

# TRIAM NETWORK



ARM HOLDINGS LTD

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# Introduction

”A financial revolution will be triggered by the birth of Blockchain!”

When people began to say this, most people did not attempt to listen to it. Several years have passed since then, and only some people have believed that the revolution will come, and have pushed forward with development and research of blockchain. It can be said that we are also one of those developers.

Today, many people around the world are excited about the excellence of blockchain technology and the birth of further cryptocurrency.

Do you know the origin of the birth of cryptocurrency?

『To secure consistency by equally informing all people the information, rights and interests that only some persons in authority can know.』

That was the beginning of the birth of cryptocurrency and the first step towards the cryptocurrency revolution.

However, as Bitcoin became too famous, it brought big interest into Bitcoin and businesses connected with Bitcoin once again. Therefore, now there are experts in Bitcoin, and the focus is more on fighting for those big interests.

We, the TRIAM development team, believe that the most important mission of the developer is to aim for what the original cryptocurrency sought to be, and we are seeking to achieve the correct digital financial literacy.

Right to know, right to obtain, right to use, these are rights we must have equally.

That's why we found value in using blockchain technology.

One of the greatest features of the TRIAM system is the ability to complete various services using blockchain in the TRIAM system.

It can be used not only for sending and receiving between currencies, but also as a means of payment for various services.

It is also possible to issue tokens easily on the TRIAM system to companies or individuals that using blockchain technology.

In the future, many kinds of cryptocurrencies will be born, and service competition will increase.

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# TRIAM NETWORK

## ARCHITECTURE

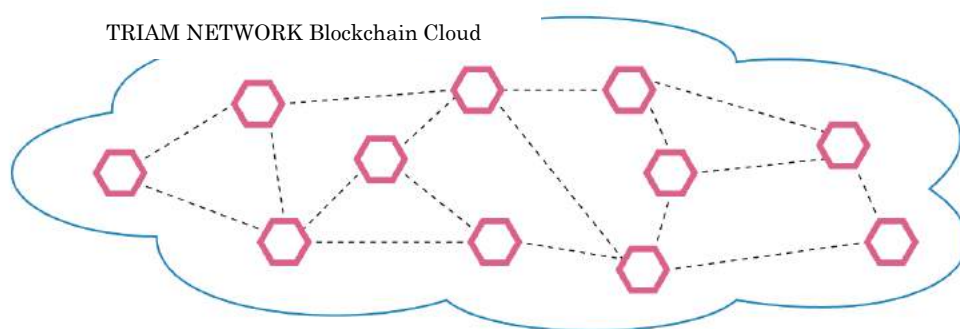
### OVERVIEW

TRIAM Network was designed and built with the aim of providing a payment platform where anyone can easily use and profit from. TRIAM Network facilitates all daily transactions, from buying a cup of coffee, paying electricity bill, buying a plane ticket, to a large business problem, like running a bank or issue one's own money.

