



Sun SPARC Enterprise M9000 Server with Oracle Database 11g Release 2

TPC-H 2.11.0
TPC-Pricing 1.5.0

Report Date: October 5, 2010
First Revision: December 9, 2010
Second Revision: September 14, 2011

Total System Cost

Composite Query per Hour Metric

Price / Performance

\$3,037,900 USD

198,907.5 QphH@3000GB

\$15.27/QphH@3000GB

Database Size

Database Manager

Operating System

Other Software

Availability Date

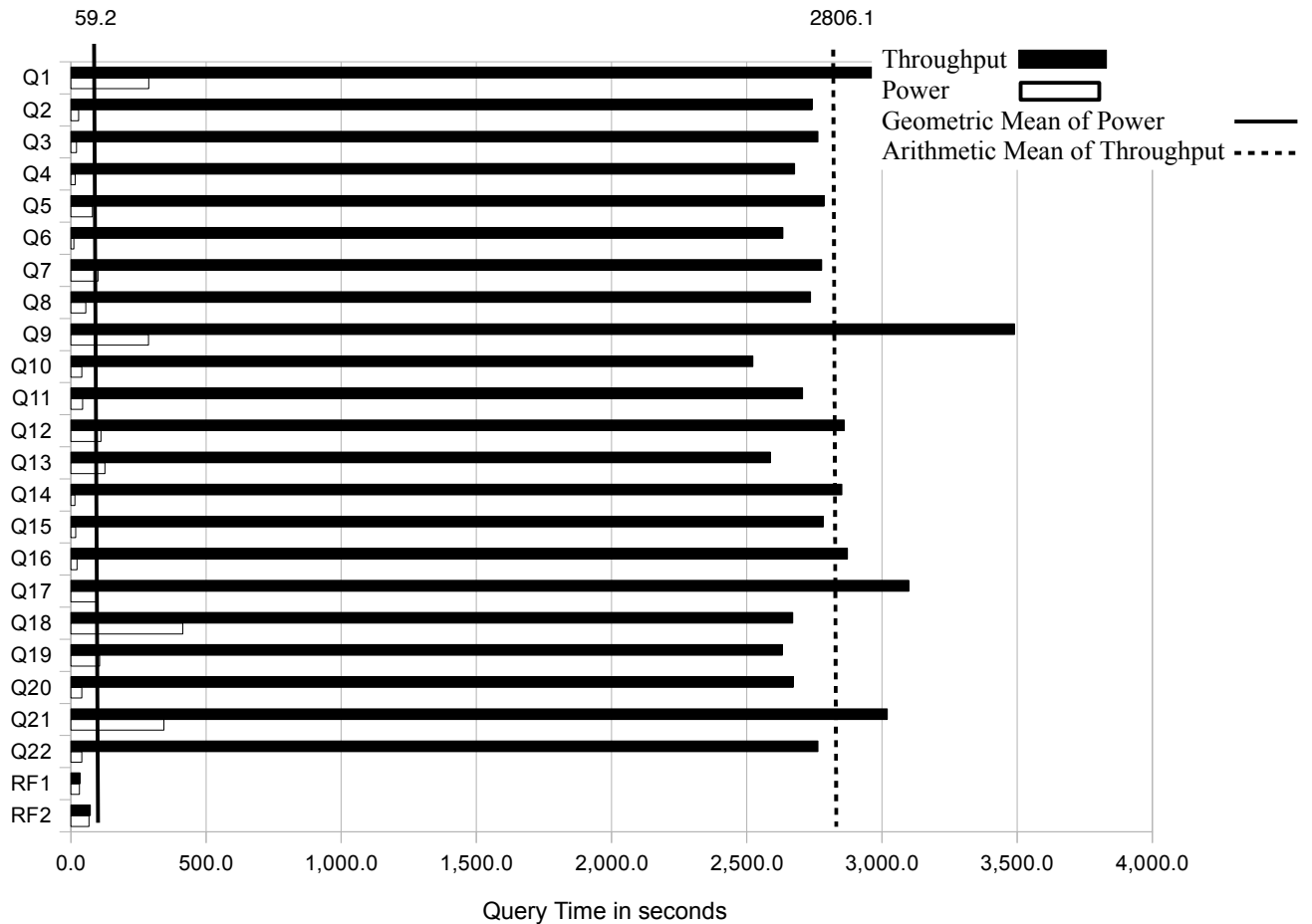
3000GB

Oracle Database 11g Release 2
Enterprise Edition with
Partitioning

Solaris 10

None

December 9, 2010



Database Load Time = 3:40:11
Load Includes Backup: N
Total Data Storage / Database Size = 26.0
Memory to Database Size Percentage = 17.1

Storage Redundancy Levels:
Base Tables: Level Three
Auxiliary Data Structures: Level Three
DBMS Temporary Space: Level Zero
OS and DBMS Software: Level One

System Configuration:

Processors:

Memory:

Disks:

Total Storage:

Sun SPARC Enterprise M9000 Server

32 SPARC64 VII 2880 MHz Processors, 128 cores, 256 threads

512GB

16 Sun Storage 6180 Arrays w/ 16 300GB 15K RPM disks each

4 300GB 10K SAS Internal

78,000GB (GB = 1024*1024*1024 bytes)



