Dr. Pascal Grange

Senior Backend Engineer - Distributed Systems – Extreme Programmer

Regularly attend and sometimes speaks in agile software related conferences including (in french):

- *à la chasse aux faux semblants* — https://bit.ly/hunting_fails
- *Test Driven Development of Ansible roles* — https://bit.ly/tdd_ansible

Maintain or contribute to several open-source projects, including:

- bash unit testing enterprise edition framework for professionals — https://bit.ly/bash-unit

English: fluent / French: native / German: some basics and willing to learn more

Professional Background

December 2023 - present: Founder

`21research`

Building, securing and hosting a Bitcoin Lightning node. Exploring the development of a Lightning Hardware Wallet. Developping LN paid services.

Bitcoin, Lightning, eclair, Phoenix, Ledger, Scala, Kotlin, security, operations

September 2022 - September 2023: Senior Software Engineer - Hydra

`IOG https://iohk.io`

Developing Hydra, the layer 2 scalability solution for Cardano: increase transaction speed through low latency and high throughput and minimize transaction cost.

Cardano blockchain, state channels, security, Open Source, Ensemble Programming, Haskell

May 2020 - August 2022: Senior Software Engineer

`Sinch https://sinch.com`

Expanding a local SaaS product to a global worlwide solution. Migrating from baremetal to AWS. Handling local regulations, security and total cost of ownership. Ensuring software teams autonomy.

AWS, terraform, Cloud Development Kit, prometheus, ops'genie, Python

Implementing 24/7 on-call duty contract to cover all timezones. Fighting against alert fatigue, identifying key critical alarms. Facilitate post-incident reviews.

Problem Solving, facilitation, metrics, learning together

March 2018 – May 2020: Chief Information Security officer - Infrastructure Engineer

`LGO https://lgo.group/`

Building and securing the leading (at the time) institutional Bitcoin exchange in Europe. Approx. $500.000.000 equivalent traded on the platform until february 2020. No major incident. *Funds are safu*.

High performance (target several millions orders per second). Test driven infrastructure as code. Automated failure management (disk expansion, service restart, machine restart). Implementation of an on-call contract (just in case).

role-unit, bash_unit, ansible, packer, terraform, consul, nomad, vault, GCP, aeron cluster, raft

In charge of writing and implementing the security policy for the company, the trading platform and funds management.

hardware security, pentest, bug-bounty, training, risk assessment, implementation of security reviews

October 2011 – May 2018 : Manager of expert teams in web, telephony and NFC

`Orange Business Services — Orange Applications for Business`

Management of a team of five systems and network engineers and one project manager. Supporting change to evolve from a culture where system administration is performed *manually* to a *devops* and *infrastructure as code* culture.

agile software development, lean-thinking, standards, technical sharing workshops, recruitment
ansible, docker, test driven software development, git, gitlab-ci, pair-programming, mob-programming

Frequent management of security audits, formalization of responses and follow-up of the countermeasures when needed.

In charge of designing, costing and building several customer platforms. Responsible for their quality of service, security and profitability for the company:

- multi-country web authentication platform using smartphone — *Mobile Connect*
- shared cryptography service — *Hardware Security Module as a Service*
- e-commerce website — client annual income over 150 M€
- NFC mobile payment platform
- Telephony platform with active replication over three distinct geographical areas - 100 000 calls a day

Mastercard certification, payshield Hardware Security Modules, ncipher Hardware Security Modules
OMS Interactive Voice Response, mobile carrier networks interconnection
debian, redhat, ha-proxy, varnish, apache, tomcat, mysql, automation of security patches, puppet

November 2005 — September 2011 : Software Developer

`Orange Business Services — CVF`

Test Driven Development; frequent writing of executable specifications; building several continuous integration platforms; team leadership, project management and writing of commercial offers.

Java, Javacard, Javascript, python, NFC, SIM card, OTA, Voice XML, FitNesse
subcontractor management, partnership coordination

September 1999 — August 2005 : Teacher in higher education

`ENSEIRB — Université Bordeaux 1 — IUT Bordeaux 1`

Education/training

2022 — Strategic Domain Driven Design - Maxime Sanglan-Charlier

2019 — FunAr functional architectures through practice — Arnaud Bailly and Frederic Merizen

2016 — LEAN and Operational Excellence — CUBIK Partners

2015 — Certified *ethical hacker* — EC-Council — Sysdream

2013 — Neuro-Linguistic Programming Technician — L'Institut de formation PNL

2005 — Ph.D in computer science — *Distributed Systems: Transparency, Hiding, and Associated Tools*
Université Bordeaux 1, Mention Trés honorable