Security Review of

Zodiac Roles Modifier

January 2022

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Files in scope

The following solidity files in: https://github.com/gnosis/zodiac-modifier-roles/tree/83e06d28a1407fcc5243d9bacde9ec397042d913/contracts

- Permissions.sol
- Roles.sol

Current status

All found issues have been fixed or addressed.

Issues

1. compValue matches two possible values

Severity: major

The fact that in `pluckDynamicParamValue` values larger than `32 bytes` are hashed, while shorter aren't, means each `compValue` theoretically matches two param values. This is not an issue if `compValue` is not itself a hash, but if it is, either because it's been compressed by `maybeCompressCompValue` or for some other reason, it allows an attacker to slip in unexpected param value (either a hash where unhashed value is expected, or unhashed value where hashed value is expected).

status - fixed

The issue is no longer present in: https://github.com/gnosis/zodiac-modifier-roles/tree/454be9d3c26f90221ca717518df002d1eca1845f/contracts

2. Call data incorrectly parsed in case of some dynamic param types

Severity: major

The length of the dynamic type represents number of bytes if it's a byte array, but if it's for example an `uint256` array, it represents number of `32 byte` long segments. The way the contract parses arguments right now assumes all dynamic types are byte arrays and can't correctly parse the other type of dynamic arrays.

status - fixed

The issue is no longer present in: https://github.com/gnosis/zodiac-modifier-roles/tree/454be9d3c26f90221ca717518df002d1eca1845f/contracts

3. Maximum number of params in a function call should be explicitly enforced

Severity: minor

Currently contract doesn't explicitly enforce maximum number of params but implicitly the number is limited by the size of the `config` variable. This might lead to unpredictable behavior.

status - fixed

The issue is no longer present in: https://github.com/gnosis/zodiac-modifier-roles/tree/454be9d3c26f90221ca717518df002d1eca1845f/contracts