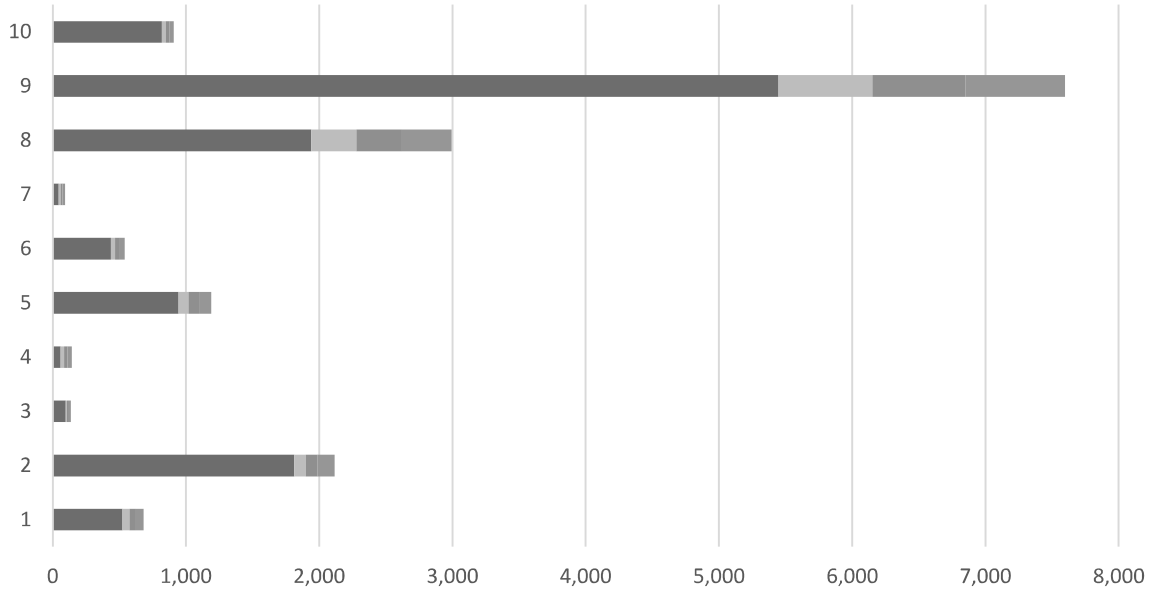




	<h2 style="text-align: center;">Dell EMC PowerEdge R6625</h2>		TPCx-AI	1.0.2
			TPC Pricing	2.8.0
			Report Date	Jun. 13, 2023
TPCx-AI Performance	Total System Cost	Price/Performance	Availability Date	
<b>3,258.01</b> <b>AIUCpm@1000</b>	<b>\$872,988 USD</b>	<b>\$267.96</b> <b>USD/AIUCpm@1000</b>	<b>June 13, 2023</b>	
Framework	Operating System	Other Software	Scale Factor	Streams
Cloudera SEL Data Platform Private Cloud Base Edition	Red Hat Enterprise Linux 8.6/8.7	N/A	1,000	4
<p style="text-align: center;">Use Case Time (sec.) by Phase <span style="float: right;">■ Training ■ Serving 1 ■ Serving 2 ■ Throughput (Avg)</span></p> 				
Physical Storage / Scale Factor	Scale Factor / Physical Memory	Main Data Redundancy Model		
214.56	0.12	Replication3, RAID 1		
Servers:	11			
Total Processors/Cores/Threads	22 / 704 / 1,344			
Server Type	1x PowerEdge R6625 (Master Node)	10x PowerEdge R6625 (Worker Node)		
Processors	2x AMD EPYC 9354 32-Core Processor	2x AMD EPYC 9354 32-Core Processor		
Memory	768 GiB	768 GiB		
Storage Controller	1x PERC H755 RAID Controller	1x PERC H755 RAID Controller		
Storage Device	1x 800 GB SAS SSD 1x 960 GB SAS SSD 2x Dell Ent. 1.92 TB NVMe	2x 800 GB SAS SSD (7 nodes) 2x 960 GB SAS SSD (3 nodes) 4x 3.84 TB SAS SSD (all nodes) 2x Dell Ent. 1.92 TB NVMe (all nodes)		
Network Controller	1x Broadcom Adv. Dual 25 Gb	1x Broadcom Adv. Dual 25 Gb		
Connectivity	1x Mellanox SN3420 100/25 GbE (Cluster Interconnect)			


