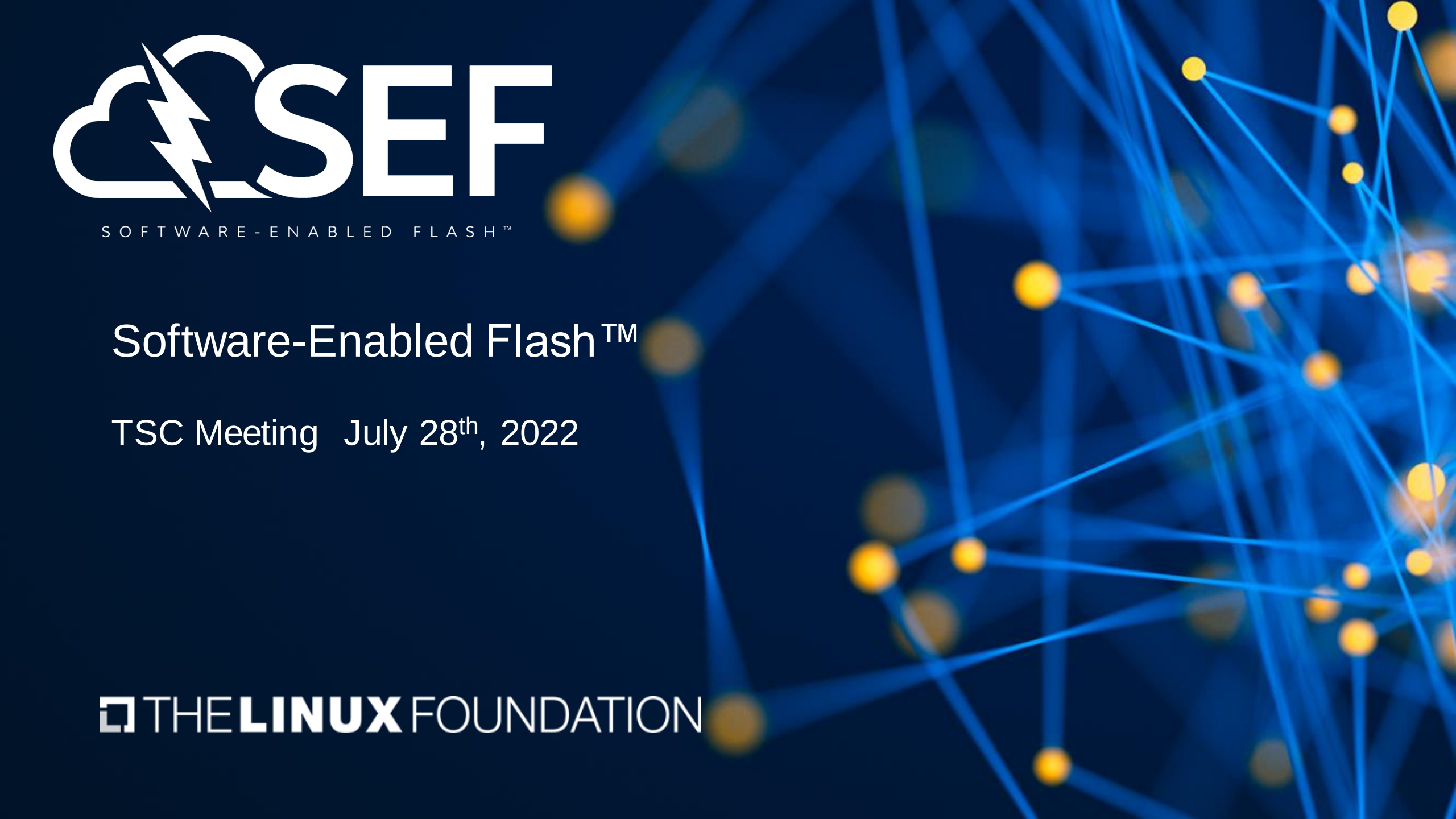


Software-Enabled Flash™

TSC Meeting July 28th, 2022

THE LINUX FOUNDATION

Software-Enabled Flash Project - TSC Meeting Agenda

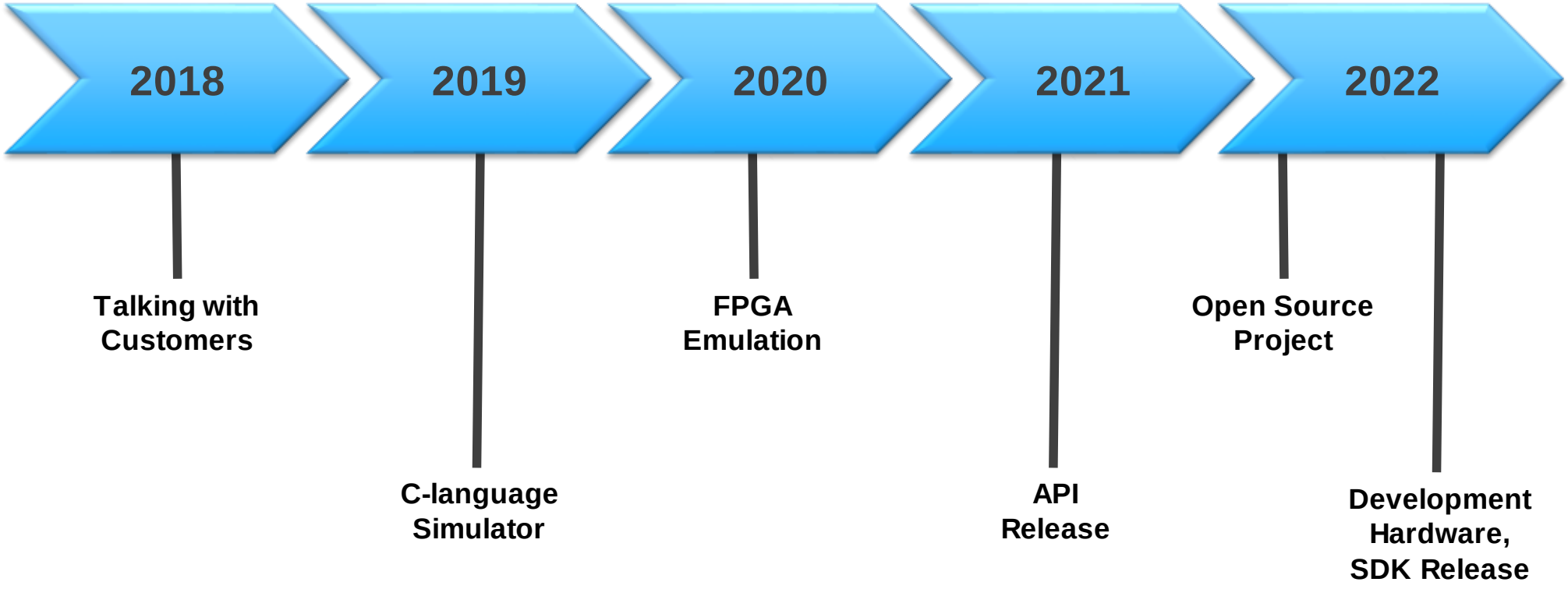
1. Welcome
2. Introduction and timeline
3. Updates on development of the API
4. Status of SDK availability
5. Extensions to the project
6. Follow up and getting involved
7. Open discussion

