

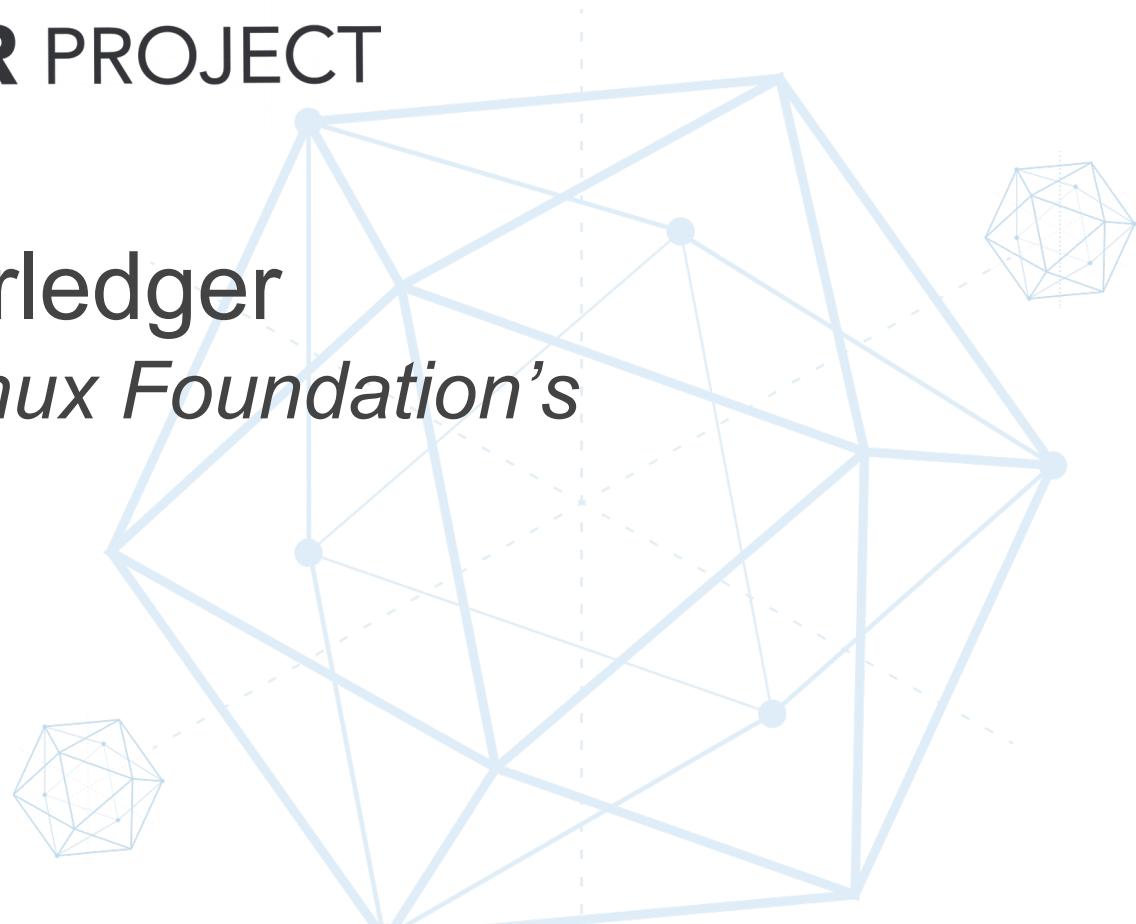


HYPERLEDGER PROJECT

Overview of Hyperledger

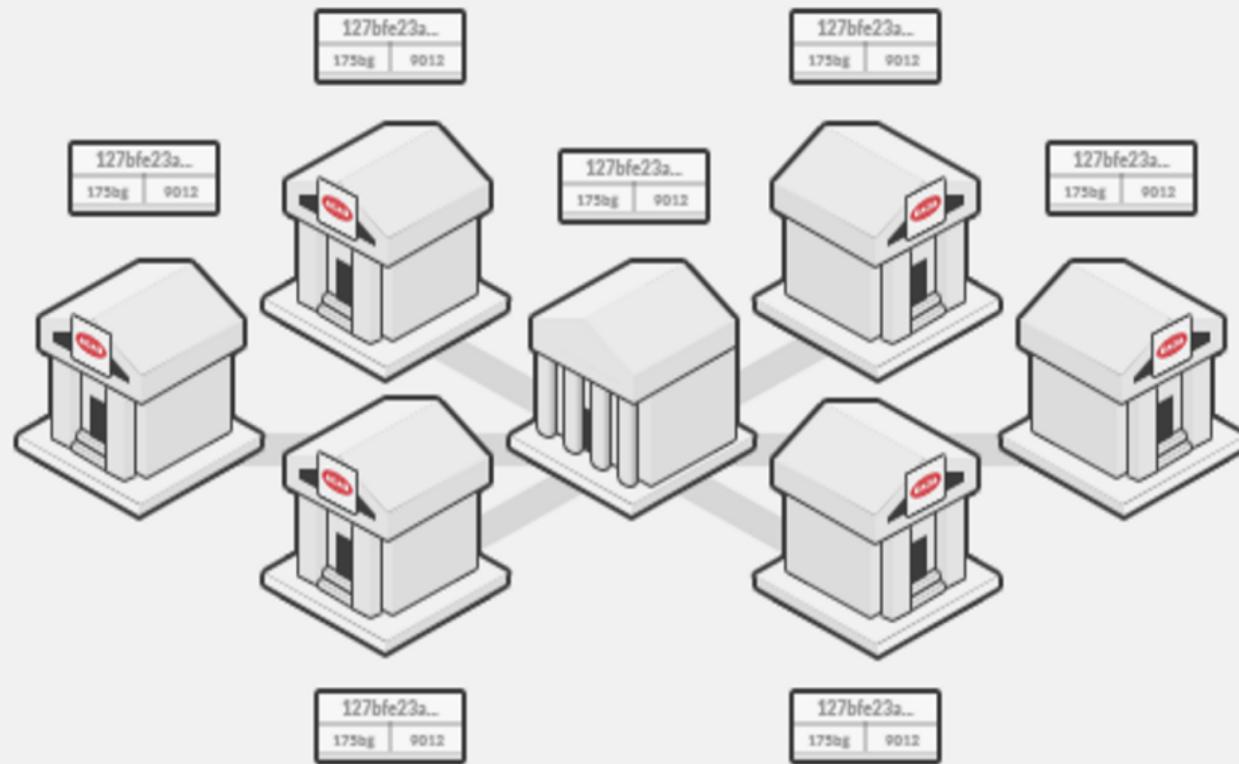
*Introduction to the Linux Foundation's
