




Started	Mon Oct 09 2023 07:18:18 GMT+0000 (Coordinated Universal Time)
Finished	Mon Oct 09 2023 08:03:36 GMT+0000 (Coordinated Universal Time)
Mode	Deep
Client Tool	Mythx-Cli-0.7.3
Main Source File	Contracts/Handlers/Erc20TransferHandler.sol

## DETECTED VULNERABILITIES

 HIGH	 MEDIUM	 LOW
0	0	0

## ISSUES

## UNKNOWN Arithmetic operation "+" discovered

This plugin produces issues to support false positive discovery within MythX.

SWC-101

Source file

node\_modules/@openzeppelin/contracts/token/ERC20/utils/SafeERC20.sol

Locations

```
60 | function safeIncreaseAllowance(IERC20 token, address spender, uint256 value) internal {
61 |     uint256 oldAllowance = token.allowance(address(this), spender);
62 |     _callOptionalReturn(token, abi.encodeWithSelector(token.approve.selector, spender, oldAllowance + value));
63 | }
```

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SWC-101

Source file

node\_modules/@openzeppelin/contracts/token/ERC20/utils/SafeERC20.sol

Locations

```
71 |     uint256 oldAllowance = token.allowance(address(this), spender);
72 |     require(oldAllowance >= value, "SafeERC20: decreased allowance below zero");
73 |     _callOptionalReturn(token, abi.encodeWithSelector(token.approve.selector, spender, oldAllowance - value));
74 | }
75 | }
```

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Source file

node\_modules/@openzeppelin/contracts/token/ERC20/Utils/SafeERC20.sol

Locations

```
106 | token.permit(owner, spender, value, deadline, v, r, s);
107 | uint256 nonceAfter = token.nonces(owner);
108 | require(nonceAfter == nonceBefore + 1, "SafeERC20: permit did not succeed");
109 | }
```

## UNKNOWN Arithmetic operation "/" discovered

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
113 |
114 | if(feeOnTransferPercentageRate[tokenSymbol] > 0) {
115 |     uint256 transferFee = feeOnTransferPercentageRate[tokenSymbol] * amount / 1000;
116 |     require(amountToSend > transferFee, 'Insufficient amount to send : Percent Rate');
117 |     amountToSend = amountToSend - transferFee;
```

## UNKNOWN Arithmetic operation "\*" discovered

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
113 |
114 | if(feeOnTransferPercentageRate[tokenSymbol] > 0) {
115 |     uint256 transferFee = (feeOnTransferPercentageRate[tokenSymbol] * amount) / 1000;
116 |     require(amountToSend > transferFee, 'Insufficient amount to send : Percent Rate');
117 |     amountToSend = amountToSend - transferFee;
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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
115 | uint256 transferFee = (feeOnTransferPercentageRate[tokenSymbol] * amount) / 1000;
116 | require(amountToSend > transferFee, 'Insufficient amount to send : Percent Rate');
117 | amountToSend = amountToSend - transferFee;
118 | }
119 |
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
120 | if(feeOnTransferFlatRate[tokenSymbol] > 0) {
121 | require(amountToSend > feeOnTransferFlatRate[tokenSymbol], 'Insufficient amount to send : Flat Rate');
122 | amountToSend = amountToSend - feeOnTransferFlatRate[tokenSymbol];
123 | }
124 |
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
123 | }
124 |
125 | return abi.encode(tokenSymbol, amountToSend, amount - amountToSend);
126 | }
127 |
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
140 | uint256 txFee = 0;
141 | if(chargeTxFee) {
142 | txFee = txFeeRate * amount / 1000;
143 | uint256 bribeFee = (bribeFeeRate * txFee) / 1000;
144 | uint256 lpFee = txFee - bribeFee;
```

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contracts/handlers/Erc20TransferHandler.sol

Locations

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140 | uint256 txFee = 0;
141 | if(chargeTxFee) {
142 |     txFee = (txFeeRate * amount) / 1000;
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Locations

