

# Angelo Failla

STAFF SITE RELIABILITY ENGINEER

Dublin, Rep. of Ireland

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*"The best way to complain is to make things."*

## Summary

Engineering leader with over 25 years of experience, including 14 years at Meta/Facebook, specializing in large-scale systems and organizational leadership. Proven expertise in delivering impactful projects, leading high-performing teams, and driving technical strategy across complex organizations.

Extensive background in infrastructure and data center automation, with deep knowledge of system architecture, incident management, and cross-functional collaboration. Recognized for successful technical leadership and the ability to influence organizational outcomes at scale.

Versatile professional with experience spanning hands-on technical contributions to strategic leadership, including coding, system design, incident response coordination (IMOC, Incident Manager OnCall), mentoring engineers and interns, and delivering public talks at conferences ([view talks](#)).

Seeking a senior leadership role to apply expertise in team development, business alignment, and infrastructure reliability. Committed to driving innovation and solving critical business challenges through technical and organizational excellence.

## Skills

<b>People &amp; leadership</b>	Hiring, mentoring and growing teams/individuals.
<b>Stakeholder management</b>	Communication with executives, product owners and engineering teams.
<b>Strategic Planning</b>	Roadmap definition, OKRs and cross-functional alignment.
<b>Operational Excellence</b>	Incident management, on-call processes, SLA enforcement.
<b>System Administration</b>	UNIX (Solaris, FreeBSD, OpenBSD), Linux (Redhat base systems, Debian based systems), <b>systemd</b>
<b>Programming and scripting</b>	Python, Go, Rust, C++, LaTeX, Shell, Sed, Awk, Perl, Ruby
<b>Infrastructure &amp; Tools</b>	Containerization, IaaS, Automation, Version control ( <b>git</b> , <b>mercurial</b> ), Monitoring and Observability
<b>Languages</b>	English, Italian

## Experience

### Meta(Facebook)

Dublin, Republic of Ireland

STAFF PRODUCTION ENGINEER (IC6)

March 2011 - Present

Progressed from IC3 to IC6, advancing from being an IC3 on a Tier 1 with infrastructure-wide support responsibilities to driving critical datacenter automation initiatives in the bare metal provisioning space. Recently, I have led efforts to transform the way we manage the Operating System for Meta's custom network switch infrastructure (**FBOSS**), focusing on scalability, reliability, ownership, and time-to-provision improvements.

2022

Present

#### PRODUCTION ENGINEER (IC6) - TEAM(S): NETWORK OS

In 2022, I started collaborating with people in the US on efforts to redesign the Operating System management approach at Meta, transitioning from a traditional model of provisioning a vanilla OS followed by configuration with Chef at first boot (more time-intensive and less efficient), to an immutable image-based model which significantly reduces provisioning time and increases reliability.

- Recognizing the challenges of organizational adoption, **I successfully advocated for the creation of a dedicated team** to implement this new approach for Meta's custom network switch infrastructure (FBOSS). This required **extensive collaboration and alignment with stakeholders across various levels**, including managers, directors, VPs, and ICs, to emphasize the critical need for this transformation to enhance reliability, scalability, and security.
- The initial prototype demonstrated a dramatic improvement, **reducing provisioning time from 2 hours to 15 minutes**.
- This success **catalyzed enhancements in key operational processes**, including rack ingestion, rack moves, and repair workflows, ultimately driving greater efficiency and reliability across the network infrastructure.

April 2014  
2022

PRODUCTION ENGINEER (IC4->IC6) - TEAM(S): CLUSTEROPS -> CLUSTERINFRA -> HOST PROVISIONING ENGINEERING -> DC BOOTSTRAP

Following the successful automation of the SRO team's core responsibilities, the team was strategically dissolved and members were presented with opportunities to transition into new specialized focus areas. While several colleagues moved to product teams, I chose to remain in infrastructure by joining the ClusterOps team. This team managed essential infrastructure services including DNS, LDAP, NTP, DHCP, TFTP, and bare metal provisioning systems. During this period, I achieved several significant technical milestones:

