Intro to Linux

System Management
1.2.4 Linking and Copying Files Between Systems

Lesson Overview:

Students will:
· Be able to use Linux commands to create symbolic links and copy files between systems

Guiding Question: How can Linux commands for linking and copying files be used to efficiently manage and transfer data between different systems?
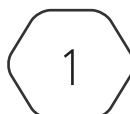
Suggested Grade Levels: 9 - 12

Technology Needed: None

CompTIA Linux+ XK0-005 Objective:

1.2 - Given a scenario, manage files and directories
- Copying files between systems
    - o rsync
    - o scp
    - o nc

Copying Files Between Systems

Files can be copied between systems in Linux using various methods and tools. The choice of method depends on specific requirements and the systems being used. Here are some common methods to copy files between Linux systems.

1. SCP (Secure Copy Protocol)
    SCP is a secure and widely used method to copy files between Linux systems over SSH (secure Shell). To use SCP, use the **scp** command in the following format: **scp** [options] **source_file user@ remote_host:destination_path**. For example: **scp myfile.txt user@192.168.1.100:/ path/to/remote/directory/**

    Files can also be copied from a remote system to a local system using **scp** by reversing the source and destination.

2. rsync
    rsync is a powerful tool for efficiently transferring and synchronizing files and directories. It's commonly used for backups and remote file transfers. To copy files using rsync, use the following syntax: **rsync** [options] **source_file user@remote_host:destination_path**. For example: **rsync -avz myfile.txt user@192.168.1.100:/path/to/remote/directory/**. Rsync can be more efficient than SCP, especially for large files and directories, as it can transfer only the difference between the source and destination.

3. nc
    The nc command is short for "netcat" and is a versatile networking utility in Linux. It is often referred to as the "Swiss Army knife" of networking because of its wide range of functionalities. In the context of moving files, nc can be used to transfer files between systems. Files can be sent from one system to another, or even received from a remote system. On the receiving end: **nc -l -p port > received_file** and on the sending end: **nc remote_host port < local_file**

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