



Smart Contract Audit

FOR

Minnienu

DATED : 7 June 23'



AUDIT SUMMARY

Project name – Minnielnu

Date: 7 June, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: Passed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1- Manual Review:

A line by line code review has been performed by audit ace team.

2- BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3- Slither :

The code has undergone static analysis using Slither.

Testnet version:

Contract has been tested on binance smart chain testnet which can be found in below link:

<https://testnet.bscscan.com/address/0x93D0FE0Fb665A06277e0FB54D310d3AF3e75D7BC>



Token Information

Token Name : Minnielnu

Token Symbol: \$MINNIE

Decimals: 18

Token Supply: 1,000,000,000

Token Address:

0xc608A97B2483207EC20DCfe4162540b4351d2836

Checksum:

ae134d3ed4aa4e1dea8d0c9251e45f3810009957

Owner:

0xd6883bAc3ac3d6D3feda3939017dB1468F2D827b

Deployer:

0xbC63f84B8d91de6C963d85D478af69E9fa776E20



TOKEN OVERVIEW

Fees:

Buy Fees: 7%

Sell Fees: 7%

Transfer Fees: 0%

Fees Privilege: Owner

Ownership: Owned

Minting: None

Max Tx Amount/ Max Wallet Amount: Yes

Blacklist: No

Other Privileges: - initial distribution of tokens
- including or excluding from fees
- changing swap threshold



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
 - Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
 - Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
 - Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
 - Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.
-



VULNERABILITY CHECKLIST

- | | |
|--|---|
|  Return values of low-level calls |  Gasless Send |
|  Private modifier |  Using block.timestamp |
|  Multiple Sends |  Re-entrancy |
|  Using Suicide |  Tautology or contradiction |
|  Gas Limitand Loops |  Timestamp Dependence |
|  Address hardcoded |  Revert/require functions |
|  Exception Disorder |  Use of tx.origin |
|  Using inline assembly |  Integer overflow/underflow |
|  Divide before multiply |  Dangerous strict equalities |
|  Missing Zero Address Validation |  Using SHA3 |
|  Compiler version not fixed |  Using throw |
-

