EIP 1884: Repricing for trie-size-dependent opcodes

Return to Ethereum ERCs

: **Note**: The following is an excerpt from the official Ethereum site. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Table 1: Data sheet for Repricing for trie-size-dependent opcodes

Title	Repricing for trie-size-dependent opcodes
EIP	1884
Requires	• EIP 150: Gas cost changes for IO-heavy operations • EIP 1052: EXTCODEHASH opcode
Author	Martin Holst Swende (@holiman)
Status	Final
Created	2019-03-28
Description	https://github.com/ethereum/EIPs/blob/master/EIPS/eip-1884.md
Specification	https://github.com/ethereum/EIPs/blob/master/EIPS/eip-1884.md#Specification
Category	Core

Simple Summary

This EIP proposes repricing certain opcodes, to obtain a good balance between gas expenditure and resource consumption.

Abstract

The growth of the Ethereum state has caused certain opcodes to be more resource-intensive at this point than they were previously. This EIP proposes to raise the gasCost for those opcodes.

Motivation

An imbalance between the price of an operation and the resource consumption (CPU time, memory, etc.) has several drawbacks:

- It could be used for attacks, by filling blocks with underpriced operations which causes excessive block processing time.
- Underpriced opcodes cause a skewed block gas limit, where sometimes blocks finish quickly but

other blocks with similar gas use finish slowly.

If operations are well-balanced, we can maximise the block gaslimit and have a more stable processing time.