Parsiq Token

Smart Contract Audit Report

SYSFIXED

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Parsiq Token	PRQ	Binance Smart Chain

Addresses

Contract address	0xd21d29b38374528675c34936bf7d5dd693d2a577
Contract deployer address	0x3DEcac3cB963Ba79DFC5C7F89f4dd717178478dF

Project Website

https://www.parsiq.net/

Codebase

https://bscscan.com/address/0xd21d29b38374528675c34936bf7d5dd693d2a577#code

SUMMARY

Welcome to PARSIQ Network The main purpose of our Tsunami API is to get historical, real-time and raw data from the blockchains almost instantaneously. We have indexed tens of millions of blocks across numerous blockchains, such as Ethereum, BNB Smart Chain, Avalanche, Polygon and Arbitrum, with hundreds of millions of transactions, calls, events, from block zero to this exact second. All this information is available within milliseconds to you no matter what your request is! To get familiar with Tsunami API, read through this doc and try it out at API Reference.

Contract Summary

Documentation Quality

Parsiq Token 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 Parsiq Token with the discovery of several low issues.

Test Coverage

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

Audit Findings Summary

- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 1.
- SWC-107 | It is recommended to use a reentrancy lock, reentrancy weaknesses detected on lines 404.
- 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 404.
- SWC-113 SWC-128 | It is recommended to implement the contract logic to handle failed calls and block gas limit on lines 404.
- SWC-116 | It is recommended to use oracles for block values as a proxy for time on lines 87, 772, 947, 948, 773, 950, 600 and 930.

CONCLUSION

We have audited the Parsiq Token project released on June 2021 to discover issues and identify potential security vulnerabilities in Parsiq Token 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 satisfactory results with low-risk issues.

The issues found in the Parsiq Token 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 no pragma is set, a call to a user-supplied address is executed, a control flow decision is made based on The block.timestamp environment variable, and requirement violation. Choosing what version of Solidity is used for compilation consciously is recommended. Currently, no version is set in the Solidity file. A call to a user-supplied address is executed, external message call to an address specified by the caller is executed. Note that the callee account might contain arbitrary code and could re-reentry function within this contract. ReeReenteringe contract in an intermediate state may lead to unexpected behavior. Ensure no state modifications are executed after this call, and reentrancy guards are in place. Multiple calls are executed in the same transaction, and this call is executed following another call within the same transaction. The call may never get executed if an initial call fails permanently. This might be caused intentionally by a malicious callee. If possible, refactor the code such that each transaction only executes one external call or ensure that all callees can be trusted (i.e. they're part of your codebase). Requirement violation, the requirement was violated in a nested call, and the call was reverted as a result. Ensure valid inputs are provided to the nested call (for instance, via passed arguments).

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.	PASS
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.	ISSUE FOUND
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.	ISSUE FOUND
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.	ISSUE FOUND
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	Friday Jun 11 2021 18:30:20 GMT+0000 (Coordinated Universal Time)
Finished	Saturday Jun 12 2021 12:14:07 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	ParsiqToken.sol

Detected Issues

ID	Title	Severity	Status
SWC-103	NO PRAGMA IS SET.	low	acknowledged
SWC-107	A CALL TO A USER-SUPPLIED ADDRESS IS EXECUTED.	low	acknowledged
SWC-113	MULTIPLE CALLS ARE EXECUTED IN THE SAME TRANSACTION.	low	acknowledged
SWC-116	A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.	low	acknowledged
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SWC-116	A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.	low	acknowledged
SWC-123	REQUIREMENT VIOLATION.	low	acknowledged

SWC-103 | NO PRAGMA IS SET.

LINE 1

low SEVERITY

It is recommended to make a conscious choice on what version of Solidity is used for compilation. Currently no version is set in the Solidity file.

Source File

- ParsiqToken.sol

Locations

```
0
1   /**
2   *Submitted for verification at BscScan.com on 2021-06-11
3   */
4
5
```

SWC-107 | A CALL TO A USER-SUPPLIED ADDRESS IS EXECUTED.

LINE 404

low SEVERITY

An external message call to an address specified by the caller is executed. Note that the callee account might contain arbitrary code and could re-enter any function within this contract. Reentering the contract in an intermediate state may lead to unexpected behaviour. Make sure that no state modifications are executed after this call and/or reentrancy guards are in place.

