

Token-2022 Support

Raydium now supports the new Token-2022 Solana token program

The [Token-2022 program](#) is a new token standard on Solana that provides additional fungible and non-fungible token functionality by enabling token creators to use a variety of [extension s](#) when minting tokens on Solana. Raydium's permissionless Concentrated Liquidity Market Maker (CLMM) pools now support Token-2022 assets.

Interacting with Token-2022 assets on Raydium

Token-2022 on Raydium is an advanced feature. As such, users will have to manually enter the mint address in the search bar to locate a tradable asset. For the time being, Token-2022 assets will not display a token name or logo unless manually added by a user. Anyone interacting with a Token-2022 asset will be required to confirm and acknowledge the risks associated with the assets they are interacting with. Users that manually confirm interactions with a Token-2022 asset will then be able to route swaps through other pools that contain Token-2022 assets. Users who have not confirmed a Token-2022 asset or that are only swapping standard SPL tokens will only route through pools that contain standard SPL tokens.

Transfer Fee Extension: A common Token-2022 extension is Transfer Fees. This mint extension allows token creators to charge a fee for each token transfer that is executed programmatically and goes to a token account determined by the token creator. Transfer fees are displayed on the Raydium UI when possible, however Raydium has no control over any Token-2022 transfer fees. Transfer fees may apply to token interactions like swaps or even adding and removing liquidity. Transfer fees are not necessarily immutable, which means the token issuer could update the transfer fee at any time without warning.

Unsupported Token-2022 Extensions Raydium's permissionless Concentrated Liquidity Market Maker (CLMM) pools now support Token-2022 assets. However, some extension types are limited on the program-level. Out of an abundance of caution, Token-2022 assets with the following extensions enabled are currently unable to create a permissionless pool:

- Permanent Delegate :** With Token-2022, it's possible to specify a permanent account delegate for a mint. This authority has unlimited delegate privileges over any account for that mint, meaning that it can burn or transfer any amount of tokens.
- Non-Transferable Tokens :** The Non-Transferable mint extension allows for "soul-bound" tokens that cannot be moved to any other entity. This extension is very similar to issuing a token and then freezing the account but allows the owner to burn and close the account if they want.
- Default Account State :** A mint creator may use the DefaultAccountState extension, which can force all new token accounts to be frozen.
- Confidential Transfers :** With Token-2022, it's possible to use ZK proofs to encrypt balances and transfers amounts, providing transaction privacy to token holders.
- Transfer Hook :** A mint creator can set custom transfer parameters to execute functions upon transfers of the token.

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