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AUDIT COMPANY

Smart Contract Security Audit

TechRate

July, 2021

Audit Details

Audited project

BABYXRP

Deployer address

0xeE3B7270CaDacA45DD3CE1f70480F1A26263E38A

Client contacts:

BABYXRP team

Blockchain

Binance Smart Chain

Project website:

https://www.babyxrp.org/

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at 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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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

TechRate was commissioned by BABYXRP to perform an audit of smart contracts:
https://bscscan.com/address/0x8beAbaa4f025D00B4699d56a683758d692d17F20#code

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contracts Details

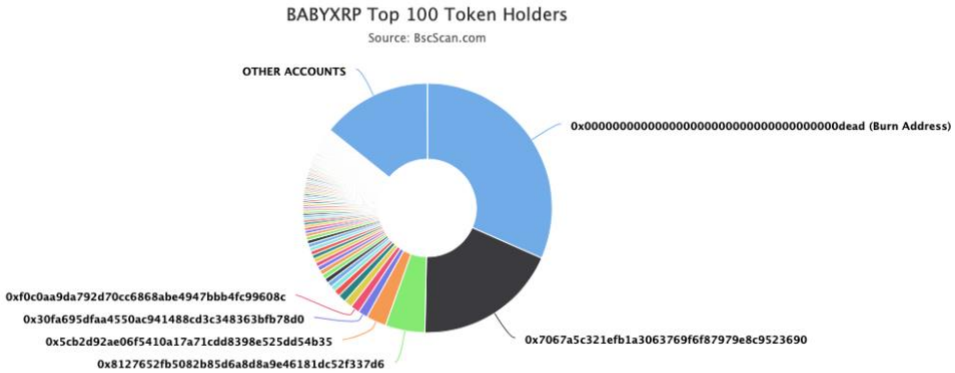
Token contract details for 10.07.2021

Contract name	BABYXRP
Contract address	0x8beAbaa4f025D00B4699d56a683758d692d17F20
Total supply	1,000,000,000,000,000
Token ticker	BBYXRP
Decimals	9
Token holders	2,566
Transactions count	19,565
Top 100 holders dominance	85.73%
Liquidity fee	5
Total tax fee	17
Xrp charity address	0xfaebb7b4aa4df7046dc32d9a589ea83d8d852950
Uniswap V2 pair	0x7067a5c321efb1a3063769f6f87979e8c9523690
Contract deployer address	0xeE3B7270CaDacA45DD3CE1f70480F1A26263E38A
Contract's current owner address	0xee3b7270cadaca45dd3ce1f70480f1a26263e38a

BABYXRP Token Distribution

The top 100 holders collectively own 85.73% (857,294,330,419,959.00 Tokens) of BABYXRP

