

IBM开源技术微讲堂

区块链和HyperLedger系列

第二讲

Hyperledger 项目与社区概览

<http://ibm.biz/opentech-ma>



“区块链和HyperLedger” 系列公开课

- 每周四晚8点档
 - 区块链商用之道
 - [Hyperledger 项目与社区概览](#)
 - Bluemix上的区块链服务
 - 开发和部署一个区块链应用
 - HyperLedger 中的共享账本
 - HyperLedger中的共识管理
 - HyperLedger中的隐私与安全
 - HyperLedger应用案例赏析



讲师介绍-Baohua Yang

- **Researcher in IBM**
 - Fintech, Cloud and Analytics
- **Open-Source contributor**
 - [OpenDaylight](#), [OpenStack](#), [Hyperledger](#), etc.
- **Hyperledger fan**
 - Code committer to [fabric](#), [sdk](#), [Cello](#) etc.
 - PTL of [Cello](#) project and [fabric-sdk-py](#) project
 - Chair of [Hyperledger Technical Working Group China](#)
 - Drafter of [fabric sdk spec](#) and [multi-channel consensus spec](#)
 - Mentor of Summer Intern Program



议程

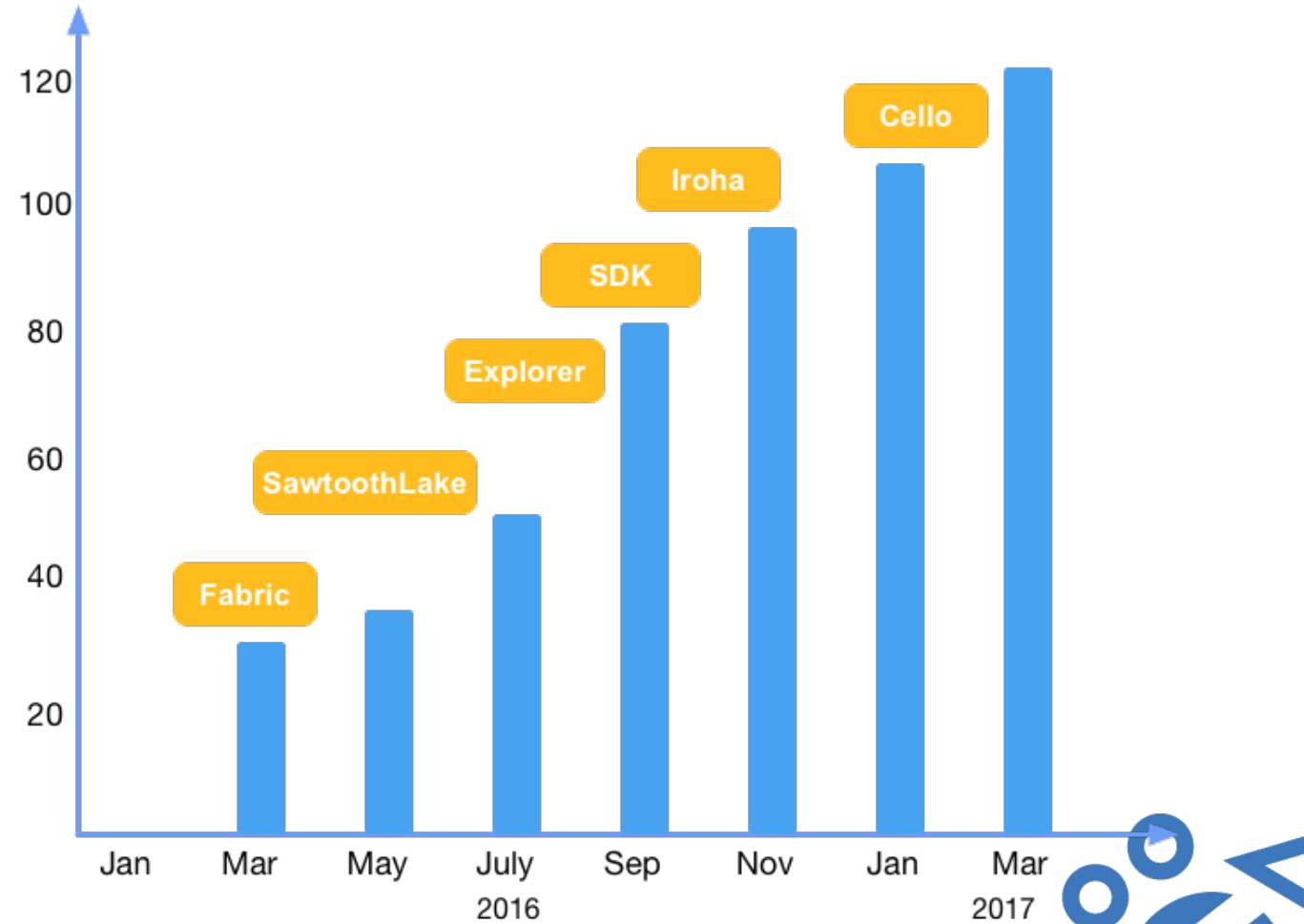
- Introduction to Hyperledger
- Hyperledger Projects
- Hyperledger Community
- Technical Working Group China
- Summary



