https://github.com/yahgwai/devcon-workshop

Check out the Prerequisites section, and try to get them installed

Wifi: DevconWorkshop
Password: buildit22
Demystifying L2 Transactions

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Workshop layout

Using Arbitrum as an example, we’ll explore how L2 transactions work and how they’re different from L1 transactions

● Introduction to optimistic rollups (5 mins)
  ○ What a rollup is, and overview of how it works
  ○ The L2 transaction lifecycle
  ○ How L2 transactions consume gas

● Workshop (45 mins)
  ○ Send a transaction and explore the gas it consumes
  ○ Decode and inspect the batch containing that transaction
Rollup = sidechain + validating bridge

SoK: Validating Bridges as a Scaling Solution for Blockchains

Patrick McCorry¹, Chris Backland¹, Bennet Yee², Dawn Song²
Regular commitments checked by the bridge contract
Regular commitments checked by the bridge contract

Rollup
Rollup transition

Ethereum
Bridge contract
Regular commitments checked by the bridge contract

Rollup
Rollup transition

Operator commits to the rollup state

Bridge contract
Transaction data

Ethereum
Regular commitments checked by the bridge contract

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Transaction data
Regular commitments checked by the bridge contract
Transaction submission lifecycle

User creates a transaction

Sequencer includes transaction into batch

Sequencer compresses batch

Sequencer submits batch to Ethereum
L1 and L2 gas

Transactions consume both L1 and L2 gas - users need to pay for both

L1 gas
- Used to pay for batch submission
- Tx data is submitted to L1, but transaction is not executed there
- Tx data is stored in L1 call data
- User needs to pay call data costs for each byte of tx data

L2 gas
- The same units as Ethereum gas
- Gas price is the L2 gas price