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Description	Part Number	Source	Unit Price	Qty	Ext. Price	3 Yr. Maint.
Server Hardware						
Sun SE M9000-32 Base 1ph	SEHASY11Z-N	1	616,629	1	616,629	
SE_CMU:4*SPARCVII@2.8GHz w/64GB	SEMY4HE1Z-N	1	184,512	8	1,476,096	
SE_PCI_E IO Unit: 8*slots	SEMY61Z-N	1	43,970	8	351,760	
PWR Cord 1PHs M8000-9000 USA (included)	SEMXP31Z-N	1	3,039	5	15,195	
PCI-E Base IO Card	SEMY7BS1Z-N	1	3,840	2	7,680	
300GB 10K RPM 2.5" SAS	SEMY3C11Z-N	1	1,100	4	4,400	
8GB PCIe FC Dual Host Bus Adapter, qllogic	SG-XPCIE2FC-QF8-N	1	2,399	32	76,768	
Sun Fire X4170-M2	X4170M2-H1-AA	1	2,699	1	2,699	
Oracle Solaris 10 Pre-Install	5894A-N	1	0	1	0	
US PC Peripheral Kit (Keyboard/Mouse)	3701A-PC	1	50	1	50	
Express Slide Rail Kit	6326A	1	150	1	150	
4GB (1x4GB) DDR3-1333	4910A	1	255	2	510	
300GB 10K RPM 2.5" SAS Disk	RB-SS2CF-300G10K-N	1	689	1	689	
6Gb/s SAS HBA, Internal ATO	SG-SAS6-INT-Z	1	419	1	419	
DVD+/-RW SATA-based drive ATO	8325A-N	1	145	1	145	
1 x Intel Xeon E5620 ATO	5924A	1	599	1	599	
DIMM slot filler panel	5879A-N	1	0	15	0	
17" TFT Monitor	X7204A-N	1	219	1	219	
Server Hardware Subtotal					2,554,008	0
Storage						
Sun Storage 6180 4GB cache 4 FC ports	TB6180R11A2-0-N	1	15,595	16	313,520	
300GB 15K RPM FC-AL Disk	XTC-FC1CF-300G15KZ	1	2,095	256	536,320	
Sun Storage 6180 Rack Rail Kit	XTA6000-RK2-RAIL	1	175	16	2,800	
Jumper Cable Kit: 1 x 1m C13	XSR-JUMP-1MC13	1	23	32	736	
15M Fibre Channel Cable	X9734A-Z-N	1	105	32	3,360	
Sun Rack II 42U	XSR-1242E	1	2,849	2	5,698	
PDU 15kVA, Single Phase, LV	XSR-15K-L630	1	1,200	4	4,800	
Storage Subtotal					867,234	0
Server Software						
Oracle Solaris 10 Pre-install	SOLZS-10LC9A9S-IP	1	0	1	0	
Oracle Solaris Studio 12	SSSM9-121-T9DM	1	10	1	10	
Oracle Database 11g Release 2 Enterprise Edition, Named User Plus for 3 years (for 96 processors)		1	11,875	96	1,140,000	
Partitioning, Named User Plus for 3 years (for 96 processors)		1	2,875	96	276,000	
Incident Server Support for 3 years		1	2,300	3		6,900
Server Software Subtotal					1,416,010	6,900
Oracle Premier Hardware Support	Q-PREM-SPRT-SYS	1	410,549	3		1,231,647
Total					4,837,252	1,238,547
Total Oracle Software, Hardware and Hardware Maintenance Discount		1			(3,037,900)	
Notes (Source):					3 Yr. Cost	\$3,037,900
1. Oracle Corp.					QpH @3000GB	198,907.5
					\$/QpH @3000GB	\$15.27

Audited by Francois Raab of InfoSizing, Inc.

Oracle's discounts are based upon US list prices and for similar quantities and configurations. A discount of 50% has been applied to all Oracle hardware, software and services based on the total value and quantities of the components of the configuration, including full payment of all components and maintenance.

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 section of the TPC benchmark specifications. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.



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Numerical Quantities

Measurement Results:

Database Scale Factor	= 3000GB
Total Data Storage / Database Size	= 26.0
Start of database load time	= 09-14-2010 18:22:14
End of database load time	= 09-14-2010 22:02:25
Database Load Time	= 3:40:11
Query Streams for Throughput Test	= 64
TPC-H Power	= 182,350.7
TPC-H Throughput	= 216,967.7
TPC-H Composite Query-per-Hour Rating (QphH@3000GB)	= 198,907.5
Total System Price Over 3 Years	= \$3,037,900
TPC-H Price/Performance Metric (\$/QphH@3000GB)	= \$15.27

Measurement Intervals:

Measurement Interval in Throughput Test (Ts)	= 70,086.00 seconds
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Duration of Stream Execution:

Power Run	Seed	RF1 Start RF1 End	Query Start Query End	RF2 Start RF2 End	Duration
	0914220225	09/15/2014 22:29:33	09/15/2014 22:30:05	09/15/2014 23:08:39	00:40:13
		09/15/2014 22:30:05	09/15/2014 23:08:39	09/15/2014 23:09:46	

Throughput Stream	Seed	Query Start Query End	Duration	RF1 Start RF1 End	RF2 Start RF2 End
1	0914220226	09/15/2014 23:09:56	17:03:00	09/16/2014 16:44:37	09/16/2014 16:45:05
		09/16/2014 16:12:56		09/16/2014 16:45:05	09/16/2014 16:46:01
2	0914220227	09/15/2014 23:09:56	16:51:31	09/16/2014 16:46:01	09/16/2014 16:46:30
		09/16/2014 16:01:26		09/16/2014 16:46:30	09/16/2014 16:47:36
3	0914220228	09/15/2014 23:09:56	16:44:12	09/16/2014 16:47:36	09/16/2014 16:48:10
		09/16/2014 15:54:08		09/16/2014 16:48:10	09/16/2014 16:49:18
4	0914220229	09/15/2014 23:09:56	16:37:43	09/16/2014 16:49:18	09/16/2014 16:49:50
		09/16/2014 15:47:39		09/16/2014 16:49:50	09/16/2014 16:50:53
5	0914220230	09/15/2014 23:09:56	16:43:14	09/16/2014 16:50:53	09/16/2014 16:51:23
		09/16/2014 15:53:10		09/16/2014 16:51:23	09/16/2014 16:52:32
6	0914220231	09/15/2014 23:09:56	16:34:08	09/16/2014 16:52:32	09/16/2014 16:53:06
		09/16/2014 15:44:04		09/16/2014 16:53:05	09/16/2014 16:54:13
7	0914220232	09/15/2014 23:09:56	17:17:31	09/16/2014 16:54:13	09/16/2014 16:54:47
		09/16/2014 16:27:27		09/16/2014 16:54:47	09/16/2014 16:55:57
8	0914220233	09/15/2014 23:09:56	16:35:14	09/16/2014 16:55:57	09/16/2014 16:56:33
		09/16/2014 15:45:10		09/16/2014 16:56:33	09/16/2014 16:57:47

