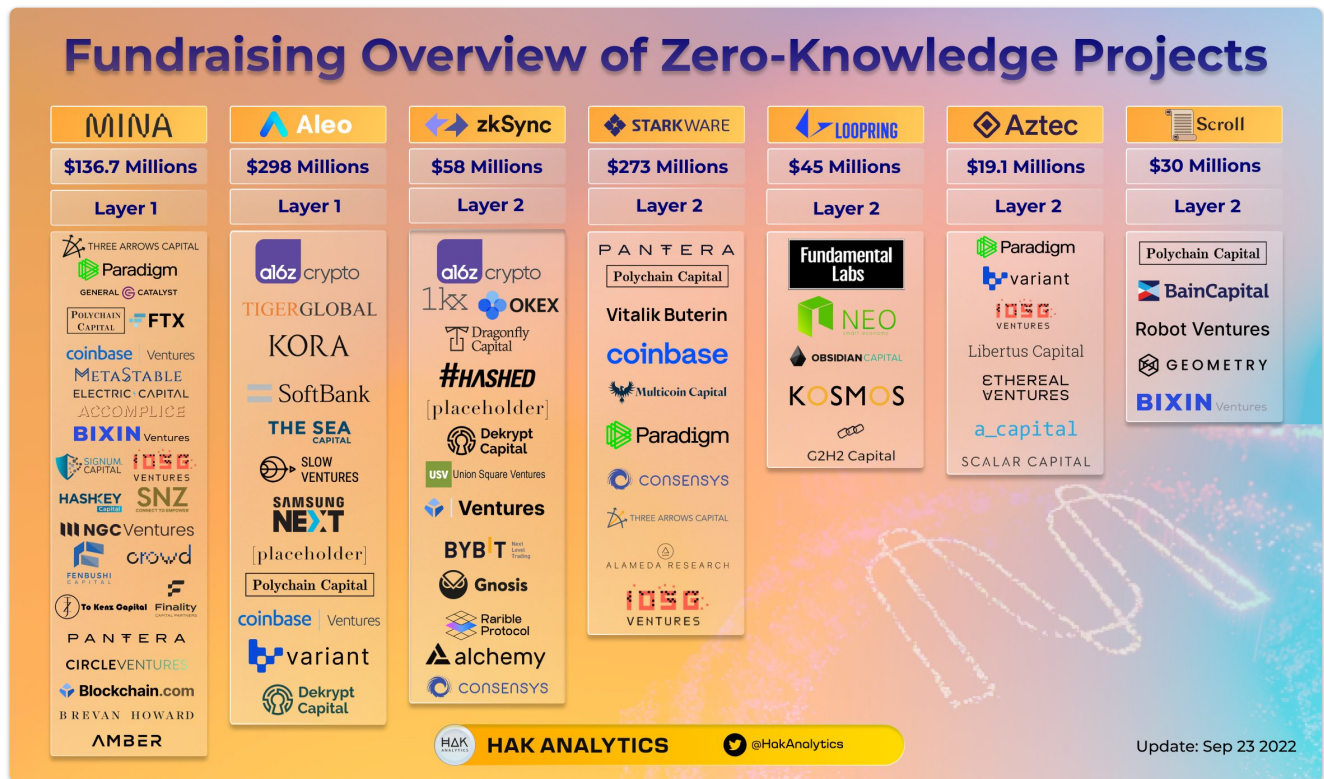


Lesson 2 - Starknet overview



Grants program

[Meetups](#) [Mixers](#) [Apply](#) [GRANTS PROGRAM](#)

Grants Program

Welcome to the StarkCon Grant Program. ZKX and StarkWare have partnered to offer a grant of \$50,000 to support early-stage ideas across the world and kickstart developers' journey into exploring Cairo, the native language for StarkNet.

[REGISTER](#)

\$50,000
Grant Pool

See [program](#)

Starknet Bug Bounties

Up to \$1,000,000 - See [Immunefi](#)

Starknet

"StarkNet is a permissionless decentralized ZK-Rollup. It operates as an L2 network over Ethereum, enabling any dApp to achieve unlimited scale for its computation – without compromising Ethereum's composability and security."

