Six years of empowering open source communities

OOSC 2025
September 6, 2025

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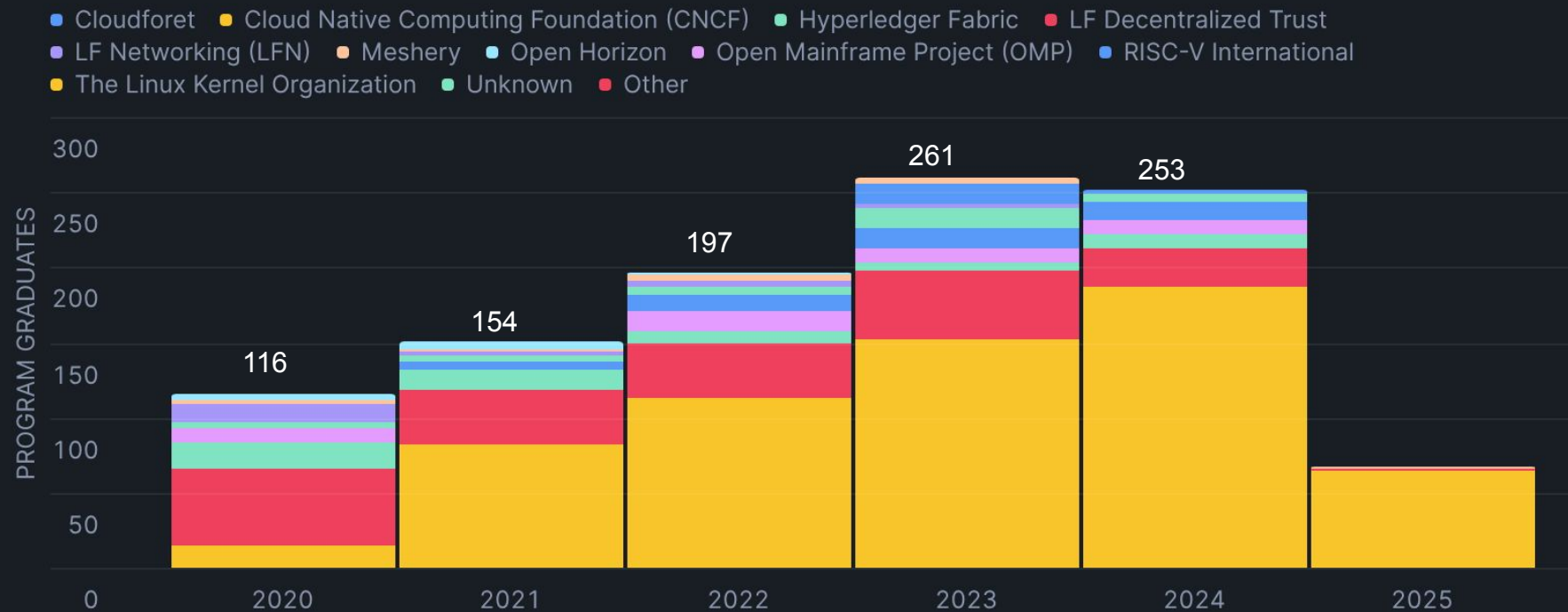skhan@linuxfoundation.org
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THE LINUX FOUNDATION

Growing new talent and attracting new developers is challenging for open source communities. Yet, it is vital to reach out to train the next generation of developers to keep the open source communities healthy and sustainable.

Equitable access to learning resources is a barrier for a significant number of new developers. It isn't easy for new developers to get a start in open source, connect with open source communities and contribute to them. It is equally challenging for employers to find new developers to add to their technical projects.

Shuah Khan will talk about Linux Foundation's six year journey to provide learning resources for new open source developers, opportunities to experts in open source communities to train and mentor the next generation, and make newly trained talent available to prospective employers.

