RUGDOG

SMART CONTRACT SECURITY AUDIT

Final report

Plan: Simple

Nyro

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✧ CONTENTS

✧ INTRODUCTION

The report has been prepared for Nyro.

Nyro, an energetic memecoin, emerged as a twin alongside its sibling, Myro.

Name	Nyro
Audit date	2024-02-08 - 2024-02-08
Language	Solidity
Network	Binance Smart Chain

✧ CONTRACTS CHECKED

Name	Address
Redis	

✧ AUDIT PROCESS

The code was audited by the team according to the following order:

Automated analysis

- Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
- Manual confirmation of all the issues found by the tools

Manual audit

- Thorough manual analysis of smart contracts for security vulnerabilities

- Smart contracts' logic check

ATTACKS CHECKED

Title	Check result
Unencrypted Private Data On-Chain	✓ passed
Code With No Effects	✓ passed
Message call with hardcoded gas amount	✓ passed
Typographical Error	✓ passed
DoS With Block Gas Limit	✓ passed
Presence of unused variables	✓ passed
Incorrect Inheritance Order	✓ passed
Requirement Violation	✓ passed
Weak Sources of Randomness from Chain Attributes	✓ passed
Shadowing State Variables	✓ passed
Incorrect Constructor Name	✓ passed
Block values as a proxy for time	✓ passed
Authorization through tx.origin	✓ passed

DoS with Failed Call	✓ passed
Delegatecall to Untrusted Callee	✓ passed
Use of Deprecated Solidity Functions	✓ passed
Assert Violation	✓ passed
State Variable Default Visibility	✓ passed
Reentrancy	✓ passed
Unprotected SELFDESTRUCT Instruction	✓ passed
Unprotected Ether Withdrawal	✓ passed
Unchecked Call Return Value	✓ passed
Floating Pragma	✓ passed
Outdated Compiler Version	✓ passed
Integer Overflow and Underflow	✓ passed
Function Default Visibility	✓ passed

✧ OVERVIEW OF RELEVANCE LEVELS

High relevance Issues of high relevance may lead to losses of users' funds as well as changes of ownership of a contract or possible issues with the logic of the contract.
High-relevance issues require immediate attention and a response from the team.

Medium relevance	While issues of medium relevance don't pose as high a risk as the high-relevance ones do, they can be just as easily exploited by the team or a malicious user, causing a contract failure and damaging the project's reputation in the process. Usually, these issues can be fixed if the contract is redeployed. Medium-relevance issues require a response from the team.
Low relevance	Issues of low relevance don't pose high risks since they can't cause damage to the functionality of the contract. However, it's still recommended to consider fixing them.

ISSUES

High relevance issues

No high relevance issues found

Medium relevance issues

No medium relevance issues found

Low relevance issues

No low relevance issues found

✧ CONCLUSION

Nyro Redis contract was audited. No relevance issues were found.

