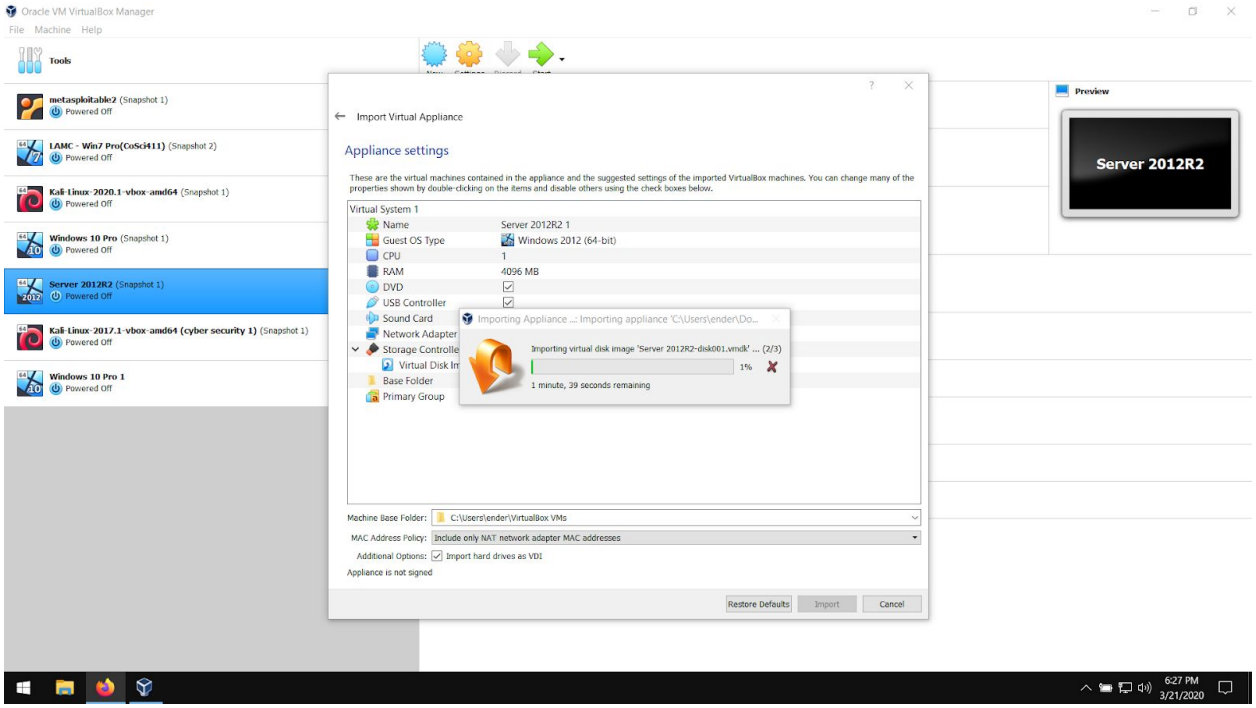
Importing the newly created Server 2012R2 appliance.

