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Comparing BenchmarkSQL Performance on vmware to VirtualBox

1. 單機測試

在 vmware 以及 virtualbox 下安裝 Ubuntu 14.04 server，並用 benchmarksql 測試其個別的 postgresql 效能。

1.1 Virtual Machine Setting

	vmware workstation 10	Oracle VM VirtualBox 4.2.12
CPU	1	1
Mem	1024MB	1024MB
Network	Bridge (Killer e2200 PCI-E Gigabit Ethernet Controller)	Bridge (Killer e2200 PCI-E Gigabit Ethernet Controller)

1.2 Software

	vmware workstation 10	Oracle VM VirtualBox 4.2.12
OS	Ubuntu 14.04 Server 64bit	Ubuntu 14.04 Server 64bit
Database	postgres 9.3	postgres 9.3
Workload	BenchmarkSQL 4.1.0	BenchmarkSQL 4.1.0
JDBC Driver	postgresql-9.3-1101.jdbc41	postgresql-9.3-1101.jdbc41

1.3 BenchmarkSQL Setting

Warehouses	10
runTxnsPerTerminal	10
runMins	0
limitTxnsPermin	300
newOrderWeight	45
paymentWeight	43
ordersStatusWeight	4
deliveryWeight	4
stockLevelWeight	4

1.4 Test Result

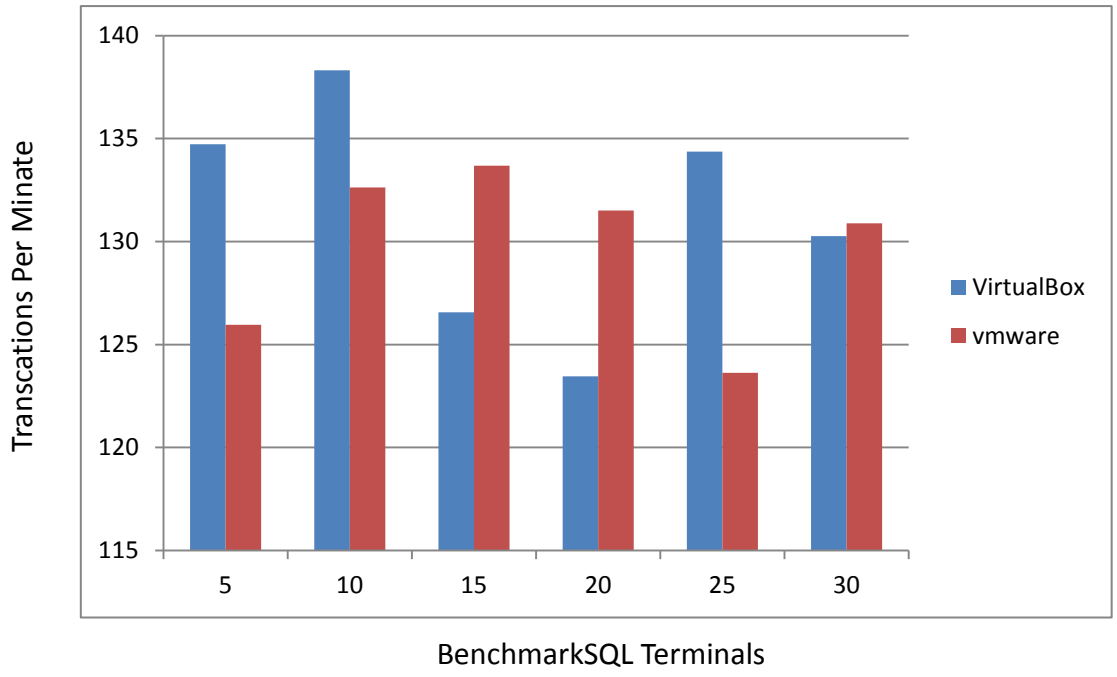
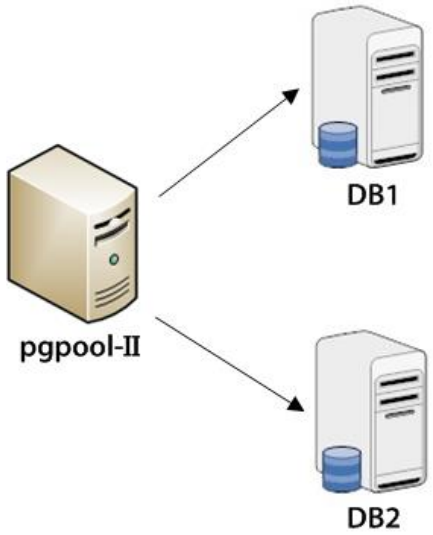


