HackerFrogs Afterschool Network Hacking – Session 7

Class:
Network Hacking

Workshop Number:
AS-NET-07

Document Version:
1.75

Special Requirements:
Registered account
at tryhackme.com

Welcome to HackerFrogs Afterschool!

This is the seventh session for network hacking!

Let's go over the concepts we covered in the previous session!

This Session's Topics

- What are File Transfers?

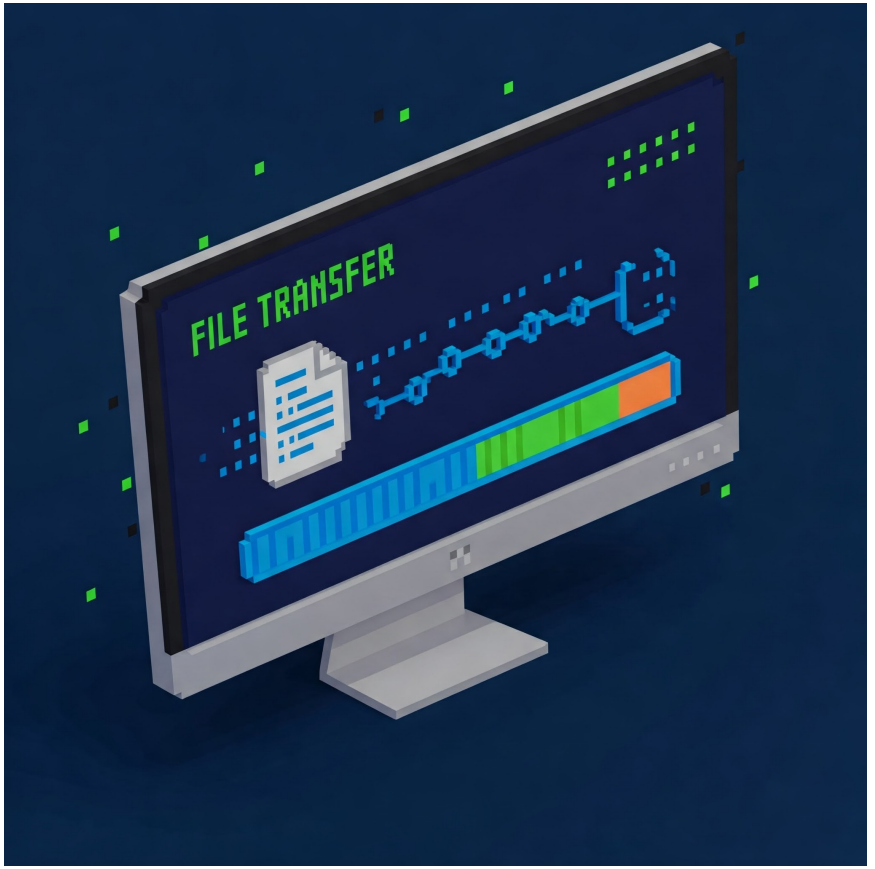
- Transferring small files by clipboard and Base64

- Transferring files via Python HTTP and Wget

- Transferring files via Scp (SSH)

What are File Transfers?

File transfers are an essential operation of computer networking, but how you move files from one network device to another depends on what two major factors--

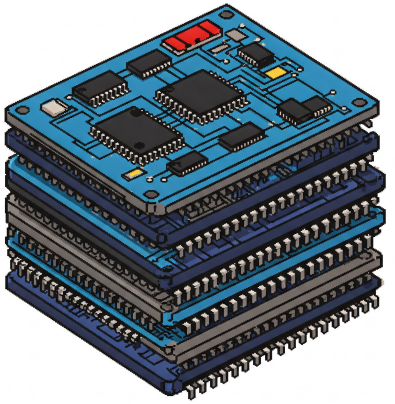


What are File Transfers?

