

Md Rehan Fazal

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SUMMARY

Passionate about cloud-native technologies and DevOps, with practical experience in Kubernetes, Cluster API (BYOH), GitOps workflows, and k8s multi-cluster lifecycle management. Selected as a **LIFT Scholar 2024** and **CKA Certified**, demonstrating strong proficiency in Kubernetes administration and automation. Experienced in Linux systems, distributed architectures, IaC tooling, and contributing to CNCF open-source initiatives. Passionate about building reliable, scalable infrastructure and continuously improving cloud-native skills.

EDUCATION

Siliguri Institute of Technology

Bachelor of Technology in Computer Science and Engineering

Siliguri, WestBengal

Oct. 2022 – June 2026

EXPERIENCE

LFX Mentee at O-RAN-SC: K8s Multi-Cluster LCM

Sep 2025 – Present

Remote

San Francisco, California, United States

- Developed multi-cluster Kubernetes lifecycle management using Cluster API BYOH (Bring-Your-Own-Host), including creating and managing multiple workload clusters across Anuket bare-metal linux(ubuntu) servers.
- Built the Cluster API BYOH controller image from source, configured providers, and automated the provisioning workflow for registering and managing BYOH-based clusters.
- Implemented GitOps-based cluster creation and lifecycle management using Argo CD, enabling fully declarative provisioning, reconciliation, and cluster operations.
- Wrote automated bootstrap scripts to create the management cluster using vanilla Kubernetes, installing all required Cluster API infrastructure, bootstrap, and control-plane providers.
- Operated and managed six Anuket Linux (Ubuntu) bare-metal servers via SSH for deploying and testing multi-cluster environments, strengthening skills in Linux administration, networking, node provisioning, troubleshooting, and system maintenance.
- Performed extensive testing of cluster creation, registration, upgrades, and healing scenarios using BYOH agents and Cluster API workflows.
- Studied Nephio architecture and learned how Nephio performs greenfield deployment of non-KIND workload clusters using Metal3, Ironi, and Cluster API (CAPM3).

CNCF Zero to Merge Incubator Program

Jun. 2024 – Jul. 2024

Remote

The Linux Foundation

- Selected for the CNCF Zero-to-Merge cohort, participating in structured mentorship and hands-on training focused on contributing to CNCF open-source projects.
- Gained practical experience in issue triaging, PR creation, code reviews, and following CNCF project contribution workflows and guidelines.
- Developed foundational skills in cloud-native technologies, Kubernetes, Git, CI/CD workflows, and open-source best practices to prepare for meaningful upstream contributions.

PROJECTS

Kubernetes Homelab | *Kubernetes, Kubeadm, Bash, Multipass VM, Linux, Containers*

Aug 2025

- Built a production-style Kubernetes homelab environment using kubeadm, showcasing cluster provisioning, configuration, and lifecycle management skills.
- Automated installation of cluster components including CNI, storage, and essential add-ons using declarative configuration.
- Created Bash scripts to streamline cluster setup, node bootstrap, networking, and common operational tasks.
- Documented step-by-step homelab setup for reproducibility, covering cluster creation, administration, troubleshooting.

Chat Microservices App | *Node.js, Express, React, MongoDB, Redis, Docker, Kubernetes, Minikube* Aug 2025

- Developed a real-time microservices-based chat application using Node.js, Express, Socket.IO, and React, supporting user authentication, multiple chat rooms, and persistent message history.
- Containerized all frontend and backend services with Docker and deployed the full system on Kubernetes using Minikube, integrating Nginx as a gateway and Redis as a Socket.IO adapter for multi-instance scalability.
- Automated local Kubernetes deployment through Bash scripts for cluster setup, Minikube ingress configuration, and DNS routing, enabling seamless access to the application via `chat.local`.

TECHNICAL SKILLS

Languages: Go, Python, Java, JavaScript, Bash

Cloud & DevOps: Kubernetes, Cluster API (CAPI BYOH), GitOps (Argo CD), Docker, Minikube, Kubeadm, Helm, Linux, CI/CD, Terraform, Ansible

Frameworks & Tools: React, Tailwind CSS

Cloud Platforms: Google Cloud Platform (GCP), AWS (Basic)

Developer Tools: Git, GitHub, VS Code