BPTL

Smart Contract Audit Report

SYSFIXED

24 Jan 2023

TABLE OF CONTENTS

AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
BPTL	BPTL	Ethereum

Addresses

Contract address	0x3a1bc4014c4c493db3dbfbdd8ee1417113b462bf
Contract deployer address	0x8DF71E2fb1eCEBED2c5013963eE51A19D1FF1E65

Project Website

https://blockportal.info/

Codebase

https://etherscan.io/address/0x3a1bc4014c4c493db3dbfbdd8ee1417113b462bf#code

SUMMARY

All-in-one social network that allows governing/trading crypto assets at the same time providing a means to interact with each other on a 1-on-1 or group basis. BlockPortal ecosystem consists of several trading, social + community features along with a marketplace. Moreover, the platform will have robust payment automation and peer-to-peer crypto & NFT transfers.

Contract Summary

Documentation Quality

BPTL provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by BPTL with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 276, 276, 277, 277, 279, 279, 280, 280, 281, 281, 290, 290, 291, 291, 295, 295, 296, 296, 306, 306, 307, 307, 308, 308, 325, 325, 390, 402, 415, 496, 505, 532, 533, 547, 666, 682 and 685.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 19.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 391, 403, 537 and 538.

CONCLUSION

We have audited the BPTL project released on January 2023 to discover issues and identify potential security vulnerabilities in BPTL Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides a satisfactory result with some low-risk issues.

The issues found in the BPTL smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, a floating pragma is set, and out of bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Monday Jan 23 2023 04:14:59 GMT+0000 (Coordinated Universal Time)
Finished	Tuesday Jan 24 2023 09:52:17 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	BPTL.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
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SWC-101	ARITHMETIC OPERATION "**" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged

SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
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SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 276

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
275   uint8 private constant _decimals = 18;
276   uint256 internal constant _totalSupply = 1_000_000_000 * 10**_decimals;
277   uint32 private constant percent_helper = 100 * 10**2;
278   //Settings limits
279   uint32 private constant max_fee = 90.00 * 10**2;
280
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

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Source File

- BPTL.sol

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Source File

- BPTL.sol

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276   uint256 internal constant _totalSupply = 1_000_000_000 * 10**_decimals;
277   uint32 private constant percent_helper = 100 * 10**2;
278   //Settings limits
279   uint32 private constant max_fee = 90.00 * 10**2;
280   uint32 private constant min_maxes = 0.50 * 10**2;
281
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

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Source File

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281
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 279

low SEVERITY

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Source File

- BPTL.sol

Locations

```
278   //Settings limits
279   uint32 private constant max_fee = 90.00 * 10**2;
280   uint32 private constant min_maxes = 0.50 * 10**2;
281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 279

low SEVERITY

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Source File

- BPTL.sol

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279   uint32 private constant max_fee = 90.00 * 10**2;
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281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 280

low SEVERITY

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Source File

- BPTL.sol

Locations

```
279   uint32 private constant max_fee = 90.00 * 10**2;
280   uint32 private constant min_maxes = 0.50 * 10**2;
281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283   //OpenTrade
284
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 280

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
279   uint32 private constant max_fee = 90.00 * 10**2;
280   uint32 private constant min_maxes = 0.50 * 10**2;
281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283   //OpenTrade
284
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 281

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
280   uint32 private constant min_maxes = 0.50 * 10**2;
281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283   //OpenTrade
284   bool public trade_open;
285
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 281

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
280   uint32 private constant min_maxes = 0.50 * 10**2;
281   uint32 private constant burn_limit = 10.00 * 10**2;
282
283   //OpenTrade
284   bool public trade_open;
285
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 290

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
289   address public team_wallet;
290   uint32 public fee_buy = 8.00 * 10**2;
291   uint32 public fee_sell = 8.00 * 10**2;
292   /*
293
294
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 290

low SEVERITY

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Source File

- BPTL.sol

Locations

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290   uint32 public fee_buy = 8.00 * 10**2;
291   uint32 public fee_sell = 8.00 * 10**2;
292   /*
293
294
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 291

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
290   uint32 public fee_buy = 8.00 * 10**2;
291   uint32 public fee_sell = 8.00 * 10**2;
292   /*
293
294   */
295
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 291

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
290   uint32 public fee_buy = 8.00 * 10**2;
291   uint32 public fee_sell = 8.00 * 10**2;
292   /*
293
294   */
295
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 295

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
294   */
295   uint32 public fee_early_sell = 30.00 * 10**2;
296   uint32 public lp_percent = 25.00 * 10**2;
297
298   //Ignore fee
299
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 295

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
294   */
295   uint32 public fee_early_sell = 30.00 * 10**2;
296   uint32 public lp_percent = 25.00 * 10**2;
297
298   //Ignore fee
299
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 296

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
295   uint32 public fee_early_sell = 30.00 * 10**2;
296   uint32 public lp_percent = 25.00 * 10**2;
297
298   //Ignore fee
299   mapping(address => bool) public ignore_fee;
300
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 296

