

Assure DeFi[®]

THE VERIFICATION **GOLD STANDARD**



Security Assessment

BloxSIM

Date: 08/10/2024

Audit Status: FAIL

Audit Edition: Advanced



ASSURE DEFI[®]
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Risk Analysis

Vulnerability summary

Classification	Description
 High	High-level vulnerabilities can result in the loss of assets or manipulation of data.
 Medium	Medium-level vulnerabilities can be challenging to exploit, but they still have a considerable impact on smart contract execution, such as allowing public access to critical functions.
 Low	Low-level vulnerabilities are primarily associated with outdated or unused code snippets that generally do not significantly impact execution, sometimes they can be ignored.
 Informational	Informational vulnerabilities, code style violations, and informational statements do not affect smart contract execution and can typically be disregarded.

Executive Summary

According to the Assure assessment, the Customer's smart contract is **Poorly Secured**.



Scope

Target Code And Revision

For this audit, we performed research, investigation, and review of the BloxSIM contracts followed by issue reporting, along with mitigation and remediation instructions outlined in this report.

Target Code And Revision

Project	Assure
Language	Solidity
Codebase	https://etherscan.io/token/0xeaebb6cd3a1f9b9cad725d0189ba5bfea25a9d76#code
Audit Methodology	Static, Manual

Attacks made to the contract

In order to check for the security of the contract, we tested several attacks in order to make sure that the contract is secure and follows best practices.

Category	Item
Code review & Functional Review	<ul style="list-style-type: none">• Compiler warnings.• Race conditions and Reentrancy. Cross-function race conditions.• Possible delays in data delivery.• Oracle calls.• Front running.• Timestamp dependence.• Integer Overflow and Underflow.• DoS with Revert.• DoS with block gas limit.• Methods execution permissions.• Economy model.• Private user data leaks.• Malicious Event log.• Scoping and Declarations.• Uninitialized storage pointers.• Arithmetic accuracy.• Design Logic.• Cross-function race conditions.• Safe Zeppelin module.• Fallback function security.• Overpowered functions / Owner privileges

AUDIT OVERVIEW



1. Incorrect Fee Application in transfer() Function

Function: transfer()

Issue: Normal wallet-to-wallet transfers are charged fees if `_contractCount == 0`, meaning if no buy has occurred, fees are always applied during standard transfers.

Recommendation: Modify the logic to apply fees only when the from or to address is the uniswapV2Pair address.



1. Missing Setter for bots Mapping Preventing Address Blacklisting

Variable: mapping (address => bool) private bots

Issue: The contract lacks functionality to blacklist addresses due to the absence of a setter for the bots mapping.

Recommendation: Implement a setter function for the bots mapping to allow address blacklisting.



No low severity issues were found.



No Informational severity issues were found.

Testing coverage

During the testing phase, custom use cases were written to cover all the logic of contracts. **Check “Annexes” to see the testing code.*