✧ DISCLAIMER

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✧ STATIC CODE ANALYSIS

```
INFO:Detectors:
Reentrancy in Redis._transfer(address,address,uint256) (contracts/
Token.sol#342-361):
        External calls:
        - swapTokensForEth(contractTokenBalance) (contracts/Token.sol#357)
                - uniswapV2Router.swapExactTokensForETCSupportingFeeOnTransferTokens(
tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#372-383)
                - uniswapV2Router.swapExactTokensForROSESupportingFeeOnTransferTokens
(tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#386-397)
                - uniswapV2Router.swapExactTokensForAVAXSupportingFeeOnTransferTokens
(tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#400-411)
                - uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#413-424)
        State variables written after the call(s):
        - _transferStandard(from,to,amount) (contracts/Token.sol#360)
                - rOwned[sender] = rOwned[sender] - rAmount (contracts/
Token.sol#471)
                - rOwned[recipient] = rOwned[recipient] + rTransferAmount (contracts/
Token.sol#472)
                - rOwned[address(this)] = rOwned[address(this)] + rTreasury
(contracts/Token.sol#477)
        Redis.rOwned (contracts/Token.sol#149) can be used in cross function
reentrancies:
        - Redis._transferStandard(address,address,uint256) (contracts/
Token.sol#451-485)
        - Redis.balanceOf(address) (contracts/Token.sol#277-279)
        -
Redis.constructor(string,string,uint8,uint256,address,address,uint16,uint16,address)
(contracts/Token.sol#190-241)
        - _transferStandard(from,to,amount) (contracts/Token.sol#360)
                - rTotal = rTotal - rReflection (contracts/Token.sol#482)
        Redis.rTotal (contracts/Token.sol#155) can be used in cross function
reentrancies:
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        - Redis._getCurrentSupply() (contracts/Token.sol#553-558)
        - Redis._transferStandard(address,address,uint256) (contracts/
Token.sol#451-485)
        -
Redis.constructor(string,string,uint8,uint256,address,address,uint16,uint16,address)
(contracts/Token.sol#190-241)
        - Redis.tokenFromReflection(uint256) (contracts/Token.sol#320-329)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-
vulnerabilities-1
INFO:Detectors:
Reentrancy in Redis._transfer(address,address,uint256) (contracts/
Token.sol#342-361):
        External calls:
        - swapTokensForEth(contractTokenBalance) (contracts/Token.sol#357)
                - uniswapV2Router.swapExactTokensForETCSupportingFeeOnTransferTokens(
tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#372-383)
                - uniswapV2Router.swapExactTokensForROSESupportingFeeOnTransferTokens
(tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#386-397)
                - uniswapV2Router.swapExactTokensForAVAXSupportingFeeOnTransferTokens
(tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#400-411)
                - uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
tokenAmount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#413-424)
        Event emitted after the call(s):
        - Reflected(sender,tReflection) (contracts/Token.sol#483)
                - _transferStandard(from,to,amount) (contracts/Token.sol#360)
        - Transfer(sender,recipient,tTransferAmount) (contracts/Token.sol#474)
                - _transferStandard(from,to,amount) (contracts/Token.sol#360)
        - Transfer(sender,address(this),tTreasury) (contracts/Token.sol#478)
                - _transferStandard(from,to,amount) (contracts/Token.sol#360)
Reentrancy in Redis.swapTokensForEth(uint256) (contracts/Token.sol#363-426):
        External calls:
        - uniswapV2Router.swapExactTokensForETCSupportingFeeOnTransferTokens(tokenAmo
unt,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#372-383)
        Event emitted after the call(s):
        - SwapTokensForEthFailed(tokenAmount) (contracts/Token.sol#382)
Reentrancy in Redis.swapTokensForEth(uint256) (contracts/Token.sol#363-426):
        External calls:
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        - uniswapV2Router.swapExactTokensForROSESupportingFeeOnTransferTokens(tokenAm
ount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#386-397)
        Event emitted after the call(s):
        - SwapTokensForEthFailed(tokenAmount) (contracts/Token.sol#396)
Reentrancy in Redis.swapTokensForEth(uint256) (contracts/Token.sol#363-426):
        External calls:
        - uniswapV2Router.swapExactTokensForAVAXSupportingFeeOnTransferTokens(tokenAm
ount,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#400-411)
        Event emitted after the call(s):
        - SwapTokensForEthFailed(tokenAmount) (contracts/Token.sol#410)
Reentrancy in Redis.swapTokensForEth(uint256) (contracts/Token.sol#363-426):
        External calls:
        - uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(tokenAmo
unt,0,path,treasuryAddress,block.timestamp) (contracts/Token.sol#413-424)
        Event emitted after the call(s):
        - SwapTokensForEthFailed(tokenAmount) (contracts/Token.sol#423)
Reentrancy in Redis.withdrawTokens(address,address,uint256) (contracts/
Token.sol#432-440):
        External calls:
        - require(bool,string)(IERC20(token).transfer(to,amount),transfer rejected)
(contracts/Token.sol#437)
        Event emitted after the call(s):