Six years and counting…

Program Graduates

- Cloudforet
- Cloud Native Computing Foundation (CNCF)
- Hyperledger Fabric
- LF Decentralized Trust
- LF Networking (LFN)
- Meshery
- Open Horizon
- Open Mainframe Project (OMP)
- RISC-V International
- The Linux Kernel Organization
- Unknown
- Other

Year	Program Graduates
2020	116
2021	154
2022	197
2023	261
2024	253
2025	

2020

●	Other	41
●	Unknown	18
●	The Linux Kernel Organization	13
●	LF Networking (LFN)	12
●	LF Decentralized Trust	11
●	Open Mainframe Project (OMP)	9
●	Hyperledger Fabric	4
●	Open Horizon	4
●	Meshery	3
●	Cloud Native Computing Foundation (CNCF)	1
	Total	116
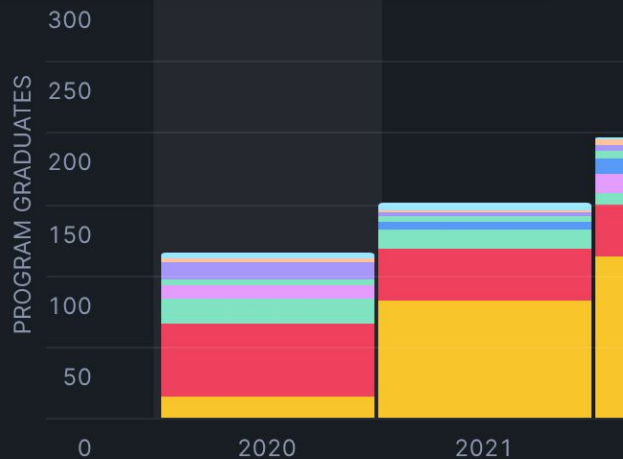
2024

●	Cloud Native Computing Foundation (CNCF)	134
●	The Linux Kernel Organization	53
●	LF Decentralized Trust	17
●	RISC-V International	12
●	Open Mainframe Project (OMP)	10
●	Unknown	10
●	Other	8
●	Hyperledger Fabric	6
●	Cloudforet	3
	Total	253

