



METATRUST

Security Assessment for **BladeDAO**

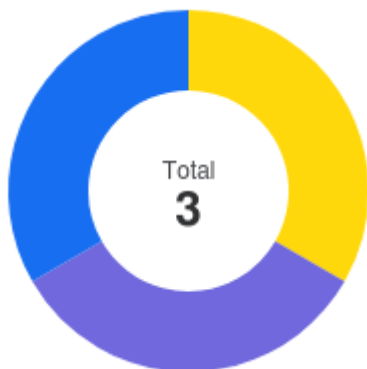
May 21, 2023






Executive Summary

Overview			
Project Name	BladeDAO		
Codebase URL	-		
Scan Engine	Security Analyzer		
Scan Time	2023/05/21 08:30:05		
Commit Id	-		

Total			
Critical Issues	0		
High risk Issues	0		
Medium risk Issues	1		
Low risk Issues	1		
Informational Issues	1		

Critical Issues		The issue can cause large economic losses, large-scale data disorder, loss of control of authority management, failure of key functions, or indirectly affect the correct operation of other smart contracts interacting with it.
High Risk Issues		The issue puts a large number of users' sensitive information at risk or is reasonably likely to lead to catastrophic impacts on clients' reputations or serious financial implications for clients and users.
Medium Risk Issues		The issue puts a subset of users' sensitive information at risk, would be detrimental to the client's reputation if exploited, or is reasonably likely to lead to moderate financial impact.
Low Risk Issues		The risk is relatively small and could not be exploited on a recurring basis, or is a risk that the client has indicated is low-impact in view of the client's business circumstances.
Informational Issue		The issue does not pose an immediate risk but is relevant to security best practices or Defence in Depth.



	Critical Issues	0%	0
	High risk Issues	0%	0
	Medium risk Issues	33%	1
	Low risk Issues	33%	1
	Informational Issues	33%	1

Summary of Findings

MetaScan security assessment was performed on **May 21, 2023 08:30:05** on project **BladeDAO** with the repository on branch **default branch**. The assessment was carried out by scanning the project's codebase using the scan engine **Security Analyzer**. There are in total **3** vulnerabilities / security risks discovered during the scanning session, among which **0** critical vulnerabilities, **0** high risk vulnerabilities, **1** medium risk vulnerabilities, **1** low risk vulnerabilities, **1** informational issues.

ID	Description	Severity	Alleviation
MSA-001	Initial Token Distribution	Medium risk	Acknowledged
MSA-002	Centralized Role	Low risk	Mitigated
MSA-003	Missing emit events	Informational	Acknowledged

Findings

Critical (0)



No Critical vulnerabilities found here

High risk (0)

No High risk vulnerabilities found here

Medium risk (1)

1. Initial Token Distribution

 Medium risk Security Analyzer

A number of `_amount` tokens are allocated to the deployer. It could be a centralized risk as the deployer owns them.

File(s) Affected

Recommendation



Recommend the team distribute tokens according to the corresponding tokenomics.

Alleviation Acknowledged

The development team acknowledged this finding.

Low risk (1)

1. Centralized Role

 Low risk Security Analyzer

In the `Ownable` contract, the owner has the privilege of the following functions:

- `renounceOwnership`: leaves the contract without an owner;
- `transferOwnership`: Transfers ownership of the contract to a new account.

The `BladeDAOToken` contract inherits the `Ownable` contract and inherits its privileged role. Meanwhile, the owner role of the `BladeDAOToken` contract has the privilege of the following function:

- `mint`: mints tokens to arbitrary account;
- `freeze`: freezes any account;
- `unfreeze`: unfreezes any account;
- `setPause`: pauses the contract.

File(s) Affected

Recommendation



Consider implementing a decentralized governance mechanism or a multi-signature scheme that requires consensus among multiple parties before pausing or unpausing the contract. This can help mitigate the centralization risk associated with a single owner controlling critical contract functions. Alternatively, you can provide a clear justification for the centralization aspect and ensure that users are aware of the potential risks associated with a single point of control.

Alleviation Mitigated

The development team removed the `mint` function in the contract
<https://explorer.zksync.io/address/0x591CAdFaF2F5dBBd09580C8b74A4770A9255bF28#contract>

Informational (1)

1. Missing emit events

 Informational Security Analyzer

Below keys functions' updates state variables missing emit events:

- **freeze**: freezes any account;
- **unfreeze**: unfreezes any account;
- **setPause**: pauses the contract.

File(s) Affected

Recommendation

Emit events for updates of the state variables.

Alleviation Acknowledged

The development team acknowledged this finding.

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