## TRIAM NETWORK CORE

### Infrastructure

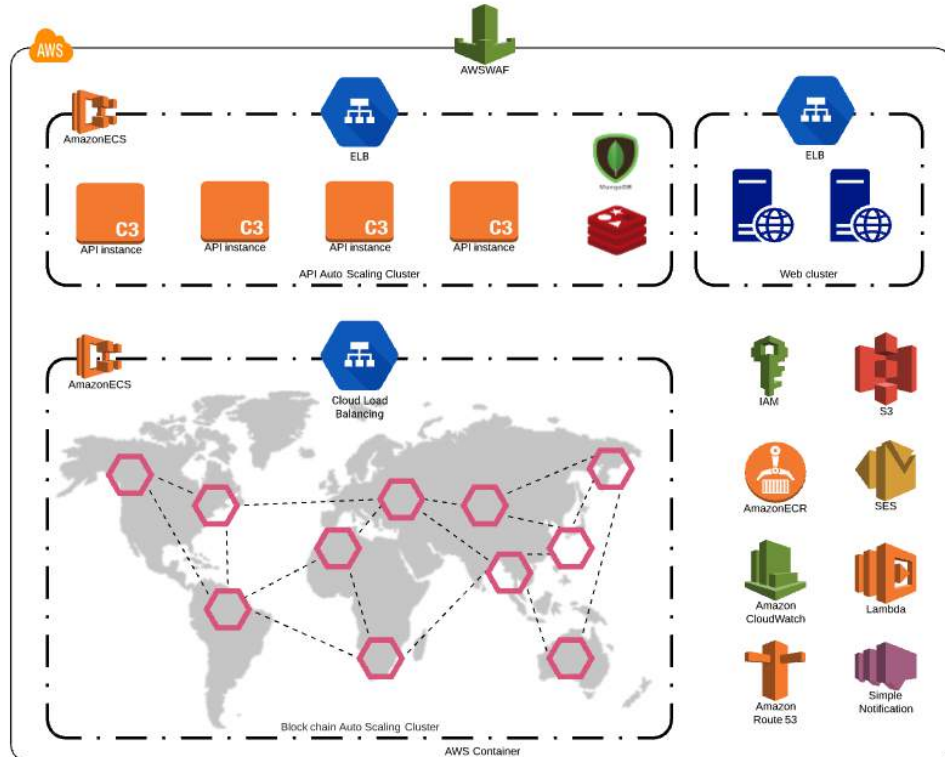
TRIAM Network offers a robust, secure, low cost, immediate check blockchain. The TRIAM network uses an environmentally-friendly TRIAM Consensus Algorithm, which is computationally and electrically efficient.



TRIAM Network blockchain is deployed and operating globally. While designing TRIAM Network System, our hard-working development team tried and succeeded in preserving all blockchain principals, including Decentralization, Openness and Global consensus.



We chose Amazon Web Services (AWS) as our cloud computing provider, and integrated AWS's most advanced and up-to-date technologies into our blockchain solution. Therefore, your transaction data as well as personal information receive ultimate protection.



## Blockchain consensus algorithm

A major obstacle in distributed computing and multi agent systems is the consensus problem.

With bit coins, everyone has the authority to do consensus. However, this method requires a lot of time and power.

This problem underscores the difficulties realized when the distributed process and the system attempts to reach agreement on some data values required during computation.

Therefore, some actors participating in the distributed process and the system may fail. It will be an untrusted network. The consensus algorithm is a mechanism used to achieve consensus on a single data value and improves the reliability of the network that may contain unreliable participants.

The consensus of TRIAM aims at a truly reasonable and prompt consensus. Nodes installed in the world are managed by designated people. But everyone can check this.

It is very dangerous for unknown people to manage and approve it.

One of the key features of block chain technology is the dispersed nature. Since all network participants (nodes) can own copies of the block chain, there is no single point of failure. There is no mining in TRIAM where people without knowledge and malignant people can participate.

In exchange for solving puzzles, the miners are a little stupid. This is known as block reward.

People engaged in mining are not friends. Some of them act to gain a profit, but the only important thing is a breakpoint.

What is important to consensus is accuracy, trust and speed.

It goes without saying that TRIAM's approval speed is fast and safe.

# API AND PAYMENT PLATFORM

## API

TRIAM Network allows developers and third-party users to interact with the system by providing an OAuth2-compliant API. This promotes and encourages public efforts to diversify the TRIAM Network eco-system.

OAuth is the industry-standard protocol for authorization, providing to clients a Secure Delegated Access by using access token. OAuth 2.0 is currently the newest version of OAuth specification, which is more secure in protocol design and implementation flow.