Hyperledger Project*

June 2016

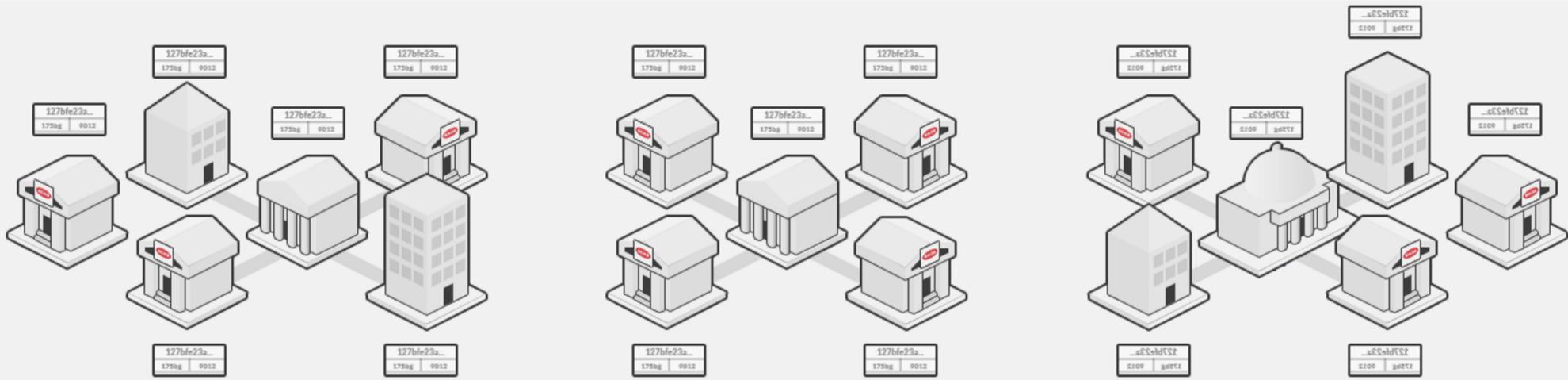


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The Problem with Traditional Databases

