Florian Vichot

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Principal Engineer

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 -

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

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 presurgery 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.