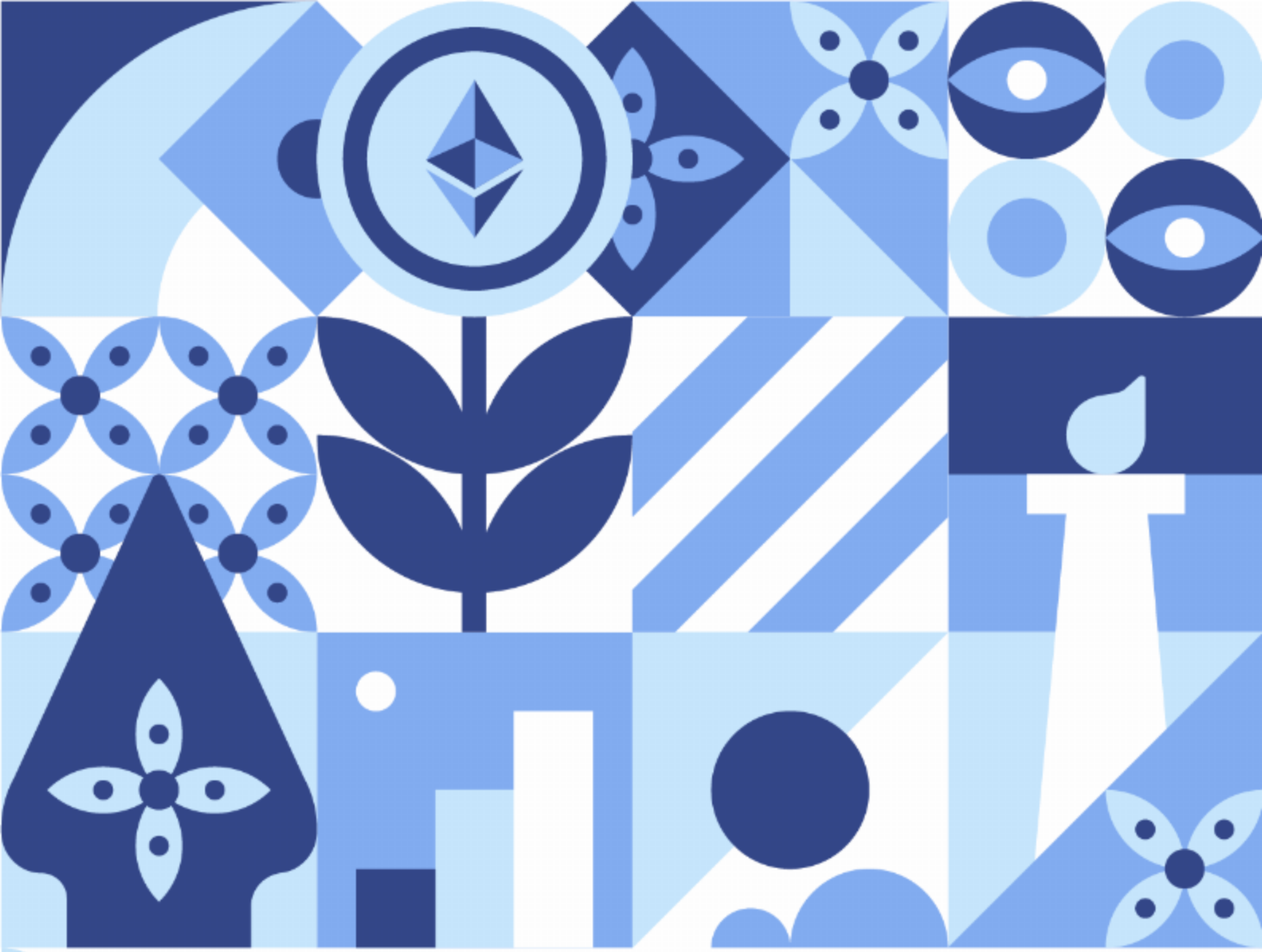

Astrix

Smart Contract Audit Report

SYSFIXED

19 Apr 2022

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Astrix	AIX	Ethereum

Addresses

Contract address	0xd305fcd46b408371340385a053ad9aE1B7a1D89b
Contract deployer address	0xd8C79BE41a97aAD96739B0f18B25290A8928D4Cc

Project Website

https://astrixtoken.io/

Codebase

https://etherscan.io/address/0xd305fcd46b408371340385a053ad9aE1B7a1D89b#code

SUMMARY

Astrix is a two-sided 3D Play to Earn NFT shooter game. An immersive metaverse-based environment on the Ethereum Blockchain. In an effort to integrate blockchain into popular gaming, Astrix offers the benefits of genuine ownership, digital scarcity, monetization, and interoperability to both crypto and non-crypto game lovers.

