Benchmarking zkEVMs

Duration: 1 hr

Moderator: Kevaundray Wedderburn (@kevaundray), Ignacio Hagopian (@jsign)
Note taker: TBA

Agenda

- [10 mins] Overview to discuss the tools we have built, standardization efforts and methodology
- [30 mins] 3 guided sessions:
  - [10 mins] Discuss the methodology and improvements
  - [10 mins] Hardware reqs: Cloud proving vs home proving
  - [10 mins] Hardware reqs: What is an appropriate capex/opex for proving
- [20 mins] Summarize sessions and action points

Summary

Different zkEVMs use different guest programs, guest program inputs and hardware when making performance claims. This makes it difficult to compare zkEVMs and determine what the actual capex/opex is for proving EL blocks across different zkEVMs.

This is not only important before we launch zkEVMs, but also important once zkEVMs are launched and we need to make ongoing decisions around changing the gas price of opcodes.

Goals

- Scrutinize the methodology for benchmarking
- Decide on a concrete set of hardware requirements that we can use for benchmarking

Pre-reads

- Ere (https://github.com/eth-applied-research-group/ere)
- zkEVM benchmarking repo (https://github.com/eth-applied-research-group/zkevm-benchmark-workload)
- Execution spec tests repo (https://github.com/ethereum/execution-spec-tests)