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Hadoop TeraSort Benchmark

Written by **Eric Zhiqiang Ma** on **December 18th, 2012**. **1 Comment**

TeraSort is one of Hadoop's widely used benchmarks. Hadoop's distribution contains both the input generator and sorting implementations: the TeraGen generates the input and TeraSort conducts the sorting. Here, we provide a short tutorial for using the Hadoop TeraSort benchmark.

TeraGen generates random data that can be used as input data for a subsequent running of TeraSort.

Generate input by TeraGen

The syntax for TeraGen:

```
$ hadoop jar hadoop-*examples*.jar teragen \
<number of 100-byte rows> <output dir>
```

To make the TeraGen run on multiple nodes with multiple tasks, you may need to specify the number of map tasks (30 here as an example; for Hadoop 2):

```
$ hadoop -D mapreduce.job.maps 30 \
jar hadoop-*examples*.jar teragen \
<number of 100-byte rows> <output dir>
```

The number of mappers depends on the number of rows you will generate and the number of nodes you have. For more information on how to set the number of mappers and reducers, please check this post.

Run TeraSort

After the data is generated, run the sort by TeraSort

```
$ hadoop jar hadoop-*examples*.jar terasort \
<input dir> <output dir>
```

You may also need to set the number of mappers and reducers for better performance.

Validate the sorted output data of TeraSort

TeraValidate ensures that the output data of TeraSort is globally sorted.

The syntax for TeraValidate:

```
$ hadoop jar hadoop-*examples*.jar teravalidate \
<output dir> <terasort-validate dir>
```

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About Eric Zhiqiang Ma

25 articles and counting.

Eric Zhiqiang Ma is interested in system software for cloud computing, virtualization of large-scale distributed systems and etc. Also find Eric on Facebook, Twitter, LinkedIn and Google+. The views or opinions expressed here are solely Eric's own and do not necessarily represent those of any third parties.

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Jul 23, 2014 at 6:34 pm

For large datasets, you may need to specify the number of mappers and reducers to make the computation and data distributed across nodes:

http://ask.fclose.com/947/how-set-the-number-mappers-and-reducers-hadoop-command-line

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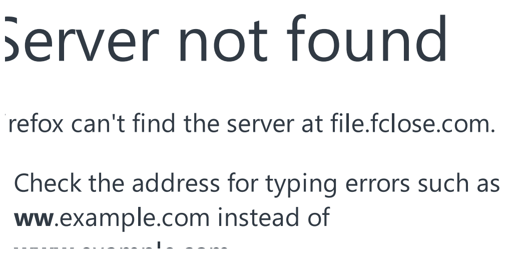

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