Starknet Components

1. **Prover**: A separate process (either an online service or internal to the node) that receives the output of Cairo programs and generates STARK proofs to be verified. The Prover submits the STARK proof to the verifier that registers the fact on L1.
2. **StarkNet OS**: Updates the L2 state of the system based on transactions that are received as inputs. Effectively facilitates the execution of the (Cairo-based) StarkNet contracts. The OS is Cairo-based and is essentially the program whose output is proven and verified using the STARK-proof system. Specific system operations and functionality available for StarkNet contracts are available as calls made to the OS.
3. **StarkNet State**: The state is composed of contracts' code and contracts' storage.
4. **StarkNet L1 Core Contract**: This L1 contract defines the state of the system by storing the commitment to the L2 state. The contract also stores the StarkNet OS program hash – effectively defining the version of StarkNet the network is running. The committed state on the L1 core contract acts as provides as the consensus mechanism of StarkNet, i.e., the system is secured by the L1 Ethereum consensus. In addition to maintaining the state, the StarkNet L1 Core Contract is the main hub of operations for StarkNet on L1.

Specifically:

- It stores the list of allowed verifiers (contracts) that can verify state update transactions
 - It facilitates L1 ↔ L2 interaction
-

Starknet Network

Block Explorers

StarkScan

The StarkScan interface features a top navigation bar with the 'STARKSCAN' logo, a search bar, and dropdown menus for 'Blockchain', 'Code', 'Data', and 'Developer'. It also includes a toggle for 'Mainnet' and 'Testnet'. The main content area displays the title 'חוקר סטארקנט יקר, ברוך הבא' (Dear Starknet Explorer, Welcome) in Hebrew. Below this, a 'TPS' widget shows a value of 0.19. The central section contains six data cards: 'Blocks' (6,580), 'Transactions' (774,796), 'Contracts' (335,361), 'Events' (1,214,832), 'Messages' (76,781), and 'Classes' (179). Each card includes a 'View all' link. Social media icons for Twitter, GitHub, and Discord are located in the top right corner.

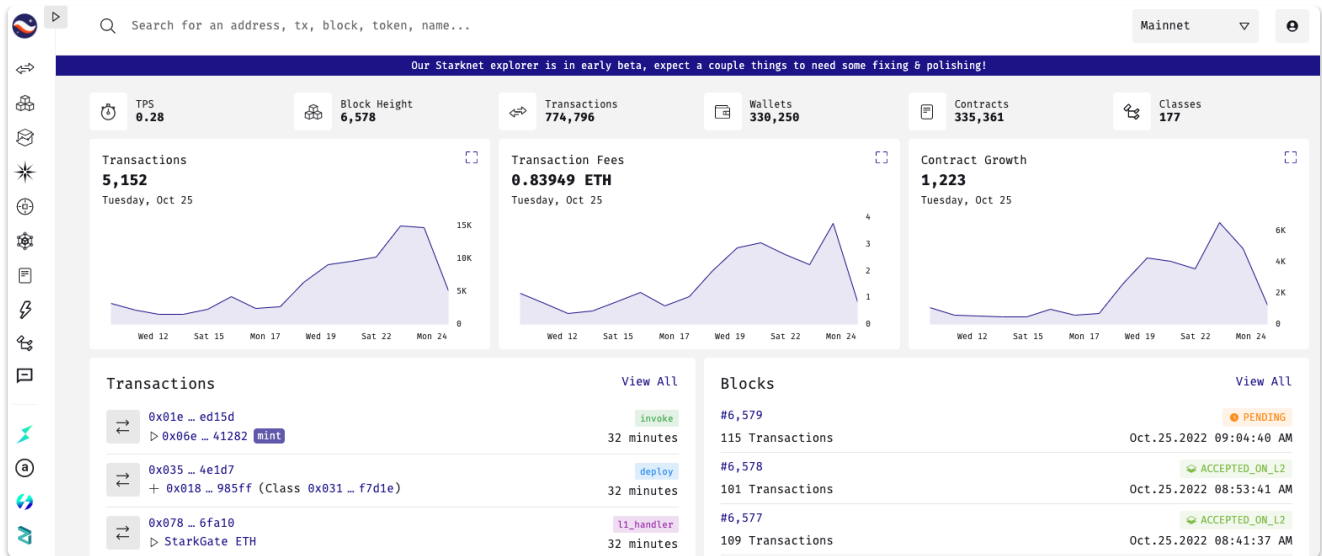
Metric	Value
Blocks	6,580
Transactions	774,796
Contracts	335,361
Events	1,214,832
Messages	76,781
Classes	179

