Audit Report

Superior cars

January 2022

Type	BEP20
Network	BSC
Address	0xF44DE2b8731cD69d4A727Da0214874aE35559426
Audited by	© coinscope

Table of Contents

Contract Review

Contract Name	CoinToken
Compiler Version	v0.4.24+commit.e67f0147
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0xF44DE2b8731cD69d4A727Da0214874aE35559426
Symbol	SRT
Decimals	9
Total Supply	10,000,000,000
Source	contract.sol
Domain	superiorcarsgame.com

Audit Updates

Initial Audit	4th January 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

ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	https://bscscan.com/address/0x8983a6f5b70315f9373d39e14de5afeabf835588#code#L285

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the `updateFee` function with a high percentage value.

```
function updateFee(uint256 _txFee,uint256 _burnFee,address _FeeAddress)
onlyOwner public{
    txFee = _txFee;
    burnFee = _burnFee;
    FeeAddress = _FeeAddress;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

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.

MT - Mint Tokens

Criticality	critical
Location	contract.sol#L300

Description

The contract owner has the authority to mint tokens. The owner may take advantage of it by calling the `mint` function. As a result the contract tokens will be highly inflated

```
function mint(address account, uint256 amount) onlyOwner public {
    totalSupply = totalSupply.add(amount);
    balances[account] = balances[account].add(amount);
    emit Mint(address(0), account, amount);
    emit Transfer(address(0), account, amount);
}
```

Recommendation

The owner should carefully manage the credentials of the owner's account. We advised considering an extra-strong security mechanism that the actions may be quarantined by many users instead of one. The owner could also renounce the contract ownership for a period of time or pass the access to the zero address.

BC - Blacklisted Contracts

Criticality	medium
Location	contract.sol#L253

Description

The contract owner has the authority to stop contracts from transactions. The owner may take advantage of it by calling the `blackListAddress` function.

```solidity
function blackListAddress(address listAddress,  bool isBlackListed) public
whenNotPaused onlyOwner  returns (bool success) {
   return super._blackList(listAddress, isBlackListed);
}
```

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

Contract Diagnostics

● Critical ● Medium ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L11	Unnecessary Boolean equality

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L300,L285,L281 and 6 more

Description

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

```
mint
updateFee
burn
...
```

Recommendation

Use the external attribute for functions never called from the contract

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L285,L281,L249 and 27 more

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.

```
_FeeAddress
_burnFee
_txFee
...
```

Recommendation

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

L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L4

Description

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

```
mul
```

Recommendation

Remove unused functions.

L11 - Unnecessary Boolean equality

Criticality	minor
Location	contract.sol#L161,L128

Description

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

