Data Acquisition in Hadoop System

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Plan

- Motivation
- Setup
- Performance
- Critical Value

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Motivation

- Constantly introducing new data
- Oil & Gas drilling data
- Soft real-time

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Setup

- 15 nodes cluster
- Push and pull scenario
- Measuring acquisition overhead
- Naïve vs. Chukwa
  - Naïve: simpler to implement, slower for bigger files (copy overhead)
  - Chukwa: more difficult to implement, risk of minor data loss (2s), lack of copy overhead

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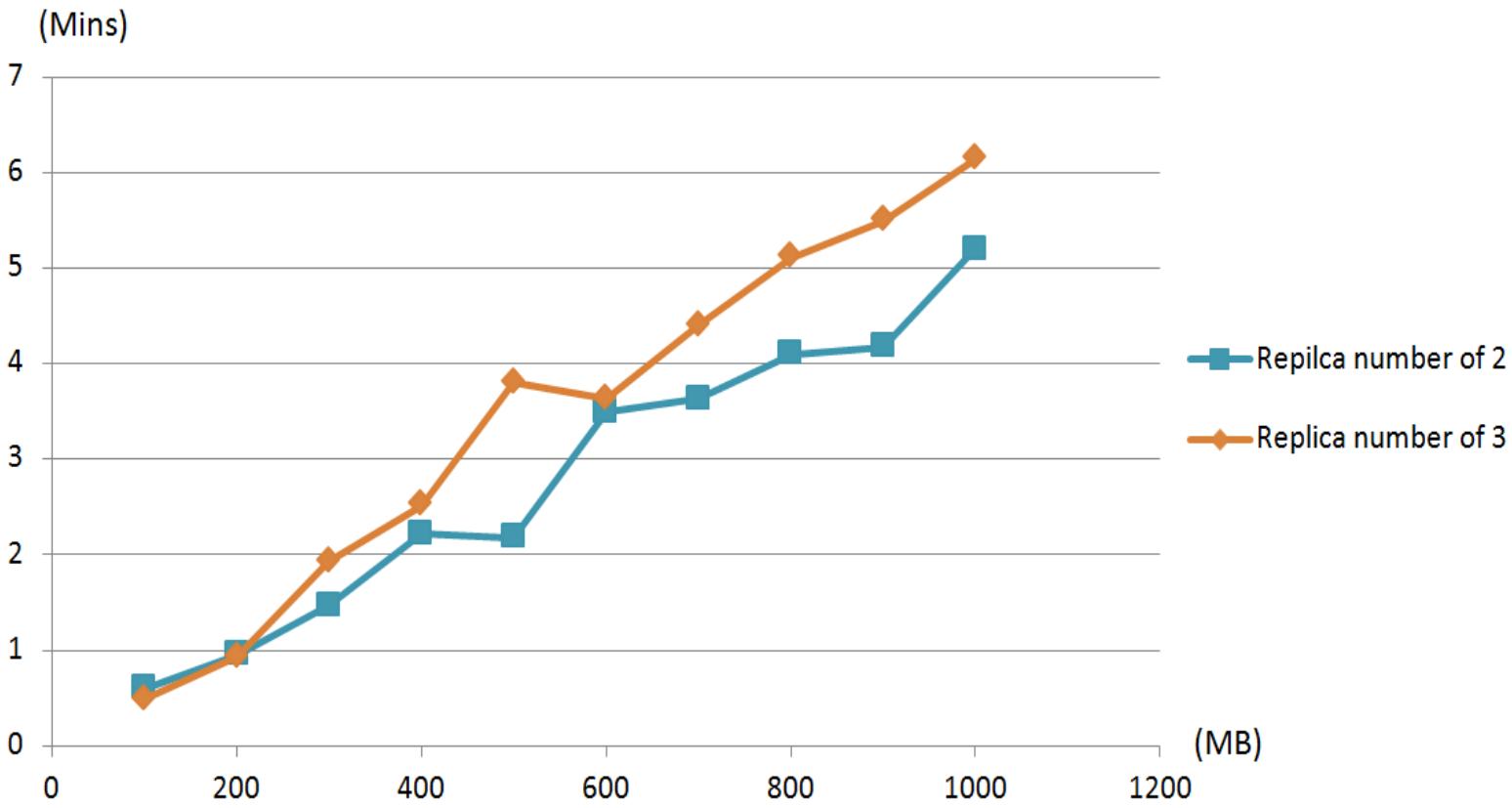
Performance Comparison – Copy Overhead



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Critical Value – Copy Overhead

Size of Data set	Time used
20M	2s
30M	3s
40M	3s
50M	8s

Table 1. Time used for copying according to the size of data set with replica number of 2

Size of Data set	Time used
10M	2s
15M	2s
20M	8s
30M	10s
40M	21s

Table 2. Time used for copying according to the size of data set with replica number of 3

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