



**NYAN CAT**  
**Code Review**

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**GEMZ "LITE"**  
**SECURITY**  
**AUDIT**  
**PREPARED ON**  
**3-28-2021**



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# Summary

What follows is a “lite security report” of the NCAT project.

The information appearing in this report is for general purposes only and **is not intended to provide any legal security guarantees to any individual or entity**. It is advisable to **conduct more reviews or/and audits** as just one review or audit may miss important issues.

The report **does not provide personalized investment advice or recommendations**, nor does it provide advice to perform any transactions and it **does not provide investment, financial, legal, or tax advice**. We are not responsible or liable for any loss which results from the report. **The report should not be considered as investment advice.**

# Report

## NyanCatToken (NCAT)



Contract: [0x0cf011a946f23a03ceff92a4632d5f9288c6c70d](#)

This contract is a fork of [RFI](#), with some modifications of features made.

### Token Supply

The total supply of NCAT is 1,000,000,000,000,000. The number of decimal places is 9, which is the same as RFI.

### Transfer Maximum Size

There is a maximum amount per transaction, originally set to 5,000,000,000,000 NCAT, and then currently set to 10,000,000,000,000 NCAT. If a transfer greater than this amount is made, and the sender or recipient is not the owner address of the NCAT contract, the transaction will revert and not successfully complete.

### Transfer Fees

Besides the reflection fee, there is also a liquidity fee. 4% is reflected, 5% is converted into liquidity.

When a token transfer is done, it is not in `_isExcludedFromFee`. It will do the following to deduct fees calculated:

`_takeLiquidity`  
`_reflectFee`

If the to or from address for that transfer is whitelisted in `_isExcludedFromFee`, there will be no fees charged for that transaction.

The adding of liquidity fees to the Pancakeswap NCAT/WBNB liquidity is only done in a transfer when the NCAT contract's balance of NCAT is greater than or equals to 5,000,000,000,000 NCAT. The amount used for the liquidity will be 5,000,000,000,000 NCAT.

In the `swapAndLiquify` function, half of the NCAT tokens will be swapped for BNB, and this BNB and the remaining NCAT will then be used to provide liquidity. The LP token will be sent to the owner of the NCAT contract.

## Contract Ownership

The owner of the NCAT contract has been renounced to 0x00. This is done in this transaction

[0xcb72aa0c0776ce40ab2b22fea8888b77244465d4f4cf29f7d2ac501be89d211e](https://etherscan.io/tx/0xcb72aa0c0776ce40ab2b22fea8888b77244465d4f4cf29f7d2ac501be89d211e).

The following onlyOwner functions can no longer be called:

- renounceOwnership()
- transferOwnership(address newOwner)
- lock(uint256 time)
- excludeFromReward(address account)
- includeInReward(address account)
- excludeFromFee(address account)
- includeInFee(address account)
- setTaxFeePercent(uint256 taxFee)
- setLiquidityFeePercent(uint256 liquidityFee)
- setMaxTxPercent(uint256 maxTxPercent)
- setSwapAndLiquifyEnabled(bool \_enabled)

As the current owner is 0x0, this also means that all liquidity pool tokens provided by the liquidity fee are all sent to the burn address, effectively locking the liquidity. No one is able to recover tokens from this burn address.

# Issues

Rated on a scale of: **Infomational**, **Low**, **Medium**, **High**, **Critical**

**NCT-001:** NCAT contract deployer is excluded from fees

**Severity:** **Low**

When the contract is created, the owner address is added to the `_isExcludedFromFee` mapping. The original NCAT contract owner address can be confirmed from the transaction

[0xdf79bab7876b643163ab359f32c456fcacc6f27d142481401f85550fb65fa7eb](#), which is [0x97224d0a6d7b33e3a0b855b5277b04bc8a8c1ed8](#). By querying this address in `isExcludedFromFee`, it returns true, confirming that transfers to and from this address will not be subjected to fees.

8. `isExcludedFromFee`

account (address)

`0x97224d0a6d7b33e3a0b855b5277b04bc8a8c1ed8`

Query

↳ `bool`

[ `isExcludedFromFee` method Response ]

➤ `bool: true`

As this address is an externally owned address, the wallet owner will be able to make transfers and trade NCAT tokens without any fees.


