

nest

Game Theoretic Oracle NEST Protocol

Last update: June 6, 2022



Open quotation pairs

Anybody can start any quotation for any pairs of tokens

- No centralized authority to decide which token can be listed



Open quotation

Anybody can provide quotation information to the system

- No centralized authority to decide the nodes for data providing
- Everyone can participate as a quotation maker
 - MINERs: those providing quotations to receive \$NEST
 - VERIFIERs: those bringing deviated quotation price to the market price to earn revenue

NEST creates a unique quotation mechanism



Quotation with mining

- Quotation MINERs win reward of \$NEST through mining
- Take ETH/USDT as one example
 - MINER needs x ETH and $100 x$ USDT for quotation $1 \text{ ETH} = 100 \text{ USDT}$
 - MINER earns \$NEST according to its number of quotations



Game theoretic quotation

- Wrong quotation generates arbitrage for VERIFIERs
- Take the same ETH/USDT example
 - If market price is $1 \text{ ETH} = 50 \text{ USDT}$
 - VERIFIER buys ETH from external market and sells to the above MINER with each ETH earning 50 USDT

NEST introduces effective attack-resistance solutions



Quotation chain

The VERIFIERs must offer new price, making continues quotations

- VERIFIER 1 trades with original MINER for price p_0 and offers price p_1
- VERIFIER 2 trades with VERIFIER 1 for price p_1 and offers price p_2
- Within quotation interval quotation chain reads: $p_0 - p_1 - p_2 \dots$