Throughput Stream	Seed	Query Start Query End	Duration	RF1 Start RF1 End	RF2 Start RF2 End
9	0914220234	09/15/2014 23:09:56	17:14:47	09/16/2014 16:57:47	09/16/2014 16:58:23
		09/16/2014 16:24:44		09/16/2014 16:58:23	09/16/2014 16:59:45
10	0914220235	09/15/2014 23:09:56	17:32:58	09/16/2014 16:59:45	09/16/2014 17:00:20
		09/16/2014 16:42:54		09/16/2014 17:00:20	09/16/2014 17:01:29
11	0914220236	09/15/2014 23:09:56	16:54:50	09/16/2014 17:01:29	09/16/2014 17:02:06
		09/16/2014 16:04:46		09/16/2014 17:02:06	09/16/2014 17:03:12
12	0914220237	09/15/2014 23:09:56	16:27:11	09/16/2014 17:03:12	09/16/2014 17:03:46
		09/16/2014 15:37:07		09/16/2014 17:03:46	09/16/2014 17:04:50
13	0914220238	09/15/2014 23:09:57	16:40:14	09/16/2014 17:04:50	09/16/2014 17:05:25
		09/16/2014 15:50:11		09/16/2014 17:05:25	09/16/2014 17:06:33
14	0914220239	09/15/2014 23:09:57	16:48:35	09/16/2014 17:06:33	09/16/2014 17:07:11
		09/16/2014 15:58:32		09/16/2014 17:07:10	09/16/2014 17:08:16
15	0914220240	09/15/2014 23:09:57	16:35:42	09/16/2014 17:08:16	09/16/2014 17:08:49
		09/16/2014 15:45:39		09/16/2014 17:08:49	09/16/2014 17:09:57
16	0914220241	09/15/2014 23:09:57	17:31:48	09/16/2014 17:09:57	09/16/2014 17:10:29
		09/16/2014 16:41:45		09/16/2014 17:10:29	09/16/2014 17:11:45
17	0914220242	09/15/2014 23:09:57	16:48:35	09/16/2014 17:11:46	09/16/2014 17:12:19
		09/16/2014 15:58:32		09/16/2014 17:12:19	09/16/2014 17:13:30
18	0914220243	09/15/2014 23:09:57	17:28:41	09/16/2014 17:13:30	09/16/2014 17:14:02
		09/16/2014 16:38:38		09/16/2014 17:14:02	09/16/2014 17:15:10
19	0914220244	09/15/2014 23:09:57	16:34:22	09/16/2014 17:15:11	09/16/2014 17:15:42
		09/16/2014 15:44:19		09/16/2014 17:15:42	09/16/2014 17:16:45
20	0914220245	09/15/2014 23:09:57	17:05:43	09/16/2014 17:16:45	09/16/2014 17:17:16
		09/16/2014 16:15:40		09/16/2014 17:17:16	09/16/2014 17:18:25
21	0914220246	09/15/2014 23:09:57	16:57:50	09/16/2014 17:18:25	09/16/2014 17:19:00
		09/16/2014 16:07:47		09/16/2014 17:19:00	09/16/2014 17:20:11
22	0914220247	09/15/2014 23:09:57	17:12:41	09/16/2014 17:20:11	09/16/2014 17:20:48
		09/16/2014 16:22:39		09/16/2014 17:20:48	09/16/2014 17:22:08
23	0914220248	09/15/2014 23:09:57	17:03:31	09/16/2014 17:22:08	09/16/2014 17:22:46
		09/16/2014 16:13:28		09/16/2014 17:22:46	09/16/2014 17:23:58
24	0914220249	09/15/2014 23:09:57	17:13:36	09/16/2014 17:23:58	09/16/2014 17:24:33
		09/16/2014 16:23:33		09/16/2014 17:24:33	09/16/2014 17:25:47
25	0914220250	09/15/2014 23:09:57	16:53:44	09/16/2014 17:25:47	09/16/2014 17:26:27
		09/16/2014 16:03:41		09/16/2014 17:26:27	09/16/2014 17:27:38
26	0914220251	09/15/2014 23:09:57	16:45:08	09/16/2014 17:27:38	09/16/2014 17:28:15
		09/16/2014 15:55:05		09/16/2014 17:28:15	09/16/2014 17:29:19
27	0914220252	09/15/2014 23:09:57	16:57:29	09/16/2014 17:29:19	09/16/2014 17:29:50
		09/16/2014 16:07:27		09/16/2014 17:29:50	09/16/2014 17:31:05
28	0914220253	09/15/2014 23:09:57	17:06:14	09/16/2014 17:31:05	09/16/2014 17:31:37
		09/16/2014 16:16:11		09/16/2014 17:31:37	09/16/2014 17:32:58
29	0914220254	09/15/2014 23:09:57	16:58:21	09/16/2014 17:32:58	09/16/2014 17:33:29
		09/16/2014 16:08:19		09/16/2014 17:33:29	09/16/2014 17:34:31
30	0914220255	09/15/2014 23:09:58	16:57:16	09/16/2014 17:34:31	09/16/2014 17:35:03
		09/16/2014 16:07:13		09/16/2014 17:35:03	09/16/2014 17:36:20
31	0914220256	09/15/2014 23:09:58	17:27:23	09/16/2014 17:36:20	09/16/2014 17:36:54
		09/16/2014 16:37:21		09/16/2014 17:36:54	09/16/2014 17:38:09
32	0914220257	09/15/2014 23:09:58	17:18:28	09/16/2014 17:38:09	09/16/2014 17:38:40
		09/16/2014 16:28:26		09/16/2014 17:38:40	09/16/2014 17:39:55

