Alejandro **Colomina**

Site Reliability Engineer

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Experience

Flywire
Valencia, Spain

Site Reliability Engineer
Aug. 2018 - PRESENT

Flywire ($FLYW) is a public international fintech that has been rapidly growing since 2018 through the acquisition of several companies. This expansion introduced a lot of complexity when managing cloud resources in an homogeneus way as the SRE team had to support new squads, new tech stacks and new products. It was decided to create a *gold standard* in the form of an internal PaaS to rule them all, an approach to evolutionary infrastructure that's been successfully adopted by every team in the company. My job in this trip has been to:

Technical

- ➜ Migrate the whole payments platform from monolithic legacy systems to our gold standard. This was an effort of moving +30 apps with their respective data sets to our internal PaaS with no customer impact. Driving this cultural change implied:
    - ✶ Communicating, coordinating and cooperating with every stakeholder of every app. Effectively, all the company.
    - ✶ Developing infrastructure glue for SWEs while the migration was in process.
    - ✶ Mentoring all development squads in the adaptation of their apps to the new gold standard. This is: containerization following **12-factor principles**, log streaming, configuration and connection handling, adaptation of cron jobs to be idempotent and distributed, operating system signal trapping, and a large etcetera.
    - ✶ Teaching every SWE in using the PaaS. This included learning how to properly version libraries, apps packaging and delivery, rollout and rollback artifacts, security considerations, etc.
    - ✶ Teaching SWEs the **fallacies of distributed computing**. The payments platform used to live in a monolith spread among 8 hosts, so the exercise of splitting and decoupling every service from it introduced a lot of complexity as every request between services started traveling through the network.
    - ✶ Writing RFCs with all the smells seen in the process of migrating the legacy platform. Some examples include management of gigantic configuration files, divergence between applications when making HTTP calls, monitoring and observability of the platform, usage of different AMQP clients, traceability among services, operability, etc.
- – Develop and extension of PaaS features to meet business requirements and boost SWEs productivity through extensive testing. This includes work on the PaaS core (**Ruby**), CI/CD pipelines (**GitLab**), infrastructure modules that create cloud resources (**Terraform**, and development of providers (**Golang**)). Some numbers (mid 2020, before migrating the payments platform): 2050 deployments/month, 170 production deployments/month, 40 min mean time from dev to production.
- – Enable teams to improve platform observability by providing a framework with which they can create business and operational alerts from an easy to learn DSL. This includes: instrumentation of known-knowns such as application metrics and infrastructure limits, monitoring of known-unknowns such as memory leaks and provision tooling for answering questions to debug unknown-unknowns.
- – Enable teams to define service expectations in the form of internal/external SLO/A through a comprehensible interface.
- – Develop internal tools that glue the payments platform with the internal PaaS
- – Push new initiatives across delivery teams SREs.
- – Write problem statements and RFCs to improve communication among stakeholders and enable engineers to push in the same direction.
- – Help implementing GitOps workflows in other departments of the company such as IT and Security.
- – Mentor development team in reliability and infrastructure best practices through pair programming, workshops and gamedays.
- – Help acquired companies integrate with our SDLC. In most cases, this implies helping them migrate their workload to our gold standard.
- – Be in the oncall rotation with development team, participating in incident response, trainings and gamedays.
- – Participate in the hiring process of SREs, SWEs and security engineers.
- – Contribute to the Open Source community.
- – Support squads in debugging and solving issues.
- – Enable and push 'You build it, you own it, you run it' mentality.
- – Enable and push Post Mortem culture after incidents.
- – Give both external and internal talks about reliability, resiliency and infrastructure best practices.
- – Write in-depth documentation that shares knowledge.

Runator
Valencia, Spain

Site Reliability Engineer
Jun. 2017 - Aug. 2018

Runator was the global runner community. Sharing running experiences, meeting new runners and participating in global races were the main focus of the application. As the only SRE in the company, my job was to:

- Migrate infrastructure from Microsoft Azure VMs to Google Cloud Platform. It was a journey from toiling around with snowflake servers to a immutable CI driven infrastructure with Kubernetes as its core.
- – Design a ChatOps based deployments system.
- – Design, automate, manage, monitor and size infrastructure components such as datasets, caches and search engines.
- – Configure, deploy, monitor and management infrastructure helpers such as load balancers, monitors, backups and replication, and proxies.
- – Pipeline the SDLC deliverable workflow into Jenkins providing a CI/CD system.
- – Develop business features with Symfony 2.7 framework.

