Cyberscope

Audit Report

FBX

June 2023

Network	BSC
Address	0xd21fB1717c8Ef8cb015C40aa827271795e4370F4
Audited by	© cyberscope

Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Renounced
●	BC	Blacklists Addresses	Passed

Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	L19	Stable Compiler Version	Unresolved

Table of Contents

Review

Contract Name	FBX
Compiler Version	v0.8.7+commit.e28d00a7
Optimization	200 runs
Explorer	https://bscscan.com/address/0xd21fb1717c8ef8cb015c40aa827271795e4370f4
Address	0xd21fb1717c8ef8cb015c40aa827271795e4370f4
Network	BSC
Symbol	FBX
Decimals	18
Total Supply	500,000,000

Audit Updates

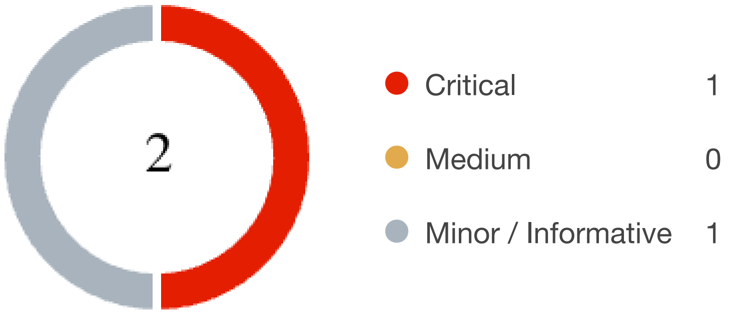
Initial Audit	05 Jun 2023

Source Files

Filename	SHA256
@openzeppelin/contracts/access/Ownable.sol	9353af89436556f7ba8abb3f37a6677249aa4df6024fbfaa94f79ab2f44f3231
@openzeppelin/contracts/governance/utils/IVotes.sol	55fe90680900ea253e4e5b11d9b6ab5c4ff3e85e48ffb94c8b2c29694d01312b

@openzeppelin/contracts/token/ERC20/ERC20.sol	bce14c3fd3b1a668529e375f6b70ffdf9cef8c4e410ae99608be5964d98fa701
@openzeppelin/contracts/token/ERC20/extensions/draft-ERC20Permit.sol	243e9133374f78f57888ef7280d76b79b0b4f550f56268659506dde9438425a1
@openzeppelin/contracts/token/ERC20/extensions/draft-IERC20Permit.sol	3e7aa0e0f69eec8f097ad664d525e7b3f0a3fda8dcdd97de5433ddb131db86ef
@openzeppelin/contracts/token/ERC20/extensions/ERC20Votes.sol	4c74d2f49b481ab3386392007f057a0beb86da1dedc11d3e9509898de815303d
@openzeppelin/contracts/token/ERC20/extensions/IERC20Metadata.sol	af5c8a77965cc82c33b7ff844deb9826166689e55dc037a7f2f790d057811990
@openzeppelin/contracts/token/ERC20/IERC20.sol	94f23e4af51a18c2269b355b8c7cf4db8003d075c9c541019eb8dcf4122864d5
@openzeppelin/contracts/utils/Context.sol	1458c260d010a08e4c20a4a517882259a23a4baa0b5bd9add9fb6d6a1549814a
@openzeppelin/contracts/utils/Counters.sol	2fdcb1343e5621385b62e57b5c7775607c272122b6f2dc77da8f84828aa40cd0
@openzeppelin/contracts/utils/cryptography/ECDSA.sol	d18195404f37ee86b44cfb01858b76ac0d4d17b77328fa82895ee893718cb0c2
@openzeppelin/contracts/utils/cryptography/EIP712.sol	8e8907de613172eb24cb7c8c6ae34381bfe5aa38d9998e27d3065e3a711390c0
@openzeppelin/contracts/utils/math/Math.sol	8059d642ec219d0b9b62fbc76912079529cf494cac988abe5e371f1168b29b0f
@openzeppelin/contracts/utils/math/SafeCast.sol	a5dab332e2caa1db5aae709693e59431132aa720528d0245a647dde6e93d7436
@openzeppelin/contracts/utils/Strings.sol	f81f11dca62dcd3e0895e680559676f4ba4f2e12a36bb0291d7ecbb6b983141f
contracts/Presale/fbx.sol	56015410c06231ecbf8e5427978fb6a89295aaa98048818caf232114cc727d1c

Findings Breakdown



Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	1
● Medium	0	0	0	0
● Minor / Informative	1	0	0	0

BT - Burns Tokens

Criticality	Critical
Location	contracts/Presale/fbx.sol#L24
Status	Renounced

Description

The contract owner has the authority to burn tokens from a specific address. The owner may take advantage of it by calling the `burn` function. As a result, the targeted address will lose the corresponding tokens.

```
function burn(address account, uint256 amount)
    external
    onlyOwner()
{
    _burn(account, amount);
}
```

Recommendation

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. Some suggestions are:

- Introduce a time-locker mechanism with a reasonable delay.
- Introduce a multi-sign wallet so that many addresses will confirm the action.
- Introduce a governance model where users will vote about the actions.
- Renouncing the ownership will eliminate the threats but it is non-reversible.

Team Update

The contract's ownership has been renounced. The information regarding the transaction can be accessed through the following link:
https://bscscan.com/tx/0x90f0133695147b19a0a299af73f5358fde0f1a10b372c1f54c473cfdd028992a.

