

# **HEGUNINJA** **AUDITS**



Security Assessment

**Best Ever APY Token**

April 20, 2022

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# Audit Summary

This report has been prepared for Best Ever APY Token on the Binance Smart Chain network. CFGNINJA provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.



# Project Overview

## Token Summary

| Parameter     | Result  |
|---------------|---|
| Address       | 0xAD8ff5a33ea308068Eb938e99f0d8e7342FD9C22  |
| Name          | Best Ever APY   |
| Token Tracker | Best Ever APY (BESTAPY)   |
| Decimals      | 5   |
| Supply        | 1,000,000,000,000   |
| Platform      | Binance Smart Chain   |
| compiler      | v0.8.13+commit.abaa5c0e   |
| Contract Name | BESTAPY   |
| Optimization  | Yes with 200 runs   |
| LicenseType   | Unlicense   |
| Language      | Solidity  |
| Codebase      | <a href="https://bscscan.com/address/0xAD8ff5a33ea308068Eb938e99f0d8e7342FD9C22#code">https://bscscan.com/address/0xAD8ff5a33ea308068Eb938e99f0d8e7342FD9C22#code</a> |
| Url           | <a href="https://besteverapy.com">https://besteverapy.com</a>   |



## Main Contract Assessed

### Contract Name

| Name          | Contract                                   | Live |
|---------------|--|------|
| Best Ever APY | 0xAD8ff5a33ea308068Eb938e99f0d8e7342FD9C22 | Yes  |

## TestNet Contract Assessed

### Contract Name

| Name          | Contract                                   | Live |
|---------------|--|------|
| Best Ever APY | 0xe5750947a873350e55521510d969ed4423b97f88 | Yes  |

## Solidity Code Provided

| SolID   | FileNameMD5                              | FileName    |
|---------|--|-------------|
| BESTAPY | ee319ccb409809796f99b1e84da63f144a71f212 | BESTAPY.sol |



# Smart Contract Vulnerability Checks

| Vulnerability   | Automatic Scan | Manual Scan | Result        |
|---|----------------|-------------|---------------|
| Unencrypted Private Data On-Chain                       | Complete       | Complete    | Low / No Risk |
| Code With No Effects                                    | Complete       | Complete    | Low / No Risk |
| Message call with hardcoded gas amount                  | Complete       | Complete    | Low / No Risk |
| Hash Collisions With Multiple Variable Length Arguments | Complete       | Complete    | Low / No Risk |
| Unexpected Ether balance                                | Complete       | Complete    | Low / No Risk |
| Presence of unused variables                            | Complete       | Complete    | Low / No Risk |
| Right-To-Left-Override control character (U+202E)       | Complete       | Complete    | Low / No Risk |
| Typographical Error                                     | Complete       | Complete    | Low / No Risk |
| DoS With Block Gas Limit                                | Complete       | Complete    | Low / No Risk |
| Arbitrary Jump with Function Type Variable              | Complete       | Complete    | Low / No Risk |
| Insufficient Gas Griefing                               | Complete       | Complete    | Low / No Risk |
| Incorrect Inheritance Order                             | Complete       | Complete    | Low / No Risk |
| Write to Arbitrary Storage Location                     | Complete       | Complete    | Low / No Risk |
| Requirement Violation                                   | Complete       | Complete    | Low / No Risk |
| Missing Protection against Signature Replay Attacks     | Complete       | Complete    | Low / No Risk |



# Mint Check

The Project Owners of Best Ever APY does not have a mint function in the contract,  
owner cannot mint tokens after initial deploy

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The Project has a Total Supply of 1,000,000,000,000 and cannot mint any more than the  
Max Supply.



**Owner can't mint new coins**



# Fees Check

The Project Owners of Best Ever APY does not have the ability to set fees higher than 25% .

Team May have fees defined, however they dont have the ability to set those fees higher than 25%.

 Fees can be changed up to a maximum of 25%



# MaxTx Check

The Project Owners of Best Ever APY does not have the ability to set max tx amount

The Team allows any investors to swap, transfer or sell their total amount if needed.

**Project Has No MaxTX**



# Pause Trade Check

The Project Owners of Best Ever APY Owner can pause trading but he can't move tokens  
(Owner can't pause trading)

The Team has done a great job to avoid stop trading, and investors has the ability to trade at any given time without any problems

**Pause Trade Notes:**

**Auditor Notes:** This is a Rebase Token.

**Project Owner Notes:** Project Owners Ack



# Contract Ownership

The contract ownership of Best Ever APY is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

The current owner is the address  
0x07cD2c89540F5703346d0a0749DEC840c3D79206 which can be viewed from:  
[HERE](#)

The owner wallet has the power to call the functions displayed on the privileged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

We recommend the team to use a Multisignature Wallet if contract is not going to be renounced, this will give the ability to the team to have more control over the contract.

