Mikaël Morvan

CTO, Cloud Architect, DevOps

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Resume PDF

LANGUAGES

French (Native)

English (Professional)

INTERESTS

Computer Science

Geek Culture

Cooking

CAREER PROFILE

I'm Mikaël Morvan, I'm an experienced R&D manager / CTO, Cloud Architect and DevOps. I've lead R&D teams and I've implemented Kubernetes projects on Google cloud, Amazon Web services and on Baremetal (k3s, Rancher).

My expertise:

- R&D management
    - Team management
    - Technical definition & architecture
    - Business development
    - Marketing strategy
- Definition, monitoring and implementation of your cloud architecture from A to Z
    - Kubernetes (helm, kustomize)
    - Baremetal linux
    - micro-services
    - serverless
    - Traefik
- Integration and continuous deployment
    - Docker image generation and storage on Gitlab
    - Writing and deployment of Ansible scripts
    - Writing and deployment of Terraform scripts
    - Writing and deploying Pulumi scripts
    - GitOps deployment with ArgoCD
- Development in Go, Java, Typescript, Javascript
    - micro, beego, fiber
    - Spring,
    - React, Angular, VueJS

I was for 5 years the CEO of a startup called ZetaPush specialized in providing real-time cloud services (SaaS). I have therefore a huge expertise in complex architectures and their implementation in production.

I can help you to define your needs or to adapt your existing to integrate the cloud and CI-CD dimension.

I can make you benefit from my experience as a project creator to advise you from the ideation phase.

Do not hesitate to call upon my services and my experience.

EXPERIENCES

DevOps Expert

August 2023 - Present

Silbo (Rennes, France)

I'm helping Silbo move from Cloud Aws to Kubernetes hosted at OVH

Stages of my mission

- Audit of existing architecture
- Recommendation of a Kubernetes architecture for production (SaaS mode) and for On Premise.
- Recommendation of a scalable architecture through the introduction of a message bus (Nats)
- Go implementation of a high availability SFTP server for file reception
- Go implementation of a CLI for sending and consuming health data messages.
- Deployment of the new architecture on a Kubernetes cluster using Infra as Code (Pulumi).
- Automatic build of Docker images with Github Action (CI-CD)

Technology used

- Kubernetes
- Go
- Nats
- Docker
- Pulumi
- Github

R&D Manager

2022 - July 2023

Acklio (Rennes, France)

Full time mission in a startup in the field of IoT. Acklio provides a embeded SDK for IoT devices to compress data before sending them on Lpwan networks. Acklio also provides a cloud solution to manage devices and decompress data.

Runtime on Kubernetes clusters on AWS, Gitlab for CI-CD, Infra as code.

My main mission was to manage the R&D team and to define the technical roadmap.

- Management of a team of 11 developers
    - Cloud team (4)
    - Embedded team (5)
    - Interns (2)
- Definition of the technical roadmap
- Definition of the technical architecture
    - Enhancements of the existing architecture to have a fully scalable and resilient architecture
    - Add 2 new products to the existing architecture to provide new services to our customers
    - Add a new compression protocol based on ZStandard
- Definition of the development methodology

    - remove Jira and remplce it with Clickup
- Definition of the test strategy
    - add full integration tests with Playwright
- Definition of the monitoring strategy
    - add a monitoring with Datadog
- Definition of the documentation strategy
    - add a documentation with Confluence
- Definition of the support strategy
    - add a support with Clickup

Marketing & Business strategy

- Elaboration of the marketing and business strategy following the addition of new products
- Participation in international trade shows (MWC Barcelona, Distributech San Diego, etc.)