Source File

- ParsiqToken.sol

Locations

```
403   // solhint-disable-next-line avoid-low-level-calls
404   (bool success, bytes memory returndata) = target.call{ value: value }(data);
405   return _verifyCallResult(success, returndata, errorMessage);
406   }
407
408
```

SWC-113 | MULTIPLE CALLS ARE EXECUTED IN THE SAME TRANSACTION.

LINE 404

low SEVERITY

This call is executed following another call within the same transaction. It is possible that the call never gets executed if a prior call fails permanently. This might be caused intentionally by a malicious callee. If possible, refactor the code such that each transaction only executes one external call or make sure that all callees can be trusted (i.e. they're part of your own codebase).

Source File

- ParsiqToken.sol

Locations

```
403   // solhint-disable-next-line avoid-low-level-calls
404   (bool success, bytes memory returndata) = target.call{ value: value }(data);
405   return _verifyCallResult(success, returndata, errorMessage);
406   }
407
408
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 87

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
86   uint256 c = a + b;
87   require(c >= a, "SafeMath: addition overflow");
88   return c;
89   }
90
91
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 772

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
771   ) public onlyGovernanceBoard returns (bool) {
772   require(block.timestamp > reviewPeriods[from], "Review period is not elapsed");
773   require(block.timestamp <= decisionPeriods[from], "Decision period expired");
774
775   _transfer(from, to, value);
776
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 947

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
946   // Need to unwrap modifiers to eliminate Stack too deep error
947   require(decisionPeriods[owner] < block.timestamp, "Account is being reviewed");
948   require(decisionPeriods[spender] < block.timestamp, "Account is being reviewed");
949   require(!paused || msg.sender == governanceBoard, "Pausable: paused");
950   require(deadline >= block.timestamp, "ParsiqToken: EXPIRED");
951
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 948

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
947   require(decisionPeriods[owner] < block.timestamp, "Account is being reviewed");
948   require(decisionPeriods[spender] < block.timestamp, "Account is being reviewed");
949   require(!paused || msg.sender == governanceBoard, "Pausable: paused");
950   require(deadline >= block.timestamp, "ParsiqToken: EXPIRED");
951   bytes32 digest =
952
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 773

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
772   require(block.timestamp > reviewPeriods[from], "Review period is not elapsed");
773   require(block.timestamp <= decisionPeriods[from], "Decision period expired");
774
775   _transfer(from, to, value);
776   emit GovernedTransfer(from, to, value);
777
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 950

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
949   require(!paused || msg.sender == governanceBoard, "Pausable: paused");
950   require(deadline >= block.timestamp, "ParsiqToken: EXPIRED");
951   bytes32 digest =
952   keccak256(
953   abi.encodePacked(
954
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 600

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
599   modifier onlyResolved(address account) {
600   require(decisionPeriods[account] < block.timestamp, "Account is being reviewed");
601   _;
602   }
603
604
```

SWC-116 | A CONTROL FLOW DECISION IS MADE BASED ON THE BLOCK.TIMESTAMP ENVIRONMENT VARIABLE.

LINE 930

low SEVERITY

The block.timestamp environment variable is used to determine a control flow decision. Note that the values of variables like coinbase, gaslimit, block number and timestamp are predictable and can be manipulated by a malicious miner. Also keep in mind that attackers know hashes of earlier blocks. Don't use any of those environment variables as sources of randomness and be aware that use of these variables introduces a certain level of trust into miners.

Source File

- ParsiqToken.sol

Locations

```
929   require(recipient != address(0), "ERC20: transfer to the zero address");
930   require(decisionPeriods[recipient] < block.timestamp, "Account is being reviewed");
931
932   _balances[recipient] = _balances[recipient].add(amount);
933   emit Transfer(msg.sender, recipient, amount);
934
```

SWC-123 | REQUIREMENT VIOLATION.

LINE 404

low SEVERITY

A requirement was violated in a nested call and the call was reverted as a result. Make sure valid inputs are provided to the nested call (for instance, via passed arguments).

Source File

- ParsiqToken.sol

Locations

```
403   // solhint-disable-next-line avoid-low-level-calls
404   (bool success, bytes memory returndata) = target.call{ value: value }(data);
405   return _verifyCallResult(success, returndata, errorMessage);
406   }
407
408
```

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This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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