Throughput Stream	Seed	Query Start Query End	Duration	RF1 Start RF1 End	RF2 Start RF2 End
33	0914220258	09/15/2014 23:09:58	16:59:56	09/16/2014 17:39:55	09/16/2014 17:40:25
		09/16/2014 16:09:54		09/16/2014 17:40:25	09/16/2014 17:41:42
34	0914220259	09/15/2014 23:09:58	17:06:52	09/16/2014 17:41:42	09/16/2014 17:42:14
		09/16/2014 16:16:50		09/16/2014 17:42:14	09/16/2014 17:43:37
35	0914220260	09/15/2014 23:09:58	17:21:27	09/16/2014 17:43:37	09/16/2014 17:44:08
		09/16/2014 16:31:25		09/16/2014 17:44:08	09/16/2014 17:45:34
36	0914220261	09/15/2014 23:09:58	17:11:07	09/16/2014 17:45:34	09/16/2014 17:46:08
		09/16/2014 16:21:05		09/16/2014 17:46:08	09/16/2014 17:47:25
37	0914220262	09/15/2014 23:09:58	17:08:44	09/16/2014 17:47:25	09/16/2014 17:47:57
		09/16/2014 16:18:42		09/16/2014 17:47:57	09/16/2014 17:49:10
38	0914220263	09/15/2014 23:09:58	17:14:51	09/16/2014 17:49:10	09/16/2014 17:49:43
		09/16/2014 16:24:50		09/16/2014 17:49:43	09/16/2014 17:50:52
39	0914220264	09/15/2014 23:09:58	16:59:18	09/16/2014 17:50:52	09/16/2014 17:51:24
		09/16/2014 16:09:16		09/16/2014 17:51:24	09/16/2014 17:52:41
40	0914220265	09/15/2014 23:09:58	17:17:08	09/16/2014 17:52:41	09/16/2014 17:53:16
		09/16/2014 16:27:06		09/16/2014 17:53:16	09/16/2014 17:54:27
41	0914220266	09/15/2014 23:09:58	17:02:13	09/16/2014 17:54:27	09/16/2014 17:55:04
		09/16/2014 16:12:11		09/16/2014 17:55:04	09/16/2014 17:56:20
42	0914220267	09/15/2014 23:09:58	17:32:55	09/16/2014 17:56:20	09/16/2014 17:56:51
		09/16/2014 16:42:54		09/16/2014 17:56:51	09/16/2014 17:58:01
43	0914220268	09/15/2014 23:09:58	17:34:11	09/16/2014 17:58:01	09/16/2014 17:58:39
		09/16/2014 16:44:10		09/16/2014 17:58:39	09/16/2014 17:59:45
44	0914220269	09/15/2014 23:09:59	17:12:07	09/16/2014 17:59:46	09/16/2014 18:00:17
		09/16/2014 16:22:05		09/16/2014 18:00:17	09/16/2014 18:01:35
45	0914220270	09/15/2014 23:09:59	16:59:33	09/16/2014 18:01:35	09/16/2014 18:02:15
		09/16/2014 16:09:31		09/16/2014 18:02:15	09/16/2014 18:03:25
46	0914220271	09/15/2014 23:09:59	17:16:57	09/16/2014 18:03:25	09/16/2014 18:03:57
		09/16/2014 16:26:56		09/16/2014 18:03:57	09/16/2014 18:05:09
47	0914220272	09/15/2014 23:09:59	17:11:07	09/16/2014 18:05:09	09/16/2014 18:05:41
		09/16/2014 16:21:05		09/16/2014 18:05:41	09/16/2014 18:06:56
48	0914220273	09/15/2014 23:09:59	17:25:48	09/16/2014 18:06:56	09/16/2014 18:07:26
		09/16/2014 16:35:47		09/16/2014 18:07:26	09/16/2014 18:08:43
49	0914220274	09/15/2014 23:09:59	17:34:38	09/16/2014 18:08:43	09/16/2014 18:09:25
		09/16/2014 16:44:37		09/16/2014 18:09:25	09/16/2014 18:10:40
50	0914220275	09/15/2014 23:09:59	17:34:36	09/16/2014 18:10:40	09/16/2014 18:11:11
		09/16/2014 16:44:35		09/16/2014 18:11:11	09/16/2014 18:12:25
51	0914220276	09/15/2014 23:09:59	17:33:52	09/16/2014 18:12:25	09/16/2014 18:12:58
		09/16/2014 16:43:51		09/16/2014 18:12:58	09/16/2014 18:14:09
52	0914220277	09/15/2014 23:09:59	16:58:10	09/16/2014 18:14:09	09/16/2014 18:14:43
		09/16/2014 16:08:09		09/16/2014 18:14:43	09/16/2014 18:15:52
53	0914220278	09/15/2014 23:09:59	17:31:45	09/16/2014 18:15:52	09/16/2014 18:16:25
		09/16/2014 16:41:44		09/16/2014 18:16:25	09/16/2014 18:17:55
54	0914220279	09/15/2014 23:09:59	17:32:33	09/16/2014 18:17:55	09/16/2014 18:18:31
		09/16/2014 16:42:32		09/16/2014 18:18:31	09/16/2014 18:19:52
55	0914220280	09/15/2014 23:09:59	17:17:27	09/16/2014 18:19:52	09/16/2014 18:20:24
		09/16/2014 16:27:27		09/16/2014 18:20:24	09/16/2014 18:21:53
56	0914220281	09/15/2014 23:09:59	17:18:26	09/16/2014 18:21:53	09/16/2014 18:22:26
		09/16/2014 16:28:26		09/16/2014 18:22:26	09/16/2014 18:23:40
57	0914220282	09/15/2014 23:09:59	17:25:57	09/16/2014 18:23:40	09/16/2014 18:24:15
		09/16/2014 16:35:57		09/16/2014 18:24:14	09/16/2014 18:25:29
58	0914220283	09/15/2014 23:10:00	17:19:55	09/16/2014 18:25:29	09/16/2014 18:26:13
		09/16/2014 16:29:54		09/16/2014 18:26:13	09/16/2014 18:27:29
59	0914220284	09/15/2014 23:10:00	17:32:48	09/16/2014 18:27:29	09/16/2014 18:28:01
		09/16/2014 16:42:47		09/16/2014 18:28:01	09/16/2014 18:29:17
60	0914220285	09/15/2014 23:10:00	17:21:25	09/16/2014 18:29:17	09/16/2014 18:29:49
		09/16/2014 16:31:25		09/16/2014 18:29:49	09/16/2014 18:31:05