Technology used

- Kubernetes
- AWS
- Gitlab
- Terraform
- Scaleway
- Go
- Typescript
- React
- Clickup
- Confluence
- Datadog
- Playwright

DevOps, Cloud Architect

2021 - 2022

Novadiscovery, (Lyon, France)

Full remote mission with occasional trips to Lyon

Runtime on Kubernetes clusters on AWS, Gitlab for CI-CD, Infra as code

CI-CD chain

- Existing GitOps audit
- Improvement of the Ansible / Helm / Kustomize / Gitlab scripts for deploying the different environments
- Proposal of a new architecture using Pulumi with storage of states on S3
- Implementation of Datadog for log management with dedicated dashboards and alerting
- Implementation of dedicated Gitlab Runners on physical servers with optimization of Npm builds using a pnpm cache

Security

- Audit of authorization management / secret management and redesign using Hashicorp Vault and AWS Kms / IAM
- Implementation of security audit of containers and api (Gitlab, OWASP ZAP, Trivy)
- Study of the implementation of audit bug bounty with YesWeHack

Simulation engine on Kubernetes

- Creation of simulation test system (Docker Compose / Airtable / Datadog)
- Writing performance tests and hardening tests
- Launching simulation tests via Gitlab CI
- Audit / help to the developer to improve performance
- Implementation of recommendations (Workers XXL, Autoscalability)

Technology used

- DevOps
- AWS
- Kubernetes
- Gitlab
- Hashicorp Vault
- Pulumi
- Datadog
- Ansible

Cloud Architect, DevOps

2020-2021

Moonda, (Bordeaux, France)

Existing CMS audit API gateway audit (Traefik)

- stability
- scalability
- security Optimization of the CI-CD chain on Gitlab Optimization of LetsEncrypt wildcard certificates usage Porting GKE on GCP to OVH Kubernetes offer.

Technology used

- DevOps
- GCP
- Kubernetes
- Gitlab
- Traefik
- Ansible
- Nginx

Cloud Architect, DevOps

Sept 2020- Oct 2020

ScaleDynamics, (Rennes, France)

The mission consisted in setting up a build chain for a source code in NodeJs on Google Cloud Build.

- study, advice on Google Cloud Build
- creation of a configuration generator (Docker File, Conf Nginx, ...) in NodeJs
- realization of a Docker image of the generator and deposit on Google Cloud Registry

- implementation of a build chain on Google Cloud Build with automatic launch of the generator as a build step
- demonstration of the automatic launch by API call.

Technology used

- DevOps
- GCP
- Google Cloud Build
- Docker
- NodeJs

Cloud Architect, DevOps

July 2020 - August 2020

Mobistock, (Rennes, France)

- Understanding of the need
- Definition of the target architecture
- Containerization of Php-Mysgl application (Api Platform)
- Continuous integration on Gitlab
- Realization of Helm / Kustomize deployment scripts
- Kubernetes cluster setup
- Client exchanges, Php code debugging

Technology used

- DevOps
- Kubernetes
- Gitlab
- Helm
- Kustomize
- Api Platform
- Php

CEO - Founder

2015 - 2019

ZetaPush, (Rennes, France)

ZetaPush, Startup - Real time application engine

- Company manager
  - Team management (12 people),
  - Company management (accounting, finance, HR, ...)
  - Project, budget and business plan preparation
  - Project pitch
- Architect Serverless deployment on Kubernetes
  - K8S Rancher Cluster
  - Helm templates
  - Continuous & seamless deployment
  - Backend As A Service Architecture
  - High availability real time servers
  - Bare Metal Servers
  - Angular Dashboard
  - Connection SDK Javascript, Go, Swift
  - WebRTC SDK Javascript, Android, Swift

Technology used

- DevOps
- Kubernetes
- Rancher
- Helm
- Kustomize
- Angular
- WebRTC
- Javascript
- Go
- Swift
- Java Spring
- HBase
- Jetty

Web Architect

2010 - 2014

France Telecom / Orange, (Rennes, France)

Architect appsbar.sosh.fr Design of the global architecture Backend development: Java / HBase noSQL / Jetty / Spring 3 Development team follow-up Android Hybrid Mobile Application Architect Global architecture design Techno Dojo / Phonegap / Android Follow-up of the development team