Introduction to Hyperledger

- Since Dec 17, 2015
- Apache v2 License
- 30 founded members
- 29/122 (China) members
- 5 main projects
- 200+ contributors
- 8000+ commits

Enterprise grade, open source distributed ledger framework!



Hyperledger Projects

- Open Communications

- [Mail-list](#)
- [Rocket chat](#)
- [Meetings](#)

- Lifecycle

- Proposal
- Incubation
- Active
- Deprecated
- End of Life

Blockchain Explorer

Fabric

STL

Iroha

Cello



Hyperledger Fabric

- Open-sourced at Dec, 2015
- Proposed by IBM and DAH
- Golang
- 70+ contributors
- 4000+ commits
- v0.6: ~80k loc; v1.0: ~120k loc
- Active now, in 1.0 pre-release (alpha)



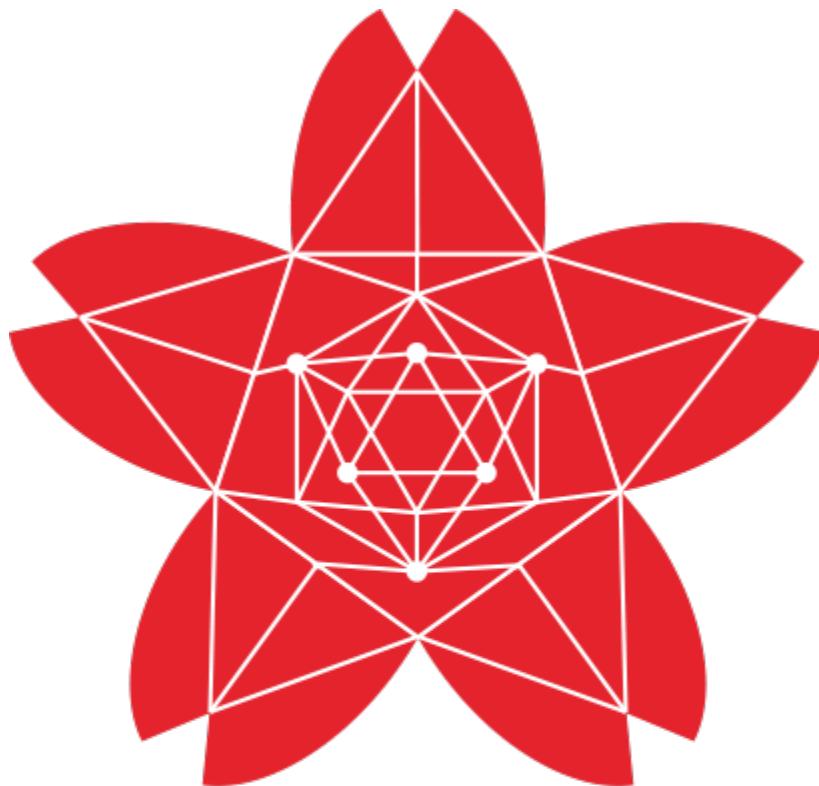
Hyperledger SawtoothLake

- Open-sourced at April, 2016
- Proposed by Intel
- Python
- 20+ contributors
- 2000+ commits
- Key features
 - PoET consensus
 - Transaction Families
 - Scalability



Hyperledger Iroha

- [Open-sourced](#) at Oct, 2016
- Proposed by [Soramitsu](#) and Hitachi
- C++
- 10+ contributors
- 1000+ commits
- Key features
