Infrastructure Automation MCP

Executive Summary

An AI-powered CI/CD system designed to automate Okta and AWS EC2 infrastructure provisioning with speed, accuracy, and full auditability.

The Challenge

Design and implement a reliable CI/CD pipeline for managing Okta users, groups, and AWS EC2 infrastructure while eliminating manual effort and human error.

The Solution

A fully functional infrastructure automation platform powered by MCP, Terraform, and GitHub Actions, enabling conversational DevOps workflows.

Key Metrics

Before	After
45 min provisioning	30 seconds
Manual, error-prone	Automated, validated
Fragmented audit trail	Complete Git history

Technologies Used

Okta • AWS (EC2, IAM, S3) • Terraform • GitHub Actions • Slack • Python • MCP

What I Built

• 15+ MCP tools for infrastructure automation •
End-to-end CI/CD pipeline with auto-destroy •
GitHub Projects integration • Slack
notifications and approvals • SOC2-ready audit
trails

Links

Video Demo: https://www.loom.com/share/f9834c96dbd34dc380d274aa623f28d1
GitHub Repo: https://github.com/metalfa/infra-automation-mcp
Full Documentation: See README.md

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