RugFreeCoins Audit

FEG Token

Smart Contract Security Audit

September 19, 2021

Contents

Audit details	1
Disclaimer	2
Background	3
About the project	4
Target market and the concept	6
Potential to grow with score points	13
Total Points	13
Contract details	14
Top token holders	15
Token distribution	16
Contract interaction details	18
Contract code function details	19
Contract description table	20
Security issue checking status	28
Owner privileges	30
Audit conclusion	31

Audit details

Audited project

FEG Token

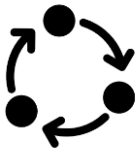
Contract Address

BSC: 0xacfc95585d80ab62f67a14c566c1b7a49fe91167

ETH: 0x389999216860ab8e0175387a0c90e5c52522c945

Client contact

FEG Token Team



Blockchain

Binance smart chain & Ethereum smart chain

Project website

https://fegtoken.com/

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

DISCLAIMER: By reading this report or any part of it, you agree to the terms of this disclaimer. If you do not agree to the terms, then please immediately cease reading this report, and delete and destroy any and all copies of this report downloaded and/or printed by you. This report is provided for information purposes only and on a non-reliance basis, and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and Rugfreecoins and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers and other representatives) (Rugfreecoins) owe no duty of care towards you or any other person, nor does Rugfreecoins make any warranty or representation to any person on the accuracy or completeness of the report. The report is provided "as is", without any conditions, warranties or other terms of any kind except as set out in this disclaimer, and Rugfreecoins hereby excludes all representations, warranties, conditions and other terms (including, without limitation, the warranties implied by law of satisfactory quality, fitness for purpose and the use of reasonable care and skill) which, but for this clause, might have effect in relation to the report. Except and only to the extent that it is prohibited by law, Rugfreecoins hereby excludes all liability and responsibility, and neither you nor any other person shall have any claim against Rugfreecoins, for any amount or kind of loss or damage that may result to you or any other person (including without limitation, any direct, indirect, special, punitive, consequential or pure economic loss or damages, or any loss of income, profits, goodwill, data, contracts, use of money, or business interruption, and whether in delict, tort (including without limitation negligence), contract, breach of statutory duty, misrepresentation (whether innocent or negligent) or otherwise under any claim of any nature whatsoever in any jurisdiction) in any way arising from or connected with this report and the use, inability to use or the results of use of this report, and any reliance on this report. The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

Rugfreecoins was commissioned by FEG Token to perform an audit of the smart contract.

https://bscscan.com/token/0xacfc95585d80ab62f67a14c566c1b7a49fe91167

https://etherscan.io/token/0x389999216860ab8e0175387a0c90e5c52522c945

The focus of this audit is to verify that the smart contract is secure, resilient and working according to the specifications.

The information in this report should be used to understand the risk exposure of the smart contract, project feasibility, long term sustainability and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

About the project

The main concept behind FEG Token is to provide a decentralized transaction network, which operates on the Ethereum blockchain (ERC-20) and the Binance Smart Chain (BEP-20).

Token Features

- The automatic FEG token rewards per each transaction when buying and selling will be distributed among every holder proportional to how many tokens each individual holds according to the BSC and ETH distribution percentages.

- FEG token has the burn strategy that benefits and rewards those who invest long-term. This feature slowly reduces supply making each FEG more and more valuable.

Project Features

- FEG exchange platform (FEGex)
- FEG stake
- FWrap
- SmartSwap
- Peer to peer (P2P)
- Swap to swap (S2S)
- FEG track and FEG stats
- FEGfaucet
- Charity

Tokenomics

2% fee when buying and selling (BSC)

- 56.50% of the 2.00% tax goes to the burn address.
- 43.50% of the 2.00% tax is distributed among holders.

2% fee when buying and selling (ETH)

- 58.20% of the 2.00% tax goes to the burn address.
- 41.80% of the 2.00% tax is distributed among holders.

Roadmap

Done action items

❖ Design & creation	✔
❖ Uniswap listing	✔
❖ TRY.finance partnership	✔
❖ Dogira partnership	✔
❖ Marketing Team initiates campaigns	✔
❖ Further ecosystem development	✔
❖ FEGtrack listing (Google Play)	✔
❖ FEGex Beta	✔
❖ FEGtrack listing (App Store)	✔
❖ PASA partnership	✔
❖ NFT sale	✔
❖ FEGtrack is launched as a web application	✔
❖ FEGshop launched	✔
❖ Goldfarm partnership	✔
❖ FEGtoken pools on GoldFarm	✔
❖ Successful audit by Solidity Finance	✔
❖ FOMO partnership	✔
❖ FEGstake launched	✔
❖ Smartswap idea sparked	✔
❖ FEGex partner listings	✔
❖ FEGex charts	✔
❖ FEGfaucet launches as a frictionless reward faucet	✔
❖ Hotbit CEX listing (unplanned)	✔
❖ FEGlottery	✔
❖ FEGex Smartswap testing	✔
❖ Perpetual PASA fund	✔
❖ FEGwrap launched	✔
❖ Perpetual marketing fund	✔
❖ FEGex SmartSwap launched	✔
❖ FEGex direct swap functionality	✔
❖ FEGex fWrap implementation	✔
❖ FEGstats	✔
❖ FEGstake v2	✔
❖ First SmartDeFi token launch	✔
❖ FEGex auto-add pairs functionality	✔

Pending action items

❖ FEGex trading pair listings
❖ FEGex auto-add SmartDeFi pairs
❖ FEGshop v2
❖ FEGcharts
❖ FEGcentral to implement FEGblog and FEGedu

Future action items

❖ FEGtrack v2
❖ FEGex CEXDEX (Bridge)
❖ FEGex UI redesign
❖ Continuous improvement of FEGex and the FEG Token ecosystem

