Cyberscope

Audit Report

Pi Network Inu

June 2022

Table of Contents

Contract Review

Contract Name	PiNetworkInu
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x78c0240dc7cc847babd972c853945a0293b2b040
Symbol	PII
Decimals	9
Total Supply	1,000,000,000,000,000
Domain	https://pinetworkinu.io/

Source Files

Filename	SHA256
contract.sol	c29b0a40261c203b31c1532410dbcacfda3ec778e2a513271458ff9287077c63

Audit Updates

Initial Audit	4th July 2022
Corrected	

Contract Analysis

● Critical   ● Medium   ● Minor   ● Pass

Severity	Code	Description
●	ST	Contract Owner is not able to stop or pause transactions
●	OCTD	Contract Owner is not able to transfer tokens from specific address
●	OTUT	Owner Transfer User's Tokens
●	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
●	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
●	MT	Contract Owner is not able to mint new tokens
●	BT	Contract Owner is not able to burn tokens from specific wallet
●	BC	Contract Owner is not able to blacklist wallets from selling

ULTW - Unlimited Liquidity to Team Wallet

Criticality	minor
Location	contract.sol#L379,L385

Description

The contract owner has the authority to transfer funds without limit to the team wallet. These funds have been accumulated from fees collected from the contract. The owner may take advantage of it by calling the manualswap and manualsend methods.

```
function manualswap() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress ||
_msgSender() == owner());
    uint256 contractBalance = balanceOf(address(this));
    swapTokensForEth(contractBalance);
}
```

```
function manualsend() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress ||
_msgSender() == owner());
    uint256 contractETHBalance = address(this).balance;
    sendETHToFee(contractETHBalance);
}
```

Recommendation

The contract could embody a check for the maximum amount of funds that can be swapped. Since a huge amount may volatile the token's price.

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. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Contract Diagnostics

● Critical   ● Medium   ● Minor

Severity	Code	Description
●	FSA	Fixed Swap Address
●	CO	Code Optimization
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L05	Unused State Variable

FSA - Fixed Swap Address

Criticality	minor
Location	contract.sol#L173

Description

The swap address is assigned once in the constructor and it can not be changed.
The decentralized swaps sometimes create a new swap version or abandon the
current. A contract that cannot change the swap address may not be able to
catch-up the upgrade.

```
IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E);
    uniswapV2Router = _uniswapV2Router;
    uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory())
        .createPair(address(this), _uniswapV2Router.WETH());
```

Recommendation

It could be better to allow the swap address mutation in case of future swap
updates.

CO - Code Optimization

Criticality	minor
Location	contract.sol#L299

Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

The functions _tokenTransfer and _tranferStandard can be merged to perform less operation on token transfers.

```
function _tokenTransfer(address sender, address recipient, uint256 amount) private {
     _transferStandard(sender, recipient, amount);
}
```

Recommendation

Rewrite some code segments so the runtime will be more performant.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L402,218,110,188,387,184,192,116,209,204,306,313,300,213,196,398

Description

Public functions that are never called by the contract should be declared external to save gas.

```
toggleSwap
totalSupply
approve
rescueForeignTokens
setNewMarketingAddress
setNewDevAddress
transfer
allowance
transferOwnership
...
```

Recommendation

Use the external attribute for functions never called from the contract.

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L93

Description

Constant state variables should be declared constant to save gas.

_previousOwner

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L146,299,398,132,300,34,145,305,312,147

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
_decimals
marketingAddressUpdated
devAddressUpdated
_name
_tokenAddr
_to
WETH
_amount
_tTotal
...
```

Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions

L05 - Unused State Variable

Criticality	minor
Location	contract.sol#L127,93

Description

There are segments that contain unused state variables.

