title: ERC-777 Token Standard description: lang: en

Warning {#warning}

ERC-777 is difficult to implement properly, due to itssusceptibility to different forms of attack. It is recommended to use ERC-20 instead. This page remains as a historical archive.

Introduction? {#introduction}

ERC-777 is a fungible token standard improving the existingERC-20 standard.

Prerequisites {#prerequisites}

To better understand this page, we recommend you first read aboutERC-20.

What improvements does ERC-777 propose over ERC-20? {#-erc-777-vs-erc-20}

The ERC-777 provides the following improvements over ERC-20.

Hooks {#hooks}

Hooks are a function described in the code of a smart contract. Hooks get called when tokens are sent or received through the contract. This allows a smart contract to react to incoming or outgoing tokens.

The hooks are registered and discovered using theERC-1820 standard.

Why are hooks great? {#why-are-hooks-great}

1. Hooks allow sending tokens to a contract and notifying the contract in a single transaction, unlikeERC-20, which requires a double call (`approve`/`transferFrom`) to achieve this.
2. Contracts that have not registered hooks are incompatible with ERC-777. The sending contract will abort the transaction when the receiving contract has not registered a hook. This prevents accidental transfers to non-ERC-777 smart contracts.
3. Hooks can reject transactions.

Decimals {#decimals}

The standard also solves the confusion around`decimals` caused in ERC-20. This clarity improves the developer experience.

Backwards compatibility with ERC-20 {#backwards-compatibility-with-erc-20}

ERC-777 contracts can be interacted with as if they were ERC-20 contracts.

Further Reading {#further-reading}

EIP-777: Token Standard