# Stefan Muraru

Senior Cloud Engineer with 10 years of hands-on experience designing and building cloud-native projects. Specialized in crafting high-throughput applications using modern technologies across the entire back-end stack, like Go, NodeJS, Typescript, MongoDB, PostgreSQL and Kubernetes. Proficient in building, managing, monitoring and scaling infrastructures due to specific needs with security and costs in mind on both AWS and GCP using IaC tooling.

## **Technologies**

- Go, NodeJS, Typescript Languages: Data: MongoDB, PostgreSQL, Redis, Elasticsearch, RabbitMQ Infrastructure:
  - Providers: Cloudflare, GCP, AWS
  - Tools: Kubernetes, Docker, Terraform, ArgoCD, Github Actions
  - Observability: Prometheus, Loki, Grafana

## **Work Experience**

Team Lead	CloudQuery	May 2024 – Present
Integrations Team	Tel-Aviv, Israel (Remote)	

Lead of the Integrations team, responsible with anything related to CloudQuery sync experience. Leading a team of 7 engineers through the entire development and support lifecycle of different components, like

- the source integrations with third-party APIs and services,
- the destination plugins for databases,
- open-source SDK's and the CLI that stand at the core of a sync process and •
- an in-house Kubernetes operator that takes care of automatically scheduling and managing the lifecycle of syncs on top of K8s nodes.

The results?

- Led partnerships and integration validation workflows with companies like Wiz, Tenable, Snowflake, etc that resulted in CloudQuery integrations being validated and published on their respective marketplaces and ours,
- led and built product, from idea to specification to implementation to monitoring and validation, •
- took part in the solutions processes, guiding customers and finding the best engineering options to accommodate their needs
- built and tried to nurture a community across the CloudQuery ecosystem on Discourse. •

Senior Software Engineer

CloudQuery

Apr 2024 – Present

Framework & Plugins Team

Tel-Aviv, Israel (Remote)

Working on the Framework team, handling the open source software (CLI, SDKs, etc.) as well as the private plugins and internal software components.

- Implemented new source plugins based on demand for platforms like Wiz, Tenable and Plaid.
- Implemented features in the Core SDK like tracking sync usage per-table and adding support for additional types.
- Implemented resources and bugfixes to core plugins like GCP, AWS, Github & Snyk.

Monokle Cloud

## Kubeshop

Delaware, United States (Remote)

Led the **infrastructure management** as well as **end-to-end architecture and development** of the authentication framework, microservices and GraphQL APIs for the Monokle Cloud application at Kubeshop.

- Cut existing cloud costs by over 60% while also leveraging monitoring, logging and alerting stacks for improving application and infrastructure availability.
- Implemented OAuth2.0 + OpenID Connect authentication by deploying and configuring an on-prem Authorization Server as well implementing and testing individual Authorization Code, Client Credentials and Device Code flows.
- Implemented a high-throughput content streaming API for fetching repositories from multiple GIT providers by integrating provider APIs or leveraging SSH / HTTPS git authentication.
- Created and maintained Github Actions configuration files for building and testing as well as Helm Charts & Kustomizations deployed on ArgoCD to sum up for an end-to-end CI/CD process.
- Improved build times by more than 80% while also scaling down image sizes by an entire order of magnitude by leveraging Github Actions concurrency and caching as well as Docker multistage builds and distroless images.

Senior Platform Engineer	Bitdefender	2018–2022
Cloud & Infrastructure	Iasi, Romania	

Worked on **building an internal platform** that enabled developers and ML researchers to easily manage their code's lifecycle after development, from building, to deploying to multiple testing and staging environments and ultimately going to production.

- Implemented multiple Kubernetes operators for technologies such as RabbitMQ, Prometheus and the Elastic Stack (deep diving into operations like HA clustering, sharding, etc.) in order to be able to ship them as managed services.
- Designed and implemented a hardware and software discovering and inventorying system that in only a couple of months helped the company pass a SOC2 audit while also saving on alternative paid solutions.
- Designed and implemented a highly-available, multi-region mail templating gateway through which the client emails are being sent on behalf of the products. Built, managed and worked with multiple message brokers and SMTP gateways connected on a multi-region scale, on high-availability requirements.
- Participated in the design and implementation of infrastructure, Kubernetes deployment on public and private cloud providers (Google Cloud Platform, Amazon AWS and on-premise infrastructure) as well as migration (Virtual Machines to Kubernetes), replication, scaling and authentication of services like MongoDB, RabbitMQ, Redis and Elastic Stack components using OAuth2.0 flows.

### Software Developer

**TSS-Yonder** lasi, Romania

#### 2017-2018

Worked on a Data Warehouse & GIS mapping project used by government entities.

- Developed frontend components using Angular, based on specific instructions & designs
- Mapped GIS, JSON and XML data through .NET and NodeJS APIs.
- Dockerized all the dev and staging environments in order to facilitate local development and shorten build and release times.

Junior Software Developer

Maxcode Iasi, Romania 2016-2017

Worked on designing and implementing an internal employee management application.

Junior Software Developer

**TSS-Yonder** Iasi, Romania Autumn 2016

## **Education**

- Master's degree, Distributed Systems, "Gheorghe Asachi" Technical University of Iasi, Romania. 2018–2020
- Bachelor's degree, Information Technology, "Gheorghe Asachi" Technical University of Iasi, Romania. 2014–2018

## **Projects**

- Kubernetes operator for sync scheduling, CloudQuery k8s operator built in Go that helps ease out scheduling of sync runs on k8s nodes. Main challenges included changes in our SDK, CLI, plugins and telemetry
- File streaming API, Kubeshop highly-available system that handles pulling repository metadata and content from different GIT providers (eg. Github, Gitlab, Bitbucket). Main challenges were different authentication mechanisms on different providers and even on different versions of a provider, as well as having a lower latency as possible.
- Mail templating gateway, Bitdefender platform that enabled defining of mail templates in Mustache syntax with microservices and workers for sending emails distributed on 4 continents and 7 regional data centers. Challenges included having a 5 digit uptime, for which a message broker bouncing system was eventually employed.
- **Console**, Bitdefender internal platform that enabled developers and ML researchers to deploy services and workflows on top of multiple Kubernetes clusters from different public and private cloud providers.

## Interests

• Homelab and home automation enthusiast, tinkering in spare weekends with a 5-node NAS, Kubernetes cluster, NVR and cloud storage setup hosted in my office.