```
_previousOwner
_tOwned
```

Recommendation

Remove unused state variables.

Contract Functions

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Token	Interface			
	transferFrom	External	✓	-
	transfer	External	✓	-
IUniswapV2Factory	Interface			
	createPair	External	✓	-
IUniswapV2Router02	Interface			
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
Context	Implementation			
	_msgSender	Internal		
SafeMath	Library			
	add	Internal		
	sub	Internal		

	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
PiNetworkInu	Implementation	Context, IERC20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	tokenFromReflection	Private		
	_approve	Private	✓	
	_transfer	Private	✓	
	swapTokensForEth	Private	✓	lockTheSwap
	sendETHToFee	Private	✓	
	_tokenTransfer	Private	✓	
	rescueForeignTokens	Public	✓	onlyDev
	setNewDevAddress	Public	✓	onlyDev
	setNewMarketingAddress	Public	✓	onlyDev
	_transferStandard	Private	✓	
	_takeTeam	Private	✓	

_reflectFee	Private	✓	
<Receive Ether>	External	Payable	-
_getValues	Private		
_getTValues	Private		
_getRValues	Private		
_getRate	Private		
_getCurrentSupply	Private		
manualswap	External	✓	-
manualsend	External	✓	-
setFee	Public	✓	onlyDev
toggleSwap	Public	✓	onlyDev
excludeMultipleAccountsFromFees	Public	✓	onlyOwner

Contract Flow
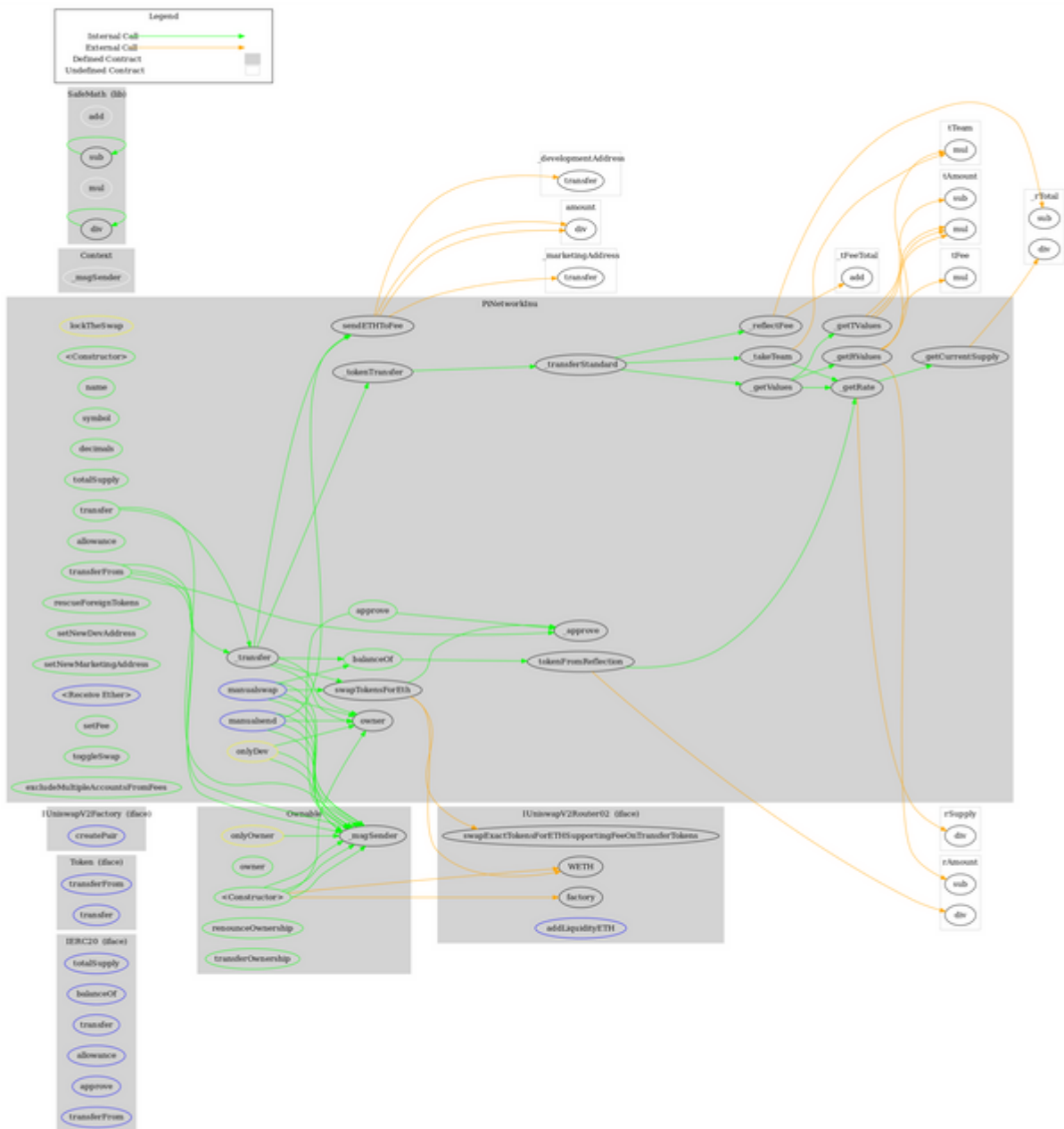
Domain Info

Domain Name	pinetworkinu.io
Registry Domain ID	6dd847b4edfc4d86a8ae4903424e75ce-DONUTS
Creation Date	2022-07-01T14:45:26Z
Updated Date	2022-07-01T14:45:27Z
Registry Expiry Date	2024-07-01T14:45:26Z
Registrar WHOIS Server	whois.godaddy.com/
Registrar URL	http://www.godaddy.com/domains/search.aspx?ci=8990
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain has been created 3 days before the creation of the audit. It will expire in almost 2 years.

There is no public billing information, the creator is protected by the privacy settings.

Summary

The Smart Contract analysis reported one minor severity issue. The contract owner has the authority to transfer funds to the team's wallet. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats. There is also a limit of max 16% fees on every transaction.

Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

Cyberscope team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed.

The Cyberscope team has audited this project for general information and only expresses their opinion based on similar projects and checks from popular diagnostic tools. Under no circumstances did Cyberscope receive a payment to manipulate those results or change the awarding badge that we will be adding in our website.

Always Do your own research and protect yourselves from scams. This document should not be presented as a reason to buy or not buy any particular token.

The Cyberscope team disclaims any liability for the resulting losses.

About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provide all the essential tools to assist users draw their own conclusions.

The Cyberscope team

https://www.cyberscope.io