



TechRate
AUDIT COMPANY

Smart Contract Security Audit

Audit Details



Audited project

PanStake



Deployer address

0x042191d164bbc5485912e528c067b03c9f55fb36



Client contacts:

PanStake team



Blockchain

Binance Smart Chain



Project website:

<https://panstake.finance/>

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 below disclaimer below – please make sure to read it in full.

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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

TechRate was commissioned by PanStake to perform an audit of smart contracts:

<https://bscscan.com/address/0x99f7822880655cdb8769c6dc41aa822090fb182a#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

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

Contracts Details

Token contract details for 03.02.2022

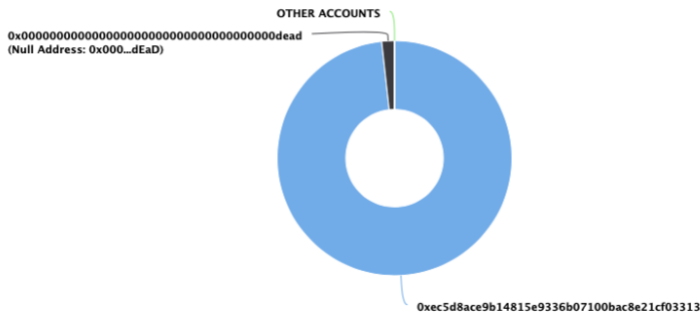
Contract name	PanStake
Contract address	0x99F7822880655cdb8769c6dC41Aa822090Fb182a
Total supply	1,000,000,000
Token ticker	PANS
Decimals	18
Token holders	2
Transactions count	2
Top 100 holders dominance	100.00%
Marketing tax	2
Rewards tax	2
Team tax	2
Treasury tax	6
Total taxes	12
Contract deployer address	0x042191d164bbc5485912e528c067b03c9f55fb36
Contract's current owner address	0xe9c2c202e2097aefb0b6a8edd2deceaadcf4d027

PanStake Token Distribution

The top 100 holders collectively own 100.00% (1,000,000,000.00 Tokens) of PanStake

Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 2

PanStake Top 100 Token Holders
Source: BscScan.com



(A total of 1,000,000,000.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

PanStake Contract Interaction Details

Time Series: Token Contract Overview

Tue 1, Feb 2022 - Tue 1, Feb 2022



PanStake Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0xec5d8ace9b14815e9336b07100bac8e21cf03313	982,656,000	98.2656%
2	Null Address: 0x000...dEaD	17,344,000	1.7344%



Contract functions details

- + Ownable (Context)
 - [Pub] <Constructor> #
 - [Pub] owner
 - [Pub] renounceOwnership #
 - modifiers: onlyOwner
 - [Pub] transferOwnership #
 - modifiers: onlyOwner
 - [Int] _transferOwnership #
- + [Int] IERC20
 - [Ext] totalSupply
 - [Ext] balanceOf
 - [Ext] transfer #
 - [Ext] allowance
 - [Ext] approve #
 - [Ext] transferFrom #
- + [Int] IERC20Metadata (IERC20)
 - [Ext] name
 - [Ext] symbol
 - [Ext] decimals
- + Context
 - [Int] _msgSender
 - [Int] _msgData
- + [Int] IUniswapV2Factory
 - [Ext] feeTo
 - [Ext] feeToSetter
 - [Ext] getPair
 - [Ext] allPairs
 - [Ext] allPairsLength
 - [Ext] createPair #
 - [Ext] setFeeTo #
 - [Ext] setFeeToSetter #
- + [Int] IUniswapV2Router01
 - [Ext] factory
 - [Ext] WETH
 - [Ext] addLiquidity #
 - [Ext] addLiquidityETH (\$)
 - [Ext] removeLiquidity #
 - [Ext] removeLiquidityETH #
 - [Ext] removeLiquidityWithPermit #
 - [Ext] removeLiquidityETHWithPermit #
 - [Ext] swapExactTokensForTokens #
 - [Ext] swapTokensForExactTokens #
 - [Ext] swapExactETHForTokens (\$)
 - [Ext] swapTokensForExactETH #
 - [Ext] swapExactTokensForETH #
 - [Ext] swapETHForExactTokens (\$)

