



Token SDK

A standard interface to tokenize assets and re-imagine business transactions with Corda •

The ability to represent assets on a digital system and execute transactions using blockchain technology is creating new markets for previously illiquid assets and reducing risk and cost in post-trade systems. Digital asset tokens can represent any asset or agreement between parties today. These tokens boost market efficiency by enabling end-to-end solutions combining trading, settlement and custody services into one seamless offering.

A standard toolkit to create, issue and trade tokens

Built for the needs of regulated institutions, R3's Corda platform delivers settlement finality, strict privacy and the ability to use legal prose in smart contracts making it the leading permissioned blockchain for the tokenization of securities today.

The Token SDK provides financial institutions and application builders with a standard token library and a consistent developer experience to issue, list, exchange and settle digital assets on the Corda platform. Emerging digital asset exchanges and businesses looking to securitize real-world assets, are already using the Token SDK to represent debt, equity and cash instruments on Corda, as well as exploring the tokenization of other goods, commodities and services.

62% of securities market players say a permissioned network is the most appropriate for security tokens and issuing digital assets.

Security Tokens: Crypto-nite for Stock Certificates, Greenwich Associates, 2019



We are building the future exchange for digital assets, so the ability to adapt and evolve the ecosystem over time is crucial. R3's wide developer community, open-source code base and experience across a range of industries make it ideal for this purpose.

Sven Roth, Chief Digital Officer, SIX Digital Exchange

Benefits of tokens on Corda

Automate the asset lifecycle: Corda's peer-to-peer design, ability to process transactions 24/7 and maintenance of transaction information within the token, eliminates time consuming parts of the classic exchange process. Corda initiated transactions can also be settled instantly through Corda Settler, an application which enables atomic delivery versus payment. Digital assets and cash token trades can be made through blockchain or traditional payment rails, greatly improving reconciliation processes.

Unlock capital, liquidity and new financial products: Tokenization paves the way for the fractional ownership of assets, opening-up liquid and illiquid assets to a wider investor base. It also enables the creation of new financial products through the securitization of asset-backed cash flows. With a standard framework, tokens on Corda can easily flow from one exchange to another, supporting secondary trading. The ability to issue Initial Securities Offerings and Securities Token Offerings provides new ways to raise finance.



Token standards on Corda

A common language: Standard token types that can be consistently used by issuers, exchanges and investors include fungible and non-fungible assets, as well as evolvable assets that allow for ongoing updates of conditions surrounding a smart contract. Standard flows have also been delivered to issue, move, redeem and update contracts.

A standard interface: Tokens are issued through Corda via the JVM interface for a developer friendly experience, using a language that is widely adopted by proven enterprise technologies. The standard interface makes listing easy by specifying issuer, holder, amount and token types in a common way.

The R3 ecosystem: Corda-based tokens emerged in 2016, through collaboration with Bank of Canada, Payments Canada and other participants in Project Jasper. Today, HQLAX in securities lending and Tradewind Markets for gold trading are demonstrating the value of token-based businesses on Corda. Leading digital exchanges, such as SIX Digital Exchange are also adopting Corda and using Token SDK to drive the standardized representation of debt, equity and cash instruments as they create a fully integrated end-to-end trading, settlement and custody service for digital assets.

For more information on Digital Assets on Corda visit:

<https://www.r3.com/customers/digital-assets/>

To get started with the Token SDK on Corda visit:

<https://github.com/corda/token-sdk>

Why Corda?

Corda natively supports the strong identity, privacy, scalability and finality requirements of the emerging digital assets market.



Privacy

Corda's peer-to-peer transaction level architecture allows flexibility over privacy, combined with secure identity management. Only the necessary data is shared between relevant participants.



Scalability

With Corda, nodes only communicate when they are party to a transaction. A DTCC and Accenture study confirmed Corda's ability to handle the equivalent trading of the entire US equities market.



Finality

Corda transactions are final and irrevocable once confirmed. 51% attacks, such as those seen on public blockchains don't exist on Corda. Equally Corda does not have a global chain that can be split, eliminating the risk of duplicated digital assets.

About R3

R3 is an enterprise blockchain software firm working with a broad ecosystem of more than 300 participants across multiple industries from both the private and public sectors to develop on Corda, its open-source blockchain platform, and Corda Enterprise, a commercial version of Corda for enterprise usage. Learn more at [r3.com](https://www.r3.com).



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