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French citizen, born in 1982



SKILLS

Security consulting:

Source code audits:

- Best-effort and complete reviews of industrial-grade software projects
- Discovery of implementation flaws (C/C++, PHP, Java...)

Reverse-engineering:

- Firmware analysis for consumer electronics
- Hardware-level attacks (serial, JTAG, soldering...)
- Analysis and fuzzing of protocols (Wireshark, ISIC, zzuf...)

Penetration tests:

- Discovery of computer networks and services (Nmap...)
- Identification, analysis and exploitation of security flaws (American Fuzzy Lop, Metasploit...)
- Native and web-based applicative Blackbox tests

Security architecture:

- System hardening and verification of Best Practices on UNIX and Windows platforms
- Design by Contract (TDD...), Threat Modeling (SDL...)

Documentation and reporting:

- Proficiency with Office productivity tools
- Use of semantic and typesetting formats (DocBook, TeX...)

Programming:

Systems software:

- Kernel programming in C, Assembly (BSD, Linux...)
- Kernel- and user-land contributions to the [NetBSD](#) Operating System
- Research & Development in automated discovery of flaws

Distributed frameworks:

- Implementation and extension of RPC components (PVM...)
- Implementation of a Foreign Function Interface (DeforaOS libMarshall)

Graphical interfaces:

- Development of a lightweight Desktop and Smartphone environment (C, Gtk+, HTML5)
- Experiments with alternatives to the X11 windowing system (Xynth, OpenGL)

Security tools:

- Firmware analysis (UWfirmforce)
- Cross-platform (dis)assembly framework (DeforaOS Asm)
- Networking (UWsslmitm...)

Web applications:

- Development of websites, both personally or professionally
 - Implementation of a complete Content Management System (CMS) with PHP
- Systems administration:
- GNU/Linux, BSD and other UNIX environments
 - Deployment of services (DNS, SMTP, LDAP...)
 - Task automation (Python, shell scripting...)
 - Centralized infrastructure management (Salt...)
 - Monitoring solutions (performance, security)

WORK EXPERIENCE

- Since Sep 2007: Independent **Freelance Security Consultant**
- Source code, Blackbox and network audits
 - Embedded systems development
 - Researching applicative flaws, Future Internet, reverse-engineering...
- July 2016 – July 2017: **Co-Founder, Security Consultant** at *Defora Networks GbR*
- Security reviews, awareness trainings
 - Solutions for digital independence
- May 2013 - May 2016: *Deutsche Bank AG* as **Freelance Contractor**
- Design and development of a Threat Intelligence platform
 - Team lead of six developers, partly remote
 - SCRUM methodology, continuous operations
- Feb 2010 - May 2011: **Co-founder, Security Consultant** at *loopb-ack IT-Security Consulting GbR*
- Security reviews and trainings
 - Exposure assessment
- Jul 2008 - Oct 2009: *Bearstech SCOP*, supporting the **R&D team**
- Promoting the concept of Hackable Devices (Open Source hardware)
 - Co-founder and maintainer of the [hackable:1](#) Linux distribution
- Feb 2006 - May 2007: *n.runs AG* as **Security Consultant**
- Source code audits (C/C++, embedded...)
 - Blackbox penetration-tests (embedded devices)
 - Network penetration-tests
- Jan 2005 - Oct 2005: *Fpconcept SARL* as **Web Developer** (PHP/MySQL, scholar internship)
- Design and implementation of a groupware solution
 - Deployment of websites, including an online shop
- Nov 2004 - Dec 2004: *Netanswer* as **Web Developer** (PHP/MySQL, scholar internship)
- Development and support
- May 2004 - Oct 2004: *COVENTYA* as **Systems Administrator** (scholar internship)
- Monitoring of servers and network equipments (Squid, Cacti, Nagios)
 - Administration of the software infrastructure (Active Directory, Lotus Domino)
 - Maintenance of user workstations, helpdesk
- Apr 2002 - Sep 2002: *INRIA Rhône-Alpes* as **Software Developer**
- User interface in C++ and Gtk+ for the "Opale" project (graphical

programming for physics experiments)