Target market and the concept

Target market

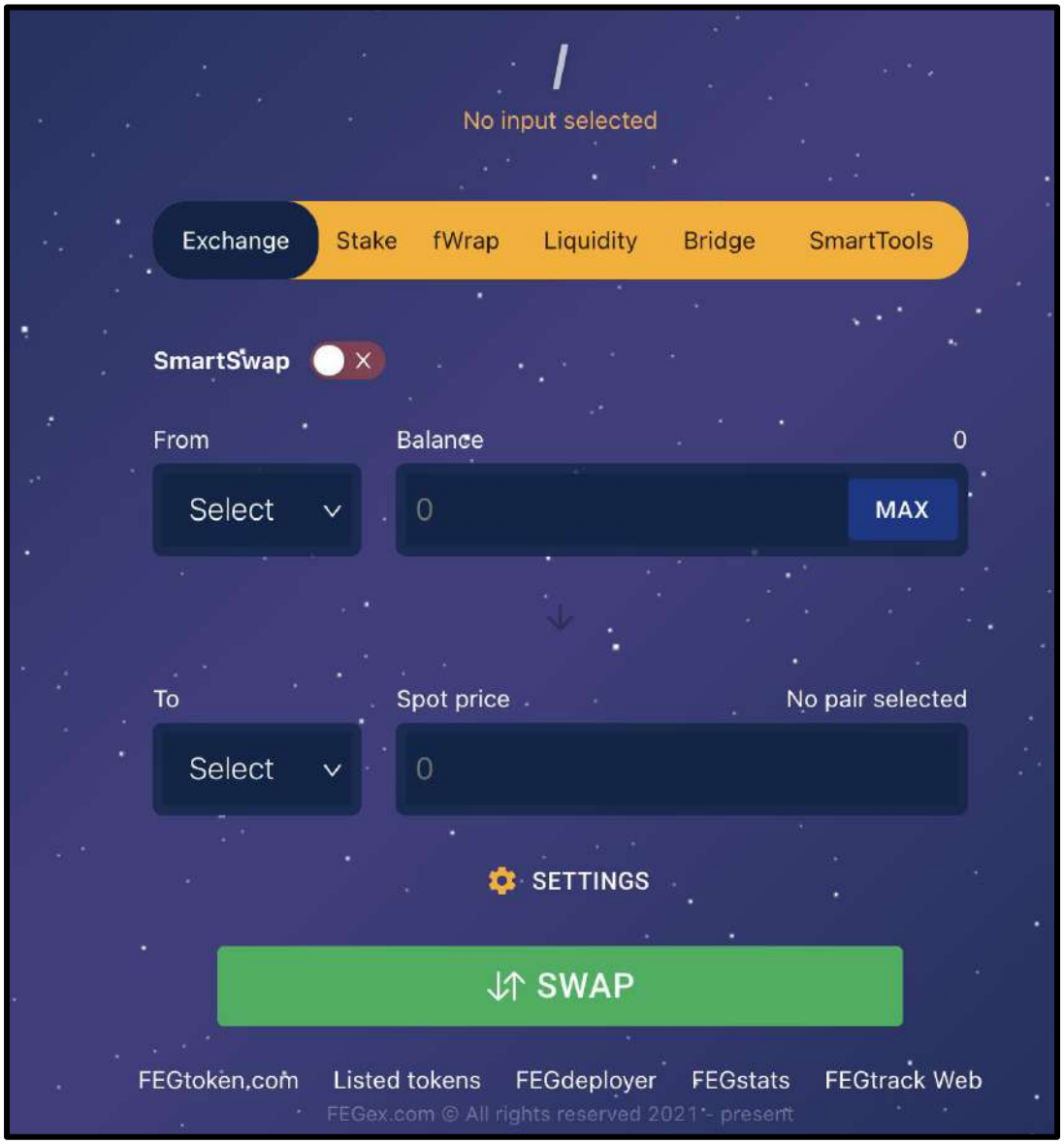
- Anyone who's interested in Crypto space with long term investment plans.
- Anyone who's ready to earn a passive income by holding tokens.
- Anyone who's interested in taking part with the FEG exchange platform.
- Anyone who's interested in taking part with FEG stake and wrap and earn rewards.
- Anyone who's interested in trading tokens.
- Anyone who's interested in taking part with the FEGfaucet feature.
- Anyone who's interested in making P2P or S2S
- Anyone who's interested in taking part with the future plans of the project.
- Anyone who's interested in taking part with the good cause of charity of the project.
- Anyone who's interested in making financial transactions with any other party using FEG as the currency.

Core concept

FEG exchange platform (FEGex)

Click here

FEG Token is the governance token of FEG Exchange ("FEGex"), cross-chain centralized exchange / decentralized exchange (CEX/DEX) where tokens can be swapped, staked, added to liquidity pools, or fWrapped.



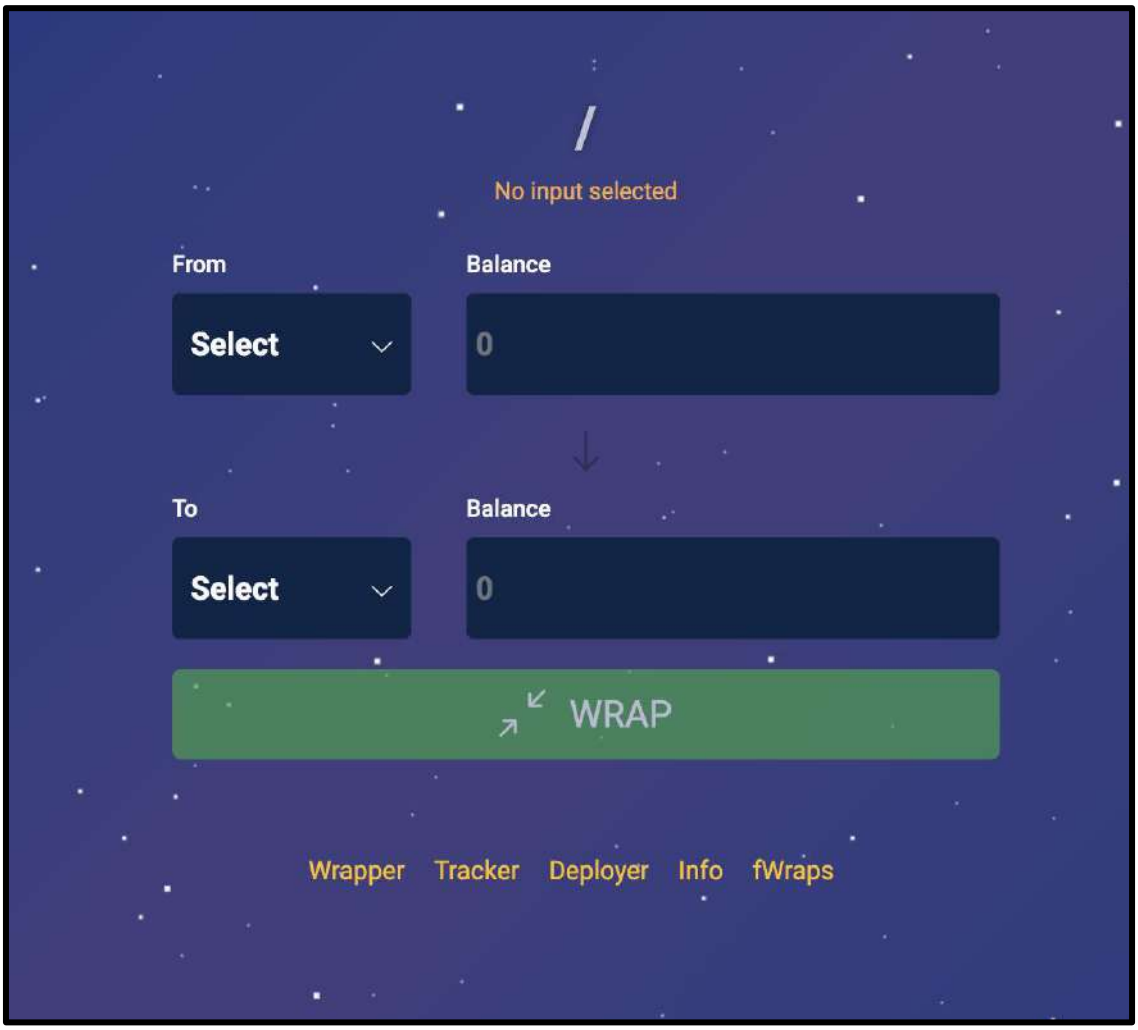
FEG stake

Staked FEG tokens are held securely in the FEG Token staking contract. Stakers are rewarded a share of 0.12% of the dollar value of all sell transactions that occur on the exchange (across all pairs) in the form of fBNB or fETH, depending on which chain was utilized to stake. These rewards are divided and distributed to stakers automatically, based on the percentage of the staking pool each staker owns. As the trading pairs and trading volume increases on FEGex, FEG Token staking rewards will increase dramatically**.**

FEG stake

Wrap favorite cryptocurrencies and immediately start earning more of them. Users can wrap not just FEG, but ADA, DOGE, XRP, LTC, USDT and more. Users can unwrap back into the original cryptocurrencies whenever they desire.

They just have to pay a 1.00% tax when wrapping or unwrapping cryptocurrencies. There are no additional risks involved with fWrapping and no impermanent loss. 1.00% of every transaction (buy, sell, or transfer) that takes place during the fWrap process (including the fWrap process within the SmartDeFi system) is immediate and automatically distributed between holders of that fWrap. This provides an excellent annual percentage yield (APY).



