

Unix Project - VPS Website with Automatic GitHub Updates

Presentation Topics

1. Project Description and Motivation

- Host a static website on a VPS (AWS Lightsail)
- Automatically deploy updates from GitHub
- Motivation: Learn DevOps basics, SSH security, automation, and working in a production-like environment

2. Major Technical Solutions Compared

- **Hosting:** AWS Lightsail vs DigitalOcean vs free VPS – *Chose Lightsail for simplicity and cost*
- **Web server:** Apache vs Nginx – *Chose Nginx for better performance with static sites*
- **Deployment:** GitHub Webhooks vs Cron Job – *Chose cron for simplicity with static content*

3. Demo Our Project

- Live visit of deployed website
- Show auto-deployment by pushing an update to GitHub
- Confirm website reflects latest commit

4. Git Repository Tour

- `index.html` and CSS in root
- Bash deployment script in `/usr/local/bin`
- Crontab entry for deployment
- `README.md`, `DECISIONS.md`

5. Development Journey (Plan vs Actual)

- Planned to use GitHub webhooks, but shifted to cron after testing
- Originally considered free hosting, but it was unreliable
- Communicated and resolved issues over Discord

6. Major Challenges

- Understanding and configuring SSH key-based access (used our previous knowledge from the labs)
- Properly setting up cron to run with correct permissions
- Debugging Nginx not reflecting latest changes without restart

7. Major Accomplishments

- Fully automated static site deployment from GitHub
- Secure VPS setup (SSH key login, UFW firewall)
- Clean team collaboration and final Git repo structure

8. Future Plans

- Implementing more security measures, like a better firewall and license for our website.

9. Contribution to a FLOSS Project?

- No direct contributions to FLOSS, but used and documented open tools (Nginx, Git, Linux, cron, etc.)

10. Why Should You “Buy” Our Product? (Self-Evaluation)

- Lightweight, easy to replicate static site deployment
- Great for small teams, hobby sites, or personal portfolios