

# Smart Contract Audit

**FOR** 

# BabyApeCoin

DATED: 09 November 23'



Centralization - Owner can blacklist wallets.

Severity: High

function: blacklist

Status: Open

### Overview:

The owner can blacklist wallets from transferring tokens for an indefinite period of time which is not recommended. Which can lock the user's token.

```
function blacklist(address account, bool isBlacklisted)
external onlyOwner {
   blacklisted[account] = isBlacklisted;
   emit BlacklistUpdated(account, isBlacklisted);
}
```

### Suggestion:

There should be a locking period so that the wallet cannot be locked for an indefinite Period of time.



## **AUDIT SUMMARY**

Project name - BabyApeCoin

Date: 09 November 2023

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

**Audit Status: Passed with High risk** 

### **Issues Found**

| Status       | Critical | High | Medium | Low | Suggestion |
|--------------|----------|------|--------|-----|------------|
| Open         | 0        | 1    | 0      | 2   | 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:**

The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:

https://testnet.bscscan.com/address/0x2e57b29f5e141b1b546fe0023de7f90e592a6a45#code



# **Token Information**

**Token Address: -**

0xF80FcfaD81bFC386CE5E6515267D4a2001aFE02c

Name: BabyApeCoin

Symbol: BABYAPE

Decimals: 18

**Network: ETH** 

Token Type: ERC20

Owner: - 0xdda9111d3E9ad58e6f74BCa014998A62cB36178b

Deployer: -

0xdda9111d3E9ad58e6f74BCa014998A62cB36178b

**Token Supply: 100000000** 

Checksum: e1d0e4f3ac5d6777fbd4657945e19e43

#### **Testnet version:**

The tests were performed using the contract deployed on the Binance smart chain Testnet, which can be found at the following address:

 $\frac{https://testnet.bscscan.com/address/0x2e57b29f5e141b1b546}{fe0023de7f90e592a6a45\#code}$ 



# TOKEN OVERVIEW

**buy fee: 25%** 

Sell fee: 25%

transfer fee: 25%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max wallet: Yes

Max Trx: Yes

Blacklist: No

### Other Privileges:

- Initial distribution of the tokens
- Modifying fees
- Enabling trades
- -bulk exempts fee
- -Modify amm, router,

Liquidity is doing to owner wallet



# **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-byline 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 isexercised 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**





# **CLASSIFICATION OF RISK**

### Severity

- Critical
- High-Risk
- Medium-Risk
- Low-Risk
- Gas Optimization/Suggestion

### **Description**

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

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

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

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

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

### **Findings**

| Severity   | Found |
|--|-------|
| ◆ Critical   | 0     |
| ◆ High-Risk  | 1     |
| ◆ Medium-Risk  | 0     |
| ♦ Low-Risk   | 2     |
| <ul><li>Gas Optimization /</li><li>Suggestions</li></ul> | 0     |



### **POINTS TO NOTE**

- Owner can renounce the ownership.
- Owner can transfer the ownership.
- Owner can exclude wallets from fees.
- Owner can enable trading.
- Owner can pause trading.
- Owner can blacklist wallets.
- Owner can set update threshold.
- Owner can set AMMpair.