IM (Instant Messaging) prototype architect with Web and Smartphone clients Global architecture design Techno Backend Java / CometD / Xmpp / Jetty / Spring 3 Techno Frontend Dojo / PhoneGap / Android / iPhone Messaging Suite Architect Expertise, development follow-up, technical expert

Technology used

- Java Spring
- HBase
- Jetty
- Dojo
- Phonegap
- Android
- iPhone

Web Architect - Technical Leader

2007 - 2010

SII, (Rennes, France)

Orange Rennes Architect on the Messaging Suite (Orange WebMail)

- Architecture,
- Expertise Sofrecom (France Telecom) Paris-Maroc Expert, Web 2.0 Architect Expertise:
- Audit of the existing struts code,
- Audit of the javascript code developed in Morocco,
- Recommendations on good development practices, - Performance audit and advice on how to optimize them,
- Help to the developers on the blocking points, Consulting:
- Study of the transition from a Struts architecture to a Full Web 2.0 architecture

Orange R&D Lannion Expert, Web 2.0 Architect Consulting and implementation of Dojo-OAF in an existing Struts- EJB architecture. Expertise:

- Study of the existing architecture,
- Consulting for the implementation of Dojo-OAF (splitting in Widgets, data islands on Struts side),
- Consulting for the implementation of inter-team exchanges based on extreme programming (Lannion, Paris, Rabat),
- Helping with the integration of Widgets in existing pages,
- Realization of an optimization script of the Dojo-OAF library allowing to drastically reduce loading times. Training:
- Training of Moroccan developers on Dojo-OAF jointly with Orange OAF trainer. Development:
- Development of Dojo-OAF widgets

Technology used

- Javascript
- Dojo

Architect

2006 - 2007

ATOS, (Rennes, France)

Orange Billing.

- Addition of new processing services in Java J2EE,
- Correction of issues on existing processing,
- Creation of an expert software allowing the fast reading of XML exchange files,
- Study of the performance of the application using JProbe.

Technology used

- Eclipse,
- CVS,
- Weblogic,
- Java/J2EE,
- Oracle,
- HPUx

Project manager, technical expert

2001 - 2006

Silicomp AQL/ OBS, (Rennes, France)

Creation of an antenna propagation simulation software for TDF

- The application allows to simulate the radiation of the electromagnetic field emitted by an antenna structure. This simulation is done both in analog and digital (case of DTT). The result of the simulation is visualized in horizontal, vertical and 3 dimensional diagrams (OpenGL). Many software experts have been added to meet the very specific needs of TDF engineers. For example, this software is the only one capable of calculating antenna propagation for DTT. About 200 copies of this application are deployed for TDF engineers as well as in foreign subsidiaries.
- Specification and design of the application.
- Project manager of the project team (4 people) and Technical Manager. Numerous business experts have been developed:
- Expert allowing the technical drawing of the pylons in the Autocad genre,
- Expert allowing the numerical optimization of curves based on simulated annealing algorithm,
- Expert allowing the realization of template from calculated curves,
- Expert allowing the realization of curves from templates (choice of algorithms based on Bezier curves, Spline, Polynomial of configurable degrees and smoothing by Fourier transform FFT),
- Expert allowing the realization and visualization of the assembly of the pylons based on visual components in the Visio genre:
- Numerical calculations on the realized tree,
- Simulation of the propagation,
- Computation of statistics between theoretical and real pylons
- Expert simulating the power distribution necessary to supply a tower
- 6 months of work,
- Algorithm based on the enumeration of all possible junction assemblies (in On)
- Estimation before calculation allowing to limit the calculations (several weeks of possible calculation time) Translated with www.DeepL.com/Translator (free version)

Technology used

- Delphi
- OpenGL
- Numerical optimization

Developer

1997 - 2001

AST, (Brest, France)

Designer and developer on two applications

- Business management software in Delphi
- Fire safety management software for Alcatel Brest