		<h2 style="margin: 0;">Dell EMC PowerEdge R6625</h2>			TPCx-AI 1.0.2 TPC Pricing 2.8.0 Report Date Jun. 13, 2023	
Description	Part Number	Source	List Price	Qty	Extended Price	1-Yr. Maintenance
<b>Hardware</b>						
<b>PowerEdge R6625 Server - Primary Node</b>	210-BFXO	1	\$90,673.91	1	\$90,673.91	
2.5" Chassis with up to 10 SAS4/SATA Drives including 4 Universal Slots, Front PERC 11	321-BIIO	1	\$0.00	1		
SAS/SATA/NVMe Capable Backplane	379-BDSW	1	\$0.00	1		
No Rear Storage	379-BDTE					
No GPU Enablement	379-BDSR					
Trusted Platform Module 2.0 V3	461-AAIG	1	\$0.00	1		
AMD EPYC 9354 3.25GHz, 32C/64T, 256M Cache (280W) DDR5-4800	338-CGXN	1	\$0.00	1		
Additional Processor Selected	379-BDCO	1	\$0.00	1		
Heatsink for 2 CPU configuration	412-ABEE	1	\$0.00	1		
Performance Optimized	370-AHLL	1	\$0.00	1		
4800MT/s RDIMMs	370-AHCL	1	\$0.00	1		
32GB RDIMM, 4800MT/s Dual Rank	370-AGZP	1	\$0.00	24		
Unconfigured RAID	780-BCDS	1	\$0.00	1		
PERC H755 SAS Front	405-AAZB	1	\$0.00	1		
Front PERC Mechanical Parts, rear load	750-ADRI	1	\$0.00	1		
800GB SSD SAS ISE, MU, up to 24Gbps 512e 2.5in Hot-Plug, AG Drive	345-BEPV	1	\$0.00	1		
960GB SSD vSAS 12Gbps SED RI 512e 2.5in Hot-plug 1WPD	345-BHXD	1	\$0.00	1		
1.92TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier	400-BKGW	1	\$0.00	2		
Performance BIOS Settings	384-BBBL	1	\$0.00	1		
UEFI BIOS Boot Mode with GPT Partition	800-BBDM	1	\$0.00	1		
High Performance Fan x4	384-BDHQ	1	\$0.00	1		
Single, Hot-plug, Power Supply Non-Redundant (1+0), 1400W, Mixed Mode	450-AIQW	1	\$0.00	1		
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America	492-BBDI	1	\$0.00	2		
Riser Config 1, 1 x16 LP + 2 x16 LP	330-BCCX	1	\$0.00	1		
PowerEdge R6625 Motherboard	329-BHQD	1	\$0.00	1		
Broadcom 57414 Dual Port 10/25GbE SFP28, OCP NIC 3.0	540-BCOC	1	\$0.00	1		
Broadcom 5720 Dual Port 1GbE Optional LOM	540-BDKD	1	\$0.00	1		
TRAY,W/LBLS,X8/X10,R6625	321-BIGJ	1	\$0.00	1		
No Bezel	350-BBBW	1	\$0.00	1		
BOSS Blank	403-BCID	1	\$0.00	1		
Enterprise Linux OS, Non Factory Installed, Requires Subscription Selection	605-BBFL	1	\$0.00	1		
No Media Required	605-BBFN	1	\$0.00	1		
RHEL, 1-2SKT, Physical Node, 3YR Premium Sub, 1 Virtual Guest, Digitally Fulfilled	528-CHFH	1	\$0.00	1		
iDRAC9, Enterprise 16G	528-CTIC	1	\$0.00	1		
Secured Component Verification	528-COYT	1	\$0.00	1		
No Quick Sync	350-BBXM	1	\$0.00	1		
iDRAC,Factory Generated Password	379-BCSF	1	\$0.00	1		
iDRAC Group Manager, Disabled	379-BCQY	1	\$0.00	1		
ReadyRails Sliding Rails Without Cable Management Arm or Strain Relief Bar	770-BECD	1	\$0.00	1		
No Systems Documentation, No OpenManage DVD Kit	631-AACK	1	\$0.00	1		
PowerEdge R6625 Shipping	340-DDEC	1	\$10.00	1	\$10.00	
PowerEdge R6625 Shipping Material 4	340-DDCC	1	\$99.00	1	\$99.00	
PowerEdge R6625 CCC Marking, No CE Marking	470-AFOR	1	\$0.00	1		
Basic Next Business Day 36 Months	709-BBFM	1	\$186.76	1		\$186.76
ProSupport and Next Business Day Onsite Service Initial, 36 Month(s)	865-BBMY	1	\$8,559.30	1		\$8,559.30

