

Pierre Bourdon

Low-level Software Engineer

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Experience

Business

- Mar 2013 - Aug 2013 **Site Reliability Engineering (intern)**, *Google Switzerland*, www.google.com.
Development of DoS attack analysis tools and improvements in the DoS detection infrastructure. Work on highly distributed architectures handling large amounts of requests.
- Aug 2012 - Dec 2012 **iPhone/Android low-level development**, *Axalot, Paris, France*, www.axalot.com.
Work on a data recovery software for bricked Android/iOS phones. Reverse engineering of internal Apple APIs for firmware restoration. Design of an Android restoration ROM used to extract data from HTC and Samsung devices.
- Aug 2011 - Apr 2012 **Python backend development**, *Critsend, Paris, France*, www.critsend.com.
Development of backend services for Critsend's cloud emailing architecture. Work on a realtime spam signals analysis architecture to improve deliverability and block spammers as soon as possible.
- Jun 2010 - Sep 2010 **System administration/Python development**, *alwaysdata, Paris, France*, www.alwaysdata.com.
Administration of managed hosting servers and development of helper tools for abuse detection (realtime outbound packets processing to detect DoS coming from the company hosting servers).

Community and Personal Projects

- Aug 2011 - today **Dolphin Emulator (Gamecube/Wii)**, *Open source project*, <http://dolphin-emu.org/>.
Core developer working on CPU, DSP and GPU emulation accuracy and optimizations. Infrastructure (buildbot, website, IRC bot) maintainer.
- Oct 2008 - today **Prologin contest organizer**, *French national programming contest*, <http://prologin.org/>.
Organizer of the contest since 2008 and technical lead from 2011 to 2013. Worked on infrastructure development, systems administration, distributed computing architecture design.
- Sept 2011 - Jan 2013 **Participant in CTF security contests**, *Team LSE*, <https://ctftime.org/team/757/>.
Solving reverse engineering, exploits and forensics challenges in a contest environment.
- May 2012 - Jul 2012 **chapchap**, <http://code.delroth.net/chapchap/>.
GPGPU bruteforce tool using OpenCL to recover a plain text password from an MSCHAPv2 handshake.
- Nov 2011 **gcdsp-ida**, <http://code.delroth.net/gcdsp-ida/>.
IDA processor module for the Gamecube DSP. Implements a disassembler and some basic code analysis.
- Jan 2011 **wiiodfs**, <http://code.delroth.net/wiiodfs/>.
FUSE filesystem for Wii optical discs, handling on the fly decryption of the disc contents.
- Oct 2009 - Jun 2010 **meta-morphosis**, <http://code.delroth.net/meta-morphosis/>.
Basic MIPS to x86 static recompiler for Playstation demos emulation, using LLVM for code generation and optimization.

Skills

Computer Technologies

Languages	C, C++, Python, C#, sh, OCaml, SQL Occasional uses of PHP, Java, Ruby, Perl	Systems	GNU/Linux, Windows
Tools	Git, SVN, HG, Perforce, Vim, Visual Studio, CMake, gdb, boost, LLVM	Low-level	Good knowledge of the x86, ARM, MIPS, PPC architectures. IDA, OllyDBG, VTune

Languages

English	Fluent (TOEIC: 990)	French	Native speaker
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Education

- Jan 2011 - Mar 2013 **Student researcher**, *Systems and Security Lab, EPITA*, Working on security and low-level related problems..
- Sep 2008 - Oct 2013 **Computer science student**, *EPITA*, Pursuing an engineer's degree. Majoring in real time and embedded software development.