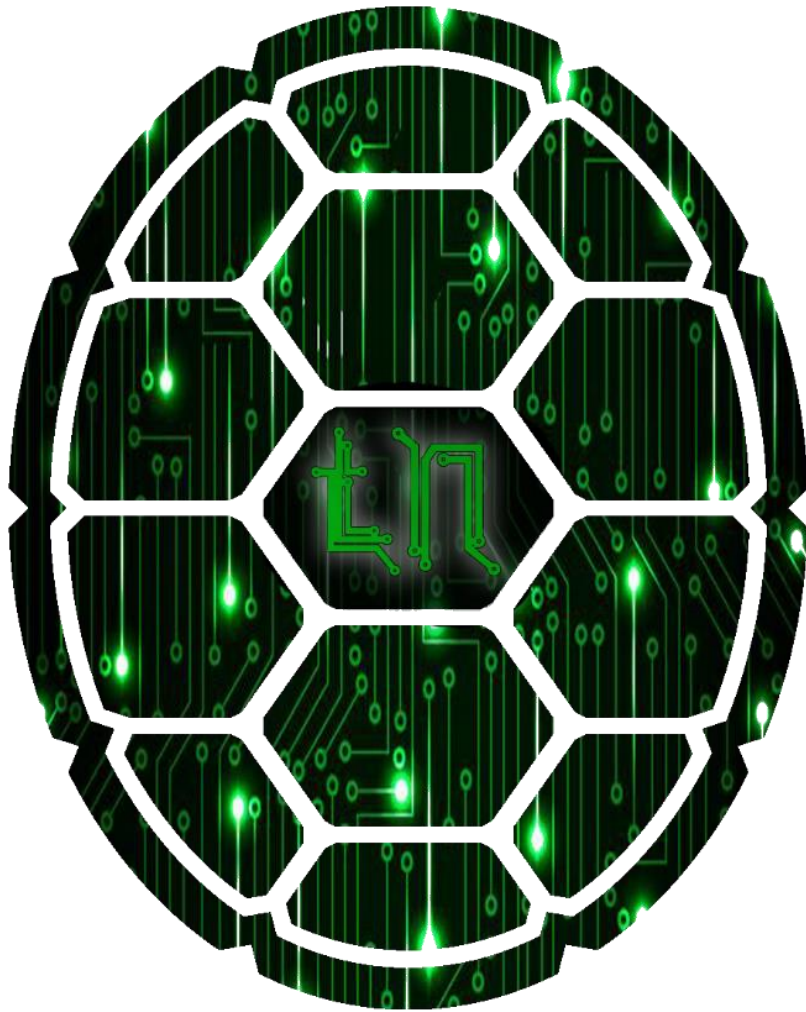


TurtleNetwork WhitePaper

2.3



Document Control

Document Information

Details	Information
<i>Document ID</i>	TurtleNetwork WhitePaper
<i>Document Owner</i>	TurtleNetwork.eu
<i>Document Editor</i>	TurtleNetwork Core Team
<i>Issue Date</i>	01/10/2018
<i>Last Saved Date</i>	10/09/2020
<i>File Name</i>	TurtleNetwork WhitePaper v2.*

Document History

Details	Information
<i>2.0 (Draft 1.0)</i>	<i>01/10/2018 - start of WP 2.0 Draft</i>
<i>2.0 (Draft 1.2-1.5)</i>	<i>26/10/2018 - 29/10/2018</i>
<i>2.0(Draft 1.6)</i>	<i>30/10/2018 - Public review</i>
<i>2.0</i>	<i>05/11/2018 - Final released 2.0 version</i>
<i>2.1</i>	<i>04/04/2019 - re-branded from BlackTurtle to TurtleNetwork</i>
<i>2.1</i>	<i>14/04/2019 - updated links</i>
<i>2.2</i>	<i>20/09/2019 - updated links, included Founder details</i>
<i>2.3</i>	<i>10/09/2020 - updated links & info, removed section 3 & 5.2</i>

Table of Contents

- 1. *Abstract* 4
- 2. *Introduction* 4
- 3. *TurtleNetwork Brand* 5
 - 3.1 Turtle Network..... 5
 - 3.2 TurtleNetwork (TN) Coin..... 7
 - 3.3 **BlackTurtleNode** 8
 - 3.4 **TurtleNodeBot** 8
 - 3.5 **TNTippingBot** 8
- 4. *TurtleNetwork Services* 9
 - 4.1 Gateway Services 9
- 5. *Official Links*..... 9
- 6. *Social Media*..... 9

