AASTHA SHRESTHA

DevOps Engineer

shresthaaastha121@gmail.com | +977 9800798327 | linkedin.com/in/aastha-shrestha | Lalitpur, Nepal

PROFESSIONAL SUMMARY

Results-driven DevOps Engineer with strong experience on AWS Cloud (EC2, S3, IAM, Security Groups) deploying secure, scalable infrastructure, and hands-on proficiency in Infrastructure as Code (Terraform, Ansible) and CI/CD pipelines (Jenkins, GitHub Actions), with automation scripting in Python and Bash. Solid knowledge of Linux administration, Docker, Kubernetes, networking, and system monitoring (Prometheus, Grafana, Grafana Loki). Experienced with Git-based version control, backend application deployment, and maintaining reliable, high-availability production environments. Brings hands-on backend development experience (RESTful APIs, ASP.NET Core, Python) alongside excellent problem-solving and teamwork skills, with a track record of close cross-functional collaboration across infrastructure and release engineering work.

TECHNICAL SKILLS

Cloud Platforms: AWS (EC2, IAM, S3, Security Groups), Azure, secure & scalable infrastructure deployment, Linux Administration, Apache, Tinyproxy, WHM/cPanel, VPS

Infrastructure as Code & CI/CD: Terraform (AWS EC2, VPC, Security Groups), Ansible (Mid-Repo Triggers), Jenkins, GitHub Actions (Self-Hosted Runners), automation scripting in Python & Bash, Cron Jobs

Containerisation & Networking: Docker, Docker Compose, Kubernetes, Proxmox VE, LXC Containers, Virtual Machines, VLANs & network topology design

Monitoring & Logging: Grafana, Grafana Alloy, Prometheus, Grafana Loki, Falco, Falcosidekick, system & application monitoring

Security: HashiCorp Vault (PKI & Secrets Engine), SonarQube, Trivy, SSL/TLS Automation, Server Hardening

Version Control: Git, GitHub — branching strategies, repository access controls, safe-directory policies

Backend Development: RESTful API development, ASP.NET Core, ASP.NET MVC, Laravel Artisan, Entity Framework, Python scripting

Databases: MySQL, MariaDB, SQL Server — backup & restore, collation management, schema migration

Languages: Bash, Python, C#, PHP (Laravel)

EXPERIENCE

DevOps Engineer · Mantra Ideas Pvt. Ltd.
Feb 2025 – Present

Infrastructure & Virtualisation

- Administered Linux production servers, enforcing least-privilege file permission policies, ownership controls, and OS-hardening benchmarks to maintain compliance and sustained operational integrity.
- Deployed and maintained Proxmox VE hypervisor clusters hosting heterogeneous fleets of virtual machines and LXC containers, with workload-aware resource allocation to sustain high-availability SLAs.
- Architected internal network topologies, VLANs, and bridge configurations within Proxmox VE to enforce traffic segmentation and strengthen the security perimeter between service boundaries.
- Engineered VM and container provisioning automation, eliminating manual provisioning toil and guaranteeing consistent, idempotent environment builds across all target systems.

CI/CD & Automation

- Provisioned and operated self-hosted GitHub Actions runner infrastructure on dedicated Proxmox VMs, delivering low-latency, on-premises pipeline execution with direct integration to internal network resources.
- Architected GitHub Actions workflows incorporating Ansible mid-repository triggers — autonomously invoking Ansible playbooks on code merge to orchestrate configuration convergence, service restarts, and full environment synchronisation with zero manual intervention.
- Configured Laravel Artisan scheduling, queue worker supervisory processes, and background job processing pipelines to sustain high-throughput data ingestion workloads at production scale.
- Integrated HashiCorp Vault PKI engine to automate X.509 certificate issuance and enforce centralised secrets governance across all container and VM environments.
- Authored and maintained infrastructure-as-code using Terraform and Ansible, ensuring fully declarative, repeatable, and auditable environment deployments across all target stages.

Monitoring & Observability

- Architected and deployed a comprehensive observability stack — Falco, Falcosidekick, Grafana Loki, and Grafana Alloy — delivering end-to-end telemetry coverage across all production systems.
- Designed log-based alerting rule sets, custom Grafana dashboards, and application performance metric pipelines to enable real-time anomaly detection and proactive incident response.
- Investigated and resolved production incidents surfaced via automated alert workflows, measurably improving MTTR, application reliability, and service uptime SLOs.

Networking & Proxy Management

- Managed Apache virtual host configurations, domain redirection rulesets, DNS record management, and subdomain CNAME aliasing across multi-tenant client environments.
- Configured Tinyproxy to tunnel local development traffic through a VPS endpoint, enabling production-equivalent integration testing and accurate environment parity validation.
- Administered multi-domain email forwarding rule sets and resolved cross-server delivery failures in coordination with upstream email providers; authored automation scripts to reduce recurring administration overhead.

Database Management & Security

- Administered MySQL and MariaDB instances — resolving collation conflicts, executing schema migrations, and performing backup and point-in-time recovery operations with zero data loss.
- Applied server-hardening controls and centralised application secret governance via HashiCorp Vault, eliminating credential exposure and plaintext secret storage across all deployment environments.
- Embedded SonarQube static analysis and Trivy container vulnerability scanning into CI pipelines, enforcing continuous security assurance gates on every release artefact.
- Implemented structured Git branching strategies, repository access controls, and safe-directory policies to support secure, auditable collaborative development workflows.

.NET Backend Developer · GrayCode Technology · Full-time
Mar 2023 – Sep 2024 · 1 yr 7 mos · Lalitpur District, Nepal

- Developed and maintained RESTful APIs and web services enabling client applications to interact with the backend.
- Handled data processing, storage, and retrieval, ensuring efficient interaction with databases.
- Designed and implemented core application functionality and business logic.