VirtualBox - import appliance



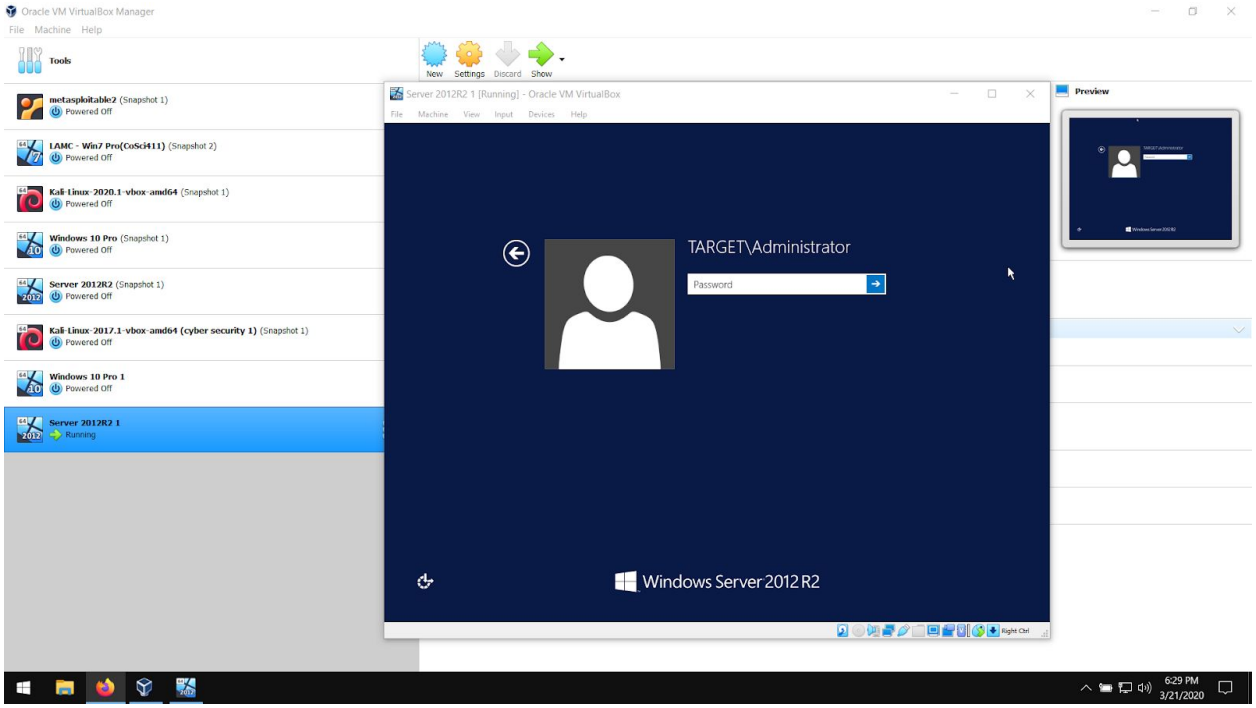
All settings left at default.

VirtualBox - importing appliance



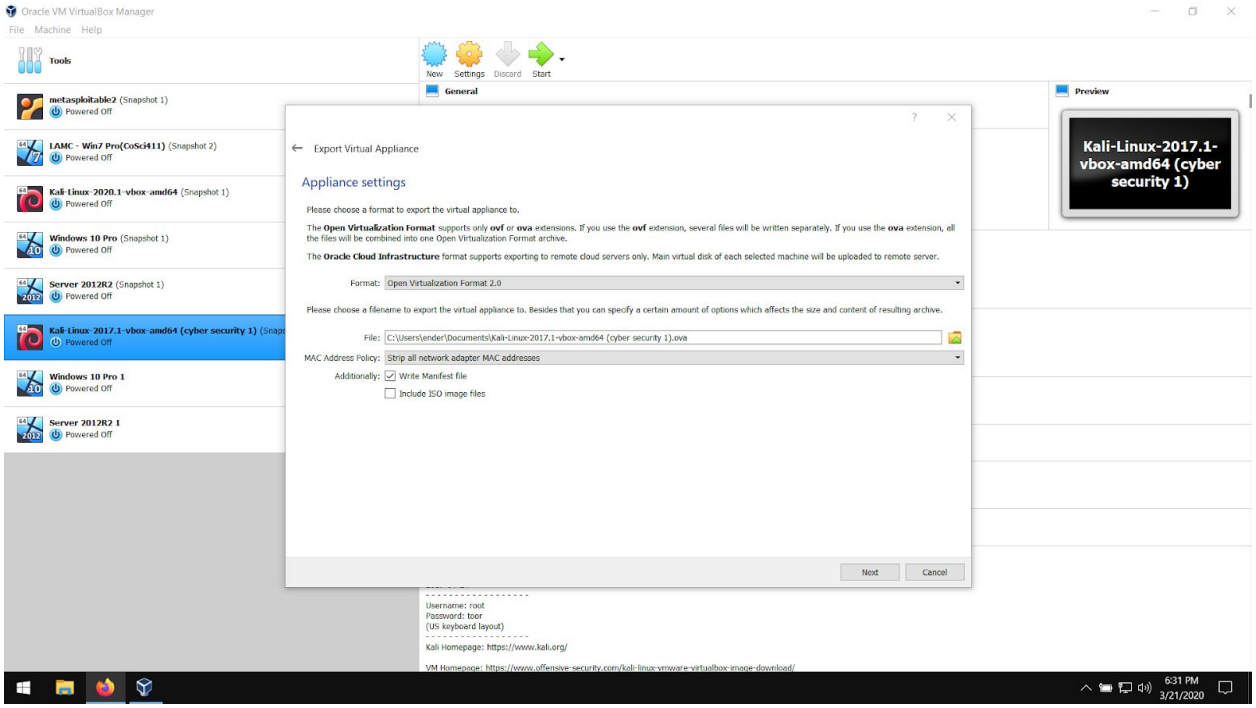
Import process has started.