## Recommendations:

Set the contract deployer address in `_isExcludedFromFee` to false.

Note: As the token ownership has renounced, there is no way to include this address to be subjected to fees. No further action can be taken.

## Response from NCAT Team:

The deployer burned all the team tokens in multiple transactions and will not be trading NCAT.

Rank	Address	Quantity	Percentage	Analytics
1	0x86b695aaa2600668cec754c7827357626b188054	43,597,009,081,170.1	<div><div>4.3597%</div></div>	<a href="#">🔗</a>
2	 PancakeSwap: NCAT	35,806,158,341,848.2	<div><div>3.5806%</div></div>	<a href="#">🔗</a>
3	0x290420874bf65691b98b67d042c06bbc31f85f11	34,375,517,055,325.1	<div><div>3.4376%</div></div>	<a href="#">🔗</a>
4	0xde655d29a0098cbc2c80945f0f1338d43a4779a1	32,946,500,015,748.7	<div><div>3.2947%</div></div>	<a href="#">🔗</a>
5	0x46775b2583502dbe0f594c725c5944543f19682b	32,857,647,217,824.4	<div><div>3.2858%</div></div>	<a href="#">🔗</a>
6	0x6ada527abc5754c8e60ccce37d4b97fb424522e1	32,501,998,359,762.9	<div><div>3.2502%</div></div>	<a href="#">🔗</a>
7	0xb565ea05aba01ea9015ff65432fdc775cd2fef0f	32,500,000,000,000	<div><div>3.2500%</div></div>	<a href="#">🔗</a>
8	0xe414a701d3206a0cbab8c7ff96798926d53e3892	32,500,000,000,000	<div><div>3.2500%</div></div>	<a href="#">🔗</a>
9	0x09622b15409c17f93a2ab5407c9e2d5a4cd26cb5	32,500,000,000,000	<div><div>3.2500%</div></div>	<a href="#">🔗</a>
10	0xc1dd11527c478024371b556c7c2a8c91aed015a8	32,500,000,000,000	<div><div>3.2500%</div></div>	<a href="#">🔗</a>
11	0x511411d1a19be5259694b06f403c83f21a10258b	32,158,676,705,288.4	<div><div>3.2159%</div></div>	<a href="#">🔗</a>
12	0x0000000000000000000000000000000000000001	30,893,490,772,787.9	<div><div>3.0893%</div></div>	<a href="#">🔗</a>
13	0x14627e4b95d1e165480a6f23a3d712c46e9a2136	30,604,315,399,711.5	<div><div>3.0604%</div></div>	<a href="#">🔗</a>
14	0xd1a896e3e11585d29f73bdd6e0b6695b181aeb84	30,564,368,083,180.1	<div><div>3.0564%</div></div>	<a href="#">🔗</a>
15	0x488d789771a78213047c056355ca44e8a90484d3	30,251,538,177,454.8	<div><div>3.0252%</div></div>	<a href="#">🔗</a>
16	0x8f70b3ac45a6896532fb90b992d5b7827ba88d3c	29,998,791,281,501.8	<div><div>2.9999%</div></div>	<a href="#">🔗</a>
17	0x6aa5662c9cc6807230b248ee6f07b4dcab525569	29,613,188,666,597.2	<div><div>2.9613%</div></div>	<a href="#">🔗</a>

**NCT-002:** Lack of events for functions that change sensitive variables

**Severity:** **Informational**

Functions that affect the status of sensitive variables such as whitelists and fee percentages should emit events as notifications.

**Recommendations:**

Add events for the setter functions which modify sensitive state variables.

Note: As the contract is already deployed on mainnet, code changes cannot be made.

# Smart Contract Risk Factors

Users should note that fees will be deducted from every NCAT token transfer, i.e. swap.

When swapping NCAT, due to the fees, the user will have to set a slippage percentage that is higher than the total fee percentage (9%), or will not be able to successfully make the swap.

As mentioned in NCT-001, the contract deployer may abuse the status of not being subjected to fees.

## RECOMMENDATIONS

There are no recommendations to be made as the ownership has already been renounced, and thus does not allow for any of the sensitive variable changes to be made.