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141 | if(chargeTxFee) {
142 |     txFee = (txFeeRate * amount) / 1000;
143 |     uint256 bribeFee = (bribeFeeRate * txFee) / 1000;
144 |     uint256 lpFee = txFee - bribeFee;
145 | }
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contracts/handlers/Erc20TransferHandler.sol

Locations

```
141 | if(chargeTxFee) {
142 |     txFee = (txFeeRate * amount) / 1000;
143 |     uint256 bribeFee = (bribeFeeRate * txFee) / 1000;
144 |     uint256 lpFee = txFee - bribeFee;
145 | }
```

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
142 | txFee = (txFeeRate * amount) / 1000;
143 | uint256 bribeFee = (bribeFeeRate * txFee) / 1000;
144 | uint256 lpFee = txFee - bribeFee;
145 |
146 | if(bribeFee > 0) {
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
158 | }
159 |
160 | token.safeTransfer(target, amount - txFee);
161 | }
162 |
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
172 |
173 | if(feeOnTransferPercentageRate[tokenSymbol] > 0) {
174 | uint256 transferFee = feeOnTransferPercentageRate[tokenSymbol] * amount + feeOnTransferAmount;
175 | require(feeOnTransfer >= transferFee, 'Insufficient amount to send : Percent Rate');
176 | feeOnTransfer = feeOnTransfer - transferFee;
```

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
172 |  
173 | if(feeOnTransferPercentageRate[tokenSymbol] > 0) {  
174 | uint256 transferFee = (feeOnTransferPercentageRate[tokenSymbol] * amount + feeOnTransferAmount) / 1000;  
175 | require(feeOnTransfer >= transferFee, 'Insufficient amount to send : Percent Rate');  
176 | feeOnTransfer = feeOnTransfer - transferFee;
```

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
172 |  
173 | if(feeOnTransferPercentageRate[tokenSymbol] > 0) {  
174 | uint256 transferFee = (feeOnTransferPercentageRate[tokenSymbol] * (amount + feeOnTransferAmount)) / 1000;  
175 | require(feeOnTransfer >= transferFee, 'Insufficient amount to send : Percent Rate');  
176 | feeOnTransfer = feeOnTransfer - transferFee;
```

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
174 | uint256 transferFee = (feeOnTransferPercentageRate[tokenSymbol] * (amount + feeOnTransferAmount)) / 1000;  
175 | require(feeOnTransfer >= transferFee, 'Insufficient amount to send : Percent Rate');  
176 | feeOnTransfer = feeOnTransfer - transferFee;  
177 | }  
178 |
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
179 | if(feeOnTransferFlatRate[tokenSymbol] > 0) {  
180 |     require(feeOnTransfer >= feeOnTransferFlatRate[tokenSymbol], 'Insufficient amount to send : Flat Rate');  
181 |     feeOnTransfer = feeOnTransfer - feeOnTransferFlatRate[tokenSymbol];  
182 | }  
183 |
```

## UNKNOWN Arithmetic operation "+" discovered

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
184 | require(feeOnTransfer == 0, 'Invalid fee on transfer amount');  
185 |  
186 | uint256 amountToSend = amount + feeOnTransferAmount;  
187 |  
188 | IERC20 token = IERC20(tokenAddress);
```

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SWC-101

Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
191 | token.safeTransferFrom(target, address(this), amountToSend);  
192 | uint256 postTransferBalance = token.balanceOf(address(this));  
193 | uint256 diffTransferBalance = postTransferBalance - preTransferBalance;  
194 | require(diffTransferBalance >= amount, 'Invalid transfer amount');  
195 | }
```

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Source file

contracts/handlers/Erc20TransferHandler.sol

Locations

```
212 | token.safeTransferFrom(msg.sender, address(this), amount);
213 | uint256 postDepositBalance = token.balanceOf(address(this));
214 | uint256 diffDepositBalance = postDepositBalance - preDepositBalance;
215 |
216 | IFeeCollector(feeCollectors[tokenSymbol]).deposit(msg.sender, diffDepositBalance);
```