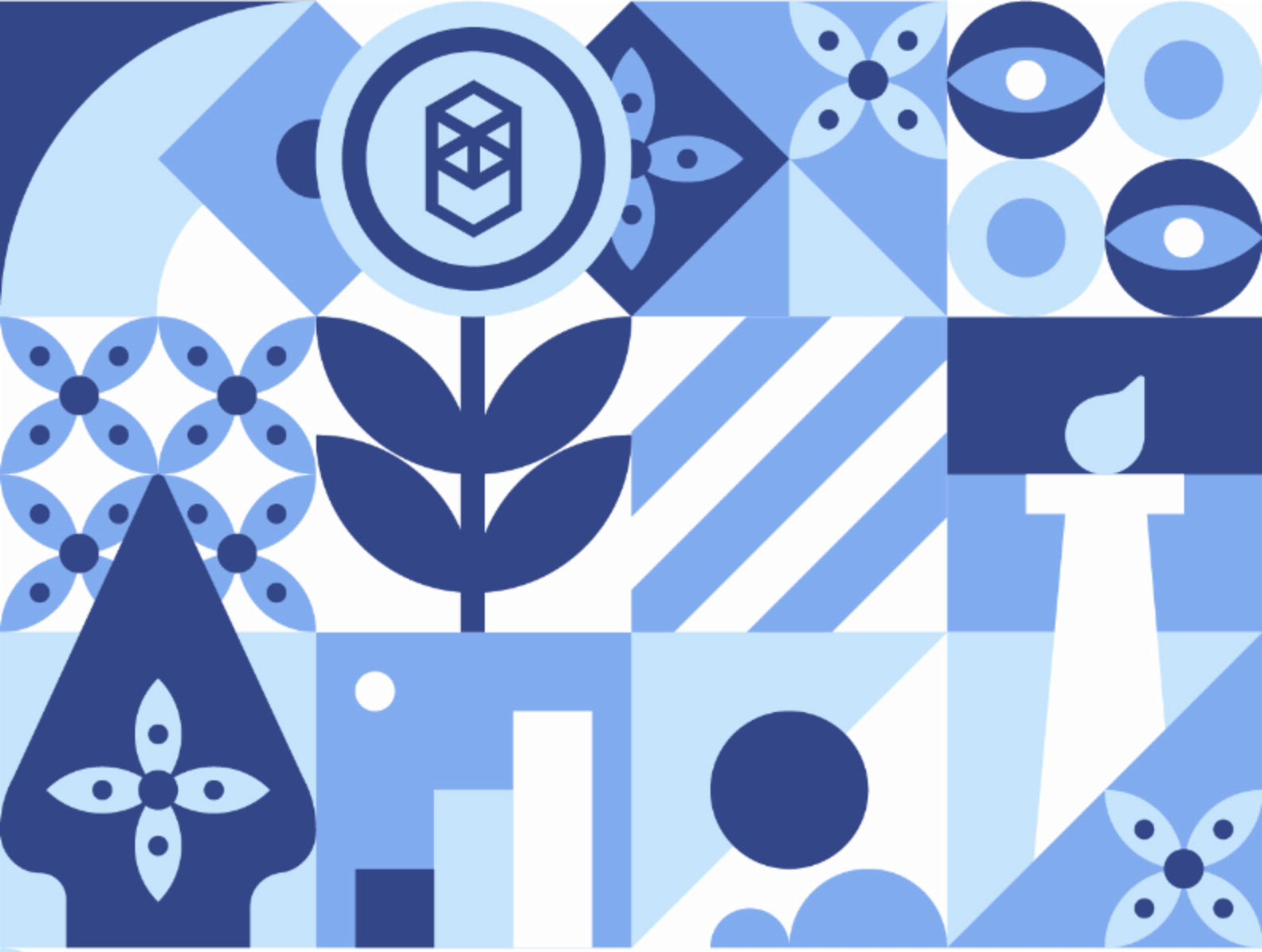

ProjectMars Token

Smart Contract Audit Report

SYSFIXED

24 May 2021

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
ProjectMars Token	MARS	Fantom

Addresses

Contract address	0xbe41772587872a92184873d55b09c6bb6f59f895
Contract deployer address	0x0897Cf572C8dAc35126c8198B9Ba2f300ED61b51

Project Website

https://www.projectmars.finance/

Codebase

https://ftmscan.com/address/0xbe41772587872a92184873d55b09c6bb6f59f895#code

SUMMARY

PROJECTMARS protocol is a combination of blackhole tokenomics and an auto-liquidity generating protocol. In addition to this, we are also building and developing a non-fungible token(NFT) platform.

Contract Summary

Documentation Quality

ProjectMars Token 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 ProjectMars Token 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 722.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 110, 142, 165, 166, 201, 237, 464, 705, 705, 705, 705, 706, 706, 725, 725, 725, 725, 726, 726, 726, 726, 858, 860, 887, 943, 962, 968 and 860.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 11.
- 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 859, 860, 860, 944, 944, 945, 946, 1071 and 1072.

CONCLUSION

We have audited the ProjectMars Token project released in May 2021 to discover issues and identify potential security vulnerabilities in ProjectMars Token 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 ProjectMars Token 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.