SmartSwap

Swing trade without incurring taxes! The 2.00% tax on FEG will be waived when trading inside (via the internal balance) of SmartSwap.

Peer to peer (P2P)

Users can send and receive any token or base pair that has SmartSwap capability on FEGex discreetly. The receiving wallet is not revealed in the Tx hash. It is not a direct wallet-to-wallet transaction. Instead, the transaction is routed through a smart contract. This provides enhanced privacy with encryption.

Inside the P2P system, there are transaction taxes. There is a 0.50% tax when sending FEG, which will be sent to the burn wallet. There is a 0.30% system fee for any fWrapped token that will be used for high-end server hosting, IT security firm payment, and further development of the FEG Token ecosystem. Gas fees for P2P should be minimal; all previous transaction fees have been averaging only $0.06.

Swap to swap (S2S)

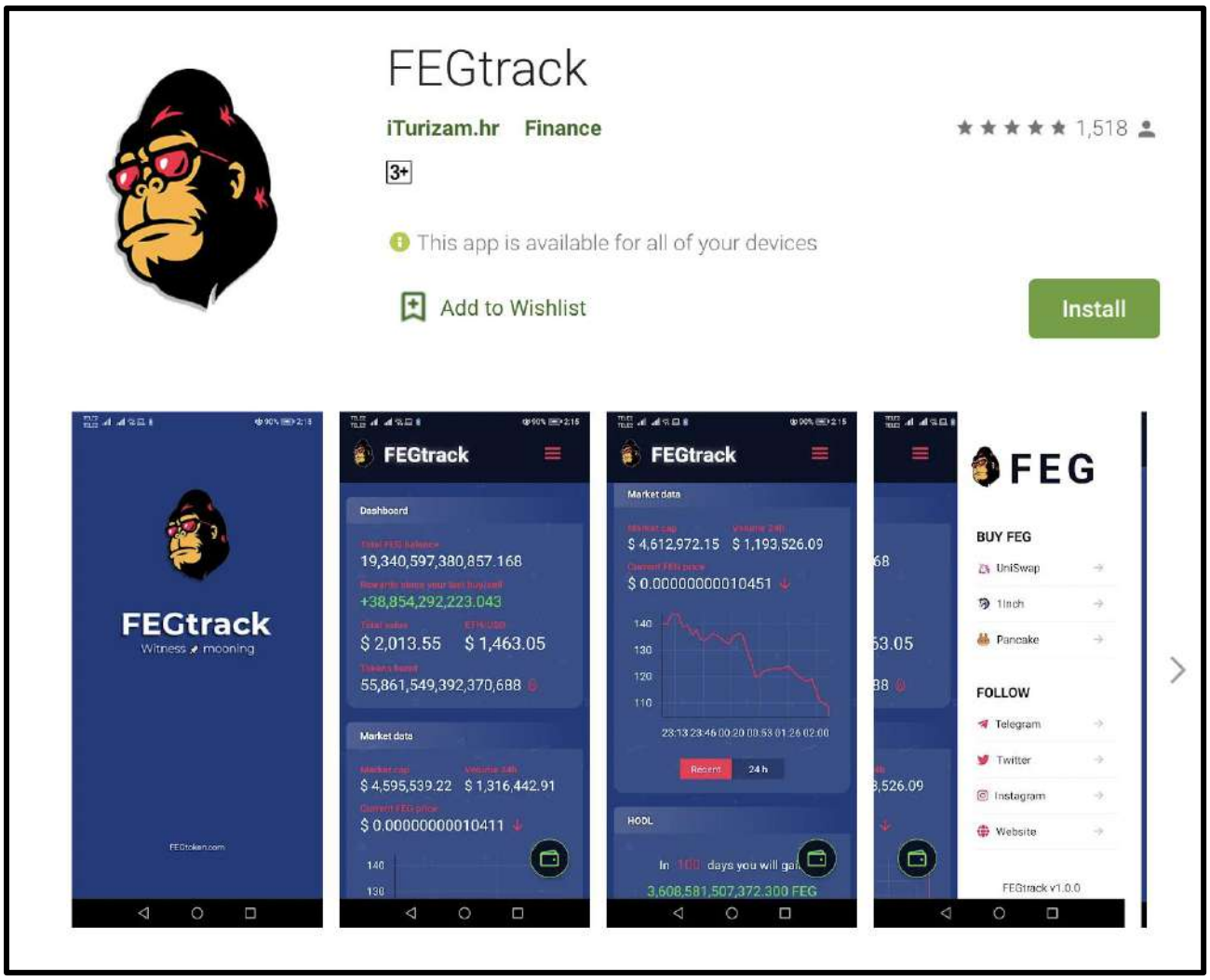
Swap-to-Swap (S2S) allows for moving of fWrapped base-pair (fBNB, fETH, fUSDT, etc.) between SmartSwap contracts (e.g., FEG/fBNB fBNB moving TRY/fBNB)

FEG track and FEG stats

Click here

FEGtrack is a mobile and web application that enables users to track their FEG rewards and dollar-value balance. The application is continuously improving as FEG Token transforms the DeFi space.

Anyone in the FEG ecosystem can take advantage of FEGstats to view holdings in one place as well as view current data and prices.

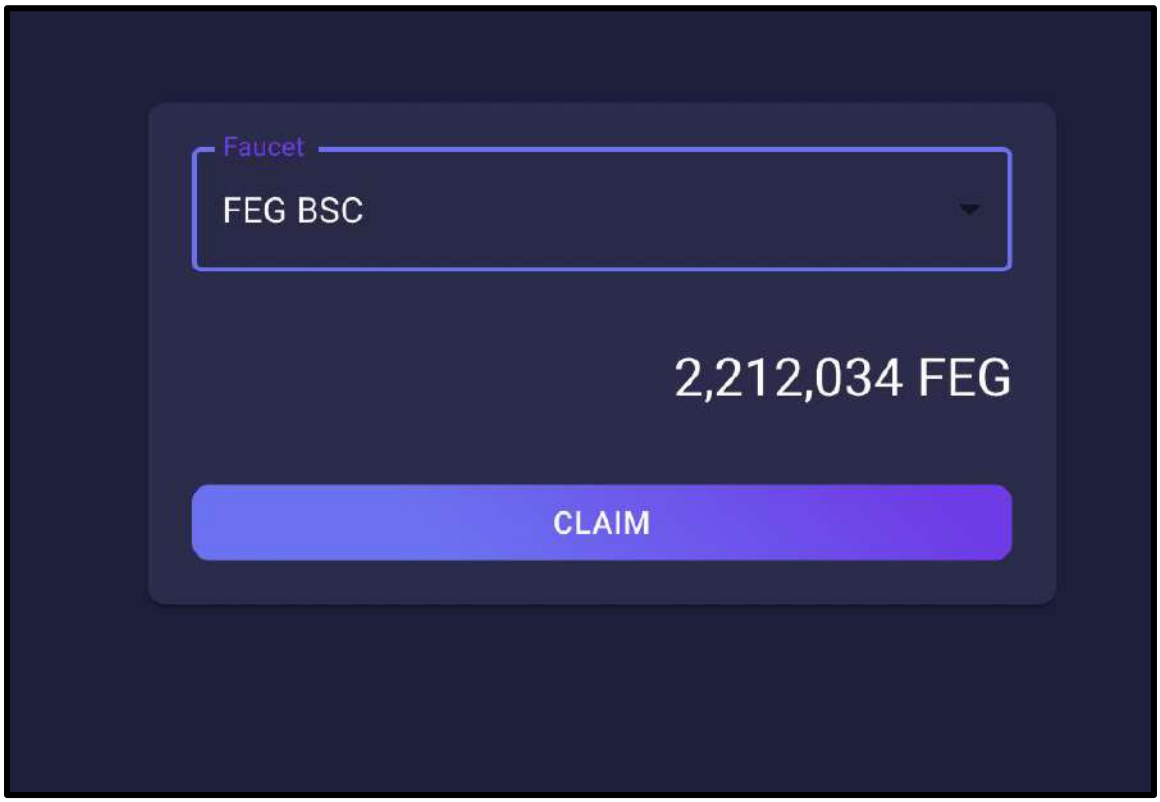


FEGfaucet

FEG Token feeds every gorilla in all parts of the world. Experience the FEGfaucet **(https://FEGfaucet.com)** and claim free FEG. Every day. Forever.