Server 2012R2 - login



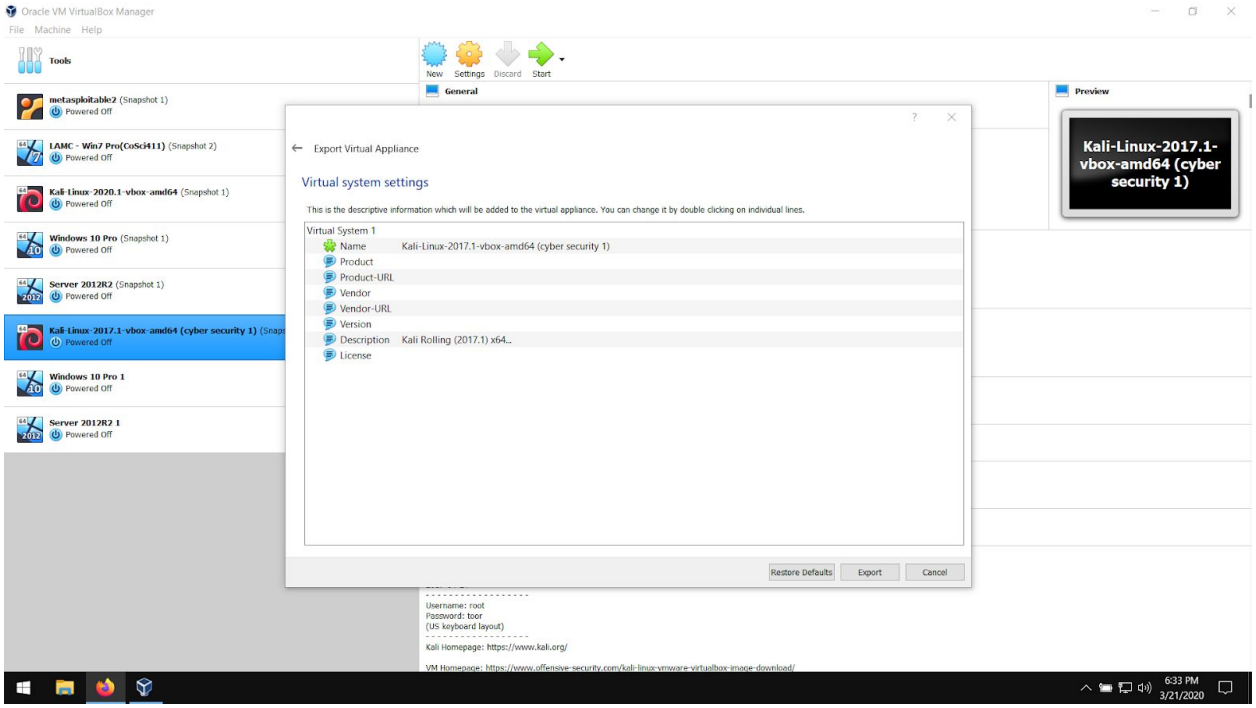
Note the domain is already set and ready for use.