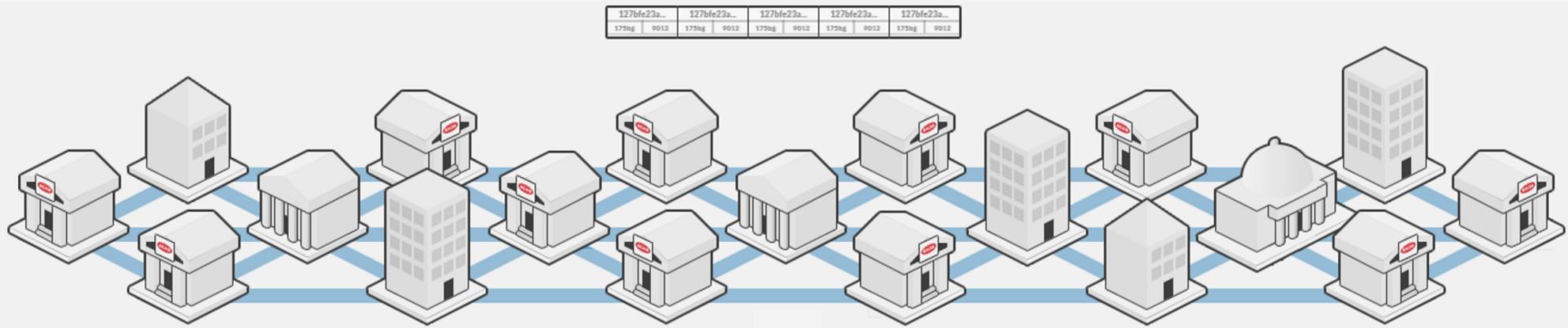


The Problem with Traditional Databases



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How Blockchain Solves This



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Existing Blockchains

Limited
Throughput

Slow
Transaction
Confirmations

Designed for
Cryptocurrency

Poor
Governance

No Privacy

Anonymous
Processors

No Settlement
Finality

Introducing Hyperledger

A **collaborative** effort created to **advance blockchain** technology by identifying and addressing important features for a **cross-industry open standard** for distributed ledgers that can transform the way **business transactions** are conducted globally.

Project Goals

- Create an enterprise grade, open source distributed ledger **framework** and code base, upon which users can build and run robust, industry-specific applications, platforms and hardware systems to support business transactions.
- Create an open source, technical **community** to benefit the ecosystem of Hyperledger solution providers and users, focused on blockchain and shared ledger use cases that will work across a variety of industry solutions.
- **Promote** participation of leading members of the ecosystem, including developers, service and solution providers and end users.
- **Host** the infrastructure for Hyperledger, establishing a neutral home for community infrastructure, meetings, events and collaborative discussions and providing structure around the business and technical governance of Hyperledger.

Modular Framework

Requirements for blockchains vary greatly across different use-cases, there will not be a one size fits all solution.

As such, Hyperledger is being designed to be highly modular, with pluggable options to suit different needs.

About The Linux Foundation



The Linux Foundation is the organization of choice for the world's top developers and companies to build ecosystems that accelerate open technology development and commercial adoption. Together with the worldwide open source community, it is solving the hardest technology problems by creating the largest shared technology investment in history. Founded in 2000, The Linux Foundation today provides tools, training and events to scale any open source project, which together deliver an economic impact not achievable by any one company.

The Linux Foundation has **16 years** experience of providing **governance structure** and infrastructure to support the development of large scale, successful open source projects such as:



Successful Launch

30
members

32
Additions
since

>\$6m
funding

2,300
membership requests

5x
more requests than
next largest in LF
history

[Wired - "Tech and Banking Giants Ditch Bitcoin for Their Own Blockchain"](#)

[Fortune - "IBM, J.P. Morgan, and Others Build a New Blockchain for Business"](#)

[Financial News - “Another day, another blockchain consortium update –this time from the Hyperledger Project”](#)

[International Business Times -- “Linux Foundation's Hyperledger Project trumpets code contributions from across 30 founder members”](#)

PREMIER



High performance. Delivered.



GENERAL



Milligan Partners

MonetaGo



Orchestrating a brighter world

NEC



STATE STREET



symbiont



THOMSON REUTERS



Project Team – Executive Director



Brian Behlendorf

Behlendorf was a primary developer of the Apache Web server, the most popular web server software on the Internet, and a founding member of the Apache Software Foundation. He has also served on the board of the Mozilla Foundation since 2003 and the Electronic Frontier Foundation since 2013. He was the founding CTO of CollabNet and CTO of the World Economic Forum. Most recently, Behlendorf was a managing director at Mithril Capital Management LLC, a global technology investment firm.