The FEG Token team donated 20T of their own FEG tokens to kick-start FEGfaucet. The FEGfaucet is locked and only the frictionless rewards it generates can be claimed. Anyone can claim the rewards. Each time the rewards are claimed on a first-come, first-served method, the claimable amount resets to zero. Each wallet can claim from the FEGfaucet a maximum of once per 24 hours. You do not need to be a FEG holder to claim from the FEGfaucet.

The FEGfaucet will generate rewards and help to expand the user base exponentially! The hope is that FEGfaucet will one day be providing over $20.00 (USD) of FEG every minute, which would be more than the monthly salary in several developing countries and be truly life-changing for many.



Charity

The Pan African Sanctuary Alliance (PASA) is FEG Token's first charitable partner, and the FEG Token team matches the first $750.00 (USD) of donations given by the community each month.

Potential to grow with score points

1.	Project efficiency	10/10
2.	Project uniqueness	10/10
3	Information quality	10/10
4	Service quality	10/10
5	System quality	10/10
6	Impact on the community	10/10
7	Impact on the business	10/10
8	Preparing for the future	10/10
Total Points		**10/10**

Contract details

BSC Token contract details for 19th September 2021

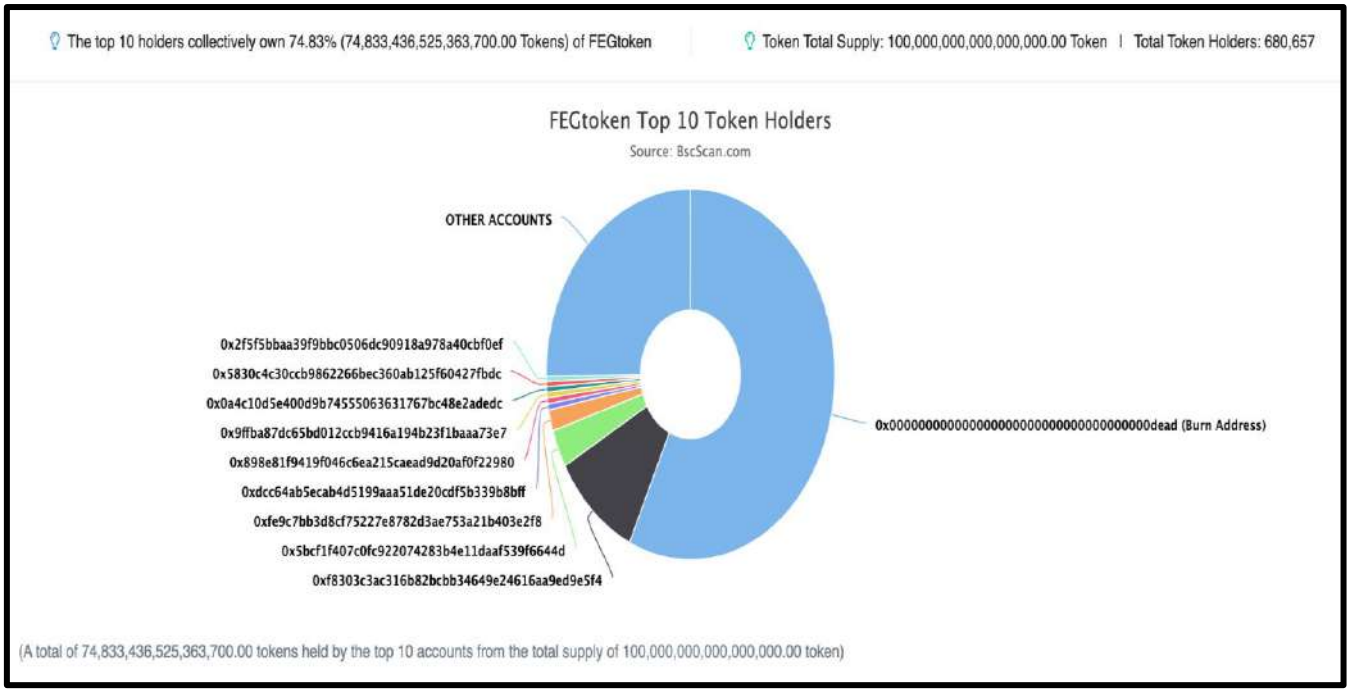
Contract name	FEGtoken
Contract address	0xacfc95585d80ab62f67a14c566c1b7a49fe91167
Token supply	100,000,000,000,000,000
Token ticker	FEG
Decimals	9
Token holders	680,655
Transaction count	2,723,327
Top 100% holders dominance	83.76%
Contract deployer address	0x3B30Bac3c331168e40FC6338BA2295A2F3adDe52
Contract's current owner address	0x0000000000000000000000000000000000000000

ETH Token contract details for 19th September 2021

Contract name	**FEGtoken**
Contract address	0xacfc95585d80ab62f67a14c566c1b7a49fe91167
Token supply	100,000,000,000,000,000
Token ticker	FEG
Decimals	9
Token holders	81,399
Transaction count	247,290
Top 100% holders dominance	83.60%
Contract deployer address	0x3B30Bac3c331168e40FC6338BA2295A2F3adDe52
Contract's current owner address	0x0000000000000000000000000000000000000000