BloxSIM contracts tests:

```
contract: BloxSIM - 70.6%
BloxSIM.clearStuckEther - 100.0%
BloxSIM.rescueERC20 - 100.0%
BloxSIM.rescueEther - 100.0%
BloxSIM.setFeeTx - 100.0%
Ownable._checkOwner - 100.0%
BloxSIM.clearStuckBalance - 91.7%
BloxSIM._approve - 75.0%
SafeMath.add - 75.0%
SafeMath.div - 75.0%
SafeMath.sub - 75.0%
BloxSIM._transfer - 70.4%
SafeMath.mul - 58.3%
```

```
tests/test_blox.py::test_set_fee RUNNING
Transaction sent: 0x5547db6d602ba33595929a9a53e6e78aa818afc4393be739541208f4dc897027
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
WETH9.constructor confirmed Block: 1 Gas used: 476546 (3.97%)
WETH9 deployed at: 0x3194cB0C3dbcd3E11a07892e7bA5c3394048Cc87

Transaction sent: 0x7bae2624e4397b7e8bf657828e1e07435f469ad759872b75091dcfb92e64b42d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
UniswapV2Factory.constructor confirmed Block: 2 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0x602C71e4D0AC47a042Ee7f46E0aee17F94A3bA086

Transaction sent: 0xfe6097b03e1a1a43331440c45f0d3c463a215b9ce3bb912ceff4521bea2b5fc7
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
UniswapV2Router02.constructor confirmed Block: 3 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0xE7e06747FaC5360f88a2EFC03E00d25789F69291

Transaction sent: 0xfed0c2e59436a63ad5abef2f01ffbb1513080004bfead9653df27a68da440876
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
BloxSIM.constructor confirmed Block: 4 Gas used: 3883847 (32.37%)
BloxSIM deployed at: 0x6951b58d815043E3F842c1b026b0Fa888Cc2D085

Transaction sent: 0x641b491f84135d1a578fefd776c660cf328626ed291ef8bd07a275b049f24d4b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
BloxSIM.setFeeTx confirmed (Ownable: caller is not the owner) Block: 5 Gas used: 22526 (0.19%)

Transaction sent: 0xd14a87f90a2f3720eccbf7dc3d88c27f875f02d468e4395ff0b6a18f25441f7f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
BloxSIM.setFeeTx confirmed (Tax cannot exceed 5) Block: 6 Gas used: 32582 (0.27%)

Transaction sent: 0xdea2ba27f6024d70c480f108203419d8cc4c82c701b1b4e79f08c00dd3a7baed
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
BloxSIM.setFeeTx confirmed Block: 7 Gas used: 32545 (0.27%)

tests/test_blox.py::test_set_fee PASSED
```

```
tests/test_blox.py::test_transfer RUNNING
Transaction sent: 0x56c2541f92aa306f1209baae3a840ab2c1dffc89c2598d908a5bfac69cac914d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
WETH9.constructor confirmed Block: 8 Gas used: 476546 (3.97%)
WETH9 deployed at: 0x9E4c14403d7d9A8A782044E86a93CAE09D7B2ac9

Transaction sent: 0xa631e8c29bda874e2ef287747e0dbfa547eebc9b053b4c979fc4a8e4d57ae00e
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 7
UniswapV2Factory.constructor confirmed Block: 9 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0xcCB53c9429d32594F404d01f9e9E65ED1DCda8D9

Transaction sent: 0x821ffffde57cb491817defa1b492304e3c45333d9e2fa1312b7e048819f82c405
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
UniswapV2Router02.constructor confirmed Block: 10 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0x420b109989eF5baba6D92029594eF45E19A04A4A

Transaction sent: 0x1b3bb287501c155c9eb4fc00600cdc3f3fa16d22b5d4f41ce37f31ed39d2c27c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
UniswapV2AddLiquidity.constructor confirmed Block: 11 Gas used: 449853 (3.75%)
UniswapV2AddLiquidity deployed at: 0xa3853d0Cd2E3fC28e8E130288F2aB08d5EE37472

Transaction sent: 0x1e13ec40af833425ad4db66d87d3471959ee6e479ced6f4858def7c1e9de19a6
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
