

# Curriculum Vitae

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## Last graduated school

Computer Science / Transilvania University (1997)

## My graduation diploma

Distributed networks and task migration ([M]PVM)

## Work experience

Oct 2012 – Today – **FlashNet** Brasov

**Programmer and system/network administrator.**

Tasks:

- Developing code for LoRaWan network: network manager and application dispatching
- Developing concentrator side for some PLC (power line communication) protocols
- Taking care of 40 Linux servers and several Cisco routers
- Maintaining images for routers (based on OpenWRT distribution)
- Cross compiling applications for MIPS and ARM based routers.

Jul 2005 – Sep 2012 – **Route 66** Brasov

**Project manager, programmer and system/network administrator.**

My work was used by millions of clients (from Nokia, Samsung, HTC)

Tasks:

- Scalable client/server applications for off-board navigation (**C**)
- Scalable distributed activation services (**C**, **PHP** and **SQL**)
- Server farm administration (**Linux**)
- Road traffic server programming and administration (**PHP**)
- Web statistics for activations and road traffic (**PHP** and **SQL**)
- Porting Linux kernel to an ARM based platform
- VoIP telephony network (**Asterisk**)

Oct 2001 – Jul 2005 (4 years) - **Romania Data Systems** Brasov (ISP)

**Project manager, programmer and system/network administrator.**

Tasks:

- Client/server app for national wide network monitoring (**C** and **PHP**).
- Traffic control (HTB, rtnetlink) (**C**).
- Network/security modules for Linux kernel (**C**).
- Domain name server and MySQL integration (**C**).
- SNMP and graphics for cable modems level monitoring (**C** and **PHP**).
- Source control system implementation (subversion).

Sep 1997 - Oct 2001 (4 years) – **Deuroconsult** Brasov (ISP division)

**Technical manager, system/network administrator and programmer.**

Tasks:

- Implementation of a Distributed User Management System using **MySQL**, **PHP** and **C**
- Development of the technical page (user tracking, payments, invoices, logins etc.) using **SQL**, **PHP** and **HTML**.
- Administration of 10 Linux servers, 1 Cisco router and other equipments farm.
- Implementation of multi-homing with 2 providers using zebra on Linux and Cisco for BGP and OSPF.
- Implementation of QoS using CBQ, TBF, RED on Linux routers.
- Implementation of Differentiated Services on Linux routers.

Sep 1995 - Sep 1997 (2 years, during studies) - **Ecran Magazin** Brasov

**Desktop publishing engineer**

Tasks:

- I worked in the pre-press department in the DTP lab.
- I managed a Windows, Mac and Linux network (disk, printer and Internet sharing).
- I used PageMaker, Quark and PhotoShop (PCs & Mac).

1993 - 1994 (1 year, during studies) - **Monitor Mediafax** Brasov

**Desktop publishing engineer**

Tasks:

- I used PageMaker and Word in the pre-press division.

## Achievements

Several contributions to Linux kernel (accepted in mainline)  
- I co-authored **sch\_netem** (see kernel >= 2.6.8-rc1)  
- I added **u32 nfmark match**  
- See also <http://kernel.embedromix.ro/kpatches/>

Several GPLv2/3 projects:  
check <http://kernel.embedromix.ro/us/>  
some of them published on FreshMeat (now FreeCode):  
<http://freshmeat.net/projects/dinouml/>  
<http://freshmeat.net/projects/noca/>  
[http://freshmeat.net/projects/sch\\_dup/](http://freshmeat.net/projects/sch_dup/)  
[http://freshmeat.net/projects/sch\\_ooo/](http://freshmeat.net/projects/sch_ooo/)  
[http://freshmeat.net/projects/sch\\_log/](http://freshmeat.net/projects/sch_log/)  
<http://freshmeat.net/projects/sesoma/>  
<http://kernel.embedromix.ro/kpatches/>  
<http://freshmeat.net/projects/pwatch/>  
All freshmeat projects: <http://freshmeat.net/~catalinboie/>

Git web hosting commercial project (but under Affero GPL):  
<http://rocketgit.com/>

Giving Linux and Solaris classes for a big international company.

Project manager of the IT division of a big Romanian health company (since 2001).

Contributions to several FLOSS projects: asterisk, iproute2 etc.

Web - Gnutella (peer-to-peer network) bridge (project done for an Italian company).

Music/bands web portal (for an Italian company).

Fake POP3 server (for an American company).

## Skills

Operating systems

**Linux** (since 1994) - **expert**  
**FreeBSD** (since 2004) - **medium**  
**Plan9** (since 2004) - **medium**  
**Solaris** (since 2005) - **medium**

Programming languages

**C** (since 1991) - **expert**  
**PHP** (since 1999) - **expert**  
Assembler (x86, mips, arm) - **advanced**  
Java (since 2002) - **medium**

Databases

**PostgreSQL** (since 1998) - **advanced**  
**MySQL** (since 1999) - **advanced**  
**SQLite** (since 2004) - **advanced**  
**Berkely DB** - **medium**

Web development

CGI (since 1999)  
C, PHP, Perl, shell, MySQL, PostgreSQL, speed and security

HTML (since 1998)  
Web design

Image processing & 3D (since 1996)  
Gimp, PhotoShop, Blender, Scribus

Networking

IPv4 & IPv6  
Diskless workstations, NFS, Samba, GlusterFS  
Tunnels, NAT, multicast  
Client/server applications  
QOS (Netem, HTB, CBQ, TBF, RED)  
Differentiated services  
IPSec  
Policy routing, BGP, OSPF  
Firewalls  
P2P technology

Traffic dissection

Distributed programs & clusters

PVM  
9grid

Virtualization

user-mode-linux - building/running a lot of Linux virtual machines  
libvirt/qemu/KVM - emulation of different OSs

Security:

SELinux (admin and policy writing)  
Familiar with top security problems for code (XSS, XSRF etc.)

Performance and optimization analysis

perf  
valgrind (memcheck & helgrind)  
strace/ltrace

SCM

git (used for Linux kernel development and a lot of other projects)  
subversion

Telephony

Asterisk

Teaching abilities

Linux (all levels)  
Programming (all levels)  
Security (all levels)  
Solaris (for beginners and middle level)

## Languages

English (good)  
Romanian (native language)

## Personal info

I do not smoke and don't drink coffee.  
I do not take care of personal things at work.  
Easy adaptability and integration as individual or in a team.

## Hobbies

Programming, OpenGL, microcontrollers  
Basket-ball

## Other things

My style:

unit testing rules (also for deployments)  
always check error codes  
short functions, 80 chars lines, code must be easy to read even if larger, no code duplication  
valgrind rules  
love bug hunting  
backward compatibility is important  
learn something every day

Plans for future: fastest open source web server in the world, improving RocketGit, more contributions to Linux kernel.  
I have a driver license (category B).

You can find the last version of this CV at: <http://kernel.embedromix.ro/cv/>

Sites that I read daily: planet.kernel.org, planet.postgresql.org, lwn.net, phoronix.com, linuxtoday.com and osnews.com.

My name without localization: Traian-Catalin BOIE.

CV version: 2.13