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. Foresight and the need for building knowledge, experience & value-added services, led to the creation of the 'Turtle Network' mid-April 2018. The Core Team 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.x introduces a re-brand from **BlackTurtle to TurtleNetwork** in April 2019, as detailed below;

TurtleNetwork = Overall brand

- Network: Turtle Network.
- Exchange: Turtle Network DEX or aka TN DEX.
- Coin: TurtleNetwork (TN)
- Service: BlackTurtleNode
- Service: TurtleNodeBot or @TurtleNodeBot
- Service: TNTippingBot or @TNTippingBot

History of \$TN Coin

The token was originally created on the Waves platform and called TurtleNode (TN). Waves Platform code was utilized to create the Turtle Network blockchain, utilizing the TurtleNetwork (TN) coin, as the underlying asset of the Turtle Network.

As of the TurtleNetwork re-brand, a new token created on Waves platform called TurtleNetwork (TN) and swapped from TurtleNode (TN), allowing for a uniform coin 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. TurtleNetwork Brand

Founder & BlackTurtle BVBA business owner:



Primary Role: Founder & BVBA owner

Secondary Role: Architect & Lead Developer

Tertiary Role: IT Technical blockchain & infrastructure specialist

TurtleNetwork Core team involvement in the TurtleNetwork Brand:

The Core Team are defined as: supporting an open, trustworthy, fair & decentralized manner. The 'Core Team' are a trusted group of talented actively involved individuals that represent the brand 'TurtleNetwork'. The 'Core Team' support open collaborative discussions & decisions, drive initiatives & improvements within. Never allow, participate, nor encourage hate speech or disrespectful behaviour.

The Core Team 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.

3.1 Turtle Network

"Turtle Network - Community Based Blockchain Network"

"Turtle Network 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 smart contracts. Most significantly the Turtle Network provides important advantages with respect to community support, speed of development, flexibility and assistance/guidance from the Core Team.

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 Network 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.
- Core Team 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.
- 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: 1000TN
 - Burn 0.02TN
 - Lease 0.02TN
 - Lease cancel: 0.02TN
 - Set-script: 1TN (asset and account script)
 - Mass-transfer: $0.02 + (\text{tx.amount} + 1 * 0.02) / 2$, so 3 recipient is 0.06 TN, 4 = 0.08 TN
 - SponsorFee: 10TN
 - Data: Data: 0.021 TN minimal fee (depending on data size this becomes bigger)
- Node Reward Fees: Minimum Generating Balance of 1000 TN' required, forger gets 40% & next forger gets 60% of the rewards.

3.2 TurtleNetwork (TN) Coin

Token name: TurtleNetwork

Symbol: TN

Decimals: 8

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: Underlying token on the Turtle Network with the name TurtleNetwork (TN). Initially created on the Waves Platform.

Token Utility: \$TN is the base token for the Turtle Network Blockchain. \$TN is required 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 (TN) Qualified Token on Waves Platform on 31 July 2019 by Bettertokens.

3.3 BlackTurtleNode

BlackTurtleNode was founded in October of 2017 as a node on the Waves Platform. BlackTurtleNode assists in securing the Waves Network with its stake leasing pool. 90% of block rewards are distributed once per day to lessors of the node including extra rewards in \$TN.

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

3.4 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: turtlenetwork.eu/turtlenodebot.

3.5 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: turtlenetwork.eu/tntippingbot.

4. TurtleNetwork Services

4.1 Gateway Services

The Turtle Network utilizes Gateways for external token's/coins to bi-directionally transfer between blockchain networks.

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://tngw.turtlenetwork.eu>). Utilizing the Wallet, the token can instantly be traded on the Turtle DEX with any other pair on the Turtle Network.

The gateways in production and operational are listed on <https://explorer.turtlenetwork.eu/gateways>. New Gateway development requirements, more information can be found on the website, turtlenetwork.eu/gateway-services.

5. Official Links

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

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

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

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

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

Roadmap: <https://www.turtlenetwork.eu/insight>

Documentation: <https://documentation.turtlenetwork.eu>

6. Social Media

Email: support@turtlenetwork.eu

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

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

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

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

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

Bitcointalk: <https://bitcointalk.org/index.php?topic=5138663>

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

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

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

LinkedIn: <https://www.linkedin.com/company/blackturtle-bvba>