BloxSIM.constructor confirmed Block: 12 Gas used: 3883859 (32.37%)
BloxSIM deployed at: 0xb6286fAFD0451320ad6A8143089b216C2152c025

Transaction sent: 0xa77e6b11e014a98674aac9c67a50a6b4491d7fda7e428c12f0b320c917e5e7c9
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
BloxSIM.transfer confirmed (ERC20: transfer from the zero address) Block: 13 Gas used: 22149 (0.18%)

Transaction sent: 0x073b20dd91c404ab0643c9b5f45159d62bee21944904b9de355390ea484f8af8
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
BloxSIM.transfer confirmed (ERC20: transfer to the zero address) Block: 14 Gas used: 21944 (0.18%)

Transaction sent: 0x4a02d34a860c9d0d6faee40fa7b9ec32f0283ba1112e2dfb4365949e5c505ff2
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
BloxSIM.transfer confirmed (Transfer amount must be greater than zero) Block: 15 Gas used: 22159 (0.18%)

Transaction sent: 0x21f8328f835532e27db7c09cdeeda8381fedf8004b203825d90b4b892c15938f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 11
BloxSIM.transfer confirmed Block: 16 Gas used: 52787 (0.44%)

Transaction sent: 0xb6010e53cb82637bac6822610ac2f7ca07c9bd2b19f0bbea932656fd4f18547d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
BloxSIM.transfer confirmed Block: 17 Gas used: 87362 (0.73%)

Transaction sent: 0xe7d6bd47b55941d3c92bddc1529304a9459fa3512f15ef4eac65d37ca190ac54
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
BloxSIM.transfer confirmed Block: 18 Gas used: 76157 (0.63%)

Transaction sent: 0xfd10c15b825d14b1e958c5bb32d511ab5eaa381b01b0b9442a29aeb3d6ab862f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
BloxSIM.transfer confirmed (Exceeds the _maxTxAmount.) Block: 19 Gas used: 33787 (0.28%)

Transaction sent: 0x150d76049353d45046c9d28bffa92964efd0e16f9306d462c3e81518bb76943
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
BloxSIM.transfer confirmed (Exceeds the maxWalletSize.) Block: 20 Gas used: 35593 (0.30%)

Transaction sent: 0x8ed2445c1bc0c5d23cbf402d03dbede712764bacec93714354bf402750f0fe48
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
BloxSIM.transfer confirmed Block: 21 Gas used: 85558 (0.71%)

Transaction sent: 0xe71794427732bd69fe2029fda5443e69810399c81175af2945fc50696588fd9c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 5
BloxSIM.transfer confirmed Block: 22 Gas used: 47786 (0.40%)

tests/test_blox.py::test_transfer PASSED
```

```
tests/test_blox.py::test_clear_stuck_balance RUNNING
Transaction sent: 0x245e15b53adc2f3c22cd4f9070e200886fced164d8648a6d5b0935eae2fb2f845
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 12
WETH9.constructor confirmed Block: 23 Gas used: 476546 (3.97%)
WETH9 deployed at: 0x2c15A315610Bfa5248E4CbCb693320e908E03Cc

Transaction sent: 0xb04371b84b89d55c174637daa0b3d2c9a644c08295f9716c6d24bbcc929bf553
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 13
UniswapV2Factory.constructor confirmed Block: 24 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0xe692Cf21B12e082717C4bF647F9768Fa58861c8b

Transaction sent: 0x15492ca0a86b385d7018462c011436f1ed1baaabe57e89a7f3d12da9c2cda6ee
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 14
UniswapV2Router02.constructor confirmed Block: 25 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0xe65A7a341978d59d40d30FC23F5014FACB4f575A

Transaction sent: 0xf4ef4f26a548eadc39a877d04e5e91405435aa784ee4646ee23e1cc9f8ddf2da
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 15
UniswapV2AddLiquidity.constructor confirmed Block: 26 Gas used: 449853 (3.75%)
UniswapV2AddLiquidity deployed at: 0x30375B532345B01cB8c2AD12541b09E9Aa53A93d

