



# SMART CONTRACT SECURITY AUDIT

big-bit/contracts/Token

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Website: [soken.io](https://soken.io)

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# Disclaimer

This is a comprehensive report based on our automated and manual examination of cybersecurity vulnerabilities and framework flaws. We took into consideration smart contract based algorithms, as well. Reading the full analysis report is essential to build your understanding of project's security level. It is crucial to take note, though we have done our best to perform this analysis and report, that you should not rely on the our research and cannot claim what it states or how we created it. Before making any judgments, you have to conduct your own independent research. We will discuss this in more depth in the following disclaimer - please read it fully.

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Security analysis is based only on the smart contracts. No applications or operations were reviewed for security. No product code has been reviewed.

# Procedure

## Our analysis contains following steps:

1. Project Analysis;
2. Manual analysis of smart contracts:
  - Deploying smart contracts on any of the network(Ropsten/Rinkeby) using Remix IDE
  - Hashes of all transaction will be recorded
  - Behaviour of functions and gas consumption is noted, as well.
3. Unit Testing:
  - Smart contract functions will be unit tested on multiple parameters and under multiple conditions to ensure that all paths of functions are functioning as intended.
  - In this phase intended behaviour of smart contract is verified.
  - In this phase, we would also ensure that smart contract functions are not consuming unnecessary gas.
  - Gas limits of functions will be verified in this stage.
4. Automated Testing:
  - Mythril
  - Oyente
  - Manticore
  - Solgraph

# Terminology

**We categorize the finding into 4 categories based on their vulnerability:**

- Low-severity issue — less important, must be analyzed
- Medium-severity issue — important, needs to be analyzed and fixed
- High-severity issue — important, might cause vulnerabilities, must be analyzed and fixed
- Critical-severity issue — serious bug causes, must be analyzed and fixed.

# Limitations

The security audit of Smart Contract cannot cover all vulnerabilities. Even if no vulnerabilities are detected in the audit, there is no guarantee that future smart contracts are safe. Smart contracts are in most cases safeguarded against specific sorts of attacks. In order to find as many flaws as possible, we carried out a comprehensive smart contract audit. Audit is a document that is not legally binding and guarantees nothing.

# Wennect Audit Details



Token Project Name: **Wennect**

Language: **Solidity**

Compiler Version: **v0.8.10**

Blockchain: **Ethereum**

## Social Profiles

Project Website: **<https://wennect.com/>**

Project Twitter: **[https://twitter.com/Wennect\\_\\_](https://twitter.com/Wennect__)**

Project LinkedIn: **<https://www.linkedin.com/company/usewennect/>**

Project Facebook: **[https://www.facebook.com/  
Wennect-100609322485296](https://www.facebook.com/Wennect-100609322485296)**