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Election Announcements

Board Chair:



Blythe Masters
CEO



TSC Chair:



Chris Ferris
CTO Open Technology



General Member Board Representatives:



Craig Young
CTO



Charles Cascarilla
CEO



Hyperledger Governing Board



Blythe
Masters
 Digital Asset



Chad
Cascarilla
 itBit



Chris
Ferris
 IBM



Craig
Young
 SWIFT



David
Treat
 accenture



Dirk
Hohndel
 intel



Jerry
Cuomo
 IBM



Kireeti
Reddy
 CME Group



Robert
Palatnick
 DTCC



Santiago
Suarez
J.P.Morgan



Stefan
Teis
 DEUTSCHE BÖRSE GROUP



Todd
McDonald
 R



Toshiya
Cho
 HITACHI



Yoshinobu
Sawano
 FUJITSU

 HYPERLEDGER PROJECT

Technical Steering Committee



Chris
Ferris

IBM



Tamás
Blummer

 **Digital Asset**



Emmanuel
Viale
accenture



Mic
Bowman

 **intel**



Hart
Montgomery

 **FUJITSU**



Stanislav
Liberman

 **CME Group**



Pardha
Vishnumolakala

 **DTCC**



Dave
Voell

J.P.Morgan



Stefan
Teis

 **DEUTSCHE BÖRSE GROUP**



Richard G.
Brown

 **R3**



Satoshi
Oshima

 **HITACHI**



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Levels and Fees

Premier

11 Members **16** Maximum

1 Board Rep
1 TSC Rep
For first 6 months
1 Voting Marketing Rep

\$250k
Per year

General

33 Members **No** Maximum

Vote on a Board Rep
1 Non-Voting Marketing Rep

Yearly fee depends
on Organization Size:

\$50,000: 5,000 and above
\$30,000: 2,000 - 4,999
\$20,000: 500 - 1,999
\$10,000: 50 - 499
\$5,000: Less than 50



