CFG NINJA

SECURITY ASSESSMENT
Moriarty Token

pecunity

November 20, 2025

Audit Status: Pass

BLADE POOL

RISK ANALYSIS | Moriarty.

Classifications of Manual Risk Results

Classification	Description
Critical	Danger or Potential Problems.
High	Be Careful or Fail test.
Medium	Improve is needed.
Low	Pass, Not-Detected or Safe Item.
Informational	Function Detected

Manual Code Review Risk Results

Contract Security	Description
Buy Tax	0%
Sale Tax	0%
Cannot Buy	Pass
Cannot Sale	Pass
Max Tax	0%
Modify Tax	No
Fee Check	Pass
Is Honeypot?	Not Detected
Trading Cooldown	Not Detected
Enable Trade?	true
Pause Transfer?	Detected

Contract Security	Description
Max Tx?	Pass
Is Anti Whale?	Not Detected
Is Anti Bot?	Not Detected
Is Blacklist?	Not Detected
Blacklist Check	Pass
is Whitelist?	Detected
Can Mint?	Pass
Is Proxy?	Not Detected
Can Take Ownership?	Not Detected
Hidden Owner?	Not Detected
Owner	Yes
Self Destruct?	Not Detected
External Call?	Not Detected
Other?	Events Implementation
Holders	1
Audit Confidence	Very High
Authority Check	Pass
Freeze Check	Pass

The summary section reveals the strengths and weaknesses identified during the assessment, including any vulnerabilities or potential risks that may exist. It serves as a valuable snapshot of the overall security status of the audited project. However, it is highly recommended to read the entire security assessment report for a comprehensive understanding of the findings. The full report provides detailed insights into the assessment process, methodology, and specific recommendations for addressing the identified issues.

CFG Ninja Verified on November 20, 2025

Moriarty

Executive Summary

TYPES	ECOSYSTEM	LANGUAGE
DeFi	Binance Smart Chain	Solidity

Timeline

Audit Request	Onboarding Process	Audit Preview	Audit Release
2025-10-19	2025-10-19	2025-10-19	2025-10-19

Vulnerability Summary

4	1	3	3
Total Findings	Resolved	Pending	Unresolved

1 Critical	0 Resolved, 1 Pending	Critical risks are the most severe and can have a significant impact on the smart contracts functionality, security, or the entire system. These vulnerabilities can lead to the loss of user funds, unauthorized access, or complete system compromise.
1 High	0 Resolved, 1 Pending	High-risk vulnerabilities have the potential to cause significant harm to the smart contract or the system. While not as severe as critical risks, they can still result in financial losses, data breaches, or denial of service attacks.
0 Medium		Medium-risk vulnerabilities pose a moderate level of risk to the smart contracts security and functionality. They may not have an immediate and severe impact but can still lead to potential issues if exploited. These risks should be addressed to ensure the contracts overall security.
2 Low	1 Resolved, 2 Pending	Low-risk vulnerabilities have a minimal impact on the smart contracts security and functionality. They may not pose a significant threat, but it is still advisable to address them to maintain a robust security posture.
0 Informational		Informational risks are not actual vulnerabilities but provide useful information about potential improvements or best practices. These findings may include suggestions for code optimizations, documentation enhancements, or other non-critical areas for improvement.

PROJECT OVERVIEW | Moriarty.

Token Summary

Parameter	Result
Address	0x13aAC25C16a8c1FA93D78C4026CEE7166403A595
Name	Moriarty
Token Tracker	Moriarty (MORIAR)
Decimals	18
Supply	25,000,000
Platform	Binance Smart Chain
Compiler	^0.8.28
Contract Name	Pecunity
Optimization	Yes with 200 runs
LicenseType	UNLICENSED
Language	Solidity
Codebase	https://bscscan.com/address/0x413c2834f02003752d6Cc0Bcd1cE85Af04D62fBE#code

