Florian Vichot

Principal Engineer

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An accomplished software engineer, I have over fifteen years of experience in both development and operations. Well-versed in multiple programming languages, tools and technologies, I'm also a seasoned technical leader and mentor. I'm drawn to roles offering challenging and varied problems as part of a talented and close-knit team. Organisations building open-source software or serving the public interest are especially attractive.

SKILLS

- Track record of advancing code and infrastructure quality, performance and maintainability
- Dedicated to automating time-consuming and error-prone tasks
- Experienced in leading teams, acting as technical referent, mentoring other engineers
- Effective at helping teams plan and prioritise work, negotiating roadmaps with stakeholders
- Pragmatic approach to complex problems, from tactical short-term goals to long-term strategic vision

EXPERIENCE

Cisco Meraki — Remote, Australia

- **Principal Engineer - SRE** — *February 2023 to June 2025*
  - Acted as the technical advisor for Platform Engineering, a grouping of 7 teams and 35 engineers, by building a shared vision, advising managers, unblocking projects, initiating workgroups, promoting cross-collaboration.
  - Mentored several Technical Leaders, with weekly one-on-ones to discuss technical challenges, career aspirations and leadership development.
  - Continued to help lead the monolith transition into Kubernetes, by organising work, writing design docs, contributing code, reviewing solutions, giving progress demos to stakeholders.
- **Senior Technical Leader - SRE** — *May 2021 to February 2023*
  - Continued to lead the Kubernetes implementation. Grew it to over 40 clusters worldwide, including AWS China, and FedRAMP-certified clusters. Hired and trained a team to take over this platform.
  - Identified a memory leak in the Linux kernel as the source of server crashes using bpftrace and the crash kernel debugger. Implemented a remediation of last resort as a kernel module, which over 18 months mitigated over 25,000 leaks, avoiding thousands of server crashes.
  - Kick-started a multi-year initiative to migrate our monolith from bare-metal into Kubernetes, using custom tools and services.
- **Technical Leader - SRE** — *March 2019 to May 2021*
  - After extensive analysis of the container orchestration landscape, led the design and implementation of Meraki's EKS-based Kubernetes platform, provisioned using Terraform and Helm. It included Grafana SLO/SLI dashboards, Fluentd/Kinesis logging pipeline, Okta authentication, Statsd/Prometheus metrics collection, Gitlab CI deployments, Kyverno admission control, strict default Pod Security Policies and Network Policies.
  - Designed and implemented a Haproxy-based on-prem proxy infrastructure, for exposing customer-facing services running in EKS on IP ranges owned by Meraki. At peak, it was handling 3 million concurrent connections.
  - On-call in a follow-the-sun schedule. Triaged PagerDuty alerts, investigated root-causes, deployed remediations or rollbacks, ran post-mortems.

VMTech — Sydney, Australia

- **DevOps Engineer** — *August 2018 to February 2019*
  - Design and implementation of a customer-facing graphs dashboard, using Python, SQLAlchemy and Flask, using APIs from Splunk, ElasticSearch, ScienceLogic EM7, CommVault and ServiceNow.
  - Improving automation scripts (a mix of Node.js, Python, Bash) for monthly report generation.

Wifirst — Paris, France

- **Infrastructure & Automation Engineer** — *April 2016 to May 2018*
  - Management of over 10,000 Linux routers using Ansible, to provide internet to ~500,000 users.
  - Developing Python/Bash services to configure iptables, routes, and supervision on Linux routers.
  - Designing and evolving our monitoring infrastructure for a large volume of data (150,000 devices supervised) using Python, Nginx, Django, PostgreSQL, Redis.
  - Writing code to configure various network equipment: Cisco, Zyxel, DLink.
  - Speaker at PyCon France 2017.

Inria, Asclepios Lab — Sophia-Antipolis, France

- **Senior Software Engineer** — *March 2012 to April 2015*
  - Lead developer on medInria, a C++/Qt open-source medical image visualisation, processing and manipulation software, to add cardiac related functionalities.
  - Setup CI/CD using Jenkins, to test and build software on Debian, Fedora, OSX and Windows 7+.
  - Improved the reliability of medInria and its code quality by instituting code-reviews and a pull-request based workflow. Migrated the project to GitHub, reorganised, cleaned and simplified the source code, re-architected and updated the build/test system.
  - Evolved medInria's architecture to handle new functionalities, and transformed it into a framework for other projects using a plugin system.
  - Attended and presented at conferences (MICCAI), workshops (CTK), and contributed to scientific articles.

Telecoms Without Borders — Pau, France

- **Systems & Network Engineer** — *Sept. 2010 to Oct. 2011, April 2015*
  - Deployed on various international missions in response to humanitarian emergencies: floods, influx of refugees, cyclone, conflict or famine, for a total of 5 months on mission. Established telephone operations for populations, installed network and satellite equipment for international relief organisations and the United Nations. Provided trainings.
  - Maintained and evolved TSF's infrastructure (website, email servers, storage server, equipment database, OpenBSD firewall).
  - Contributed to the TSFBox, a custom Linux router facilitating monitoring and optimization of internet connections provided during missions, with services written in Perl.

Diateam — Brest, France

- **Software Engineer** — *June 2008 to April 2010, July/August 2007*
  - Implemented a multithread RPC framework in C++/Qt4, and its code generator and test suite.
  - Lead developer on the Hynesim open source project (Hybrid Network Simulator): implementation in C++/Qt4 of virtual network components, custom GUI widget and of wrappers around different virtualization technologies (OpenVZ/LXC containers, Qemu/KVM VMs) using livbirt. Speaker for conferences at OSSIRB and Hack.lu 2008.
  - Contributor to IpMorph : TCP/IP stack fingerprint spoofing for containers and VMs. Speaker during Hack.lu 2009. Co-authored a publication.

EDUCATION

- ENIB, National Engineering School of Brest, France from 2003 to 2008 (Master's Degree in Engineering).

PUBLICATIONS

Cardiac Interventional Guidance using Multimodal Data Processing and Visualisation: medInria as an Interoperability Platform — Midas Journal — *2012*

Authors: F. Vichot, H. Cochet, B. Bleuzé, N. Toussaint, P. Jaïs, M. Sermesant

> MedInria is a medical imaging application developed at Inria, which aims to provide clinicians with state-of-the-art algorithms for processing and visualising their images. In this article, we focus on its use in pre-surgery preparation for cardiac interventions, and the difficulties arising from the lack of standardisation of certain data formats and visualisation conventions.

IpMorph: fingerprinting spoofing unification — Journal in computer virology 6, no. 4 — *2010*

Authors: G. Prigent, F. Vichot, F. Harrouet

> Nowadays, there are a variety of tools for easily identifying the TCP/IP stack's fingerprint of a target machine. IpMorph allows this fingerprint to be concealed, and even mimicks the fingerprint of a chosen TCP/IP stack. This is done through live session tracking and packet rewriting. Its effectiveness against tools such as Nmap, Xprobe2, Ring2, SinFP and p0f is also detailed.