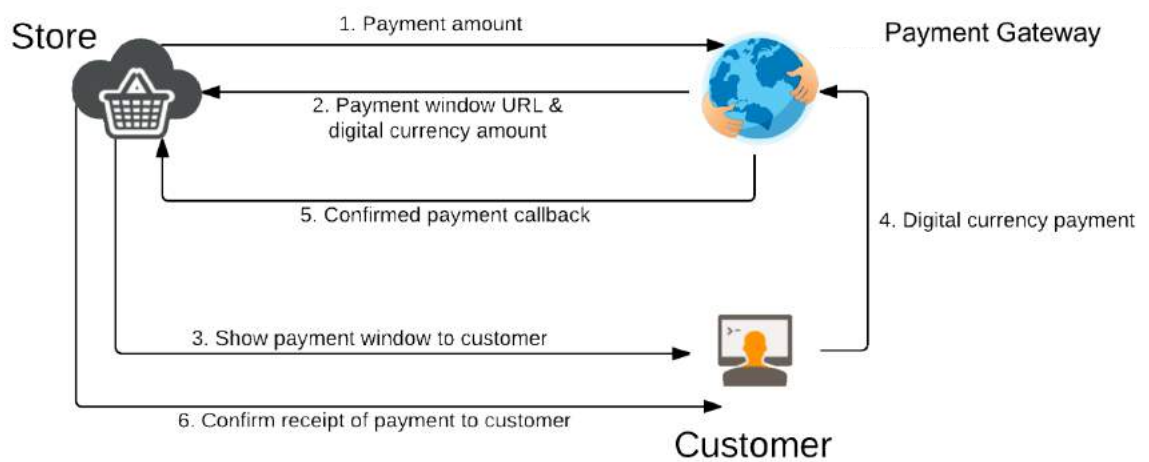
All TRIAM Network's payment APIs are protected by Two Factor Authentication (TFA), which means that possessing one's password (through eavesdropping, keylogging, brute-forcing ...) is not enough to steal anything from the account.

Knowing that TFA is essentially important for securing the account, TRIAM Network prompts users to setup TFA upon the very first use. TRIAM Network recommends Google Authenticator for TFA generator.



## Payment Gateway

TRIAM Network supports simple payment transactions by providing an old-style callback payment gateway.





# SUMMARY

## RIA

Name	RIA
Issuance Amount	32,850,000,000
Algorithms	POC (TRIAM Consensus Protocol)

## WHAT IS TRIAM?

It is a system built by using blockchain technology, and the TRIAM platform is a Completely Independent Type platform. Some crypto tokens are operated on systems that are based on a key currency. However, it often receives major influence from the key currencies, and it has many aspects to depend on the reliability.

In the TRIAM platform, it is possible to issue cryptocurrency RIA coin and own crypto tokens, and also possible to expand one's own services using blockchain for individuals and corporate services.

## TRIAM adopts POC.

In the approval work by POC, there is no need to consume large electricity like mining work by POW, and the approval will be completed within a few seconds, so very high-speed transactions are possible. Some people say that the POC algorithm is centralized type. However, in POW, there is a risk of becoming centralized by the appearance of more than 51% of powerful persons, and in POS, it has a mechanism where large asset holders can generate large profit. From these points, it is not clear which algorithm is correct.

Most applications communicate with TRIAM network. For the status of all transactions, it performs the difficult work of verifying and agreeing on other instances of the core.

TRIAM network is a global connection of the TRIAM Core that is managed by various people and organizations. It can provide high reliability and safety, because the network is decentralized.

## ASSETS

TRIAM distributed network can be used to track, hold, and transfer any type of asset.

Asset type: e.g., RIA, any other cryptocurrency

Issuer: the account that created the asset

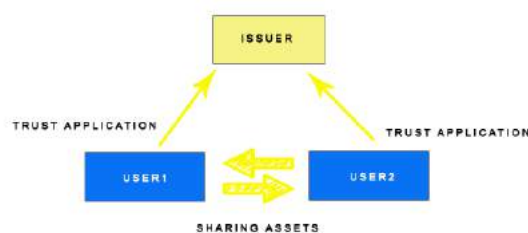
## TRUSTLINES

Keeping assets in RIA actually holds trust from specific issuers. The issuer has agreed to trade the corresponding assets (RIA's precious metals foreign currency, etc.) on the TRIAM network.

