

VirtualBox (Remote Host)

Project Inception Phase 2

Learning Goal

In this phase, you will continue exploring virtualization, but now on a remote system located in [CTP's data center](#). You will learn how to access network resources at CTP using a VPN to connect to CTP's network and a Remote Desktop Connection to connect to your assigned CTP system. We will be adding Debian Linux to our VM inventory.

Practical Usage

Both Virtualization and Remote Desktop Protocol (RDP) are often used in the industry. Understanding how to use each one is a great skill to have; however, using them together opens up a whole range of possibilities.

- In some situations, physical access to a machine may not be possible or practical and is rarely ideal. A computer may not be in the same location as you.
- Being able to remotely connect and control a computer to address issues is frequently the most practical way to provide support.
- Remote Desktop Protocol (RDP) helps address these needs.

Requirements

Connect to a remote computer using Remote Desktop Protocol (RDP) and create a virtual machine (VM) in VirtualBox. Install Debian. Create a clone of your VM.

Instructions

1. Create a ticket for this week's lab if you do not yet have one. If you already have a ticket for this week, add to it. Before you start this lab, write a summary in your own words describing what you need to do for this lab.
2. Use Remote Desktop Connection (RDP) to remotely connect to an assigned computer in CTP's data center.
3. Copy the Bodhi and Debian Linux ISOs from the itHub to the system that you are connecting to via RDP.
 - a. To access the Student NAS, see the [Available Network Resources](#) document
 - b. The username and password for the ISOs folder will be:
 - i. Username: image
 - ii. Password: image
 - iii. You can also select "Remember forever" and then click on the button that says Connect
4. Using VirtualBox on the remote computer, create a virtual machine.
 - a. Name: Bodhi-PC
 - b. Type: Linux
 - c. Version: Other Linux (64-bit)
 - d. Memory Size (RAM): 2048 MB
 - e. Storage: 10 GB
 - f. Processors (CPU): 2 cores
5. Insert the Bodhi ISO into your VM and then press Start.
6. Install Bodhi Linux in your VM.
7. For the user creation, use the following credentials
 - a. Username: localadmin
 - b. Password: adminX
8. When done, eject the ISO from the virtual optical drive.
9. Start up Bodhi Linux and make sure it is running correctly.

10. Shut down your Bodhi VM.
11. While the VM is powered off, right-click the Bodhi Linux VM in the VirtualBox interface. Select clone. Create a full clone of Bodhi Linux. Name it Bodhi-PC2. This will create a second VM and you will be able to run both side-by-side.
12. Try running both Bodhi Linux VMs.
13. **Check in with the instructor** - An instructor check-in means, stop working on your project and ask the instructor to review your work before moving on.
14. After check-in, delete the Bodhi-PC2 and select the “remove all files” option. Make sure you do NOT delete the first Bodhi-PC. We will use it in later labs.
15. Now that you have created your first VM on VirtualBox, repeat steps 5-14 using the **Debian.iso** and the configuration in step 17
16. Using VirtualBox on the remote computer, create a virtual machine.
 - a. Name: Debian-PC
 - b. Type: Linux
 - c. Version: Debian (64-bit)
 - d. Memory Size (RAM): 4096 MB
 - e. Storage: 20 GB
 - f. Processors (CPU): 2 cores
17. Install Debian Linux onto the VM. (If you are not sure what options to pick during installation, you can review the [Debian installation notes](#))

Lab Explanation

You will be using RDP to remote control a computer located at CTP. The remote computer serves as the virtual machine host (VM host) where you will create virtual machines. The VM Host does not have Windows installed, but a Linux distribution (Debian or Ubuntu) for its operating

system. It might take you a little time to get used to the Linux interface. Ask if you need help.

Using VirtualBox, you will create a virtual machine and install Debian Linux.

Essential ideas in this lab

- **Remote Desktop Protocol (RDP)** provides a user with a graphical interface to connect to another computer over a network connection.
- An **ISO** is a type of file that contains an identical copy (or image) of data found on an optical disc, like a CD or DVD.
- **VirtualBox** is a type 2 hypervisor that allows you to create virtual machines (VMs) and install guest operating systems hosted on the physical machine.
- A **hypervisor** is a software that creates and runs virtual machines by separating a system's operating system and resources from the hardware to allocate to VMs.
- A **Type 2 hypervisor** is a virtual machine manager (VMM) that is installed as a software application on an existing operating system (OS).

Additional Resources

- [Creating a Virtual Machine in VirtualBox](#)