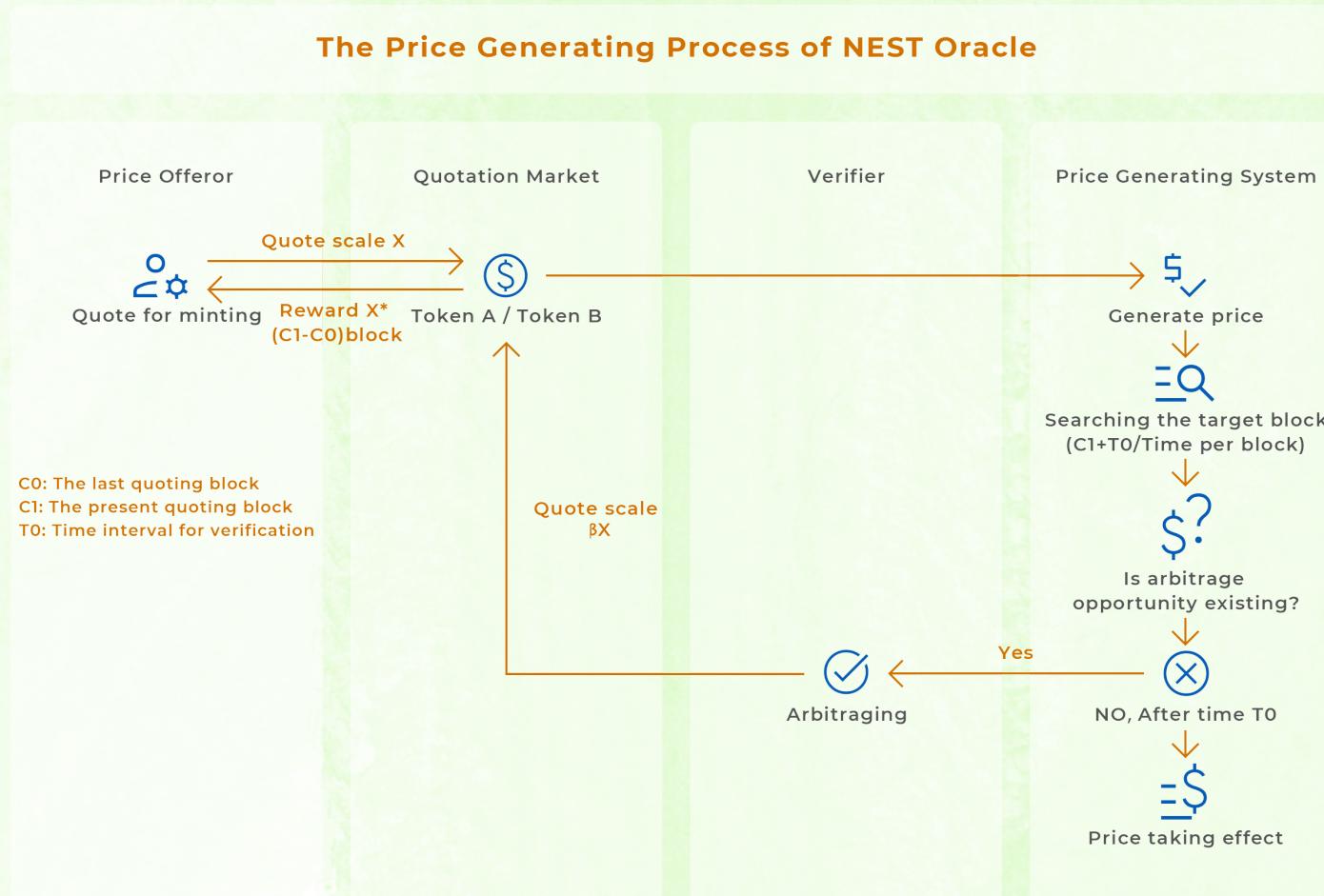


Resistance coefficient

The β coefficient prevents continues attacks by increasing the cost for attackers

- VERIFIER needs $\beta (>1)$ time of asset to offer new price
- Original MINER needs x_0 assets to offer price p_0
- VERIFIER 1 needs βx_0 while VERIFIER 2 needs $\beta^2 x_0 \dots$
- The 10th attack needs 1024 x_0 and 59049 x_0 asset if $\beta = 2$ and 3 respectively

Graphic demonstration of how NEST works



NEST fulfills truly decentralized quotation



Non-stop quotation

- Continues mining rewards guarantee continues quotations
- No need for commission fee



Verified quotation

- No need for reliable nodes, i.e. the information providers
- Game theoretic verification guarantees the true price on-chain



Permissionless quotation

- No censorship for the token pairs
- Any pairs are welcomed

You can call NEST quotation easily



Free of charge for calling the quotation

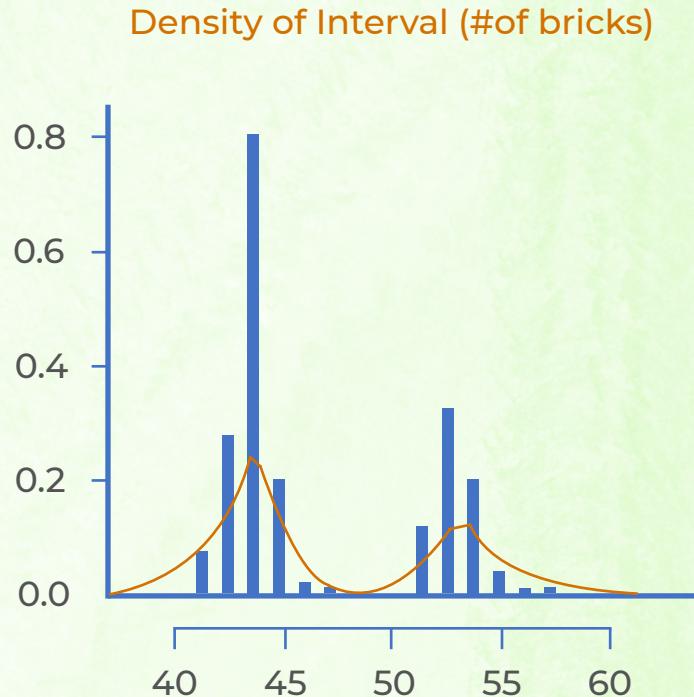
- Game theory based mechanism for pricing assets
- No need for calling fee to support the economic model



