Hyperledger is an open source collaborative effort created to advance cross-industry blockchain technologies. It is a global collaboration, hosted by The Linux Foundation, including leaders in finance, banking, IoT, supply chain, manufacturing and technology. Questions? Please visit the FAQ.

- Projects
- Working Groups
- Special Interest Groups
- Governing Documents of the Hyperledger Technical Community

## Projects

<table>
<thead>
<tr>
<th>Title</th>
<th>Project</th>
<th>Status</th>
<th>CII Badge</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperledger</td>
<td>Aries</td>
<td>INCUBATION</td>
<td></td>
<td>Infrastructure for blockchain-rooted, peer-to-peer interactions. It provides a shared, reusable, interoperable tool kit designed for initiatives and solutions focused on creating, transmitting and storing verifiable digital credentials.</td>
</tr>
<tr>
<td>Hyperledger</td>
<td>Avalon</td>
<td>INCUBATION</td>
<td></td>
<td>Hyperledger Avalon enables privacy in blockchain transactions, moving intensive processing from a main blockchain to improve scalability and latency, and to support attested Oracles.</td>
</tr>
<tr>
<td>Hyperledger</td>
<td>Besu</td>
<td>ACTIVE</td>
<td></td>
<td>Besu is an Ethereum client that runs on the Ethereum public network, private networks, and test networks such as Rinkeby, Ropsten, and Görli.</td>
</tr>
<tr>
<td>Hyperledger</td>
<td>Burrow</td>
<td>INCUBATION</td>
<td></td>
<td>Permissioned Ethereum smart-contract blockchain</td>
</tr>
<tr>
<td>Hyperledger Caliper</td>
<td>INCUBATION</td>
<td>Blockchain benchmark framework which allows users to measure the performance of a specific blockchain implementation with a set of predefined use cases.</td>
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<tr>
<td>Hyperledger Cello</td>
<td>INCUBATION</td>
<td>Blockchain operating system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyperledger Composer</td>
<td>DEPRECATED</td>
<td>Development framework/tools for building Blockchain business networks</td>
<td></td>
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<tr>
<td>Hyperledger Explorer</td>
<td>INCUBATION</td>
<td>Blockchain Web UI</td>
<td></td>
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</tr>
</tbody>
</table>
Hyperledger Fabric

Distributed ledger in Go

Hyperledger Grid

Platform for building supply chain solutions that include distributed ledger components.

Hyperledger Indy

Distributed ledger purpose-built for decentralized identity

Hyperledger Iroha

Distributed ledger in C++
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<th>Project Name</th>
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<tr>
<td>Hyperledger Quilt</td>
<td>Incubation</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>
</tr>
<tr>
<td>Hyperledger Sawtooth</td>
<td>Active</td>
<td>Distributed ledger with Multi-Language Support</td>
</tr>
<tr>
<td>Hyperledger Transact</td>
<td>Incubation</td>
<td>Transact is a transaction execution platform designed to be used as a library or component when implementing distributed ledgers, including blockchains.</td>
</tr>
<tr>
<td>Hyperledger Ursa</td>
<td>Incubation</td>
<td>A shared cryptographic library that would enable people (and projects) to avoid duplicating other cryptographic work and hopefully increase security in the process.</td>
</tr>
</tbody>
</table>

Propose a project

Project Links
- Project Proposals
- Copyright and License Policy
- Project Incubation Exit Criteria
- Project Lifecycle
- Project Readiness
- Release Taxonomy
- TSC Project Updates

Working Groups
The following working groups fall under the purview of the Technical Steering Committee.
The Hyperledger Architecture Work Group (AWG) is a technical workgroup focused on developing an architectural framework for Enterprise class distributed ledgers, towards convergence on a modular architecture. This includes identifying common and critical components, providing a functional decomposition of an Enterprise blockchain stack into component layers and modules, regularizing interfaces between the components, and interoperability between ledgers.