- **DHCP Infrastructure Modernization:** Designed and led the complete redesign of Meta's DHCP infrastructure, implementing ISC KEA with custom C++ hooks for internal system integration. This initiative significantly improved reliability and scalability. Presented the architecture at [SRECON EMEA 2015](#) and was featured in [the ISC's blog](#).
- **IPv6-only Initiative:** Participated to a critical infrastructure project to transition data centers to IPv6-only addressing, addressing RFC 1918 address space constraints. In that context I led the adaptation of the PXEboot stack and OS installation systems to support IPv6-only environments, contributing to Meta's pioneering IPv6 adoption [and praised by the Internet Society](#). This enabled the migration and scaling up to hosting millions of servers.
- **Designed and implemented dhcp1b**, a high-performance DHCP load balancer in Go. The project evolved from a hackathon prototype to a production-grade solution, featuring IPv6 support and sophisticated load balancing algorithms. The initiative spawned an industry-adopted open-source DHCP library and later expanded to include server-side functionality, becoming a cornerstone of Meta's network infrastructure.
- **Modernized the PXEboot infrastructure, leading complete rewrite from Python to Go** to enhance performance and reliability and support ever growing demand/capacity.
- **Led the development of a custom OS installation solution**, replacing traditional RedHat anaconda/kickstart systems with an optimized, more highly integrated with Facebook's infra, purpose-built installer utilizing custom bootloader, ramdisk and an initrd based on [u-root](#).

March 2011  
April 2014

SITE RELIABILITY ENGINEER (IC3->IC4) - TEAM(S): SRO

I began my tenure at Facebook in 2011 as a Site Reliability Engineer (SRE) within the Site Reliability Operations (SRO) team. The SRO team operated on a follow-the-sun model, with a counterpart team in Palo Alto, ensuring round-the-clock reliability of Facebook's infrastructure. This role provided me with extensive exposure to internal technologies and systems, and honed my skills in managing large-scale systems and handling incidents and disasters. Being based in Dublin allowed me to focus on automation and tooling development during quieter hours.

- Contributed in developing internal tooling like [FBAR](#), Facebook Auto Remediation, HostChangeLog, etc.
- Drove emergency hotfixing and pushing of the www application during Dublin hours.
- Contributed developing cluster maintenance tools and perform critical maintenance like kernel updates, OS updates, host reprovisioning, and others.
- Diagnosed and resolved complex hardware and software issues.
- Contributed to the migration of the fleet from [cfengine2](#) to [chef](#).
- Architected and implemented Facebook's initial [netconsole](#) monitoring system for kernel-level diagnostics. The solution leveraged the Linux netconsole module to capture kernel printk messages via UDP/syslog, enabling critical debugging capabilities when disk logging was unavailable. Designed and deployed a scalable architecture using cluster-based rsyslog daemons integrated with [scribe](#) infrastructure. This foundational work later evolved into [netconsd](#), now maintained by the Kernel Platform Engineering team.

## NewBay Software

*Dublin, Republic of Ireland*

SENIOR DEPLOYMENT ENGINEER

*February 2008 - March 2011*

Newbay Software provided digital content services, like photo storage, blogging and social aggregator platforms, primarily for telecommunication clients like T-Mobile and Telstra. The company was acquired by RIM and subsequently sold to Synchronoss Technologies.

- Managed software deployment and customer integration projects for major telecommunication clients, including T-Mobile (Germany/US) and Telstra (Australia).
- Provided advanced troubleshooting and issue resolution for MMS, SMS, standalone, and web-based applications.
- Developed and maintained software deployment tooling.
- Executed front-end deployments, ensuring seamless user experience and functionality.
- Configured and deployed VPNs with various telecommunication companies to establish secure SMS/MMS gateways.
- Proficient in a diverse technology stack, including Cisco IPSEC VPNs and networks, Oracle/MySQL databases, Java Messaging Systems, F5 BigIP Load Balancers, Red Hat and Solaris operating systems, and Tomcat/JBoss application servers.

## MOVIA SpA

*Catania, Italy*

UNIX SYSTEM AND NETWORK ADMINISTRATOR, PROGRAMMER AND IT CONSULTANT

*September 2005 - January 2008*

- Administered and maintained the company's corporate network infrastructure across three Italian offices (Rome, Milan, Catania).
- Managed and secured the corporate intranet utilizing OpenVPN and Cisco routers.
- Oversaw the company's web presence, mail servers, mailing lists, version control systems (CVS), and internal ticketing systems.
- Provided expert consultation to Nokia Italy, Vodafone Italy, and LogicaCMG on an as-needed basis.

## ComputerLine SRL

UNIX SYSADMIN AND NETWORK ADMINISTRATOR

Catania, Italy

December 2004 - September 2005

Small web agency providing web hosting, web design, and IT consulting services to local businesses.

- Ordinary maintenance of internet services like DNS server, Web servers, FTP servers, Mail servers etc.
- DNS domains registration and maintenance.
- Troubleshooting and, technical support for customers and internal staff.

