

## Unit 3 Lab

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### The Many PC Ports

**1. What is port 79 used for? What is one cybersecurity concern related to Port 79?**

Port 79 is used for the finger protocol. Negatively, it provides key host info to attacker - Fingering host can be DOSd if hit with a recursive finger script till its memory and swap space fill.

**2. Choose one other port of your choice. Name the port and provide one example of an everyday use for that port. You may use unofficial ports for your answer.**

Port 443 is the standard port for all secured HTTP traffic, meaning it's absolutely essential for most modern web activity. Everyone that uses the internet uses this protocol every day. Encryption is necessary to protect your information, as it makes its way between your computer and a web server.

### Know Your IP

**1. Provide your public and private IP addresses and note whether they are IPv4 or IPv6 addresses. What are the cybersecurity implications of IP addresses, both public and private?**

I know what my IP addresses are, and I have both IPv4 and IPv6 ones. The default one for my computer that I see used more is the IPv4 one.

Private IPs are self-containment and have better security. Public ones, however, allow anyone anywhere to connect to your device directly from the internet (including bad guys). As they say, when you connect to the Internet, the Internet connects to you.

### NATS and You

**1. What steps, if any, would you need to take to set up a NAT in Virtualbox? What is the major limitation of NAT mode in Virtualbox for standard network use? Why might users set up a NAT anyway?**

To create the NAT Network, open VirtualBox and click File -> Preferences. In the Preferences window, click Network and then click the NAT Networks tab. In this new window, click the + button to create a new NAT Network. The disadvantage of NAT mode is that, much like a private network behind a router, the virtual machine is invisible and unreachable from the outside internet. You cannot run a server this way unless you set up port forwarding. Users may set one up anyway because a virtual machine with NAT enabled acts much like a real computer that connects to the Internet through a router.

**2. Why would a user consider setting up a real-world NAT device? How has the introduction of IPv6 emphasized the ethical dilemma related to using NAT?**

Because it can provide an additional layer of security by making the original source and destination addresses hidden, and it can prevent the depletion of IPv4 addresses. With the introduction of IPv6 addresses, IPv4 addresses are being replaced. the new 128-bit IPv6 addresses and provides enough addresses for the Internet to expand further without problems. IPv6 improves service all around the globe; for example, by providing future cell phones and mobile devices with their own unique and permanent addresses.