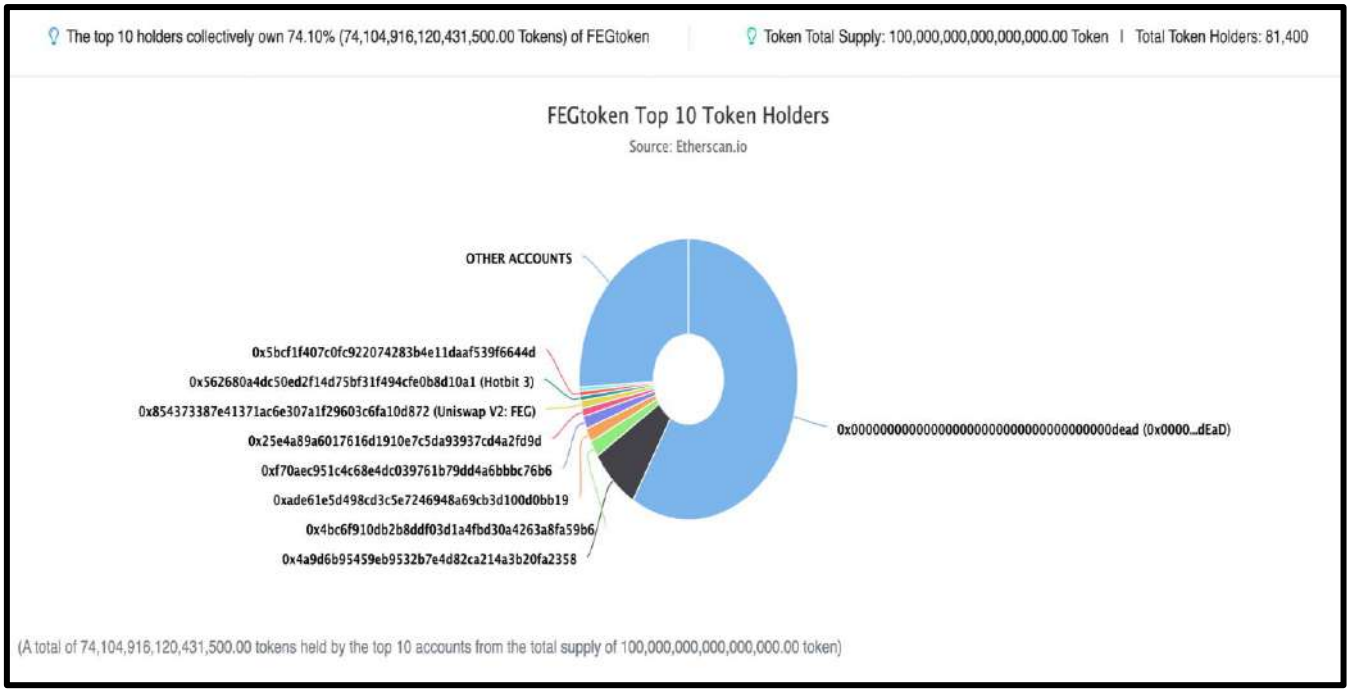
Top token holders

BSC: Top 10 Token Holders



Rank	Address	Quantity (Token)	Percentage
1	Burn Address	56,934,653,395,214,200.192695394	56.9347%
2	0xf8303c3ac316b82bcbb34649e24616aa9ed9e5f4	9,856,780,333,936,590.839691936	9.8568%
3	0x5bcf1f407c0fc922074283b4e11daaf539f6644d	3,287,866,071,527,260.363926518	3.2879%
4	0xfe9c7bb3d8cf75227e8782d3ae753a21b403e2f8	1,838,972,392,777,370.43631708	1.8390%
5	0xdcc64ab5ecab4d5199aaa51de20cdf5b339b8bff	536,311,142,168,667.872219969	0.5363%
6	0x898e81f9419f046c6ea215caead9d20af0f22980	518,076,218,189,920.672049196	0.5181%
7	0x9ffba87dc65bd012ccb9416a194b23f1baaa73e7	510,854,443,191,716.42084492	0.5109%
8	0x0a4c10d5e400d9b745550636317767bc48e2adedc	468,510,586,945,197.929361791	0.4685%
9	0x5830c4c30ccb9862266bec360ab125f60427fbdc	441,117,117,809,459.92103886	0.4411%
10	0x2f5f5bbaa39f9bbc0506dc90918a978a40cbf0ef	440,294,823,603,219.610835749	0.4403%