Contract Summary

Documentation Quality

Astrix 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 Astrix 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 313 and 318.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 127, 143, 156, 157, 172, 188, 306, 322, 322, 323, 323, 324, 324, 480 and 664.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 2.
- 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 718 and 719.

CONCLUSION

We have audited the NamaFile project released on January 2023 to discover issues and identify potential security vulnerabilities in NamaFile 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 NamaFile 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, 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. 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. We recommend to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal. Other possible visibility settings are public and private.

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.	PASS
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.	PASS
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 Apr 18 2022 21:15:09 GMT+0000 (Coordinated Universal Time)
Finished	Tuesday Apr 19 2022 19:15:46 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Astrix.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
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-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 127

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
126   function add(uint256 a, uint256 b) internal pure returns (uint256) {
127   uint256 c = a + b;
128   require(c >= a, "SafeMath: addition overflow");
129
130   return c;
131
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 143

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
142   require(b <= a, errorMessage);
143   uint256 c = a - b;
144
145   return c;
146   }
147
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 156

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
155
156   uint256 c = a * b;
157   require(c / a == b, "SafeMath: multiplication overflow");
158
159   return c;
160
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 157

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
156   uint256 c = a * b;
157   require(c / a == b, "SafeMath: multiplication overflow");
158
159   return c;
160   }
161
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 172

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
171   require(b > 0, errorMessage);
172   uint256 c = a / b;
173   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
174
175   return c;
176
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 188

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
187   require(b != 0, errorMessage);
188   return a % b;
189   }
190   }
191
192
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 306

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
305   uint8 private _decimals = 18;
306   uint256 private _tTotal = 500000000 * 1e18;
307
308   IUniswapV2Router02 public uniswapRouter;
309   address public immutable uniSwapPair;
310
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 322

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
321
322   uint256 public maxSellTransaction = 5000000 * 10**18; // 1% of total suppy
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 322

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
321
322   uint256 public maxSellTransaction = 5000000 * 10**18; // 1% of total suppy
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 323

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
322   uint256 public maxSellTransaction = 5000000 * 10**18; // 1% of total suppy
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326   event SwapAndLiquifyEnabledUpdated(bool enabled);
327
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 323

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
322   uint256 public maxSellTransaction = 5000000 * 10**18; // 1% of total suppy
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326   event SwapAndLiquifyEnabledUpdated(bool enabled);
327
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 324

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326   event SwapAndLiquifyEnabledUpdated(bool enabled);
327
328
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 324

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
323   uint256 public maxBuyTransaction = 10000000 * 10**18; // 2% of total suppy
324   uint256 public minTokenNumberToSell = 500000 * 10**18; // 0.1% of total supply
325
326   event SwapAndLiquifyEnabledUpdated(bool enabled);
327
328
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 480

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
479   {
480   require(_maxSellTxAmount >= 150000 * 1e18);
481   maxSellTransaction = _maxSellTxAmount;
482   maxBuyTransaction = _maxBuyTxAmount;
483   }
484
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 664

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
663   function manualSwap() external onlyOwner {
664   uint256 contractTokenBalance = balanceOf(address(this)).sub(1000 * 1e18); //
maintain tokens in the contract
665   require(
666   contractTokenBalance > 0,
667   "TOKEN: contract balance must be greater than zero"
668
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 2

low SEVERITY

The current pragma Solidity directive is ""^0.8.10"". 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

- Astrix.sol

Locations

```
1   // SPDX-License-Identifier: MIT
2   pragma solidity ^0.8.10;
3
4   interface ERC20 {
5   function totalSupply() external view returns (uint256);
6
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 313

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
312
313   uint256 _marketingTax;
314   uint256 public _buyMarketingTax = 60; // 6%
315   uint256 public _sellMarketingTax = 100; //10%
316   uint256 public _normalTransferTax = 10; // 1%
317
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 318

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
317
318   bool inSwapAndLiquify = false;
319   bool public swapAndLiquifyEnabled = true;
320
321
322
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 718

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
717   address[] memory path = new address[](2);
718   path[0] = address(this);
719   path[1] = uniswapRouter.WETH();
720
721   // make the swap
722
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 719

low SEVERITY

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

Source File

- Astrix.sol

Locations

```
718   path[0] = address(this);
719   path[1] = uniswapRouter.WETH();
720
721   // make the swap
722   uniswapRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(
723
```

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This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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