

ARNAUD YSMAL

SENIOR EMBEDDED SOFTWARE DEVELOPMENT ENGINEER

ABOUT

Kernel software engineer and open source enthusiast with areas of expertise such as C, Go, kernel development, drivers, FreeBSD, NetBSD, GNU/Linux.

Able to grasp new concepts quickly and use these to develop new features and fix issues on unknown source code.

WORK EXPERIENCE

Stormshield, Airbus Defence and Space

<https://stormshield.com>

June 2014 – Present

Senior Embedded Software Development Engineer (FreeBSD Kernel)

Development for embedded systems (FreeBSD): support for new hardware (devices drivers), updates and optimisations in the kernel, operating system management (update, features backports) and integration.

- FreeBSD Kernel development:
 - Support of the Armada 38x System on Chip (SoC) platform (ARMv7)
 - Optimisation of memory management for multiprocessor (SMP) architectures
 - Network Interface Card (NIC) drivers (WiFi included)
 - General Purpose Input/Output (GPIO) and watchdog device drivers
 - Backporting system hardening features
- Development of boot loader features
- Development of an Intrusion Prevention Systems (IPS) with Deep Packet Inspection (DPI) and filtering
- Management of FreeBSD versions changes and backport of features
- Development and optimisation of internal tools and interfacing with Jenkins for Continuous Integration (CI)
- Level 3 Support

IT-Finance (ProRealTime)

<https://it-finance.com>

January 2010 – May 2014

Linux development engineer

Finance-related software development: Low latency market data feed handlers, interfacing with brokers for orders handling, creation and optimisation of tools for technical analysis.

- Design and development of server side finance-related software
 - Low latency market data feed handlers
 - Client-server communication through web services
 - Optimisation of customer code interpreter for technical analysis
 - Interfacing with brokers for orders handling
 - Conception of a distributed authentication system
- Development of NGINX modules
- Level 3 production support

CONTACT



Lille, Nord FR



arnaud.ysmal@gmail.com



LinkedIn
[arnaud.ysmal](#)



Git
[stacktic](#)

EDUCATION

2006
2009

Université des Sciences et Technologies de Lille (USTL)

Master of Science

Information Technology

SKILLS

Programming Languages

C Go Python Shell script SQL

Operating Systems

FreeBSD NetBSD GNU/Linux Mac OS X

Networking

Security IPS DPI TCP/IP IPv4
IPv6 UDP Device Drivers

Software

Clang GCC GDB Valgrind Sed
Git Subversion Jenkins

PUBLICATIONS

fs-utils: file systems access tools in userland

EuroBSDCon 2009, Cambridge, England

19 September 2009

https://www.netbsd.org/~stacktic/ebc09_fs-utils_paper.pdf

LANGUAGES

French

Native speaker

English

Fluent

NetBSD Foundation

<https://NetBSD.org>

May 2009 – August 2009

Google Summer of Code Student

- ◀ Conception of a homogeneous file system-independent mounting protocol
 - Definition and implementation of a new system call
 - Creation of a mount-like program as a proof of concept

NetBSD Foundation

<https://NetBSD.org>

May 2008 – August 2008

Google Summer of Code Student

- ◀ Development of the fs-utils tools (file system access utilities)
 - Needs assessment and solution architecture
 - Development of a set of tools a la unix
 - Documentation and packaging for pkgsrc

VOLUNTEER

OpenSource projects

January 2007 – Present

Developer

- ◀ [fs-utils](#) - File System Access Utilities in Userland - main developer
 - Compatibility for non-NetBSD hosts: Linux, FreeBSD and Solaris
 - Block device and network based file systems support including FFS, Ext2, NTFS, NFS and SMBFS
- ◀ [RUMP](#) - Running NetBSD kernel code in user-space - contributor
 - Support for IPv6
 - Improvement of the network stack compatibility on non-NetBSD operating systems including Linux, FreeBSD and Solaris
- ◀ [pkgin](#) - Development for the pkgsrc binary package manager - contributor
- ◀ Personal projects:
 - Library (API) in go to access files hosted on Dropbox
 - Tools to assist developers
- ◀ Contributions to projects [FreeBSD](#), [Python](#) and [Go](#)