Diagram Software S.L. *Alcoy, Spain*

Diagram Software was an ERP development company that thrived on providing their clients with custom e-store solutions. My responsibilities included:

Local area networks set up and audit.
- Maintenance of virtualization services.
- Maintenance and deployment of datacenter monitoring services.
- Maintenance and deployment of operating systems.
- Maintenance, support and monitoring of VoIP services.
- Refactoring of infrastructure security.

Skills

Infrastructure as Code	Terraform, Docker, Chef, Vagrant, Packer, Pulumi
Orchestrators	AWS Fargate, AWS Beanstalk, GCP managed K8S
Data sets	MongoDB, MySQL, AWS DocumentDB, AWS RDS, AWS DynamoDB
Caches	Redis, Memcached, AWS Elasticache
Pub-sub	RabbitMQ, AWS SQS, AWS SNS, AWS RabbitMQ, AWS Kinesis
Interests	Developer productivity, automation, reliability and resiliency practices, SLI/SLOs, chaos testing
Programming	Ruby, Bash, NodeJS, Golang
Soft	Empathy, drive, production awareness, ownership, collaboration, ambition
Languages	Spanish, Catalan, English

Talks

Valencia DevOps
Speaker (spanish)

Valencia, Spain
May. 2020

- Presented resiliency patterns to a public online audience. **LINK** to video.

Valencia DevOps
Speaker (spanish)

Valencia, Spain
Feb. 2020

- Presented the path to serverless cron jobs to a public audience. **LINK** to event.

Valencia DevOps
Speaker (spanish)

Valencia, Spain
Jan. 2019

- Presented Infrastructure as Code with Terraform and Pulumi to a public audience. **LINK** to video.

Writing

Deploying your site with Heroku and GitHub Actions
Author

Personal site
Jan. 2019 - PRESENT

- `https://coolomina.dev/2019/10/01/heroku-github-actions.html`

Open Source

terraform-gitlab-mr-to-slack
Creator and Maintainer

GitHub
Feb 2022 - PRESENT

terraform-gitlab-mr-to-slack is a set of cloud resources that boost engineering productivity by posting to Slack channels every time a merge request is considered reviewable by *n* teams.

`https://github.com/peertransfer/terraform-gitlab-mr-to-slack`

VictoriaTreasure
Maintainer

GitHub
Aug 2018 - PRESENT

- Victoria Treasure is a utility for handling secrets in S3 avoiding manual steps for decrypting or encrypting the files.

`https://github.com/peertransfer/Victoriatreasure`

terraform_plugin_boilerplate
Maintainer

GitHub
Dec 2018 - PRESENT

- terraform_plugin_boilerplate is all the scaffolding you need to get you started developing Terraform providers.

`https://github.com/Coolomina/terraform_plugin_boilerplate`

cloud_design_patterns
Maintainer

GitHub
May 2020 - PRESENT

- cloud_design_patterns contains useful example implementations of resiliency patterns.

`https://github.com/Coolomina/cloud_design_patterns`

Education

Universitat Politècnica de València

Alcoy, Spain

- B.S. in Computer Science and Engineering

Sept. 2013 - June. 2017

Certifications

Mikrotik
1705RE970

MIKROTIK CERTIFIED ROUTING ENGINEER
May. 2017 - PRESENT

• Advanced routing protocols implemented on Mirkotik hardware.

Mikrotik
1704TCE10015

MIKROTIK CERTIFIED TRAFFIC CONTROL ENGINEER
Apr. 2017 - PRESENT

• Advanced QoS protocols implemented on Mirkotik hardware.

Mikrotik
1606NA369

MIKROTIK CERTIFIED NETWORK ASSOCIATE
Jun. 2016 - PRESENT

• Basic certification of Mikrotik hardware, such as Cisco's CCNA.