        - WithdrawedTokens(token,to,amount) (contracts/Token.sol#439)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-
vulnerabilities-3
INFO:Detectors:
Redis.swapTokensForEth(uint256) (contracts/Token.sol#363-426) has a high cyclomatic
complexity (12).
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#cyclomatic-
complexity
INFO:Detectors:
Pragma version0.8.16 (contracts/Token.sol#7) allows old versions
solc-0.8.16 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-
versions-of-solidity
INFO:Detectors:
Function IUniswapV2Router02.WETH() (contracts/Token.sol#88) is not in mixedCase
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Function IUniswapV2Router02.WETC() (contracts/Token.sol#90) is not in mixedCase
Function IUniswapV2Router02.WHT() (contracts/Token.sol#92) is not in mixedCase
Function IUniswapV2Router02.WROSE() (contracts/Token.sol#94) is not in mixedCase
Function IUniswapV2Router02.WAVAX() (contracts/Token.sol#96) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Detectors:
Variable Redis._getRValues(uint256,uint256,uint256).rReflection (contracts/Token.sol#541) is too similar to Redis._getTValues(bool,uint256).tReflection (contracts/Token.sol#527)
Variable Redis._getValues(bool,uint256).rReflection (contracts/Token.sol#506) is too similar to Redis._transferStandard(address,address,uint256).tReflection (contracts/Token.sol#467)
Variable Redis._getValues(bool,uint256).rReflection (contracts/Token.sol#506) is too similar to Redis._getRValues(uint256,uint256,uint256).tReflection (contracts/Token.sol#535)
Variable Redis._getValues(bool,uint256).rReflection (contracts/Token.sol#506) is too similar to Redis._getTValues(bool,uint256).tReflection (contracts/Token.sol#527)
Variable Redis._transferStandard(address,address,uint256).rReflection (contracts/Token.sol#464) is too similar to Redis._transferStandard(address,address,uint256).tReflection (contracts/Token.sol#467)
Variable Redis._getRValues(uint256,uint256,uint256).rReflection (contracts/Token.sol#541) is too similar to Redis._transferStandard(address,address,uint256).tReflection (contracts/Token.sol#467)
Variable Redis._transferStandard(address,address,uint256).rReflection (contracts/Token.sol#464) is too similar to Redis._getRValues(uint256,uint256,uint256).tReflection (contracts/Token.sol#535)
Variable Redis._getRValues(uint256,uint256,uint256).rReflection (contracts/Token.sol#541) is too similar to Redis._getRValues(uint256,uint256,uint256).tReflection (contracts/Token.sol#535)
Variable Redis._transferStandard(address,address,uint256).rReflection (contracts/Token.sol#464) is too similar to Redis._getTValues(bool,uint256).tReflection (contracts/Token.sol#527)
Variable Redis._getRValues(uint256,uint256,uint256).rTransferAmount (contracts/Token.sol#543) is too similar to Redis._getTValues(bool,uint256).tTransferAmount
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(contracts/Token.sol#529)
Variable Redis._getValues(bool,uint256).rTransferAmount (contracts/Token.sol#505) is
too similar to Redis._getTValues(bool,uint256).tTransferAmount (contracts/
Token.sol#529)
Variable Redis._getValues(bool,uint256).rTransferAmount (contracts/Token.sol#505) is
too similar to Redis._transferStandard(address,address,uint256).tTransferAmount
(contracts/Token.sol#466)
Variable Redis._transferStandard(address,address,uint256).rTransferAmount (contracts/
Token.sol#463) is too similar to
Redis._transferStandard(address,address,uint256).tTransferAmount (contracts/
Token.sol#466)
Variable Redis._transferStandard(address,address,uint256).rTransferAmount (contracts/
Token.sol#463) is too similar to Redis._getTValues(bool,uint256).tTransferAmount
(contracts/Token.sol#529)
Variable Redis._getValues(bool,uint256).rReflection (contracts/Token.sol#506) is too
similar to Redis._getValues(bool,uint256).tReflection (contracts/Token.sol#499)
Variable Redis._getRValues(uint256,uint256,uint256).rReflection (contracts/
Token.sol#541) is too similar to Redis._getValues(bool,uint256).tReflection
(contracts/Token.sol#499)
Variable Redis._transferStandard(address,address,uint256).rReflection (contracts/
Token.sol#464) is too similar to Redis._getValues(bool,uint256).tReflection
(contracts/Token.sol#499)
Variable Redis._getRValues(uint256,uint256,uint256).rTransferAmount (contracts/
Token.sol#543) is too similar to
Redis._transferStandard(address,address,uint256).tTransferAmount (contracts/
Token.sol#466)
Variable Redis._getRValues(uint256,uint256,uint256).rTransferAmount (contracts/
Token.sol#543) is too similar to Redis._getValues(bool,uint256).tTransferAmount
(contracts/Token.sol#498)
Variable Redis._transferStandard(address,address,uint256).rTransferAmount (contracts/
Token.sol#463) is too similar to Redis._getValues(bool,uint256).tTransferAmount
(contracts/Token.sol#498)
Variable Redis._getValues(bool,uint256).rTransferAmount (contracts/Token.sol#505) is
too similar to Redis._getValues(bool,uint256).tTransferAmount (contracts/
Token.sol#498)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-
names-too-similar
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INFO:Detectors:
Redis.uniswapV2Router (contracts/Token.sol#166) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-
variables-that-could-be-declared-immutable
INFO:Slither:. analyzed (7 contracts with 85 detectors), 37 result(s) found
```

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WOOF!

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