## UZED@ SRL

L.A.M.P. WEB DEVELOPER AND SYSTEM ADMINISTRATOR

Catania, Italy

December 2004 - September 2005

Small web agency providing web hosting, web design, and IT consulting services to local businesses.

- Ordinary maintenance of internet services like DNS server, Web servers, FTP servers, Mail servers etc.
- DNS domains registration and maintenance.
- Troubleshooting and, technical support for customers and internal staff.
- Developed web applications for customers using PHP and MySQL.

## University of Catania, Department of Engineering

WEB DEVELOPER

Catania, Italy

January 2001 - December 2002

I was responsible for building and maintaining the students e-learning portal.

## Infozoo Project

VISUAL BASIC DEVELOPER

Catania, Italy

January 2001 - March 2002

Small software house developing software for the retail sector. I have worked as a Visual Basic coder, my mainly responsibility was writing drivers to enable communication between electronic scales (on RS232).

# Publications

## PUBLIC TALKS

- |      |   |                 |
|------|---|-----------------|
| 2016 | <a href="#">[link]</a> <b>FBTFTP: Facebook's open source python3 framework for dynamic TFTP servers</b> , EuroPython 2016 | Bilbao, Spain   |
| 2015 | <a href="#">[link]</a> <b>DHCP Infrastructure Evolution at Facebook</b> , SRECon EMEA 2015                                | Dublin, Ireland |
| 2014 | <a href="#">[link]</a> <b>Python @ Facebook</b> , Pycon Ireland 2014  | Dublin, Ireland |

## OTHER PUBLICATIONS & MENTIONS

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|------|--|--------|
| 2019 | <a href="#">[link]</a> <b>Extending DHCPDLB: The path from load balancer to server</b>                 | Online |
| 2016 | <a href="#">[link]</a> <b>DHCPDLB: An open source load balancer</b>                                    | Online |
| 2015 | <a href="#">[link]</a> <b>Interview on the ISC's blog: How Facebook is Using Kea in the Datacenter</b> | Online |
| 2015 | <a href="#">[link]</a> <b>Using ISC Kea DHCP in our data centers</b>                                   | Online |
| 2014 | <a href="#">[link]</a> <b>Looking back on "Look Back" video</b>  | Online |

# Education

## Università degli studi di Catania

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Catania, Italy

1999 - 2005

Completed 10 of the 30 exams while juggling tech jobs, then chose to leave to explore new opportunities and secure full-time work.

## I.T.I.S. "Guglielmo Marconi" (High school)

DIPLOMA IN COMPUTER SCIENCE TECHNICIAN

Catania, Italy

1994 - 199

I.T.I.S. stands for "Technical Industrial State Institute," a high school focused on technical and industrial studies. The program spans five years, with the first two years covering general studies and the final three years specializing in a chosen field. I specialized in Computer Science during the last three years, gaining proficiency in C/C++ programming, RDBMS, and basic UNIX programming and administration. I graduated with top honors, achieving the maximum grade of 110/110.

# Publicly accessible projects

## Yubiswitch

OBJECTIVE-C, C

github

A macOS status bar app to toggle Yubikey's OTP functionality. Mentioned in YubiCo's [blog post](#). Initially a personal project, it gained popularity among users and tech employees at Meta, Apple, Google, and other big tech companies.

**GOLANG**

A DHCP load balancer and server running at Meta's datacenters. For the full story of how the project was born and went from hack-a-thon project, to summer internship to production read [this post in Meta's engineering blog](#).

**fbtftp****PYTHON**

fbtftp is Facebook's implementation of a dynamic TFTP server framework. It lets you create custom TFTP servers and wrap your own logic into it in a very simple manner. Facebook used it in production, and was deployed at global scale across all of data centers before being replaced by a golang implementation first, and a rust implementation later.

## Extracurricular Activity

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**LONG DISTANCE CYCLING (AKA RANDONNEURING/AUDAX)**

I have completed several 200km, 300km, 400km, and 600km rides. I have participated to the 1200km Paris-Brest-Paris twice: once in 2019 (had to scratch after 600km) and in 2023 (finished with a few hours to spare).

**VOLUNTEERED TO LOCAL LINUXUSER GROUP**

In the early 2000s, I volunteered at the Linux User Group in Catania, Italy. I helped organize events to promote Open Source/Free Software, gave talks about Linux and open source software in schools and at the university, and helped setting up labs with Linux computers in schools using cheap hardware and free software.