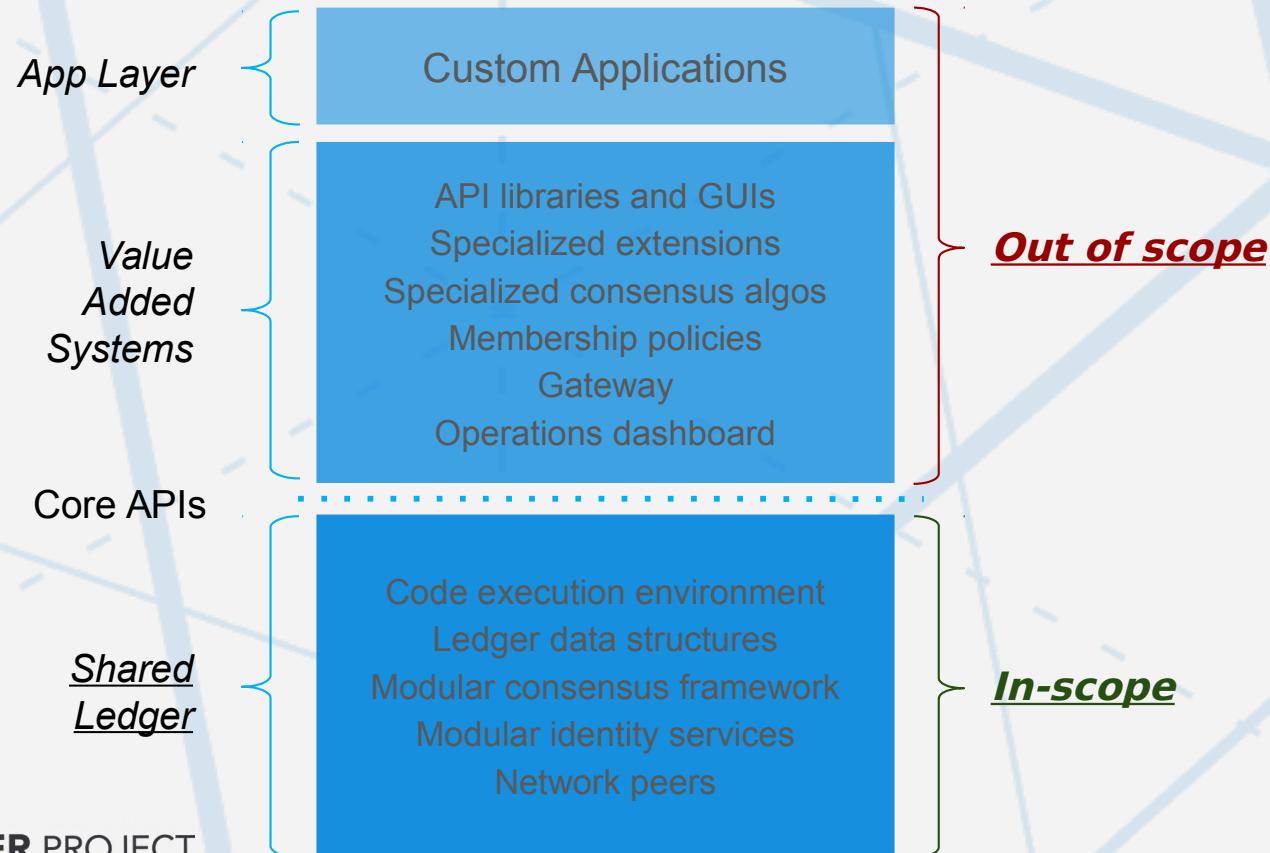
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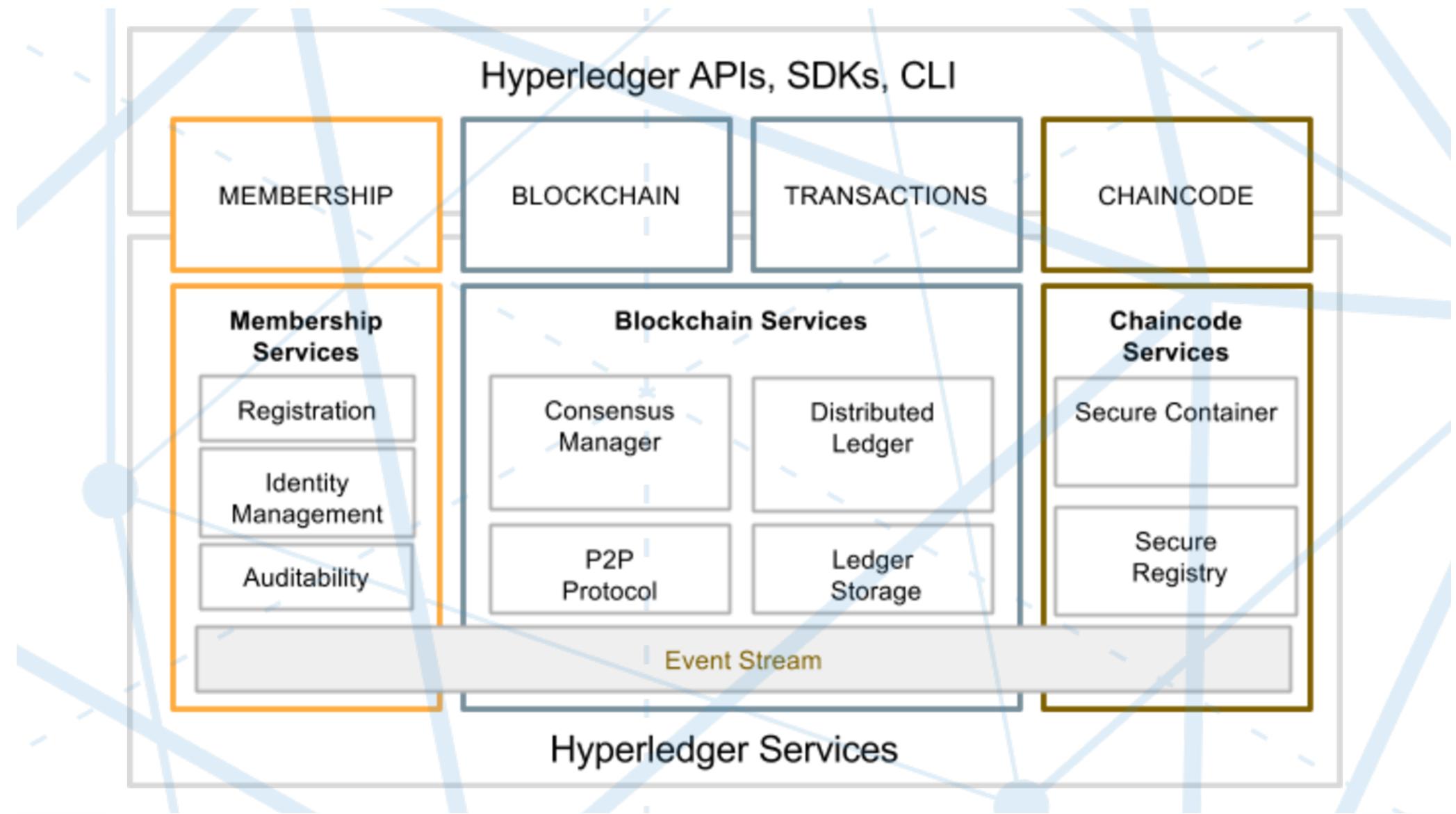
Associate Membership is free for non-profits and open source projects

