SADLIL RHYTHOM

Software Engineer, Tech Lead

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EXPERIENCE

Software Engineer, Tech Lead

Google   📅 05/2022 - Ongoing   📍 Dublin, Ireland

Building Software to Automate Network Design, Delivery and Monitoring at Planet Scale.

- Leading the Planning and Design of Network Delivery Orchestration System for Google Enterprise Network.
- Designing Software System to continuously monitor Network compliance.
- Work closely with Network Engineers to understand the network designs and define the software representations of the design.
- Leading a team of 6 people to implement the alpha version of the Delivery Orchestration system through providing technical guidance.
- Making decisions about crucial Technical Architecture and tools selection.
- Maintain continues communications with various stakeholders and translate business requirements to Technical requirements.
- Mentor 6 engineer to grow on their technical career ladder, resolving any conflicts and blockers.

Software Engineer, Site Reliability Engineering

Google   📅 01/2020 - 04/2022   📍 Dublin, Ireland

Worked in Access SRE team, managing Google's security Infra. Delivering Google's Zero Trust BeyondCorp vision for both enterprise and cloud users.

- Owner and Lead of Icepick and Uplink - Google internal solution for nonstandard application to adopt Beyondcorp Zero Trust Security model.
- Actively lead the SRE involvement in the implementation of Cloud version of the service - Applink & AppConnector.
- Designed and Implemented Reliable Web-socket Transport model for Icepick, Increasing service reliability by 70%.
- Implemented autoscaling system for Beyondcorp Infra, to support Googlers access to Google Enterprise Infra in the increasing WFH demands in COVID.
- Designed an automatic certificate renewal systems for 10K DMZ machines.
- Designed a continuous metric collection system for CLI tools from user machines.
- Member of kubernetes/minikube core team as 20% SWE Contributor.

Site Reliability Engineer - Core Infra

Booking.com   📅 07/2019 - 12/2019   📍 Amsterdam, Netherlands

- Built tools to Administer multi cloud Kubernetes Infrastructures, Integrate it with development pipelines. Improved 80% Developer experience with automated application onboarding, reduced 35% of turnup time.
- Developed and Maintained monitoring pipelines using Prometheus, Grafana and Elasticsearch, Improving the SLO monitoring by 15%.
- Managed both on-premise and cloud Kubernetes environments by writing Infrastructure as Code.
- Performing root cause analysis and implementing preventative measures to minimize disruptions.
- Designed an automation platform to support DC rack maintenance for on-premise Kubernetes nodes, that automatically drains and undrains a node for maintenance.

SKILLS

Golang   C++   Python   Neo4j

ElasticSearch   MySQL   PgSQL

Kubernetes   Docker   GCP   AWS

gRPC   Protocol Buffer

Promethues   Grafana   Loki

Kafka

PHILOSOPHY

I don't Believe in Magic

PERSONALITY

Assertive Commander

EDUCATION

BSc in Information and Communication Technology

Mawlana Bhashani Science and Technology University

📅 2011 - 2015   📍 Bangladesh.

PERSONAL ATTRIBUTES

Software System Design

Technical Leadership

Problem Solving

Collaboration & Commnication

Accountability and Ownership

EXPERIENCE

Senior Software Engineer

Grab   📅 11/2017 - 06/2019   📍 Singapore

- Designed, architect, and built several microservices to support 10M+ requests per day to support Grab Supply Shaping Infra.
- SRE liaison to support the reliability of team's cloud infrastructure.
- Participated in the OnCall rotation and Engineering Postmortems process to ensure high availability and scalability of the systems.
- Collaborated with multiple teams and PMs to align software systems with business requirements.
- Designed a tool to visualize Grab's supply and demand data in real time for multiple region.
- Lead a small team of 2 to design and implement a real time event processing pipeline, processing 15M events per day.

Software Engineer

AppsCode Inc.   📅 04/2015 - 11/2017   📍 Dhaka, Bangladesh

- Joined the company as #3 employee in a fast growing startup environment.
- Designed and Implemented the initial version of voyagermesh/voyager - an Ingress controller for Kubernetes.
- Guided a team of 4 to design & implement multiple kubernetes operator such as KubeDB, Kubed etc.
- Design and Implemented gRPC based API server and microservices.
- Designed and build a unified artifact repository for docker, maven, npm and composer etc.
- Contributed to open source projects including Kubernetes, Jenkins, Docker.

Software Engineer

Bit Mascot Pvt Ltd,   📅 11/2014 - 03/2015   📍 Dhaka, Bangladesh.

- Implemented product search and multi product comparison functionalities for the WebCommander e-commerce platform, improved customer engagement by 10%.
- Developed an SQL library to reduce query complexities and improve query speed and developer experience.

RECENT PROJECTS

Griffin - automated network compliance

Google

I spearheaded the design and deployment of Griffin, an internal software system to automate network device state compliance assessments for Google's Enterprise Network. I designed the software architecture, API contracts, dependecies and infrastructure. Comprised of six microservices, one of which interacts with low-level network devices, such as AS, FW, in a vendor-agnostic manner. I effectively led a team of 6, consisting of both software engineers and network engineers, by making strategic design decisions and fostering adherence to best practices for language and infrastructure. Throughout the implementation process, I maintained frequent and transparent communication with stakeholders and project managers to ensure the success of the solution.

Icepick

Google

I designed and built a BeyondCorp compliant solution to secure client server traffic for non-standard software. The system, devised by me, uses OpenVPN traffic proxied through a p2p ICE tunnel. Later, In response to increased demand for WFH and a code yellow, I designed a separate tunnel support with WebSocket for enhanced reliability.
I also led the SRE involvement of design and deployment of the cloud version, part of Applink and AppConnector.

PROUD OF

Open Source
Use and Love to Contribute in Open Source community. Proud to be a Contributor of Kubernetes.

Competitive Programming
Participated in 5 ICPC Dhaka Regional and 4 NCPC. Runner up in 2015 IEEE RUET IUPC.

Self Learner
Ability to quickly learn new skills, demonstrated by successfully teaching myself to swim and ride a bike at 28.

FIND ME ONLINE

Website
sadlil.com

Github
github.com/sadlil

LinkedIn
linkedin.com/in/sadlil

Twitter
twitter.com/ksadlil

Medium
medium.com/@sadlil

PAST OPEN SOURCE CONTRIBUTION HIGHLIGHTS

Kubernetes

Contributor of Kubernetes - Production Grade container scheduling and management.

- Minikube core team member as Google 20% Contributor. Driving the feature integration and minikube adoption across Google and outside.
- Fixed minikube multi node pod IP overlap.
- Added minikube vm driver alias support.
- Fix kubernetes reverse DNS support for headless service.
- Introduced Prometheus metric collection for Helm tiller.
- All Contributions.

voyagermesh/voyager

Voyager is a HAProxy backed secure L7 and L4 Kubernetes ingress controller with extended features. This can be used with any Kubernetes cloud providers including bare metal clusters.

- Designed and Implemented initial version from scratch.
- Contributions.