EDUCATION

- Sep 2003 - Oct 2005: *INSIA* part-time computer engineering school, Paris (France)
Computer Science Engineer (systems, networks, programming, security)
- Sep 2002 - July 2003: *Brookes University*, Oxford (United Kingdom)
BSc in Computing with Honors (system software, networks, Object-Oriented Programming, distributed systems, compiler construction)
- Sep 2000 - June 2002: *IUT2 Pierre Mendès-France University*, Grenoble (France)
DUT Génie Logiciel (2 years Computer Science degree)
- Languages: Native French speaker, fluent English, conversational German, basic Spanish

PERSONAL INVOLVEMENT

- Presenting at conferences: *Talks:*
- pkgsrcCon 2017, « *Hardening pkgsrc* »
 - BSDCan 2017, « *Hardening pkgsrc* »
 - AsiaBSDCon 2017, « *Hardening pkgsrc* »
 - Hack4 2016, « *What is a FFI?* »
 - FOSDEM 2016, « *EdgeBSD: Status Report* »
 - vBSDcon 2015, « *What is EdgeBSD?* »
 - pkgsrcCon 2015, « *pkgsrc meets pkg-ng* »
 - FOSDEM 2015, « *EdgeBSD: Status Report* »
 - EuroBSDcon 2014, « *EdgeBSD, a year later* »
 - area41 2014, « *DeforaOS: A Journey into OSDev* »
 - AsiaBSDCon 2014, « *Carve your NetBSD* »
 - FOSDEM 2014, « *The DeforaOS Desktop* »
 - FOSDEM 2014, « *The EdgeBSD Project* »
 - FrOSCon 2013, « *The EdgeBSD Project* »
 - BSDCan 2013, « *Call your NetBSD* » (NetBSD on smartphone hardware)
 - pkgsrcCon 2013, « *DeforaOS and pkgsrc* »
 - EHSM 2012, « *Touch your NetBSD* » (NetBSD on tablet hardware)
 - NetBSDfr hackathon 2012, « *Touche ton NetBSD* » (in French)
 - EuroBSDcon 2012, « *Touch your NetBSD* »
 - FOSDEM 2012, « *Touch your NetBSD* » (early version)
 - Osec 2011, « *The DeforaOS (de-)assembly framework* » (reverse-engineering)
 - Pas Sage en Seine 2011, « *Disassembling Android applications* »
 - Osec 2010, « *Confidence in SMS* » (Mobile security)
 - Pas Sage en Seine 2010, « *Confidences par SMS* » (in French)
 - CELF 2009, launching hackable-devices.com
 - GSMA 2009, talk about hackable devices (Open Source Hardware)
 - 23C3 2006, « *Fudging with firmware* » (firmware reverse-engineering)
 - Osec 2006, « *Fudging with firmware* »
 - Osec 2005, « *Packet tapping* » (libpcap shortcomings)
 - RMLL 2005, « *Paranoia hour* » during Les Nocturnes
- Workshops:*

- RMLL 2009, embedded development workshop
- HAR 2009, embedded development workshop
- FOSDEM 2009, embedded development workshop
- 25C3 2008, lightning talk and embedded development workshop

Contributions to the

NetBSD Operating System:

- Official developer since May 2012
- Set of drivers for the Nokia N900 smartphone
- Author of the uts(4) driver (USB touchscreens), fixes to the calibration framework
- Port of the aps(4) driver from OpenBSD
- Solution for root filesystem encryption
- Security advisory and patch for a local DoS (CVE-2010-0561)
- Fixes and backports to every major release since NetBSD 4.0
- Maintainer of over 20 packages in pkgsrc and pkgsrc-wip

Development of an experimental Operating System, DeforaOS:

- Remote and secure access to users' data
- POSIX compatibility layer
- Desktop environment
- Support for embedded platforms

Acting: (on IMDb)

In movies:

- « *Drones don't fly when the sky is grey* », 2016
- Further projects as an extra (uncredited)

At the theater:

- « *Ein Cybernachtstraum* » with the c-atre group, 2017
- « *The Time is Right* » with the c-atre group, 2014
- « *When Sysadmins Ruled the Earth* » with the c-atre group, 2013
- « *The Legend of Mulan* » with the Wu Artists, 2013 - 2014
- « *Space Invaders* », in the streets of Berlin, 2012