Throughput Stream	Seed	Query Start Query End	Duration	RF1 Start RF1 End	RF2 Start RF2 End
61	0914220286	09/15/2014 23:10:00	17:34:35	09/16/2014 18:31:05	09/16/2014 18:31:39
		09/16/2014 16:44:34		09/16/2014 18:31:39	09/16/2014 18:32:47
62	0914220287	09/15/2014 23:10:00	17:20:37	09/16/2014 18:32:47	09/16/2014 18:33:19
		09/16/2014 16:30:37		09/16/2014 18:33:19	09/16/2014 18:34:28
63	0914220288	09/15/2014 23:10:00	17:24:43	09/16/2014 18:34:28	09/16/2014 18:35:04
		09/16/2014 16:34:44		09/16/2014 18:35:04	09/16/2014 18:36:18
64	0914220289	09/15/2014 23:10:00	17:32:47	09/16/2014 18:36:18	09/16/2014 18:36:53
		09/16/2014 16:42:47		09/16/2014 18:36:53	09/16/2014 18:38:01

TPC-H Timing Intervals (in seconds):

Stream ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
0	288.2	29.3	21.1	16.2	80.1	11.1	100.5	55.7	287.7	40.2	43.4	111.1
1	2,050.6	2,134.9	4,399.8	3,284.0	3,476.0	3,561.9	2,416.4	2,258.5	2,559.8	2,723.9	3,049.1	2,802.4
2	2,733.1	3,529.2	2,387.0	2,200.4	2,376.5	28.1	2,005.6	2,903.4	4,329.4	2,912.0	2,163.6	2,528.0
3	4,124.6	1,683.7	3,081.3	3,431.2	5,136.9	3,252.2	2,655.9	157.6	3,600.9	3,444.8	2,135.3	2,210.0
4	2,802.9	2,704.9	2,169.0	2,081.2	286.5	3,536.0	1,928.9	2,484.7	3,138.5	2,079.2	2,910.3	3,718.7
5	2,827.7	2,107.7	2,795.7	3,066.5	2,220.1	3,449.3	2,914.0	2,840.2	3,234.3	2,261.7	2,823.1	1,571.9
6	2,228.2	2,164.6	4,907.7	2,081.2	2,490.6	2,888.0	3,661.7	2,451.4	3,940.8	409.7	2,299.0	2,941.8
7	3,049.2	2,780.9	2,684.4	2,645.2	2,214.8	2,154.2	2,759.8	4,549.9	3,397.2	1,976.2	2,565.2	3,592.4
8	5,198.8	1,724.7	2,969.8	2,297.3	2,735.4	2,306.3	2,720.8	2,542.7	4,132.5	2,827.7	2,695.3	3,596.1
9	1,618.7	3,046.8	2,989.5	1,983.8	2,260.8	3,619.4	2,894.0	1,075.6	2,780.0	3,351.6	2,372.8	2,310.8
10	3,042.3	3,589.1	2,032.9	2,303.8	3,340.0	983.4	3,851.0	2,838.4	3,259.7	3,202.9	2,527.6	3,038.3
11	2,003.1	2,032.2	2,584.9	2,369.3	2,534.5	2,352.0	3,321.9	2,990.8	2,403.2	2,680.7	3,605.2	2,338.8
12	1,607.3	2,842.5	2,495.0	2,822.0	2,637.4	3,368.0	4,618.1	2,225.6	3,004.3	1,988.6	2,548.2	3,743.1
13	2,870.4	2,548.2	3,724.1	1,984.2	2,500.6	2,709.4	3,163.1	2,747.3	2,525.7	2,739.2	3,351.6	3,533.1
14	3,441.7	1,397.6	2,169.2	3,706.8	3,018.4	3,112.0	2,289.0	1,830.3	5,123.3	1,785.8	2,029.0	2,389.8
15	2,593.7	2,373.5	2,897.1	2,209.9	2,589.2	1,915.2	2,760.3	3,726.0	5,124.8	3,614.2	3,011.8	3,727.9
16	2,007.2	2,403.0	4,633.0	2,458.7	3,869.6	2,914.1	2,376.1	2,295.5	4,191.9	2,335.1	2,805.4	2,631.2
17	3,144.4	3,465.8	1,704.2	2,025.0	2,838.8	1,970.0	3,504.8	2,719.4	3,348.1	2,082.3	3,739.9	3,214.8
18	3,098.9	2,332.9	2,089.7	4,648.0	3,897.7	3,560.2	2,470.6	3,493.9	2,996.4	2,197.4	2,686.3	2,296.1
19	2,833.8	3,475.7	2,342.3	1,734.7	2,292.7	1,881.8	2,263.0	2,179.1	3,486.9	2,669.9	1,817.8	4,681.7
20	3,320.7	2,450.6	1,706.5	2,265.0	2,339.7	2,107.8	2,342.8	3,448.6	3,495.4	2,161.7	2,044.1	2,561.2
21	3,374.4	3,321.3	1,995.1	3,630.6	2,561.2	2,513.1	2,065.3	2,808.8	2,776.2	2,357.7	2,814.7	3,756.8
22	2,482.1	3,748.7	2,045.1	3,552.2	1,961.4	2,819.6	2,807.4	1,740.3	3,045.9	2,745.0	3,488.2	3,473.5
23	2,999.5	2,944.2	2,074.4	1,837.8	2,234.1	2,470.4	3,350.5	3,780.3	4,206.7	2,207.4	3,010.5	2,851.0
24	2,171.4	2,044.9	4,559.0	2,476.1	2,258.7	2,925.8	2,125.8	3,147.1	3,395.3	2,975.2	2,293.8	2,090.8
25	5,333.0	3,728.7	2,029.4	1,728.9	3,050.4	1,976.5	3,130.0	2,457.9	3,654.6	2,673.1	3,574.8	2,328.9
26	2,745.2	4,473.0	1,853.5	2,531.4	3,778.7	2,293.7	1,871.0	2,170.7	3,469.1	2,702.5	2,704.8	2,727.7
27	2,898.1	2,865.5	1,951.0	2,940.7	2,267.6	3,500.2	3,313.1	3,389.8	3,381.9	1,869.5	2,065.6	2,500.0
28	3,413.9	2,343.9	1,998.9	2,538.6	2,887.2	1,857.0	3,163.8	2,442.1	2,709.0	2,223.4	3,286.2	3,493.0
29	3,970.8	2,319.0	2,746.3	3,293.5	3,131.2	2,650.6	1,922.0	4,574.2	3,650.1	2,296.2	2,363.8	3,095.8
30	2,918.8	3,290.6	2,884.5	1,989.2	3,449.5	1,917.4	2,456.9	2,426.0	2,512.9	2,711.9	1,838.6	2,244.2
31	4,812.6	2,335.6	2,743.1	2,805.6	3,069.8	2,175.3	3,316.8	2,289.3	5,376.2	2,158.7	2,122.6	1,859.7
32	2,562.1	3,429.1	2,911.3	3,203.0	3,691.0	2,552.0	2,609.3	3,219.2	3,051.9	1,688.4	2,797.4	4,688.9
33	3,688.2	3,224.3	3,532.3	2,854.4	3,492.9	2,036.2	2,782.2	2,292.0	2,698.7	2,730.0	3,249.1	2,386.6
34	3,026.2	3,273.6	3,181.3	2,933.0	1,997.7	3,143.4	2,589.3	2,720.2	3,963.6	2,539.1	3,372.2	3,114.6
35	2,922.2	2,971.1	2,159.1	1,723.3	3,707.6	2,296.6	1,574.9	2,950.3	3,492.4	3,013.0	3,298.1	2,344.3
36	3,653.8	2,388.8	2,510.3	2,932.9	2,567.5	2,068.7	3,925.0	2,185.9	3,145.1	1,987.6	2,308.7	2,349.9
37	2,578.8	2,088.6	2,257.7	1,957.1	3,246.6	2,601.3	2,575.0	2,812.6	4,651.4	3,249.1	2,714.7	2,364.4

