Cyberscope

Audit Report

LumiVault

April 2025

Network	ETH
Address	0x4ae48d05c3b5d504a71de81b10237338ff3aa3b5
Audited by	© cyberscope

Analysis

🔴 Critical 🟠 Medium ⚪ Minor / Informative 🔵 Pass

Severity	Code	Description	Status
🔵	ST	Stops Transactions	Passed
🔵	OTUT	Transfers User's Tokens	Passed
🔵	ELFM	Exceeds Fees Limit	Passed
🔵	MT	Mints Tokens	Passed
🔵	BT	Burns Tokens	Passed
🔵	BC	Blacklists Addresses	Passed

Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	UEI	Unused Error Interfaces	Unresolved
●	L09	Dead Code Elimination	Unresolved
●	L18	Multiple Pragma Directives	Unresolved

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Risk Classification

The criticality of findings in Cyberscope's smart contract audits is determined by evaluating multiple variables. The two primary variables are:

1. **Likelihood of Exploitation**: This considers how easily an attack can be executed, including the economic feasibility for an attacker.
2. **Impact of Exploitation**: This assesses the potential consequences of an attack, particularly in terms of the loss of funds or disruption to the contract's functionality.

Based on these variables, findings are categorized into the following severity levels:

1. **Critical**: Indicates a vulnerability that is both highly likely to be exploited and can result in significant fund loss or severe disruption. Immediate action is required to address these issues.
2. **Medium**: Refers to vulnerabilities that are either less likely to be exploited or would have a moderate impact if exploited. These issues should be addressed in due course to ensure overall contract security.
3. **Minor**: Involves vulnerabilities that are unlikely to be exploited and would have a minor impact. These findings should still be considered for resolution to maintain best practices in security.
4. **Informative**: Points out potential improvements or informational notes that do not pose an immediate risk. Addressing these can enhance the overall quality and robustness of the contract.

Severity	Likelihood / Impact of Exploitation
● Critical	Highly Likely / High Impact
● Medium	Less Likely / High Impact or Highly Likely/ Lower Impact
● Minor / Informative	Unlikely / Low to no Impact

Review

Contract Name	LumiVault
Compiler Version	v0.8.20+commit.a1b79de6
Optimization	200 runs
Explorer	https://etherscan.io/address/0x4ae48d05c3b5d504a71de81b10237338ff3aa3b5
Address	0x4ae48d05c3b5d504a71de81b10237338ff3aa3b5
Network	ETH
Symbol	LVT
Decimals	18
Total Supply	500.000.000
Badge Eligibility	Yes

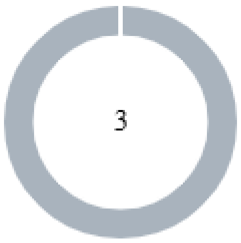
Audit Updates

Initial Audit	13 Apr 2025

Source Files

Filename	SHA256
LumiVault.sol	3ace9c9f01d4eb397f7d3e03e246e7f2e98a9e7c333da579199dd4e71123a10e

Findings Breakdown



●	Critical	0
●	Medium	0
●	Minor / Informative	3

Severity		Unresolved	Acknowledged	Resolved	Other
●	Critical	0	0	0	0
●	Medium	0	0	0	0
●	Minor / Informative	3	0	0	0

UEI - Unused Error Interfaces

Criticality	Minor / Informative
Location	LumiVault.sol#L61,119
Status	Unresolved

Description

The contract imports the `IERC721Errors` and `IERC1155Errors` interfaces however the errors declared inside are never used in any of the contracts.

```
interface IERC721Errors {
    error ERC721InvalidOwner(address owner);
    error ERC721NonexistentToken(uint256 tokenId);
    error ERC721IncorrectOwner(address sender, uint256 tokenId, address owner);
    error ERC721InvalidSender(address sender);
    error ERC721InvalidReceiver(address receiver);
    error ERC721InsufficientApproval(address operator, uint256 tokenId);
    error ERC721InvalidApprover(address approver);
    error ERC721InvalidOperator(address operator);
}


interface IERC1155Errors {
    error ERC1155InsufficientBalance(address sender, uint256 balance, uint256 needed, uint256 tokenId);
    error ERC1155InvalidSender(address sender);
    error ERC1155InvalidReceiver(address receiver);
    error ERC1155MissingApprovalForAll(address operator, address owner);
    error ERC1155InvalidApprover(address approver);
    error ERC1155InvalidOperator(address operator);
    error ERC1155InvalidArrayLength(uint256 idsLength, uint256 valuesLength);
}
```

Recommendation

It is recommended to remove unused interfaces to enhance code readability.

