

Remote Connectivity

“Desktop into the Remote Verse”

Learning Goal

Become familiar with using and setting up a variety of remote connectivity options, including Remote Desktop (RDP), TeamViewer, etc.

Practical Usage

Remote connectivity tools such as Remote Desktop, and TeamViewer are widely used and important tools for a computer technician. There are many different types of remote connectivity tools in the modern era of virtualization, cloud based services, central management and remote support. Knowing your remote connectivity options can help you work around problems and limitations, since not every type of remote connection will work in every circumstance.

Use cases

- **Remote user support.** It is frequently best to solve users' problems remotely. In some cases it would not be practical for you, the user and the system to be in the same place at the same time. Connecting remotely will almost always be the most convenient option.
- **Accessing physical servers.** Most physical servers will not have a monitor, aka headless.
- **Accessing virtualized systems.** Most modern servers and network services are deployed in virtual machines and typically do not have any physical access (no keyboard, mouse or monitor).
- **Cloud based services.** The same situation as virtualized systems.

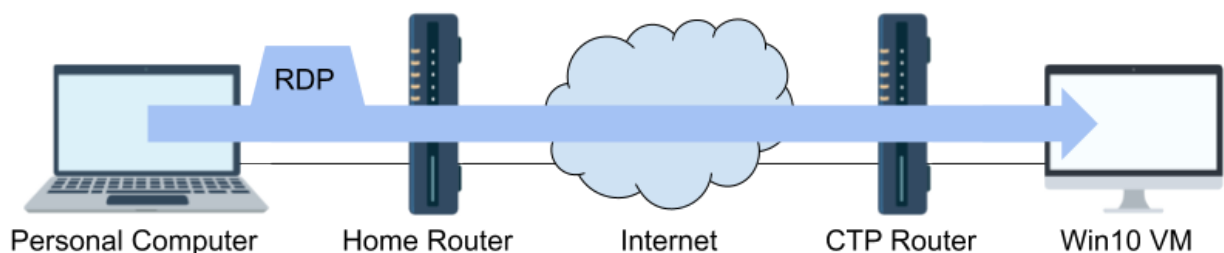
Requirements

This lab is a little different, so make sure you follow the instructions.

Imagine you are at work and your boss asked you to determine what remote desktop solution the company should use. Your boss would like you to test out as many different solutions as you can and provide them a report on what you find. It will need to include:

- Report on the benefits and limitations of each solution.
- Determine how much each solution would cost the company.

In the lab, you will be making connections between your home computer and a Virtual Machine (VM) installed with Windows 10 on your virtual host computer. Since the VM is located on CTP's network and your home computer is not, you will have at least 2 routers between your computer and the VM on CTP's network.



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. You will need to have a single Windows VM running for this lab. If you do not have one in your VM inventory, please create it by reimaging a VM (if you know how to) or doing a clean Windows install from ISO. Set networking to "bridged" so that it is on CTP's network.

- a. Windows Configuration for new install:
 - i. Name: Windows 10-PC
 - ii. Type: Windows
 - iii. Version: Windows 10
 - iv. RAM: 4096 MB
 - v. Storage: 50 GB
 - vi. CPU Processors: 4
3. Test each of the remote connectivity solutions listed below between your home PC and your Windows VM. Answer the following questions for each.
 - a. Does it work when connected to the VPN (Wireguard)?
 - b. Does it work when disconnected from the VPN?
 - c. Can you copy and paste from your home computer to the remote host?
 - d. What other unique features does each solution have? (check feature sheet on manufacturer's website)
 - e. For each solution, calculate the cost for 10 users in a business environment and for 100 users.
 - f. Make note of the license if a solution is released under a Free Open Source Software (FOSS) license.
 - g. What are the benefits and limitations of each solution?
4. Remote connectivity solutions to test.
 - a. Microsoft Remote Desktop Connection (RDP)
 - i. Built into Windows
 - ii. If you use Mac, find the RDP client for Mac in the Apple Store.
 - b. TeamViewer
 - i. <https://www.teamviewer.com/>
 - c. AnyDesk
 - i. <https://anydesk.com/en/downloads/windows>
 - d. Tight VNC
 - i. <https://www.tightvnc.com/>
 - e. NoMachine

- i. <https://www.nomachine.com/>
 - f. Google's Chrome Remote Desktop
 - i. <https://remotedesktop.google.com/>
 - ii. If you prefer a different web browser, is there an extension or add-on that will do the same thing?
 - g. Research an additional remote connectivity solution and test it.
5. Instructor check in.

Additional Notes

This lab requires researching each of the RDP tools - their use, setup and configuration. Although they serve a similar function, each has their own strengths and weaknesses. Take your time in exploring and testing each one out. **Remember, you will give your recommendation to your boss!** You can use this [Sample Template](#) as an example.

Some of the tools may require you to register an account, or the computers may have to be configured to either act as the server or a client. In that case, install the applicable software depending on the function it will serve.

'No Machine' in particular requires a restart after installation, so do this tool last.