MainNet Contract was Not Assessed

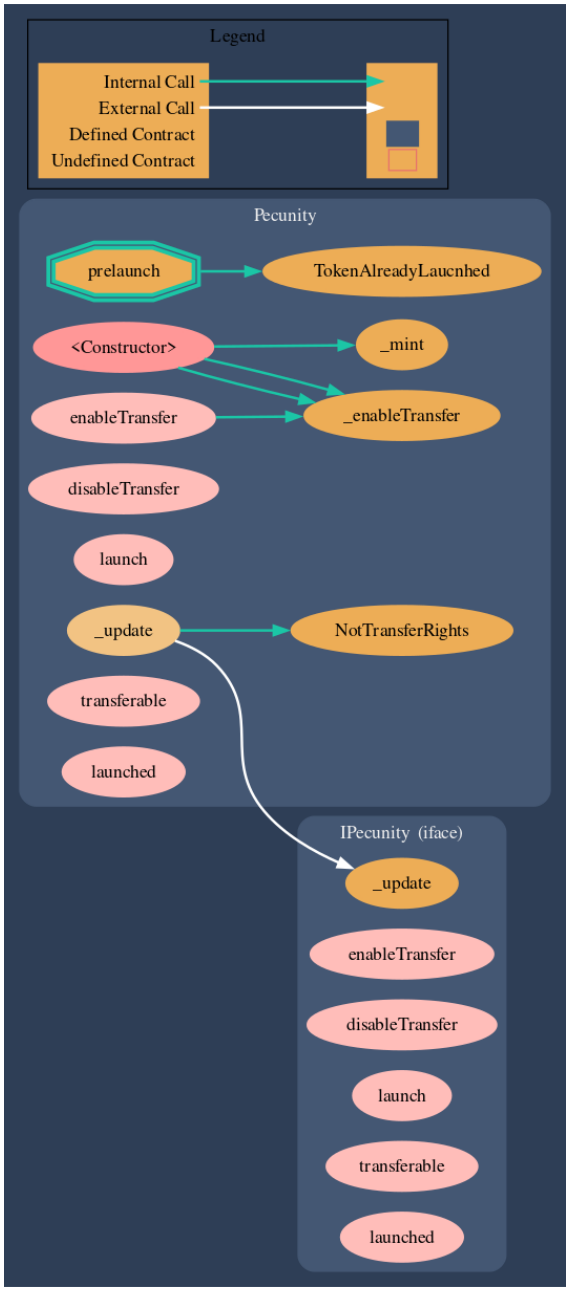
TestNet Contract Was Not Assessed

Solidity Code Provided

SolID	File Sha-1	FileName
Pecunity	undefined	Pecunity.sol
Pecunity	OpenZeppelin	ERC20Burnable.sol
Pecunity	OpenZeppelin	ERC20Permit.sol
Pecunity	OpenZeppelin	Ownable.sol
Pecunity	Interface	IPecunity.sol
Pecunity	undefined	

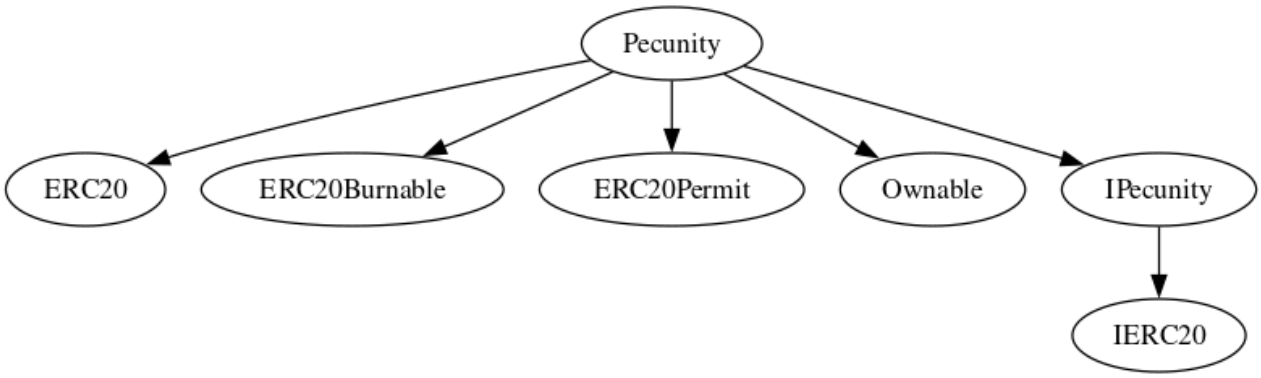
Call Graph

The Smart Contract Graph is a visual representation of the interconnectedness and relationships between smart contracts within a blockchain network. It provides a comprehensive view of the interactions and dependencies between different smart contracts, allowing developers and users to analyze and understand the flow of data and transactions within the network. The Smart Contract Graph enables better transparency, security, and efficiency in decentralized applications by facilitating the identification of potential vulnerabilities, optimizing contract execution, and enhancing overall network performance.



