

**Name** **Marc Aymerich Gubern**  
**Mobile** (+353) 899 50 68 35  
**E-mail** marc.aymerich@gmail.com  
**GitHub** github.com/glic3rinu  
**LinkedIn** linkedin.com/in/maymerich

## Work Experience

---

- 2007 - now **Senior Python Developer, System Administrator and System Architect** at Pangea.org, an Internet hosting provider based on FOSS
- Operating high available IaaS, PaaS and SaaS cloud infrastructure
  - Developing open source projects such as:  
    django-orchestra, basefs, confine-controller or smap-gear
  - Participating on FP7 EU research projects like CONFINE and Clommunity

## Main Projects

---

- 2009 - now **Develop django-orchestra**, a Django-based framework for building fully-featured web hosting control panels. Focused on extensibility, clean design and decoupled functionality, allowing to develop effective, maintainable and functional control panels with an small amount of glue code. Scales to thousands of services, servers and clients.  
[github.com/glic3rinu/django-orchestra](https://github.com/glic3rinu/django-orchestra)
- 2013 - now **Deploy, migrate and maintain a django-orchestra instance at Pangea.org**. Enabling automated management of IaaS, PaaS and SaaS infrastructure for thousands of clients and domains. Including web, mail, DNS, databases and popular CMS's, as well as handling Pangea's billing and accountancy.
- 2015 - now **Develop BaseFS** (Basically available, soft state, eventually consistent filesystem). BaseFS is a gossip-driven, peer-to-peer filesystem with decentralized authority where nodes don't need to trust each other. Its focus is on solving cloud management problems on highly distributed settings, like those found in community clouds. Written in Python, it makes heavy use of concurrency and asynchronous IO.  
[github.com/glic3rinu/basefs](https://github.com/glic3rinu/basefs)
- 2012 - 2014 **Lead developer of confine-controller**, the central server of CONFINE architecture. CONFINE is an EU funded project with the aim of providing a large-scale testbed on top of community networks. Confine-controller manages and stores the testbed configuration in a centralized way. It provides both, a user-facing web interface and a REST API for testbed nodes. Makes heavy use of caching, asynchronous IO, coroutines and message queues, withstanding the load of thousands of nodes and providing efficient monitoring of their state.  
[wiki.confine-project.eu/soft:server](http://wiki.confine-project.eu/soft:server)
- 2007 - now **Design, implement, migrate and maintain Pangea's high availability service infrastructure** based on OpenVZ containers and shared storage using iSCSI and *multipath*, hosting thousands of users and domains.  
[pangea.org/infraestructura](http://pangea.org/infraestructura)

## Main Projects (continuation)

---

- 2009      **Advanced monitoring, analysis and tuning of Pangea PaaS infrastructure**, including web, mail and database services. Targeting Apache2, PHP, MySQL, Postfix, MailScanner, iSCSI, OpenVZ, Linux kernel and networking stack.
- 2007 - now    **Develop confine-orm**, *CONFINE Object Resource Mapper* is a high level Python library for easily interacting with confine-controller REST API using object oriented concepts. Leverages the HATEOAS discoverability of CONFINE API, uses an Active Record like pattern, concurrency based on asynchronous non-blocking IO and caching based on Identity Mapping.  
[confine-orm.readthedocs.org](http://confine-orm.readthedocs.org)
- 2013      **Develop spam-gear**, high-performance utilities for fighting spam on multi-user web and mail platforms. Includes filesystem scan tools, log analysis for multiple services and DNSBL checks.  
[github.com/glic3rinu/spam-gear](https://github.com/glic3rinu/spam-gear)
- 2014      **Contribute to confine-system**, a daemon written in Lua that implements the node functionality in CONFINE architecture. My main contribution being implementing the node REST API.  
[wiki.confine-project.eu](http://wiki.confine-project.eu)

## Formal Education

---

- 2012 - 2016    **Master in Innovation and Research in Informatics** at FIB/UPC  
Specialization in Computer Networks and Distributed Systems  
Facultat d'Informàtica de Barcelona / Universitat Politècnica de Catalunya  
Master thesis: BaseFS - Basically Available, Soft state, Eventually consistent File System for Cloud Management  
[github.com/glic3rinu/basefs](https://github.com/glic3rinu/basefs)
- 2004 - 2011    **Diploma in Computer Systems** at FIB/UPC  
Facultat d'Informàtica de Barcelona / Universitat Politècnica de Catalunya  
Final thesis:    A reusable web hosting control panel with billing system  
[upcommons.upc.edu/handle/2099.1/13993](http://upcommons.upc.edu/handle/2099.1/13993)

## Skills and Competences

---

Languages      Catalan, Spanish and English

Driving license    B

Computer skills

**Programming** Proficient in **Python/Django** and **Bash**  
Comfortable with Lua, Erlang and R  
Love **good design, concurrent and distributed programming**

**Operating Systems** **Debian/Linux** (running mission critical services since 2007)

**Graphics** **Inkscape** [github.com/glic3rinu/svg](https://github.com/glic3rinu/svg)

**Services** Solid experience administrating Apache, Nginx, Postfix, MySQL, LXC, Postgresql, OpenVZ, Nagios, MailScanner between many others

**Misc** Strong skills with distributed file systems, networking, databases, shared storage, cloud computing, web development