VirtualBox - appliance settings



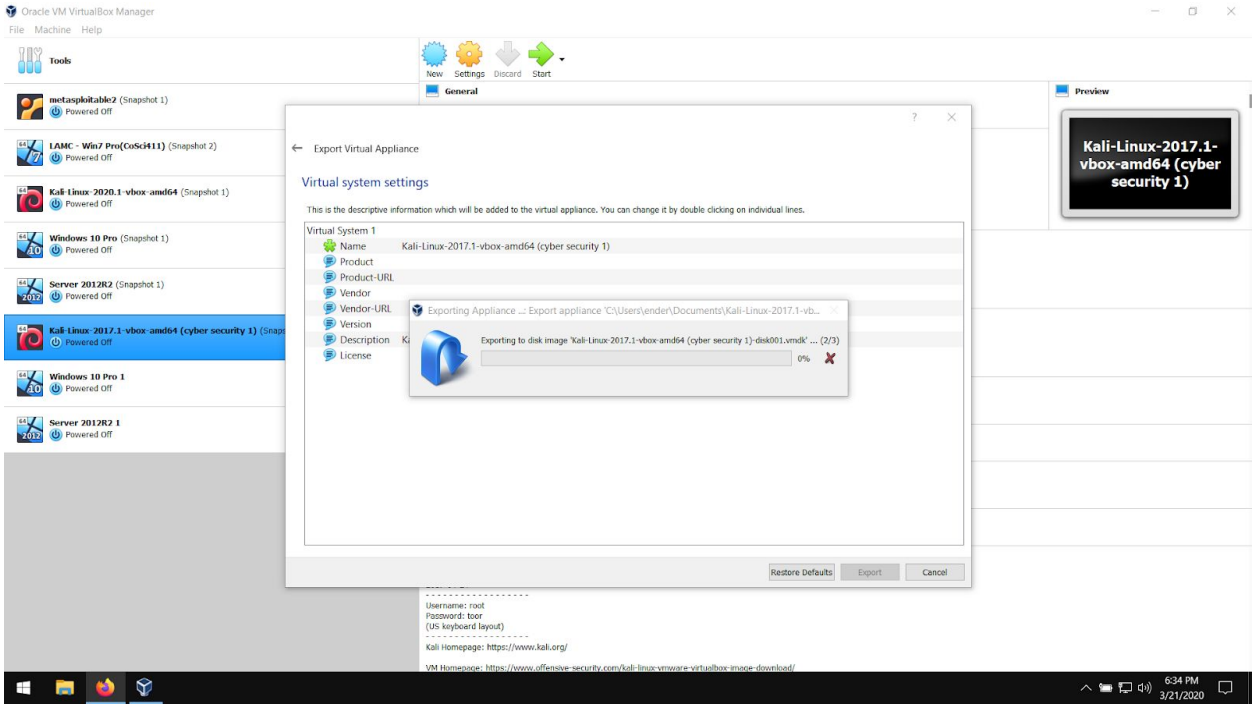
Next is Kali Linux, all the same settings are used: OVF 2.0, MAC addresses stripped, default for the rest.

VirtualBox settings - virtual system settings



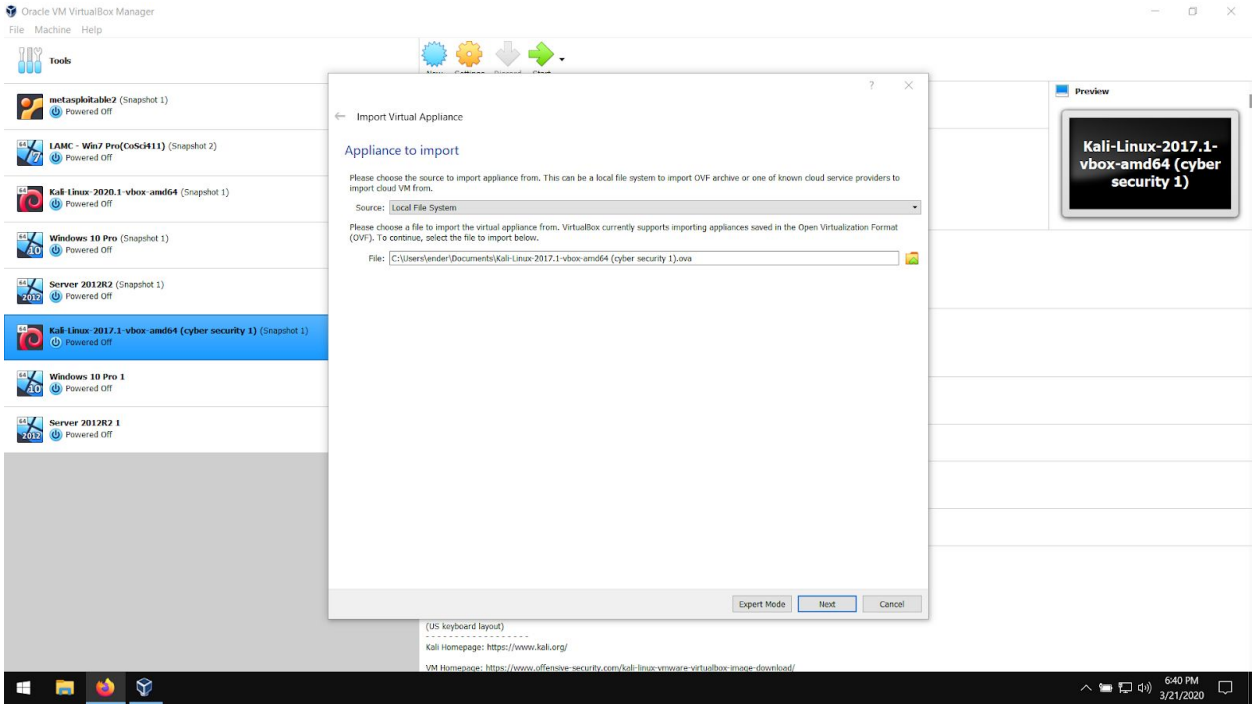
All settings are at default values.