The AWG serves as a cross-project forum for architects and technologists from the Hyperledger community to exchange ideas and explore alternate architectural options, discuss the tradeoffs, and capture the reasoning behind the choices. The AWG provides recommendations and architectural guidance to the projects under the Hyperledger greenhouse and encourages them towards convergence on a modular architecture. The AWG invites individual Hyperledger projects for architecture and design review to benefit from the expertise from the community as well as to shape the architectural direction of Hyperledger.

The Hyperledger Diversity, Civility and Inclusion Working Group (DCI) is chartered with measuring and improving the health of our open source community. We seek to provide constructive recommendations to the TSC, projects, and working groups. All are welcome to join us and help Hyperledger continue to grow in a diverse, civil, and inclusive way.

The purpose of the Identity Working Group is to discuss, research, and document ways to capture, store, transmit and use Identities on the DLT, specifically for the projects in the Hyperledger greenhouse. The Identities can be of nodes that participate in the running of the DLT or entities that transact on the DLT.

The Learning Materials Development working group reports to the Hyperledger Technical Steering Committee. It is focused on developing open source training material (licensed as specified by the Hyperledger Charter) to educate people interested in expanding their knowledge of Hyperledger and its projects. The working group will consult with other Hyperledger working groups, Hyperledger team members, and the project maintainers to identify training needs and develop strategies, as well as, material to address those needs. The output of this working group will be targeted towards both technical and non-technical audiences.

Performance and scalability are two key characteristics of any platform. In terms of most of the Hyperledger projects, both will directly relate to end user satisfaction and ultimately adoption of a project. For instance, if a code base consumes too many system resources or does not complete an action in a reasonable time with respect to other solutions, it may not succeed. Similarly, if a product does not scale well (horizontally and or vertically), it may not succeed.

The purpose of the Performance and Scalability Working Group (PSWG) is to discuss, research, and identify key metrics that relate to the performance and scalability of a blockchain and blockchain related technologies.

Smart contracts provide automation in blockchain solutions. They are immutable, decentralized and deterministic, which make them ideal to remove third-parties and let peer-to-peer interactions. Once agreed between the parties and deployed on a distributed ledger, their activities and outcomes can be verified, so they can be trusted by all stakeholders. Everybody involved in DLTs are interested in smart contracts and the benefits they bring, but are also worried because there are many aspects about smart contracts they don’t understand including legal and ethical insecurities. The main goal of this workgroup will be to give an academic perspective to this research topic and in parallel make clear to users, developers, researchers, businessmen, decision makers and others interested in smart contracts practical ways to utilize them on the different DLTs that are under the Hyperledger umbrella and explore all potentials from deploying them in everyday software solution scenarios.

The Technical Working Group China/ (TWG China, or TWGC) is a bridge between the global Hyperledger community, and the emerging technical user and contributor community in China and the greater China region, including Hong Kong and Taiwan.

Archived Working Groups

- Protocol Working Group
- Requirements Working Group
### Special Interest Groups

