Bernard Cafarelli

Software architect

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born on 1981/04/27 — Driving license

Master's Degree in Computer Engineering
"Ingénieur de spécialité de l'École des Mines de Paris"

Professional experience

may 2016–now **senior software engineer**, *Red Hat*, Paris.
Member of the Network team. Development of networking features in OpenStack Neutron

march 2007–now **developer**, *Gentoo foundation*.
Package maintainer for NX remote server, GNUstep, chromium web browser, llvm/clang, FTP servers, ...

january 2012–april 2016 **software architect**, *DenyAll*, Sèvres.
Worked on Protect, an Apache-base web application firewall:
- new versions planning, development monitoring and deployment
- new features development (on-the-fly SSL certificates generation, logs configuration and scaling, added support for WebSocket and RPC over HTTP protocols, ...)
- development and optimization of a command line interface (based on a SOAP API)
- industrialization, hardening and maintenance of DAOS, a CentOS-based system used for DenyAll Products

Design and development of a cloud-based (SaaS) security solution, `www.cloudprotector.com`:
- designing the new software architecture
- setting up an automated management interface compatible with multiple IaaS providers (AWS, Openstack, vCloud)
- infrastructure deployment automation (Ansible)
- integration and adaptation of DenyAll products

october 2006–december 2011 **R&D engineer**, *StreamWIDE*, Paris.
StreamWIDE Engine development (core technology), providing signaling and media handling capabilities for VoIP solutions (voice mail, prepaid, Ring back tone, ...):
- new modules design and implementation (Radius, Diameter, legal intercept)
- new SIP features (SIP over TCP, RFC 4028 session timers)
- reliable communication between Engine and VoIP applications

Development of mobile applications integrated with StreamWIDE software:
- Android application development for Visual Voicemail (OMTP standard)
- Apple iOS applications development (iPad visual voicemail, iPhone advanced greetings)

may 2004–october 2006 **R&D engineer**, *StreamCore System*, Puteaux.
- embedded network systems creation, working on: Linux system, C/C++ kernel modules
- TCP/IP streams analyzer engine development (RTT statistics, ...)
- worked on the centralized management server (Linux, shell, Perl+PHP)
- updated the software packaging system (automated installations and updates, ...)

may 2003–september 2003 **intern**, *Centre National d'Équipement Nucléaire (EDF)*, Montrouge.
specification and modeling of a CAD engineering application

may 2002–may 2003 **network administrator**, *School students' network*, Saint-Étienne.
new network deployment and maintenance

Academic background

2003-2005 **Master's Degree**, *Institut supérieur d'Informatique et d'Automatique (ISIA)*.
A two-year post-graduate program leading to the Master's Degree called "Ingénieur de Spécialité de l'École des Mines de Paris".
Includes a 3-weeks software conception and development project (based on the P2P platform JXTA)

2001-2004 **Master's Degree**, *École Nationale Supérieure des Mines de Saint-Étienne en Rhône-Alpes*.
National Graduate Management and Engineering School, Master's Degree, oriented on general formation, with second year major in computer science

Technical expertise

Computers

Systems
- GNU/Linux (Gentoo, RedHat/CentOS, Ubuntu/Debian)
- Unix (Solaris)
- Windows, MacOs X

Languages
- experienced in C, C++, script shell, Java
- common use of Python, PHP
- notions in Perl, SQL

Cloud computing
- Amazon Web Services (AWS): EC2 deployments, boto SDK
- OpenStack: Nova, Neutron, REST API
- vCloud Director: pyvcloud SDK

Development tools
- git, mercurial, SVN, CVS
- Makefiles and compilation scripts writing
- Docker, Ansible
- vim, Eclipse

Project management
- agile software development (SCRUM)
- Redmine, Trac, Bugzilla, Jira

Mobile phones
- Android (1 year)
- iOS/Objective-C (4 months)

Foreign languages

English	bilingual	*TOEIC score: 980 out of 990*
French	native speaker	
Spanish	average	*Diploma Básico DELE B2 (Instituto Cervantes)*
Italian	beginner	

Miscellaneous, interests

Sports: Scuba diving (french FFESSM level 1), swimming

Hobbies: technology intelligence, Open Source contributor
reading (science-fiction, historical novels)