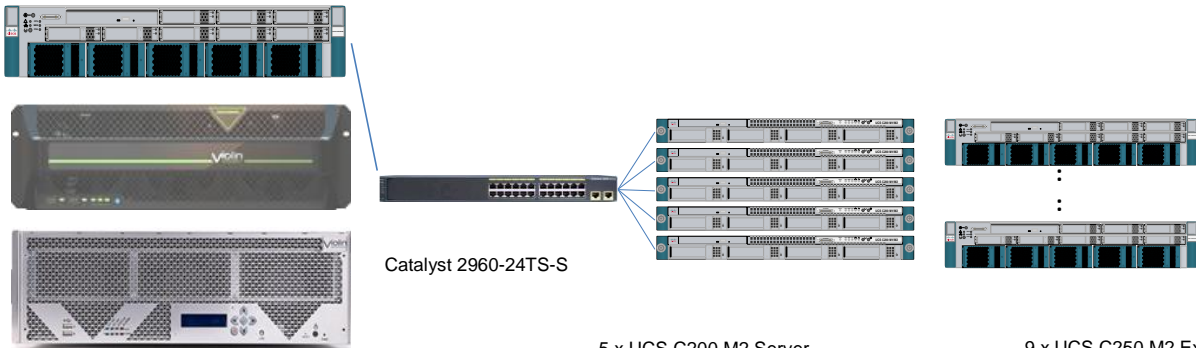




Cisco UCS C250 M2 Extended-Memory Server

TPC-C Rev. 5.11
TPC-Pricing Rev. 1.60
Report Date: December 7, 2011

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$602,316 USD	1,053,100.32 tpmC	\$0.58 USD/ tpmC	December 7, 2011	
Processors	Database Manager	Operating System	Other Software	Number of Users
Intel Xeon X5690 3.46 GHz 12M L3 Cache	Oracle Database 11g Standard Edition One	Oracle Linux with Unbreakable Enterprise Kernel Release 2	Microsoft COM+	850,000



Catalyst 2960-24TS-S

5 x UCS C200 M2 Server
1 x Intel Xeon E5620 2.40GHz 12M L3
6 x 4GB DDR3-1333MHz RDIMM

9 x UCS C250 M2 Extended-Memory
Server emulating 850,000 users

UCS C250 M2 Extended-Memory Server
2 x Intel Xeon X5690 3.46GHz 12M L3
48 x 8GB DDR3-1333MHz RDIMM (384GB)
1 x V-3205 Memory Array
1 x V-6000 Memory Array

	Server		5 Clients (each with)	
System Components	Quantity	Description	Quantity	Description
Processor/Cores/Threads	2/12/24	Intel Xeon X5690 3.46GHz 12M L3 Cache	1/4/8	Intel Xeon E5620 2.40GHz 12M L3 Cache
Memory	384 GB	48 x 8GB DDR3	24 GB	6 x 4GB DDR3
Storage Controllers	2	LSI MegaRAID SAS 9280-4i4e	1	LSI 1064E
Disk Drives (Internal)	2	300GB 6Gb SAS 10K RPM SFF HDD (OS)	1	500GB SATA 7.2K RPM HDD (OS)
Storage Arrays	1	V-3205 Memory Array (5.3 TB)		
	1	V-6000 Memory Array (16.3 TB)		
	2	VTrak J630sS JBOD with: 6 x 600GB 15K SAS HDD, 8 x 2TB 7.2K NL-SAS HDD		
Total Storage	62.6 TB			