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
uint32 public fee_early_sell = 30.00 * 10**2;
uint32 public lp_percent = 25.00 * 10**2;

//Ignore fee
mapping(address => bool) public ignore_fee;

```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 306

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
305   //Maxes
306   uint256 public max_tx = 7_500_000 * 10**_decimals; //0.75%
307   uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
308   uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%
309
310
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 306

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
305   //Maxes
306   uint256 public max_tx = 7_500_000 * 10**_decimals; //0.75%
307   uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
308   uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%
309
310
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 307

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
306   uint256 public max_tx = 7_500_000 * 10**_decimals; //0.75%
307   uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
308   uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%
309
310   //ERC20
311
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 307

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
uint256 public max_tx = 7_500_000 * 10**_decimals; //0.75%
uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%

//ERC20

```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 308

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
307   uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
308   uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%
309
310   //ERC20
311   mapping(address => uint256) internal _balances;
312
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 308

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
307   uint256 public max_wallet = 10_000_000 * 10**_decimals; //1.00%
308   uint256 public swap_at_amount = 1_000_000 * 10**_decimals; //0.10%
309
310   //ERC20
311   mapping(address => uint256) internal _balances;
312
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 325

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
324   {
325   return (_input * _percent) / percent_helper;
326   }
327
328   bool private inSwap = false;
329
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 325

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
324   {
325   return (_input * _percent) / percent_helper;
326   }
327
328   bool private inSwap = false;
329
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 390

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
389   unchecked {
390   for (uint256 i = 0; i < _input.length; i++) {
391   ignore_fee[_input[i]] = _enabled;
392   }
393   }
394
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 402

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
401   unchecked {
402   for (uint256 i = 0; i < _input.length; i++) {
403   address addr = _input[i];
404   require(
405   addr != address(0),
406
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 415

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
414   require(
415   block.timestamp > burn_last + burn_cooldown,
416   "Burn cooldown active"
417   );
418   uint256 liquidityPairBalance = this.balanceOf(pair_addr);
419
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 496

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
495   require(amount >= fee_amount, "fee exceeds amount");
496   amount -= fee_amount;
497   }
498   //Disable maxes
499   if (limits_active) {
500
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 505

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
504   require(
505   _balances[to] + amount <= max_wallet,
506   "Max wallet reached"
507   );
508   }
509
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 532

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
531   function SwapTokensForEth(uint256 _amount) private lockTheSwap {
532   uint256 eth_am = CalcPercent(_amount, percent_helper - lp_percent);
533   uint256 liq_am = _amount - eth_am;
534   uint256 balance_before = address(this).balance;
535
536
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 533

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
532   uint256 eth_am = CalcPercent(_amount, percent_helper - lp_percent);
533   uint256 liq_am = _amount - eth_am;
534   uint256 balance_before = address(this).balance;
535
536   address[] memory path = new address[](2);
537
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 547

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
546   );
547   uint256 liq_eth = address(this).balance - balance_before;
548
549   AddLiquidity(liq_am, CalcPercent(liq_eth, lp_percent));
550   }
551
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 666

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
665   unchecked {
666   _approve(owner, spender, currentAllowance - amount);
667   }
668   }
669   }
670
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 682

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
681   unchecked {
682   _balances[from] = fromBalance - amount;
683   // Overflow not possible: the sum of all balances is capped by totalSupply, and the
sum is preserved by
684   // decrementing then incrementing.
685   _balances[to] += amount;
686
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 685

low SEVERITY

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

Source File

- BPTL.sol

Locations

```
684   // decrementing then incrementing.
685   _balances[to] += amount;
686   }
687
688   emit Transfer(from, to, amount);
689
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 19

low SEVERITY

The current pragma Solidity directive is ""^0.8.17"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- BPTL.sol

Locations

```
18    */
19    pragma solidity ^0.8.17;
20
21    /**
22    * @dev Provides information about the current execution context, including the
23
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 391

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- BPTL.sol

Locations

```
390   for (uint256 i = 0; i < _input.length; i++) {
391   ignore_fee[_input[i]] = _enabled;
392   }
393   }
394   }
395
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 403

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- BPTL.sol

Locations

```
402   for (uint256 i = 0; i < _input.length; i++) {
403   address addr = _input[i];
404   require(
405   addr != address(0),
406   "ERC20: transfer to the zero address"
407
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 537

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- BPTL.sol

Locations

```
536   address[] memory path = new address[](2);
537   path[0] = address(this);
538   path[1] = uniswapV2Router.WETH();
539   _approve(address(this), address(uniswapV2Router), _amount);
540   uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
541
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 538

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- BPTL.sol

Locations

```
537   path[0] = address(this);
538   path[1] = uniswapV2Router.WETH();
539   _approve(address(this), address(uniswapV2Router), _amount);
540   uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
541   eth_am,
542
```

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