CLASSIFICATION OF RISK

Severity

Description

◆ Critical

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

◆ High-Risk

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

◆ Medium-Risk

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

◆ Low-Risk

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

◆ Gas Optimization /Suggestion

A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity

Found

◆ Critical

0

◆ High-Risk

0

◆ Medium-Risk

0

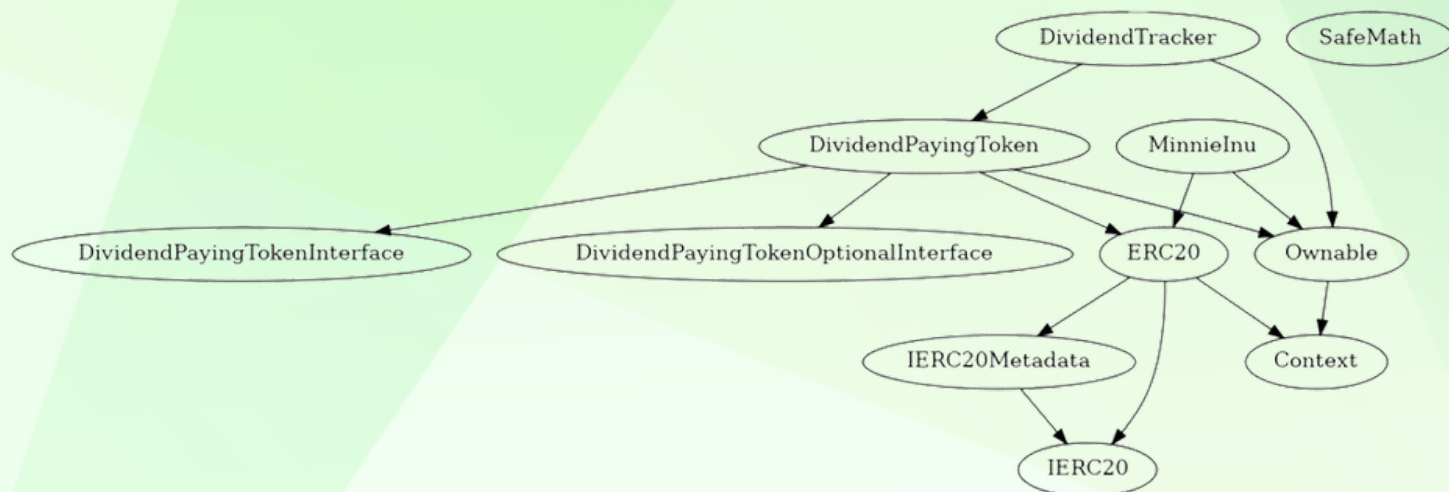
◆ Low-Risk

0

◆ Gas Optimization / Suggestions

0

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to change current tax (7% for buy and sell)
 - Owner is not able to set transfer taxes (0% forever)
 - Owner is not able to set max buy/sell/transfer/hold amount
 - Owner is not able to blacklist an arbitrary wallet
 - Owner is not able to mint new tokens
 - Owner is not able to disable trades
 - Trades are already enabled for public
 - Token has BNB rewards with auto-distribution
 - Fees are used for rewards (BNB) and marketing
-

CONTRACT ASSESMENT

Contract	Type	Bases			
-----: :-----: :-----: :-----: :-----:					
↳ **Function Name**	**Visibility**	**Mutability**	**Modifiers**		
Context	Implementation				
↳ _msgSender	Internal	🔒			
↳ _msgData	Internal	🔒			
Ownable	Implementation	Context			
↳ <Constructor>	Public	!		🔴	NO !
↳ owner	Public	!		NO !	
↳ renounceOwnership	Public	!		🔴	onlyOwner
↳ transferOwnership	Public	!		🔴	onlyOwner
↳ _transferOwnership	Internal	🔒		🔴	
SafeMath	Library				
↳ add	Internal	🔒			
↳ sub	Internal	🔒			
↳ sub	Internal	🔒			
↳ mul	Internal	🔒			
↳ div	Internal	🔒			
↳ div	Internal	🔒			
↳ mod	Internal	🔒			
↳ mod	Internal	🔒			
SafeMathInt	Library				
↳ mul	Internal	🔒			
↳ div	Internal	🔒			
↳ sub	Internal	🔒			
↳ add	Internal	🔒			
↳ abs	Internal	🔒			
↳ toUint256Safe	Internal	🔒			
SafeMathUint	Library				
↳ toInt256Safe	Internal	🔒			
IterableMapping	Library				
↳ get	Internal	🔒			
↳ getIndexOfKey	Internal	🔒			
↳ getKeyAtIndex	Internal	🔒			
↳ size	Internal	🔒			
↳ set	Internal	🔒		🔴	



CONTRACT ASSESMENT

```
|  | remove | Internal | 🔒 | ● | | |
|  |  |  |  |  |  |  |
| **IUniswapV2Factory** | Interface | | | |
|  | feeTo | External | ! | | NO ! |
|  | feeToSetter | External | ! | | NO ! |
|  | getPair | External | ! | | NO ! |
|  | allPairs | External | ! | | NO ! |
|  | allPairsLength | External | ! | | NO ! |
|  | createPair | External | ! | ● | NO ! |
|  | setFeeTo | External | ! | ● | NO ! |
|  | setFeeToSetter | External | ! | ● | NO ! |
|  |  |  |  |  |  |  |
| **IUniswapV2Pair** | Interface | | | |
|  | name | External | ! | | NO ! |
|  | symbol | External | ! | | NO ! |
|  | decimals | External | ! | | NO ! |
|  | totalSupply | External | ! | | NO ! |
|  | balanceOf | External | ! | | NO ! |
|  | allowance | External | ! | | NO ! |
|  | approve | External | ! | ● | NO ! |
|  | transfer | External | ! | ● | NO ! |
|  | transferFrom | External | ! | ● | NO ! |
|  | DOMAIN_SEPARATOR | External | ! | | NO ! |
|  | PERMIT_TYPEHASH | External | ! | | NO ! |
|  | nonces | External | ! | | NO ! |
|  | permit | External | ! | ● | NO ! |
|  | MINIMUM_LIQUIDITY | External | ! | | NO ! |
|  | factory | External | ! | | NO ! |
|  | token0 | External | ! | | NO ! |
|  | token1 | External | ! | | NO ! |
|  | getReserves | External | ! | | NO ! |
|  | price0CumulativeLast | External | ! | | NO ! |
|  | price1CumulativeLast | External | ! | | NO ! |
|  | kLast | External | ! | | NO ! |
|  | mint | External | ! | ● | NO ! |
|  | burn | External | ! | ● | NO ! |
|  | swap | External | ! | ● | NO ! |
|  | skim | External | ! | ● | NO ! |
|  | sync | External | ! | ● | NO ! |
|  | initialize | External | ! | ● | NO ! |
|  |  |  |  |  |  |  |
```

