ScoreHealth

Smart Contract Audit Report

SYSFIXED

07 Feb 2023

TABLE OF CONTENTS

AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
ScoreHealth	ScoreHealth	Binance Smart Chain

Addresses

Contract address	0x4f32Df768f06cE993e57a62d1A7A072fDB6BE2ED
Contract deployer address	0xa3315E65C48d819709567dADFa6f3D24B8A4d997

Project Website

https://bitracesecurity.com/

Codebase

https://bscscan.com/address/0x4f32Df768f06cE993e57a62d1A7A072fDB6BE2ED#code

SUMMARY

Bitrace Lab is a cutting-edge web3 cybersecurity company that offers innovative Risk Scoring Apps and Services to protect blockchain projects, NFT markets, and Metaverse. $BSH token serves as a versatile utility token on the Bitrace ScoreHealth and Learn & Earn platforms. SAFU+KYC+Audit and 100% safe.

Contract Summary

Documentation Quality

ScoreHealth provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by ScoreHealth with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 110, 151 and 160.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 124, 124, 308, 336, 368, 368, 413, 425, 425, 429, 429, 430, 430, 432, 432, 433, 434, 514, 514, 570, 570, 571, 571, 588, 589, 589, 590, 590, 604, 606, 630, 630, 632 and 636.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 6.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 530, 531, 589, 590 and 590.
- SWC-115 | tx.origin should not be used for authorization, use msg.sender instead on lines 471.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 567.

CONCLUSION

We have audited the ScoreHealth project released on February 2023 to discover issues and identify potential security vulnerabilities in ScoreHealth Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the ScoreHealth smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, weak sources of randomness, tx.origin as a part of authorization control, and out of bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value. We recommend to avoid The tx.origin environment variable has been found to influence a control flow decision. Note that using "tx.origin" as a security control might cause a situation where a user inadvertently authorizes a smart contract to perform an action on their behalf. It is recommended to use "msg.sender" instead, Don't use any of those environment variables as sources of randomness, and be aware that the use of these variables introduces a certain level of trust into miners.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	ISSUE FOUND
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	ISSUE FOUND
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	ISSUE FOUND
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Monday Feb 06 2023 18:54:10 GMT+0000 (Coordinated Universal Time)
Finished	Tuesday Feb 07 2023 01:57:57 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	ScoreHealth.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
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SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged

SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-115	USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 124

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
123   uint8 constant private _decimals = 18;
124   uint256 constant private _tTotal = startingSupply * 10**_decimals;
125
126   struct Fees {
127   uint16 buyFee;
128
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 124

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
123   uint8 constant private _decimals = 18;
124   uint256 constant private _tTotal = startingSupply * 10**_decimals;
125
126   struct Fees {
127   uint16 buyFee;
128
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 308

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
307   if (_allowances[sender][msg.sender] != type(uint256).max) {
308   _allowances[sender][msg.sender] -= amount;
309   }
310
311   return _transfer(sender, recipient, amount);
312
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 336

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
335   if (timeSinceLastPair != 0) {
336   require(block.timestamp - timeSinceLastPair > 3 days, "3 Day cooldown.");
337   }
338   require(!lpPairs[pair], "Pair already added to list.");
339   lpPairs[pair] = true;
340
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 368

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
367   function getCirculatingSupply() public view returns (uint256) {
368   return (_tTotal - (balanceOf(DEAD) + balanceOf(address(0))));
369   }
370
371   //============================================== BLACKLIST
372
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 368

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
367   function getCirculatingSupply() public view returns (uint256) {
368   return (_tTotal - (balanceOf(DEAD) + balanceOf(address(0))));
369   }
370
371   //=============================================== BLACKLIST
372
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 413

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
412   "Cannot exceed maximums.");
413   require(buyFee + sellFee <= maxRoundtripTax, "Cannot exceed roundtrip maximum.");
414   _taxRates.buyFee = buyFee;
415   _taxRates.sellFee = sellFee;
416   _taxRates.transferFee = transferFee;
417
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 425

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
424   function getTokenAmountAtPriceImpact(uint256 priceImpactInHundreds) external view
returns (uint256) {
425   return((balanceOf(lpPair) * priceImpactInHundreds) / masterTaxDivisor);
426   }
427
428   function setSwapSettings(uint256 thresholdPercent, uint256 thresholdDivisor,
uint256 amountPercent, uint256 amountDivisor) external onlyOwner {
429
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 425