Voyager

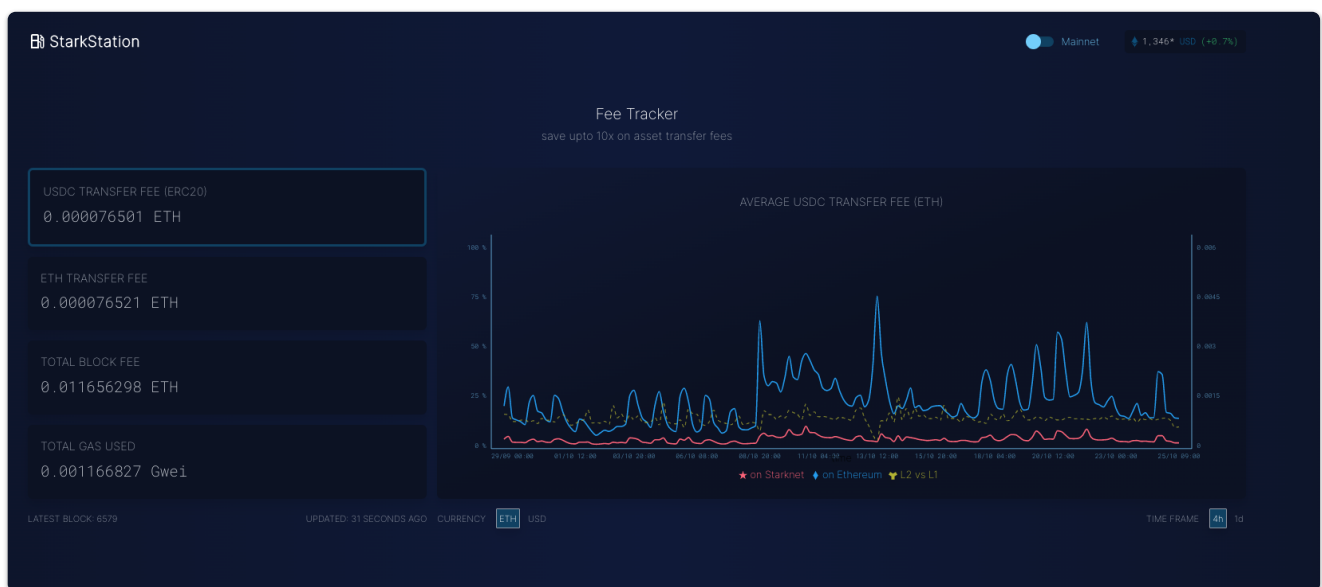
The Voyager interface has a dark theme with a top navigation bar containing links for 'Blocks', 'Transactions', 'Contracts', and 'More'. A search bar is positioned below the navigation bar. The main area features the 'VOYAGER STARKNET BLOCK EXPLORER' logo. At the bottom, a summary table displays key network statistics.

Metric	Value
TOTAL CONTRACTS	335,362
TOTAL TRANSACTIONS	774,796
TOTAL BLOCKS	6,580
CURRENT TPS	0.017

ViewBlock



StarkStation



StarkStation gives information of Fees, Block creation time etc.

