



Cyberscope

Audit Report

GRAY WOLF

July 2022

Type BEP20

Network BSC

Address 0xA3c5566EB6524384b3D24dAE8640E59b99515d5d

Audited by © cyberscope

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Contract Review

| | |
|-------------------------|---|
| Contract Name | GRAYWOLF |
| Compiler Version | v0.8.7+commit.e28d00a7 |
| Optimization | 200 runs |
| Licence | None |
| Explorer | https://bscscan.com/token/0xA3c5566EB6524384b3D24dAE8640E59b99515d5d |
| Symbol | \$GWOLF |
| Decimals | 9 |
| Total Supply | 1,000,000,000 |
| Domain | graywolfcoin.net |

Source Files

| | |
|---------------------|--|
| Filename | SHA256 |
| contract.sol | c21517f7dc35c948b0455841da0ecf48a2f1176c296e968f3bc7737da0be55b2 |

Audit Updates

| | |
|--------------------------|-----------------|
| Initial Audit | 20th April 2022 |
| Corrected phase 1 | 20th May 2022 |
| Corrected phase 2 | 20th July 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 |

ULTW - Unlimited Liquidity to Team Wallet

| | |
|--------------------|-------------------|
| Criticality | minor |
| Location | contract.sol#L324 |

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 `tokensRescued` method.

```
event tokensRescued(address indexed token, address indexed to, uint amount);  
function rescueForeignTokens(address _tokenAddr, address _to, uint _amount) public  
onlyDev() {  
    emit tokensRescued(_tokenAddr, _to, _amount);  
    Token(_tokenAddr).transfer(_to, _amount);  
}
```

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 |
| ● | 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#L188 |

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.

```
constructor () {  
    _rOwned[_msgSender()] = _rTotal;  
  
    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.

L01 - Public Function could be Declared External

| | |
|--------------------|---|
| Criticality | minor |
| Location | contract.sol#L411,131,205,396,327,234,239,321,217,137,209,225,334,407,213,230 |

Description

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

```
allowance
decimals
toggleSwap
setNewMarketingAddress
transfer
symbol
transferOwnership
totalSupply
rescueForeignTokens
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L114

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#L321,168,326,320,55,166,167,407,333

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.

```
marketingAddressUpdated
_swapEnabled
_symbol
_name
WETH
tokensRescued
_to
_amount
devAddressUpdated
...
```

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#L148,114

Description

There are segments that contain unused state variables.

```
_previousOwner  
_tOwned
```

Recommendation

Remove unused state variables.

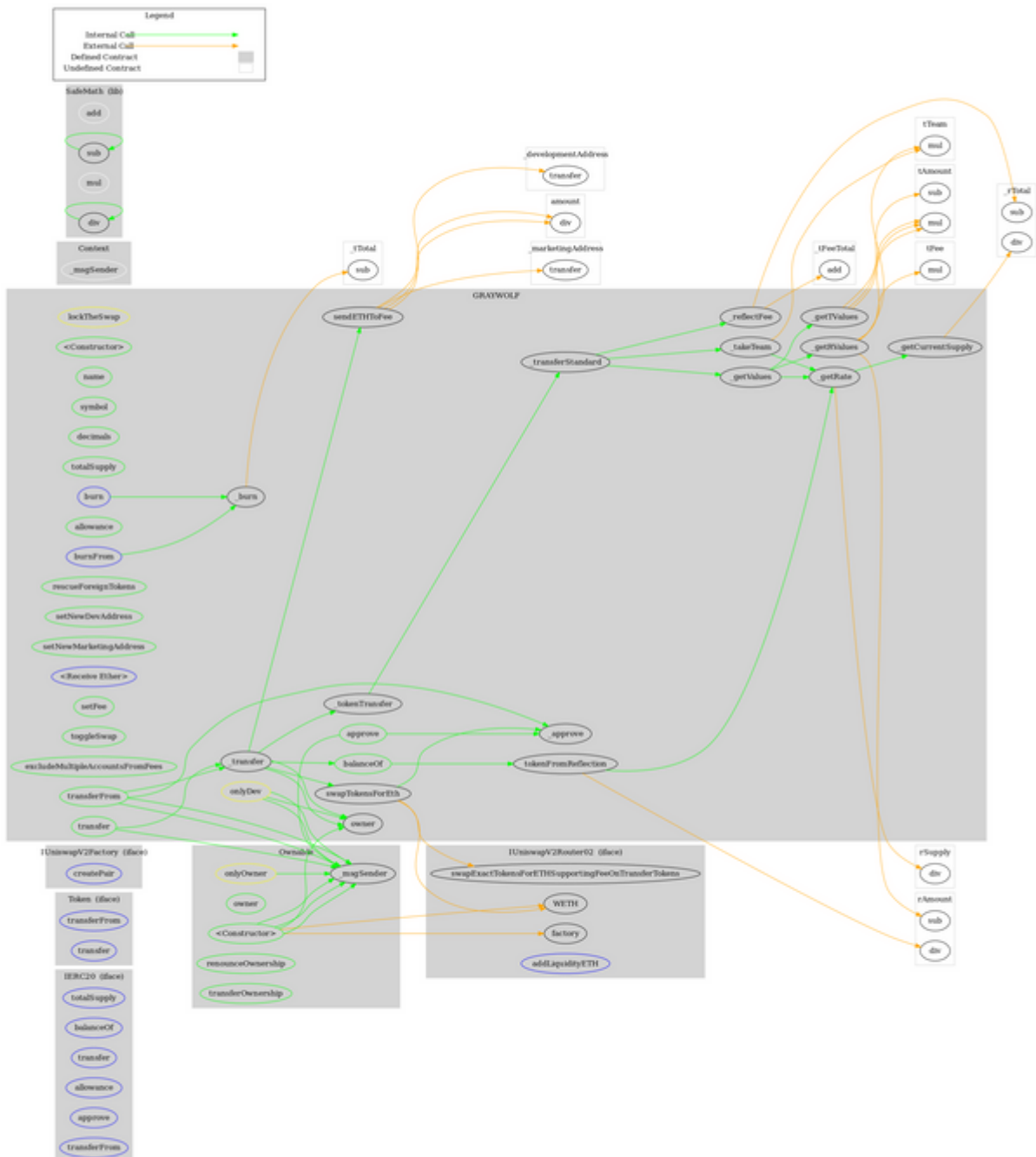
Contract Functions

| 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 |
| | | | | |
| GRAYWOLF | 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 | | |
| | setFee | Public | ✓ | onlyDev |
| | toggleSwap | Public | ✓ | onlyDev |
| | excludeMultipleAccountsFromFees | Public | ✓ | onlyOwner |
| | burn | External | ✓ | - |
| | _burn | Internal | ✓ | |
| | burnFrom | External | ✓ | - |

Contract Flow



Domain Info

| | |
|-------------------------------|---|
| Domain Name | graywolfcoin.net |
| Registry Domain ID | 2689519786_DOMAIN_NET-VRSN |
| Creation Date | 2022-04-15T13:11:40Z |
| Updated Date | 2022-04-15T13:11:41Z |
| Registry Expiry Date | 2023-04-15T13:11:40Z |
| Registrar WHOIS Server | whois.godaddy.com |
| Registrar URL | https://www.godaddy.com |
| Registrar | GoDaddy.com, LLC |
| Registrar IANA ID | 146 |

The domain has been created 5 days before the creation of the audit. It will expire in 12 months.

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 20% fees

Disclaimer

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



The Cyberscope team

<https://www.cyberscope.io>