Cyberscope

Audit Report

FlareFox

April 2024

Network	Flare
Address	0x22757fb83836e3f9f0f353126cacd3b1dc82a387
Audited by	© cyberscope

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Review

Explorer	https://flare-explorer.flare.network/address/0x22757fb83836e3F9F0F353126cACD3B1Dc82a387/

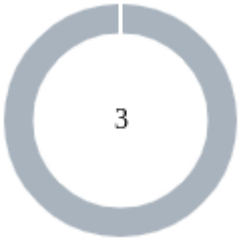
Audit Updates

Initial Audit	18 Apr 2024

Source Files

Filename	SHA256
FlareFoxInu.sol	9b2872349330669a553a102184375c9bd005f0eb374465b6710e0b1179e54571

Findings Breakdown



Critical	0
Medium	0
Minor / Informative	3

Severity	Unresolved	Acknowledged	Resolved	Other
Critical	0	0	0	0
Medium	0	0	0	0
Minor / Informative	3	0	0	0

Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	L07	Missing Events Arithmetic	Unresolved
●	L18	Multiple Pragma Directives	Unresolved
●	L19	Stable Compiler Version	Unresolved

L07 - Missing Events Arithmetic

Criticality	Minor / Informative
Location	FlareFoxInu.sol#L797
Status	Unresolved

Description

Events are a way to record and log information about changes or actions that occur within a contract. They are often used to notify external parties or clients about events that have occurred within the contract, such as the transfer of tokens or the completion of a task.

It's important to carefully design and implement the events in a contract, and to ensure that all required events are included. It's also a good idea to test the contract to ensure that all events are being properly triggered and logged.

```
burnRate = newBurnRate
```

Recommendation

By including all required events in the contract and thoroughly testing the contract's functionality, the contract ensures that it performs as intended and does not have any missing events that could cause issues with its arithmetic.

L18 - Multiple Pragma Directives

Criticality	Minor / Informative
Location	FlareFoxInu.sol#L7,34,119,226,311,341,732,769
Status	Unresolved

Description

If the contract includes multiple conflicting pragma directives, it may produce unexpected errors. To avoid this, it's important to include the correct pragma directive at the top of the contract and to ensure that it is the only pragma directive included in the contract.

```
pragma solidity ^0.8.0;
pragma solidity ^0.8.17;
```

Recommendation

It is important to include only one pragma directive at the top of the contract and to ensure that it accurately reflects the version of Solidity that the contract is written in.

By including all required compiler options and flags in a single pragma directive, the potential conflicts could be avoided and ensure that the contract can be compiled correctly.

