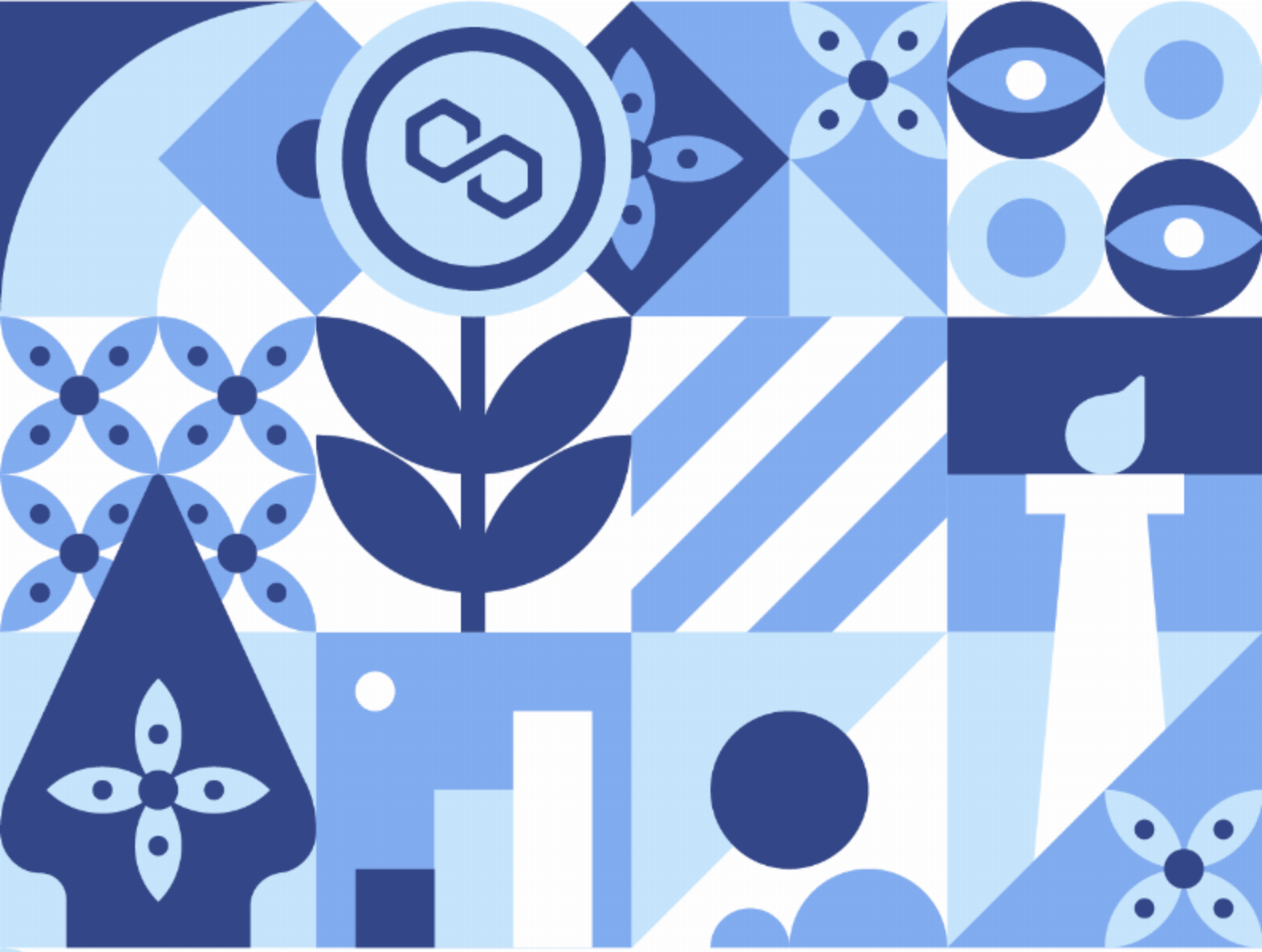

Cryption Network Token

Smart Contract Audit Report

SYSFIXED

08 May 2021

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Cryption Network Token	CNT	Polygon Matic

Addresses

Contract address	0xd1e6354fb05bf72a8909266203dab80947dceccf
Contract deployer address	0x4274A49FBeB724D75b8ba7bfC55FC8495A15AD1E

Project Website

https://cryption.network/

Codebase

https://polygonscan.com/address/0xd1e6354fb05bf72a8909266203dab80947dceccf#code

SUMMARY

Cryption Network is built on sound tokenomics principles to ensure its products' sustainable growth. The token — CNT — is a utility token built to incentivize people to provide liquidity onto our exchange.

