TPC-H performance measure

Keisuke Suzuki

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1 実験環境

- CPU : Xeon X7560 @ 2.27GHz x4
- Memory : 64GB
- DBMS : PostgreSQL 9.2
- RAID0 : iodrive x8 (chunk size = 64KB)
- 各テーブルの primary key 上に B-tree index を構築
- Scale Factor = 100
- shared buffer = 8GB
- 各クエリの実行時の状況を iostat と mpstat で 1 秒おきに監視

2 Query 8

簡単の為、Query8 のうちの IO がメインとなる部分のみを実行する。

2.1 Query and Execution Plan

```
 select
extract(year from o_orderdate) as o_year,
l_extendedprice * (1 - l_discount) as volume,
n2.n_name as nation
from
part, supplier, lineitem, orders,
customer, nation n1, nation n2,region
where
p_partkey = l_partkey
and s_suppkey = l_suppkey
and l_orderkey = o_orderkey
and o_custkey = c_custkey
and c_nationkey = n1.n_nationkey
and n1.n_regionkey = r_regionkey
and r_name = 'AMERICA'
and s_nationkey = n2.n_nationkey
and o_orderdate between date '1995-01-01' and date '1996-12-31'
and p_type = 'ECONOMY ANODIZED STEEL'
```

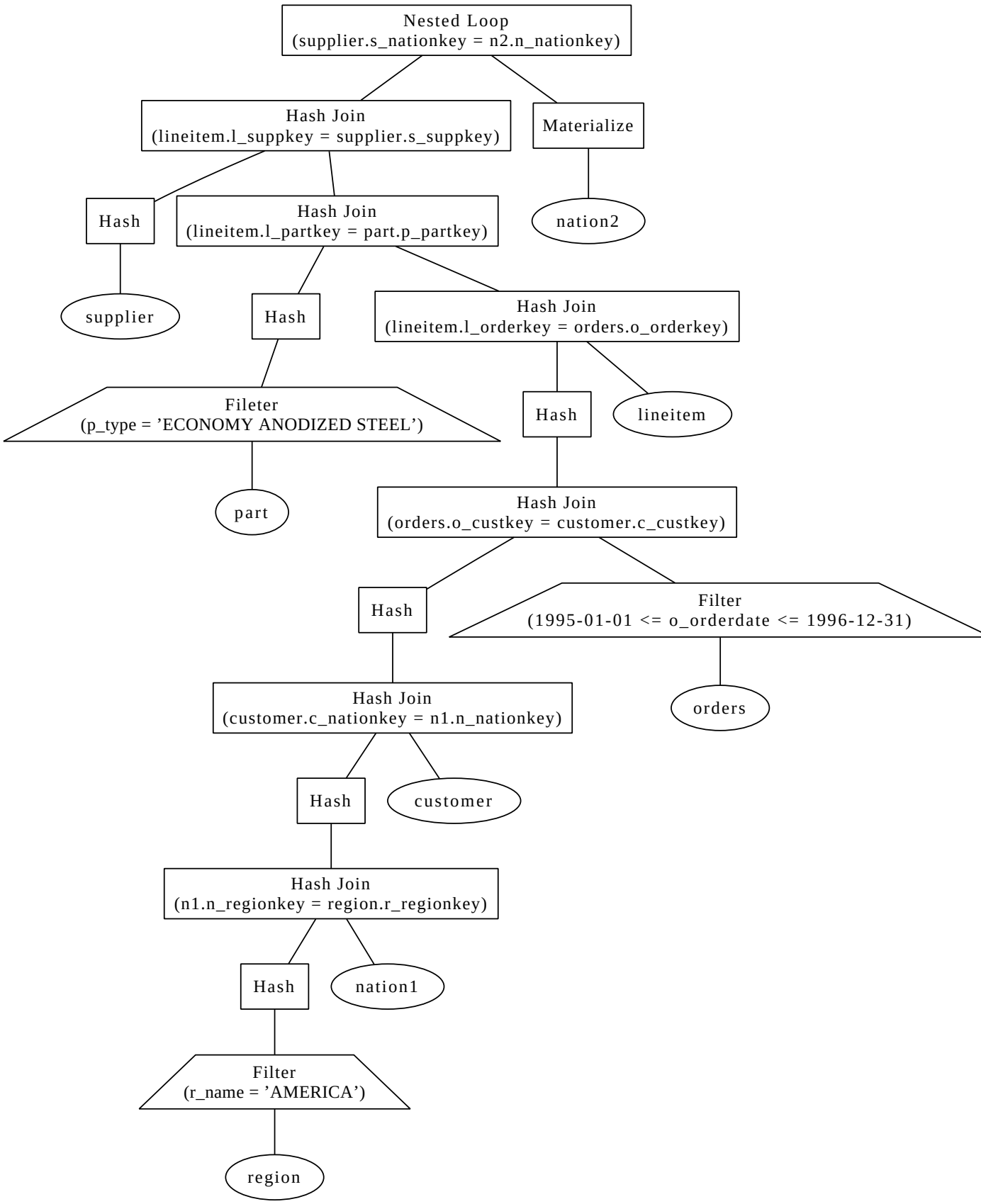
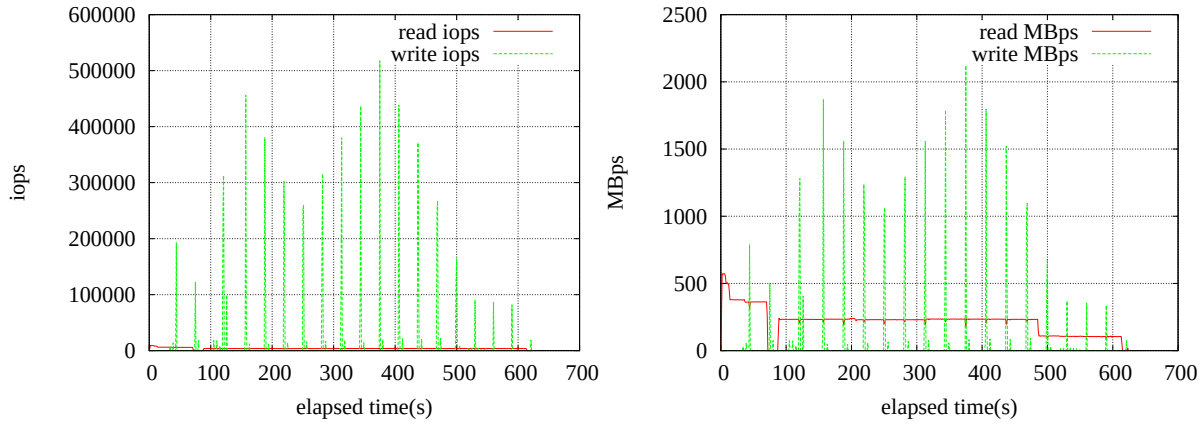