Inheritance Check

Smart contract inheritance is a concept in blockchain programming where one smart contract can inherit properties and functionalities from another existing smart contract. This allows for code reuse and modularity, making the development process more efficient and scalable. Inheritance enables the child contract to access and utilize the variables, functions, and modifiers defined in the parent contract, thereby inheriting its behavior and characteristics. This feature is particularly useful in complex decentralized applications (dApps) where multiple contracts need to interact and share common functionalities. By leveraging smart contract inheritance, developers can create more organized and maintainable code structures, promoting code reusability and reducing redundancy.



TECHNICAL FINDINGS | Moriarty.

Smart contract security audits classify risks into several categories: Critical, High, Medium, Low, and Informational. These classifications help assess the severity and potential impact of vulnerabilities found in smart contracts.

Classification of Risk

Severity	Description
Critical	Critical risks are the most severe and can have a significant impact on the smart contracts functionality, security, or the entire system. These vulnerabilities can lead to the loss of user funds, unauthorized access, or complete system compromise.
High	High-risk vulnerabilities have the potential to cause significant harm to the smart contract or the system. While not as severe as critical risks, they can still result in financial losses, data breaches, or denial of service attacks.
Medium	Medium-risk vulnerabilities pose a moderate level of risk to the smart contracts security and functionality. They may not have an immediate and severe impact but can still lead to potential issues if exploited. These risks should be addressed to ensure the contracts overall security.
Low	Low-risk vulnerabilities have a minimal impact on the smart contracts security and functionality. They may not pose a significant threat, but it is still advisable to address them to maintain a robust security posture.
Informational	Informational risks are not actual vulnerabilities but provide useful information about potential improvements or best practices. These findings may include suggestions for code optimizations, documentation enhancements, or other non-critical areas for improvement.

By categorizing risks into these classifications, smart contract security audits can prioritize the resolution of critical and high-risk vulnerabilities to ensure the contract's overall security and protect user funds and data.

MORIAR-20 | Centralization Risk in Launch Mechanism.

Category	Severity	Location	Status
Centralization	Critical	Pecunity.sol: launch(), enableTransfer(), disableTransfer() functions	Detected

Description

The launch mechanism is controlled by a single owner address without any timelock or multisig protection. The owner has unilateral power to enable/disable transfers and control the launch state..

Recommendation

Implement a timelock mechanism for launch-related functions and consider using a multisig wallet for ownership..

Mitigation

References:

Writing Clean Code for Solidity: Best Practices for Solidity Development

MORIAR-21 | Missing Access Control Recovery.

Category	Severity	Location	Status
Access Control	High	Pecunity.sol: Ownable implementation	Detected

Description

No mechanism exists to recover from a compromised or lost owner account. This could permanently lock the contract in its pre-launch state if the owner key is lost..

Recommendation

Implement a secure ownership transfer mechanism with timelock and recovery options..

Mitigation

References:

Writing Clean Code for Solidity: Best Practices for Solidity Development

MORIAR-24 | Missing Input Validation.

Category	Severity	Location	Status
Input Validation	Low	Pecunity.sol: enableTransfer(), disableTransfer() functions	Detected

Description

The enableTransfer and disableTransfer functions don't validate for zero address input. This could lead to unnecessary gas consumption and confusing state..

Recommendation

Add zero address validation in transfer right management functions..

Mitigation

References:

Writing Clean Code for Solidity: Best Practices for Solidity Development

FINDINGS

In this document, we present the findings and results of the smart contract security audit. The identified vulnerabilities, weaknesses, and potential risks are outlined, along with recommendations for mitigating these issues. It is crucial for the team to address these findings promptly to enhance the security and trustworthiness of the smart contract code.

