

FERDIAN HANIF

Computer Engineering Graduate | Cloud & Systems Infrastructure Engineer

Email: ferdianhanif001@gmail.com | Phone: +62 852-7456-7010 | Location: Jakarta Barat, Indonesia
Portfolio: ferdianhanif.pages.dev | GitHub: github.com/ferdianhanif | LinkedIn: linkedin.com/in/ferdianhanif

PROFESSIONAL SUMMARY

Computer Engineering graduate (S.T., Universitas Andalas) with practical experience deploying Linux systems, cloud infrastructure, and autonomous AI agent runtimes on AWS. Hands-on background configuring Multi-AZ environments using AWS CloudFormation, running containerized services with Docker, and securing remote VPS operations over private Tailscale WireGuard mesh tunnels without open public ports. Skilled in Python (Boto3) automation, Bash scripting, CloudWatch observability, and TCP/IP network diagnostics. Focused on building reliable, cost-efficient, and secure cloud workloads.

CORE TECHNICAL COMPETENCIES

- Cloud & Virtualization (AWS):** Amazon VPC (Multi-AZ, Public/Private Subnets, NAT Gateway), AWS Lightsail, EC2, IAM Access Control (RBAC, Least Privilege), S3 Storage Lifecycles, RDS MariaDB/MySQL, Systems Manager (SSM).
- Infrastructure as Code & Observability:** AWS CloudFormation (YAML Stack Automation), Terraform concepts, Amazon CloudWatch (Agent Setup, Metric Filters, Alarm Thresholds), EventBridge, Amazon SNS Alerting.
- Containers & Systems Administration:** Linux/Unix (Ubuntu, Amazon Linux), Docker Containerization, Systemd Daemons & User Lingerling, Bash Shell Scripting, Git & GitHub Actions CI/CD Workflows.
- Networking & Zero-Trust Security:** Tailscale WireGuard Mesh VPN, TCP/IP Protocol Analysis, Port Governance, Security Groups & NACLs, VPC Flow Logs Forensic Auditing, Cisco Cybersecurity Essentials.
- Scripting & Databases:** Python (Boto3 SDK Automation, Pandas/NumPy Data Pipelines), Relational SQL (PostgreSQL, MySQL, MariaDB Data Migration & Backup Dumps), REST API Integration.

TECHNICAL & CLOUD PROJECTS

1. Autonomous AI Agent Infrastructure & Gateway | AWS Lightsail, Docker, Tailscale, Linux, Python

(github.com/ferdianhanif/vps-ai-agent-deployment)

- Deployed an autonomous background task runner (Hermes Agent) on an AWS Lightsail Ubuntu instance, utilizing systemd user lingering for service persistence across reboots.
- Packaged OmniRoute in Docker with host networking to aggregate multiple LLM providers, implementing automatic retry fallback upon encountering HTTP 429 rate limits.
- Hardened server attack surface by removing custom web ports from the AWS firewall, routing all dashboard traffic through a private Tailscale WireGuard mesh tunnel.
- Diagnosed and resolved internal hairpin NAT packet drops by retargeting agent endpoints to 127.0.0.1, eliminating external loopback delays and reducing prompt latency.
- Configured a 2 GB SSD swap buffer to prevent Linux kernel Out-Of-Memory (OOM) process termination during concurrent token loads, operating the stack at \$12/month.

2. Enterprise Cloud Systems & Reliability Monorepo | AWS, Linux, CloudFormation, Python

(github.com/ferdianhanif/aws-cloud-engineering-labs)

- Architected 50 modular cloud infrastructure environments across Multi-AZ setups, establishing zero-trust network boundaries with private subnets and NAT Gateways.
- Automated declarative stack provisioning via CloudFormation YAML templates, dynamically resolving SSM Parameter Store AMI IDs for repeatable deployments.
- Configured CloudWatch Agents and metric filters to detect HTTP 4xx/5xx errors, dispatching automated alerts through Amazon SNS.
- Engineered automated backup routines with Python Boto3 to manage EBS snapshot lifecycles and S3 object versioning with point-in-time recovery.
- Modeled compute rightsizing using the AWS Pricing Calculator, projecting 50% monthly cost savings through vertical instance adjustments.

3. Embedded Security Appliance & Real-Time Telemetry | Bachelor Thesis Project (Feb 2024 - Jun 2024)

- Constructed an embedded physical access control unit using an ESP32 microcontroller, routing automated event logs and real-time alerts via Telegram Bot API.

PROFESSIONAL EXPERIENCE

Infrastructure Support Assistant (Internship) | PT Semen Padang (Padang, Indonesia | Feb 2022 - Mar 2022)

- Handled tier-1 technical diagnostics across corporate departments, maintaining system availability for departmental Linux and Windows workstations.
- Managed physical and logical network routing, configuring switch port allocations and static/DHCP IP address assignments.
- Assisted senior engineers in fiber optic link testing, localizing physical cable faults using Visual Fault Locator (VFL) optical lasers.

EDUCATION & CERTIFICATIONS

Bachelor of Engineering (S.T.) in Computer Engineering | Universitas Andalas (GPA: 3.32 / 4.00 | Graduated Aug 2024)

- AWS re/Start Program: Cloud Architecture & Systems Operations** - Amazon Web Services (2026)
- Cisco Cybersecurity Essentials** - Cisco Networking Academy