1) The size of the file

   and

2) The software available on the sending and receiving devices



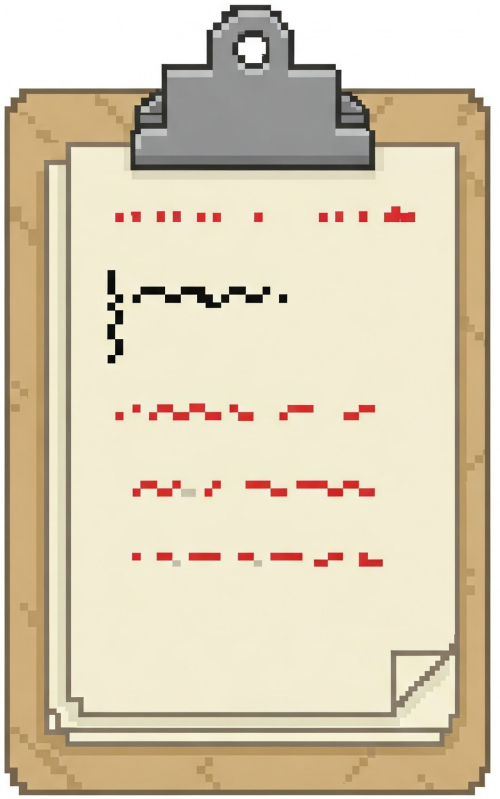
Accessing TryHackMe

Let's access this TryHackMe room to learn about file transfers:

https://tryhackme.com/room/c2carnage

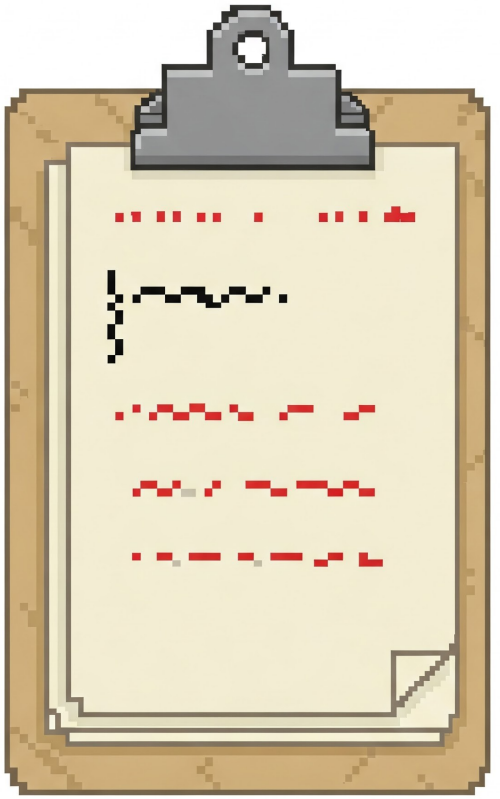
Transferring Small Files by Clipboard and Base64

If the file being transferred is sufficiently small (under 10 MB), then we can use a 'touchless' transfer method using the device's clipboard, and perhaps, the Base64 command



Transferring Small Files by Clipboard and Base64

This method is both convenient, and secure, since no data is sent over a network connection from the one device to another



Transferring Small Files by Clipboard and Base64

If the file contains binary data, like picture files, zip files or executables, we will need to encode the data before copying to the clipboard, and decode the data to restore it to its original form

Transferring Files via Python HTTP and Wget

On private networks, a convenient way to transfer files is to host files on a temporary HTTP server using Python

Then, on the receiving side, download with the Wget program

Transferring Files via Python HTTP and Wget

This method uses common tools, and works with files of all sizes, but it should never be used outside of controlled network environments, since it uses HTTP, an unencrypted protocol

