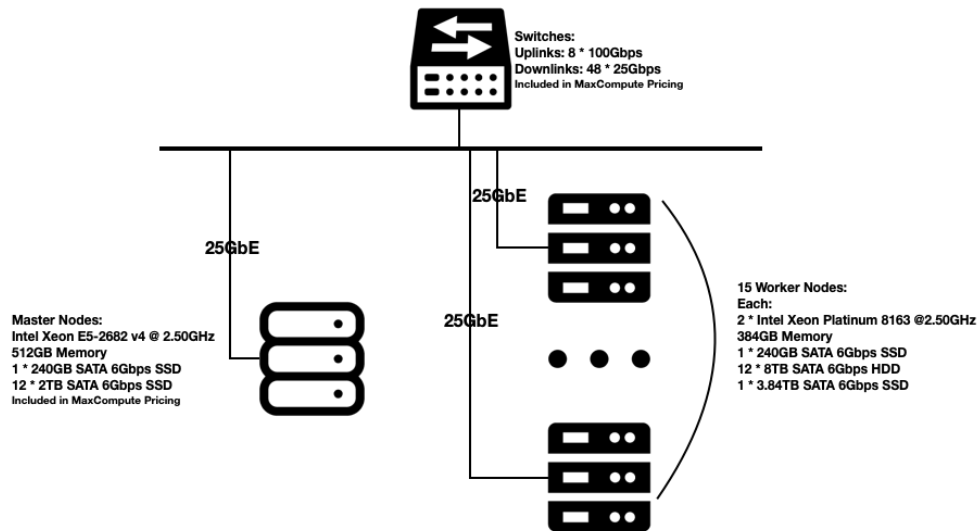
	Alibaba Cloud MaxCompute	TPCx-BB Rev. v1.3.0 TPC-Pricing Rev. v2.4.0
		Report Date: September 18, 2019
Total System Cost	TPCx-BB Performance Metric	Price/Performance
1,091,148 USD	6,427.86 BBQpm@30000	169.76 USD \$/BBQpm@30000

Framework	Operating System	Other Software	Availability Date	Scale Factor	Streams
MaxCompute v3.31	Alibaba Group Enterprise Linux Server 7.2 (Paladin)	None	September 18, 2019	30000	2

System Configuration



Physical Storage/Scale Factor: 52.46	Scale Factor/Physical Memory: 4.11
--------------------------------------	------------------------------------

Servers:	15x Worker Node, 3x Master Node
Total Processors/Cores/Threads	36/816/1,632

Server Configuration:	Per Worker Node:	Per Master Node:
Processors	2x Intel® Xeon® Platinum 8163 @ 2.50GHz	2x Intel® Xeon® E5-2682 v4 @ 2.50GHz
Memory	384 GB	512 GB
Storage Controller	Onboard SATA controller	Onboard SATA controller
Storage Device	1x 240GB SATA 6Gbps SSD 1x 3.84TB SATA 6Gbps SSD 12x 8TB SATA 6Gbps HDD	1x 240GB SATA 6Gbps SSD 12x 2TB SATA 6Gbps SSD
Network	Mellanox MT27710 ConnectX-4 Lx	Mellanox MT27710 ConnectX-4 Lx

Connectivity:	1x Network Switch (8x100Gbps Up; 48x25Gbps Down)
---------------	--



Alibaba Cloud MaxCompute

TPCx-BB Rev. v1.3.0
 TPC-Pricing Rev. v2.4.0

Report Date:
 September 18, 2019

Description	Part Number	Source	Unit Price	Qty	Ext. Price	3-Year Maint.
License Compute and Software Services						
<u>MaxCompute Annual Subscription (1,425 CU)</u>	Asia Pacific SE 1 (Singapore)	1	\$376,200.00	3	\$1,128,600.00	
Worker Node				15		
Intel(R) Xeon(R) Platinum 8163 CPU @ 2.50GHz				2		
32 GB Memory				12		
Master Node				3		
Intel(R) Xeon(R) CPU E5-2682 v4 @ 2.50GHz				2		
32 GB Memory				16		
Network Switches (8x100Gbps Up; 48x25Gbps Down)				3		
1-Year Annual Subscription Discount (30%)			-\$112,860.00	3	-\$338,580.00	
<u>MaxCompute Storage for 1 year</u>		1	\$3,076.95	3	\$9,230.85	
30000 Scale Factor (6.15 TB compressed)						
<u>MaxCompute Enterprise Service for 1 year</u>		1	\$96,000.00	3		\$288,000.00
24x7, 4 hour response						
License Compute and Software Services Sub-Total					\$799,250.85	\$288,000.00
Other Components						
13-inch MacBook Pro 1.4GHz (includes 2 spares)		2	\$1,299.00	3	\$3,897.00	
Other Components Sub-Total					\$3,897.00	\$0.00

