Contributing to Hyperledger

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About Me

20+ years of software engineering and architecture experience

- The Linux Foundation
- PayPal
- Microchip Technologies

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About You

- Have you previously contributed to open source projects?
- Have you heard of blockchain?
- Are you a developer?
- Have you heard of Hyperledger?
- Have you used any of the Hyperledger projects?
- Have you contributed to any of the Hyperledger projects?
What You Will Learn

1. What are Hyperledger and the Linux Foundation
2. What projects exist under the Hyperledger umbrella
3. Getting started with the code and community
4. Different ways you can contribute to Hyperledger
Introducing Hyperledger

Open source collaborative effort to advance cross-industry blockchain technologies

Hosted by The Linux Foundation, fastest-growing project in LF history

Global collaboration spanning finance, banking, IoT, supply chains, manufacturing and technology
Together with the global technology community, The Linux Foundation® is solving the world’s hardest problems through open source and creating the largest shared technology investment in history.

With 16 years experience providing governance structure, IT infrastructure and ecosystem development, The Linux Foundation is the umbrella organization for more than 50 open source projects accelerating open technology development and commercial adoption.

Some of the game-changing initiatives hosted by The Linux Foundation include:

- OPENCHAIN
- Let’s Encrypt
- JS Foundation
- OPEN Container Initiative
- CLOUD NATIVE COMPUTING FOUNDATION
- Xen Project
- Core Embedded Linux Project
- OPEN DAYLIGHT
- CORD
- CORE INFRASTRUCTURE INITIATIVE
- OPNFV
- CLOUD FOUNDARY
- Node.js
- Yocto Project
- HYPERLEDGER

BLOCKCHAIN TECHNOLOGIES FOR BUSINESS
The Linux Foundation has achieved an unbelievable feat in bringing together a community of traditionally competitive institutions. To facilitate such extensive collaboration between startups, financial and nonfinancial corporations and technology giants is an enormous win for the whole distributed ledger industry as firms look to leverage mutually beneficial code for the common good.”

– Blythe Masters

CEO, Digital Asset,
Governing Board Chair, Hyperledger
The Linux Foundation 2016 Annual Report
Shared Ledger Database

Blockchain allows multiple different parties to securely interact with the same universal source of truth

**Finance**
Streamlined settlement, improved liquidity, increased transparency and new products/markets

**Healthcare**
Unite disparate processes, increase data flow and liquidity, reduce costs and improve patient experience and outcomes

**Supply Chain**
Track parts and service provenance, ensure authenticity of goods, block counterfeits, reduce conflicts
Hyperledger Goals

Where open source teams build diverse approaches for business blockchain technology systems

- Create enterprise grade, open source, distributed ledger frameworks & code bases to support business transactions
- Provide neutral, open, & community-driven infrastructures supported by technical and business governance
- Build technical communities to develop blockchain and shared ledger POCs, use cases, field trials and deployments
- Educate the public about the market opportunity for blockchain technology
- Promote our community of communities taking a toolkit approach with many platforms and frameworks
Hyperledger Modular Umbrella Approach

**Infrastructure**
Technical, Legal, Marketing, Organizational

Ecosystems that accelerate open development and commercial adoption

**Frameworks**
Meaningfully differentiated approaches to business blockchain frameworks developed by a growing community of communities

**Modules**
Typically built for one framework, and through common license and community of communities approach, ported to other frameworks
Hyperledger Business Blockchain Frameworks

- **Hyperledger Fabric**: Blockchain framework implementation intended as foundation for developing applications or solutions with a modular architecture that allows components, such as consensus and membership services, to be plug-and-play.

- **Hyperledger Iroha**: Blockchain framework implementation designed to be simple and easy to incorporate into infrastructural projects requiring distributed ledger technology.

- **Hyperledger Sawtooth**: Blockchain framework implementation with potential in many fields, from IoT to Financials, that has an architecture that recognizes the diversity of requirements across that spectrum. Support for both permissioned and permissionless deployments.

- **Hyperledger Burrow**: Permissioned smart contract machine that meets the Ethereum Virtual Machine specification.

- **Hyperledger Indy**: Tools, libraries, and reusable components for providing digital identities rooted on blockchains or other distributed ledgers so that they are interoperable across administrative domains, applications, and any other silo.
## Hyperledger Technical Scope

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<th>Out of Scope</th>
<th>Custom Applications</th>
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<td>Specialized consensus algos</td>
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<td>Ledger data structures</td>
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<td>Modular consensus framework</td>
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<td>Modular identity services</td>
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<td>Network peers</td>
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## Hyperledger Community Working Groups

*Working Groups are open to the public*

<table>
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<th>Technical Working Group, China (TWG - China)</th>
<th>Requirements Working Group</th>
<th>Identity Working Group</th>
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<td>Architecture Working Group</td>
<td>Whitepaper Working Group</td>
<td>Performance and Scale Working Group</td>
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[https://www.hyperledger.org/community](https://www.hyperledger.org/community)
Hyperledger Global Meetups

We are **12,250+ members** across **47 Meetups**

https://www.meetup.com/pro/hyperledger/
How can you contribute?

Sample the frameworks and provide feedback

Find a bug, report it

Fix bugs

Test bug fixes
How can you contribute?

Contribute to design discussions
Create designs
Write code for new features
Perform code reviews
How can you contribute?

- Answer questions
- Write documentation
- Perform translations
- Advocacy
Join the Conversation

Rocket.Chat - chat.hyperledger.org*

Mailing Lists - lists.hyperledger.org

* Requires Linux Foundation ID (https://identity.linuxfoundation.org/)
Code, Change Management and Issue Tracking

Github - github.com/hyperledger

Gerrit - gerrit.hyperledger.org

Jira - jira.hyperledger.org*

* Requires Linux Foundation ID (https://identity.linuxfoundation.org/)
Quick Start

- Install Composer Playground
  - [https://hyperledger.github.io/composer/tutorials/getting-started-playground.html](https://hyperledger.github.io/composer/tutorials/getting-started-playground.html)
- Start Composer Playground
- Import Marbles Project
  - Explore Model File
  - Explore Script File
- Test Network
  - Create Players
  - Create Marbles
  - Trade Marbles
Join Us!

Ensure the strength and longevity of a core technology to your business.

Publicly proclaim your leadership in the blockchain space.

Work with other blockchain leaders to develop and promote Hyperledger.

Visit hyperledger.org/about/join or email info@hyperledger.org.