PROGRAM GRADUATES

300 250 200 150 100 50 0

2020 2021

2023 2024 2025
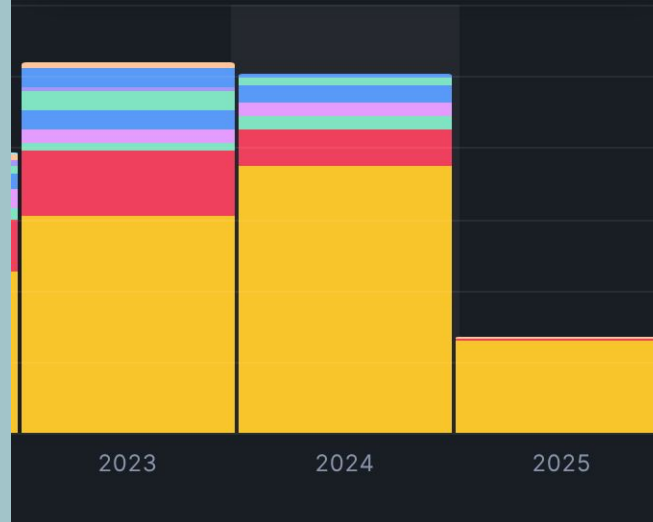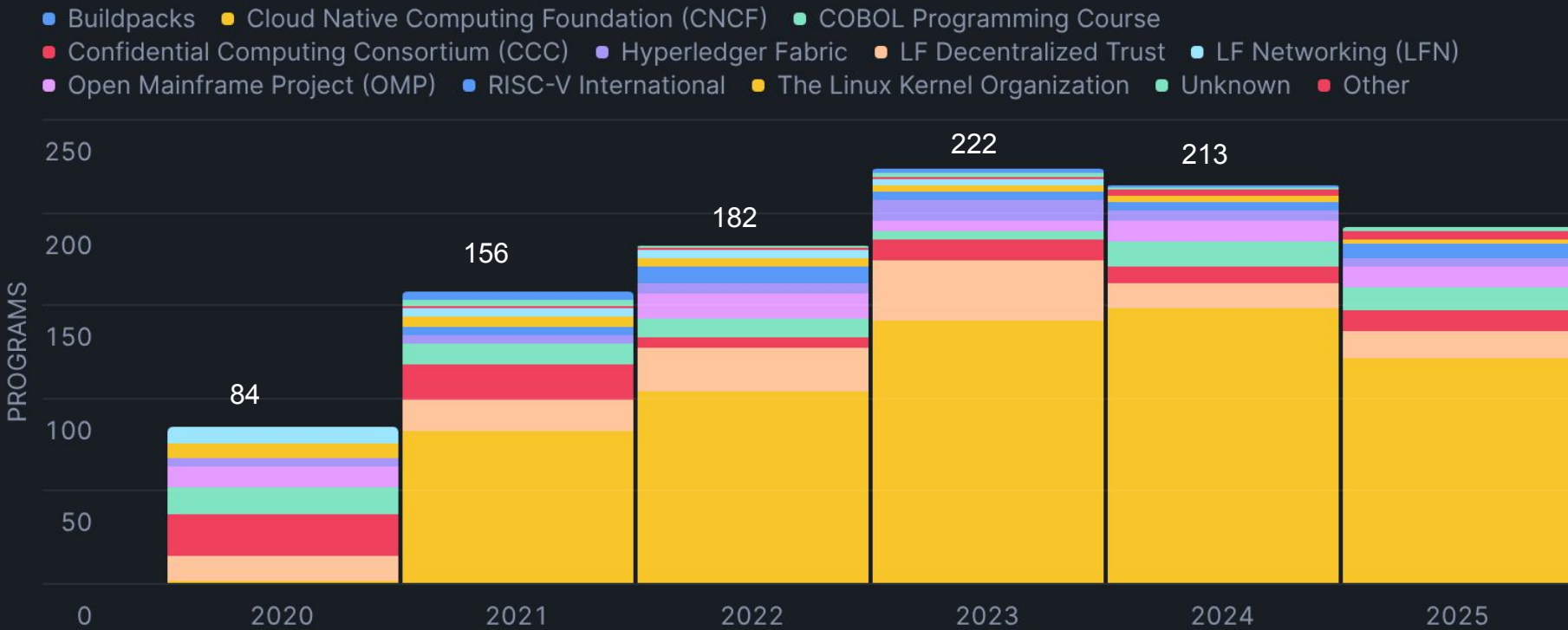
2020

🔴	Other	22
🟢	Unknown	15
🟠	LF Decentralized Trust	13
🟣	Open Mainframe Project (OMP)	11
🔵	LF Networking (LFN)	9
🟡	The Linux Kernel Organization	8
🟣	Hyperledger Fabric	5
🟡	Cloud Native Computing Foundation (CNCF)	1
	Total	84
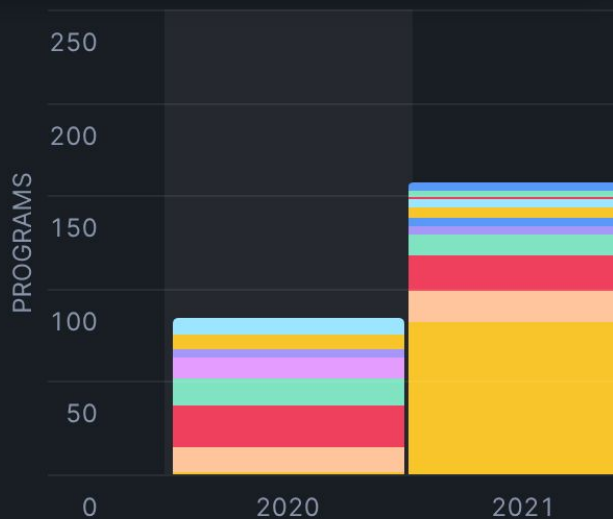
2024

