



Cyberscope

Audit Report

The Night Coin

April 2022

Network BSC

Address 0x457610b491560A8173a70Cb63446ee9637E0e5f0

Audited by © cyberscope

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Source Files

Contract Name	TheNightCoin
Compiler Version	v0.8.9+commit.e5eed63a
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0x457610b491560A8173a70Cb63446ee9637E0e5f0
Symbol	TNC
Decimals	18
Total Supply	100,000,000
Domain	thenightcoin.com

Source Files

Filename	SHA256
contract.sol	1dd61027d964abe2f648988cc0d98938d872de97e20767b41964bf376bb12323

Audit Updates

Initial Audit	2nd May 2022
Corrected	5th May 2022

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

Contract Diagnostics

● Critical ● Medium ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L04	Conformance to Solidity Naming Conventions
●	L05	Unused State Variable
●	L07	Missing Events Arithmetic
●	L09	Dead Code Elimination
●	L13	Divide before Multiply Operation

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L113,114,115

Description

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

```
decimals  
symbol  
name
```

Recommendation

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

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L31,32,49,348,629,637,484,499,521,522,524,525

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.

```
_sellLiqFee  
_sellTheTNCBankFee  
_buyLiqFee  
_buyTheTNCBankFee  
restrictions  
_totalSupply  
_liqFee  
_theTNCBankFee  
WETH  
...
```

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#L280

Description

There are segments that contain unused state variables.

```
MAX_INT256
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L606

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
tokenToEth = newAmount
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L181,326,332,339

Description

Functions that are not used in the contract, and make the code's size bigger.

```
toInt256Safe  
toUint256Safe  
abs  
_burn
```

Recommendation

Remove unused functions.

L13 - Divide before Multiply Operation

Criticality	minor
Location	contract.sol#L660

Description

Performing divisions before multiplications may cause lose of prediction.

