Backing Up with rsync

LPIC-2: Linux Engineer (201-450)

Objectives:

At the end of this episode, I will be able to:

1. Describe the rsync utility and its use-case scenarios.
2. Use rsync to replicate files and folders on a Linux host.
3. Use rsync to replicate data via an SSH tunnel to another host.

> Additional resources used during the episode can be obtained using the download link on the overview episode.

- *rsync*
  - Synchronize files between multiple systems
  - Can perform one-time copies
  - Can be used to setup scheduled synchronizations
  - Operations can be one-way or bidirectional
  - General usage
    - `rsync <options> <source> <destination>`
- Backup a folder to another location
  - `rsync -azurP ~/Documents ~/Backup`
  - `-a` Archive (copy attributes)
  - `-z` Compress with gzip
  - `-u` Skip files that are already there
  - `-r` Recursive
  - `-P` Display progress
- Remote backup
  - *rsync* Listener
    - Requires rsync running on the remote host
    - TCP port 873
    - Fairly dated, not secure
    - `rsync -azurP /home/dpezet/Documents dpezet@10.0.222.50:/home/dpezet/`
  - *rsync* over SSH
    - Encrypted tunnel
    - SSH is easy to open on firewalls
    - `rsync -azurP -e ssh /home/dpezet/Documents dpezet@10.0.222.50:/home/dpezet/`
- Include/Exclude
  - Can specify files to handle differently
  - Can combine include/exclude
    - Applied in order
  - Transfer all except...
    - Exclude should come first
    - `rsync -azurP --exclude="*.pdf" --include ".*" /home/dpezet/Documents /home/dpezet/Backup`

    - Transfer nothing except...
        - Include should come first
        - `rsync -azurP --include="*.pdf" --exclude ".*" /home/dpezet/Documents /home/dpezet/Backup`
- Perform a test run
    - `--dry-run`
    - Does not actually copy/delete files
- Preserving permissions
    - Requires root
    - `-ogA`
        - `-o` Owner
        - `-g` Group
        - `-p` Permissions
        - `-A` ACLs (implies -p)