Token Total Supply: 1,000,000,000,000,000.00 Token | Total Token Holders: 2,566

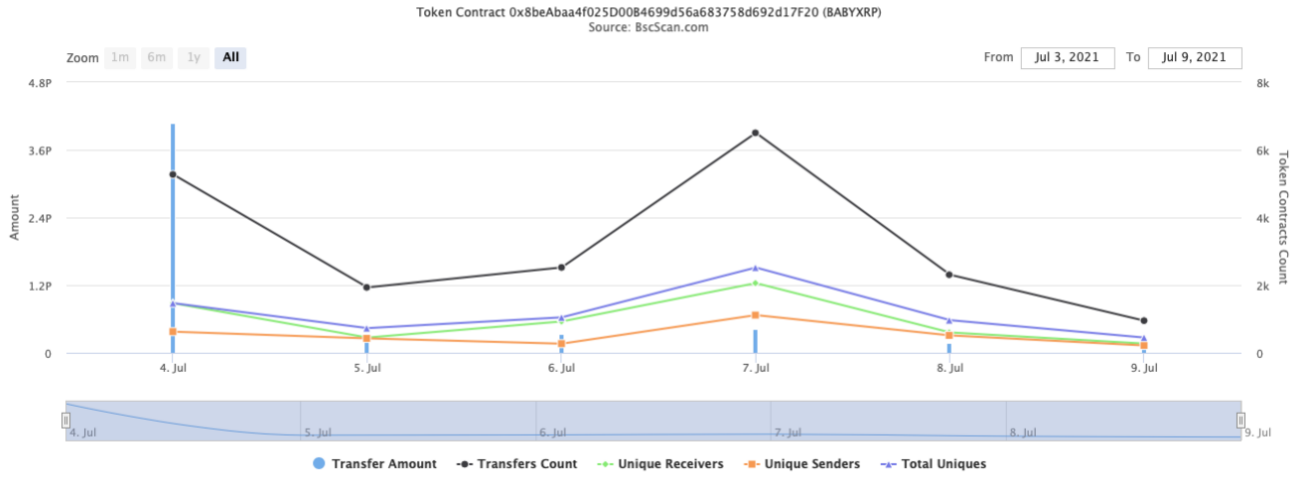


(A total of 857,294,330,419,959.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000,000.00 token)

BABYXRP Contract Interaction Details

Time Series: Token Contract Overview

Sun 4, Jul 2021 - Fri 9, Jul 2021



BABYXRP Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Burn Address	315,925,030,929,119.951508052	31.5925%
2	0x7067a5c321efb1a3063769f6f87979e8c9523690	187,400,830,126,924.437191271	18.7401%
3	0x8127652fb5082b85d6a8d8a9e46181dc52f337d6	51,388,425,000,001	5.1388%
4	0x5cb2d92ae06f5410a17a71cdd8398e525dd54b35	26,249,475,000,000	2.6249%
5	0x30fa695dfaa4550ac941488cd3c348363bfb78d0	12,305,462,970,004.98	1.2305%
6	0xf0c0aa9da792d70cc6868abe4947bbb4fc99608c	11,869,298,627,005.81	1.1869%
7	0x29aa047e0cab548211458cb981e1af663df5eafa	10,475,894,800,000	1.0476%
8	0x16fe039ed26fc07084e6d50610394b9fe0bd20eb	10,267,712,800,000.83	1.0268%
9	0xb06726a2a08f7fc0ccf9d9b83380f0256bf2a0fa	8,298,545,006,554.92896	0.8299%
10	0xff0d0cff0197952a2f024f8e573c91b1d4659534	7,016,939,636,830.352607929	0.7017%

Contract functions details

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Lib] SafeMath
  - [Int] add
  - [Int] sub
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] div
  - [Int] mod
  - [Int] mod

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Prv] _functionCallWithValue #

+ Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Pub] getUnlockTime
  - [Pub] getTime
  - [Pub] lock #
    - modifiers: onlyOwner
  - [Pub] unlock #

+ [Int] IUniswapV2Factory
  - [Ext] feeTo
  - [Ext] feeToSetter
  - [Ext] getPair
  - [Ext] allPairs
  - [Ext] allPairsLength
  - [Ext] createPair #

- [Ext] setFeeTo #
- [Ext] setFeeToSetter #

+ [Int] IUniswapV2Pair
- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] allowance
- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN_SEPARATOR
- [Ext] PERMIT_TYPEHASH
- [Ext] nonces
- [Ext] permit #
- [Ext] MINIMUM_LIQUIDITY
- [Ext] factory
- [Ext] token0
- [Ext] token1
- [Ext] getReserves
- [Ext] price0CumulativeLast
- [Ext] price1CumulativeLast
- [Ext] kLast
- [Ext] burn #
- [Ext] swap #
- [Ext] skim #
- [Ext] sync #
- [Ext] initialize #

+ [Int] IUniswapV2Router01
- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH ($)
- [Ext] removeLiquidity #
- [Ext] removeLiquidityETH #
- [Ext] removeLiquidityWithPermit #
- [Ext] removeLiquidityETHWithPermit #
- [Ext] swapExactTokensForTokens #
- [Ext] swapTokensForExactTokens #
- [Ext] swapExactETHForTokens ($)
- [Ext] swapTokensForExactETH #
- [Ext] swapExactTokensForETH #
- [Ext] swapETHForExactTokens ($)
- [Ext] quote
- [Ext] getAmountOut
- [Ext] getAmountIn
- [Ext] getAmountsOut
- [Ext] getAmountsIn

