

# Jonathan Ballet

Site Reliability Engineer

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## Experience

March 2015 – **Lead Site Reliability Engineer**, *Edge Laboratories*, Lausanne, Switzerland.

ongoing (3 years+) I instilled a DevOps culture into the company, implemented modern DevOps practices within the development and operation teams and supported the infrastructure for EdgeLab's public HTTP API serving financial risk data.

In a couple of years, the company evolved from a few developers and 2 monolith applications into a team of 20 running more than 25 in-house services written with a variety of languages, deployed several times a day.

- Implemented the infrastructure to support a service oriented architecture based on containers, service scheduler, service discovery, service mesh, departed monitoring platform and dynamic hardware capacity. The architecture delivers 1M requests per week, supporting both real-time and long-running batch services.
- Provided developers an uniform automatized workflow and standardized practices to configure, deploy and observe their own services. Feedbacks from code committed to production traffic can be obtained in a matter of minutes under the sole responsibility of the service owners.
- Automated most of the production environment using Infrastructure-as-Code to allow rebuilds and redeployments of the whole infrastructure on a daily basis for testing purpose.
- Supported different distributed systems and databases stocking more than 150 GB of new data every day.

*Keywords:* Nomad, Consul, Terraform, AWS, Saltstack, Docker, Cassandra, Elasticsearch, RabbitMQ, PostgreSQL, MySQL, Graphite, Jenkins, Sensu, Git, Python, Go, Ruby.

March 2013 – **Freelance software developer & system administrator**, Grenoble, France.

December 2013 (10 months) • Elaboration and implementation of a domain-specific end-user language for querying and filtering aggregated network data on hundreds of different fields.

The language has knowledge of all the internal network-related information collected by the underlying product (IP addresses, TCP packets RTT, etc.), offers boolean logic to allow complex filtering combination on the underlying network data and compiles towards the internal query language understood by the existing storage backend.

- Migration of bare-metal servers infrastructure towards the Proxmox virtualization environment; Automatization of server configuration using Saltstack;
- Helped the team to modernize their infrastructure and practices by moving to Git, packaging Python applications, automatization of application and servers deployments.

October 2008 – **Software Engineer**, *Performance Vision (formerly SecurActive)*, Paris, France.

December 2010 (2 years, 3 months) Development and QA of an Application Performance Monitoring appliance, which monitors and provides diagnostics on various metrics related to the performance of a company internal networking. A typical appliance is capable of passively analyzing and ingesting several gigabytes of network traffic every minutes up to a thousand clients and servers, understanding common L1 to L3 network protocols as well as several widely deployed L7 protocols.

- Fullstack developer, from the data collection back-end to the user interface (Python, Zope, PostgreSQL);
- Development of the developers' infrastructure:
  - Adapting, fixing and contributing back upstream on externals libraries and tools used (internal mirrors, Buildout and Python components),
  - Development and maintenance of the continuous integration tools (Buildbot);
- Implementation of fully automated integration tests (from Git to a fully usable, newly deployed hardware appliance).

- October 2007 – **Master Degree Internship**, Verimag, Grenoble, France.
- October 2008 – Implementation of the code generation back-end for the *Lustre V6 compiler*.  
 (1 year) Development of the Lustre V6 compiler back-end and prototyped in OCaml a transpilation of a strict subset of Lustre source code into C source code, ensuring the safety properties of the language.
- January 2004 – **Software developer / System Administrator**, Rodacom, Grenoble, France.
- October 2008 – As the first employee of the company, I experienced the growth and development of the whole company, projects and support, up to 35 employees.  
 (4 years, 10 month)
  - Lead developer of the *Convert'Immo* platform, which imports, transforms and exports real-estate agencies data from more than 50 different softwares to more than 30 different mediums (including websites, newspapers and other estates management softwares). Design and implementation of the core functionalities; Implementation of private sharing systems between different companies. (Python and PostgreSQL);
  - Lead backend developer of *Connect'Immo*, a real-estate properties management software. Development of the server (Python, PostgreSQL) and the client (C#). Implementation of a protocol to synchronize data between clients, with full offline editing capabilities.
  - Administration and supervision of all the company infrastructure: network, servers, databases.

## Computer skills

Language	Python, Ruby, Go, OCaml	Databases	PostgreSQL, MySQL, Cassandra, Elasticsearch, ZODB
Framework	asyncio, aiohttp, Pyramid, Twisted, Py-GObject, PyQt5	System	Consul, Nomad, Terraform, Git, Mercurial, Saltstack, Jenkins, Buildbot

## Miscellaneous

- Nov. 2012 – **PADI Divemaster & dive center manager**, Dive Concepts, Pemuteran, Bali, Indonesia.
- Dec. 2012 – Management of the dive center operations and guiding dives in the North-West area of Bali, Indonesia.
- May 2012 – Oct. 2012 – **PADI Divemaster**, Kanawa Island Diving, Kanawa Island, Indonesia.  
 Assisted classes and lead day trips into the Komodo National Park.

## Education

- 2003 – 2008 **Master degree**, CNAM, Grenoble, France.  
 Computer Science: Software Architecture. (Evening classes)
- 2001 – 2003 **2-years technical degree**, IUT 2, Grenoble, France.  
 Computer Science: Software Engineering
- 2001 **High School Diploma**.

## Miscellaneous

- Apr. 2014 – **From Central China to Singapore by bicycle**.  
 Aug. 2014 Solo bicycle travel from Zhengzhou, Henan, China, to Singapore, by Laos, Thailand and Malaysia
- Dec. 2013 – **Self-studying Chinese culture & language**, China.  
 Mar. 2014 Solo travel in China, with the goal of improving my knowledge of Chinese language &
- Apr. 2011 – Jan. 2013 **Gap year**.  
 A journey across East-Asia, from Japan to Indonesia “overland”.  
 WWOOF helper in organic farms, English teacher, PADI Divemaster.

## Languages

French	Mother-tongue
English	Full working proficiency
Mandarin	Basic (HSK Level 3)