Transaction sent: 0x5eae2d32bd79a61e5a6ae3fb83aa102da832c4147924b392cdd43eb98888f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 16
BloxSIM.constructor confirmed Block: 27 Gas used: 3883849 (32.37%)
BloxSIM deployed at: 0x26f153358B1C6a4C0B660eDd694a0555A9F1cce3

Transaction sent: 0x364980298c277d1ce3e9ff530d433756bd713703a4d91bb4fd234b270370fa0
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 6
BloxSIM.clearStuckBalance confirmed (reverted) Block: 28 Gas used: 22151 (0.18%)

Transaction sent: 0x4838dc1005846f8676efef7e179bbd58ddfb5e2c6c4ae23e3633ff37a9afefee
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 0
BloxSIM.clearStuckBalance confirmed Block: 30 Gas used: 31419 (0.26%)

Transaction sent: 0x52bf899c146f51ff7c8e36865acalac3830f2c50404ce00218676931178f1cde
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 17
BloxSIM.transfer confirmed Block: 31 Gas used: 52775 (0.44%)

Transaction sent: 0x6ba8c9e5ac27b943ce1752ec01b06bafa57dfa74465f721e33e4d335477a4487
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 18
WETH9.deposit confirmed Block: 32 Gas used: 43706 (0.36%)

Transaction sent: 0x0536a0e733c29affb36b2f8025ba2e83907c2be817b031b2771d233cf36fa717
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 19
WETH9.approve confirmed Block: 33 Gas used: 43962 (0.37%)

Transaction sent: 0x0423741bde7e68acfdff5e5550dc812acc3afd2eaf71f13042775aa01d37f3a
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 20
BloxSIM.approve confirmed Block: 34 Gas used: 44145 (0.37%)

Transaction sent: 0xad7cf9140c08af099945a2721c317aelca55e72ca43b169a01797ba2365d6e1c
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 21
UniswapV2AddLiquidity.addLiquidity confirmed Block: 35 Gas used: 296168 (2.47%)

Transaction sent: 0xb248cb83b5bc5c22536ce2694dbc57e4c4abd96ab4a9eb035e2bab4006fb9726
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 1
BloxSIM.clearStuckBalance confirmed Block: 36 Gas used: 157811 (1.32%)

tests/test_blox.py::test_clear_stuck_balance PASSED
```



```
tests/test_blox.py::test_clear_stuck_eth RUNNING
Transaction sent: 0x7c3lea61f6645598dc4a50199255c9f59757bd9ebbd4f6dffa1762e80b0e96898
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 22
WETH9.constructor confirmed Block: 37 Gas used: 476546 (3.97%)
WETH9 deployed at: 0x022363efee93190f82b52FCD62870bcb920eF658

Transaction sent: 0x6482ccb309d81a0bdb21a38ec3f502c0ec49edcd2c51aeca342c38da606c4498
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 23
UniswapV2Factory.constructor confirmed Block: 38 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0x401B781ce59B8C184F63B99D39d6719A522f46B5

Transaction sent: 0xe561670449905284e792d651381ea97d59675f2c6e6767e695a272c8f1fdc10f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 24
UniswapV2Router02.constructor confirmed Block: 39 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0xf9C8Cf55f2E520B08d869df7bc76aa3d3dd0F913

Transaction sent: 0x54a53b166dbde362d9d759d763098d0cbdd1efb27607a9c9265efcd70e36bae71
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 25
BloxSIM.constructor confirmed Block: 40 Gas used: 3883849 (32.37%)
BloxSIM deployed at: 0x654f70d8442EA18904FALAD79114f7250F7E9336

Transaction sent: 0x2c34441e2bae50b8cbf8139c0af677a5821b9aaa1876ff526d1cac63498953d6
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 8
BloxSIM.clearStuckEther confirmed (reverted) Block: 41 Gas used: 22150 (0.18%)

Transaction sent: 0x0a6c9e647b353861a80a9040077a742934ac9598fc73333a0b2c252968f7fd40
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 2
BloxSIM.clearStuckEther confirmed Block: 42 Gas used: 23806 (0.20%)