🟡	Cloud Native Computing Foundation (CNCF)	148
🟠	LF Decentralized Trust	13
🟢	Unknown	13
🟣	Open Mainframe Project (OMP)	11
🔴	Other	9
🟣	Hyperledger Fabric	6
🔵	RISC-V International	5
🔴	Confidential Computing Consortium (CCC)	3
🟡	The Linux Kernel Organization	3
🔵	Buildpacks	1
🟢	COBOL Programming Course	1
	Total	213
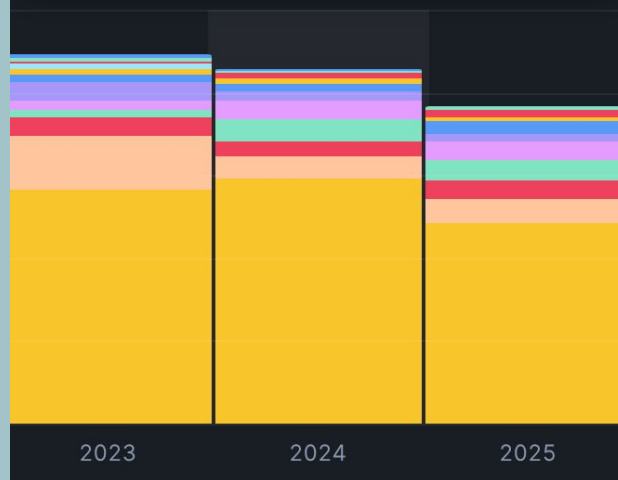
Applications

- Cloud Native Computing Foundation (CNCF)
- Confidential Computing Consortium (CCC)
- Hyperledger Fabric
- LF Decentralized Trust
- LF Energy (LFE)
- Meshery
- Open Mainframe Project (OMP)
- RISC-V International
- The Linux Foundation
- The Linux Kernel Organization
- Unknown
- Other
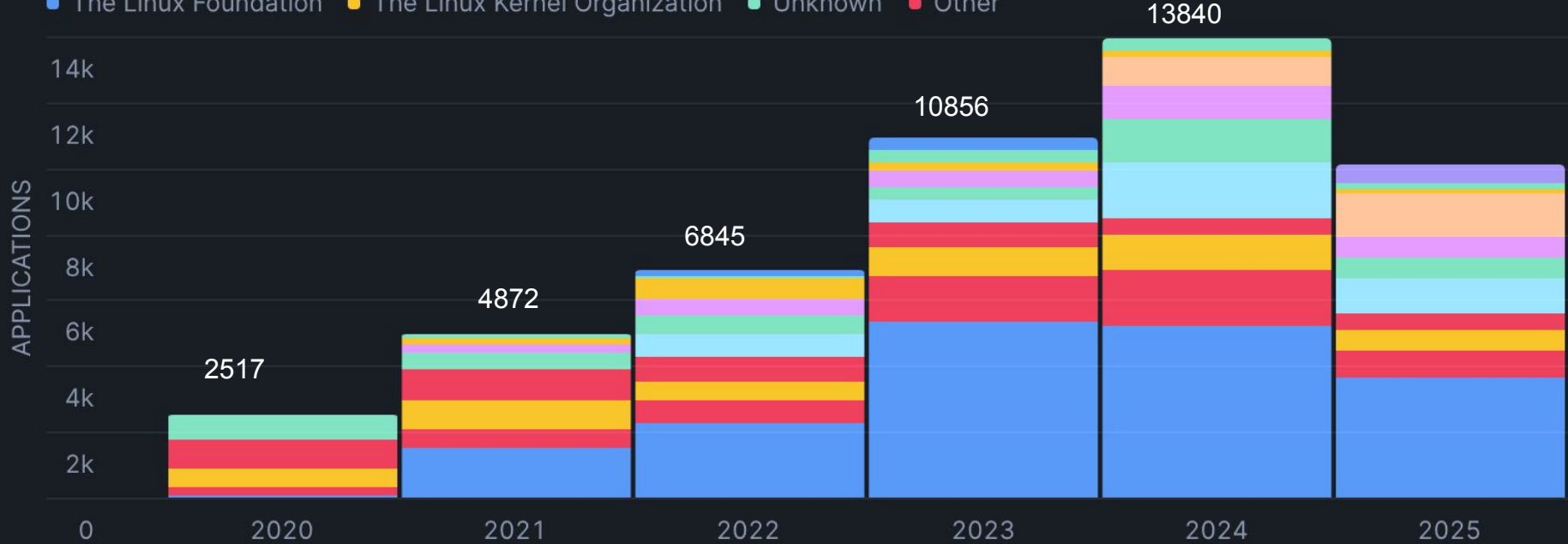
2020

