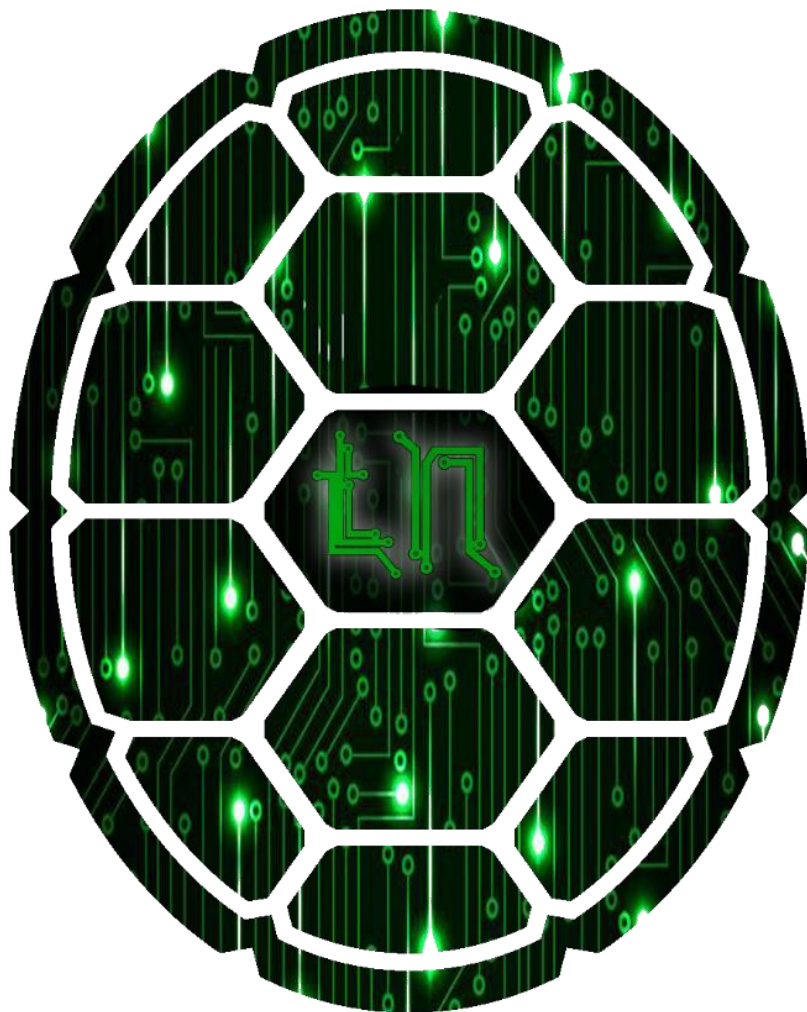


TurtleNetwork WhitePaper

2.1



Document Control

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1. Abstract

The name Turtle is chosen because of the spiritual meanings of the Turtle. Some of the strongpoints include the ability to stay grounded, even in moments of disturbances and chaos. The ability to pace itself, find and execute purpose through determination and persistence. Most notably the strength to understand and endure against all odds. These are strong ingredients to build a trusted, innovative, and best-of-breed blockchain.

2. Introduction

History of the TurtleNetwork Brand

The humble beginnings of the Turtle started with the Founder, Bram Nagtegals, a twenty-something skilled coder. Bram initially managed a node on the Waves Platform called '*BlackTurtleNode*' then created the '*TurtleNode (TN) token*' on Waves Platform. Determination led to the creation of the '*TurtleNodeBot*' notification service. A successful crowdfund was then held early 2018 to build value around TurtleNode services. Foresight and the need for building knowledge, experience & value-added services, led to the creation of the '*Turtle Network*' mid April 2018. Advisors were introduced and as services expanded, re-branding to BlackTurtle occurred and alignment of service offerings completed, hence an updated WhitePaper 2.0.