When holding an asset, it is necessary for the issuer to trust so that the creditors are appropriately redeemed. Because RIA users do not want to trust

only issuers, accounts must explicitly trust issuing accounts before holding issuer credits.

To trust the issuing account, create a trust line. Letter of credit is the entry remaining in the RIA ledger. They keep track of the limit on which your account trusts the issue account and the amount of credit from the issue account currently held by your account.



## ISSUING ASSETS

Any account can issue assets on TRIAM network. Entities that issue assets are called issuer. Issuer can be run by individuals, small businesses, local communities, nonprofits, organizations, etc. Any type of financial institution—a bank, a payment processor—can be an issuer.

### Issuing Assets

One of RIA's most powerful features is the ability to trade any kind of asset, fiat currency, bitcoins, special coupons, ICO tokens or just about anything you like.

This works in RIA because an asset is really just a credit from a particular account. When you trade US dollars on TRIAM network, you don't actually trade US dollars—you trade US dollars credited from a particular account.

Often, that account will be a bank, but if your neighbor had a banana plant, they might issue banana assets that you could trade with other people.

### Issuing a New Asset Type

To issue a new type of asset, all you need to do is choose a code. It can be any combination of up to 12 letters or numbers, but you should use the appropriate ISO 4217 code (e.g. USD for US dollars) or ISIN for national currencies or securities. Once you've chosen a code, you can begin paying people

using that asset code. You don't need to do anything to declare your asset on the network.

To issue a new type of asset, simply select the code.

You can combine up to 12 alphanumeric characters, but you need to use the appropriate ISO 4217 code (US dollar is US dollars etc.) or ISIN for national currency and securities.

Once you select a code, you can begin paying to users using that asset code. There is no need to do anything to declare assets on the network.

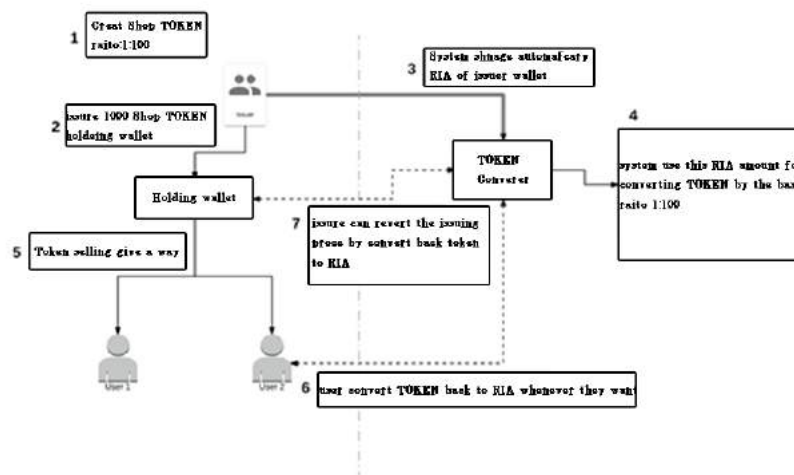
But you can not receive your assets until others trust your assets.

Accounts can use the trust change operation to create declarations that trust trust lines or specific assets. The trust line can also be limited to a specific amount. If your neighbors of apple cultivation have only a few plants, you may not want to trust about more than 200 kinds of apple.

Once you have selected an asset code and someone else has created a trust line for your asset, you can use the asset to initiate a payment operation.