Stream ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
38	3,388.2	2,527.0	3,030.5	3,204.1	4,475.6	3,473.1	2,680.7	2,620.3	4,031.7	2,159.3	2,992.5	2,717.3
39	2,933.5	3,233.3	3,032.0	2,490.6	2,794.3	2,700.5	4,500.3	2,449.9	2,578.7	2,674.1	2,050.8	2,354.9
40	3,632.4	2,068.7	4,324.5	2,255.1	2,259.4	1,963.1	2,331.7	2,152.5	2,945.1	2,259.6	3,221.7	2,265.2
41	2,221.4	4,476.1	2,680.2	2,532.5	2,781.0	2,772.7	2,127.4	3,074.7	3,896.9	2,011.1	2,244.2	3,273.2
42	3,200.9	1,991.3	3,656.6	2,662.0	2,828.3	3,498.2	3,084.6	2,365.6	3,124.4	2,672.0	2,787.0	2,536.4
43	2,352.0	2,237.3	2,280.3	1,955.8	2,995.4	3,080.0	2,146.5	2,867.1	4,667.7	3,109.3	2,147.0	2,728.3
44	4,206.0	2,180.2	3,309.5	3,049.9	4,240.9	3,193.8	3,070.2	3,291.4	3,506.3	3,111.0	2,542.1	2,336.1
45	2,424.8	2,803.0	2,049.5	2,339.9	3,528.9	2,938.2	1,801.3	2,719.8	3,062.6	1,947.5	2,291.1	3,931.2
46	2,518.9	2,204.7	2,595.0	3,555.7	2,251.2	2,769.5	2,931.4	2,358.4	4,124.2	2,048.6	2,868.5	2,052.5
47	2,794.0	2,433.5	4,043.3	2,366.8	1,950.9	2,755.9	3,107.8	2,815.8	3,946.4	3,619.7	2,424.9	2,652.3
48	2,725.3	2,960.6	2,161.7	3,685.3	1,682.2	2,458.4	2,738.1	3,480.6	3,618.6	2,158.7	2,496.7	3,088.5
49	4,314.5	2,224.6	3,039.2	2,862.2	2,615.6	2,122.2	2,707.0	3,151.9	4,432.0	2,312.2	2,765.4	2,358.9
50	2,704.3	3,564.0	3,109.4	2,391.4	3,282.4	4,300.7	2,223.8	4,204.6	2,977.1	2,626.1	2,555.5	1,956.9
51	3,161.7	2,400.4	1,693.3	2,023.5	2,604.5	4,115.3	3,990.3	3,253.6	3,099.7	2,873.9	2,249.9	2,889.8
52	2,266.7	1,917.5	2,190.3	2,822.2	2,468.5	2,426.1	3,454.6	2,505.5	2,385.3	2,786.3	2,921.5	2,477.4
53	4,736.6	2,364.0	2,144.8	2,806.2	2,490.5	2,167.7	3,667.2	2,488.5	3,185.6	1,778.6	2,971.6	4,097.9
54	2,894.0	2,592.5	2,581.5	2,329.0	1,918.2	2,757.2	3,863.6	2,294.5	3,037.9	3,610.4	2,832.4	3,561.2
55	3,888.8	4,610.5	2,291.3	2,960.0	2,993.2	3,312.9	2,892.8	2,249.0	4,106.2	2,228.2	1,991.0	2,513.2
56	2,999.9	2,234.6	3,267.2	2,400.3	2,695.4	2,333.2	2,571.6	2,987.2	4,008.8	4,304.5	3,336.2	2,212.1
57	5,274.8	2,369.2	3,553.3	3,022.2	2,936.6	3,436.1	2,695.3	2,783.9	3,766.8	2,084.6	2,350.5	2,358.5
58	2,827.6	3,866.4	4,820.1	1,699.2	3,490.4	2,361.2	2,776.4	2,339.4	3,662.4	2,425.6	3,124.9	3,355.8
59	2,557.9	2,834.8	2,468.6	3,673.0	3,008.0	1,978.9	2,049.4	3,440.1	3,264.6	2,040.6	3,666.5	2,113.5
60	3,072.5	1,974.9	1,957.9	4,847.6	2,526.6	2,717.2	2,350.4	2,686.2	3,549.9	2,665.4	2,483.7	3,802.5
61	3,020.0	2,086.6	2,844.9	2,331.8	2,664.2	3,040.4	2,297.3	2,936.7	2,874.7	2,066.5	2,349.8	3,129.5
62	3,731.9	3,370.0	2,392.3	4,325.1	2,412.9	2,067.2	2,171.6	2,398.9	2,965.3	2,346.2	2,792.8	3,062.9
63	2,297.5	2,915.1	2,033.5	2,290.8	2,343.3	2,327.0	2,097.3	2,331.4	2,917.3	3,201.8	4,192.8	2,906.3
64	3,437.5	3,462.5	3,082.1	1,872.2	1,682.2	2,048.8	2,918.3	3,711.3	4,419.7	2,738.2	2,048.5	3,222.6
Min	288.2	29.3	21.1	16.2	80.1	11.1	100.5	55.7	287.7	40.2	43.4	111.1
Avg	3,046.5	2,700.2	2,720.8	2,635.3	2,744.8	2,593.7	2,736.1	2,695.1	3,441.5	2,484.2	2,665.0	2,817.9
Max	5,333.0	4,610.5	4,907.7	4,847.6	5,136.9	4,300.7	4,618.1	4,574.2	5,376.2	4,304.5	4,192.8	4,688.9