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	Sunday May 23 2021 06:17:10 GMT+0000 (Coordinated Universal Time)
Finished	Monday May 24 2021 06:47:28 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	MarsToken.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-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	COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS 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-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 110

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
109   function add(uint256 a, uint256 b) internal pure returns (uint256) {
110   uint256 c = a + b;
111   require(c >= a, "SafeMath: addition overflow");
112
113   return c;
114
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 142

low SEVERITY

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

Source File

- MarsToken.sol

Locations

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

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 165

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
164
165   uint256 c = a * b;
166   require(c / a == b, "SafeMath: multiplication overflow");
167
168   return c;
169
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 166

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
165   uint256 c = a * b;
166   require(c / a == b, "SafeMath: multiplication overflow");
167
168   return c;
169   }
170
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 201

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
200   require(b > 0, errorMessage);
201   uint256 c = a / b;
202   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
203
204   return c;
205
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 237

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
236   require(b != 0, errorMessage);
237   return a % b;
238   }
239   }
240
241
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 464

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
463   _owner = address(0);
464   _lockTime = now + time;
465   emit OwnershipTransferred(_owner, address(0));
466   }
467
468
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 705

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
704   uint256 private constant MAX = ~uint256(0);
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 705

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
704   uint256 private constant MAX = ~uint256(0);
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 705

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
704   uint256 private constant MAX = ~uint256(0);
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 705

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
704   uint256 private constant MAX = ~uint256(0);
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 706

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709   string private _name = "ProjectMars Token";
710
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 706

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
705   uint256 private _tTotal = 1000000000 * 10**6 * 10**9;
706   uint256 private _rTotal = (MAX - (MAX % _tTotal));
707   uint256 private _tFeeTotal;
708
709   string private _name = "ProjectMars Token";
710
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 725

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
724
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 725

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
724
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 725

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
724
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 725

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
724
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 726

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729   event SwapAndLiquifyEnabledUpdated(bool enabled);
730
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 726

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729   event SwapAndLiquifyEnabledUpdated(bool enabled);
730
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 726

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729   event SwapAndLiquifyEnabledUpdated(bool enabled);
730
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 726

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726   uint256 private numTokensSellToAddToLiquidity = 500000 * 10**6 * 10**9;
727
728   event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
729   event SwapAndLiquifyEnabledUpdated(bool enabled);
730
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 858

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
857   require(_isExcluded[account], "Account is already excluded");
858   for (uint256 i = 0; i < _excluded.length; i++) {
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 860

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862   _isExcluded[account] = false;
863   _excluded.pop();
864
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 887

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
886   _maxTxAmount = _tTotal.mul(maxTxPercent).div(
887   10**2
888   );
889   }
890
891
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 943

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
942   uint256 tSupply = _tTotal;
943   for (uint256 i = 0; i < _excluded.length; i++) {
944   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
945   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
946   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
947
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 962

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
961   return _amount.mul(_taxFee).div(
962   10**2
963   );
964   }
965
966
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 968

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
967   return _amount.mul(_liquidityFee).div(
968   10**2
969   );
970   }
971
972
```

SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 860

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862   _isExcluded[account] = false;
863   _excluded.pop();
864
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 11

low SEVERITY

The current pragma Solidity directive is ""^0.6.12"". 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

- MarsToken.sol

Locations

```
10
11   pragma solidity ^0.6.12;
12   // SPDX-License-Identifier: Unlicensed
13   interface IERC20 {
14
15
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 722

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

- MarsToken.sol

Locations

```
721
722   bool inSwapAndLiquify;
723   bool public swapAndLiquifyEnabled = true;
724
725   uint256 public _maxTxAmount = 5000000 * 10**6 * 10**9;
726
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 859

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
858   for (uint256 i = 0; i < _excluded.length; i++) {
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862   _isExcluded[account] = false;
863
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 860

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862   _isExcluded[account] = false;
863   _excluded.pop();
864
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 860

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
859   if (_excluded[i] == account) {
860   _excluded[i] = _excluded[_excluded.length - 1];
861   _tOwned[account] = 0;
862   _isExcluded[account] = false;
863   _excluded.pop();
864
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 944

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
943   for (uint256 i = 0; i < _excluded.length; i++) {
944   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
945   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
946   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
947   }
948
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 944

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
943   for (uint256 i = 0; i < _excluded.length; i++) {
944   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
945   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
946   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
947   }
948
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 945

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
944   if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
(_rTotal, _tTotal);
945   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
946   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
947   }
948   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
949
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 946

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
945   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
946   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
947   }
948   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
949   return (rSupply, tSupply);
950
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1071

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
1070   address[] memory path = new address[](2);
1071   path[0] = address(this);
1072   path[1] = uniswapV2Router.WETH();
1073
1074   _approve(address(this), address(uniswapV2Router), tokenAmount);
1075
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1072

low SEVERITY

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

Source File

- MarsToken.sol

Locations

```
1071   path[0] = address(this);
1072   path[1] = uniswapV2Router.WETH();
1073
1074   _approve(address(this), address(uniswapV2Router), tokenAmount);
1075
1076
```

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