Francis Refol
IT Automation Engineer / DevOps / Infrastructure

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Summary

Hands-on IT Automation Engineer with experience in infrastructure-as-code, CI/CD pipelines, identity management, and modern cloud-native tools. Proven ability to design, automate, and maintain enterprise-grade environments.

Work Experience

TECHNICAL APPLICATIONS ENGINEER   Jul 2022-Aug 2024

Technology Concepts & Design Inc | Purchase, NY
TCDI is a legal services and cybersecurity solutions company.

- **Developed Ansible scripts** to automate comprehensive management of network inventories, including the deployment of security patches and application updates. Leveraged APIs and SQL for playbook creation.
- **Configured and maintained enterprise monitoring tools** to track system health and job workflows across hybrid environments (Windows, Linux).
- **Managed and maintained** critical development assets for the TCDI team, including GitHub Enterprise server, TeamCity, JFrog Artifactory, JFrog XRay, and SonarQube.
- **Supported and administered** virtual machines running on Windows and Ubuntu Linux operating systems.
- **Supported and administered** PingID and PingFederate to orchestrate authentication and authorization of users to internal applications.
- **Maintained and supported** Nuix servers utilized by e-Discovery data processors.
- **Developed and maintained** software using C# and Java, integrating with Nuix and Relativity APIs.
- **Authored and maintained Standard Operating Procedures (SOPs)** to document daily operational workflows, improving team efficiency and onboarding.

ASSISTANT DIRECTOR OF DEVELOPMENT OPERATIONS   May 2011-Jul 2022

Stroz Friedberg, an AON Company | New York, NY
Stroz Friedberg is a full service investigation firm that develops data discovery software. It was acquired by TCDI on July 2022.

- **Led end-to-end test lifecycle management** for proprietory Win32 applications (Stroz Discovery and Nuix-X), improving defect resolution timelines.
- **Automated software validation processes** using Pytest and Selenium, enhancing reliability and deployment speed.
- **Delivered high-quality builds** through automated build systems such as Jenkins and TeamCity.
- **Developed custom MSI installers** for enterprise applications, ensuring seamless deployment across environments.
- **Integrated backend services with e-Discover tools** (Nuix, Relativity APIs) to enhance legal data processing workflows.

BUILD MANAGER/DEVELOPER   Feb 2009-Apr 2011

BlackStratus | Edison, NJ

BlackStratus (formerly NetForensics) develops enterprise-class
Security Information and Event Management (SIEM) software.

- **Managed and enhanced** a custom automated build system utilizing Java and Apache Ant, ensuring efficient and reliable build processes.
- **Maintained and developed** the installation codebase for the nFX SIM One product using Advanced Installer and Java.
- **Created and deployed** patch updates for the nFX SIM One product, ensuring seamless functionality and user experience.

ADVANCED DEVELOPMENT ENGINEER   Aug 2006-Feb 2009

NETGEAR Incorporated | San Jose, CA

NETGEAR is a worldwide provider of networking products for the
home and business.

- **Engineered firmware solutions** in an embedded Linux environment and **created MSI installers** for Windows components.
- **Designed, implemented, and maintained** an automated build system to streamline development processes.
- **Oversaw and conducted** comprehensive internal and external testing to ensure product quality.
- **Collaborated with global support teams** to develop and enforce procedures aimed at preventing and eliminating defects in both new and existing products.

VARIOUS TECHNICAL & LEADERSHIP ROLES   Apr 1990-Aug 2006

Held progressively senior positions in software development,
automation, quality assurance, and operations across multiple
organizations, including McAfee Software, SkipJam Corporation, and
Helix Software. Led CI/CD implementations, managed QA testing
processes, developed enterprise software solutions, and oversaw IT
operations to support business growth.

Core Skills

- **Automation & Monitoring:** Ansible, Rundeck, Jenkins, TeamCity, RESTful APIs, CI/CD, MSI
- **Infrastructure & Virtualization:** VMWare, Proxmox, Windows, Linux, Docker, Network Administration
- **Security & Compliance:** SIEM, PingID, PingFederate, SolarWinds, Disaster Recovery
- **Scripting & Development:** Python, Bash, Powershell, Java, C#, Git, GitHub, Jenkins, TeamCity
- **Project Tools:** Jira, Confluence, YouTrack
- **Soft Skills:** Documentation, Cross-functional Collaboration, Problem Solving, Communication

Home Lab & Automation Portfolio

- Built and maintain a fully-featured homelab using **Proxmox** virtualization, Ubuntu VMs, and Docker — simulating production-grade infrastructure.

- Provision infrastructure and applications via **Ansible** and **Terraform** (IaC), achieving reproducible, version-controlled deployments.
- Automate CI/CD, testing, and deployment pipelines using **GitHub Actions**, **Jenkins**, and **Semaphore**, including automated secret management.
- Implement identity and access management using **Microsoft Entra ID (Azure AD)** + Active Directory, standardizing SSO and centralized authentication for Linux and Windows hosts and services.
- Design hybrid storage & backup architecture: local SSDs, **Ceph** cluster, iSCSI/NAS, NFS/Samba (TrueNAS), with VM snapshot backups via **Proxmox Backup Server**.
- Configure network services and reverse proxy infrastructure: redundant **Pi-Hole DNS** servers, layered firewall, and **Nginx** reverse-proxy cluster with automated **Let's Encrypt** TLS certificates.
- Deploy observability and monitoring stack using **Prometheus** for metrics collection and **Grafana** for dashboards, along with logging and alerting pipelines to track VM/container health, resource utilization, and service uptime.
- Maintain full version-controlled documentation, architecture diagrams, and automation scripts to ensure reproducibility, auditability, and maintainability.

Education

Bachelors of Science in Computer Engineering, CUNY Brooklyn College, 1990