Stream ID	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
0	126.5	15.4	18.4	22.7	100.0	414.3	106.5	40.4	344.7	40.6	31.9	66.9
1	2,775.1	2,772.8	2,734.4	2,632.0	2,485.9	3,366.6	2,493.4	3,922.6	959.4	2,520.2	27.8	55.8
2	2,312.4	3,512.5	1,953.7	3,558.0	5,185.9	1,837.3	3,151.6	1,872.5	3,635.5	3,575.0	29.4	65.5
3	1,821.6	2,386.3	2,545.0	2,173.6	3,034.0	3,346.4	2,492.8	2,567.8	2,656.3	2,314.4	33.6	68.4
4	2,111.4	2,938.4	2,777.3	2,827.9	2,572.8	1,985.8	3,616.4	2,819.5	5,692.4	2,680.4	31.4	62.9
5	2,993.8	2,209.3	4,692.5	2,436.0	2,532.3	3,790.0	3,708.5	2,248.0	1,081.8	2,389.5	30.2	68.8
6	3,471.1	2,308.2	3,408.1	2,086.0	2,423.9	2,944.7	2,218.1	2,322.9	3,100.5	2,899.5	33.8	67.0
7	2,145.0	2,229.5	2,174.1	1,785.1	3,839.2	1,322.2	3,166.0	3,070.8	4,712.0	3,438.0	34.3	69.9
8	2,293.8	2,075.2	3,051.8	2,763.2	3,657.6	2,127.5	647.1	2,956.3	2,335.7	2,058.2	36.2	73.4
9	4,659.0	2,263.5	2,581.5	3,429.9	3,139.2	2,309.3	2,775.4	3,539.6	4,442.3	2,644.0	36.3	82.2
10	2,833.8	2,518.0	4,458.8	2,309.0	3,458.9	3,283.1	2,175.1	2,434.0	3,527.7	2,169.8	34.3	69.4
11	1,728.6	4,667.1	1,099.2	3,327.4	3,744.5	4,090.1	2,351.5	2,728.8	2,347.1	3,589.0	36.7	66.5
12	2,692.5	2,261.9	2,308.9	2,738.0	3,842.9	2,563.0	1,979.1	2,151.4	2,135.2	2,657.8	33.5	63.8
13	1,810.0	1,603.4	2,083.0	2,431.8	4,750.5	2,114.9	2,972.2	2,330.4	1,848.8	3,672.5	35.3	68.3
14	2,629.9	2,118.5	3,640.6	2,092.9	2,998.8	2,201.2	2,625.5	3,394.6	3,494.9	3,025.5	37.0	65.8
15	2,158.6	2,243.2	2,845.7	1,445.5	2,927.6	2,723.5	1,804.1	1,854.5	2,702.5	2,493.4	32.7	67.5
16	2,149.7	3,401.2	1,992.1	2,951.8	2,256.4	2,128.9	2,173.1	2,956.6	4,449.9	3,727.9	32.0	76.7