L09 - Dead Code Elimination

Criticality	Minor / Informative
Location	LumiVault.sol#L307,548
Status	Unresolved

Description

In Solidity, dead code is code that is written in the contract, but is never executed or reached during normal contract execution. Dead code can occur for a variety of reasons, such as:

- Conditional statements that are always false.
- Functions that are never called.
- Unreachable code (e.g., code that follows a return statement).

Dead code can make a contract more difficult to understand and maintain, and can also increase the size of the contract and the cost of deploying and interacting with it.

```
function _contextSuffixLength() internal view virtual returns
(uint256) {
    return 0;
}

function _burn(address account, uint256 value) internal {
    if (account == address(0)) {
        revert ERC20InvalidSender(address(0));
    }
    _update(account, address(0), value);
}
```

Recommendation

To avoid creating dead code, it's important to carefully consider the logic and flow of the contract and to remove any code that is not needed or that is never executed. This can help improve the clarity and efficiency of the contract.

L18 - Multiple Pragma Directives

Criticality	Minor / Informative
Location	LumiVault.sol#L9,175,258,286,318,629
Status	Unresolved

Description

If the contract includes multiple conflicting pragma directives, it may produce unexpected errors. To avoid this, it's important to include the correct pragma directive at the top of the contract and to ensure that it is the only pragma directive included in the contract.

```
pragma solidity ^0.8.20;
```

Recommendation

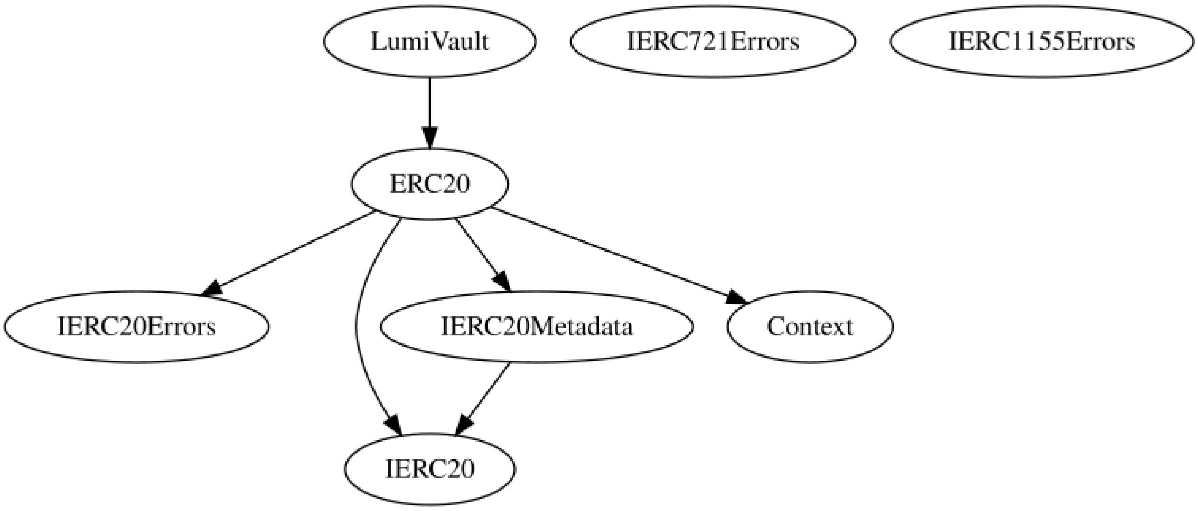
It is important to include only one pragma directive at the top of the contract and to ensure that it accurately reflects the version of Solidity that the contract is written in.

By including all required compiler options and flags in a single pragma directive, the potential conflicts could be avoided and ensure that the contract can be compiled correctly.