tests/test_blox.py::test_clear_stuck_eth PASSED
tests/test_blox.py::test_rescue_eth RUNNING
Transaction sent: 0x974ec6343903bdf017e5928b71bb193d6fa7a88821678cceb3df842b26f65593
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 26
WETH9.constructor confirmed Block: 43 Gas used: 476546 (3.97%)
WETH9 deployed at: 0xA0e061D42dE86f9058386D1D0d739d20C7eAfC43

Transaction sent: 0xcd7d973dc9e861b0255adec5cf9926845a83885b070f34bc374a107761cc45ed
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 27
UniswapV2Factory.constructor confirmed Block: 44 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0x832698Daec363C9A7aB036C224Af5821280b3AC6

Transaction sent: 0x6868f6affb7e353ccbaa0feec339d97ae2bale0e9c050c760c2b4fdbc397dce5
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 28
UniswapV2Router02.constructor confirmed Block: 45 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0xA95916C3D979400C7443961330b3092510a2298a

Transaction sent: 0x4df8d060d97538baa5e0e367c5b154d359c0b150675054a6b4becf0bc2f2ea2f
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 29
BloxSIM.constructor confirmed Block: 46 Gas used: 3883849 (32.37%)
BloxSIM deployed at: 0x42E8D004c84E6B58ad559D3b5CE7947AADb9E0bc

Transaction sent: 0x56a742de79e6260a664721cfc37374f3afc3988039ffe1601119dcd66fc5d0e4
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 9
BloxSIM.rescueEther confirmed (reverted) Block: 47 Gas used: 22174 (0.18%)

Transaction sent: 0x50d0a816ec6d7dd6590b973867beec27e9455d1500b1e9b68eb3b500a12cfe10
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 3
BloxSIM.rescueEther confirmed Block: 48 Gas used: 23793 (0.20%)

tests/test_blox.py::test_rescue_eth PASSED
```

```
tests/test_blox.py::test_rescue_erc20 RUNNING
Transaction sent: 0x5329bbdb530d00daf76db34711346117099b808c334e949e57854fe31139dc24
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 30
WETH9.constructor confirmed Block: 49 Gas used: 476546 (3.97%)
WETH9 deployed at: 0xF06D5f5BFFC86a52c84cfecb03AD35637728E73

Transaction sent: 0x1936361833c1428d263c40d659877da3611233ec668080c26df6020258f56d73
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 31
UniswapV2Factory.constructor confirmed Block: 50 Gas used: 2412730 (20.11%)
UniswapV2Factory deployed at: 0x82c83b7f88aef2eD99d4869D547b6ED28e69C8df

Transaction sent: 0x89e8db818fcd2847a3bcf454ff00ccf44a8c58b61527ba6575a8c195b4dc431
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 32
UniswapV2Router02.constructor confirmed Block: 51 Gas used: 3895430 (32.46%)
UniswapV2Router02 deployed at: 0x724Ca58E1e6e64BFB1E15d7Eec0fe1E5f581c7b0

Transaction sent: 0xe818brc09f6e8ef7f50e937ac437b20f4880df8e2b8da7d2d624be20178a3ea9a
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 33
BloxSIM.constructor confirmed Block: 52 Gas used: 3883849 (32.37%)
BloxSIM deployed at: 0x34b97ffa01dc0DC959c5f1176273D00de3be914C1

Transaction sent: 0x2ba0aacea597d060013fb0b62ed25a5f409f49028a9ee4f0dbd8fald8daf2dc
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 10
BloxSIM.rescueERC20 confirmed (reverted) Block: 53 Gas used: 22856 (0.19%)

Transaction sent: 0xcc32b87ba3438f6db80f4c32cde5f721e415aa5684db99e9773b7018ed099b6d
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 34
BloxSIM.transfer confirmed Block: 54 Gas used: 52775 (0.44%)

Transaction sent: 0x87b5a47ad1efd74ced8b8ae04cc654ac4acle07c7477aee6996a66fbcdlaee6b
Gas price: 0.0 gwei Gas limit: 12000000 Nonce: 4
BloxSIM.rescueERC20 confirmed Block: 55 Gas used: 71282 (0.59%)

tests/test_blox.py::test_rescue_erc20 PASSED
```