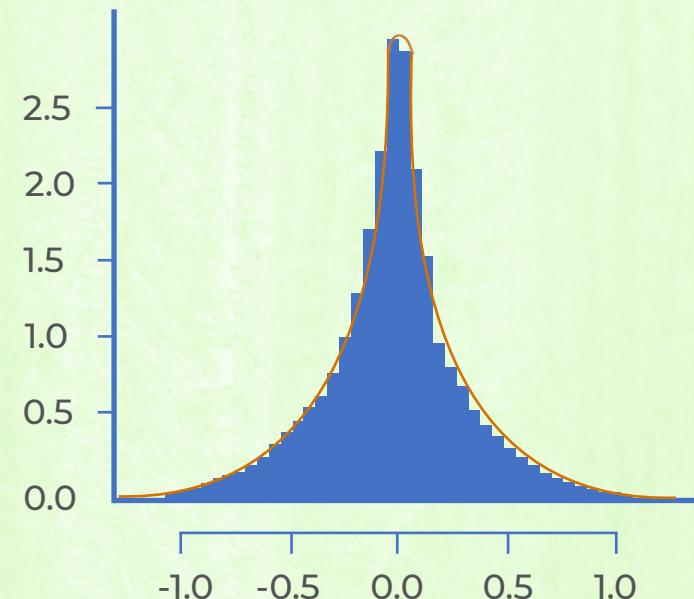
Easiness for cross-chain

- NEST supports almost all of EVM compatible chains
- Including but not limited to ETH, BSC, POLYGON, and KCC

NEST guarantees frequent and precise quotations



Density of Deviation (%)



- Interval, number of bricks (1 brick costs 3 seconds) between two quotation price
- Deviation, percentage difference between NEST quotation and CEX (e.g. Binance) price for the same token
- Distribution for the ETH-USDT pair (27328 quotations from April 10 to May 24, 2022)



Rank according to Defi Llama

- Total value secured (TVS): \$172.22m (including Staking)
- Ranked 10th (according to TVS) among oracle section
- Protocols secured: 3



Key statistics

- Number of chains: 5
- Cumulative quotations: 438,921
- Number of integrated APP: 10
- Cumulative calling: 50,756
- Community size: 700K

(Data collected on June 06, 2022)

No best, only better: step-by-step improvement

2018.12 NEST Protocol v1.0

Lending protocol goes live, aiming to provide a platform for peer-to-peer over-collateralized lending on the chain without permission, KYC, or trust.

2020.07 NEST Protocol v3.0

On the basis of version 2.0, all ERC20 Token/ETH price oracle opening permissions have been added and opened call interface of all oracle tracks

2021.04 NEST Protocol v3.6

Based on version 3.5, voting governance module was added. Gas fee is greatly decreased due to the restructure of the contract

2021.12 NEST Protocol v4.3

V4.3 allows each channel for multiple quotation pairs.

2019.12 NEST Protocol v2.0

Pricing oracle goes live, using miners' bilateral asset quotes, and gaming with market validators to generate on-chain price data

2021.01 NEST Protocol v3.5

On the basis of version 3.0, the dual-track quotation of the native assets of each oracle tracks in the NEST ecosystem was added.

2021.11 NEST Protocol v4.1

Initially launch this version on BSC, which allows anyone to start a quotation channel. This version is substantially deployed on Polygon and KCC

2021.05 NEST Protocol v4.4

Update version 4.3 to all chains and adjust several parameters for miners



Contract address

<https://docs.nestprotocol.org/#price-contract>



Information of channel and quotation pairs

<https://channel.nestprotocol.org/>



How to call

<https://docs.nestprotocol.org/#request-pricefor-contract>

nest

We cannot wait to
hear from you



You can email us

[Email: hello@nestprotocol.org](mailto:hello@nestprotocol.org)



You are welcome to visit
our communities

 (Please click)