Figure 1: Results of Scaling BenchmarkSQL Users

固定 warehouses 下，比較 terminals 數量上差異時 postgresql 的效能比較。

2. Clustering (pgpool)

Vmware virtualbox 各開三台虛擬機，每台虛擬機配置相同，三台虛擬機中，一台專門處理 pgpool 另外兩台則當作節點，均裝上 postgresql，現在測試在 virtualbox vmware 下安裝 postgresql clustering 的效能



2.1 Virtual Machine Setting

	vmware workstation 10	Oracle VM VirtualBox 4.2.12
CPU	1	1
Mem	1024MB	1024MB
Network	Bridge (Killer e2200 PCI-E Gigabit Ethernet Controller)	Bridge (Killer e2200 PCI-E Gigabit Ethernet Controller)

2.2 Software

	vmware workstation 10	Oracle VM VirtualBox 4.2.12
OS	Ubuntu 14.04 Server 64bit	Ubuntu 14.04 Server 64bit
Database	postgres 9.3	postgres 9.3
Workload	BenchmarkSQL 4.1.0	BenchmarkSQL 4.1.0
JDBC Driver	postgresql-9.3-1101.jdbc41	postgresql-9.3-1101.jdbc41
Clustering	pgpool2	pgpool2

2.3 BenchmarkSQL Setting

Warehouses	10
runTxnsPerTerminal	10
runMins	0
limitTxnsPermin	300
newOrderWeight	45
paymentWeight	43
ordersStatusWeight	4
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2.4 Test Result

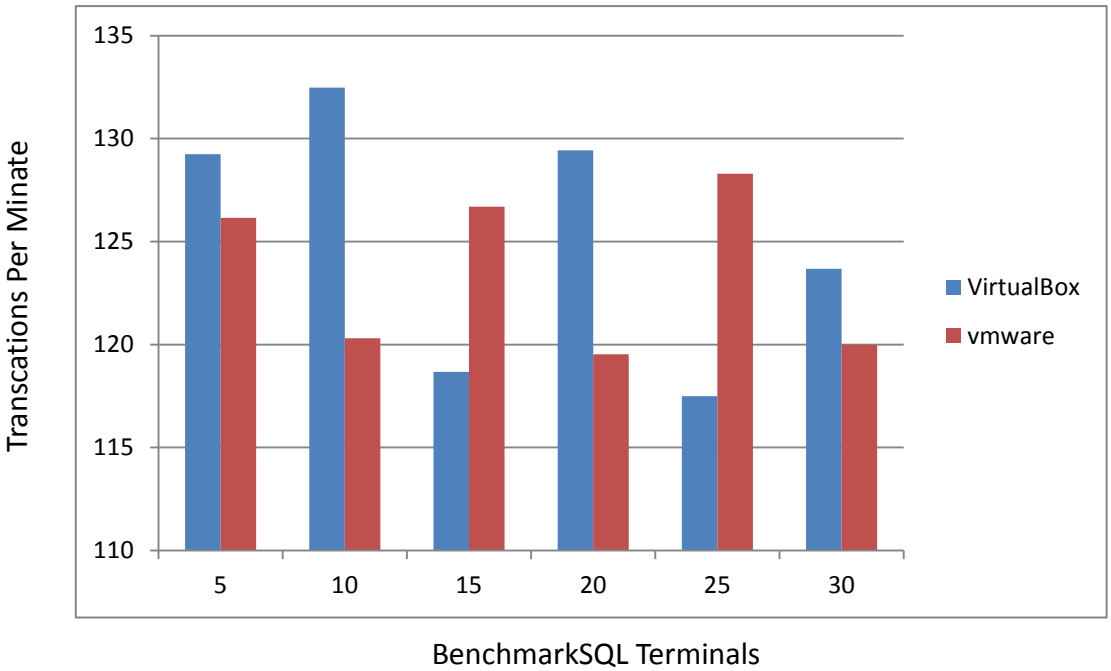

Figure 2: Results of Scaling BenchmarkSQL Users

固定 warehouses 下，比較 terminals 數量上差異時 postgresql clustering 的效能比較。