Annexes

Testing code:

Testing_BloxSIM:

```
from brownie import (

    reverts,

    accounts

)

from scripts.helpful_scripts import (

    ZERO_ADDRESS,

    get_account,

)

from scripts.deploy import (

    deploy_weth,

    deploy_factory,

    deploy_router,

    deploy_liquidity,

    deploy_blox

)

def test_set_fee(only_local):

    # Arrange

    owner = get_account(0)

    other = get_account(1)

    weth = deploy_weth(owner)
```

```
factory = deploy_factory(owner, owner)

router = deploy_router(owner, factory.address, weth.address)

token = deploy_blox(owner, router.address)
```

```
with reverts("Ownable: caller is not the owner"):
```

```
    token.setFeeTx(1, {"from": other})
```

```
with reverts("Tax cannot exceed 5"):
```

```
    token.setFeeTx(6, {"from": owner})
```

```
token.setFeeTx(1, {"from": owner})
```

```
def test_transfer(only_local):
```

```
    # Arrange
```

```
    owner = get_account(0)
```

```
    other = get_account(1)
```

```
    extra = get_account(2)
```

```
    weth = deploy_weth(owner)
```

```
    factory = deploy_factory(owner, owner)
```

```
    router = deploy_router(owner, factory.address, weth.address)
```

```
    liquidity = deploy_liquidity(owner, factory.address, router.address)
```

```
    token = deploy_blox(owner, router.address)
```

```
    pair = factory.getPair(token.address, weth.address)
```

```
with reverts("ERC20: transfer from the zero address"):
```

```
    token.transfer(other, 1e9, {"from": ZERO_ADDRESS})
```

```
with reverts("ERC20: transfer to the zero address"):
```

```
    token.transfer(ZERO_ADDRESS, 1e9, {"from": other})
```

```
with reverts("Transfer amount must be greater than zero"):
```

```

    token.transfer(extra, 0, {"from": other})

tx = token.transfer(other, 5e9, {"from": owner})

assert tx.events['Transfer'][0]['from'] == owner
assert tx.events['Transfer'][0]['to'] == other
assert tx.events['Transfer'][0]['value'] == 5e9

# applies 20% fee

tx = token.transfer(extra, 1e9, {"from": other})

assert tx.events['Transfer'][1]['from'] == other
assert tx.events['Transfer'][1]['to'] == extra
assert tx.events['Transfer'][1]['value'] == 0.8e9

# sell -> applies 25% fee

tx = token.transfer(pair, 2e9, {"from": other})

assert tx.events['Transfer'][1]['from'] == other
assert tx.events['Transfer'][1]['to'] == pair
assert tx.events['Transfer'][1]['value'] == 1.5e9

with reverts("Exceeds the _maxTxAmount."):
    token.transfer(extra, 1000001e9, {"from": pair})

with reverts("Exceeds the maxWalletSize."):
    token.transfer(extra, 1000000e9, {"from": pair})

# buy -> 20% (initial buy fee)

tx = token.transfer(other, 1e9, {"from": pair})

assert tx.events['Transfer'][1]['from'] == pair
assert tx.events['Transfer'][1]['to'] == other

