# Parallel Node.js Benchmark

## Parallel Cuckoo Hashing performance comparison using Node JS Cluster Module

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WHPC
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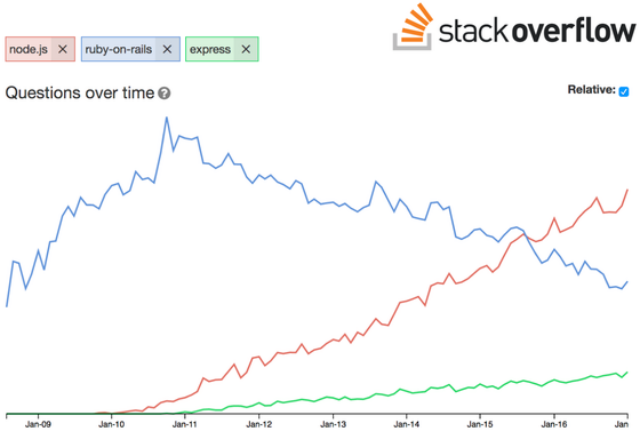
# Why node.js?

Increasing popularity of Node.js




1

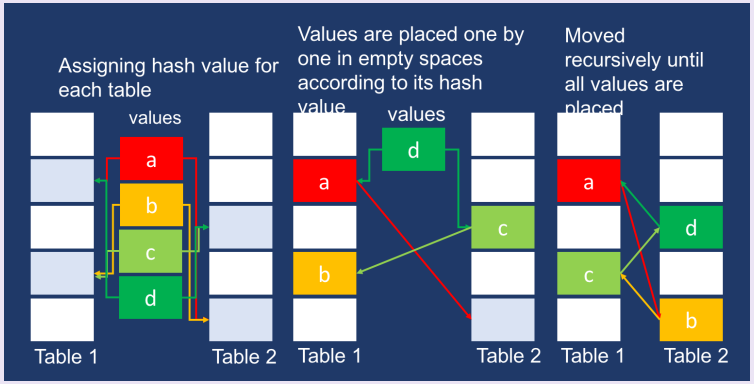
# Benchmarking Project

- Creating benchmark by building hash table in node.js child process
- **Hypothesis:** hash table will be built faster using cluster module

2

# Hash Table

Constructing hash table using cuckoo hashing




3

# Testing Method

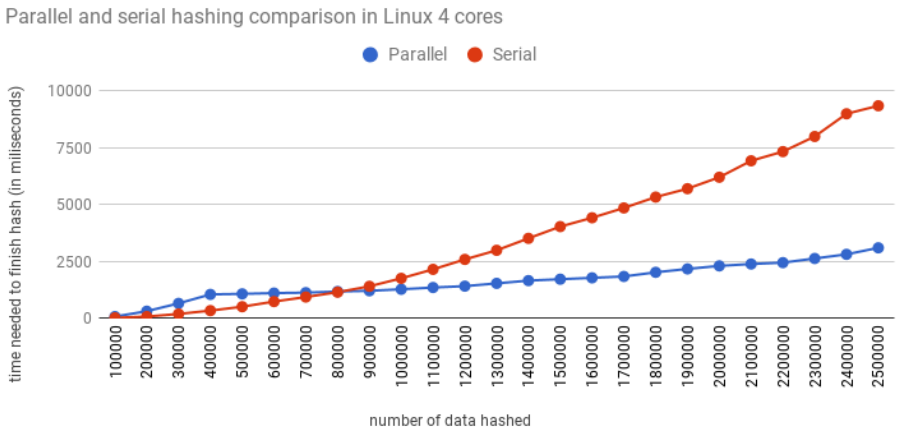
- Parallel and Serial code are being compared by:
  - Time needed to build different hash table size
  - Time needed to build hash table in different machines and operating system

4

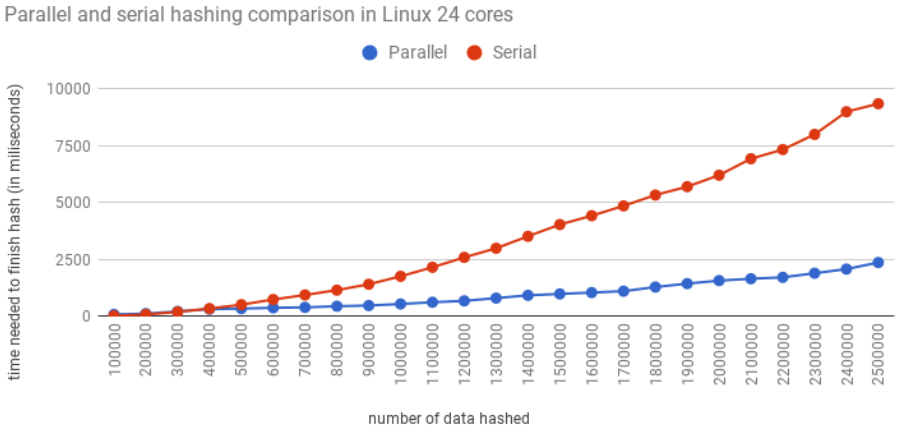
# Result & Conclusion

- Parallel implementation consistently better than serial implementation after certain table size. The bigger the data size, the more effective it gets
- Effective number of child process should follow number of cores
- Different OS affects the performance and higher number of cores only give small impact to overall performance improvement

## Linux 4 cores




## OSX 4 cores




## Linux 24 cores