VirtualBox - exporting appliance



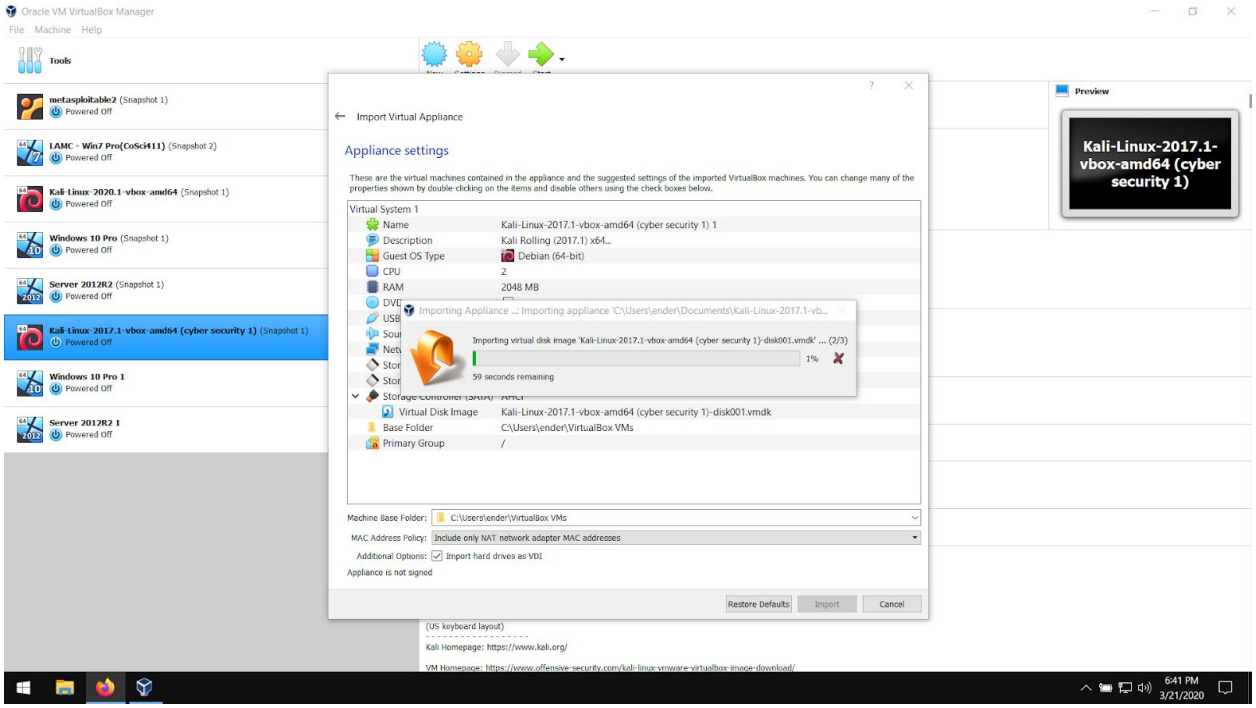
Exporting appliance settings have started.

