Hyperledger Aries

Project	HYPERLEDGER ARIES
Status	GRADUATED
CII Badge	blocked URL
Description	Hyperledger Aries is your complete toolkit for decentralized identity solutions and digital trust. Issue, store and present verifiable credentials with maximum privacy preservation, and establish confidential, ongoing communication channels for rich interactions. It supports multiple protocols, credential types, ledgers and registries. It has frameworks in multiple development languages, and interoperability tools and profiles to help everything work together seamlessly.

Hyperledger Aries is your complete toolkit for decentralized identity solutions and digital trust.

- Issue, store and present verifiable credentials with maximum privacy preservation
- Establish confidential, ongoing communication channels for rich interactions
- Meet the requirements and regulations for government-level identities
- Create wallets and agents across mobile, enterprise and the cloud

Aries is futureproofed by supporting multiple protocols, credential types, ledgers and registries. It has frameworks in multiple development languages, with interoperability tools and profiles to help everything work together seamlessly.

Key Characteristics

Privacy

- Establish decentralized credential verification and decentralized connections—give the holder more control over their information, with no “phoning home”
- Support selective disclosure, so holders only have to share the minimum amount of information
- Support Zero-Knowledge Proof (ZKP), so something can be proven (e.g. over the age of majority) without revealing the information it’s based on (e.g. date of birth)

Confidential, Ongoing Connections

- Enjoy encrypted, decentralized peer-to-peer messaging (using DIDComm) by using confidential, ongoing relationships between parties
- Support more than just issuing and presenting credentials: proactively notify holders about revoked credentials, exchange messages, and much more

Ease of deployment

- Start using ready-to-use agent frameworks in Python, Rust, Go, JavaScript and others
- Build on multiple companion projects to get started quickly, such as Aries Mobile Agent React Native (Aries Bifold) for an open-standards smartphone wallet

Flexibility

- Leverage High-level APIs so you can easily adapt your solution in the future
- Support multiple credential types, including Hyperledger AnonCreds and W3C VCs

Community

- Leverage a well-established community with a wide range of active contributors, from individuals to large-scale organizations

Learning resources

For those new to the Aries community, Trust over IP and verifiable credentials, Linux Foundation provides two courses about the concepts and technology:

- For a business perspective, please find a list of helpful links here.
- For a developer perspective, please find a list of helpful links here.

Questions?

Join the Hyperledger Discord and check out one of the many Aries project channels. (Learn more about Hyperledger Discord here)

Join the Community

- Hyperledger Aries mailing list and archives
- Hyperledger Discord Chat
- Hyperledger Code of Conduct
- Hyperledger Community Calendar

Community Meetings

For call details and agendas, see: Aries Working Group

Join this call to learn about or contribute to Aries. This complements the community's asynchronous collaboration and helps us keep everyone up-to-date and moving together.Discussion items: upcoming releases, current PRs, work that will generate future PRs, architecture changes that will impact downstream teams, project standards, best practices, design, etc.

See below for a list of links to active User Group Meetings.

Repositories, Project Management, and Issue Tracking

All Aries projects use GitHub for receiving issues, receiving pull requests and tracking releases.

*Note that while the frameworks listed below are written in a specific, identified language, for the the business layer applications built on top of the frameworks can be implemented in any language.

Repository	Description	User Group Meeting
Cloud Agent Python (ACA-Py)	CODE: Framework for Aries, written in Python, for cloud-based deployment	ACA-Pug - Aries Cloud Agent-Python User Group
Framework Go	CODE: Framework for Aries, written in Go	Aries Framework Go User Group
Aries Framework JavaScript (AFJ)	CODE: Framework for Aries, written in JavaScript	Aries Framework JavaScript User Group
VCX	CODE: Framework for Aries, written in Rust	Aries vcx Rust User Group
Mobile Agent React Native (Bifold)	CODE: Mobile Aries client built with React Native	Aries Bifold User Group
Agent Test Harness	TESTING: Test execution engine and set of tests for evaluating frameworks' interoperability	
Mobile Test Harness	TESTING: As above, but for mobile	Aries Agent-Mobile Test Harness (AATH-AMTH) User Group
Interoperability Info	Website showing the current status of Aries Interoperability between frameworks and agents	
Aries (main)	Summary of key repositories	
RFCs	Important topics that are standardized across the Aries ecosystem	
Interoperability Info	Website showing the current status of Aries Interoperability between frameworks and agents	

You can also view a list of **all Aries repositories.**
You can find current status of Aries Interoperability between Aries frameworks and agents **here**.

History

- Proposed by Nathan George
- Approved by the TSC on 2019-05-02
- Active status approved by the TSC on 25 FEB 2021