

## Hyperledger Composer Overview

**Hyperledger Composer** is a set of collaboration tools for building blockchain business networks that make it simple and fast for business owners and developers to create smart contracts and blockchain applications to solve business problems. Built with JavaScript, leveraging modern tools including node.js, npm, CLI and popular editors, Composer offers business centric abstractions as well as sample apps with easy to test devops processes to create robust blockchain solutions that drive alignment across business requirements with technical development.

With Hyperledger Composer, a business person can work with a developer to:

- 1) Define the assets that are exchanged in a blockchain-based use case
- 2) Define the business rules around what transactions are possible
- 3) Define participants, identity and access controls for what roles exist and which roles can execute which types of transactions

Developers use Hyperledger Composer's modern, open toolset to:

- 1) Model reusable, core components in a business network--assets, participants, transaction logic, and access controls for the business network, which can then be shared across multiple organizations
- 2) Generate JavaScript and REST APIs based on the business network definition that can be used to interact with applications, integrate legacy systems, create skeleton applications and run analytics on the blockchain network
- 3) Begin to develop and test on web-based Composer playground without installing anything--then move to development on your laptop, test your model, and then deploy the business network to a live blockchain instance of Hyperledger Fabric or other blockchain network

Blockchain clients who adopt **Hyperledger Composer** experience the following benefits:

- Faster creation of blockchain applications, eliminating the massive effort required to build blockchain applications from scratch
- Reduced risk with well tested, efficient design that aligns understanding across business and technical analysts and creates reusable assets based on best practices developed over 400+ client engagements
- Greater flexibility as the higher-level abstractions make it far simpler to iterate, including the capability to connect them to existing applications via APIs

**Hyperledger Composer includes the following main components:**

- 1) **Business Network Archive:** Capturing the core data in a business network, including the business model, transaction logic and access controls, the Business Network Archive packages these elements up and deploys them to a runtime.

- 2) **Composer Playground:** This Web- based tool allows developers to learn Hyperledger Composer, model out their business network, test that network and deploy that network to a live instance of a blockchain network. Composer playground offers a repository of sample business networks that can provide a base for building your own business network.
- 3) **REST API support and integration capabilities:** A LoopBack connector for business networks has been developed that exposes a running network as a REST API which can easily be consumed by client applications and integrate non-blockchain applications.