# Network and web technologist Free software developer

# Vincent **Bernat**

+33 6 18 39 27 54

vincent@bernat.im vincent.bernat.im



39 quai de l'Ourcq 93500 Pantin

**France** 

#### Skills and abilities

Network

Excellent knowledge of IP networks. Important experience of day-to-day network management. Good knowledge of security best practices.

- Ethernet. IPv4, IPv6 and upper layers.
- Redundancy and high availability.
- Routing protocols like OSPF, BGP and PIM-SM.
- VPN IPsec, L2TP/IPsec, PKI.
- Wireless networks.
- Cisco (6500, 7200, CSS). Nortel (55x0, 8610), Radware (Alteon), F5 (BigIP LTM et GTM), Spirent (Avalanche), Juniper (EX, SRX, ISG), Extreme (Black Diamond). Linux (Netfilter, Quagga, Keepalived, tc).

Programming Two favourite languages: C and Python.

- C, including event-based and network programming.
- Python (Twisted), shell.
- Javascript (JSON, Ajax, JQuery), HTML, CSS.
- SQL (MySQL and PostgreSQL).
- Software configuration management using Git, SVN and CVS.

System

GNU/Linux expert.

- Debian, Ubuntu and RHEL distributions.
- Centralized configuration management with CFEngine or Puppet.
- Virtualization: Xen, KVM, VirtualBox, LXC, VServers.
- Applications: OpenLDAP, Apache, nginx, Postfix, Dovecot (POP+IMAP), OpenSSH, PostgreSQL, MySQL, Bind (DNS), FreeRadius, Squid, Zabbix and many others.

Misc

- ITIL certification (ITIL® version 3 Foundation)
- French (native)
- English (fluent, including technical)
- German (basic)

# **Experience**

Since 2013

Dailymotion Devops

Member of the infrastructure architect team of Dailymotion, the world's second largest video-sharing website.

#### 2008 — 2012 Orange Portails Network engineer

Member of the network team in the entity hosting the Orange web portal. Orange is the leading telecom and Internet operator in France. Three datacenters. Multi-layer redundancy. Heterogenous environment. Some achievements:

- Many VPN setups including redundant IPsec VPN using BGP for communication between datacenters as well as L2TP/IPsec VPN for roadwarrior access.
- Development of numerous tools to help day-to-day management like a layer-2 network cartography tool.
- Maintainance and development of various needed Linux software components. Monitoring.
- Network architecture evolutions. For example, setup of IPv6 or design of new routing solutions.

#### 2006 — 2008 Wallix System and network engineer

Wallix is a French security editor. IT consultant. Product development. Pre-sales engineering. Some achievements:

- Log concentrator and analyzer Wallix Logbox. Conception and development of the second version. Modular
  architecture. Support of most logging solutions.
- Monitoring with Zabbix. Adaptation and installation of the solution for an important client in real estate industry.
- Access control through a mandatory server for equipment administration with Wallix Adminbastion. RDP protocol
  implementation (client and server).

## 2006 DSI - ÉNS de Cachan System and network administrator

Head of network. Responsable réseau à l'École Normale Supérieure de Cachan. CISO. Administration of a NEC TX 7 supercomputer.

#### 2001 — 2006 CRANS - ÉNS de Cachan System and network administrator

Technical advisor at CRANS, a non-profit organization managing the student network at École Normale Supérieure de Cachan.

- Network management.
- Large wireless network roll-out based on OpenWRT.
- IP television service roll-out.

#### 2002 - 2006 Computer science department - ÉNS de Cachan Teaching assistant

C++, C. Network programming. Compilation and static analysis.

### **Personal projects**

#### Since 2009 GNU/Linux Magazine France Author

Occasional author.

- « Python et le C » (Python and C), Novembre 2010
- « La séparation de privilèges en C », Septembre 2009
- « Python et le réseau » (Python and network) Janvier 2009

#### Since 2007 Open source projects Developer

Various opensource projects available on GitHub. Mostly C or Python. A few examples:

- Ildpd, a 802.1ab daemon with SNMP support.
- Wiremaps, a layer-2 network discovery application.
- snimpy, an interactive SNMP tool with Python.
- Keepalived, healthchecking and high-availability (VRRP).

#### Since 2007 **Debian Developer**

Official maintainer of various packages in Debian GNU/Linux distribution.

#### **Education**

## 2002 — 2006 LSV - ÉNS de Cachan PhD in computer science

Intruder theories for the verification of cryptographic protocols. With highest honors.

#### 2001 — 2002 ENS de Cachan / Université Paris VII Master's degree in computer science

Vérification. Cryptography. Automata. Complexity. With highest honors.