Pricing: 1 = Alibaba; 2 = Apple.com

⁽¹⁾ All discounts are based on US list prices and for similar quantities and configurations. The discounts are based on the overall specific components pricing from respective vendors in this single quotation. Discounts for similarly sized configurations will be similar to those quoted here but may vary based on the components in the configuration.

Audited by Doug Johnson of InfoSizing

Three-Year Cost of Ownership	\$1,091,148
BBQpm@30000	6,427.86
\$/BBQpm@30000	\$ 169.76

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform at pricing@tpc.org. Thank you.

Numerical Quantities

Scale Factor	30000
Streams	2
SUT Validation Test	PASS

Performance Run (Run 2)

Overall Run Start Time	2019-09-01 12:41:33.273
Overall Run End Time	2019-09-01 23:40:54.575
Overall Run Elapsed Time	39,561.302
Load Test Start Time	2019-09-01 12:41:33.273
Load Test End Time	2019-09-01 13:11:32.580
Load Test Elapsed Time	1,799.307
Power Test Start Time	2019-09-01 13:11:32.582
Power Test End Time	2019-09-01 17:46:26.867
Power Test Elapsed Time	16,494.285
Throughput Test Start Time	2019-09-01 17:46:26.868
Throughput Test End Time	2019-09-01 23:40:54.574
Throughput Test Elapsed Time	21,267.706
Performance Metric (BBQpm@ 30000)	6,427.86

Repeatability Run (Run 1)

Overall Run Start Time	2019-09-01 00:40:44.561
Overall Run End Time	2019-09-01 11:37:15.168
Overall Run Elapsed Time	39,390.607
Load Test Start Time	2019-09-01 00:40:44.561
Load Test End Time	2019-09-01 01:10:26.215
Load Test Elapsed Time	1,781.654
Power Test Start Time	2019-09-01 01:10:26.216
Power Test End Time	2019-09-01 05:48:02.626
Power Test Elapsed Time	16,656.410
Throughput Test Start Time	2019-09-01 05:48:02.627
Throughput Test End Time	2019-09-01 11:37:15.168
Throughput Test Elapsed Time	20,952.541
Performance Metric (BBQpm@ 30000)	6,472.77

Performance Run Report (Run 2)

TPCx-BB

Result

v1.3.0

INFO: T_LOAD = 1799.307

INFO: T_LD = 0.1 * T_LOAD: 179.9307

INFO: T_PT = 6355.6274823179

INFO: T_T_PUT = 21267.706

INFO: T_TT = 10633.853

INFO: === Checking validity of the final result ===

INFO: OK: All required BigBench phases were performed.

INFO: OK: All 30 queries were running in the power test.

INFO: OK: All 30 queries were running in the first throughput test.

INFO: OK: Pretend mode was inactive. All commands were executed.

INFO: === Final result ===

INFO: VALID BBQpm@30000 = 6427.86075553866

Repeatability Run Report (Run 1)

TPCx-BB

Result

v1.3.0

INFO: T_LOAD = 1781.654

INFO: T_LD = 0.1 * T_LOAD: 178.1654

INFO: T_PT = 6362.82168526351

INFO: T_T_PUT = 20952.541

INFO: T_TT = 10476.2705

INFO: === Checking validity of the final result ===

INFO: OK: All required BigBench phases were performed.

INFO: OK: All 30 queries were running in the power test.

INFO: OK: All 30 queries were running in the first throughput test.

INFO: OK: Pretend mode was inactive. All commands were executed.

INFO: === Final result ===

INFO: VALID BBQpm@30000 = 6472.77141703629

Summary details of the run reports are shown above. For the complete run reports, see the Support Files Archive.