

Linux_Level_Up: DevOps & Scripting Mini Projects

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This project portfolio showcases practical Bash scripting and Linux system administration tasks as part of a DevOps skill-building journey. The scripts solve real-world problems like traffic monitoring, secure password generation, log archiving, and automated backups via cron jobs.

Project 1: Network Packet Monitoring (packet_stats.sh)

This script monitors network traffic on a specific port for 3 seconds and reports the number of packets transmitted. Useful for checking active connections, debugging services, or monitoring suspicious activity.

Usage: `sudo ./port_monitor.sh PORT_NUMBER`

Example: `sudo ./port_monitor.sh 8080`

Note: Root access is necessary because of TCPdump scanning.

Project 2: Password Generator (genpass.sh)

This Bash script generates strong, random 12-character passwords that meet the following security requirements:

- At least 1 digit (0-9)
- At least 1 lowercase letter (a-z)
- At least 1 uppercase letter (A-Z)
- At least 1 special character (!@#\$%^&* _+=...)

Project 3: Archive Files (Easy Auditing of Files)

This script archives log files from a specified directory within a given date range (YYYY-MM-DD to

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YYYY-MM-DD), organizing them into a dated folder at /tmp for audit purposes.

Usage: `sudo ./archive_files_by_date.sh /var/log/nginx 2024-01-01 2025-01-01`

Project 4: Backup Cron 2.0

This project sets up a daily cron job at 2 AM to back up log files from /var/log/ to /backups/ in a compressed .tar.gz archive.

Key Features:

- Automatic daily backups via cron
- Saves to /backups/logs_YYYYMMDD.tar.gz
- Supports manual execution with progress display
- Includes system and application logs
- Installs cron if missing with interactive setup

Summary of Skills Demonstrated

- Bash scripting and automation
- Cron job scheduling and Linux system maintenance
- Network monitoring and packet inspection
- File system navigation and archiving logs
- Secure password generation logic
- System audit and backup practices

GitHub Repository: https://github.com/Dev-Gyinae/Linux_Level_Up

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