# Liquidity Ownership

The token does not have liquidity at the moment of the audit, block  
15710486



# KYC Information

The Project Owners of Best Ever APY is not KYC.. .

The owner wallet has the power to call the functions displayed on the privileged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

## KYC Information Notes:

**Auditor Notes:** Asked project owner about KYC.

**Project Owner Notes:** Project owner confirmed will be doing KYC with Pinksale.



# Mythx Security Summary Checks

| ID      | Severity | Name  | File           | location     |
|---------|----------|---|----------------|--------------|
| SWC-100 | Pass     | Function .  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-101 | Pass     | Integer Overflow and Underflow.                   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-102 | Pass     | Outdated Compiler Version file.                   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-103 | Low      | A floating pragma is set.                         | BESTAPY.so<br> | L: 22 C: 0   |
| SWC-104 | Pass     | Unchecked Call Return Value.                      | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-105 | Pass     | Unprotected Ether Withdrawal.                     | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-106 | Pass     | Unprotected SELFDESTRUCT Instruction              | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-107 | PASS     | Read of persistent state following external call. | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-108 | Pass     | State variable visibility is not set..            | BESTAPY.so<br> | L: 438 C: 29 |
| SWC-108 | Pass     | State variable visibility is not set.             | BESTAPY.so<br> | L: 466 C: 12 |
| SWC-108 | Pass     | State variable visibility is not set.             | BESTAPY.so<br> | L: 467 C: 12 |
| SWC-108 | Pass     | State variable visibility is not set.             | BESTAPY.so<br> | L: 468 C: 12 |
| SWC-109 | Pass     | Uninitialized Storage Pointer.                    | BESTAPY.so<br> | L: 0 C: 0    |



| ID      | Severity | Name   | File           | location     |
|---------|----------|--|----------------|--------------|
| SWC-110 | Pass     | Assert Violation.  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-111 | Pass     | Use of Deprecated Solidity Functions.  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-112 | Pass     | Delegate Call to Untrusted Callee.   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-113 | Pass     | Multiple calls are executed in the same transaction.                               | BESTAPY.so<br> | L: 1180 C: 8 |
| SWC-114 | Pass     | Transaction Order Dependence.  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-115 | Pass     | Authorization through tx.origin.   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-116 | Pass     | A control flow decision is made based on The block.timestamp environment variable. | BESTAPY.so<br> | L: 1205 C: 8 |
| SWC-117 | Pass     | Signature Malleability.  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-118 | Pass     | Incorrect Constructor Name.  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-119 | Pass     | Shadowing State Variables.   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-120 | Pass     | Weak Sources of Randomness from Chain Attributes.                                  | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-121 | Pass     | Missing Protection against Signature Replay Attacks.                               | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-122 | Pass     | Lack of Proper Signature Verification.   | BESTAPY.so<br> | L: 0 C: 0    |
| SWC-123 | Pass     | Requirement Violation.   | BESTAPY.so<br> | L: 0 C: 0    |



| ID      | Severity | Name   | File       | location  |
|---------|----------|--|------------|-----------|
| SWC-124 | Pass     | Write to Arbitrary Storage Location.                     | BESTAPY.so | L: 0 C: 0 |
| SWC-125 | Pass     | Incorrect Inheritance Order.                             | BESTAPY.so | L: 0 C: 0 |
| SWC-126 | Pass     | Insufficient Gas Griefing.                               | BESTAPY.so | L: 0 C: 0 |
| SWC-127 | Pass     | Arbitrary Jump with Function Type Variable.              | BESTAPY.so | L: 0 C: 0 |
| SWC-128 | Pass     | DoS With Block Gas Limit.                                | BESTAPY.so | L: 0 C: 0 |
| SWC-129 | Pass     | Typographical Error.                                     | BESTAPY.so | L: 0 C: 0 |
| SWC-130 | Pass     | Right-To-Left-Override control character (U+202E).       | BESTAPY.so | L: 0 C: 0 |
| SWC-131 | Pass     | Presence of unused variables.                            | BESTAPY.so | L: 0 C: 0 |
| SWC-132 | Pass     | Unexpected Ether balance.                                | BESTAPY.so | L: 0 C: 0 |
| SWC-133 | Pass     | Hash Collisions with Multiple Variable Length Arguments. | BESTAPY.so | L: 0 C: 0 |
| SWC-134 | Pass     | Message call with hardcoded gas amount.                  | BESTAPY.so | L: 0 C: 0 |
| SWC-135 | Pass     | Code With No Effects (Irrelevant/Dead Code).             | BESTAPY.so | L: 0 C: 0 |
| SWC-136 | Pass     | Unencrypted Private Data On-Chain.                       | BESTAPY.so | L: 0 C: 0 |

