

LEV Token Migration & L2 Token Review

The team at BlockchainLabs.nz have had a lot of engagement with Leverj over the last few years, so when it was time for a token migration we set out to help ensure that it would be both straightforward and robust.

Let's start with why a migration was needed in the first place. At the time when Leverj's token was created by Consensys Token Foundry in 2017 the ERC20 frameworks were still under development and had minor differences in adherence to the ERC20 specification. Unfortunately, the Consensys developers made an assumption that users could never approve an amount greater than the user's balance, however, it has become a common practice in DeFi to "Infinity Approve" a DEX or AMM to simplify the user experience.

Now, thanks to the significant contributions of OpenZeppelin there are really robust and future proof contracts, so this was the obvious choice for Leverj's new token: L2.

New L2 Token Contract

Smart Contract base	@openzeppelin/contracts/token/ERC20/ERC20Burnable.sol
Name : Symbol	Leverj Gluon : L2
Decimals	18
Approvals	Unlimited
Total Supply	Amount minted (can't exceed 1B supply of LEV)
Contract Address	0xbbff34e47e559ef680067a6b1c980639eeb64d24

Token Migration

The Leverj team desired that the migration should be conducted in a trustless manner and should not exclude any addresses from participating in migrating their LEV balance to the new L2 token contract. To achieve this a few functions were added to the L2 token contract (based on the OpenZeppelin ERC20Migrator).

The `legacyToken` was set to the LEV token contract address `0xf2fbb2939981594e25d93e6226231fcc1b01718e` at construction time - this ensures that the migration will only look at balances of LEV tokens.

The migrate functions transfer an account's allowed balance in the LEV token to this contract, and then mints the same amount of new L2 tokens for that account. Because LEV token had only `9` decimal places, whereas L2 has `18`, a multiplier of `1000000000` is used to mint an amount with the correct precision.

LEV tokens that have been transferred to the L2 contract can not be transferred and thus are essentially locked in perpetuity. This ensures that the migration is an atomic one-way process that is not susceptible to replay or reentrancy attacks.

However, it should be noted that directly transferring LEV tokens to the L2 contract will not mint L2 tokens. The two step process to approve and migrate tokens is the only method to migrate an account balance from LEV to L2.

The total supply of L2 tokens minted should be equal or less (in the case of LEV being transferred directly without minting L2) than the amount of LEV tokens held by the L2 contract address, thus providing transparency that no additional supply of tokens has been minted.

Review

It’s been good to see the careful consideration and testing that the Leverj team have dedicated to getting the token migration right. The basis of the new token contract is some of the most audited and up-to-date code which should provide for greater longevity in what is a rapidly evolving ecosystem, therefore we are confident that the migration approach is robust and don’t foresee any technical risk to token holders in migrating their balance.