Backing Up with Time Machine

Objectives:

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

1. Configure Time Machine to backup a computer running macOS.
2. Verify a backup completed successfully.
3. Describe the supported destinations for a Time Machine backup.

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

- Time Machine

    - Easy to use backup system
    - Provides ongoing backups to another disk
    - By default backs up every hour

        - If a removable disk is used, it must be present
        - Changed files are tracked and backed up on schedule
        - Only changed files are copied
        - The entire file is copied

            - That is a problem for large files, as each copy is maintained

    - Backups are stored as a large series of hard links to unchanged files alongside the changed files
    - When space runs out, oldest backups are deleted
    - The larger the backup drive, the further back you can restore

- Hardware Requirements

    - Can back up to any disk other than the system volume
    - A secondary disk is recommended

- Time Machine Encryption

    - Can be encrypted
    - DEMO: Enabling Time Machine with Encryption

- Local Snapshots

    - A local backup cache is kept
    - Called a local snapshot
    - Enabled by default
    - Can be viewed in terminal

        - Terminal needs "Full Disk Access" permissions
        - `sudo tmutil listbackups`
        - `sudo tmutil listlocalsnapshots /Volumes/Macintosh\ HD`

- Network Backups

    - Backup to a network share hosted on a macOS server or Time Capsule WAP
    - DEMO: Network Backup