WhitePaper 2.1 introduces a re-brand from ***BlackTurtle to TurtleNetwork*** in April 2019, as detailed below;

TurtleNetwork = Overall brand (can reference by TurtleNetwork or TurtleNetwork.eu)
Details;

- Network: Turtle Network or aka TNetwork (shortname used in conversations etc).
- Exchange: TN Decentralized Exchange or aka TN DEX (shortname used in conversations etc)
- Token: TurtleNetwork (TN) on Turtle Network & the same Waves Platform.
- Service: BlackTurtleNode
- Service: TurtleNodeBot or @TurtleNodeBot
- Service: TNTippingBot or @TNTippingBot

History of \$TN Token

Token was originally created on the Waves platform and called TurtleNode (TN), Waves Platform code was forked, and the Turtle Network was created using TurtleNetwork (TN) as the underlying asset on the Turtle Network and Turtle DEX.

As of the TurtleNetwork re-brand, a new token created on Waves platform called TurtleNetwork (TN). TurtleNode (TN) on Waves platform will be swapped in good time to TurtleNetwork (TN), allowing for a uniform token across both networks with no change in maximum supply of 100m.

Vision

- Our vision is to provide trusted, innovative & best-of-breed blockchain solutions through service excellence.

Brand Value Statements

- We strive for an open collaborative community with good governance.
- We offer innovative products & solutions that are beneficial to all \$TN hodlers.
- We provide an open, trusted, secure & distributed Blockchain network for everyone.
- We encourage open development and provide opportunity through technology.

3. Crowdfund

The crowdfunding was held on the Waves Platform in 2018 and known-as the TurtleNode crowdfund ([TurtleNode WhitePaper Link](#)), with the following tiered rates;

- Tier 1: 0.00020 Waves/TN for the initial 5 million TN
- Tier 2: 0.00021 Waves/TN for the following 10 million TN
- Tier 3: 0.00022 Waves/TN for the following 15 million TN
- Tier 4: 0.00024 Waves/TN for the following 20 million TN
- Tier 5: 0.00026 Waves/TN for the following 25 million TN
- Tier 6: 0.00028 Waves/TN for the following 15 million TN

The crowdfunding started on January 1, 2018 and ended on March 16, 2018.

A total of 21 900 WAVES were collected @ +- \$4.70 per WAVES.

Crowdfund Distribution: 90% Fund raising, 2% for the founder, 8% Community Appreciation funds.

Evidence of Crowdfund;

First ICO sell on Waves Platform: wavesexplorer.com/blocks/820645

Last ICO sell on Waves Platform: wavesexplorer.com/blocks/920443

Full ICO Wallet transactions: [3PKPd4HDTM9qFmDYQ4Fn7vrjnPR63aFWdej](https://wavesexplorer.com/wallet/3PKPd4HDTM9qFmDYQ4Fn7vrjnPR63aFWdej)

4. TurtleNetwork Brand

TurtleNetwork Advisors involvement in the TurtleNetwork Brand:

Advisors are defined as: supporting an open, trustworthy, fair & decentralized manner. The 'Advisors' are a trusted group of talented actively involved individuals that represent the brand 'TurtleNetwork'. The 'Advisors' support open collaborative discussions & decisions, drive initiatives & improvements within. Never allow, participate or encourage hate speech or disrespectful behaviour.

The Advisors will operate across the whole Brand 'TurtleNetwork', from across the globe and with a vested interest in the success of the Brand "TurtleNetwork' and all services within.

4.1 Turtle Network

"Turtle Network - Open, Trusted, Secure, Distributed Blockchain Network for Everyone"
"Turtle Decentralized Exchange, aka Turtle DEX, is an exchange accessible from the wallet, allowing every token created on Turtle Network or accessible via Gateways to trade in a decentralized manner"

The Turtle Network is a particle network of the Waves Platform with many inherited elements and benefits. They include a wallet, decentralized exchange (DEX), gateways, token creation, leasing and non-turing complete smart contracts. Most significantly the Turtle Network provides important advantages with respect to community support, speed of development, flexibility and assistance/guidance from Advisors.