● Other	897
● Unknown	620
● The Linux Kernel Organization	550
● LF Decentralized Trust	228
● Hyperledger Fabric	119
● Cloud Native Computing Foundation (CNCF)	77
● Open Mainframe Project (OMP)	23
● Meshery	3
Total	2517

2024

● Cloud Native Computing Foundation (CNCF)	5203
● Open Mainframe Project (OMP)	1683
● LF Decentralized Trust	1672
● Unknown	1314
● The Linux Kernel Organization	1056
● RISC-V International	999
● Meshery	883
● Other	492
● Hyperledger Fabric	380
● Confidential Computing Consortium (CCC)	158
Total	13840
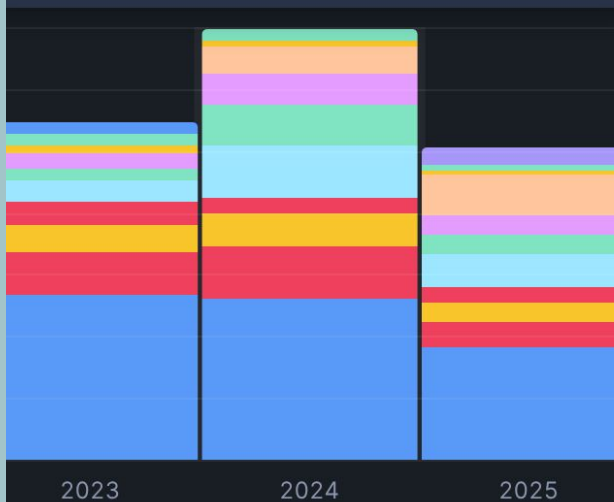
Connecting with graduates

- Our graduates are sought out by employers
- Find our graduates on our Mentorship site
- Connect with them at Open Source Summits across the globe
- Learn about their mentorship projects

LFX Mentorship Showcase

📅 Tuesday June 24, 2025 5:00pm - 6:30pm MDT

📍 Solutions Showcase - Bluebird Ballroom 1AB (Terrace Level 1)

Today's Mentees are future contributors, maintainers, leaders

Learning resources the Linux Foundation

Connecting

- **LFX Mentorship Showcases**
- **Scholarships to events**
- **Access to experts at events**
- **Speed Mentoring at events**

Mentorship Programs

- **Full/Part time**
- **Open for all**
- **Paid/Credit only**
- **Spring/Summer/Fall**

Learning Resources

- **LF Education - Plan your learning**
- **LiFT Scholarships**
- **Webinars**
- **LF Blogs**

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Learn about projects and communities at Mentorship Poster Sessions.