+ [Int] IUniswapV2Router02 (IUniswapV2Router01)
- [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
- [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #

- [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
- [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
- [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ BABYXRP (Context, IERC20, Ownable)
- [Pub] <Constructor> #
- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Pub] minimumTokensBeforeSwapAmount
- [Prv] deliver #
- [Prv] reflectionFromToken
- [Prv] tokenFromReflection
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] swapAndLiquify #
  - modifiers: lockTheSwap
- [Prv] swapTokensForEth #
- [Prv] addLiquidity #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Prv] _transferBothExcluded #
- [Prv] _getRate
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getCurrentSupply
- [Prv] _takeLiquidity #
- [Prv] calculateFee
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Pub] isExcludedFromFee
- [Pub] excludeFromFee #
  - modifiers: onlyOwner
- [Pub] includeInFee #
  - modifiers: onlyOwner
- [Ext] setTaxes #
  - modifiers: onlyOwner
- [Ext] setMaxTxAmount #
  - modifiers: onlyOwner
- [Ext] setNumTokensBeforeSwap #
  - modifiers: onlyOwner
- [Ext] setMarketingWalletAddress #
  - modifiers: onlyOwner
- [Ext] setXrpCharityWalletAddress #

    - modifiers: onlyOwner
  - [Pub] setSwapAndLiquifyEnabled #
    - modifiers: onlyOwner
  - [Pub] setSwapAndLiquifyByLimitOnly #
    - modifiers: onlyOwner
  - [Ext] prepareForPreSale #
    - modifiers: onlyOwner
  - [Ext] prepareForLaunch #
    - modifiers: onlyOwner
  - [Prv] transferToAddressETH #
  - [Pub] changeRouterVersion #
    - modifiers: onlyOwner
  - [Ext] <Fallback> ($)

($) = payable function
= non-constant function

Issues Checking Status

	Issue description	Checking status
1.	Compiler errors.	Passed
2.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
3.	Possible delays in data delivery.	Passed
4.	Oracle calls.	Passed
5.	Front running.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow.	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Low issues
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	The impact of the exchange rate on the logic.	Passed
13.	Private user data leaks.	Passed
14.	Malicious Event log.	Passed
15.	Scoping and Declarations.	Passed
16.	Uninitialized storage pointers.	Passed
17.	Arithmetic accuracy.	Passed
18.	Design Logic.	Passed
19.	Cross-function race conditions.	Passed
20.	Safe Open Zeppelin contracts implementation and usage.	Passed
21.	Fallback function security.	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

1. Out of gas

Issue:

- The function `_getCurrentSupply` also uses the loop for evaluating total supply. It also could be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

```
function _getCurrentSupply() private view returns (uint256, uint256) {
    uint256 rSupply = _rTotal;
    uint256 tSupply = _tTotal;
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (
            _rOwned[_excluded[i]] > rSupply ||
            _tOwned[_excluded[i]] > tSupply
        ) return (_rTotal, _tTotal);
        rSupply = rSupply.sub(_rOwned[_excluded[i]]);
        tSupply = tSupply.sub(_tOwned[_excluded[i]]);
    }
    if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
    return (rSupply, tSupply);
}
```

Recommendation:
Check that the excluded array length is not too big.