(continued on the next page)

	<h2 style="margin: 0;">Dell EMC PowerEdge R6625</h2>				TPCx-AI 1.0.2 TPC Pricing 2.8.0 Report Date Jun. 13, 2023
	(continued from the previous page)				
	Description	Part Number	Source	List Price	Qty
<b>PowerEdge R6625 Server - Worker Nodes Type 1</b>	210-BFXO	1	\$117,263.33	3	\$351,789.99
2.5 Chassis	379-BDTF	1	\$0.00	3	\$0.00
SAS/SATA/NVMe Capable Backplane	379-BDSW	1	\$0.00	3	\$0.00
No Rear Storage	379-BDTE	1	\$0.00	3	\$0.00
No GPU Enablement	379-BDSR	1	\$0.00	3	\$0.00
Trusted Platform Module 2.0 V3	461-AAIG	1	\$0.00	3	\$0.00
2.5" Chassis with up to 10 SAS4/SATA Drives including 4 Universal Slots, Front PERC 11	321-BIIO	1	\$0.00	3	\$0.00
AMD EPYC 9354 3.25GHz, 32C/64T, 256M Cache (280W) DDR5-4800	338-CGXN	1	\$0.00	3	\$0.00
Additional Processor Selected	379-BDCO	1	\$0.00	3	\$0.00
Heatsink for 2 CPU configuration	412-ABEE	1	\$0.00	3	\$0.00
Performance Optimized	370-AHLL	1	\$0.00	3	\$0.00
4800MT/s RDIMMs	370-AHCL	1	\$0.00	3	\$0.00
32GB RDIMM, 4800MT/s Dual Rank	370-AGZP	1	\$0.00	72	\$0.00
Unconfigured RAID	780-BCDS	1	\$0.00	3	\$0.00
PERC H755 SAS Front	405-AAZB	1	\$0.00	3	\$0.00
Front PERC Mechanical Parts, rear load	750-ADR1	1	\$0.00	3	\$0.00
960GB SSD vSAS 12Gbps SED RI 512e 2.5in Hot-plug 1WPD	345-BHXD	1	\$0.00	6	\$0.00
3.84TB SSD vSAS Mixed Use 12Gbps 512e 2.5in Hot-Plug ,AG Drive SED, 3DWPD	345-BCVR	1	\$0.00	12	\$0.00
1.92TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier	400-BKGW	1	\$0.00	6	\$0.00
Performance BIOS Settings	384-BBBL	1	\$0.00	3	\$0.00
UEFI BIOS Boot Mode with GPT Partition	800-BBDM	1	\$0.00	3	\$0.00
High Performance Fan x4	384-BDHQ	1	\$0.00	3	\$0.00
Dual, Hot-plug, Power Supply Redundant (1+1), 1400W, Mixed Mode, NAF	450-AIQZ	1	\$0.00	3	\$0.00
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America	492-BBDI	1	\$0.00	6	\$0.00
Riser Config 1, 1 x16 LP + 2 x16 LP	330-BCCX	1	\$0.00	3	\$0.00
PowerEdge R6625 Motherboard	329-BHQD	1	\$0.00	3	\$0.00
Broadcom 57414 Dual Port 10/25GbE SFP28, OCP NIC 3.0	540-BCOC	1	\$0.00	3	\$0.00
Broadcom 5720 Dual Port 1GbE Optional LOM	540-BDKD	1	\$0.00	3	\$0.00
TRAY,W/LBLS,X8/X10,R6625	321-BIGJ	1	\$0.00	3	\$0.00
No Bezel	350-BBBW	1	\$0.00	3	\$0.00
BOSS Blank	403-BCID	1	\$0.00	3	\$0.00
Enterprise Linux OS, Non Factory Installed, Requires Subscription Selection	605-BBFL	1	\$0.00	3	\$0.00
No Media Required	605-BBFN	1	\$0.00	3	\$0.00
RHEL, 1-2SKT, Physical Node, 3YR Premium Sub, 1 Virtual Guest, Digitally Fulfilled	528-CHFH	1	\$0.00	3	\$0.00
iDRAC9, Enterprise 16G	528-CTIC	1	\$0.00	3	\$0.00
Secured Component Verification	528-COYT	1	\$0.00	3	\$0.00
No Quick Sync	350-BBXM	1	\$0.00	3	\$0.00
iDRAC,Factory Generated Password	379-BCSF	1	\$0.00	3	\$0.00
iDRAC Group Manager, Disabled	379-BCQY	1	\$0.00	3	\$0.00
ReadyRails Sliding Rails Without Cable Management Arm or Strain Relief Bar	770-BECD	1	\$0.00	3	\$0.00
No Systems Documentation, No OpenManage DVD Kit	631-AACK	1	\$0.00	3	\$0.00
PowerEdge R6625 Shipping	340-DDEC	1	\$0.00	3	\$0.00
PowerEdge R6625 Shipping Material 4	340-DDCC	1	\$0.00	3	\$0.00
PowerEdge R6625 CCC Marking, No CE Marking	470-AFOR	1	\$0.00	3	\$0.00
Basic Next Business Day 36 Months	709-BBFM	1	\$186.76	3	\$560.28
ProSupport and Next Business Day Onsite Service Initial, 36 Month(s)	865-BBMY	1	\$8,559.30	3	\$25,677.90
(continued on the next page)					