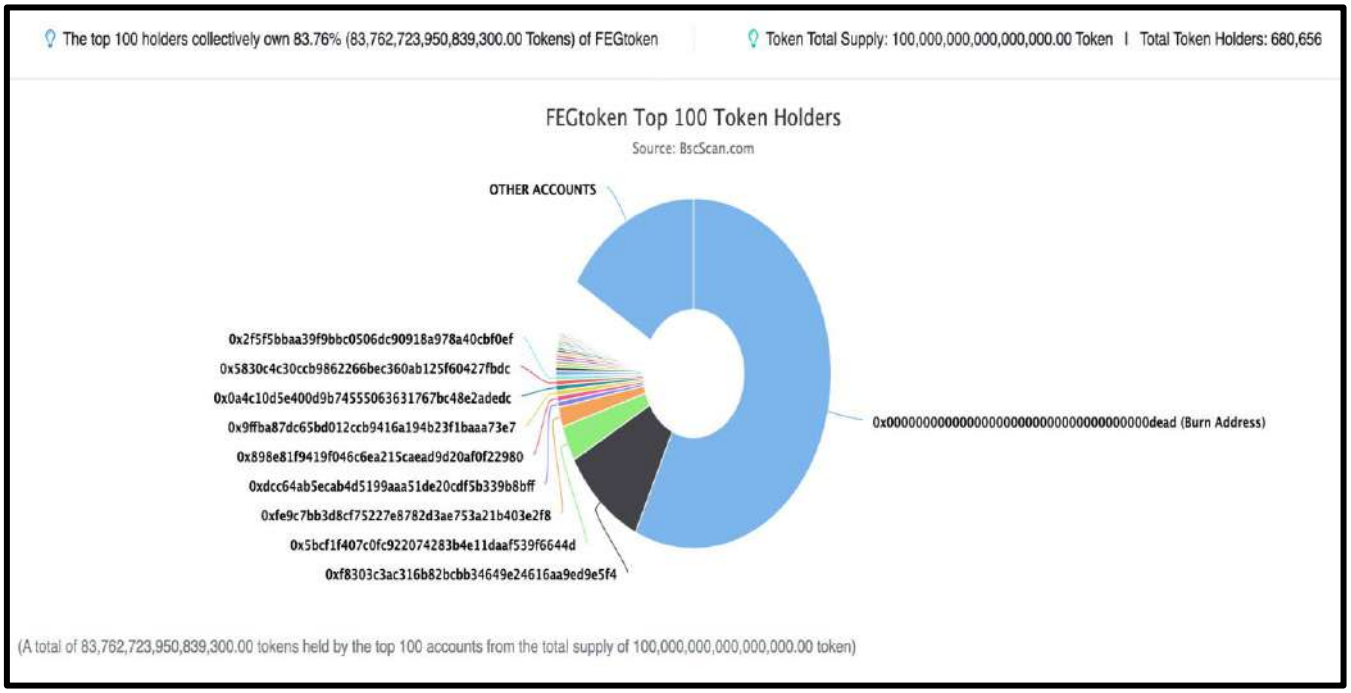
ETH: Top 10 Token Holders



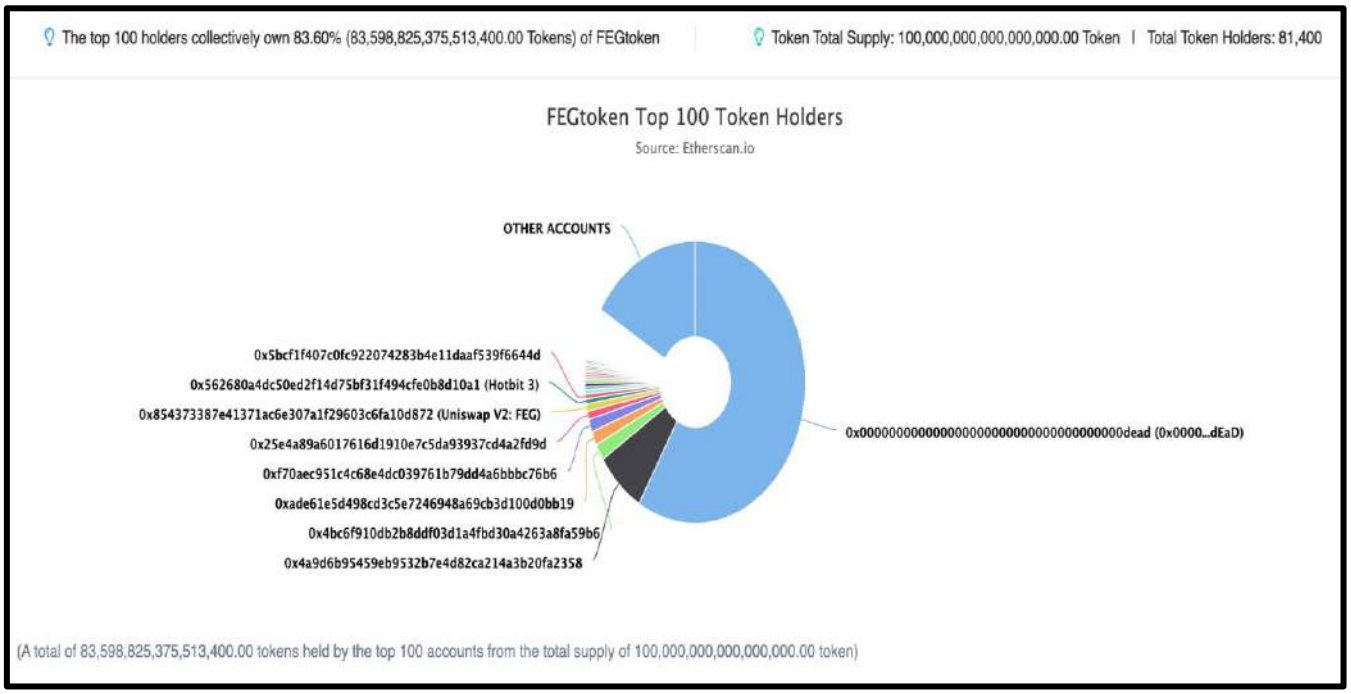
Rank	Address	Quantity (Token)	Percentage
1	0x0000...dEaD	58,504,772,255,754,000.937273748	58.5048%
2	0x4a9d6b95459eb9532b7e4d82ca214a3b20fa2358	7,293,050,177,230,580.935150113	7.2931%
3	0x4bc6f910db2b8ddf03d1a4fbd30a4263a8fa59b6	1,891,274,573,714,270.896751836	1.8913%
4	0xade61e5d498cd3c5e7246948a69cb3d100d0bb19	1,590,508,006,137,560.904117034	1.5905%
5	0xf70aec951c4c68e4dc039761b79dd4a6bbbc76b6	1,460,755,630,995,760.860447785	1.4608%
6	0x25e4a89a6017616d1910e7c5da93937cd4a2fd9d	909,192,299,077,057.659382516	0.9092%
7	Uniswap V2: FEG	890,496,008,999,146.328398007	0.8905%
8	Hotbit 3	574,477,225,380,971.771898813	0.5745%
9	0x5bcf1f407c0fc922074283b4e11daaf539f6644d	528,364,215,340,362.956147169	0.5284%
10	0x80b939d02b5a3bea66e615762cc8a47357c7c884	462,025,727,801,697.314014439	0.4620%

