Curriculum Vitae

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Personal Info

Website: `http://rgl.antares-labs.eu`

Public software: `http://git.antares-labs.eu`

GitHub: `http://github.com/sametsisartenep`

LinkedIn: `https://www.linkedin.com/in/rodrigo-g-lópez-178744178/`

Languages

- English: Advanced. (C1/CAE)
  Fluency reading and listening, without problems to express myself, mainly in writing.
- Spanish: Native.

Work Experience

• Computer programmer and Sysadmin at *Telfy Telecom S.L.U.* since December 2019.

- MySQL performance tuning, including filesystem (ext2, ext4, xfs) and Linux kernel benchmarking.
- On-line hard drive resizing with LVM in VirtualBox, QEMU and oVirt VMs.
- Created a centralized rsyslog setup for multiple machines through a UDP transport.
- Implemented a service to safely truncate logs whenever they reached a certain size, using C and the inotify(7) API.
- Installed and configured an Asterisk 11 PBX with enough functionality to allow for two SIP lines to talk to each other.
- Installed oVirt 3.6 and 4.x with a hosted engine for NFS and iSCSI benchmarking.
- Created web applications with JS, PHP, PostgreSQL and Python to provide internal services for the FTTH Dept. like technicians's work report registration, antennae

maintenance notifications, fiber optics coverage queries issued by clients and custom-format labels for network segments and distribution boxes.

- Set up the services to provide IPv6 connectivity to all our clients, using ISC's Kea and its API through custom Python scripts to manage leases and host reservations, along with a DDNS service to sync against an internal BIND instance. I also integrated the new functionality with our internal ACS, used to provision the clients's CPE/ONT.
- Helped colleagues from the Technical Support and Systems departments with system administration, data processing, automation and networking tasks regarding Linux.
- Worked on the migration of a monolithic web platform into a set of REST web services using PHP, MySQL and MongoDB, including a search engine where I designed the Docker container infrastructure for its development along with the CI/CD pipeline using Jenkins and Ansible playbooks.

- Programmer at *everis* from April 2017 to August 2018. I worked on four projects for a client in the energy sector, the first one using SAPUI5, two later using jQuery and the last one with jQuery and Leaflet to build an internal application's section for a map with some range filtering and trace selection functionality. I also worked with a testing team on a project, evaluating several formulary windows, fields, layouts and parametrization. There was also a project using speech recognition, where I learned a bit about finite state grammars, language models and speech-to-text synthesis.
- Technical support at *SolidQ* during Spring of 2016. I helped customers with software setup and configuration, and also worked with the internal support team to update documentation and manage clients' subscriptions.
- English-Spanish translator at *Node.js* in Spring and Summer of 2015. I worked with the Node spanish community to translate the documents of every version, developer publications and the API, along with examples for C++ and Javascript.
- Backend Engineer at *Caribe Activo* during Spring of 2015. I operated their Unix systems, setting up security systems and remote administration, and building their first search engine with Node.js, MongoDB and LevelDB.

Technical Experience and Skills

I use **Plan 9** on a daily basis, along with **FreeBSD** and **Linux**. I designed and implemented my home/laboratory network, including **DHCP** and a **DNS** server handling its own SOA (Start of Authority) using Plan 9, along with a **TFTP** service so that machines can bootup automatically through **PXE**. Most of the systems inside this network are virtual and hosted on **FreeBSD** with **Bhyve**, using a custom VM management toolset I developed. I also use **jails(8)** for some of my services.

- I'm proficient with **C** and shells like **rc**, **ksh** and **(ba)sh**.
- I use the UNIX text-processing tools (**awk**, **sed**, **grep**, etc) on a daily basis for system administration tasks, also document preparation (**troff** and its macro packages) and manuals.
- I've created concurrent programs under the formal model of **CSP** by Tony Hoare with **Go** as well as Plan 9's **libthread**, and **POSIX threads**.
- I have developed firmware for the **Atmel ATmega328P** and the **STM32F103RB** microcontrollers, using both **C** and **Assembly**.
- I also have some experience with the **Verilog** hardware description language and I'm currently learning more (**PWM**, **VGA** and **UART** so far).
- I've used **git**, **mercurial**, and **svn** as version control systems.
- I've built infrastructure for testing and build automation with **QEMU/KVM**, **Bhyve**

and **VirtualBox**.

- I have experience using **soldering iron** with precise narrow and batch-soldering wide tips to treat through-hole and surface-mounted electronic components, at temperatures ranging from 200 to 400°C. I've also used **desoldering wick** to clean some joints and non-corrosive **flux**.
- I also have some experience using a **digital oscilloscope** to analyze signals and properties of the hardware I work on, although the features I use have been very simple so far.

Education

- Books, scientific papers, technical specifications and people's experiences shared on the Internet are my main source of knowledge.
- *Software Security* by Prof. Michael Hicks, University of Maryland, College Park on Coursera MOOC. Earned in September 2016
- *Middle Degree S.M.R. (Sistemas Microinformáticos y Redes)*, I.E.S. Las Espeñetas, Orihuela, ALC. From September 2014 to June 2016
- *Some online courses on Science, Engineering, Law & Economy*, MIT OpenCourseWare, EdX, Stanford Online, HarvardX and Coursera