CONTRACT ASSESMENT

```

| **IUniswapV2Router01** | Interface | |||
|  | factory | External ! | | NO ! |
|  | WETH | External ! | | NO ! |
|  | addLiquidity | External ! | ● | NO ! |
|  | addLiquidityETH | External ! | $ | NO ! |
|  | removeLiquidity | External ! | ● | NO ! |
|  | removeLiquidityETH | External ! | ● | NO ! |
|  | removeLiquidityWithPermit | External ! | ● | NO ! |
|  | removeLiquidityETHWithPermit | External ! | ● | NO ! |
|  | swapExactTokensForTokens | External ! | ● | NO ! |
|  | swapTokensForExactTokens | External ! | ● | NO ! |
|  | swapExactETHForTokens | External ! | $ | NO ! |
|  | swapTokensForExactETH | External ! | ● | NO ! |
|  | swapExactTokensForETH | External ! | ● | NO ! |
|  | swapETHForExactTokens | External ! | $ | NO ! |
|  | quote | External ! | | NO ! |
|  | getAmountOut | External ! | | NO ! |
|  | getAmountIn | External ! | | NO ! |
|  | getAmountsOut | External ! | | NO ! |
|  | getAmountsIn | External ! | | NO ! |
|||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |||
|  | removeLiquidityETHSupportingFeeOnTransferTokens | External ! | ● | NO ! |
|  | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ! | ● | NO ! |
|  | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ! | ● | NO ! |
|  | swapExactETHForTokensSupportingFeeOnTransferTokens | External ! | $ | NO ! |
|  | swapExactTokensForETHSupportingFeeOnTransferTokens | External ! | ● | NO ! |
|||||
| **IERC20** | Interface | |||
|  | totalSupply | External ! | | NO ! |
|  | balanceOf | External ! | | NO ! |
|  | allowance | External ! | | NO ! |
|  | transfer | External ! | ● | NO ! |
|  | approve | External ! | ● | NO ! |
|  | transferFrom | External ! | ● | NO ! |
|||||
| **Address** | Library | |||
|  | isContract | Internal 🔒 | | |
|  | sendValue | Internal 🔒 | ● | |
|  | functionCall | Internal 🔒 | ● | |
|  | functionCall | Internal 🔒 | ● | |

```



CONTRACT ASSESMENT

```
|  | functionCallWithValue | Internal | | | |
|  | functionCallWithValue | Internal | | |
|  | _functionCallWithValue | Private | | |
|  |  |  |  |  |
| **IERC20Metadata** | Interface | IERC20 | | |
|  | name | External | | |NO |
|  | symbol | External | | |NO |
|  | decimals | External | | |NO |
|  |  |  |  |  |
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata | | |
|  | <Constructor> | 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 |
|  | _transfer | Internal | | |
|  | _mint | Internal | | |
|  | _burn | Internal | | |
|  | _approve | Internal | | |
|  | _beforeTokenTransfer | Internal | | |
|  |  |  |  |  |
| **DividendPayingTokenInterface** | Interface | | | |
|  | dividendOf | External | | |NO |
|  | withdrawDividend | External | | |NO |
|  |  |  |  |  |
| **DividendPayingTokenOptionalInterface** | Interface | | | |
|  | withdrawableDividendOf | External | | |NO |
|  | withdrawnDividendOf | External | | |NO |
|  | accumulativeDividendOf | External | | |NO |
|  |  |  |  |  |
| **DividendPayingToken** | Implementation | ERC20, Ownable, DividendPayingTokenInterface,
DividendPayingTokenOptionalInterface | | |
|  | <Constructor> | Public | | |ERC20 |
|  | distributeDividends | Public | | |onlyOwner |
|  | withdrawDividend | Public | | |NO |
```