## Token Converter

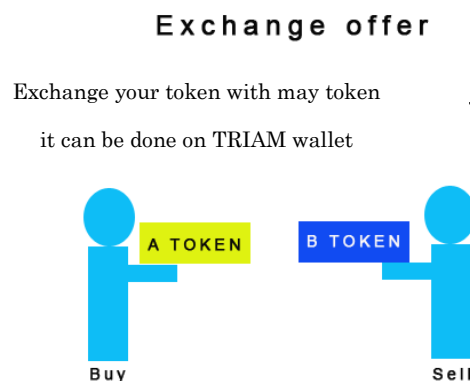
Token Converter is a system to convert an issued asset (token) into the key currency RIA. Only the issuer has the right to convert the issued asset into the key currency on the TRIAM platform. Someone that has created a trustline for the asset cannot use the token converter to trade issued assets to the key currency RIA.



# Exchange Offers

In addition to supporting the issuing and movement of assets, TRIAM network also acts as a decentralized distributed exchange of any type of asset that people have added to the network. Its ledger stores both balances held by user accounts and offers that user accounts make to buy or sell assets.

An account can make offers to buy or sell assets using the Manage Offer operation. In order to make an offer, the account must hold the asset it wants to sell. Similarly, the account must trust the issuer of the asset it's trying to buy.



When an account makes an offer, the offer is checked against the existing orderbook for that asset pair. If the offer crosses an existing offer, it is filled at the price of the existing offer. Let's say that you make an offer to buy 10 RIA for 2 BTC. If an offer already exists to sell 10 RIA for 2 BTC, your offer will take that offer—you'll be 2 BTC poorer but 10 RIA richer.

If the offer doesn't cross an existing offer, the offer is saved in the orderbook until it is either taken by another offer, taken by a payment, canceled by the account that created the offer, or invalidated because the account making the offer no longer has the asset for sale.

Offers in RIA behave like limit orders in traditional markets.

For offers placed at the same price, the older offer is filled before the newer one.

## Ledger

A ledger contains the list of all the accounts and balances, all the orders in the distributed exchange, and any other data that persists.

## **Transactions**

Transactions are commands that modify the ledger state. Among other things, transactions are used to send payments, enter orders into the distributed exchange, change settings on accounts, and authorize another account to hold your currency. If you think of the ledger as a database, then transactions are SQL commands.

### **Source account**

This is the account that originates the transaction. The transaction must be signed by this account, and the transaction fee must be paid by this account.

The sequence number of this transaction is based off this account.

### **Fee**

Each transaction sets a fee that is paid by the source account. If this fee is below the network minimum the transaction will fail. The more operations in the transaction, the greater the required fee.

### **Sequence number**

Each transaction has a sequence number. Transactions follow a strict ordering rule when it comes to processing of transactions per account. For the transaction to be valid, the sequence number must match the one stored in the source account entry when the transaction is applied. After the transaction is applied, the source account's stored sequence number is incremented by 1.

Note that if several transactions with the same source account make it into the same transaction set, they are ordered and applied according to sequence number. For example, if 3 transactions are submitted and the account is at sequence number 5, the transactions must have sequence numbers 6, 7, and 8.

### **List of operations**

Transactions contain an arbitrary list of operations inside them. Typically there is just one operation, but it's possible to have multiple. Operations are executed in order as one ACID transaction, meaning that either all operations are applied or none are. If any operation fails, the whole transaction fails. If operations are on accounts other than the source account, then they require signatures of the accounts in question

## List of signatures

Up to 20 signatures can be attached to a transaction. See Multi-sig for more information. A transaction is considered invalid if it includes signatures that aren't needed to authorize the transaction—superfluous signatures aren't allowed.

## INFORMATION

This white paper will explain the general project of TRIAM.

As explained in this white paper, TRIAM is designed to be used for all services provided by the TRIAM platform.

1. The TRIAM platform's RIAs and tokens are not intended to constitute security in any jurisdiction. This white paper is not intended to request investment and is not related to the provision of securities in any jurisdiction.
2. All purchases of TRIAM platform RIAs and tokens are final and can not be refunded for any reason. Individuals, businesses, and other organizations need to carefully consider the risks, costs, and benefits of acquiring RIAs and tokens on the TRIAM platform.
3. When using the TRIAM platform, all problems must be handled by the user himself at the discretion and judgment