Project Facebook: **<https://discord.com/invite/QvAmSMB7Z3>**

# Token Details

## wennect

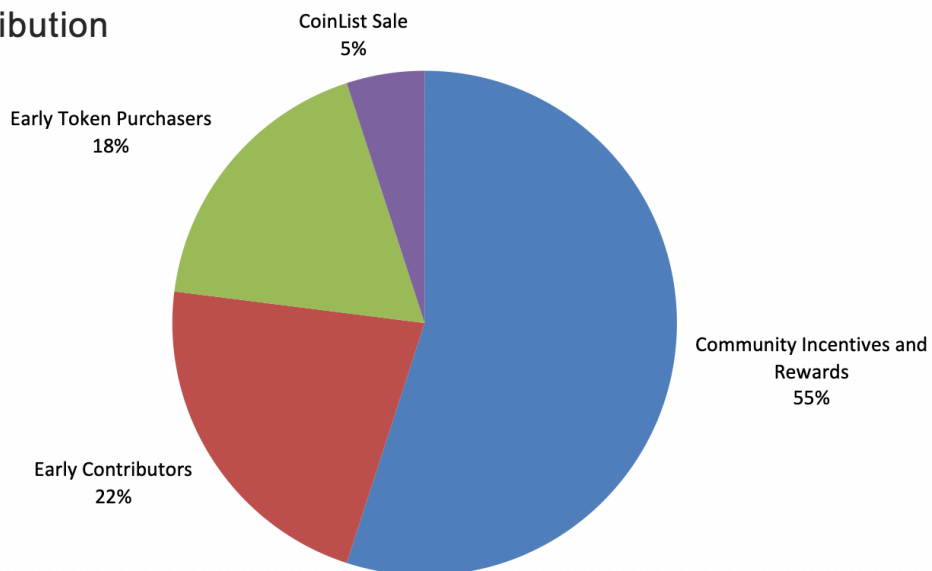
### introducing the Wennect Token: WNCT

The WNCT token will be launched on the Ethereum mainnet on February 26, 2022 using the ERC-20 standard. The token incentivize the community to build the network through referring clients, as well as screening new specialists. It has a fixed supply of 500 million tokens.

The open-sourced WNCT Contract repositories can be found on Github [here](#).

The open-sourced WNCT ERC-20 has been deployed [here](#).

### Token distribution



### Token distribution table

(subject to future community management)

Segment	Allocation % of total supply	Release Schedule
Community Incentives and Rewards	55%	Unlocked at network launch and distributed over time in accordance with community incentive and reward programs, including the Wennector program.
Early Token Purchasers	18%	2 year lock, 1 year cliff, then monthly.
Early Contributors	22%	4 year release schedule, 1 year cliff, then monthly.
Token Sale	5%	3 month/6 month lock, releasing monthly depending on tier.



# Audit Scope

big-bit /

contracts /

contracts /

Token.sol

IERC20.sol

ERC20Internal.sol

ERC2612.sol

ERC3009.sol

Recover.sol



# Vulnerabilities checking

Issue Description	Checking Status
Compiler Errors	Completed
Delays in Data Delivery	Completed
Re-entrancy	Completed
Transaction-Ordering Dependence	Completed
Timestamp Dependence	Completed
Shadowing State Variables	Completed
DoS with Failed Call	Completed
DoS with Block Gas Limit	Completed
Outdated Compiler Version	Completed
Assert Violation	Completed
Use of Deprecated Solidity Functions	Completed
Integer Overflow and Underflow	Completed
Function Default Visibility	Completed
Malicious Event Log	Completed
Math Accuracy	Completed
Design Logic	Completed
Fallback Function Security	Completed
Cross-function Race Conditions	Completed
Safe Zeppelin Module	Completed

# Security Considerations

## 1) ERC3009

Use `receiveWithAuthorization` instead of `transferWithAuthorization` when calling from other smart contracts. It is possible for an attacker watching the transaction pool to extract the transfer authorization and front-run the `transferWithAuthorization` call to execute the transfer without invoking the wrapper function. This could potentially result in unprocessed, locked up deposits. `receiveWithAuthorization` prevents this by performing an additional check that ensures that the caller is the payee. Additionally, if there are multiple contract functions accepting receive authorizations, the app developer could dedicate some leading bytes of the nonce could as the identifier to prevent cross-use.

## 2) ERC2612

Though the signer of a `Permit` may have a certain party in mind to submit their transaction, another party can always front run this transaction and call `permit` before the intended party. The end result is the same for the `Permit` signer, however.

Since the `ecrecover` precompile fails silently and just returns the zero address as signer when given malformed messages, it is important to ensure `owner != address(0)` to avoid `permit` from creating an approval to spend “zombie funds” belong to the zero address.

Signed `Permit` messages are censorable. The relaying party can always choose to not submit the `Permit` after having received it, withholding the option to submit it. The `deadline` parameter is one mitigation to this. If the signing party holds ETH they can also just submit the `Permit` themselves, which can render previously signed `Permits` invalid.



# Conclusion

Low-severity issues exist within smart contracts. Smart contracts are free from any critical or high-severity issues.

NOTE: Please check the disclaimer above and note, that audit makes no statements or warranties on business model, investment attractiveness or code sustainability.

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