Cisco	Cisco UCS C250 M2 Extended-Memory Server					TPC-C Rev. 5.11 TPC-Pricing Rev. 1.6.0		
	Report Date:						6-Dec-2011	
Description	Part Number	Brand	Source	Unit Price	Qty	Extended Price	3 Year Maint. Price	
Server Hardware								
UCS C250 M2 Srvr w/1PSU,DVD w/o CPU, mem, HDD, or PCIe card	R250-2480805W	Cisco	1	\$4,687	1	\$4,687		
Intel Xeon X5690 3.46GHz/6c/130W/12M/DDR3 1333MHz	A01-X0115	Cisco	1	\$4,686	2	\$9,372		
8GB DDR3-1333MHz RDIMM/PC3-10600	N01-M308GB2-L	Cisco	1	\$435	48	\$20,880		
850W power supply for the UCS C250 M2	R250-PSU2-850W	Cisco	1	\$560	1	\$560		
LSI MegaRAID SAS 9280-4i4e, 4 internal and 4 external ports	UCSC-RAID-C-4I4E	Cisco	1	\$1,592	2	\$3,184		
300GB 6Gb SAS 10K RPM SFF HDD	A03-D300GA2	Cisco	1	\$561	2	\$1,122		
MS Comfort Curve DT 3000 USB-EN NA Keyboard & Mouse	7ZJ-00001	Provantage	6	\$25	1	\$25		
V173DjB LCD Monitor	ET-BV3RP-D03	Provantage	6	\$90	1	\$90		
Cisco R42610 expansion rack	RACK-UCS	Cisco	1	\$2,857	1	\$2,857		
C250 24x7x4Hr Onsite Support Service	CON-UCS7-R250W	Cisco	1	\$566	3			\$1,698
						Subtotal	\$42,777	\$1,698
Storage								
V-6000 Memory Array	V-6616-HA64-4xPCIe	Violin	4	\$530,000	1	\$530,000		Inc
V-3205Memory Array	V-3205	Violin	4	\$150,000	1	\$150,000		Inc
Violin Bronze Maintenance 3Y 24x7 Hr	VS-BRONZE	Violin	4	\$93,085	1			\$68,952
VTrak J630sS JBOD storage enclosure	VTJ630sS	Datalink	5	\$4,189	2	\$8,378		
600GB 15K SAS Drive (inc. 10% spare)	X30DVEA1	Datalink	5	\$641	14	\$8,974		
2TB 7.2K NL-SAS Drive (inc. 10% spare)	X30DVSA1	Datalink	5	\$385	18	\$6,930		
Promise ServicePlus Plan	SP3YEAR	Datalink	5	\$883	2			\$1,766
						Subtotal	\$704,282	\$70,718
Client Hardware								
UCS C200 M2 Srvr w/1PSU, DVD w/o CPU, mem, HDD or PCIe card	R200-1120402W	Cisco	1	\$2,343	5	\$11,715		
2.26GHz Xeon E5520 80W CPU/8MB cache/DDR3 1066MHz	N20-X00003	Cisco	1	\$1,124	5	\$5,620		
4GB DDR3-1333-MHz RDIMM/PC3-10600	UCS-MR-1X041RX-A	Cisco	1	\$319	30	\$9,570		
LSI 1064E (4-port SAS 3.0G RAID 0, 1, 1E) Mezz Card	R2X0-ML002	Cisco	1	\$281	5	\$1,405		
Cisco UCS P81E Virtual Interface Card	N2XX-ACPCI01	Cisco	1	\$1,594	5	\$7,970		
Gen 2 500GB SATA 7.2K RPM 3.5in HDD	R200-D500GCSATA03	Cisco	1	\$448	5	\$2,240		
C200 24x7x4Hr Onsite Support Service	CON-UCS7-R200W	Cisco	1	\$405	15			\$6,075
						Subtotal	\$38,520	\$6,075
Connectivity								
Catalyst 2960S 24 GigE	WS-C3560CG-8TC-S	Cisco	1	\$1,995	1	\$1,995		
Onsite 24x7x4 Cat 2960S 24GigE	CON-OSP-2960S2SS	Cisco	1	\$280	3			\$840
						Subtotal	\$1,995	\$840
Large Purchase Discount ⁱ		57.0% Cisco	1					-\$46,339
Large Purchase Discount		35.0% Violin	1					-\$238,000
						Hardware Subtotal	\$503,234	\$79,331
Server Software								
Oracle Linux		Oracle	2	\$0				
Oracle Linux Basic Limited (3 year support)		Oracle	2	\$1,497	1	\$1,497		\$1,497
Oracle Database 11g Release 2 Standard Edition One, Per Processor for 3Years		Oracle	2	\$2,900	2	\$5,800		
Incident Server Support		Oracle	2	\$2,300	3	\$6,900		\$6,900
						Subtotal	\$5,800	\$8,397
Client Software								
Microsoft Windows Server 2008 Standard Edition	P73-03883	Microsoft	3	\$999	5	\$4,995		
Microsoft Problem Resolution Services	NA	Microsoft	3	\$259	1			\$259
Microsoft Visual Studio Standard 2008	127-00166	Microsoft	3	\$299	1	\$299		
						Subtotal	\$5,294	\$259
						Total	\$514,328	\$87,987
Pricing: 1=Cisco 2=Oracle 3=Microsoft 4=Violin 5=Datalink 6=Provantage; i-Excludes Support Services and Connectivity						Three-Year Cost of Ownership: \$602,316 USD		
Audited by Francois Raab of InfoSizing, Inc. www.sizing.com						tpmC: 1,053,100.32		
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.						\$ / tpmC: \$0.58 USD		
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 Summary

MQTH, Computed Maximum Qualified Throughput: 1,053,100.32 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.368	0.994	3.014
Payment	0.367	0.992	2.696
Order-Status	0.368	0.992	2.568
Delivery (interactive portion)	0.334	0.934	2.531
Delivery (deferred portion)	0.098	0.111	3.946
Stock-Level	0.381	1.007	2.522
Menu	0.335	0.936	3.117

Transaction Mix, in percent of total transaction

New-Order	44.94%
Payment	43.03%
Order-Status	4.01%
Delivery	4.01%
Stock-Level	4.02%

Emulation Delay (in seconds)

	Resp.Time	Menu
New-Order	0.100	0.100
Payment	0.100	0.100
Order-Status	0.100	0.100
Delivery (interactive)	0.100	0.100
Stock-Level	0.100	0.100

Keying/Think Times (in seconds)

	Min.	Average	Max.
New-Order	18.000/0.000	18.000/12.084	18.069/120.31
Payment	3.000/0.000	3.000/12.089	3.077/120.31
Order-Status	2.000/0.000	2.000/10.084	2.071/100.30
Delivery (interactive)	2.000/0.000	2.000/5.057	2.069/50.30
Stock-Level	2.000/0.000	2.000/5.055	2.077/50.30

Test Duration

Ramp-up time	0:42:00
Measurement interval	2:00:00
Transactions (all types) completed during measurement interval	281,184,455
Ramp down time	0:01:00

Checkpointing

Number of checkpoints	5
Checkpoint interval (average)	24:51