Project Scope



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6 Proposed Code contributions



J.P.Morgan



Blockstream



Digital Asset

60+ Developers Attended First Hackathon

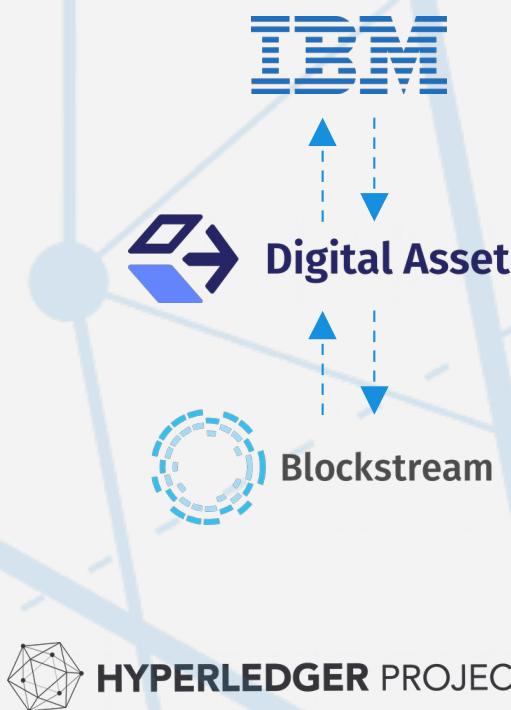


J.P. Morgan hosted the first Hyperledger hackathon, a 4 day event in Brooklyn, New York.

There were four focusses:

- Whitepaper working group
 - Evolved the whitepaper from IBM's
- Requirements and Use Cases working group
 - Gathered financial and non-financial requirements
- Chaincode development group
 - Created an example application in Chaincode to emulates the exchange of shares
- Integration working group
 - Focused on integrating the code proposals from IBM, Digital Asset, and Blockstream

Successfully Demonstrated Integrated Codebase



By the end of the hackathon, the integration team successfully demonstrated a proof of concept showing different parts of three code bases communicating:

Transaction Validation from Blockstream's Elements Project
Implementing the UTXO model in IBM's OBC Chaincode
Client communication with Digital Asset's HLP-Candidate

The simple proof of concept showed the ability to retrieve the chain height and transactions from the blockchain, executing a transaction, and listening to an account to be notified of balance changes.

Community and Ecosystem Engagement

- Hyperledger Executive Director Brian Behlendorf keynoting at multiple events across the globe in 2016, with Hyperledger also exhibiting at key events – Visit hyperledger.org/news/events for details
- Launching a global Meet-up structure in 2H '16 to organize grass-roots engagement
- Active engagement with technology and finance journalists and analysts to continue educating the market on Hyperledger – Visit hyperledger.org/news
- Technical Steering Committee hosts regular online and face-to-face hackathons – join our mailing lists to learn about these and other technical activities - hyperledger.org/community

Two Projects in Incubation

Initial Commits

hyperledger/fabric



Digital Asset



Blockstream

hyperledger/sawtooth-lake



<https://github.com/hyperledger>

More potential contributions being discussed

Two Projects in Incubation

hyperledger/fabric Community Growth

Sep 20, 2015 – Jun 30, 2016
Contributions to master, excluding merge commits



72 Contributors (6/30/216)

hyperledger/sawtooth-lake Community Growth

Mar 27, 2016 – Jun 30, 2016
Contributions to master, excluding merge commits



10 Contributors (6/30/216)

<https://github.com/hyperledger>



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More Information

hyperledger.org

hyperledger.org/community

github.com/hyperledger

github.com/hyperledger-incubator



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