Projects on Starknet

For an overview see [this article](#)

Areas include : Wallets / DeFi / Games / NFT / Tools / Security



<https://www.starknet-ecosystem.com/>


Most active projects

StarkNet Dapp Daily Data ,2022-10-23 22h ago

Dapp Name	Launch Date	All Users	24h Active Users	24h New Users	24h Interactions
NEW 0x63a4b3b0122cd...	2022-09-21	1,065	48	11	79
NEW 0x59df550c89bebe...	2022-09-16	470	12	8	18
NEW 0x7c666546bad63...	2022-10-08	8	7	7	12
1 MySwap	2022-08-01	12,110	595	445	1,122
2 MintSquare	2022-07-25	11,540	520	432	1,036
3 Aspect	2022-07-28	10,061	400	336	746
4 10KSwap	2022-09-19	5,613	977	822	1,951
5 Orbiter	2022-06-23	5,025	183	145	356
6 Gol2	2022-09-15	1,069	76	68	235
7 AlmanacNFT	2022-08-16	245	7	6	16

DeFi Projects on Starknet

Yagi Finance



The StarkNet Yield Aggregator

Grow your Ethereum assets cheaply on the most sophisticated Layer 2

Deposit

Learn more

Join 1000+ others on Discord

Apply to become a contributor

New

Build new vaults using Cairo, the StarkNet native smart contract programming language

Join us →

Projected APY
4.2%

Your position
0 USDC of Vault TVL 108.346426 USDC

Learn about Risks

Trade ETH to get USDC on JediSwap

Available balance: 0 USDC
Max deposit: 340282366920938463463374607431768.211 USDC

Max withdraw: 0 USDC

Deposit Amount
0.0

Max

Withdrawal Amount
0.0

Deposit

Withdraw

Nexus Staking
Stakes LORDS to receive trading fees

Projected APY

Your position
1158.8861261266477654 LORDS of Vault TVL 55723.236573895813170137 LORDS