Mentors (maintainers, developers) hold up the pyramid - Vital for sustainable and healthy projects

Mentoring benefits

Benefits to Maintainers and community

- Teach and share expertise
- Grow and strengthen project and community
- Bring new talent into the project
- Extra help to improve codebase & documentation, add new features
- Develop future leaders

Benefits to Open Source communities

- Strong and sustainable Open Source communities
- Improved security and quality of releases
- Talented pool of prospective employees trained by experts

Voices of our graduates

"A **pivotal experience** in my professional development."
  - CNCF Mentorship Graduate

"An incredibly valuable experience that has **broadened my technical horizons** and enhanced my practical skills."
  - CNCF Mentorship Graduate

"Gained **invaluable insights into open-source collaboration, community dynamics**"
  - CNCF Mentorship Graduate

"Unique opportunity to **work closely with experienced mentors** and **explore and learn together**."
  - CNCF Mentorship Graduate

*"The Kernel was this **magical thing** I only knew how to build but couldn't begin to imagine how it worked. The program bridged that gap and showed that I could, **even with limited experience, contribute to the Kernel in meaningful ways**"*
  - *Linux Kernel Mentorship Graduate*

*"A significant experience. I had the opportunity to work on the Linux Kernel, the **bedrock of the whole IT**. Gave me **hands-on experience** and invaluable insights into **contributing to large-scale, real-world subsystems**."*
  - *Linux Kernel Mentorship Graduate*

*"Learned a lot and gained **valuable hands-on experience** working on the Linux kernel"*
  - *Linux Kernel Mentorship Graduate*

"A truly rewarding experience for me. Provided a **platform for personal growth**, allowing me to **contribute meaningfully to a real-world project**."
  - CNCF Mentorship Graduate

"Profoundly transformative and immensely rewarding - transitioned from being **a novice in the open-source community to a confident contributor.** Enriched my professional development and instilled a strong sense of **perseverance and continuous learning**."
  - CNCF Mentorship Graduate

"An amazing, once-in-a-lifetime experience - provided **invaluable knowledge from experienced developers** - introduced me to a supportive open-source community - fulfilled my wish to contribute to open source - taught me the value of persistence and continuous learning."
  - CNCF Mentorship Graduate

*"I have gained a lot from the LFX Mentorship - in open source, English, **communication skills**, and meaningful contributions. This experience will help me **grow in the future, both technically and professionally**."*
-   *CNCF Mentorship Graduate*

"Collaborating with experts in the open-source community - **gained hands-on experience** - broadened my technical horizons - feel **confident about my future career plans**."
-   CNCF Mentorship Graduate

"Opportunity to **grow, learn, and make meaningful contributions** to one of the most critical open-source projects in the world"
-   Linux Kernel Mentorship Graduate

Exciting and enriching experience. This journey has **challenged me technically**, expanded my problem-solving skills, and deepened my understanding of **open source collaboration**.
  - LF Decentralized Trust Mentorship Graduate

Valuable technical advice and insights into **navigating open-source collaboration** - accelerated my learning - helped me cultivate a problem-solving mindset essential for tackling complex technical challenges. The community enriched my experience by **fostering inclusivity, shared knowledge**, and opportunities for skill development.
  - LF Decentralized Trust Mentorship Graduate

Collaborative effort led to **significant personal and professional growth** that equips me with the skills to tackle similar challenges in the future and leaves me with a **profound sense of accomplishment**.
  - LF Decentralized Trust Mentorship Graduate

What are the takeaways?

- Learning from experts and experienced developers

- Collaborating with experts in open source communities

- Contributing to real-world projects

- Novice in the open-source community to a confident contributor

- Valuable hands-on experience

- Personal, Professional, Technical growth

- [Linux kernel Mentorship graduates blog about their journey](#)

- [CNCF celebrates successful mentees from LFX Program Term 1 2024!](#)

- [Congratulations to 45 CNCF Term 2 2024 LFX Program mentees!](#)

- [Blog | LF Decentralized Trust | Mentorship Program](#)

- [Hyperledger Mentorship - YouTube](#)

- [Unlock growth and talent: why maintainers should mentor with CNCF](#)
  By Nate Waddington, Head of Mentorship and Documentation, CNCF

- [Behind the scenes of running Linux kernel Mentorship Programs](#) by
  Shuah Khan Kernel Maintainer & Linux Fellow, The Linux Foundation

What does research show?

