

Pietrofrancesco APOLLONIO

PERSONAL INFORMATION

DATE OF BIRTH: 03 May 1986
WEB SITE: <http://www.francescoapollonio.com>
EMAIL: francesco@francescoapollonio.com
DRIVING LICENCE: Car (B)



WORK EXPERIENCE

- MAG 2016-TODAY** Analyst, NOEMALIFE S.P.A., Bari
Technical coordinator and supervisor of a small team and full stack developer. In my team I deal with planning the assigned tasks, with requirements analysis, projecting software architecture and developing. I mostly work on backend/administration side (J2EE) and on frontend side (AngularJS, HTML, CSS). I also deal with the administration of the machines used for tests/demo.
- MAG 2014-APR 2016** Junior Analyst, NOEMALIFE S.P.A., Bari
Full stack developer. My main occupation is requirements analysis, projecting software architecture and developing. I mostly work on backend/administration side (dbms, backend development using J2EE, Linux machine management) and on frontend side (AngularJS, HTML, CSS).
- FEB 2013-JUL 2013** Student Researcher, GERMAN SPACE CENTER (DLR), Munich
Research on the extension of the LTP protocol (part of *Delay Tolerant Networking*) to increase performance in deep space communications using Erasure Codes.
- MAY 2012-FEB 2013** Tutor of the course *Foundations of Telecommunications T*, University of Bologna - Faculty of Engineering
Help students with lectures and exercises about networking and communication protocols.
- DEC 2010-TODAY** Voluntary contribution to the Delay Tolerant Networking (DTN) research group, ARCES Research Center, University of Bologna
Develop software to manage testbeds and virtual servers, create and manage virtual and "real" clusters. Develop software to carry out tests on Delay Tolerant Networking (DTN) architectures.
[| Attachment 1: List of Conferences and Publications](#)
- SEP 2009-MAY 2012** Web applications and web sites developer, I Gatto Errante Agenzia Viaggi, Castrignano del Capo (LE)
Web sites developing to book and manage touristic services (<http://www.transfersalento.com> and <http://www.apuliaholiday.eu>).

EDUCATION

- JAN 2011-MAR 2014 Master's degree in Computer Science Engineering, University of Bologna
Final mark: 106/110
Thesis: "*Erasure Error Correcting Codes Applied to DTN Communications*", Supervisor: Prof. Carlo CAINI
Main subjects: DTN, Virtualization, Embedded Programming, J2EE, Android, Computer Architectures
[| Attachment 2: University Projects](#)
- SEP 2005-DEC 2010 Bachelor's degree in Computer Engineering, University of Bologna
Thesis: "*Analyse and extend VDE2 (Virtual Distributed Ethernet) to create virtual testbeds*", Supervisor: Prof. Carlo CAINI
- SEP 2000-JUL 2005 Scientific high school degree, Liceo Scientifico Statale "A. Vallone", Galatina (LE)

FREE SOFTWARE E OPEN SOURCE COMMUNITY

- FEB 2013-TODAY **DTNPerf_3**
Developer
A client-server application to evaluate the performance of a DTN-BP architecture.
Web Site: <http://cnrl.deis.unibo.it/new/software.php>
- DEC 2012-TODAY **Virtualbricks**
Project Manager
DEC 2010-DEC 2012 Developer
Virtualbricks a software to manage and to create virtual clusters composed of QEMU/KVM virtual machines and VDE (Virtual Distributed Ethernet) components. Virtualbricks has been presented at the "Free and Open Source software developers' European meeting" (FOSDEM) on February 2011.
Web Site: <https://launchpad.net/virtualbrick>

LANGUAGE

- ITALIAN: Mother tongue
ENGLISH: Independent User (B2 English Language Test is part of the Master's degree in Computer Science Engineering.
GERMAN: Basic Knowledge (Language Course attended during my stay in Munich)