Learn about Risks

Trade ETH to get LORDS on JediSwap

Available balance: 99000 LORDS
Max deposit: 340282366920938463463.375 LORDS

Max withdraw: 1158.8861261266477654 LORDS

Deposit Amount
0.0

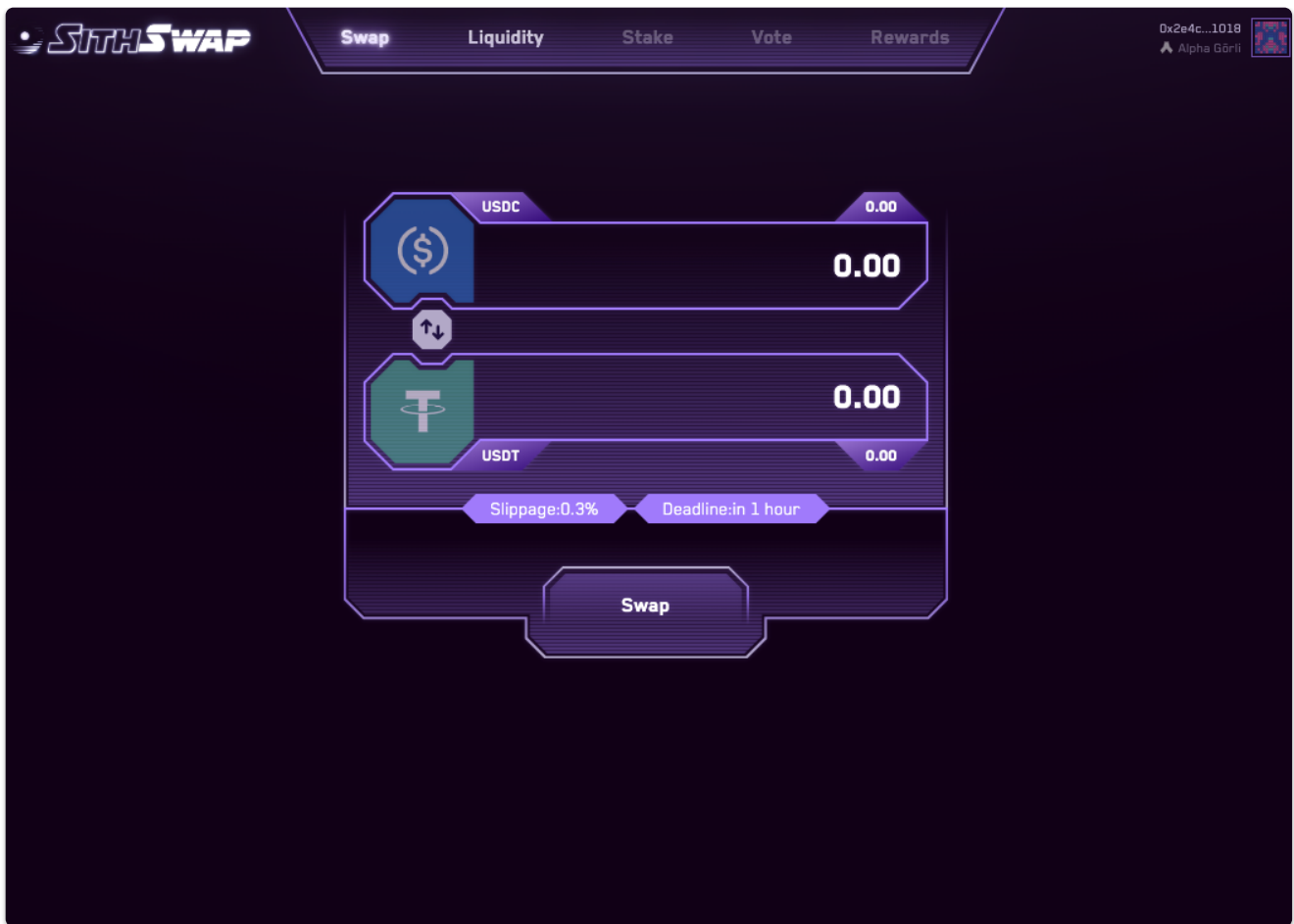
Max

Withdrawal Amount
0.0

Deposit

Withdraw

Sith Swap



10kSwap

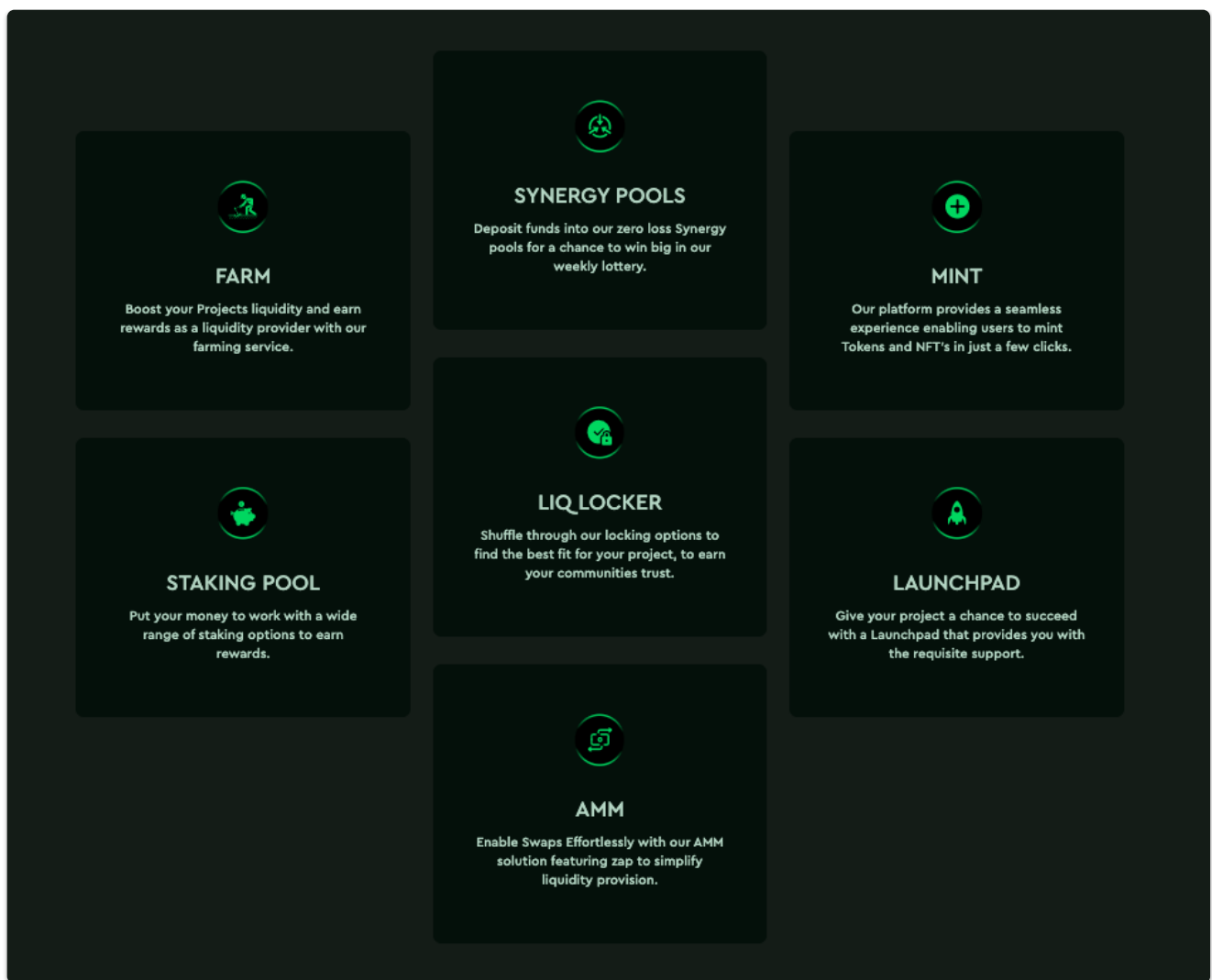
AMM

[app on goerli](#)

[github](#)

Stark DeFi

A DeFi Solutions Hub



Astraly

Astraly is a fundraising and community building platform. Buy ASTR tokens, stake them and receive lottery tickets to invest in the listed projects.

[app on goerli](#)
[github](#)

MakerDAO Starknet DAI Bridge

[app on goerli](#)
[github](#)

CurveZero

CurveZero is a fixed-rate loan protocol built on StarkNet. It allows users to get fixed-rate loans at any duration.

[web](#)
[github](#)

Flashloans

See [Repo](#)