```
fees = amount.mul(buyTotalFees).div(100)
fees = amount.mul(sellTotalFees).div(100)
```

Recommendation

The multiplications should be prior to the divisions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
IUSV2Pair	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-
	swap	External	✓	-

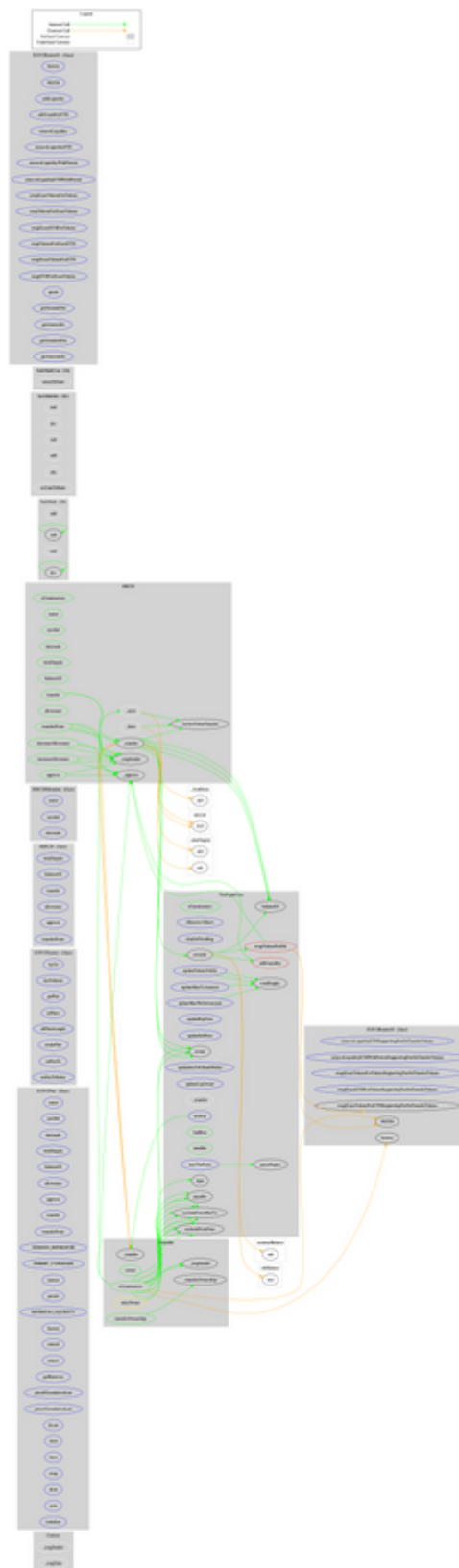
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
IUSV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IERC20	Interface			
	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, IERC20Meta data		
	<Constructor>	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	✓	
	_beforeTokenTransfer	Internal	✓	
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		
	toUint256Safe	Internal		

SafeMathUint	Library			
	toInt256Safe	Internal		
IUSV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUSV2Router02	Interface	IUSV2Route r01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	✓	-
	removeLiquidityETHWithPermitSuppo rtingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	✓	-

TheNightCoin	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	disableTimeRug	External	✓	onlyOwner
	updateTokensToEth	External	✓	onlyOwner
	updateMaxTxAmount	External	✓	onlyOwner
	updateMaxWalletAmount	External	✓	onlyOwner
	excludeFromMaxTx	Public	✓	onlyOwner
	updateBuyFees	External	✓	onlyOwner
	updateSellFees	External	✓	onlyOwner
	excludeFromFees	Public	✓	onlyOwner
	updatetheTNCBankWallet	External	✓	onlyOwner
	updateLiqOwner	External	✓	onlyOwner
	_transfer	Internal	✓	
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	switchIt	Private	✓	
	badBots	Public	✓	onlyOwner
	notaBot	Public	✓	onlyOwner
	partyBegins	Private	✓	
	startTheParty	External	✓	onlyOwner
	airdrop	External	✓	onlyOwner

Contract Flow



Domain Info

Domain Name	thenightcoin.com
Registry Domain ID	2654686867_DOMAIN_COM-VRSN
Creation Date	2021-11-13T18:52:46Z
Updated Date	2021-11-13T18:52:46Z
Registry Expiry Date	2022-11-13T18:52:46Z
Registrar WHOIS Server	whois.godaddy.com
Registrar URL	http://www.godaddy.com
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain has been created 6 months before the creation of the audit. It will expire in 7 months.

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

Summary

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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 provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>



Cyberscope

Audit Report

The Night Coin

April 2022

SHA256 37e0f6527875733990716becda9dd12bc7d91bd9e7fd8f2e40ee85ef847cbd32

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Source Files

Filename	SHA256
contract.sol	37e0f6527875733990716becda9dd12bc7d91bd9e7fd8f2e40ee85ef847cbd32

Audit Updates

Initial Audit	2nd May 2022
Corrected	

Contract Analysis

● Critical ● Medium ● Minor ● Pass

Severity	Code	Description
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Contract Diagnostics

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●	L04	Conformance to Solidity Naming Conventions
●	L05	Unused State Variable
●	L07	Missing Events Arithmetic
●	L09	Dead Code Elimination
●	L11	Unnecessary Boolean equality
●	L13	Divide before Multiply Operation

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L113,114,115,122,127,131,136,146,151,267,821,828

Description

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

```
notaBot  
badBots  
transferOwnership  
decreaseAllowance  
increaseAllowance  
transferFrom  
approve  
allowance  
transfer  
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L249,527,526,530,529,504

Description

Constant state variables should be declared constant to save gas.

```
restrictions
_sellTheTNCBankFee
_sellLiqFee
_buyTheTNCBankFee
_buyLiqFee
_previousOwner
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L31,32,49,349,538,539,626,633,489,526,527,529,530,535

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.

```
_isExcludedMaxTx  
_sellLiqFee  
_sellTheTNCBankFee  
_buyLiqFee  
_buyTheTNCBankFee  
_totalSupply  
_liqFee  
_theTNCBankFee  
liqOwnerUpdated  
...
```

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#L281,485,486,249,488

Description

There are segments that contain unused state variables.

```
MAX
_previousOwner
_allowances
_balances
MAX_INT256
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality

minor

Location

contract.sol#L605,612,617,626,633

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
sellTheTNCBankFee = _theTNCBankFee  
buyTheTNCBankFee = _theTNCBankFee  
maxWallet = newNum * (1e18)  
maxTx = newNum * (1e18)  
tokenToEth = newAmount
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L181,327,333,340

Description

Functions that are not used in the contract, and make the code's size bigger.

```
toInt256Safe  
toUint256Safe  
abs  
_burn
```

Recommendation

Remove unused functions.

L11 - Unnecessary Boolean equality

Criticality

minor

Location

contract.sol#L840

Description

The comparison to boolean constants is redundant. Boolean constants can be used directly and do not need to be compared to true or false.

```
require(bool,string)(boughtEarly == true,done)
```

Recommendation

Remove the equality to the boolean constant.