L19 - Stable Compiler Version

Criticality	Minor / Informative
Location	contracts/Presale/fbx.sol#L2
Status	Unresolved

Description

The `^` symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.0;
```

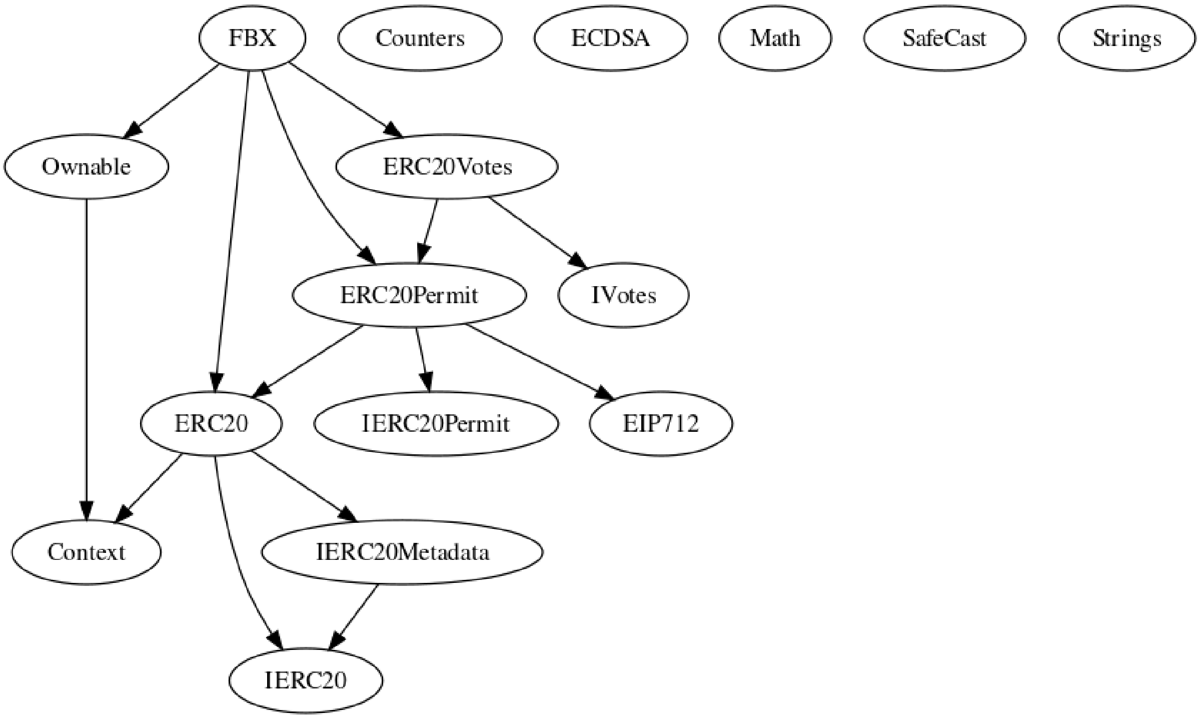
Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.

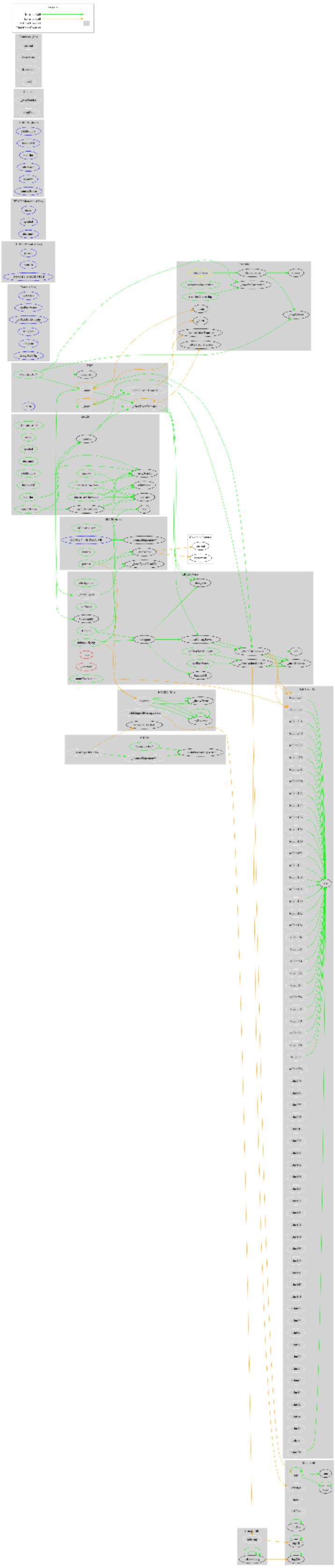
Functions Analysis

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
FBX	Implementation	ERC20, ERC20Permit, ERC20Votes, Ownable		
		Public	✓	ERC20 ERC20Permit
	decimals	Public		-
	burn	External	✓	onlyOwner
	_afterTokenTransfer	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	

Inheritance Graph



Flow Graph



Summary

FBX contract implements a token mechanism. This audit investigates security issues, business logic concerns, and potential improvements. There are some functions that can be abused by the owner like burning tokens from any address. if the contract owner abuses the burn functionality, then the users could lose their tokens. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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About Cyberscope

Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.

The Cyberscope team

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