Interoperability predeploys

The following predeploys have been added to enable interoperability.Predeployed smart contracts exist at predetermined addresses, coming from the genesis state. They're similar toprecompiles(opens in a new tab) but run directly in the EVM instead of running as native code.

CrossL2Inbox

TheCrossL2Inbox is the system predeploy for cross chain messaging. Anyone can trigger the execution or validation of cross chain messages, on behalf of any user.

- Address:
- 0x4200000000000000000000000000000000000022
- Specs:
- CrossL2Inbox (opens in a new tab)
- Source code:
- CrossL2Inbox (opens in a new tab)

L2ToL2CrossDomainMessenger

TheL2ToL2CrossDomainMessenger is a higher level abstraction on top of theCrossL2Inbox that provides general message passing. It's utilized for secure ERC20 token transfers between L2 chains. Messages sent through theL2ToL2CrossDomainMessenger on the source chain receive both replay protection and domain binding (the executing transaction can only be valid on a single chain).

- Address:
- 0x4200000000000000000000000000000000000023
- Specs:
- L2ToL2CrossDomainMessenger (opens in a new tab)
- Source code:
- L2ToL2CrossDomainMessenger (opens in a new tab)

SuperchainTokenBridge

TheSuperchainTokenBridge is an abstraction on top of theL2toL2CrossDomainMessenger that facilitates token bridging using interop. It has mint and burn rights overOptimismSuperchainERC20 tokens, as described in thetoken bridging spec(opens in a new tab) .

- Address:
- 0x4200000000000000000000000000000000000028
- Specs:
- SuperchainTokenBridge (opens in a new tab)
- Source code:
- SuperchainTokenBridge (opens in a new tab)