Stream ID	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	RF1	RF2
17	1,571.0	2,514.5	3,646.7	4,625.6	2,676.9	2,706.3	2,292.9	2,301.7	2,460.6	1,961.6	33.1	71.1
18	2,929.9	1,628.8	2,324.9	3,190.1	2,985.2	1,626.5	2,906.9	3,690.6	3,099.4	2,771.0	31.8	68.8
19	2,745.2	3,860.7	2,970.7	3,636.9	2,713.2	1,976.2	2,381.9	2,313.5	2,539.3	2,865.3	31.8	62.7
20	3,894.6	2,680.4	4,738.5	1,790.4	3,684.5	3,637.9	3,586.1	2,528.3	1,995.6	2,762.9	31.1	69.0
21	2,030.3	4,649.8	2,434.7	2,859.3	2,801.7	2,096.8	3,543.5	1,852.5	2,675.0	2,151.0	34.8	70.8
22	2,982.8	4,686.8	1,923.7	1,901.7	3,475.7	2,518.6	2,647.6	2,337.7	2,982.0	2,595.6	36.7	80.5
23	2,282.7	2,681.5	4,553.0	2,787.8	2,744.8	2,694.4	2,511.2	2,172.3	2,431.2	2,585.9	37.3	72.1
24	2,489.8	3,612.5	2,731.0	3,359.3	2,493.2	3,764.4	2,337.7	2,359.9	3,854.4	2,549.8	34.6	74.5
25	3,195.8	3,348.8	2,026.4	2,714.1	1,914.5	1,900.7	2,182.2	2,967.0	2,443.6	2,464.5	39.6	70.6
26	2,269.6	3,597.6	1,654.9	3,010.5	2,405.4	2,186.0	2,821.8	3,416.9	2,621.6	3,002.2	37.6	63.3
27	2,338.8	2,037.5	2,495.5	2,223.0	4,815.6	2,279.9	3,347.1	2,100.4	3,720.1	2,748.6	31.5	74.7
28	3,056.4	2,397.3	2,495.5	2,878.1	1,863.2	2,620.4	2,176.7	3,112.1	4,025.9	4,591.1	31.8	80.7
29	1,971.9	1,874.3	2,341.2	2,541.7	3,032.5	3,143.3	2,660.6	2,409.0	1,917.5	3,195.8	31.6	61.3
30	3,853.6	2,754.7	3,039.5	1,997.7	4,697.4	2,925.8	2,711.5	2,566.5	2,521.6	3,327.0	32.0	77.2
31	2,679.0	2,694.1	2,317.5	2,434.2	2,161.6	2,462.7	3,104.7	2,865.3	3,892.6	3,166.3	33.9	75.1
32	2,690.2	2,182.6	2,448.2	3,340.4	3,919.8	1,856.8	2,345.3	2,348.4	1,976.1	2,796.9	31.4	74.3
33	2,222.4	3,330.9	2,468.9	4,735.9	2,865.2	1,899.5	2,333.4	2,010.9	2,289.0	2,072.7	30.4	76.9
34	4,247.3	3,608.0	1,883.3	2,032.9	2,007.0	2,357.6	2,311.9	1,799.6	2,638.0	2,872.0	32.1	82.8
35	2,828.4	2,499.4	2,296.0	2,958.8	4,913.1	2,733.1	2,432.7	3,302.0	2,800.4	3,270.4	30.8	86.3
36	3,116.6	2,244.0	2,352.4	2,764.5	4,626.8	2,023.0	3,451.7	2,011.0	4,366.6	2,886.6	33.5	77.0
37	2,919.2	4,354.1	2,338.8	2,220.5	2,773.0	2,229.9	2,975.1	3,385.8	2,204.1	3,226.2	31.6	73.0
38	1,737.3	3,191.6	2,286.1	2,997.4	2,531.2	2,074.5	2,499.0	3,000.0	1,960.7	2,513.7	33.3	69.1
39	2,326.6	3,081.6	3,156.6	2,849.9	2,132.3	1,939.8	3,058.6	3,636.7	3,190.5	1,992.8	31.9	76.7
40	3,329.8	2,792.8	4,335.7	2,352.6	3,316.3	2,253.2	3,572.0	2,777.5	3,072.4	2,746.4	34.8	71.6
41	2,338.8	3,057.6	2,211.7	2,587.2	2,995.7	3,754.0	1,974.9	2,648.1	2,242.2	3,431.4	36.4	75.8
42	2,787.9	2,413.9	3,040.9	2,831.5	2,454.4	3,681.6	2,343.2	3,008.8	4,091.7	2,114.3	31.7	69.5
43	1,985.8	3,704.6	2,357.5	2,889.8	4,673.3	2,206.9	3,011.8	2,393.7	4,567.0	2,894.4	37.9	66.6
44	2,262.4	2,450.6	2,312.7	2,161.8	2,982.3	2,653.5	2,164.7	2,107.9	2,413.3	2,380.3	31.8	77.5
45	1,917.5	3,070.6	2,786.6	3,199.2	2,842.7	2,105.4	3,383.7	3,365.6	4,057.2	2,606.8	39.7	70.0
46	3,089.0	2,268.5	3,713.1	3,125.1	2,550.8	2,654.3	3,719.5	2,138.9	4,219.2	2,460.0	32.0	72.2
47	3,146.7	2,050.1	3,015.9	2,335.8	2,396.7	3,453.5	2,217.6	2,423.0	3,339.0	2,577.1	32.2	74.5
48	2,285.6	2,303.1	2,661.7	1,607.7	2,271.5	4,546.4	2,781.7	3,579.8	3,838.3	3,617.9	30.2	77.2
49	1,809.0	2,323.3	3,402.0	2,771.0	2,969.0	3,158.9	3,886.5	2,188.4	3,590.4	2,274.5	41.5	75.2
50	3,762.4	2,023.3	2,438.2	2,208.8	3,040.1	2,761.9	3,046.0	2,904.4	3,058.2	2,137.0	31.1	73.5
51	2,700.7	2,569.7	3,796.7	2,708.8	2,854.6	3,540.0	2,081.8	2,414.1	3,500.9	2,708.7	33.2	70.3
52	1,801.2	3,577.9	4,229.1	3,578.2	2,847.5	3,645.0	2,058.5	3,116.9	2,424.6	3,188.9	34.0	69.3
53	2,200.1	2,768.7	3,205.8	3,262.5	3,087.2	2,442.7	2,578.7	2,193.7	3,214.3	3,252.4	32.6	90.0
54	2,295.2	2,784.6	2,835.2	2,545.1	3,946.0	2,127.5	3,302.0	1,922.2	4,976.7	2,145.8	36.2	80.6
55	2,314.1	2,570.5	2,131.9	2,336.5	2,866.4	2,526.3	2,207.7	3,943.8	2,879.0	2,434.3	32.2	89.3
56	1,717.8	2,303.9	2,295.6	4,656.5	3,307.8	3,297.7	2,472.0	2,283.0	2,519.1	2,101.8	32.3	74.5
57	2,127.5	3,768.9	1,891.5	3,588.3	2,593.6	2,121.7	1,937.5	2,747.0	3,046.7	2,302.9	34.3	74.3
58	2,231.3	1,968.6	2,243.4	3,690.8	3,147.1	2,691.5	2,589.5	2,388.8	2,406.4	2,287.9	43.7	76.2
59	3,518.1	4,756.8	2,256.1	3,094.5	2,971.3	1,796.9	2,344.8	3,047.8	3,379.2	2,906.4	32.3	76.2
60	2,158.6	2,833.1	3,284.3	4,351.1	2,776.3	1,533.8	2,493.2	2,274.0	2,960.2	3,185.9	31.3	75.9
61	2,963.6	3,482.3	3,850.6	4,904.0	2,999.5	4,266.1	2,199.8	2,068.2	1,792.0	3,106.2	34.1	68.2
62	2,372.4	3,717.6	2,423.3	2,334.5	3,341.0	1,988.3	2,167.6	4,960.4	3,031.3	2,064.0	31.6	69.4
63	3,470.6	3,685.9	2,283.6	5,036.2	3,495.8	2,922.4	2,429.8	2,152.7	2,424.2	2,928.5	35.6	74.4
64	2,045.6	2,259.2	3,810.7	2,825.3	2,576.9	4,975.7	2,499.9	2,279.5	2,471.8	2,778.1	34.3	68.3
Min	126.5	15.4	18.4	22.7	100.0	414.3	106.5	40.4	344.7	40.6	27.8	55.8
Avg	2,549.6	2,808.3	2,740.0	2,828.4	3,053.7	2,635.5	2,592.9	2,631.2	2,978.3	2,721.5	33.7	72.4
Max	4,659.0	4,756.8	4,738.5	5,036.2	5,185.9	4,975.7	3,886.5	4,960.4	5,692.4	4,591.1	43.7	90.0