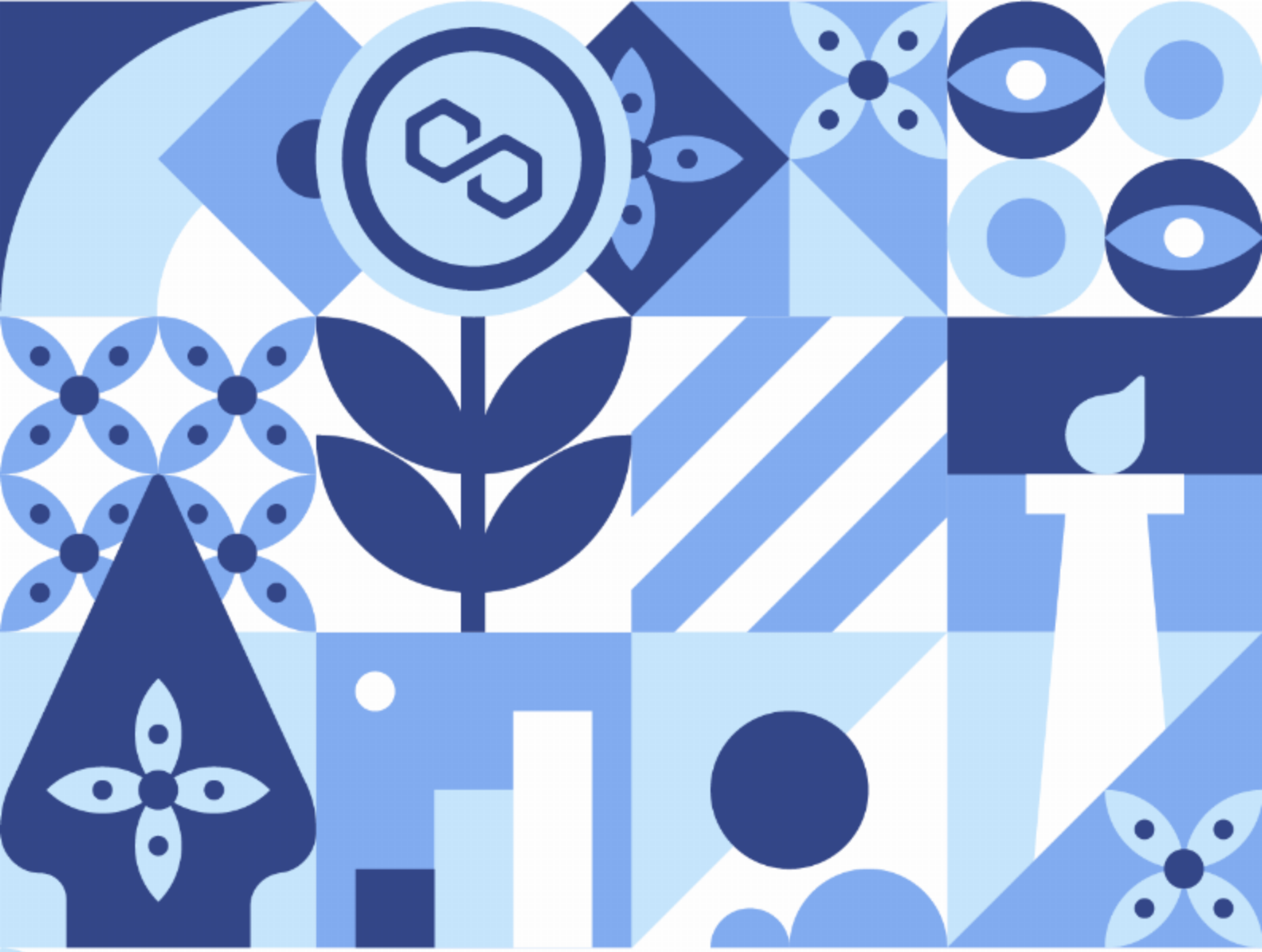

0xBitcoin Token

Smart Contract Audit Report

SYSFIXED

02 Sep 2020

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
0xBitcoin Token	0xBTC	Polygon Matic

Addresses

Contract address	0x71b821aa52a49f32eed535fca6eb5aa130085978
Contract deployer address	0xdcFAE11C70F1575faB9d6Bd389a6188aE5524A56

Project Website

https://0xbitcoin.org/#/

Codebase

https://polygonscan.com/address/0x71b821aa52a49f32eed535fca6eb5aa130085978#code

SUMMARY

The name 0xBitcoin is derived from a combination of the name of the decentralized and mined commodity Bitcoin with the term '0x', which implies that the asset lives on the Ethereum Network. This is suggested because all Ethereum addresses begin with the character '0x.' The 0xBitcoin contract is located at Ethereum address 0xb6ed7644c69416d67b522e20bc294a9a9b405b31 and has validated transparent code, which can be audited on the Etherscan service.

Contract Summary

Documentation Quality

0xBitcoin 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 0xBitcoin 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 1225 and 1328.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 9, 36, 116, 278, 422, 731 and 977.

CONCLUSION

We have audited the 0xBitcoin Token project released on September 2020 to discover issues and identify potential security vulnerabilities in the 0xBitcoin 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 0xBitcoin Token smart contract code issues 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 a floating pragma is set and a state variable visibility is not set. 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.

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.	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	Tuesday Sep 01 2020 17:57:10 GMT+0000 (Coordinated Universal Time)
Finished	Wednesday Sep 02 2020 07:53:58 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	ChildERC20.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
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
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SWC-103	A FLOATING PRAGMA IS SET.	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-103 | A FLOATING PRAGMA IS SET.

LINE 9

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
8
9   pragma solidity ^0.6.0;
10
11   /*
12   * @dev Provides information about the current execution context, including the
13
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 36

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
35
36   pragma solidity ^0.6.0;
37
38   /**
39   * @dev Interface of the ERC20 standard as defined in the EIP.
40
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 116

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
115
116   pragma solidity ^0.6.0;
117
118   /**
119   * @dev Wrappers over Solidity's arithmetic operations with added overflow
120
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 278

low SEVERITY

The current pragma Solidity directive is ""^0.6.2"". 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

- ChildERC20.sol

Locations

```
277
278   pragma solidity ^0.6.2;
279
280   /**
281   * @dev Collection of functions related to the address type
282
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 422

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
421
422   pragma solidity ^0.6.0;
423
424
425
426
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 731

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
730
731   pragma solidity ^0.6.0;
732
733   /**
734   * @dev Library for managing
735
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 977

low SEVERITY

The current pragma Solidity directive is ""^0.6.0"". 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

- ChildERC20.sol

Locations

```
976
977   pragma solidity ^0.6.0;
978
979
980
981
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 1225

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

- ChildERC20.sol

Locations

```
1224   contract Initializable {
1225   bool inited = false;
1226
1227   modifier initializer() {
1228   require(!inited, "already inited");
1229
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 1328

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

- ChildERC20.sol

Locations

```
1327   );
1328   mapping(address => uint256) nonces;
1329
1330   /*
1331   * Meta transaction structure.
1332
```

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