L19 - Stable Compiler Version

Criticality	Minor / Informative
Location	FlareFoxInu.sol#L7,34,119,226,311,341,732,769
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;
pragma solidity ^0.8.17;
```

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

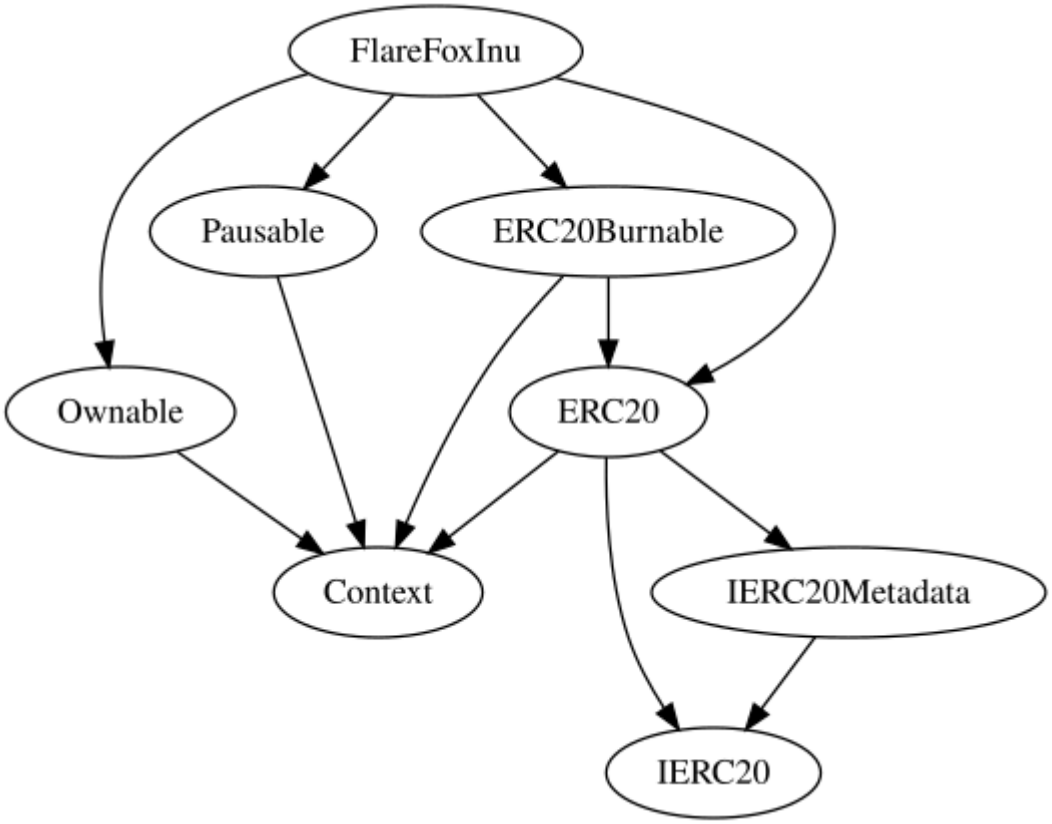
Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
		Public	✓	-
	owner	Public		-
	_checkOwner	Internal		
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
Pausable	Implementation	Context		
		Public	✓	-
	paused	Public		-
	_requireNotPaused	Internal		
	_requirePaused	Internal		
	_pause	Internal	✓	whenNotPaused
	_unpause	Internal	✓	whenPaused

IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IERC20Metadata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
ERC20	Implementation	Context, IERC20, IERC20Metadata		
		Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-

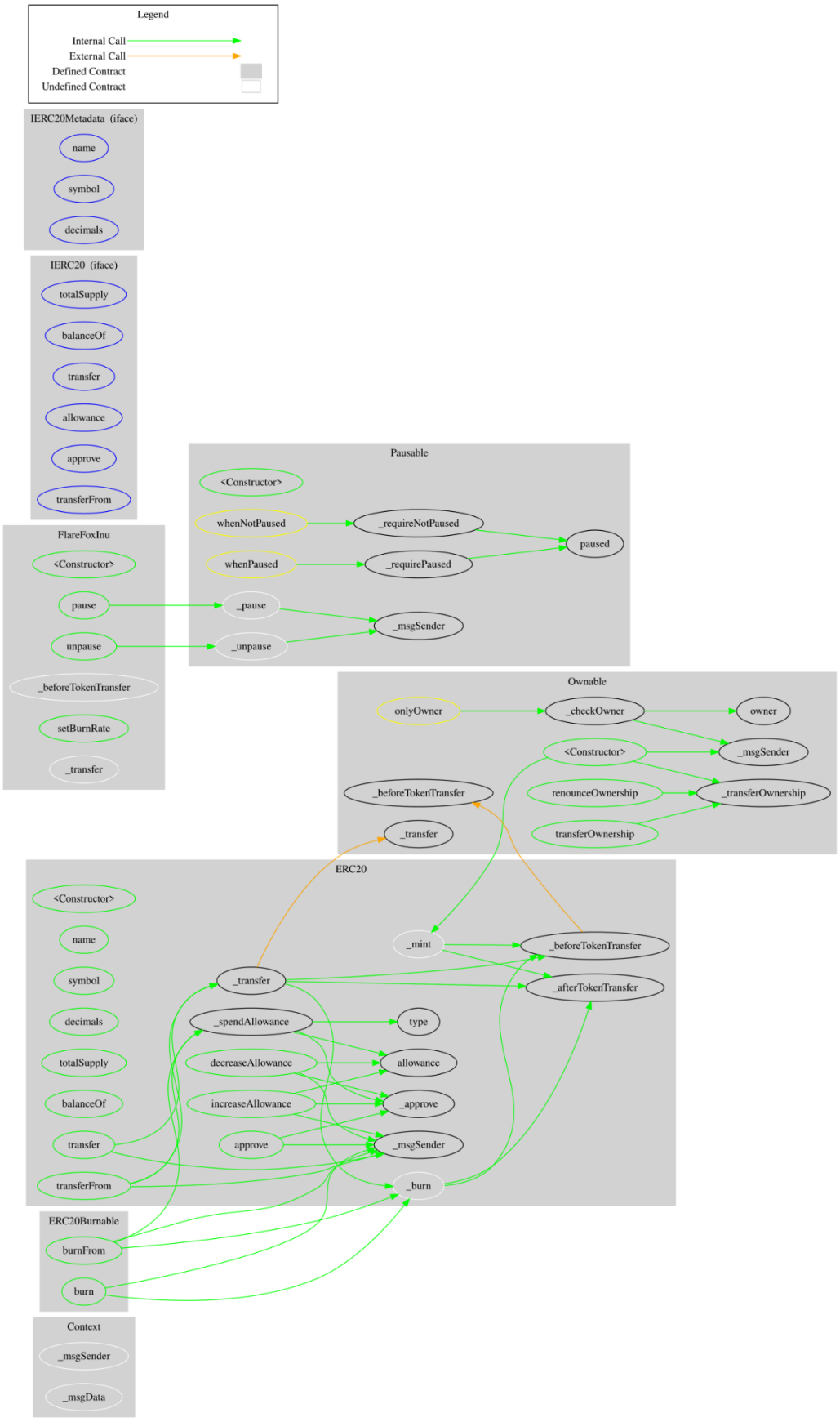
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_spendAllowance	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
ERC20Burnable	Implementation	Context, ERC20		
	burn	Public	✓	-
	burnFrom	Public	✓	-
FlareFoxInu	Implementation	ERC20, ERC20Burnable, Pausable, Ownable		
		Public	✓	ERC20
	pause	Public	✓	onlyOwner
	unpause	Public	✓	onlyOwner
	_beforeTokenTransfer	Internal	✓	whenNotPaused

	setBurnRate	Public	✓	onlyOwner
	_transfer	Internal	✓	