Turtle Network Value Proposition;

- Network is decentralized
- Decentralized Exchange, orders execute peer-to-peer (p2p).
- Fast & Secure: With the adoption of the Waves-NG protocol, the Turtle Network has transaction speeds of over 100 transactions per second (tps), Mass Transfers closer to 400 transactions per second (tps). Transactions and trades occur within seconds, all verified within 1 minute.
- Network Security: Turtle Network secures its network through mining with a stake leasing protocol called LPOS (Leased Proof of Stake). LPOS is an energy-efficient type of mining which means that minimal electricity consumption is required to secure the blockchain.
- Network governance: Node owners vote to activate new features on the network, voting is weighted on the amount of TN leased to the node pool. The LPOS (Fair POS)

protocol allows nodes with more TN leased to the pool, a bigger opportunity to mine or validate blocks on the network.

- Secure Wallet & Funds: Strong security, 15 SEED words secure wallet with password.
- Passive Rewards: Any amount of TurtleNetwork (\$TN) can be leased to a Pool. This makes it possible for smaller stakeholders to combine forces and help secure the network while earning block rewards in \$TN, stake any amount of \$TN, funds remain in the wallet.
- Easy Token Creation: Tokens can be created quickly & easily within the decentralized wallet. The newly minted token is also immediately tradeable on the Turtle Decentralized Exchange (DEX).
- Asset Ticker Assignment: Basic security checks & KYC required for Tickers on the Turtle Network, to minimize scams or bad actors.
- Based on Waves Platform technology, Particle Network with many inherited elements and benefits.
- Advisors contributing towards open collaborative discussions & decisions, drive initiatives & improvements within the brand 'TurtleNetwork'.
- Good governance: Allow the community to be actively involved in binding decisions through blockchain voting (secure, transparent & fair).
- Open development environment, open sourced code.
- Gateways: numerous supported Gateways.
- ICO Due Diligence (IDD): service framework for ICO risk management.
- Striving towards total decentralization of the Network with no reliance on central entities.

Turtle Network Technical Specifications;

- API: Web Interface available to the Turtle Full Node API using Swagger.
- Algorithm: Leased Proof of Stake (LPOS)
- Mining: Turtle Network secures its network with a stake leasing protocol called LPOS, every node with a balance greater than 1,000 TurtleNetwork (\$TN) is capable of forging blocks.
- Block Time: 1 minute.
- Exchange: Accessible via Wallet, Centralized matcher, Peer to peer order matching settled on the blockchain.
- Network Fees;
 - Transfer: 0.02TN
 - Create-alias: 10TN
 - Exchange 0.04TN
 - Issue Token: 1000TN
 - Reissue: 100TN
 - Burn 0.02TN

- Lease 0.02TN
- Lease cancel: 0.02TN
- Set-script: 0.02TN
- Mass-transfer: 0.01TN
- Data: 0.02TN
- Versioned-transfer: 0.02TN
- Node Reward Fees: Minimum Generating Balance of 1000 TN' required, forger gets 40% & next forger gets 60% of the rewards.

4.2 TurtleNetwork (TN) Coin

Token name: TurtleNetwork

Symbol: TN

Decimals: 8 on Turtle Network & on Waves platform

Total Supply: Fixed total amount of 100,000,000 (100 million)

Re-issuable: no

Asset ID: [bPWkA3MNYer1TuDchWgdpqJZhGhfPXj7dJdr3qiW2kD on Waves Platform](#)

Issued by: 3PKPd4HDTM9qFmDYQ4Fn7vrjnPR63aFWdej (BlackTurtle)

Platform: Created on the Waves Platform with the name TurtleNetwork (TN), base token on the Turtle Network with the name TurtleNetwork (TN).

Token Utility: \$TN is the base token for the Turtle Network Blockchain. \$TN is required in order to operate a node. \$TN is also required for all fees on the platform, such as token creation, alias creation, trading and transfer fees.

TurtleNetwork Token details: blackturtle.eu/turtlenetwork-token-tn

[OLD] TurtleNode Token details: blackturtle.eu/turtlenode-token-tn

- [OLD] Asset ID: [HxQSdHu1X4ZVxmJs232M6KfZi78FseeWaEXJczY6UxJ3 on Waves Platform](#)

4.3 BlackTurtleNode

BlackTurtleNode was founded in October of 2017 as a node on the Wavesplatform.

BlackTurtleNode assists in securing the Waves Network with its stake leasing pool and 99% of block rewards are distributed once per week to lessors of the node.