```
require(bool)(tokenBlacklist[msg.sender] == false)
```

Recommendation

Remove the equality to the boolean constant.

Contract Functions

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
SafeMath	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
Ownable	Implementation			
	transferOwnership	Public	✓	onlyOwner
Pausable	Implementation	Ownable		
	pause	Public	✓	onlyOwner whenNotPaused
	unpause	Public	✓	onlyOwner whenPaused
ERC20Basic	Implementation			
	balanceOf	Public		-
	transfer	Public	✓	-
ERC20	Implementation	ERC20Basic		
	allowance	Public		-
	transferFrom	Public	✓	-
	approve	Public	✓	-
StandardToken	Implementation	ERC20		
	transfer	Public	✓	-
	balanceOf	Public		-

	transferFrom	Public	✓	-
	approve	Public	✓	-
	allowance	Public		-
	increaseApproval	Public	✓	-
	decreaseApproval	Public	✓	-
	_blackList	Internal	✓	
PausableToken	Implementation	StandardToken, Pausable		
	transfer	Public	✓	whenNotPaused
	transferFrom	Public	✓	whenNotPaused
	approve	Public	✓	whenNotPaused
	increaseApproval	Public	✓	whenNotPaused
	decreaseApproval	Public	✓	whenNotPaused
	blackListAddress	Public	✓	whenNotPaused onlyOwner
CoinToken	Implementation	PausableToken		
	<Constructor>	Public	Payable	-
	burn	Public	✓	-
	updateFee	Public	✓	onlyOwner
	_burn	Internal	✓	
	mint	Public	✓	onlyOwner

Contract Flow
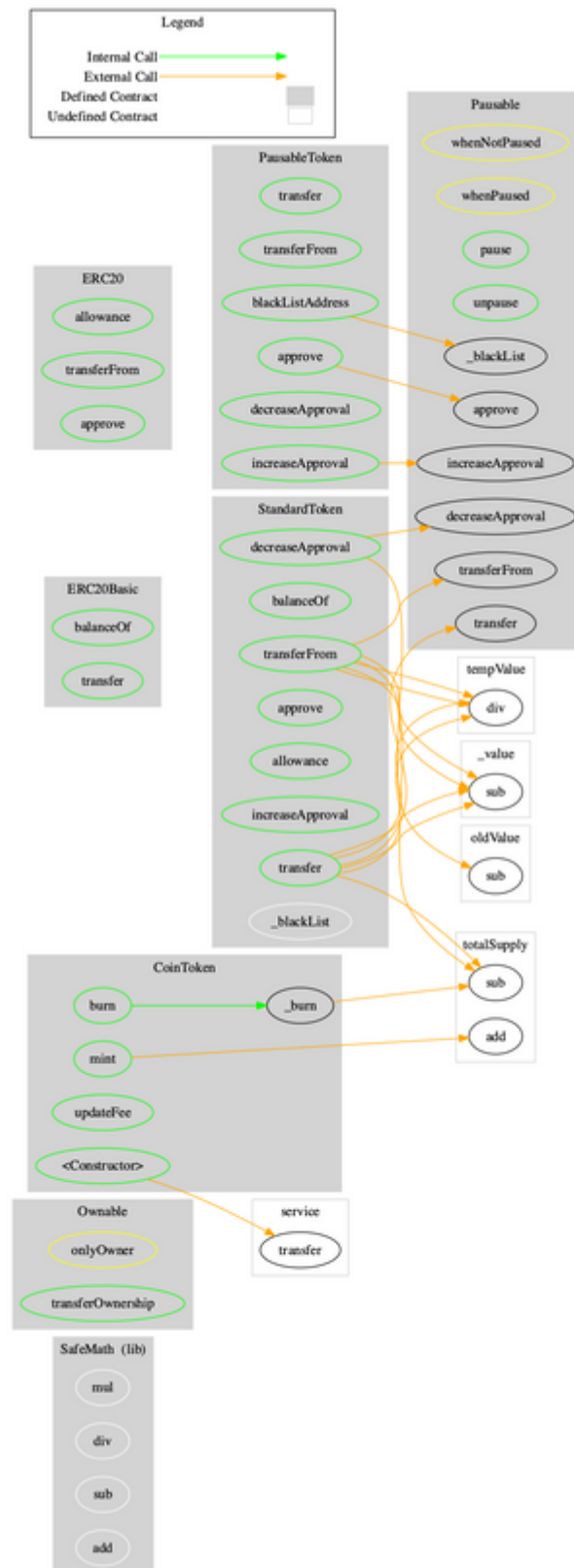
Domain Info

Domain Name	superiorcarsgame.com
Registry Domain ID	2662587105_DOMAIN_COM-VRSN
Creation Date	2021-12-19T05:01:22Z
Updated Date	2021-12-20T10:09:15Z
Registry Expiry Date	
Registrar WHOIS Server	whois.registrar.eu
Registrar URL	http://www.registrar.eu
Registrar	Hosting Concepts B.V. d/b/a Registrar.eu
Registrar IANA ID	1647

The domain has been created 16 days before the creation of the audit.

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

Summary

Superior cars is aiming to create a game with cars. The token has a friendly and growing community. There are some informative comments that do not affect the contract security. The contract analysis reported two major and one medium-level issues. There are some functions that can be abused by the owner, like manipulating fees, blacklisting addresses and minting tokens. The maximum fee percentage that can be set is 25%. 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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The Coinscope.co team

https://www.coinscope.co