Owner privileges (In the period when the owner is not renounced)

- Owner can change the tax and liquidity fee.

```
function setTaxFeePercent(uint256 taxFee) external onlyOwner() {
    _taxFee = taxFee;
}

function setLiquidityFeePercent(uint256 liquidityFee) external onlyOwner() {
    _liquidityFee = liquidityFee;
}
```

- Owner can change the maximum transaction amount.

```
function setMaxTxAmount(uint256 maxTxAmount) external onlyOwner() {
    _maxTxAmount = maxTxAmount;
}
```

- Owner can exclude from the fee.

```
    function excludeFromFee(address account) public onlyOwner {
        _isExcludedFromFee[account] = true;
    }
```

- Owner can change minimum tokens before swap.

```
function setNumTokensBeforeSwap(uint256 newLimit) external onlyOwner() {
    minimumTokensBeforeSwap = newLimit;
}
```

- Owner can change marketing and XRP charity wallets.

```
ftrace | funcSig
function setMarketingWalletAddress(address newAddress) external onlyOwner() {
    marketingWalletAddress = payable(newAddress);
}

ftrace | funcSig
function setXrpCharityWalletAddress(address newAddress) external onlyOwner() {
    xrpCharityWalletAddress = payable(newAddress);
}
```

- Owner can disable and enable swapAndLiquifyByLimitOnly.

```
function setSwapAndLiquifyByLimitOnly(bool newValue) public onlyOwner {
    swapAndLiquifyByLimitOnly = newValue;
}
```

- Owner can enable prepareForPreSale and prepareForLaunch presets.

```
function prepareForPreSale() external onlyOwner {
    setSwapAndLiquifyEnabled(false);
    _totalTaxPercent = 0;
    _prevTotalTaxPercent = 0;
    _maxTxAmount = 1000000000 * 10**6 * 10**9;
}
function prepareForLaunch() external onlyOwner {
    setSwapAndLiquifyEnabled(true);
    _totalTaxPercent = _burnFee.add(_liquidityFee).add(_marketingFee).add(_xrpCharityFee);
    _prevTotalTaxPercent = _totalTaxPercent;
    _maxTxAmount = 3000000 * 10**6 * 10**9;
}
```

- Owner can change Uniswap router address.

```
function changeRouterVersion(address newRouterAddress⬆) public onlyOwner returns(address newPairAddress⬆) {

    IUniswapV2Router02 _uniswapV2Router = IUniswapV2Router02(newRouterAddress⬆);

    newPairAddress⬆ = IUniswapV2Factory(_uniswapV2Router.factory()).getPair(address(this), _uniswapV2Router.WETH());

    if(newPairAddress⬆ == address(0)) //Create If Doesnt exist
    {
        newPairAddress⬆ = IUniswapV2Factory(_uniswapV2Router.factory())
            .createPair(address(this), _uniswapV2Router.WETH());
    }

    uniswapV2Pair = newPairAddress⬆; //Set new pair address
    uniswapV2Router = _uniswapV2Router; //Set new router address
}
```

- Owner can change fees.

```
ftrace | funcSig
function setTaxes(uint256 newBurnFee⬆, uint256 newLiquidityTax⬆, uint256 newMarketingTax⬆, uint256 newXrpCharityTax⬆) external onlyOwner()
    _burnFee = newBurnFee⬆;
    _liquidityFee = newLiquidityTax⬆;
    _marketingFee = newMarketingTax⬆;
    _xrpCharityFee = newXrpCharityTax⬆;
    _totalTaxPercent = _burnFee.add(_liquidityFee).add(_marketingFee).add(_xrpCharityFee);
    _prevTotalTaxPercent = _totalTaxPercent;
}
```

- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced.

```
//Locks the contract for owner for the amount of time provided
function lock(uint256 time) public virtual onlyOwner {
    _previousOwner = _owner;
    _owner = address(0);
    _lockTime = now + time;
    emit OwnershipTransferred(_owner, address(0));
}

//Unlocks the contract for owner when _lockTime is exceeds
function unlock() public virtual {
    require(_previousOwner == msg.sender, "You don't have permission to unlock");
    require(now > _lockTime , "Contract is locked until 7 days");
    emit OwnershipTransferred(_owner, _previousOwner);
    _owner = _previousOwner;
}
```

Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team:
https://dxsale.app/app/v2_9/dxlockview?id=326&add=0&type=lpdefi&chain=B

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.