Bridging ether

Ether (ETH) is the native currency of Ethereum and all Arbitrum chains. It is used to pay the necessary fees to execute a transaction in those chains. Bridging ETH from Ethereum (Layer 1, or L1) to an Arbitrum chain (Layer 2, or L2) follows, thus, a different process than the one followed when bridging other types of asset.

Depositing ether

To move ETH from L1 to L2, you execute a deposit transaction viaInbox.depositEth . This transfers funds to the Bridge contract on the L1 and credits the same funds to you inside the Arbitrum chain at the specified address.

function

depositEth (address destAddr)

external

payable override returns

(uint256) The following diagram depicts the process that funds follow during a deposit operation.

As far as the L1 knows, all deposited funds are held by Arbitrum's Bridge contract.

Withdrawing ether

Withdrawing ether can be done using theArbSys precompile 'swithdrawEth method:

ArbSys (100) . withdrawEth { value :

2300000

} (destAddress) Upon withdrawing, the Ether balance is burnt on the Arbitrum side, and will later be made available on the Ethereum side.

ArbSys.withdrawEth is actually a convenience function which is equivalent to callingArbSys.sendTxToL1 with empty calldataForL1. Like any othersendTxToL1 call, it will require an additional call toOutbox.executeTransaction on L1 after the dispute period elapses for the user to finalize claiming their funds on L1 (see"L2 to L1 Messages"). Once the withdrawal is executed from the Outbox, the user's Ether balance will be credited on L1.

The following diagram depicts the process that funds follow during a withdraw operation.Edit this page Last updatedonMar 7, 2024 Previous How to bridge tokens via a custom gatewayNext Bridging ERC-20 tokens