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
424   function getTokenAmountAtPriceImpact(uint256 priceImpactInHundreds) external view
returns (uint256) {
425   return((balanceOf(lpPair) * priceImpactInHundreds) / masterTaxDivisor);
426   }
427
428   function setSwapSettings(uint256 thresholdPercent, uint256 thresholdDivisor,
uint256 amountPercent, uint256 amountDivisor) external onlyOwner {
429
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 429

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
428   function setSwapSettings(uint256 thresholdPercent, uint256 thresholdDivisor,
uint256 amountPercent, uint256 amountDivisor) external onlyOwner {
429   swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor;
430   swapAmount = (_tTotal * amountPercent) / amountDivisor;
431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 429

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
428   function setSwapSettings(uint256 thresholdPercent, uint256 thresholdDivisor,
uint256 amountPercent, uint256 amountDivisor) external onlyOwner {
429   swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor;
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431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 430

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
429   swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor;
430   swapAmount = (_tTotal * amountPercent) / amountDivisor;
431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 430

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
429   swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor;
430   swapAmount = (_tTotal * amountPercent) / amountDivisor;
431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 432

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434   require(swapThreshold >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of
total supply.");
435   }
436
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 432

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
431   require(swapThreshold <= swapAmount, "Threshold cannot be above amount.");
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434   require(swapThreshold >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of
total supply.");
435   }
436
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 433

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
432   require(swapAmount <= (balanceOf(lpPair) * 150) / masterTaxDivisor, "Cannot be
above 1.5% of current PI.");
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434   require(swapThreshold >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of
total supply.");
435   }
436
437
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 434

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
433   require(swapAmount >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of total
supply.");
434   require(swapThreshold >= _tTotal / 1_000_000, "Cannot be lower than 0.00001% of
total supply.");
435   }
436
437   function setPriceImpactSwapAmount(uint256 priceImpactSwapPercent) external
onlyOwner {
438
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 514

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
513   uint256 swapAmt = swapAmount;
514   if (piContractSwapsEnabled) { swapAmt = (balanceOf(lpPair) * piSwapPercent) /
masterTaxDivisor; }
515   if (contractTokenBalance >= swapAmt) { contractTokenBalance = swapAmt; }
516   contractSwap(contractTokenBalance);
517   }
518
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 514

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
513   uint256 swapAmt = swapAmount;
514   if (piContractSwapsEnabled) { swapAmt = (balanceOf(lpPair) * piSwapPercent) /
masterTaxDivisor; }
515   if (contractTokenBalance >= swapAmt) { contractTokenBalance = swapAmt; }
516   contractSwap(contractTokenBalance);
517   }
518
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 570

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
569   allowedPresaleExclusion = false;
570   swapThreshold = (balanceOf(lpPair) * 10) / 10000;
571   swapAmount = (balanceOf(lpPair) * 30) / 10000;
572   launchStamp = block.timestamp;
573   }
574
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 570

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
569   allowedPresaleExclusion = false;
570   swapThreshold = (balanceOf(lpPair) * 10) / 10000;
571   swapAmount = (balanceOf(lpPair) * 30) / 10000;
572   launchStamp = block.timestamp;
573   }
574
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 571

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
570   swapThreshold = (balanceOf(lpPair) * 10) / 10000;
571   swapAmount = (balanceOf(lpPair) * 30) / 10000;
572   launchStamp = block.timestamp;
573   }
574
575
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 571

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
570   swapThreshold = (balanceOf(lpPair) * 10) / 10000;
571   swapAmount = (balanceOf(lpPair) * 30) / 10000;
572   launchStamp = block.timestamp;
573   }
574
575
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 588

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
587   require(accounts.length == amounts.length, "Lengths do not match.");
588   for (uint16 i = 0; i < accounts.length; i++) {
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 589

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
588   for (uint16 i = 0; i < accounts.length; i++) {
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 589

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
588   for (uint16 i = 0; i < accounts.length; i++) {
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 590

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
594
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 590

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
594
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 604

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
603   }
604   _tOwned[from] -= amount;
605   uint256 amountReceived = (takeFee) ? takeTaxes(from, buy, sell, amount) : amount;
606   _tOwned[to] += amountReceived;
607   emit Transfer(from, to, amountReceived);
608
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 606

