Matei-Marius Micu, Senior Software/Infrastructure Engineer

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LINKS

GitHub, Linlkedin, Personal Website, Workshops & Slides, Certifications

EMPLOYMENT HISTORY

Apr 2022

Senior Software/Infrastructure Engineer, Prisma

Remote

- Focus on evolving the <u>Prisma Data Platform</u>
- Improved monitoring of the infrastructure (mostly based on AWS but with some components on GCP and Azure). Cut down the unnecessary metrics from 150k to a max of 30k. Also created a managed sink for the "nice to have but not critical" metrics
- Create an MVP report to help Support and Product view the current platform usage using **BigQuery**.
- · Work on feature parity with the open-source offering. Initially focusing on Interactive Transactions

Oct 2020 — Mar 2022

Site Reliability Engineer at HotJar, Oct 2020 - Mar 2022, Hotjar

Remote

- Migrate the ingestion pipelines from EC2 to Kubernetes. This is the most sensitive part of the
 infrastructure handling the biggest part of the data ingestion (~800k WebSocket connections active
 at peak). This migration involved infrastructure and product changes (client-side and server-side both
 written in Python) and took 6 months.
- Enhance the disaster recovery procedures, backups, and security of our **AWS** infrastructure.
- Introduce a new incident process, act as an Incident Commander and T1 responder

Jun 2018 - Oct 2020

Site Reliability Engineer, Mambu

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- Convert a manual procedure for disaster recovery to a fully automated and tested process that can restart operation in another AWS region in **under 2h for more than 50+ environments**. This project took 9 months and involved coordinating 3 engineers and expectations of 5+ teams
- Create the new infrastructure platform based on Kubernetes, Terraform and AWS, and CloudNative
 projects. It allowed for the rapid development of 15+ microservices alongside an existing monolith
- Designed & implemented the release procedure for microservices using GitLab, Helm Charts, and ArgoCD following the GitOps approach. Empowered 200+ developers to safely deploy changes across 50+ environments
- Automating infrastructure requirements through Terraform, Terragrunt and **GoLang**. The AWS infrastructure bill was around **1 million dollars per month** which we needed to get better visibility in.
- Adopt and productize the internal streaming platform based on Kafka and Nakadi. This was used to
 expand the monolith and support the creation of at least 15 microservices during my tenure
- Organize internal workshops or dedicated guidance (1-4 weeks) preparing development teams to
 create their first series of production microservices. I focused on: **Docker, Kubernetes**, Microservice
 architecture patterns, and How to safely **break up a monolith**.

Sep 2017 — Jun 2018

DevOps, Mambu

Iasi

- Automate Operation tasks like provisioning, pipelines for Terraform, general CI/CD, container-based infrastructures, and lambdas/serverless-based projects.
 - Enhanced billing tracking for an average bill of 1 million dollars per month
- Collaborate with support, Ops, and development teams to address cross-cutting concerns (compliance tools, cloning/obfuscating, etc...)
 - Build an internal platform that helped developers get compliant access to production databases (over 50)
- Audit and improve existing tooling. Offer Python reviews/guidance for multiple parts of the organization.
 Organize numerous workshops about advanced Python topics, language features, and frameworks
 (SQLAlchemy, calling C and Java code from Python, Flask, Django, tox, PyTest, Conu)

Mar 2016 — Aug 2017

Cloud Engineer, Cloudbase

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Develop and maintain the following Open-Source projects that were part of the OpenStack ecosystem

<u>Argus-Ci</u> is a framework for writing complex integration tests, for code that needs to run under various different operating systems.

- I increased support from 1 Windows version to 6 (including Windows Nano).
- Parallelize the running of tests (for running all the tests for all supported Windows versions the time was reduced from ~60 hours to 20-30 minutes)

<u>Arestor</u> is an HTTP framework used to substitute and control cloud providers' metadata. It is used in integration with the Cloudbase-init-ci framework, to test Cloudbase-init in a fully controlled environment with various HTTP metadata sources like **AWS**, **OpenStack**, **DigitalOcean**, or **Packer**.

 $\underline{CloudBase\text{-}Init} \text{ is the Windows equivalent of the Cloud-Init project used on most } \textbf{OpenStack} \text{ Linux images.}$

I also maintained the Jenkins pipelines and OpenStack cluster for these projects and contributed to other OpenStack projects.

EDUCATION

2018 - 2021

Master's degree (BSc) Advance topics of Computer Science, Faculty of Computer Science

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This is a custom program that allows me to pick every course and with the help of my supervisor, I tailored the courses to focus mainly on distributed computing

2015 - 2018

Bachelor of Science (BSc) Computer Science, Faculty of Computer Science

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EXTRA-CURRICULAR ACTIVITIES

Feb 2022

Collaborator Teacher Assistant, Faculty of Computer Science

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- I am teaching two groups of second-year students, roughly 50 students, Web Technologies.
- The course focuses on core knowledge about front-end and backend, including current trends in the industry (microservices, GraphQL, architectural patterns, etc.)

Feb 2019 — Jun 2019

Collaborator Teacher Assistant, Faculty of Computer Science

Iasi

- I was teaching two groups of third-year students, roughly 50 students, Open Source Working Methodologies.
- This course was focused on Linux skills and introduced them to open source development and container-based infrastructure and concepts.

Aug 2018 — Jul 2020

Technical Trainer, Wantsome

Iasi/Remote

- Python Trainer https://wantsome.ro/curs-programare-python-iasi
 - Design and Teach a 16 weeks Python training program (2 hours of theory and 4 hours of practice every week) - The first group had 17 people
 - Offer assistance for 8 weeks (3h / week) for final projects. This involves explaining multiple frameworks/libraries or concepts that are not part of the base python course but are more related to each student interests
- $\bullet \quad \text{DevOps/System Reliability Engineer Trainer-https://wantsome.ro/curs-system-engineering-devops}\\$
 - Assist in designing and teaching a 16 weeks Training Program that focuses on Linux, CI/CD,
 Containers, and Networking (2 hours of theory and 4 hours of practice every week) The first group
 had 11 people

COURSES

Aug 2022 — Aug 2025

CKA: Certified Kubernetes Administrator, The Linux Foundation

Aug 2022 — Aug 2025

KCNA: Kubernetes and Cloud Native Associate, The Linux Foundation