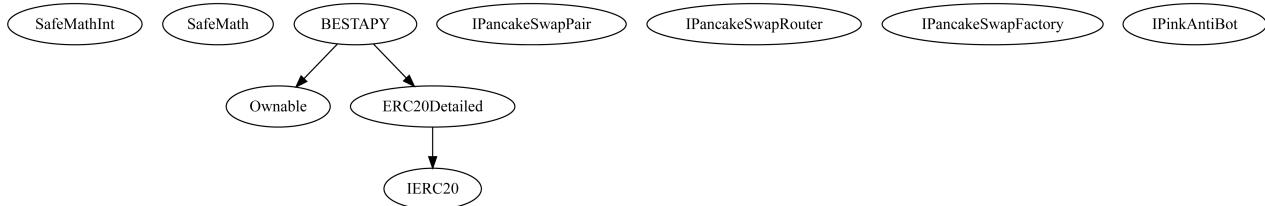
We scan the contract for additional security issues using MYTHX and industry standard security scanning tool



# Call Graph and Inheritance

The contract for Best Ever APY has the following call graph structure

The Project has a Total Supply of 1,000,000,000,000 and has the following inheritance



# Privileged Functions (onlyOwner)

| Function Name         | Parameters  | Visibility |
|-----------------------|---|------------|
| renounceOwnership     | none  | public     |
| transferOwnership     | address newOwner  | public     |
| setEnableAntiBot      | (bool _enable)  | external   |
| excludeFromFee        | address account   | public     |
| includeInFee          | address account   | public     |
| withdrawAllToTreasury |   | external   |
| setAutoRebase         | bool _flag  | external   |
| setAutoAddLiquidity   | bool _flag  | external   |
| setFeeReceivers       | address _autoLiquidityReceiver<br>address _treasuryReceiver<br>address _BESTAPYInsuranceFund<br>Receiver address _firePit uint256<br>liquidityFee | external   |
| setWhitelist          | address _addr   | external   |
| setBotBlacklist       | address _botAddress, bool _flag   | external   |
| setPairAddress        | address _pairAddress  | public     |
| setLP                 | address _address  | external   |



## Important Notes To The Users:

- The team has not provided a KYC Link during the time of assessment and can be found in the Audit.
- No mint function found, owner cannot mint tokens after initial deploy.
- Smart contract uses Rebase. With Rebase, the circulating token supply adjusts (increases or decreases) automatically or manually according to defined parameters in the contract.
- Owner can't change fees up to 25%.
- Owner can't set max tx amount.
- Owner can't pause trading.
- No high-risk Exploits/Vulnerabilities Were Found in the Source Code.
- 

## Audit Passed



# Social Media Checks

| Social Media | URL   | Result |
|--------------|---|--------|
| Twitter      | <a href="https://twitter.com/besteverapy">https://twitter.com/besteverapy</a>               | Pass   |
| Instagram    | <a href="https://www.instagram.com/besteverapy/">https://www.instagram.com/besteverapy/</a> | Pass   |
| Website      | <a href="https://besteverapy.com">https://besteverapy.com</a>                               | Pass   |
| Telegram     | <a href="https://t.me/BestEverAPY">https://t.me/BestEverAPY</a>                             | Pass   |

We recommend to have 3 or more social media sources including a completed working websites.

**Social Media Information Notes:**

**Auditor Notes:** undefined

**Project Owner Notes:**



# Disclaimer

CFGNINJA has conducted an independent audit to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the codes that were provided for the scope of this audit. This audit report does not constitute agreement, acceptance or advocacy for the Project that was audited, and users relying on this audit report should not consider this as having any merit for financial advice in any shape, form or nature. The contracts audited do not account for any economic developments that may be pursued by the Project in question, and that the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are completely free of exploits, bugs, vulnerabilities or depreciation of technologies.

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