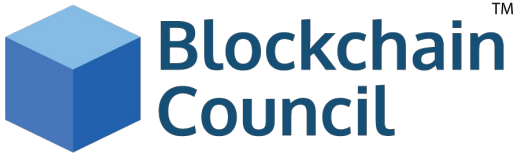

Certified Blockchain Architect

Tools required for Blockchain

Programming Language

Different platforms use, different programming languages. Some allow development using a specific programming language and others are dependent on programming languages. For example:

Platform	Dependency	Development
Ethereum	NodeJS	Solidity
Hyperledger	Node JS, Python, Go	Java, Node JS, Go
R3 Corda	Java, IntelliJ	Kotlin, Java

Blockchain Testnet

If you are blockchain developer, whether you want to create a new dapp on Blockchain or another chain, you should use the related testnet or a system that works as a substitute for the real blockchain. Some of the famous testnet available for development are:

- Bitcoin - Bitcoin Testnet
- Ethereum - Rinkeby, Ganache, TestRPC
- Ripple - XRP Ledger Dev

Cloud Services

Apart from development, you also require a hosting environment. It’s not possible for everyone to have multiple computers to run multiple nodes and create a Blockchain network.

You can use Cloud virtual machines to do the same and spin off nodes as per your requirement.

Some cloud service providers, also offers Blockchain as a Service, where you don’t need to handle the infrastructure. You can focus on your application whereas cloud service provider will manage your infrastructure.

Blockchain APIs

API’s are provided as webcalls or callbacks that can help your application easily integrate with the Blockchain Platform. There are many third party services present too which are providing APIs. Most of the APIs are available with the platform itself. APIs help you to interact with the application from you client. Some API examples are:

- Bitcoin: JSON RPC calls
- Ethereum: Web3JS, JSON RPC calls
- Hyperledger: Loopback, Swagger

Compiler

When building a blockchain project, you require compilers to compile the code and run as you desire. These compilers helps you to convert the open source code for blockchains to executable forms. You can also use blockchain daemons which are pre-compiled sources and help you run the chain without compiling on your machine.

Most of the daemons available are not updated regularly, so it’s better to take the code and compile it by yourself.

Compilers could be like GCC compiler that compiles the actual code for Bitcoin or Ethereum or they could be like Ethereum Virtual machine, which runs on the blockchain and compiles the smart contract.

Development Frameworks

Development frameworks allows you to easily develop and deploy dapps, or a serverless html5 application that uses decentralized technologies. For example:

- Truffle: It allows you to develop smart contract over Ethereum and integrate smart contracts with front-end. It also allows you test and deploy smart contracts on top of blockchain.
- Hyperledger Composer CLI: This allows you to develop chaincode/BNA applications, you can run identity services and open APIs for people to connect with your chaincode

Wallets/Accounts

Any type of interaction over Blockchain happens through a Blockchain account.

Without a Blockchain account you won't be able to interact with the Blockchain services.

Blockchain accounts are normally clubbed with the Blockchain Command Line Interface and you can directly use to create and perform transactions.

Apart from accounts, you can also use wallets to test your applications and use it with your Blockchain Projects. Example: MetaMask is used to test out Ethereum Smart Contracts.

THANK YOU!

Any questions?

You can mail us at

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