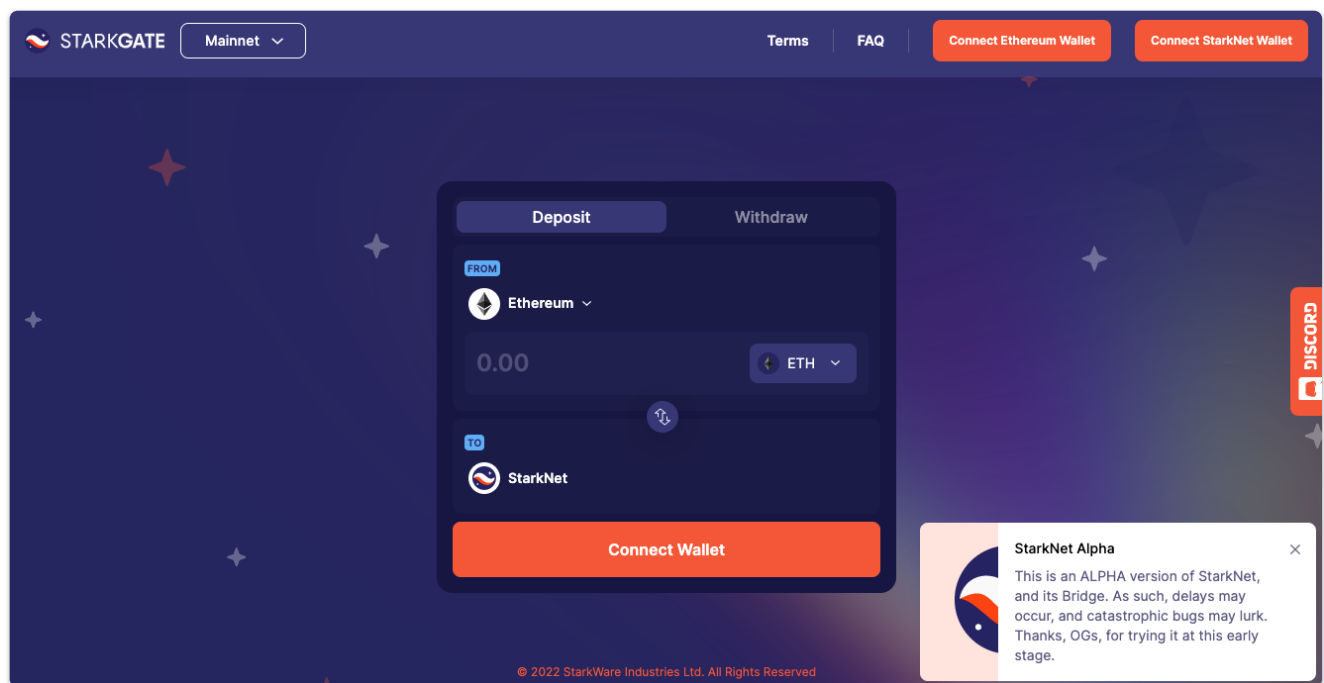
Other projects

Fossil

Fossil is a set of smart contracts on both Starknet and Ethereum L1 that allow Starknet smart contracts to read anything ever committed to Ethereum L1 and any of its EVM based L2s.


Bridges on Starknet

Starkgate



Layerswap


Layerswap allows connection between exchanges and Starknet

Layerswap

Exchange → Network


Network → Exchange

From

Binance

▼

To

StarkNet


▼

To StarkNet address

0x123...ab56c

Amount

0.0045 - 0.015

ETH


▼

You will receive

- ▼

Enter StarkNet address

Orbiter

Orbiter

L2 Bridge


L2 Data

Connect a Wallet

Sender


Maker

Token

ETH

▼


From

Ethereum

▼

at least 0.005 [Max](#)


To


StarkNet

▼

0 ?

CONNECT A WALLET

 Gas Fee Saved | Save \$0.11 ~ \$0.71 ?

 Time Spend 180s | Save 10min ?

StarkEx

See [Docs](#)

StarkEx allows self-custodial trading and payment transactions for applications such as DeFi and gaming.