	<h1 style="text-align: center;">Dell EMC PowerEdge R6625</h1>		TPCx-AI	1.0.2		
			TPC Pricing	2.8.0		
			Report Date	Jun. 13, 2023		
(continued from the previous page)						
Description	Part Number	Source	List Price	Qty	Extended Price	1-Yr. Maintenance
<b>PowerEdge R6625 Server - Worker Nodes Type 2</b>	210-BFXO	1	\$118,791.37	7	\$831,539.59	
2.5 Chassis	379-BDTF	1		7	\$0.00	
SAS/SATA/NVMe Capable Backplane	379-BDSW	1		7	\$0.00	
No Rear Storage	379-BDTE	1		7	\$0.00	
No GPU Enablement	379-BDSR	1		7	\$0.00	
Trusted Platform Module 2.0 V3	461-AAIG	1		7	\$0.00	
2.5" Chassis with up to 10 SAS4/SATA Drives including 4	321-BIIO	1		7	\$0.00	
Universal Slots, Front PERC 11						
AMD EPYC 9354 3.25GHz, 32C/64T, 256M Cache (280W) DDR5-4800	338-CGXN	1		7	\$0.00	
Additional Processor Selected	379-BDCO	1		7	\$0.00	
Heatsink for 2 CPU configuration	412-ABEE	1		7	\$0.00	
Performance Optimized	370-AHLL	1		7	\$0.00	
4800MT/s RDIMMs	370-AHCL	1		7	\$0.00	
32GB RDIMM, 4800MT/s Dual Rank	370-AGZP	1		168	\$0.00	
Unconfigured RAID	780-BCDS	1		7	\$0.00	
PERC H755 SAS Front	405-AAZB	1		7	\$0.00	
Front PERC Mechanical Parts, rear load	750-ADRI	1		7	\$0.00	
SanDisk 16GB Ultra Flair USB 3.0 Flash Drive	SDCZ73-016G-G46	3	\$7.49	3	\$22.47	
800GB SSD SAS ISE, MU, up to 24Gbps 512e 2.5in Hot-Plug, AG Drive	345-BEPV	1		14	\$0.00	
3.84TB SSD vSAS Mixed Use 12Gbps 512e 2.5in Hot-Plug,AG Drive SED, 3DWPD	345-BCVR	1S		28	\$0.00	
1.92TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier	400-BKGW	1		14	\$0.00	
Performance BIOS Settings	384-BBBL	1		7	\$0.00	
UEFI BIOS Boot Mode with GPT Partition	800-BBDM	1		7	\$0.00	
High Performance Fan x4	384-BD HQ	1		7	\$0.00	
Dual, Hot-plug, Power Supply Redundant (1+1), 1400W, Mixed Mode, NAF	450-AIQZ	1		7	\$0.00	
C13 to C14, PDU Style, 12 AMP, 6.5 Feet (2m) Power Cord, North America	492-BBDI	1		14	\$0.00	
Riser Config 1, 1 x16 LP + 2 x16 LP	330-BCCX	1		7	\$0.00	
PowerEdge R6625 Motherboard	329-BHQD	1		7	\$0.00	
Broadcom 57414 Dual Port 10/25GbE SFP28, OCP NIC 3.0	540-BCOC	1		7	\$0.00	
Broadcom 5720 Dual Port 1GbE Optional LOM	540-BDKD	1		7	\$0.00	
TRAY,W/LBLS,X8/X10,R6625	321-BIGJ	1		7	\$0.00	
No Bezel	350-BBBW	1		7	\$0.00	
BOSS Blank	403-BCID	1		7	\$0.00	
Enterprise Linux OS, Non Factory Installed, Requires Subscription Selection	605-BBFL	1		7	\$0.00	
No Media Required	605-BBFN	1		7	\$0.00	
RHEL, 1-2SKT, Physical Node, 3YR Premium Sub, 1 Virtual Guest, Digitally Fulfilled	528-CHF H	1		7	\$0.00	
iDRAC9, Enterprise 16G	528-CTIC	1		7	\$0.00	
Secured Component Verification	528-COYT	1		7	\$0.00	
No Quick Sync	350-BBXM	1		7	\$0.00	
iDRAC,Factory Generated Password	379-BCSF	1		7	\$0.00	
iDRAC Group Manager, Disabled	379-BCQY	1		7	\$0.00	
ReadyRails Sliding Rails Without Cable Management Arm or Strain Relief Bar	770-BECD	1		7	\$0.00	
No Systems Documentation, No OpenManage DVD Kit	631-AACK	1		7	\$0.00	
PowerEdge R6625 Shipping	340-DDEC	1		7	\$0.00	
PowerEdge R6625 Shipping Material 4	340-DDCC	1		7	\$0.00	
PowerEdge R6625 CCC Marking, No CE Marking	470-AFOR	1		7	\$0.00	
Basic Next Business Day 36 Months	709-BBFM	1	\$186.76	7		\$1,307.32
ProSupport and Next Business Day Onsite Service Initial, 36 Month(s)	865-BBMY	1	\$8,559.30	7		\$59,915.10
Keyboard and Optical Mouse, USB, Black, English	570-AAKV, 580-ADJC	1	\$12.00	1	\$12.00	
Dell 24 Monitor	210-AIWG	1	\$169.99	1	\$169.99	
Mellanox MSN3420-CB2F 25GbE/100GbE Switch	920-9N213-00F7-0X0	2	\$16,661.00	1	\$16,661.00	
NVIDIA ENT Business Critical Support	780-C34N4Z+P2CMI12	2	\$2,667.00	1		\$2,667.00
ServNVIDIA ENT Business Critical Support Services 4HR On-Site CE for SN3420 - 12.0 Months						
				<b>Subtotal</b>	<b>\$1,290,977.95</b>	<b>\$98,873.66</b>
(continued on the next page)						

