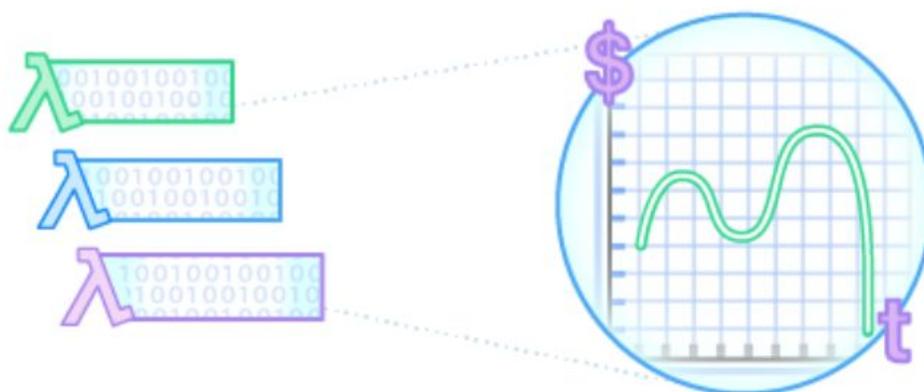


Overview

Manifold's serverless blockchain platform provides a high-speed, planetary scale blockchain to empower real-world business applications. It provides a secure, extensible, and future-proof platform for blockchain-based innovations by combining powerful AWS services, our proprietary ledger technology, and automated synchronization to multiple public blockchains. Utilization of our architecture results in low operational costs, far less than using a public blockchain directly.

Description

Our blockchain platform is exposed as a set of REST interfaces that can be securely accessed from any internet connected source to submit data for codification into the blockchain. Data verification and processing is encapsulated into separate, discrete Lambdas for stateless execution. Data is then written to AWS' fully managed autoscaling database DynamoDB for persistence.



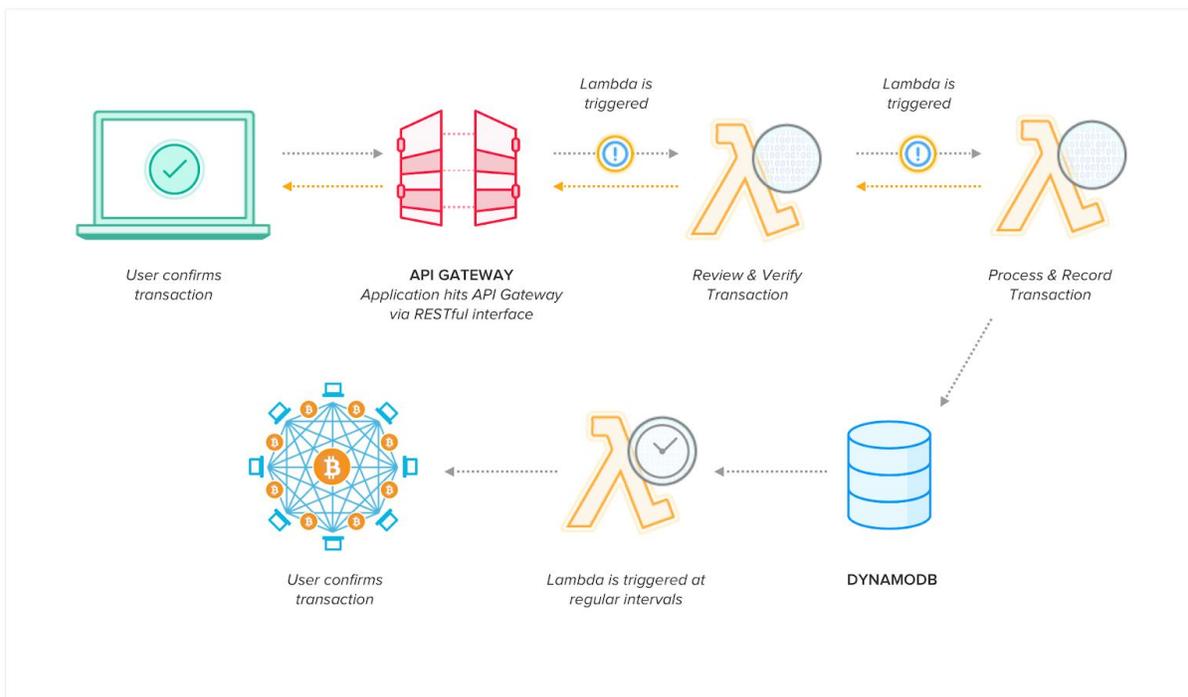
*Lambdas run code only when triggered,
using only the compute resources needed*

Compute resources are minimized

The stateless nature of AWS Lambdas means that PII, KYC, or other sensitive information can be shared with the Lambdas to allow for a determination about the veracity of a transaction without the possibility of that information being retained in the cloud. This reduces the perceived risks associated with cloud migrations while simultaneously maintaining compliance for companies working with sensitive datasets.

As AWS Lambdas are stateless, they can not be used to execute malicious code or other than intended commands. These Lambdas function as trusted gatekeepers to the secure blockchain data and are the only entities given append-only write access to the datastore, ensuring confidence in the integrity of the intermediate chains between verification periods. Furthermore, the use of a Lambda system architecture allows easy chaining of additional functionality, as needed.

Technical Architecture



Transactions are generated on an external system (IoT device, mobile app, back-office server) and submitted to a RESTful endpoint hosted by an AWS API gateway. When a transaction is received, it triggers a series of Lambda executions that first review and validate the transaction before processing and recording it to the blockchain.

All data is then protected by the selected public blockchain(s) by periodically recording the most recent interval's hash to them. This approach ensures data immutability and enables easy independent verification of that data.

Bottom Line

As blockchain projects transition from lab and proof-of-concept environments into the harsh and unforgiving real world, they will need a future-proof platform capable of delivering the scalability and throughput needed to achieve their vision. Manifold's serverless blockchain platform offers just that.