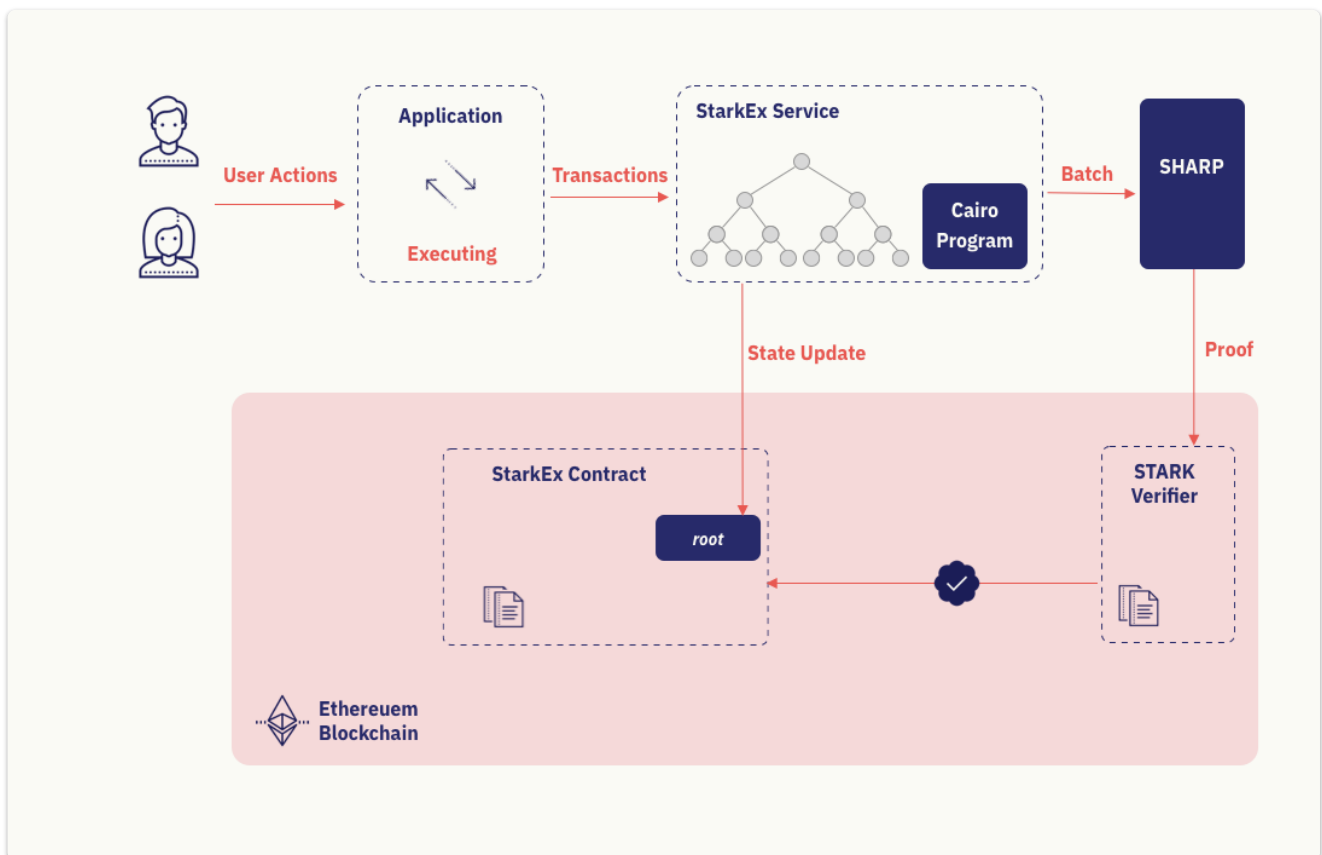
It has 270B cumulative trading and 65M transactions settled, with 1.25B total value locked.

StarkEx currently supports ETH, synthetic assets, and the following tokens:

- ERC-20
- ERC-721
- ERC-1155

StarkEx can also support tokens on other EVM-compatible blockchains.

StarkEx is a mature platform that has been deployed on Ethereum Mainnet since June 2020. Before its Mainnet deployment, over 50M StarkEx transactions were settled on both public and private Ethereum testnets.



StarkEx is trading focussed whereas Starknet allows generic computation

Network Monitoring

System Monitor

5 PASSING				3 DEGRADED		
STATUS	NAME	LAST RESULTS	24H	7D	AVG	Δ T
✓	Goerli - Contract call a few seconds ago * goerli starknet	API	100 %	99.228 %	934 ms	0 min
!	Goerli - Get latest block a few seconds ago * starknet	API	100 %	99.228 %	656 ms	0 min
✓	Goerli - Get state update a few seconds ago * starknet	API	100 %	99.089 %	331 ms	0 min
✓	Goerli - Get transaction status a few seconds ago * starknet	API	100 %	99.226 %	200 ms	0 min
!	Mainnet - Contract call a few seconds ago * starknet	API	99.953 %	99.99 %	2.02 s	0 min
!	Mainnet - Get latest block a few seconds ago * starknet	API	100 %	100 %	618 ms	1 min
✓	Mainnet - Get state update a few seconds ago * starknet	API	100 %	100 %	527 ms	0 min
✓	Mainnet - Get transaction status a minute ago * starknet	API	100 %	100 %	337 ms	1 min

Running a Starknet node

See this [tutorial](#) to set up a Pathfinder node

Hardware requirements are low : 4 CPU, 4GB RAM, 100GB Storage will work.

You can even run a node on a [Raspberry Pi](#)

Further Information about Starknet

See

- Latest Ecosystem [news](#)
- Education [news](#)
- [Blogs](#)
- [Podcasts](#)
- Starknet CC [Videos](#)