



Cyberscope

Audit Report

Z Versus Project

August 2022

Type BEP20

Network BSC TESTNET

Address 0x5Fd9187eCC1283392b94bde85490569f54451cA0

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Table of Contents

| | |
|---|-----------|
| Table of Contents | 1 |
| Contract Review | 3 |
| Source Files | 3 |
| Audit Updates | 3 |
| Contract Analysis | 4 |
| Contract Diagnostics | 5 |
| STC - Succeeded Transfer Check | 6 |
| Description | 6 |
| Recommendation | 6 |
| CO - Code Optimization | 7 |
| Description | 7 |
| Recommendation | 7 |
| L01 - Public Function could be Declared External | 8 |
| Description | 8 |
| Recommendation | 8 |
| L04 - Conformance to Solidity Naming Conventions | 9 |
| Description | 9 |
| Recommendation | 9 |
| L07 - Missing Events Arithmetic | 10 |
| Description | 10 |
| Recommendation | 10 |
| L12 - Using Variables before Declaration | 11 |
| Description | 11 |
| Recommendation | 11 |
| L14 - Uninitialized Variables in Local Scope | 12 |
| Description | 12 |

| | |
|---------------------------|-----------|
| Recommendation | 12 |
| Contract Functions | 13 |
| Contract Flow | 16 |
| Domain Info | 17 |
| Summary | 18 |
| Disclaimer | 19 |
| About Cyberscope | 20 |

Contract Review

| | |
|-------------------------|---|
| Contract Name | ZVersusProject |
| Compiler Version | v0.8.9+commit.e5eed63a |
| Testing Deploy | https://testnet.bscscan.com/token/0x5Fd9187eCC1283392b94bde85490569f54451cA0 |
| Symbol | ZVERSUS |
| Decimals | 9 |
| Total Supply | 130,000 |
| Domain | |

Source Files

| Filename | SHA256 |
|---------------------|--|
| contract.sol | 080e6c3adcdc39ed09f57d8fd926748937219c3d268f51f940c5dc72f84667ac |

Audit Updates

| | |
|--------------------------|---|
| Initial Audit | 11th July 2022 https://github.com/cyberscope-io/audits/blob/main/zversus/v1/audit.pdf |
| Corrected phase 1 | 24th August 2022 https://github.com/cyberscope-io/audits/blob/main/zversus/v2/audit.pdf |
| Corrected phase 2 | 20th September 2022 |

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

| Severity | Code | Description | Status |
|----------|------|------------------------------------|--------|
| ● | ST | Stops Transactions | Passed |
| ● | OCTD | Transfers Contract's Tokens | Passed |
| ● | OTUT | Transfers User's Tokens | Passed |
| ● | ELFM | Exceeds Fees Limit | Passed |
| ● | ULTW | Transfers Liquidity to Team Wallet | Passed |
| ● | MT | Mints Tokens | Passed |
| ● | BT | Burns Tokens | Passed |
| ● | BC | Blacklists Addresses | Passed |

Contract Diagnostics

● Critical ● Medium ● Minor / Informative

| Severity | Code | Description | Status |
|----------|------|--|------------|
| ● | STC | Succeeded Transfer Check | Unresolved |
| ● | CO | Code Optimization | Unresolved |
| ● | L01 | Public Function could be Declared External | Unresolved |
| ● | L04 | Conformance to Solidity Naming Conventions | Unresolved |
| ● | L07 | Missing Events Arithmetic | Unresolved |
| ● | L12 | Using Variables before Declaration | Unresolved |
| ● | L14 | Uninitialized Variables in Local Scope | Unresolved |

STC - Succeeded Transfer Check

| | |
|--------------------|---------------------|
| Criticality | minor / informative |
| Location | contract.sol#L489 |
| Status | Unresolved |

Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
bool success;  
uint256 marketingBalance = amtBalance;  
(success,) = marketingWallet.call{value: marketingBalance, gas: 35000}("");
```

Recommendation

The contract should check if the result of the transfer methods is successful.

CO - Code Optimization

| | |
|--------------------|---------------------|
| Criticality | minor / informative |
| Location | contract.sol#L117 |
| Status | Unresolved |

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.

Since buy fees are fixes they can be removed from the structure.

```
struct Fees {  
    uint16 buyFee;  
    uint16 sellFee;  
    uint16 transferFee;  
}  
  
Fees public _taxRates = Fees({  
    buyFee: 0,  
    sellFee: 200,  
    transferFee: 1000  
});
```

Recommendation

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

L01 - Public Function could be Declared External

| | |
|--------------------|---------------------------|
| Criticality | minor / informative |
| Location | contract.sol#L266,347,508 |
| Status | Unresolved |

Description

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

```
transfer  
getCirculatingSupply  
enableTrading
```

Recommendation

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

L04 - Conformance to Solidity Naming Conventions

| | |
|--------------------|--|
| Criticality | minor / informative |
| Location | contract.sol#L33,355,111,112,113,114,115,123,129,130,131,147 |
| Status | Unresolved |

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.

```
WETH
_antiSnipe
_antiBlock
startingSupply
_name
_symbol
_decimals
_tTotal
_taxRates
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>.