L13 - Divide before Multiply Operation

Criticality

minor

Location

contract.sol#L655

Description

Performing divisions before multiplications may cause lose of prediction.

```
fees = amount.mul(buyTotalFees).div(100)
fees = amount.mul(sellTotalFees).div(100)
```

Recommendation

The multiplications should be prior to the divisions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
IUSV2Pair	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-
	swap	External	✓	-

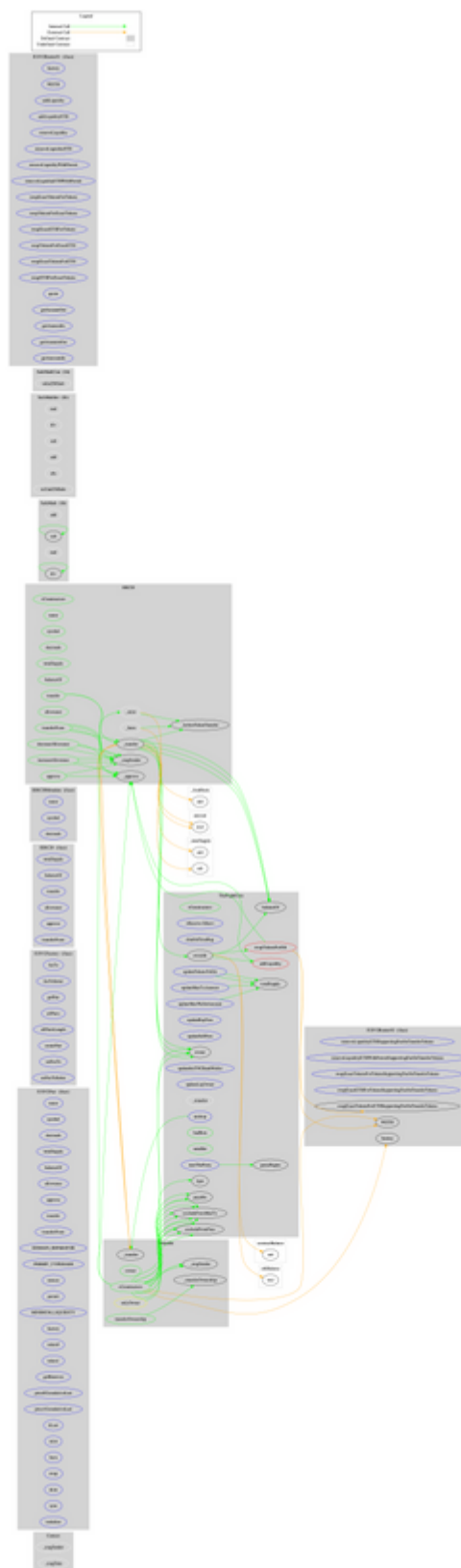
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
IUSV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IERC20	Interface			
	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, IERC20Meta data		
	<Constructor>	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	✓	
	_beforeTokenTransfer	Internal	✓	
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		
	toUint256Safe	Internal		

SafeMathUint	Library			
	toInt256Safe	Internal		
IUSV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUSV2Router02	Interface	IUSV2Route r01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	✓	-
	removeLiquidityETHWithPermitSuppo rtingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	✓	-

TheNightCoin	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	disableTimeRug	External	✓	onlyOwner
	updateTokensToEth	External	✓	onlyOwner
	updateMaxTxAmount	External	✓	onlyOwner
	updateMaxWalletAmount	External	✓	onlyOwner
	excludeFromMaxTx	Public	✓	onlyOwner
	updateBuyFees	External	✓	onlyOwner
	updateSellFees	External	✓	onlyOwner
	excludeFromFees	Public	✓	onlyOwner
	updateTheTNCBankWallet	External	✓	onlyOwner
	updateLiqOwner	External	✓	onlyOwner
	_transfer	Internal	✓	
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	switchIt	Private	✓	
	badBots	Public	✓	onlyOwner
	notaBot	Public	✓	onlyOwner
	partyBegins	Private	✓	
	startTheParty	External	✓	onlyOwner
	airdrop	External	✓	onlyOwner

Contract Flow



Domain Info

Domain Name	thenightcoin.com
Registry Domain ID	2654686867_DOMAIN_COM-VRSN
Creation Date	2021-11-13T18:52:46Z
Updated Date	2021-11-13T18:52:46Z
Registry Expiry Date	2022-11-13T18:52:46Z
Registrar WHOIS Server	whois.godaddy.com
Registrar URL	http://www.godaddy.com
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain has been created 6 months before the creation of the audit. It will expire in 7 months.

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

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