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
605   uint256 amountReceived = (takeFee) ? takeTaxes(from, buy, sell, amount) : amount;
606   _tOwned[to] += amountReceived;
607   emit Transfer(from, to, amountReceived);
608   if (!_hasLiqBeenAdded) {
609   _checkLiquidityAdd(from, to);
610
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 630

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
629   || block.chainid == 56)) { currentFee = 4500; }
630   uint256 feeAmount = amount * currentFee / masterTaxDivisor;
631   if (feeAmount > 0) {
632   _tOwned[address(this)] += feeAmount;
633   emit Transfer(from, address(this), feeAmount);
634
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 630

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
629   || block.chainid == 56)) { currentFee = 4500; }
630   uint256 feeAmount = amount * currentFee / masterTaxDivisor;
631   if (feeAmount > 0) {
632   _tOwned[address(this)] += feeAmount;
633   emit Transfer(from, address(this), feeAmount);
634
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 632

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
631   if (feeAmount > 0) {
632   _tOwned[address(this)] += feeAmount;
633   emit Transfer(from, address(this), feeAmount);
634   }
635
636
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 636

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- ScoreHealth.sol

Locations

```
635
636   return amount - feeAmount;
637   }
638   }
639
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 6

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.9.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- ScoreHealth.sol

Locations

```
5   // SPDX-License-Identifier: MIT
6   pragma solidity >=0.6.0 <0.9.0;
7
8   interface IERC20 {
9   function totalSupply() external view returns (uint256);
10
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 110

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "lpPairs" is internal. Other possible visibility settings are public and private.

Source File

- ScoreHealth.sol

Locations

```
109   mapping (address => uint256) private _tOwned;
110   mapping (address => bool) lpPairs;
111   uint256 private timeSinceLastPair = 0;
112   mapping (address => mapping (address => uint256)) private _allowances;
113   mapping (address => bool) private _liquidityHolders;
114
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 151

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwap" is internal. Other possible visibility settings are public and private.

Source File

- ScoreHealth.sol

Locations

```
150
151   bool inSwap;
152   bool public contractSwapEnabled = false;
153   uint256 public swapThreshold;
154   uint256 public swapAmount;
155
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 160

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "protections" is internal. Other possible visibility settings are public and private.

Source File

- ScoreHealth.sol

Locations

```
159   bool public _hasLiqBeenAdded = false;
160   Protections protections;
161   uint256 public launchStamp;
162
163   event ContractSwapEnabledUpdated(bool enabled);
164
```

SWC-115 | USE OF "TX.ORIGIN" AS A PART OF AUTHORIZATION CONTROL.

LINE 471

low SEVERITY

The tx.origin environment variable has been found to influence a control flow decision. Note that using "tx.origin" as a security control might cause a situation where a user inadvertently authorizes a smart contract to perform an action on their behalf. It is recommended to use "msg.sender" instead.

Source File

- ScoreHealth.sol

Locations

```
470   && to != _owner
471   && tx.origin != _owner
472   && !_liquidityHolders[to]
473   && !_liquidityHolders[from]
474   && to != DEAD
475
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 530

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- ScoreHealth.sol

Locations

```
529   address[] memory path = new address[](2);
530   path[0] = address(this);
531   path[1] = dexRouter.WETH();
532
533   try dexRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(
534
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 531

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- ScoreHealth.sol

Locations

```
530   path[0] = address(this);
531   path[1] = dexRouter.WETH();
532
533   try dexRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(
534   contractTokenBalance,
535
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 589

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- ScoreHealth.sol

Locations

```
588   for (uint16 i = 0; i < accounts.length; i++) {
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 590

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- ScoreHealth.sol

Locations

```
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
594
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 590

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- ScoreHealth.sol

Locations

```
589   require(balanceOf(msg.sender) >= amounts[i]*10**_decimals, "Not enough tokens.");
590   finalizeTransfer(msg.sender, accounts[i], amounts[i]*10**_decimals, false, false,
true);
591   }
592   }
593
594
```

SWC-120 | POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.

LINE 567

low SEVERITY

The environment variable "block.number" looks like it might be used as a source of randomness. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ScoreHealth.sol

Locations

```
566   }
567   try protections.setLaunch(lpPair, uint32(block.number), uint64(block.timestamp),
_decimals) {} catch {}
568   tradingEnabled = true;
569   allowedPresaleExclusion = false;
570   swapThreshold = (balanceOf(lpPair) * 10) / 10000;
571
```

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