Core Skills and Tools:

- **Languages:** C#, ASP.NET Core, ASP.NET MVC
- **Frameworks:** .NET Core, .NET Framework, Entity Framework
- **Databases:** SQL Server, MySQL
- **Tools:** Visual Studio, Git
- **APIs:** RESTful services

KEY PROJECTS

OCCS — *Call Center / VoIP Platform*
Stack: Asterisk · Traefik · Hetzner Cloud · GitLab CI/CD · Ansible · SonarQube

- Provisioned and hosted the Asterisk PBX-based VoIP call center platform on Hetzner Cloud infrastructure, sizing and configuring servers to support high-availability voice traffic.
- Configured Traefik as a reverse proxy with automated TLS certificate management, routing and securing traffic across platform services.
- Built a GitLab CI/CD pipeline with mid-repository Ansible triggers, automating configuration convergence, Asterisk service restarts, and environment synchronisation on every merge.
- Integrated SonarQube static code analysis into the CI pipeline to enforce continuous code quality and security gates on every release.
- Authored Ansible roles for Asterisk PBX configuration management, ensuring consistent, repeatable deployments across environments.

Jobbicus.com — *jobbicus.com*
Stack: Laravel · Docker · Docker Compose · Proxmox VE · GitHub Actions · Ansible · Grafana · Loki · HashiCorp Vault · MySQL

- Provisioned a self-hosted GitHub Actions runner on a dedicated Proxmox VM, constraining all pipeline execution to the on-premises environment for enhanced security posture and reduced egress latency.

- ► Engineered a GitHub Actions CI/CD pipeline that autonomously triggers an Ansible playbook on every main-branch merge to pull artefacts, apply configuration templates, restart Laravel queue workers, and execute a zero-downtime web server reload.
- ► Authored modular, idempotent Ansible roles governing environment variable injection, directory permission enforcement, and Docker Compose service state management across all deployment targets.
- ► Deployed Grafana dashboards with Loki log aggregation for real-time platform performance monitoring and centralised log analysis across all service tiers.
- ► Managed SSL/TLS certificate lifecycle via HashiCorp Vault PKI and enforced runtime secrets injection into container environments, eliminating hardcoded credentials from all configuration artefacts.

AnswerService.ai — *answerservice.ai*

Stack: Laravel · Docker · AWS (EC2, S3, IAM, VPC) · Terraform · GitHub Actions · Ansible · Grafana Alloy · Falco · HashiCorp Vault

- ► Authored Terraform configurations to provision AWS infrastructure — EC2 compute instances, VPC networking, and security groups — replacing manual on-premises provisioning with fully version-controlled, repeatable cloud infrastructure; deployed a self-hosted GitHub Actions runner on a dedicated EC2 instance, isolating pipeline compute from production AI inference workloads.
- ► Implemented a GitHub Actions workflow with an Ansible mid-repository trigger on every successful build — automating Docker image updates, container recreation, and AI inference queue worker restarts with no manual steps.
- ► Configured Ansible playbooks for environment-specific variable injection, container lifecycle management, and post-deployment health validation, making every release fully auditable and reproducible.
- ► Defined least-privilege IAM roles and policies for CI/CD and application access, and used S3 for artefact storage and log persistence, tightening the AWS security posture across the deployment pipeline.
- ► Deployed Falco and Falcosidekick for runtime security monitoring within the containerised AI environment, with automated alerting on anomalous kernel-level behaviour patterns.
- ► Deployed Grafana Alloy for centralised metrics and log shipping; automated SSL/TLS certificate renewal via HashiCorp Vault PKI across all platform endpoints.

WeCareWheels.com — *wecarewheels.com*

Stack: Laravel · Docker Compose · Apache · GitHub Actions · Ansible · Grafana · Loki · MySQL · HashiCorp Vault

- ► Configured a self-hosted GitHub Actions runner on the production VPS, constraining all CI/CD activity within a controlled network boundary — a critical compliance requirement for a healthcare-facing platform.
- ► Designed a GitHub Actions pipeline incorporating Ansible mid-repository triggers to deliver zero-downtime releases: pulling updated images, executing database migrations, restarting services, and validating health checks autonomously.
- ► Managed Apache virtual host configurations, canonical domain redirection rules, and multi-environment configuration templating via Ansible to enforce consistent, predictable deployment outcomes.
- ► Implemented Grafana and Loki centralised monitoring with automated alerting, enabling rapid incident detection and resolution across all platform service tiers.
- ► Enforced runtime secrets management via HashiCorp Vault, securely injecting database credentials and API keys into the application environment at deploy time.

Anandamarg — *anandamarg.org*

Stack: Laravel · Docker · Proxmox VE · GitHub Actions · Ansible · Grafana Loki · MySQL · Apache

- ► Provisioned a self-hosted GitHub Actions runner on a dedicated Proxmox VM for secure, high-performance on-premises pipeline execution with full access to internal network resources.
- ► Implemented a GitHub Actions workflow with an Ansible mid-repository trigger automating the full deployment lifecycle on every production merge — code synchronisation, configuration templating, Laravel cache invalidation, queue worker reloads, and Apache graceful restarts.
- ► Developed modular Ansible roles for configuration management, file permission enforcement, and service state reconciliation, ensuring each release is consistent, traceable, and fully repeatable.
- ► Administered Apache virtual hosts, DNS configurations, and subdomain aliasing; deployed Grafana Loki log monitoring with automated alerting to maintain platform availability SLOs.

EDUCATION

B.Sc. CSIT — Computer Science & Information Technology

Tribhuvan University, Nepal · Graduated 2023