# Hyperledger Quilt

<table>
<thead>
<tr>
<th>Project</th>
<th><img src="https://www.hyperledger.org/images/hyperledger-quilt.png" alt="Hyperledger Quilt" /></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
<td>INCUBATION</td>
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<td><strong>CII Badge</strong></td>
<td><img src="https://www.hyperledger.org/images/cii-badge.png" alt="CII Badge" /></td>
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<tr>
<td><strong>Description</strong></td>
<td>An interoperability solution for any fungible assets - fiat, crypto, DLT, in-game tokens, or any other type of asset tracked on a ledger.</td>
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Hyperledger Quilt is a Java implementation of [Interledger](https://interledger.org), a suite of open protocols and standards that allows payments interoperability across any currency - fiat or crypto. Interledger standards and specifications are being defined by the open source community at Interledger.org and at various community groups in the W3C, including Web Monetization and Web Payments.

## News and PR

- **Announcing Quilt v1.0:** ([https://www.hyperledger.org/blog/2019/11/01/announcing-hyperledger-quilt-v1-0-interledger-for-the-java-platform](https://www.hyperledger.org/blog/2019/11/01/announcing-hyperledger-quilt-v1-0-interledger-for-the-java-platform))

## Key Characteristics

By implementing the Interledger protocol, Quilt provides:

- **Foundations:** A set of protocols and primitives for enabling value interoperability across any fungible asset system, including crypto, fiat, in-game, and other token currencies.
- **Identity:** A standardized, globally unique identifier for payment accounts called Payment Pointers.
- **Liquidity:** A peer-to-peer packetized payments protocol specified under ILPv4.
- **Sending & Receiving:** A Java implementation of STREAM, which is a packetized payment protocol inspired by the QUIC Internet Transport Protocol. STREAM operates on top of core Interledger protocols by allowing a sender and receiver to coordinate a payment over any arbitrary Interledger topology.
- **Extensibility:** Quilt provides a framework for designing higher layer use-cases on Interledger to enable payment systems interoperability.

## Repositories

- **Github:** [hyperledger/quilt](https://github.com/hyperledger/quilt)

## Documentation

- **Java Project Documentation**
  - Project overview
  - Github Issues
  - Javadoc Links
  - Java Examples

- **Project Artifacts**
  - Releases & Changelogs
  - Current Milestones
  - Maven Central Coordinates

- **Interledger Protocols**
**Interledger Addresses**: a hierarchical identifier for Interledger network nodes that enables efficient routing of payment packets.

**ILPv4**: The lowest-layer Interledger protocol that enables packets to multi-hop from peer to peer across the Interledger.

**Payment Pointers**: a standardized identifier for end-user payment accounts.

**ILP-over-HTTP**: An HTTP protocol that allows two peers to transmit ILPv4 packets to each other using HTTP.

**SPSP**: Simple Payment Setup Protocol, used to allow a sender and receiver to negotiate the security parameters of an Interledger payment.

**STREAM**: A protocol for reliably sending money and data over ILPv4.

## Security
The Quilt project tries to maintain best-practices when it comes to the security of the library. To this end, we employ the following automated scans:

- Github Automated Dependency Scans ([announcement & docs](https://github.com/interledger-projects/quilt-web-index/tree/main/security_scans)
- LGTM ([acquired by Github](https://github.com) in 2019): LGTM’s security analysis is powered by findings from a dedicated team of security researchers, and by contributions from security teams at a number of [top tech companies](https://github.com).

## Interledger TestNet
The Quilt project implements Interledger sender and receiver primitives, but requires a server infrastructure in order to operate. The current Interledger Testnet is operated by Xpring, and can be accessed at [https://xpring.io](https://xpring.io).

## Community

### Mailing Lists

- [Quilt Mailing List](https://lists.interledger.com)
- [W3C Interledger Mailing List](https://lists.w3.org/Archives/Public/interledger-conformance/)

### Chat/Communications (for questions and ephemeral discussions)

- [Hyperledger Rocket Chat: #quilt](https://rocket.chat)
- [Interledger Slack](https://interledger.slack.com)
- [Interledger Community Forum](https://forum.interledger.org)
- [Other ways to get involved](https://github.com) in the Interledger community.

## Community Meetings

We have open community calls **every other Wednesday at 5pm UTC** to discuss the latest in Interledger Java projects, including Interledger spec development, the Quilt implementation, and to answer any questions people have. Agendas are sent out via the mailing lists and anyone can suggest an agenda item by adding to the [topic](https://github.com) created for that purpose in the Interledger forum (or by reaching out on any channel in the community).

Previous meeting recordings can be found [here](https://github.com) (older archives [here](https://github.com)).

## Compatible Software

At its core, Interledger is a protocol that can be used in a nearly infinite number of use-cases. The protocol has been designed using a layered design approach, similar in fashion to the [Internet suite](https://www.ietf.org/rfc/rfc2661.txt) of protocols. To this end, Quilt should be interoperable with any other Interledger-compatible implementation. This following are known implementations of Interledger in various communities and programming languages:

- [Interledger-rs](https://github.com): An implementation of the Interledger suite of protocols in Rust.
- [Interledger-js](https://github.com): An implementation of the Interledger suite of protocols in Javascript.
- [Rafki](https://github.com): A modular approach to Interledger components, written in Javascript ([blog announcement here](https://github.com)).

## History

- **Proposed** by Takahiro Inaba – NTT DATA, Adrian Hope-Bailie – Ripple, and Isaac Arruebarrena – Everis, an NTT DATA Company.
- **Approved** by the TSC on 2017-10-12.
- **Approved** maintainer change to David Fuelling on 2019-09-19.

### Recent space activity

[David Fuelling](https://github.com)

- [2020-06-02 Meeting notes](https://github.com) updated Jun 03, 2020 • view [change](https://github.com)

### Space contributors

- David Fuelling (13 days ago)
- Sudheesh Singanamalla (209 days ago)
- Silona Bonewald (223 days ago)