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
IERC20Metadata (iface)
name
symbol
decimals
IERC20 (iface)
totalSupply
balanceOf
transfer
allowance
approve
transferFrom
Pausable
<Constructor>
whenNotPaused
_requireNotPaused
paused
whenPaused
_requirePaused
FlareFoxInu
<Constructor>
pause
_pause
_msgSender
unpause
_unpause
_beforeTokenTransfer
setBurnRate
_transfer
Ownable
onlyOwner
_checkOwner
owner
<Constructor>
_msgSender
_beforeTokenTransfer
renounceOwnership
_transferOwnership
_transfer
transferOwnership
ERC20
<Constructor>
name
symbol
decimals
totalSupply
balanceOf
transfer
transferFrom
_mint
_beforeTokenTransfer
_transfer
_afterTokenTransfer
_spendAllowance
type
decreaseAllowance
allowance
increaseAllowance
_approve
approve
_msgSender
_burn
ERC20Burnable
burnFrom
burn
Context
_msgSender
_msgData

Summary

FlareFox contract implements a token mechanism on Flare network. This audit investigates security issues, business logic concerns and potential improvements.

The contract's ownership has been renounced. The information regarding the transaction can be accessed through the following link:

https://flare-explorer.flare.network/tx/0xa1a928a9b45e0b2f8471715960cd4b4ef3422f69d582bcd9bab0f3c32e4fbff6

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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

https://www.cyberscope.io