- [Ext] quote
 - [Ext] getAmountOut
 - [Ext] getAmountIn
 - [Ext] getAmountsOut
 - [Ext] getAmountsIn
- + [Int] IUniswapV2Router02 (IUniswapV2Router01)
- [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
 - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
 - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
 - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
- + PanStake (Context, IERC20, IERC20Metadata, Ownable)
- [Pub] <Constructor> #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] burnedSupply
 - [Pub] distributedSupply
 - [Pub] treasuryTax
 - [Pub] rewardsTax
 - [Pub] marketingTax
 - [Pub] teamTax
 - [Ext] totalTaxes
 - [Pub] taxSwapThreshold
 - [Pub] distributionBurnRate
 - [Pub] excludedFromRewards
 - [Pub] excludedFromTaxes
 - [Pub] distributionAddress
 - [Pub] pair
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #
 - [Ext] transferFrom #
 - [Ext] increaseAllowance #
 - [Ext] decreaseAllowance #
 - [Ext] setTreasuryStakingAddress #
 - modifiers: onlyOwner
 - [Ext] setMarketingTaxAddress #
 - modifiers: onlyOwner
 - [Ext] setTeamTaxAddress #
 - modifiers: onlyOwner
 - [Ext] setTaxes #
 - modifiers: onlyOwner
 - [Ext] distribute #
 - [Ext] extractFunds #
 - modifiers: onlyOwner
 - [Ext] addDistributor #
 - modifiers: onlyOwner
 - [Ext] removeDistributor #
 - modifiers: onlyOwner
 - [Pub] includeInRewards #

- modifiers: onlyOwner
- [Pub] excludeFromRewards #
 - modifiers: onlyOwner
- [Pub] includeInTaxes #
 - modifiers: onlyOwner
- [Pub] excludeFromTaxes #
 - modifiers: onlyOwner
- [Pub] enableTransferLimit #
 - modifiers: onlyOwner
- [Ext] disableTransferLimit #
 - modifiers: onlyOwner
- [Pub] addPair #
 - modifiers: onlyOwner
- [Ext] setTaxSwapThreshold #
 - modifiers: onlyOwner
- [Ext] setDistributionBurnRate #
 - modifiers: onlyOwner
- [Int] _transfer #
- [Int] _approve #
- [Int] _swapTransfer #
- [Int] _swapTaxes #
 - modifiers: swapLock
- [Int] _takeTaxes #
- [Int] _getRewardsRate
- [Int] _getRewardPointsFromBalance
- [Int] _getBalanceFromRewardPoints
- [Ext] <Fallback> (\$)

(\$)= payable function

= non-constant function

Issues Checking Status

Issue description	Checking status
1. Compiler errors.	Passed
2. Race conditions and Reentrancy. Cross-function race conditions.	Passed
3. Possible delays in data delivery.	Passed
4. Oracle calls.	Passed
5. Front running.	Passed
6. Timestamp dependence.	Passed
7. Integer Overflow and Underflow.	Passed
8. DoS with Revert.	Passed
9. DoS with block gas limit.	Passed
10. Methods execution permissions.	Passed
11. Economy model of the contract.	Passed
12. The impact of the exchange rate on the logic.	Passed
13. Private user data leaks.	Passed
14. Malicious Event log.	Passed
15. Scoping and Declarations.	Passed
16. Uninitialized storage pointers.	Passed
17. Arithmetic accuracy.	Passed
18. Design Logic.	Passed
19. Cross-function race conditions.	Passed
20. Safe Open Zeppelin contracts implementation and usage.	Passed
21. Fallback function security.	Passed

Security Issues

✓ High Severity Issues

No high severity issues found.

✓ Medium Severity Issues

No medium severity issues found.

✓ Low Severity Issues

No low severity issues found.

Notes:

- `setTreasuryStakingAddress` do exclude old treasury address from rewards.

Owner privileges (In the period when the owner is not renounced)

- Owner can change marketing and treasury tax addresses.
- Owner can change team tax address.
- Owner can change rewards, marketing, treasury and team taxes.
- Owner can add / remove distributor address.
- Owner can include in and exclude from taxes.
- Owner can change `_distributionBurnRate`.
- Owner and distributors can distribute an amount from the sender's wallet to all holders.
- Owner can enable / disable transfer limit.
- Owner can include in and exclude from rewards.
- Owner can add pair address.
- Owner can change tax swap threshold.

Conclusion

Smart contracts contain owner privileges! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details are NOT provided by the team.

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.



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