

Technical Resume - Web Infrastructure Project

Line Spacing: 1.15

Technical Skills

- **Operating Systems:** Linux (Ubuntu/Debian)
- **Web Servers:** Apache HTTP Server
- **Databases:** MySQL (Relational Database Management, Schema Design, CRUD Operations)
- **Backend:** PHP (Database Integration, Dynamic Content Rendering)
- **Networking & DNS:** Dynamic DNS (DuckDNS), Domain Management, Port Forwarding (80, 443)
- **Security:** SSL/TLS Certificates, Let's Encrypt, Certbot (Automated & Manual challenges)
- **Infrastructure:** Cloud Instances (EC2/Azure), Virtual Hosting, Linux File Permissions

Projects

Dynamic DevOps Portfolio & Database Integration

Architected and deployed a data-driven web application on a Linux instance that dynamically serves professional data from a backend MySQL database.

- **Database Engineering:** Designed and implemented a relational MySQL schema to store technical skills, categories, and proficiency levels, enabling scalable data management.
- **Full-Stack Connectivity:** Developed PHP-based middleware to establish secure connections between the web front-end and MySQL backend, utilizing the mysqli extension for real-time data retrieval.
- **Dynamic UI Rendering:** Engineered a responsive "Skills Grid" that automatically generates CSS-styled cards for every entry in the database, reducing manual HTML updates by 100%.
- **Troubleshooting & Log Analysis:** Resolved complex "500 Internal Server Errors" by performing root-cause analysis on Apache and PHP error logs, identifying and fixing critical database connection and permission issues.

Multi-Domain Web Hosting & Security Infrastructure

Architected and deployed a multi-tenant web server environment on a Linux instance capable of hosting multiple independent web applications using a single Public IP address.

Key Achievements:

- **Virtual Host Configuration:** Engineered separate Apache Virtual Host files to route traffic based on ServerName, allowing the simultaneous hosting of a portfolio landing page and two distinct web application clones.

- **Automated & Manual SSL Deployment:**
 - Implemented automated SSL encryption using Certbot's Apache plugin for primary domains.
 - Demonstrated advanced security proficiency by manually fulfilling HTTP-01 challenges (ACME protocol) to secure secondary domains, involving manual directory structuring and token verification.
- **Traffic Management:** Configured Port 80 to Port 443 permanent redirection to ensure all user traffic is encrypted (HTTPS), improving site security and SEO posture.
- **Server Hardening:** Applied rigorous Linux permission schemas (755 for directories, 644 for files) and ownership (www-data) to ensure the principle of least privilege across the web root.
- **Custom Landing Page:** Developed a central "Project Hub" landing page in HTML/CSS to act as a gateway for multiple hosted services, optimizing the user experience for IP-based traffic.

Linux System Administration & Optimization

Managed core system operations to maintain high availability for web services.

- Utilized command-line tools for real-time troubleshooting (configtest, systemctl, journalctl).
- Managed recursive ownership and permission updates across complex directory structures to resolve access issues.
- Configured custom logging paths for separate virtual hosts to monitor traffic and debug server errors independently.