CONTRACT ASSESMENT

```

|  |  | _withdrawDividendOfUser | Internal | 🔒 | ● |  |  | |
|  |  | dividendOf | Public | ! |  | |NO | ! |
|  |  | withdrawableDividendOf | Public | ! |  | |NO | ! |
|  |  | withdrawnDividendOf | Public | ! |  | |NO | ! |
|  |  | accumulativeDividendOf | Public | ! |  | |NO | ! |
|  |  | _transfer | Internal | 🔒 | ● |  |  |
|  |  | _mint | Internal | 🔒 | ● |  |  |
|  |  | _burn | Internal | 🔒 | ● |  |  |
|  |  | _setBalance | Internal | 🔒 | ● |  |  |
|  |  |  |  |  |  |  |  |
|  |  | **DividendTracker** | Implementation | Ownable, DividendPayingToken |  |  |
|  |  | <Constructor> | Public | ! | ● | DividendPayingToken |
|  |  | <Receive Ether> | External | ! | 💰 |NO | ! |
|  |  | _transfer | Internal | 🔒 |  |  |  |
|  |  | withdrawDividend | Public | ! |  | |NO | ! |
|  |  | updateMinimumTokenBalanceForDividends | External | ! | ● | onlyOwner |
|  |  | excludeFromDividends | External | ! | ● | onlyOwner |
|  |  | updateClaimWait | External | ! | ● | onlyOwner |
|  |  | setLastProcessedIndex | External | ! | ● | onlyOwner |
|  |  | getLastProcessedIndex | External | ! |  | |NO | ! |
|  |  | getNumberOfTokenHolders | External | ! |  | |NO | ! |
|  |  | getAccount | Public | ! |  | |NO | ! |
|  |  | getAccountAtIndex | Public | ! |  | |NO | ! |
|  |  | canAutoClaim | Private | 🔒 |  |  |  |
|  |  | setBalance | External | ! | ● | onlyOwner |
|  |  | process | Public | ! | ● |NO | ! |
|  |  | processAccount | Public | ! | ● | onlyOwner |
|  |  |  |  |  |  |  |  |
|  |  | **SBFCEO** | Implementation | ERC20, Ownable |  |  |
|  |  | <Constructor> | Public | ! | ● | ERC20 |
|  |  | <Receive Ether> | External | ! | 💰 |NO | ! |
|  |  | claimStuckTokens | External | ! | ● | onlyOwner |
|  |  | excludeFromFees | External | ! | ● | onlyOwner |
|  |  | isExcludedFromFees | Public | ! |  | |NO | ! |
|  |  | changeMarketingWallet | External | ! | ● | onlyOwner |
|  |  | _transfer | Internal | 🔒 | ● |  |  |
|  |  | swapAndSendDividends | Private | 🔒 | ● |  |  |
|  |  | setSwapEnabled | External | ! | ● | onlyOwner |
|  |  | setSwapTokensAtAmount | External | ! | ● | onlyOwner |
|  |  | updateGasForProcessing | Public | ! | ● | onlyOwner |
|  |  | updateMinimumBalanceForDividends | External | ! | ● | onlyOwner |


```



CONTRACT ASSESMENT

^L	updateClaimWait	External !	●	onlyOwner
^L	getClaimWait	External !		NO !
^L	getTotalDividendsDistributed	External !		NO !
^L	withdrawableDividendOf	Public !		NO !
^L	dividendTokenBalanceOf	Public !		NO !
^L	totalRewardsEarned	Public !		NO !
^L	excludeFromDividends	External !	●	onlyOwner
^L	isExcludedFromDividends	Public !		NO !
^L	getAccountDividendsInfo	External !		NO !
^L	getAccountDividendsInfoAtIndex	External !		NO !
^L	processDividendTracker	External !	●	NO !
^L	claim	External !	●	NO !
^L	claimAddress	External !	●	onlyOwner
^L	getLastProcessedIndex	External !		NO !
^L	setLastProcessedIndex	External !	●	onlyOwner
^L	getNumberOfDividendTokenHolders	External !		NO !