 - C++ environment
 - Mobile and Web application Support
 - Sumeragi consensus



IROHA 

Hyperledger Blockchain Explorer

- Open-sourced at Aug, 2016
- Proposed by Intel, DTCC, IBM
- UI to interact with ledger
- Node.js
- Under-development
- Key features
 - Web UI to explorer a blockchain
 - Single-Page Application

The screenshot shows the Hyperledger Blockchain Explorer web application. The top navigation bar includes links for Recent Blocks, Current State, Search, Network, Visualization, and Transactions. The main content area is divided into several sections:

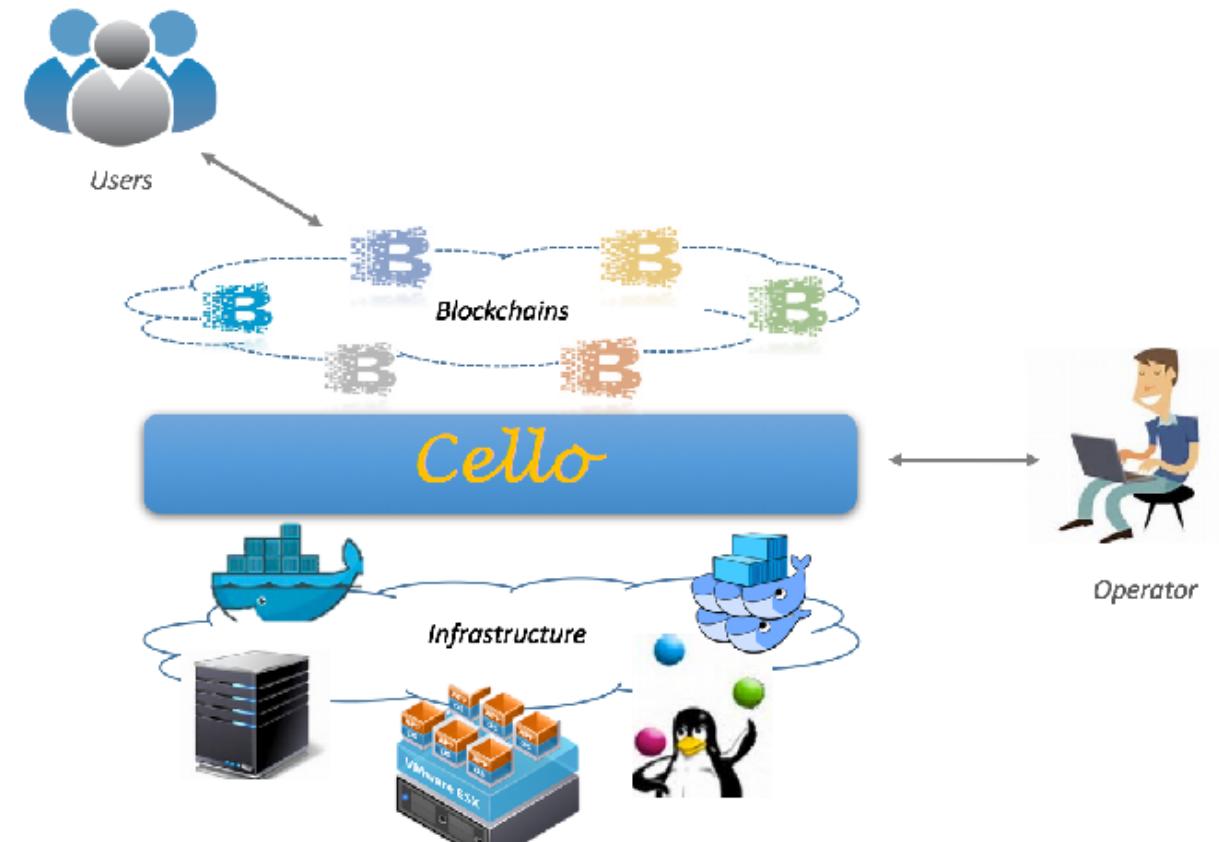
- Recent Blocks:** A table with columns for Block#, State Hash, Previous Hash, and Log. The table is currently empty.
- Current State of the BlockChain:** Displays the current height (1), current hash, and previous hash.
- Search:** A search bar with fields for UUID/Block number, Search, and Clear.
- Network Information:** Shows the number of peers connected (4) and a table of network nodes with columns for Name, Address, Type, and PKID.