```

```
assert tx.events['Transfer'][1]['value'] == 0.8e9
```

```
# contactCount > 1 = applies _caTax = 0 %
```

```
tx = token.transfer(extra, 1e9, {"from": other})
```

```
assert tx.events['Transfer'][0]['from'] == other
```

```
assert tx.events['Transfer'][0]['to'] == extra
```

```
assert tx.events['Transfer'][0]['value'] == 1e9
```

```
def test_clear_stuck_balance(only_local):
```

```
    # Arrange
```

```
    owner = get_account(0)
```

```
    other = get_account(1)
```

```
    tax_wallet = accounts.at('0x71ECAF3dca7f85B8739f0E9B8e9A99e55d82e70E', force=True)
```

```
    weth = deploy_weth(owner)
```

```
    factory = deploy_factory(owner, owner)
```

```
    router = deploy_router(owner, factory.address, weth.address)
```

```
    liquidity = deploy_liquidity(owner, factory.address, router.address)
```

```
    token = deploy_blox(owner, router.address)
```

```
    with reverts():
```

```
        token.clearStuckBalance({"from": other})
```

```
    # send some eth
```

```
    other.transfer(token.address, "1 ether")
```

```
    token.clearStuckBalance({"from": tax_wallet})
```

```
    # send some tokens
```

```
    token.transfer(token.address, 1e9, {"from": owner})
```

```
    # add liquidity
```



```
weth.deposit({"from": owner, "value": 10e9})

weth.approve(liquidity.address, 100e9, {"from": owner})

token.approve(liquidity.address, 100e9, {"from": owner})

liquidity.addLiquidity(token.address, weth.address, 1000e6, 1e9, {"from": owner})


token.clearStuckBalance({"from": tax_wallet})
```

```
def test_clear_stuck_eth(only_local):
```

```
    # Arrange
```

```
    owner = get_account(0)
```

```
    other = get_account(1)
```

```
    tax_wallet = accounts.at('0x71ECAF3dca7f85B8739f0E9B8e9A99e55d82e70E', force=True)
```

```
    weth = deploy_weth(owner)
```

```
    factory = deploy_factory(owner, owner)
```

```
    router = deploy_router(owner, factory.address, weth.address)
```

```
    token = deploy_blox(owner, router.address)
```

```
    with reverts():
```

```
        token.clearStuckEther({"from": other})
```

```
    token.clearStuckEther({"from": tax_wallet})
```

```
def test_rescue_eth(only_local):
```

```
    # Arrange
```

```
    owner = get_account(0)
```

```
    other = get_account(1)
```

```
    tax_wallet = accounts.at('0x71ECAF3dca7f85B8739f0E9B8e9A99e55d82e70E', force=True)
```

```
weth = deploy_weth(owner)

factory = deploy_factory(owner, owner)

router = deploy_router(owner, factory.address, weth.address)

token = deploy_blox(owner, router.address)
```

```
with reverts():

    token.rescueEther({"from": other})

token.rescueEther({"from": tax_wallet})
```

```
def test_rescue_erc20(only_local):
```

```
    # Arrange
```

```
    owner = get_account(0)
```

```
    other = get_account(1)
```

```
    tax_wallet = accounts.at('0x71ECAF3dca7f85B8739f0E9B8e9A99e55d82e70E', force=True)
```

```
    weth = deploy_weth(owner)
```

```
    factory = deploy_factory(owner, owner)
```

```
    router = deploy_router(owner, factory.address, weth.address)
```

```
    token = deploy_blox(owner, router.address)
```

```
    with reverts():
```

```
        token.rescueERC20(token.address, 1e9, {"from": other})
```





```
    # send some tokens
```

```
    token.transfer(token.address, 1e9, {"from": owner})
```

```
    token.rescueERC20(token.address, 1e9, {"from": tax_wallet})
```

Technical Findings Summary

Findings

Vulnerability Level	Total	Pending	Not Apply	Acknowledged	Partially Fixed	Fixed
 High	1					
 Medium	1					
 Low	0					
 Informational	0					

Assessment Results

Score Results

Review	Score
Global Score	75/100
Assure KYC	Pending
Audit Score	75/100

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 84 Points for a higher standard, if a project does not attain 85% is an automatic failure. Read our notes and final assessment below. The Global Score is a combination of the evaluations obtained between having or not having KYC and the type of contract audited together with its manual audit.

Audit FAIL

Following our comprehensive security audit of the token contract for BloxSIM project, The cybersecurity audit has failed due to multiple critical issues identified during the review, which pose significant risks to the contract's functionality.

Disclaimer

Assure Defi has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocating for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

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