

MultiversX xExchange Router (2)

MultiversX smart contract - Security audit by Arda

Repository: <https://github.com/multiversx/mx-exchange-sc/>

Smart contract path: *dex/router*

Initial commit: *42221dc5d37630be29140184869629a422064f40*

Final commit: *c6c045d5b184da2b7b3db6b7b7baec2602b80255*

Issues

1. "multiPairSwap" event does not follow specifications

Status	Solved ▾
Severity	Medium ▾
Commit (if not initial)	
Location file (optional)	
Additional note (optional)	

Description

From the specifications, the event "multiPairSwap" should allow retrieving *directly*, i.e. as top-level encoded fields: (i) the token in amount, (ii) the token out amount.

However, both those amounts are emitted as part of a struct `MultiPairSwapEvent`, therefore they will be nested encoded and harder to retrieve.

Recommendation

We suggest adding fields `amount_in` and `amount_out` directly in the "multiPairSwap" event, i.e. outside of the struct `MultiPairSwapEvent`.

2. Multi-swap fails if 0 residuum

Status	Solved ▾
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Severity	Medium ▾
Commit (if not initial)	
Location file (optional)	
Additional note (optional)	This issue was already raised in a previous review.

Description

If there is a 0 residuum in one of the swaps made in a multi-swap, then the multi-swap will fail. This is because the residuum, even if it has a 0 amount, is included in the list of payments to send back to the user, therefore the transfer will fail when trying to send a 0 amount of token:

None

```
self.send().direct_multi(&caller, &payments);
```

Recommendation

In `multi_pair_swap`, we suggest not adding residuum tokens to the list of payment payments in case the residuum amount is 0.

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