### STATIC ANALYSIS

```
IMFO:Detectors:
Context._msgData() (BabyApeCoin.sol#151-153) is never used and should be removed
Reference: https://github.com/crytic/slither/miki/Detector-Documentation#dead-code
IMFO:Detectors:
Pragma version6.8.19 (BabyApeCoin.sol#18) necessitates a version too recent to be trusted. Consider deploying with 8.8.18.
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/miki/Detector-Documentation#incorrect-versions-of-solidity
IMFO:Detectors:
Function IUniswapy2Pair.DOMAIN.SEPARATOR() (BabyApeCoin.sol#715) is not in mixedCase
Function IUniswapy2Pair.PERMIT_TYPEHASH() (BabyApeCoin.sol#716) is not in mixedCase
Function IUniswapy2Pair.MINIMUM_LIQUIDITY() (BabyApeCoin.sol#733) is not in mixedCase
Function IUniswapy2Pair.MINIMUM_LIQUIDITY() (BabyApeCoin.sol#733) is not in mixedCase
Function IUniswapy2Pair.METH() (BabyApeCoin.sol#733) is not in mixedCase
Event BabyApeCoin.marketingAddressUpdated(address) (BabyApeCoin.sol#918) is not in CapWords
Event BabyApeCoin.marketingFeesUpdated(uint16,uint16, uint16) (BabyApeCoin.sol#919) is not in CapWords
Event BabyApeCoin.marketingFeesUpdatedCuint16,uint16,uint16) (BabyApeCoin.sol#98) is not in mixedCase
Parameter BabyApeCoin.initialize(address)._router (BabyApeCoin.sol#980) is not in mixedCase
Parameter BabyApeCoin.marketingFeesSetup(uint16,uint16,uint16)._buyFee (BabyApeCoin.sol#980) is not in mixedCase
Parameter BabyApeCoin.marketingFeesSetup(uint16,uint16,uint16)._buyFee (BabyApeCoin.sol#1005) is not in mixedCase
Parameter BabyApeCoin.marketingFeesSetup(uint16,uint16,uint16)._rransferFee (BabyApeCoin.sol#1005) is not in mixedCase
Parameter BabyApeCoin.AMMPariar (BabyApeCoin.sol#1005)
```

```
INFO:Detectors:

Reentrancy in BabyApeCoin._transfer(address_address_uint256) (BabyApeCoin.sol81022-1082):

External calls:

- success = address(marketingAddress).send(marketingPortion) (BabyApeCoin.sol81068)
State variables written after the call(s):

- super._transfer(from_to_amount) (BabyApeCoin.sol8208)

- __balances(from) = fromBalance = amount (BabyApeCoin.sol8377)

__balances(from) = fromBalance = amount (BabyApeCoin.sol8377)

- _amarketingApeCoin.gol82 (BabyApeCoin.sol8208)

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- _sampingApecoin.gol82 (BabyApeCoin.sol8208)

- marketingApeCoin.gol82 (BabyApeCoin.sol8208)

- marketingAppCoin.gol82 (BabyAppCoin.sol8208)

- marketingAppCoin.gol8
```

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- Approve (passed):

https://testnet.bscscan.com/tx/0x4f6e66277c5e25870375f773090f11b696b8 5528c1d76662245a9a87d17470f6

#### 2- Increase Allowance (passed):

https://testnet.bscscan.com/tx/0x483434bd41a9aaf70533545e2db7961105a 9bea47f93b61d0bc7e1953250f745

#### 3- Decrease Allowance (passed):

https://testnet.bscscan.com/tx/0x35e7551225512f1401192edb36714372ee81cd4595ca086a629c3475592e433d

#### 4- Burn From(passed):

https://testnet.bscscan.com/tx/0x71cacfadd9fba906be3bf417f1c3d3ed06be5 0f9e390318cfec2a28be7aa6f64

### 5- Burn (passed):

https://testnet.bscscan.com/tx/0xfdc3a7a0b9226e16a077c2a012e19e83ef97c 7c3f15db578c37e26e8e96dd999



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}
```

### Suggestion:

There should be a locking period so that the wallet cannot be locked for an indefinite Period of time.



### **Centralization - Missing Zero Address**

Severity: Low

function: excludeFromLimits

Status: Open

### Overview:

functions can take a zero address as a parameter (0x00000...). If a function parameter of address type is not properly validated by checking for zero addresses, there could be serious consequences for the contract's functionality.

```
function excludeFromLimits(address account, bool
isExcluded) external onlyOwner {
   _excludeFromLimits(account, isExcluded);
}
```

### Suggestion:

It is suggested that the address should not be zero or dead.



**Severity: Low** 

subject: Missing Events

Status: Open

#### Overview:

They serve as a mechanism for emitting and recording data onto the blockchain, making it transparent and easily accessible.

function setAMMPair(address pair, bool isPair) external onlyOwner {

require(pair != pairV2, "DefaultRouter: Cannot remove
initial pair from list");

```
_setAMMPair(pair, isPair);
}
```

### Suggestion:

Add an event to these important functions where address updation is happening. This can also be marked as an indexed event for better off-chain tracking.



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