	<h2 style="text-align: center;">Dell EMC PowerEdge R6625</h2>		TPCx-AI	1.0.2		
			TPC Pricing	2.8.0		
			Report Date	Jun. 13, 2023		
(continued from the previous page)						
Description	Part Number	Source	List Price	Qty	Extended Price	1-Yr. Maintenance
	AB242979		1 \$15,000.00	1	\$15,000.00	
Cloudera SEL Data Platform Private Cloud Base Edition, Annual Subscription per compute node, Business Level Support						
	AB352445		1 \$15,229.50	10	\$152,295.00	
Cloudera SEL Data Platform Private Cloud Base Edition, Annual Subscription per storage node, Business Level Support						
RHEL, 1-2SKT, Physical Node, 1YR Premium Sub, 1 Virtual Guest, Digitally Fulfilled	528-CHFJ		1 \$1,299.00	11	\$14,289.00	
				<b>Subtotal</b>	<b>\$181,584.00</b>	<b>\$0.00</b>
				<b>Total</b>	<b>\$1,472,561.95</b>	<b>\$98,873.66</b>
				<b>Large Purchase Discount (45%)*</b>	<b>-\$655,155.43</b>	<b>-\$43,293.00</b>
Pricing: 1 = Dell; 2 = NVIDIA; 3 = Amazon * Discount applies to all line items where Key = 1. Discount based upon total system cost as purchased by a regular customer. S: One or more components of the measured configuration have been substituted in the priced configuration. See the FDR for details. <b>Audited by Doug Johnson, InfoSizing</b>			<b>Total System Cost (USD): \$872,988</b> <b>AIUCpm@1000: 3,258.01</b> <b>\$/AIUCpm@1000: \$267.96</b>			
<i>Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated Line Items. 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 Line Items. For complete details, see the pricing section of the TPC Benchmark Standard. If you find that the stated prices are not available according to these terms, please inform the TPC at <a href="mailto:pricing@tpc.org">pricing@tpc.org</a>. Thank you.</i>						