BlackTurtleNode's mission is to provide technical support as well as develop innovative tools, which are useful for the community.

4.4 TurtleNodeBot

TurtleNodeBot is a notification service for the Turtle Network & Waves Platform, on Telegram. Standard functions include showing trades, transactions and balances. Premium functions require 10K \$TN and allow for setting price notifications for exchanges, access to faucet claims, outgoing and cancel transaction notifications. More information can be found here: blackturtle.eu/turtlenodebot

4.5 TNTippingBot

TNTippingBot is a tipping service for the Turtle Network platform, on Telegram. Tip users with any Turtle Network asset, including Gateway assets, within a Telegram group. Sending tokens is simple and easy, simply tip by username using an easy command. Once an admin activates the bot within a telegram group, any telegram user who has a username, automatically gets a Turtle Network wallet and address created. Users can send and receive Turtle Network tokens in seconds, for a fee of .02 TN.

Bot activation;

- Telegram group admin inserts @TNTippingBot into the group.
- Telegram group admin gives the bot admin rights to delete messages only, then the bot will clean messages posted.

More information can be found here: blackturtle.eu/tntippingbot

5. TurtleNetwork Services

5.1 Gateway Services

The Turtle Network utilizes Gateways for external tokens/coins to transfer to and from the network in a seamless and decentralized manner.

A token is created on the Turtle Network with a 1:1 backing of the actual token (e.g. BTC-tBTC). A custom Gateway is created with easy instructions to deposit or withdraw tokens from the network (e.g. <https://bitcoingw.blackturtle.eu>). Utilizing the Wallet, the token can instantly be traded on the Turtle DEX with any other pair on the Turtle Network.

The gateways developed and operational, as of October 2018, are BTC, LTC, WAVES, DOGE, SYS, WGR, BCH and DASH. New Gateway development requirements, more information can be found on the website, blackturtle.eu/gateway-services.

5.2 ICO Due Diligence (IDD)

The ICO Due Diligence (IDD) is a service developed by TurtleNetwork that offers a thorough Due Diligence of the registered Initial Coin Offering or ICO. The IDD Framework was introduced as a mechanism to reduce risk for ICO investors on the Turtle Network. The process however is not to be used as investment advice or as a solicitation of any offer to buy or sell any token, coin or related service.

The IDD Framework provides a consolidated IDD Assessment Report & Risk Rating of the ICO, combining one self-assessment by ICO holder and two assessments by Advisors. After the concluded IDD Assessment Report, a public survey is setup to provide an unbiased view and analysis from the public of the ICO, with consolidated results immediately available and viewable.

After the IDD process, an Airdrop of tokens from the analysed project, will be distributed to \$TN holders on the Turtle Network. A percentage of the generated tokens will be airdropped to all Turtle Network supporters and Advisors.

More information can be found here: blackturtle.eu/ico-due-diligence-register-interest

6. Official Links

Explorer: <https://explorer.blackturtle.eu>

Statistics: <http://statistics.turtlenetwork.eu>

Wallet (NEW): <https://client.turtlenetwork.eu>

Wallet: <https://turtlenetwork.blackturtle.eu>

Github: <https://github.com/BlackTurtle123/TurtleNetwork>

Node Api: <https://privatenode.blackturtle.eu/api-docs/index.html>

Turtle Network Data Feed API: <https://marketdata.blackturtle.eu>

Roadmap: <https://www.blackturtle.eu/roadmap>

7. Social Media

Email: support@blackturtle.eu

Web (NEW): <https://www.turtlenetwork.eu>

Web: <https://www.blackturtle.eu>

Telegram: <https://t.me/TurtleNetwork>

Twitter: <https://twitter.com/TurtleNetworkTN>

Facebook: <https://www.facebook.com/TurtleNetworkTN>

Reddit: <https://www.reddit.com/r/BlackTurtle>

Bitcointalk: <https://bitcointalk.org/index.php?topic=3264667>

Github: <https://github.com/BlackTurtle123/TurtleNetwork>

YouTube: <https://www.youtube.com/channel/UCzbSukzGRKxpNov6yp4275w>

Instagram: <https://www.instagram.com/turtlenetworktn>