Legend

Symbol	Meaning
●	Function can modify state
	Function is payable



STATIC ANALYSIS

```
Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#303) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#305) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#336) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Token.sol#378) is not in mixedCase
Parameter DividendPayingToken.dividendOf(address). owner (contracts/Token.sol#958) is not in mixedCase
Parameter DividendPayingToken.withdrawableDividendOf(address). owner (contracts/Token.sol#963) is not in mixedCase
Parameter DividendPayingToken.withdrawnDividendOf(address). owner (contracts/Token.sol#969) is not in mixedCase
Parameter DividendPayingToken.accumulativeDividendOf(address). owner (contracts/Token.sol#975) is not in mixedCase
Constant DividendPayingToken.magnitude (contracts/Token.sol#980) is not in UPPER_CASE_WITH_UNDERSCORES
Parameter DividendTracker.updateMinimumTokenBalanceForDividends(uint256). newMinimumBalance (contracts/Token.sol#1076) is not in mixedCase
Parameter DividendTracker.getAccount(address). account (contracts/Token.sol#1121) is not in mixedCase
Parameter MinnieInu.changeMarketingWallet(address). marketingWallet (contracts/Token.sol#1440) is not in mixedCase
Parameter MinnieInu.setSwapEnabled(bool). enabled (contracts/Token.sol#1574) is not in mixedCase
Variable MinnieInu.DEAD (contracts/Token.sol#1313) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#383) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#384)
Variable DividendPayingToken.withdrawDividendOfUser(address). withdrawableDividend (contracts/Token.sol#937) is too similar to DividendTracker.getAccount(address).withdrawableDividends (contracts/Token.sol#1129)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

MinnieInu.setSwapTokensAtAmount(uint256) (contracts/Token.sol#1579-1586) uses literals with too many digits:
- require(bool,string)(newAmount > totalSupply() / 100000,SwapTokensAtAmount must be greater than 0.001% of total supply) (contracts/Token.sol#1580-1583)
MinnieInu.updateGasForProcessing(uint256) (contracts/Token.sol#1588-1599) uses literals with too many digits:
- require(bool,string)(newValue >= 200000 && newValue <= 500000,gasForProcessing must be between 200,000 and 500,000) (contracts/Token.sol#1589-1592)
MinnieInu.slitherConstructorVariables() (contracts/Token.sol#1295-1720) uses literals with too many digits:
- gasForProcessing = 300000 (contracts/Token.sol#1326)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

SafeMathInt.MAX_INT256 (contracts/Token.sol#125) is never used in SafeMathInt (contracts/Token.sol#123-165)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

ERC20.antiBotEnabled (contracts/Token.sol#711) should be constant
MinnieInu.DEAD (contracts/Token.sol#1313) should be constant
MinnieInu._totalFeesOnBuy (contracts/Token.sol#1305) should be constant
MinnieInu._totalFeesOnSell (contracts/Token.sol#1306) should be constant
MinnieInu.marketingFeeOnBuy (contracts/Token.sol#1302) should be constant
MinnieInu.marketingFeeOnSell (contracts/Token.sol#1303) should be constant
MinnieInu.rewardFeeOnBuy (contracts/Token.sol#1299) should be constant
MinnieInu.rewardFeeOnSell (contracts/Token.sol#1300) should be constant
MinnieInu.rewardToken (contracts/Token.sol#1325) should be constant
MinnieInu.swapWithLimit (contracts/Token.sol#1318) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant

MinnieInu.dividendTracker (contracts/Token.sol#1324) should be immutable
MinnieInu.uniswapV2Pair (contracts/Token.sol#1311) should be immutable
MinnieInu.uniswapV2Router (contracts/Token.sol#1310) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output



FUNCTIONAL TESTING

1- Adding liquidity (passed):

<https://testnet.bscscan.com/tx/0xa6c447e00b09d9dd42c5ea8ea8ae0eeecb78f84c546b533638cea5413d437eb3>

2- Buying when excluded from fees (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x3b3b7a95dab7d074abc09d545e7fbfcefc838d7b0448973e91c9a5eef1522f29>

3- Selling when excluded from fees (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x3b3b7a95dab7d074abc09d545e7fbfcefc838d7b0448973e91c9a5eef1522f29>

4- Transferring when excluded from fees (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xd2edaf2699a4c8d15eb8c78f3c4c0e32404bd6fcdd24ec90bdab8b15982852f0>

5- Buying when not excluded from fees (7% tax) (passed):

<https://testnet.bscscan.com/tx/0x35259771aedcfefa388ff552b2c4d28ba0503aa8aabb11edd1d644d55c8bc034>

6- Selling when not excluded from fees (7% tax) (passed):

<https://testnet.bscscan.com/tx/0xf9f1c55aa3426fc9425410d60c723bb82200dc42b98b3a10422fb5dd58d6701>



FUNCTIONAL TESTING

7- Transferring when not excluded from fees (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x31f3dece22d567b0ddb4474280a8742773108a614f4de83602b7644c441e3015>

8- Internal swap (passed):

Marketing wallet received BNB

<https://testnet.bscscan.com/tx/0xf9f1c55aa3426fc9425410d60c723bb82200dc42b98b3a10422fb5dd58d6701>



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