2023 Q1 Hyperledger Fabric

For more details on v2.4 see the What's New documentation.

Recording at Contributor Meetings 2022.
Q4 Report

v2.2 is the current LTS release with patch releases quarterly.

The project delivered v2.4.0-beta with two significant new features:

- **Fabric Gateway** - The Fabric Gateway will remove much of the transaction submission and query logic from the client application and shift it to a common gateway running within the Fabric peer, enabling each of the various client SDKs to be slimmer, more consistent, and require less maintenance. Applications will interact with a trusted peer (e.g., at their organization) and the peer will coordinate endorsements from other peers and submission to the ordering service. It will also simplify the administrative overhead of running a Fabric network because client applications will be able to connect and submit transactions via a single network port at their organization rather than the current situation where ports have to be opened from a client application to multiple peers across potentially multiple organizations. The Fabric Gateway is delivered along with slim SDKs in the [https://github.com/hyperledger/fabric-gateway](https://github.com/hyperledger/fabric-gateway) repository. Check out the client application samples.

- **Peer unjoin** - The new command "peer node unjoin" enables an administrator to remove (unjoin) a channel from a peer. The peer must be stopped when the command is executed so that channel artifacts can be cleaned up. The channel's blockchain, state database, and associated entries will be removed from the peer. When the peer is restarted it will no longer receive blocks for the channel.
Welcome to Hyperledger Fabric

- Details on how to get started
- Main documentation
- Getting Started for application developers
Quarterly Report: 2020 Q4 Hyperledger Fabric

Hyperledger Fabric roadmap

Features

v2.x

- Token samples
- Authentication service for channel management and other APIs

v3.x

- Fabric Gateway

Proposed future items, Contributions Welcome!

- Redactable private data (GDPR)
- Redactable public data (GDPR)
- Local collections and privacy-preserving endorsement
- Identity Bitrate in v2.x Java SDK
- BFT consensus
- Post-order execution (including validation/commit refactoring, block unmarshal perf improvement)

- APIs to replace QSECC and CSEC
- Private data improvements
- History query
- Pagination APIs
- Missing port data troubleshooter
- Auto-include regulator/auditor in POCs
- Optimize block storage (e.g. de-duplication of cts, compression)
- GoLevelDB versus RocksDB, analysis & replacement
- Additional on-chain queryability (e.g. expose read-only CouchDB)
- Chaincode ledger API

Improvements

- Perf - Private data optimizations

Operations

- Ledger troubleshooting utility
- Peer graceful shutdown
- Peer remove (unjoin) channel
- Operator requests
- CA v2.5 operational improvements and release

Consumability

- Perf/orderer config refactoring

Tech debt

- Go 1.15
- Update dependencies
- CI improvements / test flakiness
- System test improvements
- Remove old lifecycle
- Remove Kafka support
- Goapi re-architecture
- Remove v1.4 ledger upgrade
- Clean up source code TODOs

Statistics
• Contributing to Fabric and related sub-projects
• Coding Guidelines
• Design docs
• Meeting notes
• Videos on YouTube for Hyperledger Fabric. Includes informational and playbacks. Subscribe to be automatically notified when new videos are posted.
• Getting Started in CI - Debugging CI jobs failures

Releases

v1.4 and v2.2 are the current LTS releases. Each has patch releases at least quarterly.

• v1.4.8 - July 22, 2020
• v1.4.9 - September 30, 2020
• v2.2.0 - July 9, 2020
• v2.2.1 - September 30, 2020
• v2.3 is planned for November.

RFCs merged:

• Ledger checkpointing
• Channel participation API

RFCs in review:
Hyperledger Fabric Resources

Hyperledger Fabric Resources

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<tr>
<th>Understanding Hyperledger Fabric</th>
<th>Fabric Whitepaper</th>
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<tr>
<td>Christopher Ferris, IBM CTO Open Technology</td>
<td>hyperledger_fabric_whitepaper.pdf</td>
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<td>NGOs: National Association of Realtors (member services)</td>
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<td>Education: Sony Global Education (credentials)</td>
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<th>Fabric: Academic Paper</th>
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<td><a href="https://dl.acm.org/doi/10.1145/3190508.3190538">https://dl.acm.org/doi/10.1145/3190508.3190538</a></td>
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The exam domains and competencies outlined below serve as a reference for training partners wishing to align materials and candidates preparing to take the Certified Hyperledger Fabric Administrator (CHFA) exam.

Application Lifecycle Management – 20%
- Install and Instantiate chaincode package
- Configure endorsement policy
- Define collection policy for private data
- Modify or upgrade chaincode

Install and Configure Network – 25%
- Modify the world state database configuration
- Define initial multi-org configuration policy
- Configure Ordering service (Kafka)
- Configure Hyperledger Fabric containers
- Define network config options (block creation options, etc)
- Enable TLS for communication
- Generate genesis block
- Configure service discovery node (e.g. peer and orderer addresses)

Diagnostics and Troubleshooting – 15%
- Query and analyse peer logs
• Query and analyse CA logs
• Query and analyse Orderer logs
• Query and analyse chaincode logs

Membership Service Provider – 20%

• Configure ACL
• Create end user identity
• Revoke an identity
• Configure and start Hyperledger Fabric CA
• Configure Hyperledger Fabric for hardware security module

Network Maintenance and Operations – 20%

• Add a peer to existing organization
• Create a channel
• Add an org to a channel
• Update channel configuration
• Update a Hyperledger Fabric instance