L07 - Missing Events Arithmetic

| | |
|--------------------|-----------------------|
| Criticality | minor / informative |
| Location | contract.sol#L377,386 |
| Status | Unresolved |

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.

```
swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor  
piSwapPercent = priceImpactSwapPercent
```

Recommendation

Emit an event for critical parameter changes.

L12 - Using Variables before Declaration

| | |
|--------------------|---------------------|
| Criticality | minor / informative |
| Location | contract.sol#L537 |
| Status | Unresolved |

Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

check

Recommendation

The variables should be declared before any usage of them.

L14 - Uninitialized Variables in Local Scope

| | |
|--------------------|-----------------------|
| Criticality | minor / informative |
| Location | contract.sol#L536,537 |
| Status | Unresolved |

Description

There are variables that are defined in the local scope and are not initialized.

checked
check

Recommendation

All the local scoped variables should be initialized.

Contract Functions

| Contract | Type | Bases | | |
|-------------------|-----------------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| IERC20 | Interface | | | |
| | totalSupply | External | | - |
| | decimals | External | | - |
| | symbol | External | | - |
| | name | External | | - |
| | getOwner | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| IFactoryV2 | Interface | | | |
| | getPair | External | | - |
| | createPair | External | ✓ | - |
| | | | | |
| IV2Pair | Interface | | | |
| | factory | External | | - |
| | getReserves | External | | - |
| | sync | External | ✓ | - |
| | | | | |
| IRouter01 | Interface | | | |
| | factory | External | | - |
| | WETH | External | | - |
| | addLiquidityETH | External | Payable | - |
| | addLiquidity | External | ✓ | - |
| | swapExactETHForTokens | External | Payable | - |
| | getAmountsOut | External | | - |

| | | | | |
|-----------------------|---|-----------|---------|-----------|
| | getAmountsIn | External | | - |
| | | | | |
| IRouter02 | Interface | IRouter01 | | |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactTokensForTokens | External | ✓ | - |
| | | | | |
| Protections | Interface | | | |
| | checkUser | External | ✓ | - |
| | setLaunch | External | ✓ | - |
| | setLpPair | External | ✓ | - |
| | setProtections | External | ✓ | - |
| | removeSniper | External | ✓ | - |
| | | | | |
| ZVersusProject | Implementation | IERC20 | | |
| | <Constructor> | Public | Payable | - |
| | <Receive Ether> | External | Payable | - |
| | transferOwner | External | ✓ | onlyOwner |
| | renounceOwnership | External | ✓ | onlyOwner |
| | setOperator | External | ✓ | - |
| | renounceOriginalDeployer | External | ✓ | - |
| | totalSupply | External | | - |
| | decimals | External | | - |
| | symbol | External | | - |
| | name | External | | - |
| | getOwner | External | | - |
| | allowance | External | | - |
| | balanceOf | Public | | - |
| | transfer | Public | ✓ | - |
| | approve | External | ✓ | - |
| | _approve | Internal | ✓ | |

| | | | | |
|--|----------------------------|----------|---|------------|
| | approveContractContingency | External | ✓ | onlyOwner |
| | transferFrom | External | ✓ | - |
| | setNewRouter | External | ✓ | onlyOwner |
| | setLpPair | External | ✓ | onlyOwner |
| | setInitializer | External | ✓ | onlyOwner |
| | isExcludedFromFees | External | | - |
| | isExcludedFromProtection | External | | - |
| | setExcludedFromFees | Public | ✓ | onlyOwner |
| | setExcludedFromProtection | External | ✓ | onlyOwner |
| | getCirculatingSupply | Public | | - |
| | removeSniper | External | ✓ | onlyOwner |
| | setProtectionSettings | External | ✓ | onlyOwner |
| | lockTaxes | External | ✓ | onlyOwner |
| | setTaxes | External | ✓ | onlyOwner |
| | setWallet | External | ✓ | onlyOwner |
| | setSwapSettings | External | ✓ | onlyOwner |
| | setPriceImpactSwapAmount | External | ✓ | onlyOwner |
| | setContractSwapEnabled | External | ✓ | onlyOwner |
| | excludePresaleAddresses | External | ✓ | onlyOwner |
| | _hasLimits | Internal | | |
| | _transfer | Internal | ✓ | |
| | contractSwap | Internal | ✓ | inSwapFlag |
| | _checkLiquidityAdd | Internal | ✓ | |
| | enableTrading | Public | ✓ | onlyOwner |
| | sweepContingency | External | ✓ | onlyOwner |
| | multiSendTokens | External | ✓ | onlyOwner |
| | finalizeTransfer | Internal | ✓ | |
| | takeTaxes | Internal | ✓ | |

Contract Flow

Domain Info

| | |
|-------------------------------|---|
| Domain Name | zversus.io |
| Registry Domain ID | d78703517ed94161b1e8de375cc31687-DONUTS |
| Creation Date | 2022-01-10T13:51:00Z |
| Updated Date | 2022-04-20T12:38:14Z |
| Registry Expiry Date | 2023-01-10T13:51:00Z |
| Registrar WHOIS Server | whois.namecheap.com |
| Registrar URL | https://www.namecheap.com/ |
| Registrar | NameCheap, Inc. |
| Registrar IANA ID | 1068 |

The domain was created 8 months before the creation of the audit. It will expire in 5 months.

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

Summary

Z Versus Project is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 5% fees on sell transactions and there is no fee on buy transactions.

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>