The network information table contains the following data:

Name	Address	Type	PKID
vp2	172.18.0.5:7051	1	
vp3	172.18.0.6:7051	1	
vp1	172.18.0.4:7051	1	
vp0	172.18.0.3:7051	1	

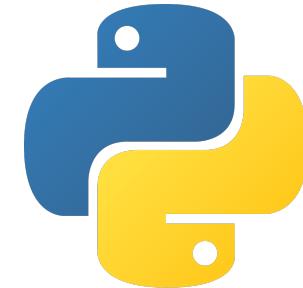
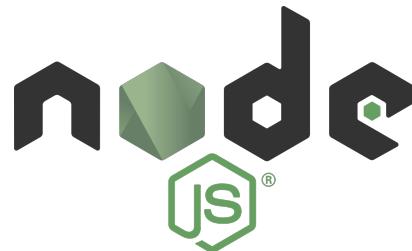
Hyperledger Cello

- Open-sourced at Jan, 2017
- Proposed by IBM
- Blockchain as a Service
- Python, JavaScript
- 270+ commits
- Key features
 - Support various infrastructures
 - High-performance
 - Scalability
 - Pluggability



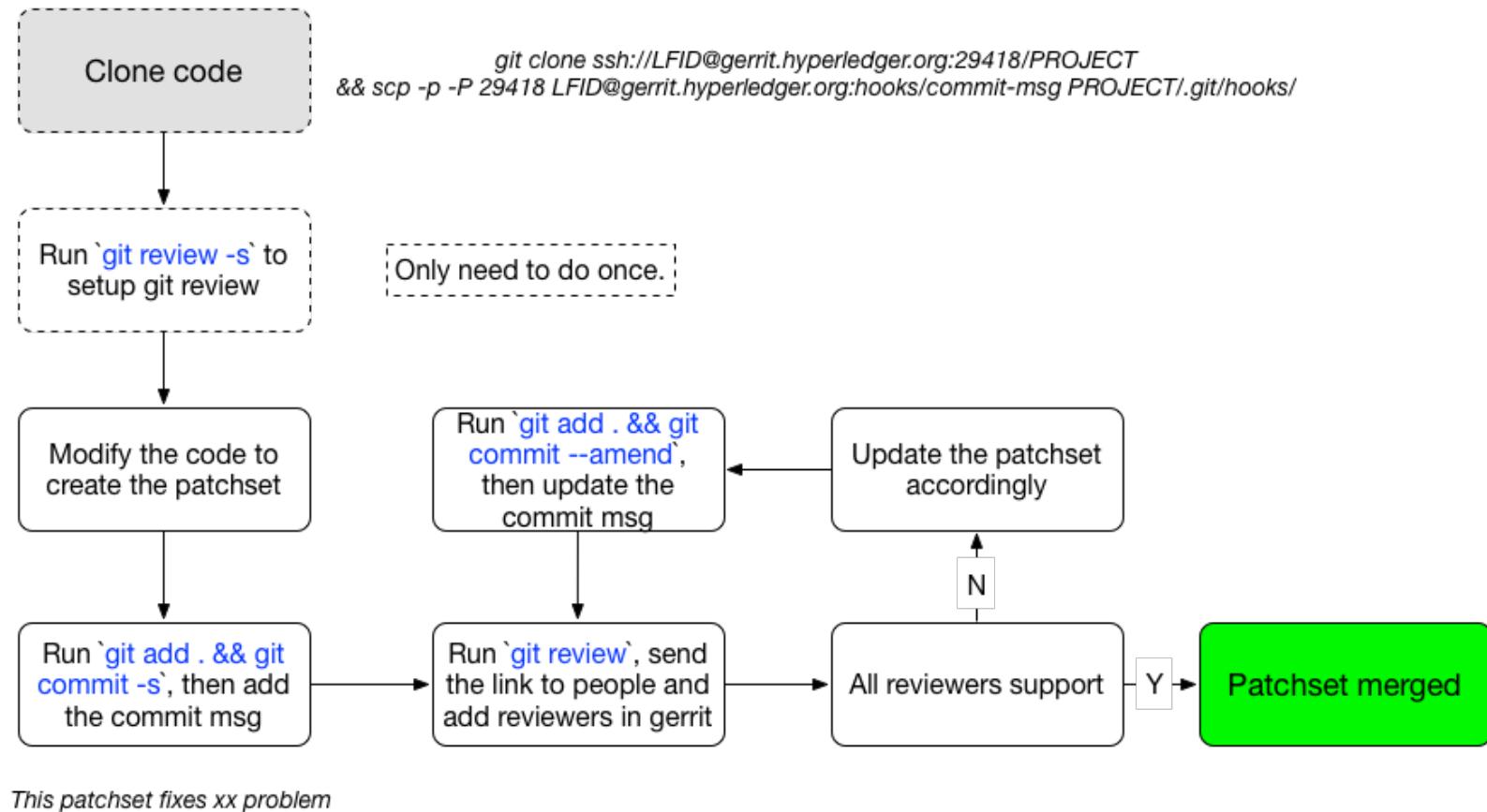
Hyperledger Fabric SDK

- Node.js
 - <https://github.com/hyperledger/fabric-sdk-node>
- Python
 - <https://github.com/hyperledger/fabric-sdk-py>
- Java
 - <https://github.com/hyperledger/fabric-sdk-java>