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
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<tbody>
<tr>
<td>Capital Markets SIG</td>
<td>The Capital Markets Special Interest Group (CMSIG) represents industry professionals working together to study how Hyperledger DLTs interact with Capital Markets use cases. These use cases cover issuance and trading of traditional and digital instruments to continued market-making, management of risk, program-trading, regulations, capital requirements, traceability, post trade settlement, custody including corporate actions and more. This group also explores architecture, standards, regulations, identity and performance related considerations specific to Capital Markets and DLTs.</td>
</tr>
<tr>
<td>Climate Action and Accounting SIG</td>
<td>A Special Interest Group focused on bringing stakeholders together to look at climate related use cases, such as using Hyperledger frameworks to build a global and open climate accounting system to support stakeholders' efforts to achieve the goals of the Paris Agreement (the United Nation's global climate accord) and to support implementation of the recommendations of the Task Force for Climate-related Financial Disclosure (TCFD), among various initiatives. The SIG encompasses the wide array of climate actions, for example GHG management and mitigation, resilience and adaptation to climate impacts, and climate finance, including also for various types of applications (e.g. facilities, supply chains, communities, technologies, etc.).</td>
</tr>
<tr>
<td>Education Architecture SIG</td>
<td>The Education Architecture Special Interest Group (EASIG) will explore and advise on issues related to integration with legacy application infrastructure of learning management systems (LMS), Student Information Systems (SIS), Enterprise Resource Planning (ERP), Integrated Library Systems (ILS), Instructional Apps, Customer Relationship Management Systems (CRM), Human Capital Management (HCM), Cloud Computing models (SaaS, PaaS, IaaS, Hybrid), and self-sovereign digital identity. In addition, this group will investigate the integration of data across the multiple institutional, informal, and workplace learning experiences in the student’s lifetime of learning, and whether these can be integrated into a comprehensive record of an individual’s knowledge, skills, and ability.</td>
</tr>
<tr>
<td>Healthcare SIG</td>
<td>The Healthcare SIG represents healthcare professionals and technologists, and globally unites in advancing the state of the healthcare industry through the implementation of technology solutions using blockchain technologies in general, and the umbrella of Hyperledger frameworks and toolsets in specific.</td>
</tr>
<tr>
<td>Public Sector SIG</td>
<td>Hyperledger Public Sector Special Interest Group (public-sector-SIG) is a Special Interest group focused on applying distributed ledger technology in general, and Hyperledger technologies in particular, to the public sector (e.g., government and government-related) uses and needs.</td>
</tr>
<tr>
<td>Social Impact SIG</td>
<td>The Social Impact SIG is primarily focused on serving as a platform for exchanging ideas and exploration of ways to use blockchain technology in the context of social good. The Social Impact SIG will work with the other groups and technical teams, especially in the areas of implementation. The SIG will focus on convening a broad ecosystem, leveraging the skills, capabilities and perspectives of individuals from the developer community, the social and humanitarian space, enterprises, government and non-government entities, and beyond</td>
</tr>
<tr>
<td>Supply Chain SIG</td>
<td>Hyperledger Supply Chain Special Interest Group (SC-SIG) represents a global membership of logistics and supply chain professionals united in advancing the state of the supply chain industry through the implementation of enterprise-grade technology solutions utilizing the Hyperledger greenhouse of business blockchain frameworks and tools including Hyperledger's supply chain project, Hyperledger Grid.</td>
</tr>
<tr>
<td>Telecom SIG</td>
<td>The Hyperledger Telecom Special Interest Group is focused on technical and business-level conversations about appropriate use cases for blockchain technology in the Telecom industry.</td>
</tr>
<tr>
<td>Trade Finance SIG</td>
<td>The Trade Finance SIG is focused on applying distributed ledger technology in general, and Hyperledger technologies in particular, to trade finance uses and needs.</td>
</tr>
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</table>
Governing Documents of the Hyperledger Technical Community

- Charter of the Hyperledger Project overall.
- Scope of planned projects covering core ledger functionality.
- Code of Conduct for all project workspaces.
- Project Lifecycle defines stages of projects within Hyperledger, from Proposal Incubation to Active.
- Project Incubation Exit Criteria required before a project is declared Active and production-ready.
- Release Taxonomy provides guidelines for release and pre-release versioning and tags.
- Copyright and License Policy
- Project Proposals for new projects at Hyperledger.
- Working Group Process specifies the process that working groups within Hyperledger conform to.
- Security Bug Reporting and Handling Process
- Quarterly Project Updates
- Quarterly Working Group Updates
- Antitrust Policy Notice

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David Boswell
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Nathan George
2019 Q4 Performance and Scale WG updated Mar 31, 2020 • view change
2019 Q4 Architecture WG updated Mar 31, 2020 • view change
2019 Q4 Technical Working Group China updated Mar 31, 2020 • view change
2019 Q4 Learning Materials Development Working Group updated Mar 31, 2020 • view change

Space contributors

- David Boswell (2 days ago)
- Nathan George (12 days ago)
- Troy Ronda (31 days ago)
- Hart Montgomery (32 days ago)
- Ry Jones (33 days ago)
- ...