Contract Summary

Documentation Quality

Cryption Network 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 Cryption Network 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 227 and 332.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 9, 224, 238, 315, 447, 472, 551, 858 and 926.
- SWC-120 | It is recommended to use external sources of randomness via oracles on lines 1129 and 1212.

CONCLUSION

We have audited the Cryption Network Token project released on May 2021 to discover issues and identify potential security vulnerabilities in Cryption Network 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 satisfactory results with low-risk issues.

The issues found in the Cryption Network 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 floating pragma is set, a state variable visibility is not set, and the potential use of "block.number" as a source of randomness. Specifying a fixed compiler version is recommended 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. It is best practice to set the visibility of state variables explicitly. The default visibility for "inited" is internal. Other possible visibility settings are public and private. 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, be aware that using these variables introduces a certain level of trust in 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.	PASS
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.	PASS
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.	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	Friday May 07 2021 01:25:16 GMT+0000 (Coordinated Universal Time)
Finished	Saturday May 08 2021 17:00:01 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	MCryptionNetworkToken.sol

Detected Issues

ID	Title	Severity	Status
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
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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-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged
SWC-120	POTENTIAL USE OF "BLOCK.NUMBER" AS SOURCE OF RANDOMNESS.	low	acknowledged

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 9

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". 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

- MCryptionNetworkToken.sol

Locations

```
8
9   pragma solidity >=0.6.0 <0.8.0;
10
11   /**
12   * @dev Wrappers over Solidity's arithmetic operations with added overflow
13
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 224

low SEVERITY

The current pragma Solidity directive is ""^0.7.6"". 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

- MCryptionNetworkToken.sol

Locations

```
223
224   pragma solidity ^0.7.6;
225
226   contract Initializable {
227   bool inited = false;
228
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 238

low SEVERITY

The current pragma Solidity directive is ""^0.7.6"". 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

- MCryptionNetworkToken.sol

Locations

```
237
238   pragma solidity ^0.7.6;
239
240
241   contract EIP712Base is Initializable {
242
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 315

low SEVERITY

The current pragma Solidity directive is ""^0.7.6"". 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

- MCryptionNetworkToken.sol

Locations

```
314
315   pragma solidity ^0.7.6;
316
317
318
319
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 447

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". 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

- MCryptionNetworkToken.sol

Locations

```
446
447   pragma solidity >=0.6.0 <0.8.0;
448
449   /*
450   * @dev Provides information about the current execution context, including the
451
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 472

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". 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

- MCryptionNetworkToken.sol

Locations

```
471
472   pragma solidity >=0.6.0 <0.8.0;
473
474   /**
475   * @dev Interface of the ERC20 standard as defined in the EIP.
476
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 551

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". 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

- MCryptionNetworkToken.sol

Locations

```
550
551   pragma solidity >=0.6.0 <0.8.0;
552
553
554
555
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 858

low SEVERITY

The current pragma Solidity directive is ""=0.6.0<0.8.0"". 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

- MCryptionNetworkToken.sol

Locations

```
857
858   pragma solidity >=0.6.0 <0.8.0;
859
860   /**
861   * @dev Contract module which provides a basic access control mechanism, where
862
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 926

low SEVERITY

The current pragma Solidity directive is ""^0.7.0"". 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

- MCryptionNetworkToken.sol

Locations

```
925
926   pragma solidity ^0.7.0;
927
928   // CryptionNetworkToken with Governance.
929
930
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 227

low SEVERITY

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

Source File

- MCryptionNetworkToken.sol

Locations

```
226   contract Initializable {
227   bool inited = false;
228
229   modifier initializer() {
230   require(!inited, "already inited");
231
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 332

low SEVERITY

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

Source File

- MCryptionNetworkToken.sol

Locations

```
331   );
332   mapping(address => uint256) nonces;
333
334   /*
335   * Meta transaction structure.
336
```

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

LINE 1129

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

- MCryptionNetworkToken.sol

Locations

```
1128   require(
1129   blockNumber < block.number,
1130   "CNT::getPriorVotes: not yet determined"
1131   );
1132
1133
```

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

LINE 1212

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

- MCryptionNetworkToken.sol

Locations

```
1211   safe32(
1212   block.number,
1213   "CNT::_writeCheckpoint: block number exceeds 32 bits"
1214   );
1215
1216
```

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