

Quartz DevKit



Background

The global economy is set to increasingly draw on the power of business ecosystems. However, with disruptive technologies such as Blockchain, the industry faces skill set challenges globally. Developers of blockchain applications need to be aware of the data structure for the ledger, the validations involved, the functions to be implemented, in addition to the having programming expertise on the specific language (GoLang/Kotlin/Solidity etc). A shortage of these skill sets, leads to issues of scale and can become a limiting factor for organizations that are looking to implement blockchain technology in their business landscape. The key challenges include:

- Ever expanding range of blockchain platforms, combined with a continuous flux of programming languages
- Shortage of skilled resources who understand the complexities of each underlying platform
- Lack of know-how in integrating blockchain into the existing IT landscape
- Security and scalability concerns

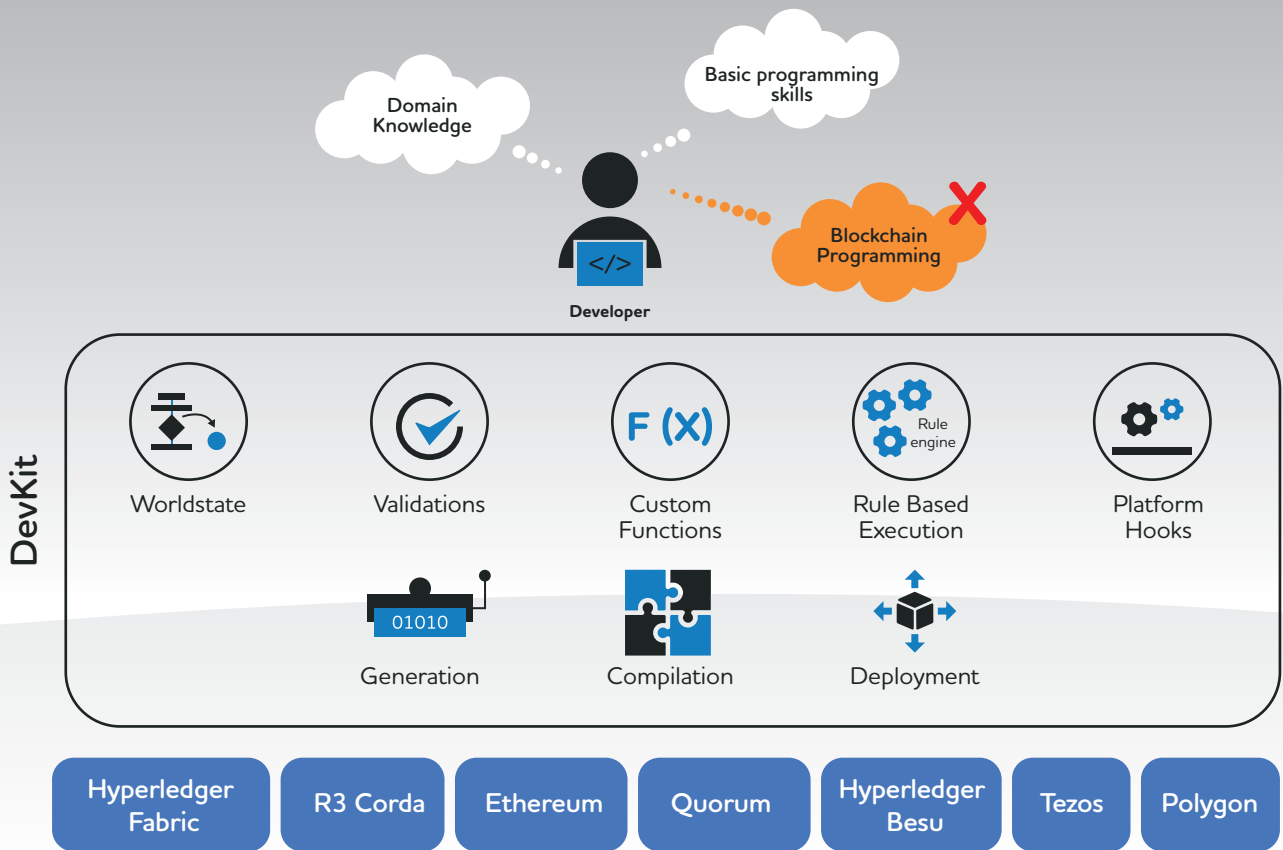
Solution

To address these challenges, we have invested in Quartz DevKit, a low-code toolkit to generate smart contracts for different blockchain technologies using an Integrated Development Environment (IDE). This tool enables developers with limited or no blockchain platform specific know-how to code business logic for the Blockchain since it allows programming using a Java based approach with the toolkit managing the code generation and deployment of the code based on the protocols of the underlying platform. It supports smart contract development, testing, and deployment on multiple platforms including Hyperledger Fabric, Hyperledger Besu, R3 Corda, Tezos, and Ethereum.

Quartz DevKit is designed to enhance the efficiency of business and application focused IT teams. It ensures standardization of development practices and is designed to incorporate security and performance considerations. The solution is industry agnostic and designed to help organizations significantly compress the overall time to market in launching blockchain solutions across various domains.

Quartz DevKit can be used by:

- IT Divisions of Enterprises to focus on developing and deploying blockchain applications in an agile manner and improve time to market.
- Smart Contract Developers to develop, test, and deploy smart contracts on one or many blockchain platforms without worrying about the complexity of each underlying platform.
- Students with proficiency in programming languages such as Java, to easily code and gain blockchain expertise.



Benefits

- Faster turnaround time from development to deployment - in a matter of weeks, and not months
- Quickly prototype, build, test, and deploy blockchain solutions, thereby enhancing organizational productivity
- Simple, easy to use, and intuitive interface, allowing shorter learning curve for new blockchain developers.

Quartz Advantage

- Agile Development Methodology and Metadata driven Standardized Development Practices
- Superior code quality, built-in software quality assurance and vulnerability checks.
- Quicker migration and upgrades with respect to the underlying platform.
- Multi-platform support

Quartz - The Smart Ledgers

Quartz comprises an Intelligent smart contract development toolkit, Integration solutions and 'Designed for DLT' business solutions that help organizations leverage the power of DLT in their businesses. Built on the core principles of **Coexistence, Integration and Interoperability**, Quartz enables existing systems to coexist and integrate with blockchain platforms and other messaging networks.

To know more about Quartz, please write to us at tcs.quartz@tcs.com, or visit our website <https://www.tcs.com/quartz>

About Tata Consultancy Services Ltd. (TCS)

Tata Consultancy Services is a purpose-led transformation partner to many of the world's largest businesses. For more than 50 years, it has been collaborating with clients and communities to build a greater future through innovation and collective knowledge. TCS offers an integrated portfolio of cognitive powered business, technology, and engineering services and solutions. The company's 469,000 consultants in 46 countries help empower individuals, enterprises, and societies to build on belief.

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