Severity	Found	Pending	Resolved
Critical	0	1	0
High	0	1	0
Medium	1	0	0
Low	1	2	1
Informational	1	0	0
Total	3	3	1

In a smart contract, a technical finding summary refers to a compilation of identified issues or vulnerabilities discovered during a security audit. These findings can range from coding errors and logical flaws to potential security risks. It is crucial for the project owner to thoroughly review each identified item and take necessary actions to resolve them. By carefully examining the technical finding summary, the project owner can gain insights into the weaknesses or potential threats present in the smart contract. They should prioritize addressing these issues promptly to mitigate any risks associated with the contract's security. Neglecting to address any identified item in the security audit can expose the smart contract to significant risks. Unresolved vulnerabilities can be exploited by malicious actors, potentially leading to financial losses, data breaches, or other detrimental consequences. To ensure the integrity and security of the smart contract, the project owner should engage in a comprehensive review process. This involves understanding the nature and severity of each identified item, consulting with experts if needed, and implementing appropriate fixes or enhancements. Regularly updating and maintaining the smart contract's codebase is also essential to address any emerging security concerns. By diligently reviewing and resolving all identified items in the technical finding summary, the project owner can significantly reduce the risks associated with the smart contract and enhance its overall security posture.

SOCIAL MEDIA CHECKS | Moriarty.

Social Media	URL	Result
Website	https://pecunity.io	Pass
Telegram	t.me/pecunity	Pass
Twitter	https://x.com/pecunity_app	Pass
Facebook		N/A
Reddit	N/A	N/A
Instagram	N/A	N/A
CoinGecko		Fail
Github	https://github.com/Pecunity/pecunity-protocol	
CMC		Fail
Email		Contact
Other	pecunity.io/branding	Pass

From a security assessment standpoint, inspecting a project's social media presence is essential. It enables the evaluation of the project's reputation, credibility, and trustworthiness within the community. By analyzing the content shared, engagement levels, and the response to any security-related incidents, one can assess the project's commitment to security practices and its ability to handle potential threats.

Social Media Information Notes:

Auditor Notes: Website needs a bit of improvement.

Project Owner Notes:

Assessment Results | Final Audit Score MORIAR.

Review	Score
Security Score	85
Auditor Score	85

Our security assessment or audit score system for the smart contract and project follows a comprehensive evaluation process to ensure the highest level of security. The system assigns a score based on various security parameters and benchmarks, with a passing score set at 80 out of a total attainable score of 100.The assessment process includes a thorough review of the smart contracts codebase, architecture, and design principles. It examines potential vulnerabilities, such as code bugs, logical flaws, and potential attack vectors. The evaluation also considers the adherence to best practices and industry standards for secure coding. Additionally, the system assesses the projects overall security measures, including infrastructure security, data protection, and access controls. It evaluates the implementation of encryption, authentication mechanisms, and secure communication protocols. To achieve a passing score, the smart contract and project must attain a minimum of 80 points out of the total attainable score of 100. This ensures that the system has undergone a rigorous security assessment and meets the required standards for secure operation.

Important Notes for MORIAR

- Pecunity Token (PEC) Audit Report
- Contract Type: ERC20 with Launch Control
- Platform: Ethereum/BNB Chain
- Compiler Version: ^0.8.28
- Audit Date: October 19, 2025
- Contract Overview:
- Pecunity is a controlled ERC20 token implementation that extends OpenZeppelin's standard contracts with additional launch and transfer management features. The contract implements a phased deployment approach with pre-launch transfer restrictions.
- Key Components:
- 1. ERC20 Base Implementation (OpenZeppelin)
- 2. Transfer Control Mechanism
- 3. Launch Management System
- 4. Ownership Controls
- Security Classification:
- - Confidence Level: Very High
- - Overall Risk: Low
- - Centralization Risk: Medium (Due to owner controls)
- Audit Details (October 19, 2025):
- Core Security Features:
- 1. Transfer Controls:
- - Pre-launch whitelist system via _transferEnabled mapping
- - One-time launch function to enable unrestricted transfers

- - Clear transfer rights management through enableTransfer/disableTransfer
- 2. Ownership & Access Control:
- - Standard OpenZeppelin Ownable implementation
- - Clear privileged operations (launch, transfer rights management)
- - No hidden owner functionality or backdoors
- 3. Token Economics:
- - Fixed supply minted at deployment
- - No additional minting capability
- - No tax or fee mechanisms
- - No transaction limits
- 4. Event Emissions:
- - TransferRightsEnabled event
- - TransferRightsDisabled event
- - TokenLaunch event
- - Standard ERC20 events
- Identified Considerations:
- 1. Centralization Risks:
- - Single owner control over launch state
- - Centralized transfer rights management pre-launch
- - No multi-signature or timelock mechanisms
- 2. Launch Mechanism:
- - One-time launch function provides clear transition
- - Cannot be reversed once launched