Linux Foundation Code of Conduct

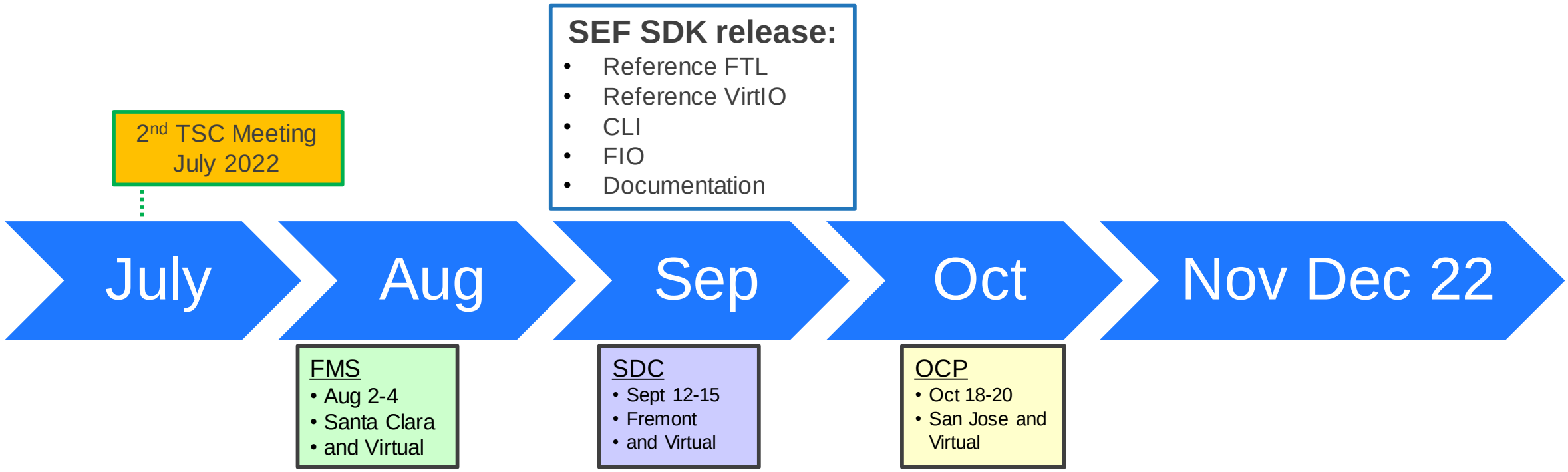
- LF Projects is committed to maintain a positive, professional work environment. This commitment calls for workplaces where participants at all levels behave according to the rules of the following code. A foundational concept of this code is that we all share responsibility for our work environment.

- Full code text
  - https://lfprojects.org/policies/code-of-conduct/

How did we get here?



SEF 2022 2H Timeline



SEF @ Major Flash Events

- Tradeshow Events
- Project Updates and Product Deliverables

SEF at Flash Memory Summit (FMS) Aug 2-4

- **SEF will be part of opening keynote**
- **SEF Seminar Wed Aug 3 at 3:30 in the NVMe track**

Software-Enabled Flash™

A Linux Foundation Open Source Project

designed for flash storage innovation

SEF
SOFTWARE-ENABLED FLASH™

A force-multiplier in data center economics

Drop the legacy HDD paradigm

- A software-defined flash API
- Optimized for flash's digital nature
- Define and deliver 'quality of service'
- Improve flash economics
- For TCO driven solutions in the cloud

** The Linux Foundation and Software-Enabled Flash Project and logo are trademarked by the Linux Foundation*

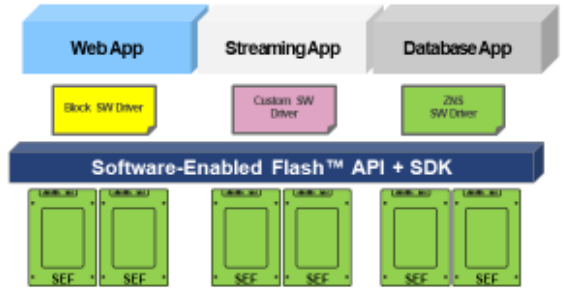
2

Hardware & Software Working Together

the Software-Enabled Flash™ value proposition

One software-defined drive

- Multiple applications
- Multiple protocols
- Fully customizable
  - Data placement & workload isolation
  - Control over latency outcomes
  - IO control & advanced queuing



For TCO advantages in data center economics

*SEF compliant 3rd party controllers are available from Marvell®

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Flash is Now Software Defined

SDK UPDATE

- SEF SW Development Kit
  - SEF Library
  - SEF reference FTL
  - SEF CLI
  - SEF FIO
  - SEF QEMU Block driver + ZNS
  - NVMe Driver / IO_URING enhancements
- Documentation
  - SEF API specification
  - SDK document
  - SEF command set specification

SDK enables developers to evaluate and test Software-Enabled Flash™ without writing a single line of code

Collaboration Resources

- **GitHub**
  - https://github.com/SoftwareEnabledFlash/
  - https://github.com/SoftwareEnabledFlash/TSC/
- **Online API Docs**
  - https://softwareenabledflash.github.io/SEF-API/
- **Mailing List**
  - https://lists.softwareenabledflash.org/g/sef-dev/join
- **Sign Up for SEF Project**
  - https://enrollment.lfx.linuxfoundation.org/?project=sef

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SEF
SOFTWARE-ENABLED FLASH™

Open Discussion

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