



> Smart
Contract

Audit #



Nov 21
2021



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METHODOLOGY

MAIN TESTS LIST:

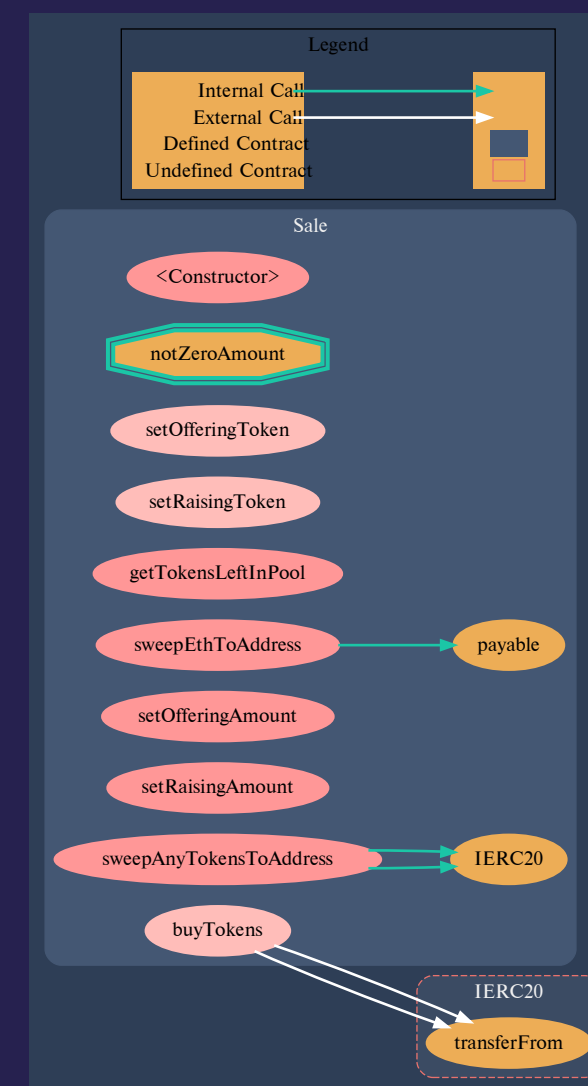
- ◆ Best code practices
- ◆ ERC20/BEP20 compliance (if applicable)
- ◆ Logical bugs
- ◆ General Denial Of Service(DOS)
- ◆ Locked ether
- ◆ Private data leaks
- ◆ Using components with known vulns
- ◆ Weak PRNG
- ◆ Unused vars
- ◆ Unchecked call return method
- ◆ Code with no effects
- ◆ Pool Asset Security (backdoors in the underlying ERC-20)
- ◆ Function visibility
- ◆ Use of deprecated functions
- ◆ Authorization issues
- ◆ Re-entrancy
- ◆ Arithmetic Over/Under Flows
- ◆ Hidden Malicious Code
- ◆ External Contract Referencing
- ◆ Short Address/ Parameter Attack
- ◆ Race Conditions / Front Running
- ◆ Uninitialized Storage Pointers
- ◆ Floating Points and Precision
- ◆ Signatures Replay

STRUCTURE OF CONTRACT


SALE.SOL

CONTRACT METHODS ANALYSIS:

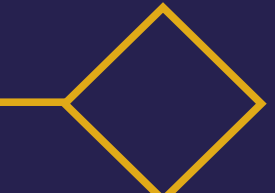
- ◆ `setOfferingToken(IERC20 _offeringToken)`
Vulnerabilities not detected
- ◆ `setRaisingToken(IERC20 _raisingToken)`
Vulnerabilities not detected
- ◆ `getTokensLeftInPool()`
Function should emit an event



Pic. 1.1.
Sale.sol

PAYABLE 

- ◆ `buyTokens(uint _tokensToBuy)`
Function should emit an event
`raising tokens in, offer tokens out, public`