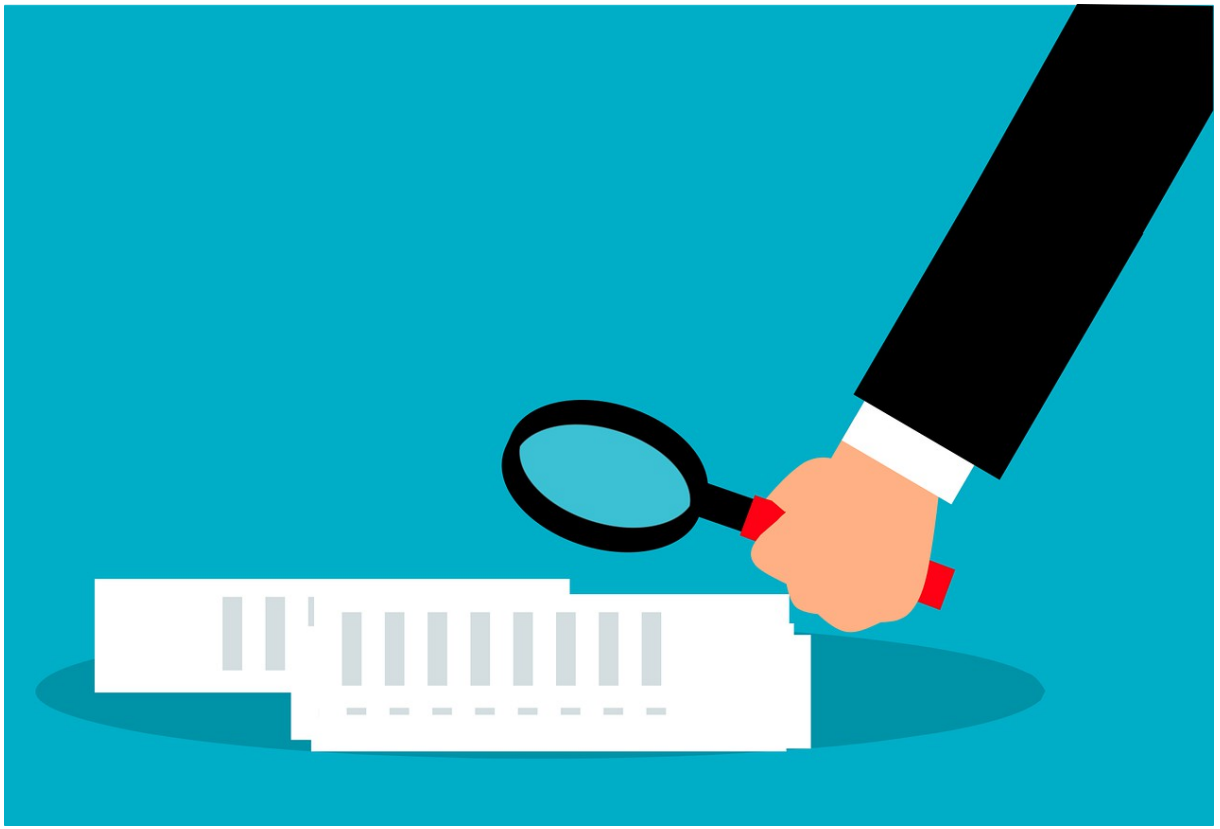
Transferring Files via Scp (SSH)

If both devices have SSH installed and running, and we have SSH credentials for the sending device, we can transfer files with the Scp (Secure Copy) program

Transferring Files via Scp (SSH)

This is a secure method for transferring large files, but it also has the most strict requirements among the methods we are discussing today, and the command syntax isn't very intuitive