VirtualBox - importing appliance



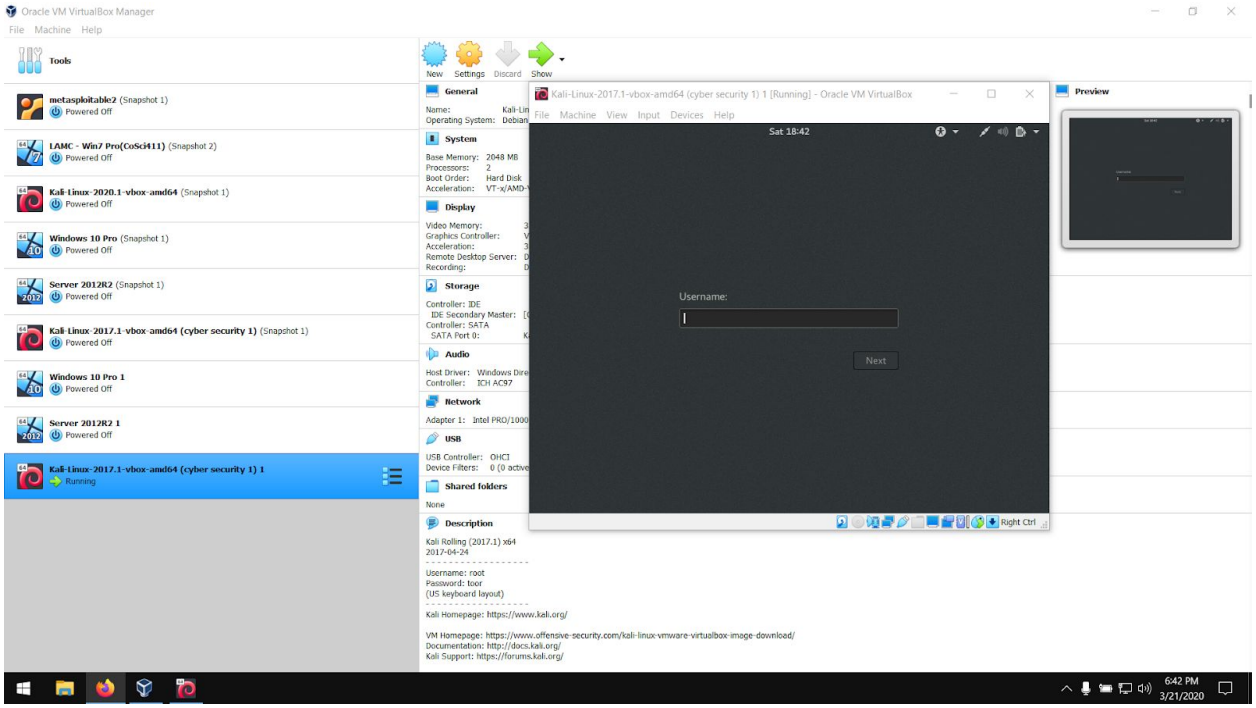
Importing the Kali Linux image.

VirtualBox - importing appliance



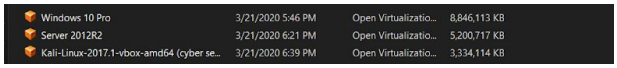
Import process has started. This seemed to be the fastest of the three imports.

Kali Linux - login



Login page for Kali Linux.