It is faster to upskill existing talent than to hire

Upskilling existing employees delivers substantial time advantages over hiring new talent. While traditional hiring and onboarding processes consume an average of 8.4 months, organizations can successfully upskill their workforce in just 5.2 months, as illustrated in Figure 11, representing a 38% reduction in time investment. This efficiency gap is particularly striking in the Asia-Pacific region, where upskilling is 89% faster than traditional hiring (see Appendix A6 for a geographic breakdown). Globally, no significant difference was found when analyzing by organization size and industry. The dramatic time savings help explain why organizations increasingly favor upskilling strategies over external recruitment to address their talent needs.

FIGURE 11

Hiring and onboarding takes 62% longer than upskilling

Source: 2025 Tech Talent, Q32, Q34, Q39, Sample Size = 556 (averages)

Times it takes to hire and onboard (months)	8.4
Time it takes to upskill / cross-skill (months)	5.2

This difference can be even wider for more senior positions. Table 2 illustrates a correlation between position seniority and time-to-hire. Executive positions require the longest hiring and onboarding periods, averaging almost one year (11.7 months). This hiring and onboarding timeline gradually decreases through director (11.5 months), manager (10.1 months), and senior technical roles (10.0 months). These findings further emphasize why organizations increasingly favor upskilling internal talent—the considerable time investment required for external hiring across all position levels creates operational gaps that internal development can substantially reduce.

TABLE 2

Time to hire and onboard is proportional to seniority

2025 Tech Talent, Q33, DKNS excluded (8% to 37%), Sample Size = 556.

The average onboarding time was added to all positions.

ROLE	AVERAGE HIRING AND ONBOARDING TIME (MONTHS)
Executive Level	11.7
Director Level	11.5
Manager Level	10.1
Senior Technical Level	10.0
Mid-Level Technical	8.7
Entry-Level Technical	7.6

In an era where competitive advantage often hinges on rapidly adapting to technological change, the ability to transform existing talent nearly twice as quickly as acquiring new talent represents a significant strategic advantage. Beyond mere time efficiency, upskilling capitalizes on existing employees' familiarity with organizational culture, established processes, and institutional knowledge. Organizations can achieve their workforce transformation goals more rapidly while preserving valuable institutional expertise by prioritizing internal talent development over external recruitment.

Our survey also reveals the effectiveness (84%) of open source culture initiatives in retaining tech talent, recognizing that modern technical talent seeks more than just competitive salaries—they desire participation in broader technical communities and knowledge sharing. This holistic approach to talent development—combining technical growth, workplace flexibility, and community engagement—creates a compelling environment that both attracts and retains high-performing technical staff.

On average, **19.2%** of the new hires leave within 6 months

FIGURE 12

Upskilling and open source are effective strategies for retaining talent

Source: 2025 Tech Talent, Q31, DKNS excluded (3% to 6%), Sample Size = 556

90%
% of organizations offering **technical training** to retain talent

91%
effectiveness of offering **technical training**

68%
% of organizations offering an **open source culture** to retain talent

84%
effectiveness of offering **open source culture**

2025 State of Tech Talent Report

FIGURE 14: HANDS-ON EXPERIENCE AND PORTFOLIO OF ACCOMPLISHMENTS ARE KEY TO EVALUATING TECHNICAL SKILLS

How important are the following education and experience factors when assessing a candidate's technical skills?

Source: 2025 Tech Talent, Q36, DKNS excluded (1 to 2%), Sample Size = 556

Relevant hands-on experience — 95%

Portfolio and examples of previous IT accomplishments — 85%

Certification of skills — 71%

Formal college or university degree — 65%

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Mentorships provide hands-on experience

2025 State of Tech Talent Report

How can you help?

- Collaborate with us
- Project ideas
- Mentors
- Funds

Better together

అందలుంటే కొండలు దాటవచ్చు (andalunte kondalu datavachu)

If you have support, you can cross mountains

Discussion - Q&A

Shuah Khan