Token distribution

BSC: Top 100 Token Holders

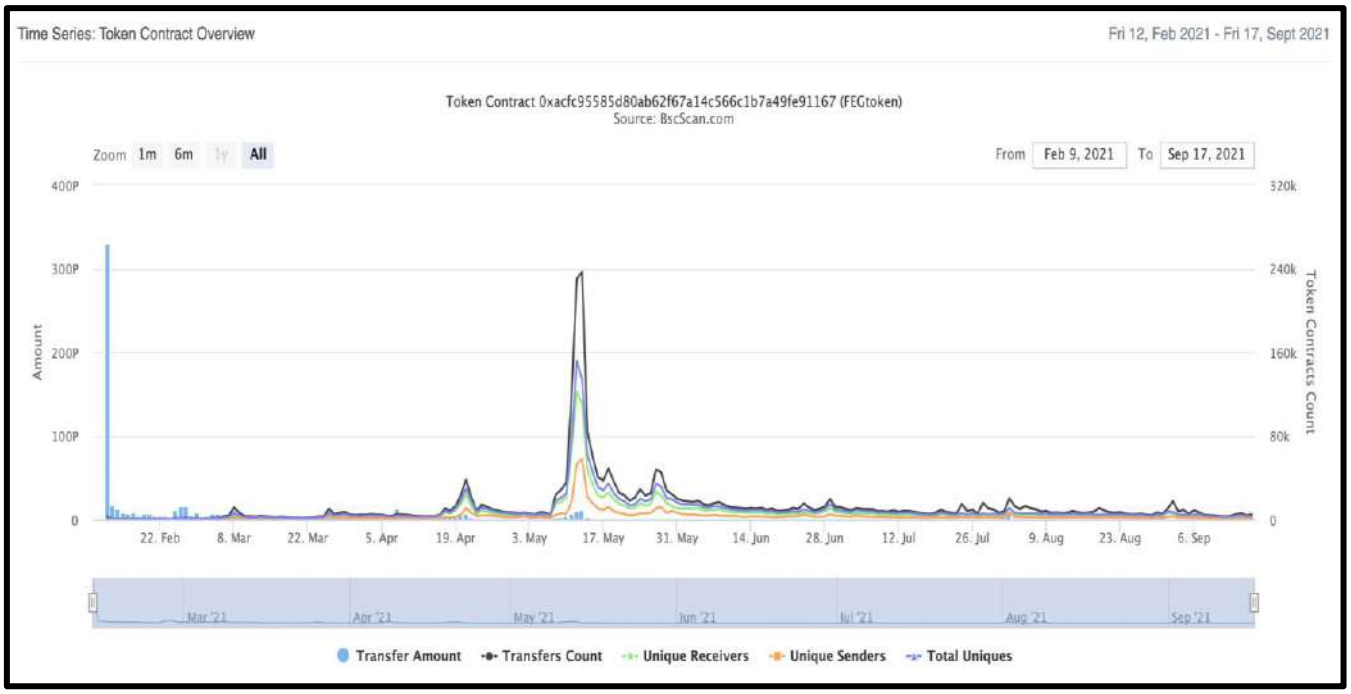


ETH: Top 100 Token Holder

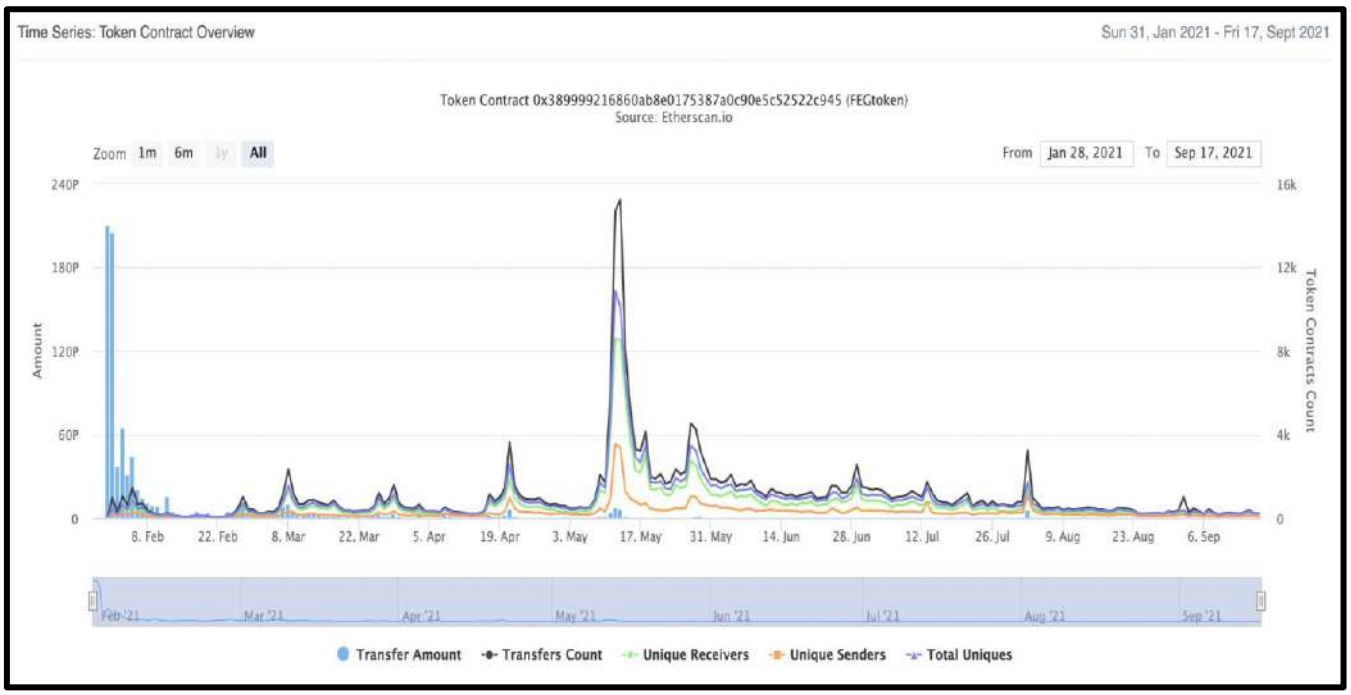


Contract interaction details

BSC



ETH



Contract code function details

No	Category	Item	Result
1	Coding conventions	BRC20 Token standards	pass
		compile errors	pass
		Compiler version security	pass
		visibility specifiers	pass
		Gas consumption	low issue
		SafeMath features	pass
		Fallback usage	pass
		tx.origin usage	pass
		deprecated items	pass
		Redundant code	pass
		Overriding variables	pass
2	Function call audit	Authorization of function call	pass
		Low level function (call/delegate call) security	pass
		Returned value security	pass
		Selfdestruct function security	pass
3	Business security	Access control of owners	pass
		Business logics	pass
		Business implementations	pass
4	Integer overflow/underflow		pass
5	Reentrancy		pass
6	Exceptional reachable state		pass
7	Transaction ordering dependence		pass
8	Block properties dependence		pass
9	Pseudo random number generator (PRNG)		pass
10	DoS (Denial of Service)		pass
11	Token vesting implementation		pass
12	Fake deposit		pass
13	Event security		pass

Contract description table

Below table represents the summary of the contracts and methods in the token contract. We scanned the whole contract and listed down all the Interfaces, functions and implementations with its visibility and mutability.

BSC

Contract	**Type**	**Bases**		
└	Function Name	Visibility	Mutability	Modifiers
Context	**Implementation**			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
IERC20	**Interface**			
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	transfer	External ❗	🛑	NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
SafeMath	**Library**			
└	add	Internal 🔒		
└	sub	Internal 🔒		
└	sub	Internal 🔒		
└	mul	Internal 🔒		
└	div	Internal 🔒		
└	div	Internal 🔒		

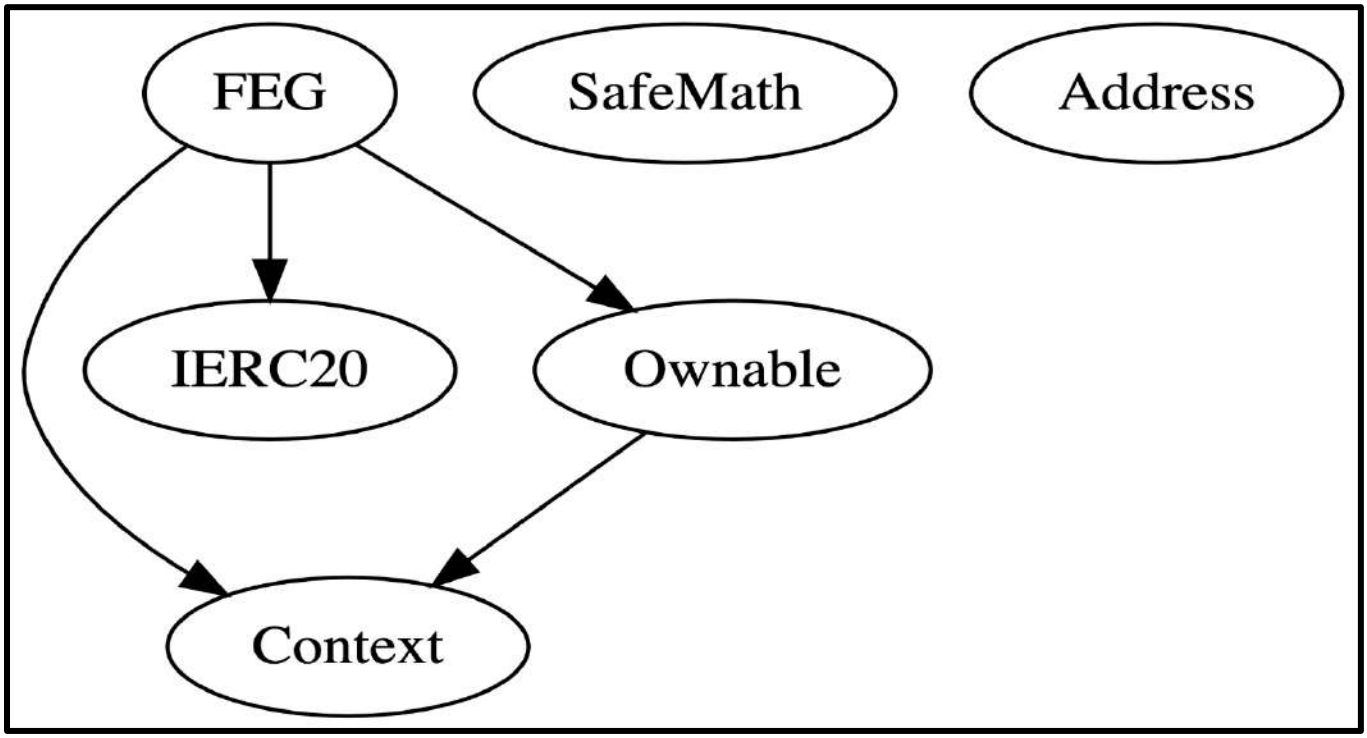
└	mod	Internal 🔒		
└	mod	Internal 🔒		
Address	**Library**			
└	isContract	Internal 🔒		
└	sendValue	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	_functionCallWithValue	Private 🔐	🛑	
Ownable	**Implementation**	**Context**		
└		Public ❗	🛑	NO❗
└	owner	Public ❗		NO❗
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
FEG	**Implementation**	**Context, IERC20, Ownable**		
└		Public ❗	🛑	NO❗
└	name	Public ❗		NO❗
└	symbol	Public ❗		NO❗
└	decimals	Public ❗		NO❗
└	totalSupply	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗
└	transfer	Public ❗	🛑	NO❗

└	allowance	Public		NO
└	approve	Public		NO
└	transferFrom	Public		NO
└	increaseAllowance	Public		NO
└	decreaseAllowance	Public		NO
└	isExcluded	Public		NO
└	totalFees	Public		NO
└	reflect	Public		NO
└	reflectionFromToken	Public		NO
└	tokenFromReflection	Public		NO
└	excludeAccount	External		onlyOwner
└	includeAccount	External		onlyOwner
└	_approve	Private		
└	_transfer	Private		
└	_transferStandard	Private		
└	_transferToExcluded	Private		
└	_transferFromExcluded	Private		
└	_transferBothExcluded	Private		
└	_reflectFee	Private		
└	_getValues	Private		
└	_getTValues	Private		
└	_getRValues	Private		
└	_getRate	Private		
└	_getCurrentSupply	Private		