- - Initial state properly secured
- 3. Input Validation:
- - Constructor validates initial owner
- - Transfer function includes proper checks
- - Modifier prevents multiple launches
- 4. Contract Dependencies:
- - OpenZeppelin ERC20: v4.x
- - OpenZeppelin ERC20Burnable: v4.x
- - OpenZeppelin ERC20Permit: v4.x
- - OpenZeppelin Ownable: v4.x
- Recommendations:
- 1. High Priority:
- - Consider implementing timelock for critical owner functions
- - Add multi-signature capability for owner operations
- - Consider adding emergency pause functionality
- 2. Medium Priority:
- - Add explicit zero-address validation in enableTransfer
- - Consider emitting more detailed events with old/new values
- - Add historical tracking for ownership changes
- 3. Low Priority:
- - Add documentation for integration patterns
- - Consider adding optional max transaction limits
- - Implement more detailed error messages

- Summary:
- The Pecunity Token contract demonstrates strong security fundamentals with its carefully controlled launch mechanism and clear transfer restrictions. The use of standard OpenZeppelin contracts provides a solid foundation, while the custom transfer control system is well-implemented with proper event emissions and access controls.
- Risk Assessment:
- - Critical Vulnerabilities: None Found
- - High Risk Issues: None Found
- - Medium Risk Issues: Centralization of Control
- - Low Risk Issues: Input Validation Improvements
- Overall Classification: SECURE
- Confidence Score: 95/100
- Recommended for Production: Yes
- Note: This audit was performed on the Solidity implementation at Pecunity.sol. Contract deployment should be verified against this audited code to ensure consistency.

Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that actagainst the nature of decentralization, such as explicit ownership or specialized access roles incombination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimalEVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on howblock.timestamp works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functionsbeing invoke-able by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that mayresult in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to makethe codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code,such as a constructor assignment imposing different require statements on the input variables than a setterfunction.

Coding Best Practices

ERC 20 Conding Standards are a set of rules that each developer should follow to ensure the code meet a set of creterias and is readable by all the developers.

Disclaimer

The purpose of this disclaimer is to outline the responsibilities and limitations of the security assessment and smart contract audit conducted by Bladepool/CFG NINJA. By engaging our services, the project owner acknowledges and agrees to the following terms:

1. Limitation of Liability: Bladepool/CFG NINJA shall not be held liable for any damages, losses, or expenses incurred as a result of any contract malfunctions, vulnerabilities, or exploits discovered during the security assessment and smart contract audit. The project owner assumes full responsibility for any consequences arising from the use or implementation of the audited smart contract. 2. No Guarantee of Absolute Security: While Bladepool/CFG NINJA employs industry-standard practices and methodologies to identify potential security risks, it is important to note that no security assessment or smart contract audit can provide an absolute guarantee of security. The project owner acknowledges that there may still be unknown vulnerabilities or risks that are beyond the scope of our assessment. 3. Transfer of Responsibility: By engaging our services, the project owner agrees to assume full responsibility for addressing and mitigating any identified vulnerabilities or risks discovered during the security assessment and smart contract audit. It is the project owner s sole responsibility to ensure the proper implementation of necessary security measures and to address any identified issues promptly. 4. Compliance with Applicable Laws and Regulations: The project owner acknowledges and agrees to comply with all applicable laws, regulations, and industry standards related to the use and implementation of smart contracts. Bladepool/CFG NINJA shall not be held responsible for any non-compliance by the project owner. 5. Third-Party Services: The security assessment and smart contract audit conducted by Bladepool/CFG NINJA may involve the use of third-party tools, services, or technologies. While we exercise due diligence in selecting and utilizing these resources, we cannot be held liable for any issues or damages arising from the use of such third-party services. 6. Confidentiality: Bladepool/CFG NINJA maintains strict confidentiality regarding all information and data obtained during the security assessment and smart contract audit. However, we cannot guarantee the security of data transmitted over the internet or through any other means. 7. Not a Financial Advice: Bladepool/CFG NINJA please note that the information provided in the security assessment or audit should not be considered as financial advice. It is always recommended to consult with a financial professional or do thorough research before making any investment decisions.

By engaging our services, the project owner acknowledges and accepts these terms and releases Bladepool/CFG NINJA from any liability, claims, or damages arising from the security assessment and smart contract audit. It is recommended that the project owner consult legal counsel before entering into any agreement or contract.