図 1　Query 8 execution plan

2.2 結果



(a) IOPS　　(b) MBPS

図 2　IO spec

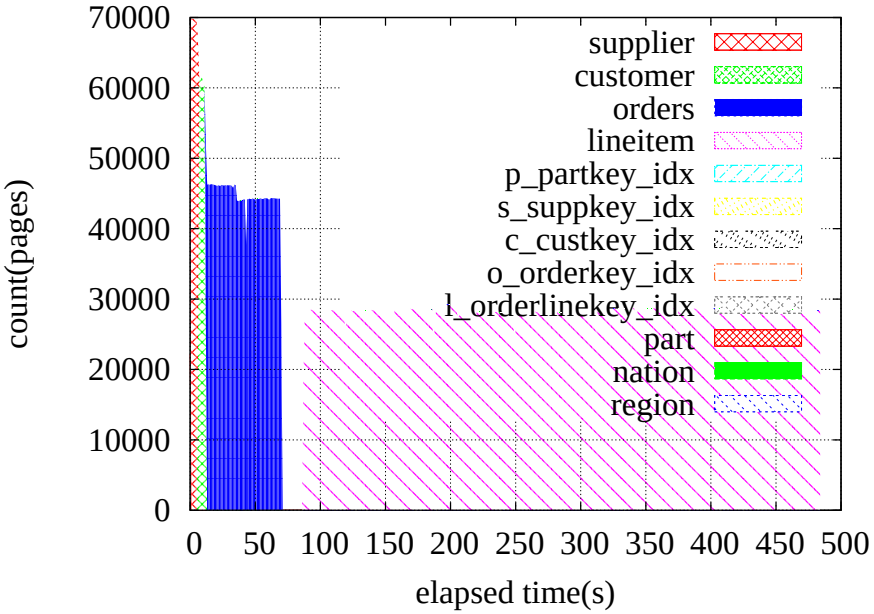


図 3　detail of IO