PAYABLE 

- ◆ `sweepAnyTokensToAddress(address _token, address _user)`
Vulnerabilities not detected
`tokens out, only owner`

- ◆ `setOfferingAmount(uint _offerAmount)`
Vulnerabilities not detected
- ◆ `setRaisingAmount(uint _raisingAmount)`
Vulnerabilities not detected

PAYABLE 

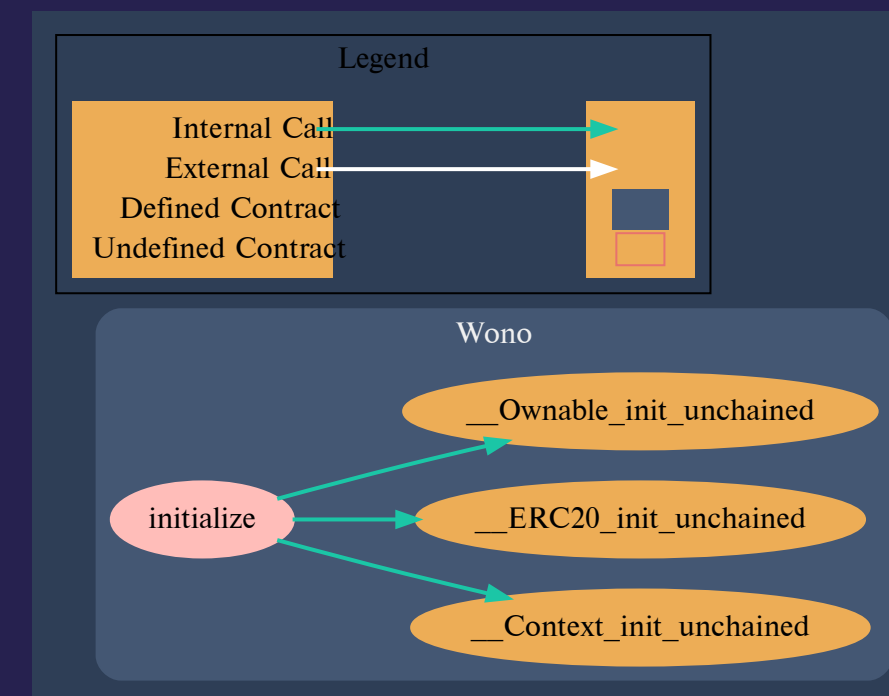
- ◆ `sweepEthToAddress(address _user)`
Vulnerabilities not detected
`eth out, only owner`

STRUCTURE OF CONTRACT

WONO.SOL

CONTRACT METHODS ANALYSIS:

- ◆ initialize()
Vulnerabilities not detected



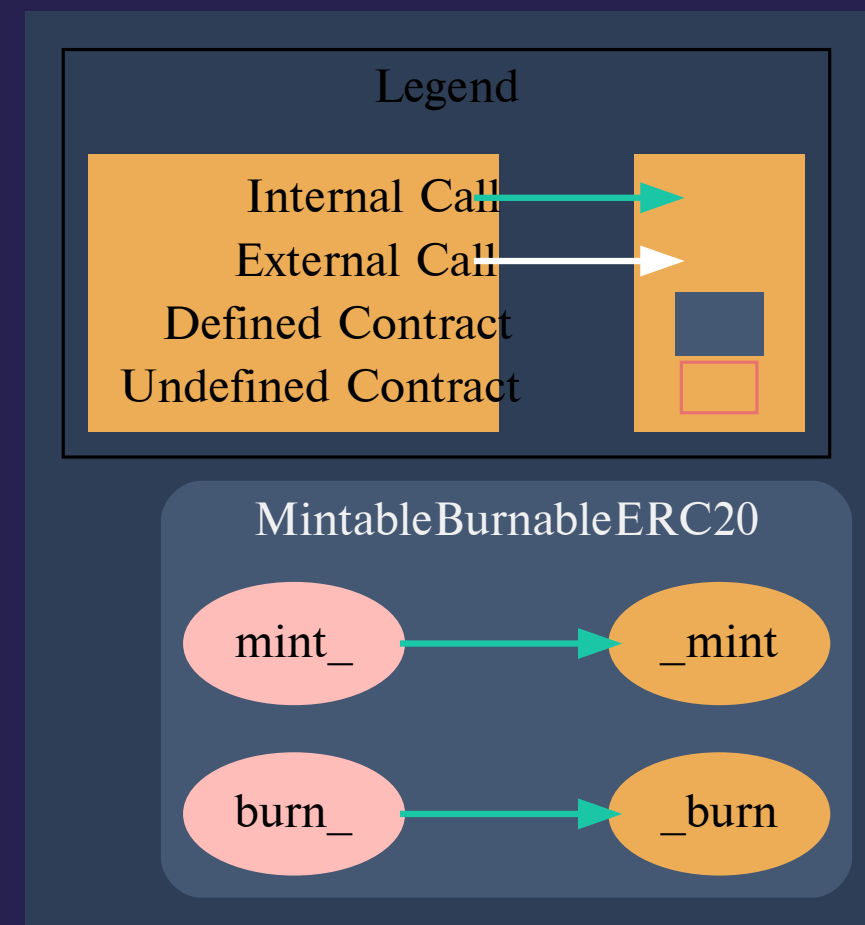
Pic. 1.2.
Wono.sol

STRUCTURE OF CONTRACT

MINTABLEBURNABLEERC20.SOL

CONTRACT METHODS ANALYSIS:

- ◆ `mint_(address acct, uint amt)`
Vulnerabilities not detected
- ◆ `burn_(address acct, uint amt)`
Vulnerabilities not detected



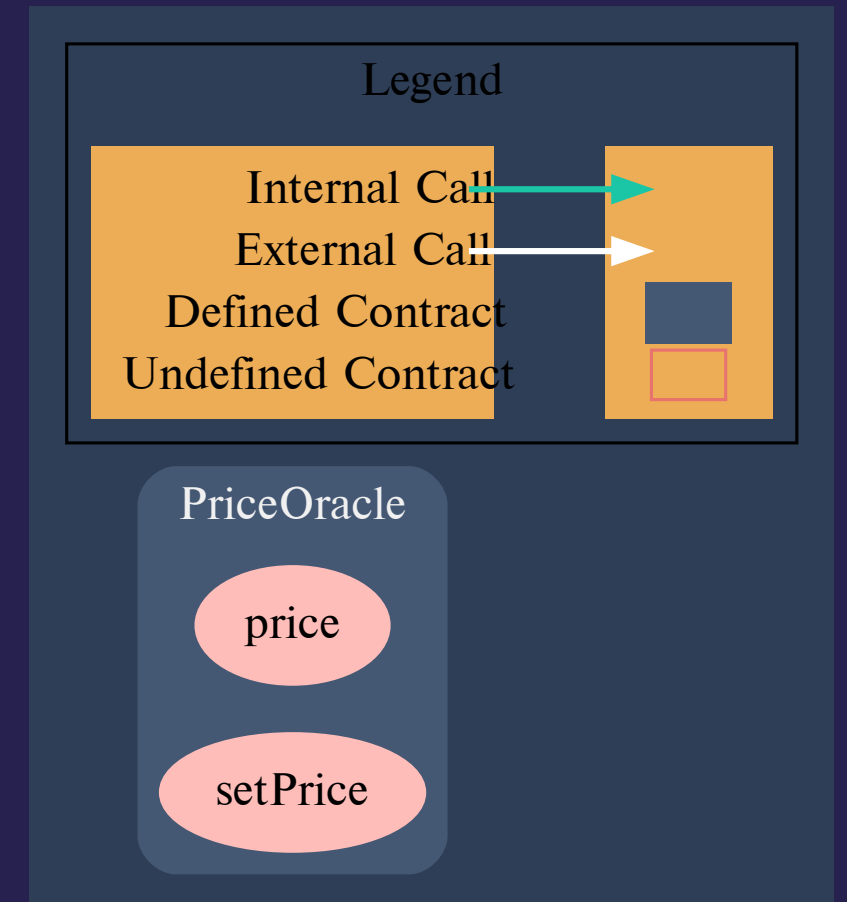
Pic. 1.3.
MintableBurnableERC20.sol

STRUCTURE OF CONTRACT

PRICEORACLE.SOL

CONTRACT METHODS ANALYSIS:

- ◆ `price()`
Vulnerabilities not detected
- ◆ `setPrice(uint _currentPrice)`
Vulnerabilities not detected



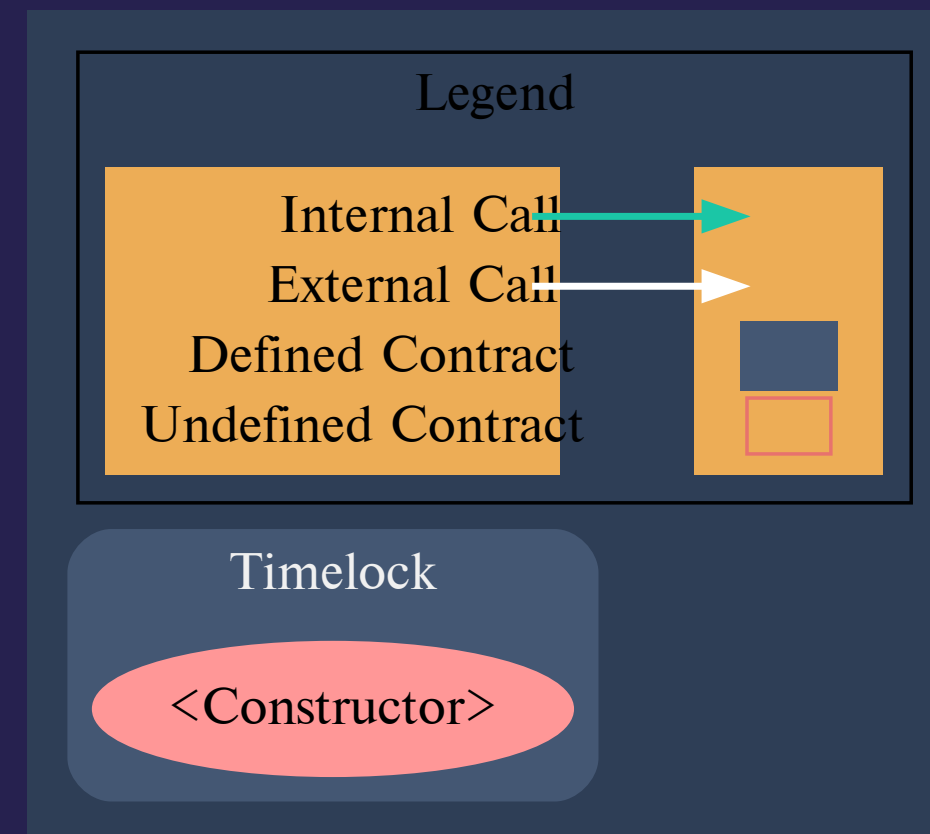
Pic. 1.4.
PriceOracle.sol

STRUCTURE OF CONTRACT

TIMELOCK.SOL

CHECK SUMMARY:

Vulnerabilities not detected



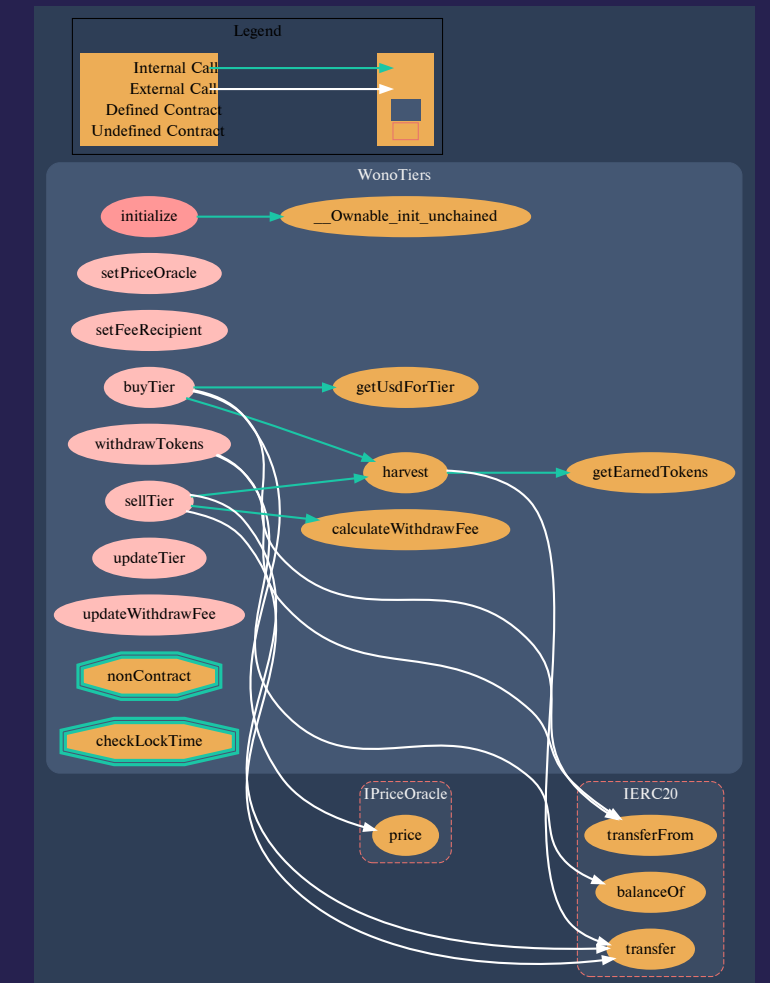
Pic. 1.5.
Timelock.sol

STRUCTURE OF CONTRACT

WONOTIERS.SOL

CONTRACT METHODS ANALYSIS:

- ◆ `initialize(IERC20 _wonoTokenAddress, IPriceOracle _priceOracle, address _wonoFeeRecipient)`
Vulnerabilities not detected
- ◆ `getEarnedTokens(address userAddress)`
Vulnerabilities not detected
- ◆ `getUsdForTier(address userAddress, uint _tier)`
Vulnerabilities not detected
- ◆ `setPriceOracle(IPriceOracle _priceOracle)`
Vulnerabilities not detected



Pic. 1.6.
WonoTiers.sol

- ◆ `setFeeRecipient(address _wonoFeeRecipient)`
Vulnerabilities not detected

PAYABLE

- ◆ `buyTier(uint tier)`
Vulnerabilities not detected

wono tokens in, public

PAYABLE

- ◆ `sellTier()`
Now fee tokens are deadlocked on the contract. Consider transferring them to fee recipient or implementing a method to withdraw them

wono tokens out, public

PAYABLE

- ◆ `harvest()`
Vulnerabilities not detected

wono tokens out, public

- ◆ `updateTier(uint8 tierId, uint price, uint lockupTime, uint apr)`
Function should emit an event

- ◆ `updateWithdrawFee(uint _key, uint _percent)`
Function should emit an event

- ◆ `calculateWithdrawFee(address _userAddress, uint _amount)`
Vulnerabilities not detected

VERIFICATION CHECK SUMS

Contract Name	Solc version	Optimisation	Bytecode hash (SHA 256)
Sale	0.8.10	200	889389019d67d8ab0b4acc 791cdbde390ee7865ac3cac c1921284b01ba614721
WonoTiers	0.8.10	200	d16d6b06c93f88c7cc6a5b1 4c00083e4fa48304e0e18b 3f6e5d6e2e8067b960b



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