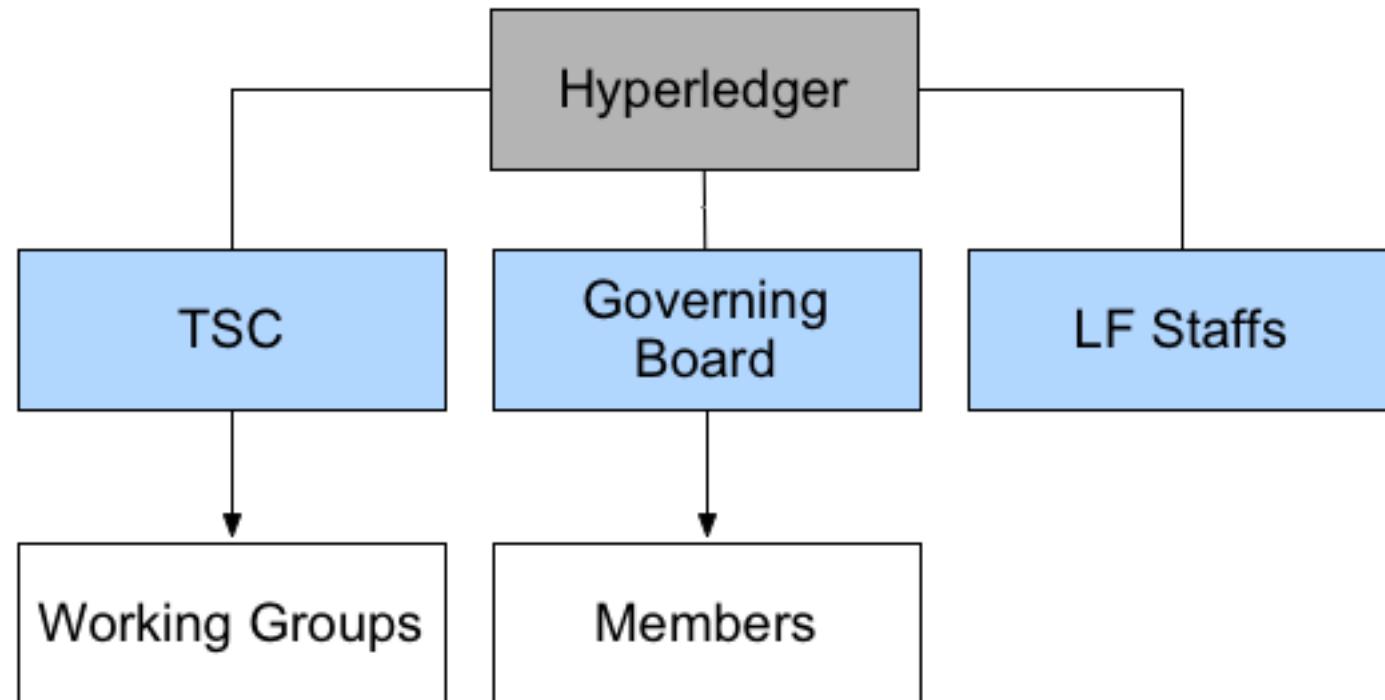
How to Contribute

- Linux Foundation ID
- Jira to mange tasks
- Gerrit to host code
- RocketChat



Hyperledger Community

- Linux Foundation Support
- Organizations
 - Technical Steering Committee
 - Governing Board
 - Linux Foundation Staffs
- TWG-China



Hyperledger Community

- Events
 - Meetups
 - 9300+ attendees across 40+ meetup groups
 - Hackathon
 - 1st Asia Hackathon at Shanghai on Mar 11,12
 - Hackfest
 - Beijing in June, TBD
- Wechat Public Number



Technical Working Group China

- About TWG-China
 - Since Dec 1, 2016
 - wiki.hyperledger.org/groups/tsc/technical-working-group-china
- Email
 - lists.hyperledger.org/mailman/listinfo/hyperledger-twg-china
 - hyperledger-twg-china@lists.hyperledger.org
- Online Chat
 - [twg-china](https://twg-china.hyperledger.org)



Technical Working Group China

- 1st Asia Hackathon
 - [Mar 11/12, 2017, Shanghai](#)
- Meetups
 - Beijing, Shenzhen, Shanghai
- Educations/Trainings
- Projects
- i18n Team
- Summer Open-Source Internship



Welcome for more volunteers!



Summary

- Hyperledger is for Enterprise grade, open source distributed ledger technologies!
- Young, and evolves quickly, with numbers of interesting projects!
- Active communities supported by Linux Foundation!



Reference

- Hyperledger Wiki&Documentation
 - wiki.hyperledger.org
 - hyperledger-fabric.readthedocs.io
- IBM 区块链
 - ibm.com/ibm/cn/blockchain/
- 《区块链技术指南》
 - github.com/yeasy/blockchain_guide
- 《Docker 从入门到实践》
 - github.com/yeasy/docker_practice



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