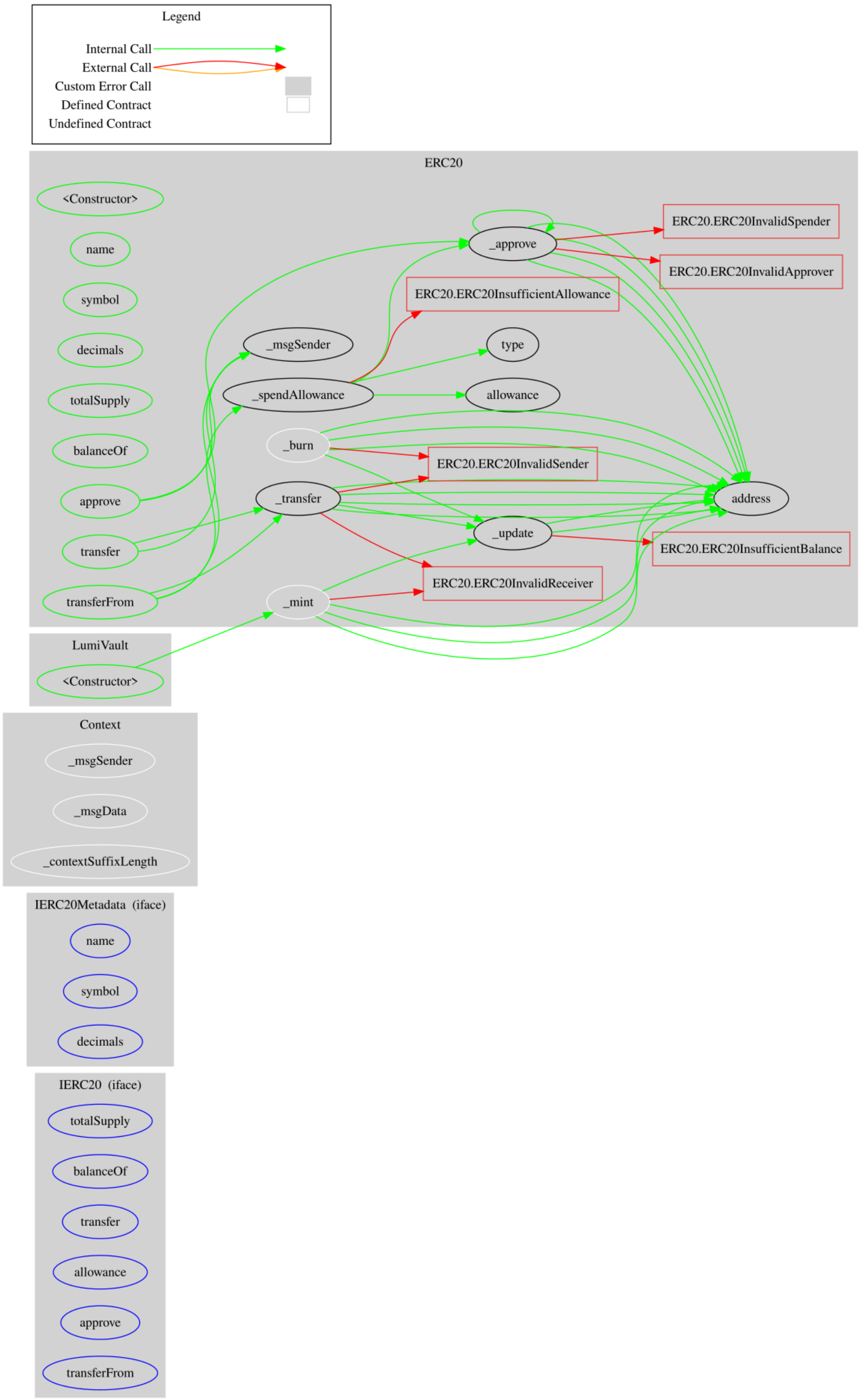
Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
LumiVault	Implementation	ERC20		
		Public	✓	ERC20

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Custom Error Call
Defined Contract
Undefined Contract
ERC20
<Constructor>
name
symbol
decimals
totalSupply
balanceOf
approve
transfer
transferFrom
_approve
_msgSender
_spendAllowance
_burn
_transfer
_mint
type
allowance
_update
address
ERC20.ERC20InvalidSpender
ERC20.ERC20InvalidApprover
ERC20.ERC20InsufficientAllowance
ERC20.ERC20InvalidSender
ERC20.ERC20InsufficientBalance
ERC20.ERC20InvalidReceiver
LumiVault
<Constructor>
Context
_msgSender
_msgData
_contextSuffixLength
IERC20Metadata (iface)
name
symbol
decimals
IERC20 (iface)
totalSupply
balanceOf
transfer
allowance
approve
transferFrom

Summary

LumiVault contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. LumiVault is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract does not have any admin functions and it also does not implement any fees.

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Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.

The Cyberscope team

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