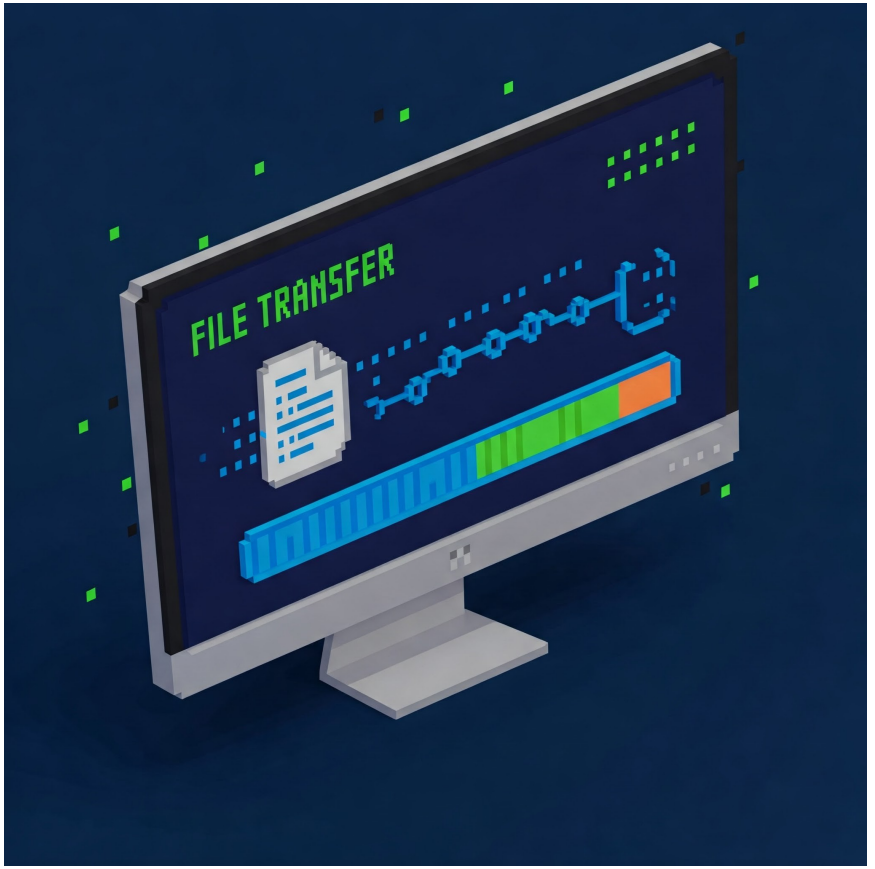
Summary



Let's review the network hacking concepts we learned in this workshop:

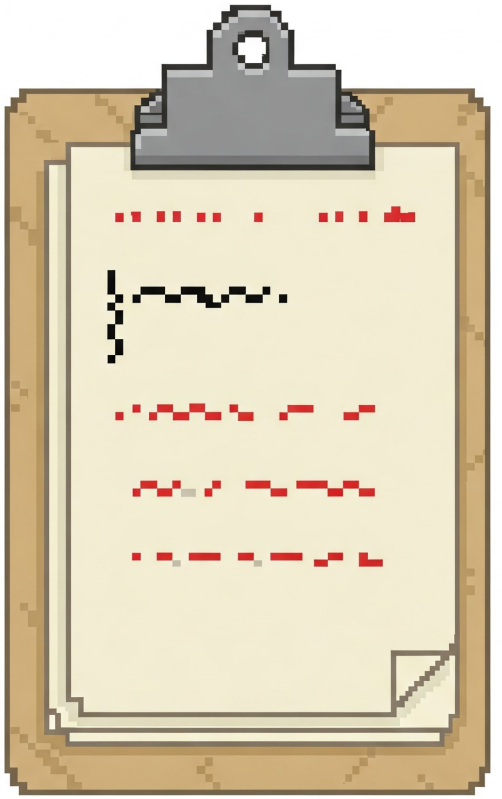
What are File Transfers?

File transfers are an essential operation of computer networking, and we learned a few different methods for file transfer



Transferring Small Files by Clipboard and Base64

The clipboard and Base64 method of file transfer is safe and convenient for small files, but it's not practical for larger files



Transferring Files via Python HTTP and Wget

In controlled networks, hosting files using the Python HTTP module and downloading with Wget is convenient, but it's not recommended for real-world scenarios, since it sends data unencrypted

Transferring Files via Scp (SSH)

If we have SSH on both devices and a set of credentials, the Scp program is an ideal file transfer solution, since it sends files over and encrypted protocol

What's Next?

In the next HackerFrogs Afterschool Network Hacking workshop, we'll be learning how to upload malicious files to hack network servers