What is Lazy Minting?

When gas fees are high, minting NFTs can be costly when using Ethereum. This results in creators needing to spend more and more money just to get their work out there as NFTs. Sometimes an item can sell and you'll lose money because of the gas fees to mint your NFT.

Enter in 'Lazy Minting'. Put simply, lazy minting is when an NFT is available 'off-chain' or off the blockchain and only gets minted once there is a sale of the NFT. This means that the artist doesn't have to pay any upfront gas fees to mint their NFT. Gas fees are only paid once the NFT is purchased and transferred 'on-chain' or on the blockchain. Another way to look at lazy minting is to see it as a way to defer the payment of gas fees until the NFT is sold.

"Lazy minting is a powerful technique that can let creators issue new NFTs at no up-front cost."

How it works

The basic premise of lazy minting is that instead of creating an NFT directly by calling a contract function, the NFT creator prepares a cryptographic signature of some data using their Ethereum account's private key.

The signed data acts as a "voucher" or ticket that can be redeemed for an NFT. The voucher contains all the information that will go into the actual NFT, and it may optionally contain additional data that isn't recorded in the blockchain, as we'll see in a bit when we talk about prices. The signature proves that the NFT creator authorized the creation of the specific NFT described in the voucher.

When a buyer wants to purchase the NFT, they call a redeem function to redeem the signed voucher. If the signature is valid and belongs to an account that's authorized to mint NFTs, a new token is created based on the voucher and transfered to the buyer.
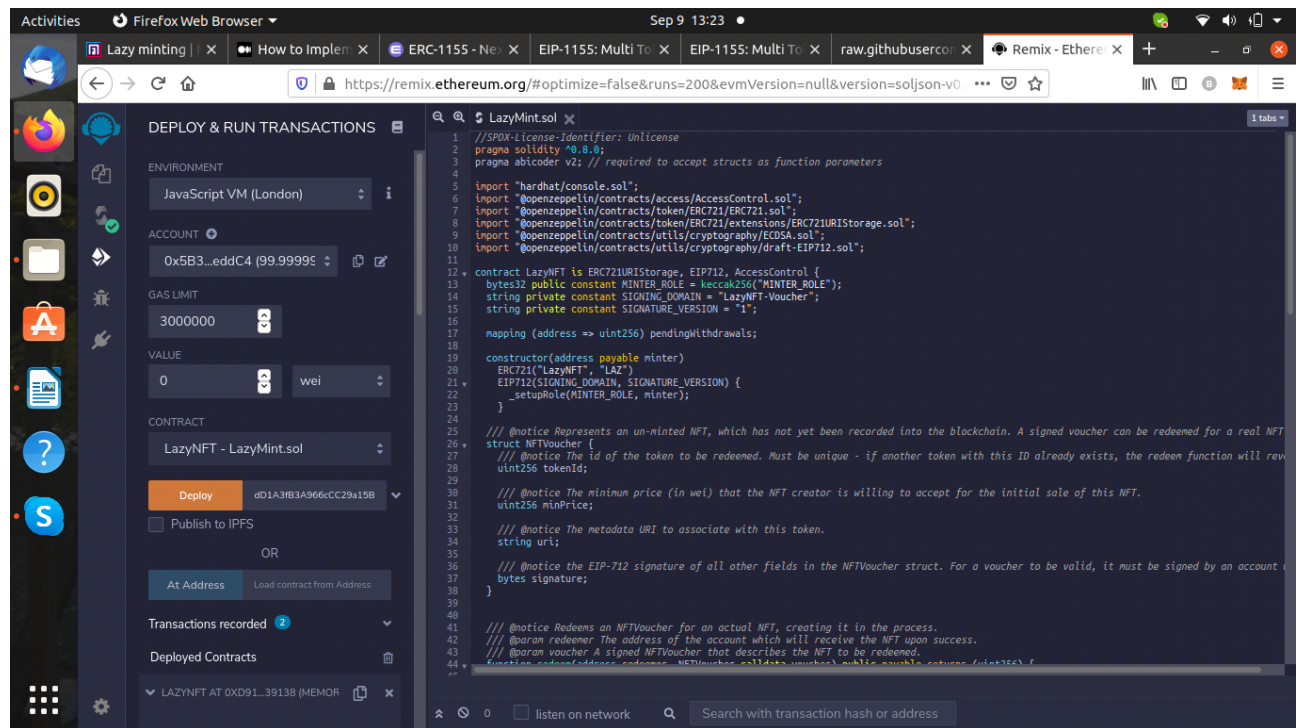
ERC1155:

ERC-1155 is a unique token that supports non-fungible (NFTs) and fungible tokens. It's faster and more efficient to use in batch token transfers.

A standard interface for contracts that manage multiple token types. A single deployed contract may include any combination of fungible tokens, non-fungible tokens.

ERC-1155 can use a single contract to make various types of NFTs. Gas fees are cut by 90%, making it an affordable way for anyone to start minting on blockchain.

ERC-1155 is the only token standard that enables you to create every type of asset, from currency and real estate to digital art and gaming items.

Draw Back of ERC1155

The only real draw back is that the NFT is harder to track in terms of ownership—to save data stored on blockchain ERC-1155 has specifications on the Etheruem logs that have less robust information.