Legend

Symbol	Meaning
	Function can modify state
	Function is payable

Inheritance Hierarchy



ETH

Contract	Type	Bases		
└	Function Name	Visibility	Mutability	Modifiers
Context	**Implementation**			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
IERC20	**Interface**			
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	transfer	External ❗	🛑	NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
SafeMath	**Library**			
└	add	Internal 🔒		
└	sub	Internal 🔒		
└	sub	Internal 🔒		

└	mul	Internal 🔒		
└	div	Internal 🔒		
└	div	Internal 🔒		
└	mod	Internal 🔒		
└	mod	Internal 🔒		
Address	**Library**			
└	isContract	Internal 🔒		
└	sendValue	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	_functionCallWithValue	Private 🔐	🛑	
Ownable	**Implementation**	**Context**		
└		Public ❗	🛑	NO❗
└	owner	Public ❗		NO❗
└	renounceOwnership	Public ❗	🛑	onlyOwner

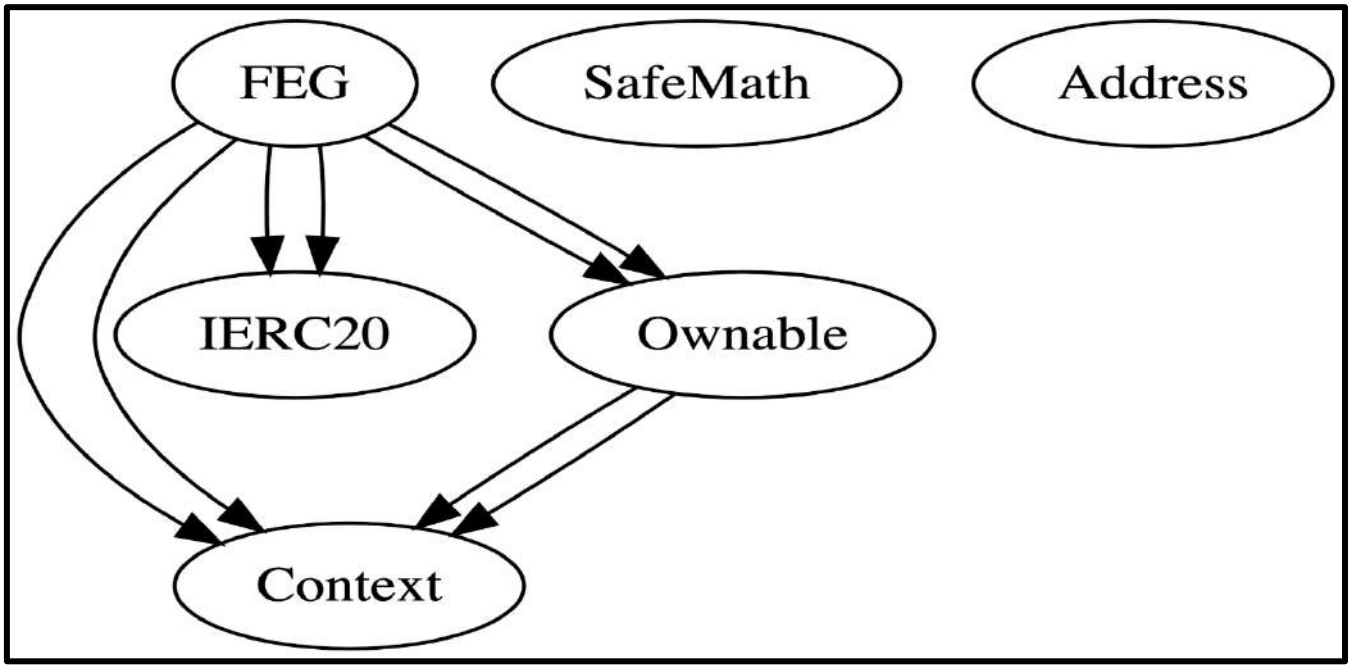
└	transferOwnership	Public ❗	🔘	onlyOwner
FEG	**Implementation**	**Context, IERC20, Ownable**		
└		Public ❗	🔘	NO❗
└	name	Public ❗		NO❗
└	symbol	Public ❗		NO❗
└	decimals	Public ❗		NO❗
└	totalSupply	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗
└	transfer	Public ❗	🔘	NO❗
└	allowance	Public ❗		NO❗
└	approve	Public ❗	🔘	NO❗
└	transferFrom	Public ❗	🔘	NO❗
└	increaseAllowance	Public ❗	🔘	NO❗
└	decreaseAllowance	Public ❗	🔘	NO❗
└	isExcluded	Public ❗		NO❗
└	totalFees	Public ❗		NO❗
└	reflect	Public ❗	🔘	NO❗

└	reflectionFromToken	Public ❗		NO❗
└	tokenFromReflection	Public ❗		NO❗
└	excludeAccount	External ❗	🛑	onlyOwner
└	includeAccount	External ❗	🛑	onlyOwner
└	_approve	Private 🔐	🛑	
└	_transfer	Private 🔐	🛑	
└	_transferStandard	Private 🔐	🛑	
└	_transferToExcluded	Private 🔐	🛑	
└	_transferFromExcluded	Private 🔐	🛑	
└	_transferBothExcluded	Private 🔐	🛑	
└	_reflectFee	Private 🔐	🛑	
└	_getValues	Private 🔐		
└	_getTValues	Private 🔐		
└	_getRValues	Private 🔐		
└	_getRate	Private 🔐		
└	_getCurrentSupply	Private 🔐		

Legend

Symbol	Meaning
	Function can modify state
	Function is payable

Inheritance Hierarchy



Security issue checking status

❖ **High severity issues**

- **No high severity issues found.**

❖ **Medium severity issues**

- **No medium severity issues found.**

❖ **Low severity issues**

- **Out of gas issue.**

  In the includeAccount function, if they use a long wallet list there can be an OUT_OF_GAS issue, better to use a small array list at once.

Owner privileges

- Owner can renounce and transfer ownership.

```
ftrace | funcSig
function renounceOwnership() public virtual onlyOwner {
    emit OwnershipTransferred(_owner, address(0));
    _owner = address(0);
}

/**
 * @dev Transfers ownership of the contract to a new account (`newOwner`).
 * Can only be called by the current owner.
 */
ftrace | funcSig
function transferOwnership(address newOwner⬆) public virtual onlyOwner {
    require(
        newOwner⬆ != address(0),
        "Ownable: new owner is the zero address"
    );
    emit OwnershipTransferred(_owner, newOwner⬆);
    _owner = newOwner⬆;
}
```

- Owner can include and exclude wallets from rewards.

```
ftrace | funcSig
function excludeAccount(address account⬆) external onlyOwner {
    require(!_isExcluded[account⬆], "Account is already excluded");
    if (_rOwned[account⬆] > 0) {
        _tOwned[account⬆] = tokenFromReflection(_rOwned[account⬆]);
    }
    _isExcluded[account⬆] = true;
    _excluded.push(account⬆);
}

ftrace | funcSig
function includeAccount(address account⬆) external onlyOwner {
    require(_isExcluded[account⬆], "Account is already excluded");
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (_excluded[i] == account⬆) {
            _excluded[i] = _excluded[_excluded.length - 1];
            _tOwned[account⬆] = 0;
            _isExcluded[account⬆] = false;
            _excluded.pop();
            break;
        }
    }
```

Audit conclusion

While conducting the audit of the FEG Token smart contract, it was observed that there is nothing alarming with the code and it only contains a low severity issue.