TECHNICAL SKILLS

- Programming: The technologies and languages I use in daily work are: J2EE, EJB3, JPA2 (Hibernate), Jax-RS (Resteasy) on application servers JBoss6,7 and WildFly8.2. On the frontend side I use AngularJS. For my projects otherwise: Linux kernel programming (device driver) during some University projects, POSIX programming (concurrent and client/server applications). Test unit creation on FE side with Karma and Protractor, JUnit on the backend.
- Languages: Professiona Use: Java, Javascript, Bash, SQL, HTML5. Personal or university use: C, Python, PHP, C# (academic), VHDL.
- Operating Systems: GNU/Linux Operating Systems (Debian-like), Windows (from version 3.1 to version 7).
- Administration: Management of computer networks, virtual computer networks (QEMU/KVM and VDE), servers installation and configuration in GNU/Linux systems (Apache, MySQL, SSH, VNC, various FTP servers), Linux firewall (iptables) configuration.
- Other Software: IDE (Eclipse, WebStorm, VisualParadigm, SQLDeveloper. Ant, Ivy. Various desktop managers, various internet clients (web, mail, IRC, FTP, SSH, VNC, IM), LaTeX, office suites (OpenOffice/LibreOffice, Microsoft Office), Matlab, Altera Quartus.
- Other: Scrum framework.

OTHER

Social and Organisational skills

Very good inclination to group work thanks to my daily job and years of collaborations on Open Source projects. Very good capacity of analysis and problem solving.

Additional Information

I write articles and HOWTOs for my personal blog and on my web site (<http://blog.ldlabs.org> and <http://www.ldlabs.org/>). I wrote various articles for the web newspaper <http://www.tuxjournal.net/>. Member of the "Salento GNU/Linux User Group" (Salug!) association.

Sport: swimming.

Attachment 1: List of Conferences and Publications

Publications

1. **P. Apollonio**, C. Caini, M. Giusti, D. Lacamera - "*Virtualbricks for DTN Satellite Communications Research and Education*". Personal Satellite Services. Next-Generation Satellite Networking and Communication Systems, Volume 148, 2016, pp 76-88, Springer International Publishing
2. **P. Apollonio**, C. Caini, M. Lülff - "*DTN LEO Satellite Communications through Ground Stations and GEO Relays*". Personal Satellite Services, Volume 123, 2013, pp 1-12, Springer International Publishing
3. **P. Apollonio**, C. Caini, V. Fiore - "*From the far side of the Moon: Delay/disruption-tolerant networking communications via lunar satellites*". Communications, China , Volume 10, Issue 10, 2013, pp 12-25, IEEE

Conferences

1. **P. Apollonio**, C. Caini, W. Cerroni, D. Lacamera, C. Raffaelli - "*Open-Source Software Virtualization Tools for Programmable Modular Router Implementation and Testing*". Italian Networking Workshop 2012
2. **P. Apollonio**, C. Caini, T. de Cola, G. Liva, B. Matuz - "*Implementation of Erasure Codes as LTP sublayer in ION*". CCSDS Spring Meeting 2013
3. **P. Apollonio**, C. Caini, M. Lülff - "*DTN LEO satellite Communications through Ground Stations and GEO Relay*". PSATS 2013

Attachment 2: University Projects

Hardware-Software Design Methods Project Work M: The aim of this project was to create a full-system simulator, which emulates the entire software stack including operative system, libraries and user-level applications. This simulator is used to design system-on-chip (SoC) hardware and software layer based on ARM architecture and to expose and analyse possible software bugs. The simulator is composed by two different parts: the first is a many core cycle accurate architectural simulator written in SystemC. The second part, based on QEMU. To realise the system, I instrument QEMU allowing it to use the simulator, and I create a Linux module to allow user applications to be executed on the SystemC layer.

Digital Systems Project Work M:: Implementation of a "CryptoBox" in VHDL. This component could be used to cipher a text using two different ciphers (TEA, ARC4).