File explorer - OVA file sizes

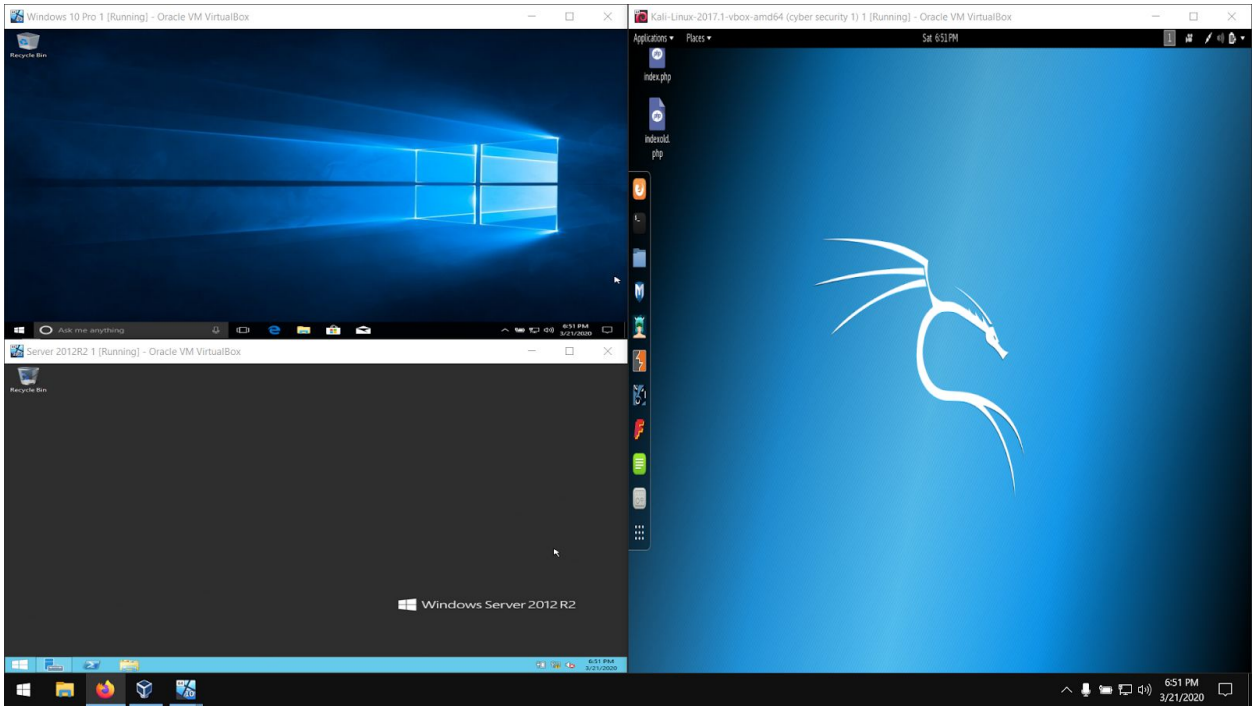


The largest by far is Windows 10 Pro.

3. Surprises. Things rarely go as planned. Include this in your report. If things aren't working, documenting the problem can help you to find the solution.

> Each OVA appliance successfully booted. The challenging part was waiting for the export process to finish. The Windows 10 Pro export took under twenty minutes, but the Server 2012R2 took around 25 minutes. There is a noticeably bigger Windows 10 Pro OVA file, this was expected given the size of the original image Windows 10 Pro occupies. Kali Linux seemed to export and import the fastest of the three virtual machines. Which makes sense since Kali Linux is the smallest of the images.

4. A screenshot of the final result of the assignment.



Each of the OVA appliances have successfully been created and verified via VirtualBox.

5. Summary. Did it work as expected? Did you need more research?

This lab was successful in creating three OVA files from Windows 10 Pro, Server 2012R2, and Kali Linux 2017. Each OVA file was exported and verified via starting each image in VirtualBox.The sizes of each OVA file are as follows: Windows 10 Pro - 8.8 GiB, Server 2012R2 - 5.2 GiB, and Kali Linux 2017 - 3.3 GiB. An OVA file is a single instance of a larger distribution of a Open Virtualization Format, which is defined as a "...hypervisor-neutral, efficient, extensible, and open specification for the packaging and distribution of virtual appliances composed of one or more VMs."[1] according to the Distributed Management Task Force. There are four known vulnerabilities[2] under the OVF search term including a format string and information disclosure vulnerabilities . Care should be taken to install only trusted OVA files from trusted sources especially in business and organizational network settings.

[1] https://www.dmtf.org/sites/default/files/standards/documents/DSP2017_1.0.0.pdf
[2] https://cve.mitre.org/cgi-bin/cvekey.cgi?keyword=OVF