Florian Vichot

software engineer

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An accomplished software engineer, I have over ten years of experience, comprising both development and operations. Fluent in multiple programming languages and technologies, I primarily aim to be versatile, and to be able to efficiently solve a broad range of problems. While particularly drawn to SRE, DevOps, Infrastructure or Backend Engineer roles, I welcome all opportunities that would allow me to work on challenging and varied problems as part of a talented team. Organisations implicated in open-source projects or tackling social issues are especially attractive.

SKILLS

- Very autonomous and self-motivated, reliable and dependable team player
- Experienced in leading teams, acting as technical referent, mentoring junior engineers
- Truly implicated, committed to improving products and processes
- Track record of improving code and infrastructure quality, performance and maintainability
- Skilled at navigating and mastering complex software codebases
- Dedicated to automate time-consuming and error-prone tasks

EXPERIENCE

Senior Site Reliability Engineer — Cisco Meraki — Sydney, Australia — *March 2019 to now*

- On-call for ~1500 servers, hosting services for 7 million devices providing connectivity to 12 million users.
- Leading the design and implementation of our **Kubernetes** platform, based on **EKS**, and provisioned with **Terraform**.

Ruby Ansible Bash Git PostgreSQL Kubernetes Docker Terraform AWS

DevOps Engineer — VMTech — Sydney, Australia — *August 2018 to February 2019*

- Development from scratch of a customer-facing dashboard showing live stats, 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.

Python Flask Gunicorn Nginx Frontend SQL-Server Bash Git Docker DevOps ITIL

Infrastructure & Automation Engineer — Wifirst — Paris, France — *April 2016 to May 2018*

- Management of over 10,000 **Linux** routers, providing internet to ~500,000 people, using **Ansible**.
- 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**.
- Automating & optimising image builds through **Jenkins**, which were tested using **LXC** and **Docker**.
- Writing code to configure various network equipment: **Cisco**, **Zyxel**, **DLink**.
- Speaker at PyCon France 2017.

Python Django Nginx PostgreSQL Bash Git Ansible iptables Docker Jenkins Cisco Network DevOps Linux

Senior Software Engineer — Inria, Asclepios Lab — Sophia-Antipolis, France — *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.

C++ Python Bash Git CMake Jenkins CI/CD Open-Source Qt VTK ITK Mac Windows Linux

Systems & Network Engineer — Telecoms Without Borders — Pau, France — *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 NGOs and the UN. Provided trainings.
- Maintained and evolved the NGO'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**.

Perl Python Bash iptables System administration Networks Satellites Linux

Software Engineer — Diateam — Brest, France — *June 2008 to April 2010, July/August 2007*

› Implemented in **C++/Qt4** a multithread RPC framework, as well as 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.

C | C++ | PHP | Python | Open-Source | Qt | Multi-Thread | LXC | OpenVZ | libvirt | KVM | OpenCL | Mac | Windows | Linux

Internship — Cognitive Robotics Lab (ENSTA) — Paris, France — *Sept. 2007 to Jan. 2008*

› Implemented visual homing and localization **algorithms** using **"bags of visual words"** in Urbi, as part of a topological navigation framework.
› Ported the Urbi environment to a P3-DX robot.
› This work was included in a scientific publication.

C | C++ | Urbi | SVN | Machine-Learning | Linux | Robotics

PERSONAL PROJECTS

Home lab on RPi cluster — *2018 to now*

› Experiments in self-hosting, container orchestration and home automation.

Raspbian | Alpine | Docker | Docker-swarm | Docker-compose | NextCloud | NAS

Robotics Club — ENIB — Brest, France — *2004 to 2010*

› Club secretary: sponsors engagement, communication, project management.
› Lead developer on the robot's software (simulator, sensor acquisition, path planning, motor control)

C | C++ | Qt | OpenGL | SVN | Linux | Embedded | Robotics | Algorithms

Server management — *2011 to 2015*

› Server administrator for a club: configuration, security, supervision.

Linux Debian | iptables | Apache | PHP | OwnCloud | Zimbra | OpenVPN | IMAP | SMTP | LVM | LUKS | KVM | LXC | RAID

LANGUAGES

› **French**: Fluent (French citizen)
› **English**: Fluent (studied for three years in the UK, TOEFL iBT: 119/120, PTE: 90/90)
› **Spanish**: Intermediate (six months in South America)

EDUCATION

› ENIB, National Engineering School of Brest, France from 2003 to 2008 (Master's Degree in Engineering).
› Artificial Intelligence online course, University of Stanford, 2012.
› Machine Learning online course, Stanford University, 2015 (Coursera).

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

> Summary: MedInria is a medical imaging software developed at Inria, which aims to provide clinicians with state-of-the-art algorithms for processing and visualising their images. In this article, we will 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

> Summary: 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.