	<h2 style="text-align: center;">Dell EMC PowerEdge R6625</h2>		TPCx-AI	1.0.2
			TPC Pricing	2.8.0
			Report Date	Jun. 13, 2023
<u>Numerical Quantities</u>				
<b>AIUCpm@1000</b>	<b>3,258.01</b>	$T_{Load}$	927.49	
Scale Factor	1,000	$T_{LD}$	927.49	
Streams	4	$T_{PTT}$	492.14	
Kit Version	1.0.2	$T_{PST1}$	57.00	
Execution Status	Pass	$T_{PST2}$	57.36	
Accuracy Status	Pass	$T_{PST}$	57.36	
		$T_{TT}$	43.93	
Test Times				
Overall Run Start Time	2023-06-07 22:35:25.028			
Overall Run End Time	2023-06-08 04:20:10.222			
Overall Run Elapsed Time	20,685.194			
Load Test Start Time	2023-06-07 23:17:13.748			
Load Test End Time	2023-06-07 23:32:43.409			
Load Test Elapsed Time	929.661			
Power Training Start Time	2023-06-07 23:32:43.411			
Power Training End Time	2023-06-08 02:54:56.659			
Power Training Elapsed Time	12,133.248			
Power Serving 1 Start Time	2023-06-08 02:54:56.662			
Power Serving 1 End Time	2023-06-08 03:17:56.895			
Power Serving 1 Elapsed Time	1,380.233			
Power Serving 2 Start Time	2023-06-08 03:17:56.898			
Power Serving 2 End Time	2023-06-08 03:41:00.813			
Power Serving 2 Elapsed Time	1,383.915			
Scoring Start Time	2023-06-08 03:45:30.011			
Scoring End Time	2023-06-08 03:50:41.962			
Scoring Elapsed Time	311.951			
Throughput Start Time	2023-06-08 03:50:41.966			
Throughput End Time	2023-06-08 04:20:10.221			
Throughput Elapsed Time	1,768.255			

	<h2>Dell EMC PowerEdge R6625</h2>	TPCx-AI	1.0.2
		TPC Pricing	2.8.0
		Report Date	Jun. 13, 2023

Numerical Quantities (continued)

Use Case Times & Accuracy

Use Case	Training (sec)	Serving 1 (sec)	Serving 2 (sec)	Throughput (avg)	Accuracy
UC01	523.703	51.215	49.736	56.083	0.000
UC02	1,813.764	85.354	88.783	129.274	0.438
UC03	95.795	12.443	12.811	13.840	4.575
UC04	59.080	25.475	25.489	31.016	0.712
UC05	943.023	76.289	78.351	91.615	0.033
UC06	435.865	33.135	33.071	37.121	0.214
UC07	43.585	15.317	15.300	17.143	1.653
UC08	1,940.283	338.579	341.811	372.418	0.750
UC09	5,448.735	703.291	699.631	745.458	1.000
UC10	818.635	28.326	28.190	31.162	0.817

Use Case Serving Times (sec.)

