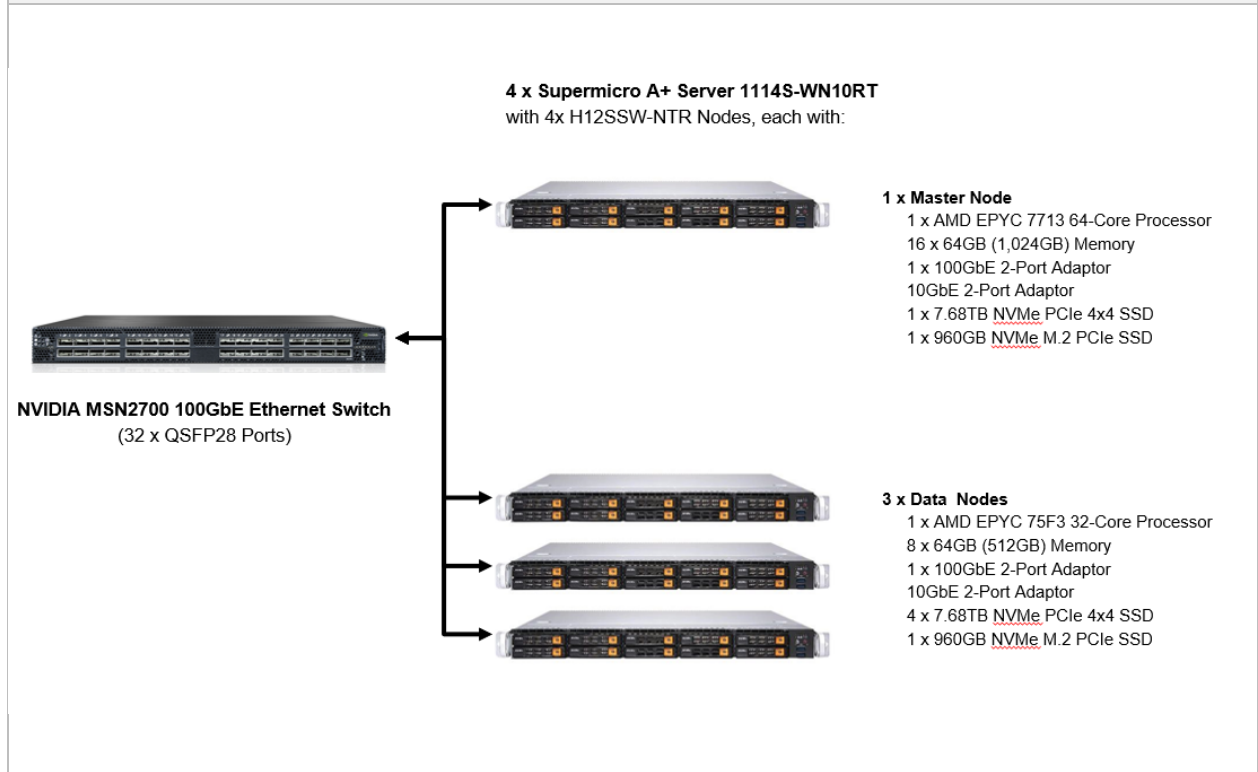


	<h1>Machbase 6.5.1</h1>	TPCx-IoT	2.0.0
		TPC Pricing	2.6.0
		Report Date	April. 02, 2021

Total System Cost	TPCx-IoT Performance Metric	Price/Performance
<b>\$302,788 USD</b>	<b>3,410,800.16 IoTps</b>	<b>\$88.78 USD/kIoTps</b>

Servers	Operating System	Other Software	Availability Date
Supermicro A+ Server 1114S-WN10RT	Red Hat Enterprise Linux Server Release 8.3	None	Mar 16, 2021

System Under Test Configuration Overview





**Total Servers:** 4x Supermicro A+ Server 1114S-WN10RT (with 4x H12SSW-NTR Nodes)

**Total Processors/Cores/Threads:** 4/160/320

Server Configuration:	1x Master Node	3x Data Nodes
Processor	1x AMD EPYC 7713 (2.00GHz, 64-core, 256 MB L3)	1x AMD EPYC 75F3 (2.95GHz, 32-core, 256 MB L3)
Memory	1,024 GB	512 GB
Storage Device	1x 960GB NVMe M.2 PCIe SSD Gen3 1x 7.68TB NVMe PCIe SSD Gen4	1x 960GB NVMe M.2 PCIe SSD Gen3 4x 7.68TB NVMe PCIe SSD Gen4
Network Controller	1x Mellanox MT27800 Family 100GbE 1x Broadcom BCM57416 NetXtreme-E Dual-Media 10GbE	1x Mellanox MT27800 Family 100GbE 1x Broadcom BCM57416 NetXtreme-E Dual-Media 10GbE

**Connectivity**  
**Total Rack Units:** NVIDIA MSN2700 100GbE Switch (4x 1114S-WN10RT) + (1x MSN2700) = (4x1) + (1x1) = 5 RU

		<h1>Machbase 6.5.1</h1>			TPCx-IoT	2.0.0
					TPC Pricing	2.6.0
					Report Date	April. 02, 2021
Description	Part Number	Source	List Price (USD)	Qty	Extended Price (USD)	3 yr. Maint. Price (USD)
<b>Server Hardware</b>						
Supermicro A+ Server 1114S-WN10RT	MBD-H12SSW-NTR	1	1,506.00	4	6,024.00	
AMD EPYC 7713 64-Core Processor	-	1	5,070.00	1	5,070.00	
AMD EPYC 75F3 32-Core Processor	-	1	4,920.00	3	14,760.00	
Supermicro 64GB DDR4-3200(PC4-25600)	MEM-DR464L-HL02-BR32	1	277.00	40	11,080.00	
Kioxia CD6 7.68TB NVMe PCIe 4x4	HDS-TUN0-KCD6XLUL7T68	1	990.00	13	12,870.00	
Mellanox Technologies MT27800 Family [ConnectX-5] Dual-port 100GbE card	-	1	1,060.00	4	4,240.00	
Micron 7300 PRO 960GB PCIe NVMe M.2	HDS-MMN-MTFDHBA960TDF1AW	1	130.00	4	520.00	
ASSEMBLY FEE	MC0037	1	-	1	-	
Maintenance - 7x24x4 Care Pack (3-yrs)	OS4HR3	1	2,000.00	4	-	8,000.00
<b>Sub-Total</b>					<b>54,564.00</b>	<b>8,000.00</b>
<b>Network</b>						
NVIDIA MSN2700-CS2F Spectrum 100GbE 1U Open Ethernet Switch	MSN2700-CS2F	2	33,003.00	1	33,003.00	
Mellanox MCP1600-E002E30 Passive NVIDIA MCP1600-C001E30N Direct Attach Copper Cable Ethernet 100GbE QSFP28 1m Black 30AWG CA-N	MCP1600-C001E30N	2	85.00	6	510.00	
Mellanox Technical Support and Warranty - Silver 3 Year with 4 Hours On-Site Support for SN2000 Series Switch	SUP-SN2000-3S-4H	3	1,981.00	1		1,981.00
<b>Sub-Total</b>					<b>33,513.00</b>	<b>1,981.00</b>
<b>Software</b>						
Red Hat Enterprise Linux Server8.3 with Premium Support 1 Year	RH00003	4	1,299.00	12		15,588.00
Machbase v6.5.1 Cluster Edition (includes 1y 7x24x4 Technical Support) (1Set = 4Node)	-	5	170,000.00	1	170,000.00	
Machbase v6.5.1 Cluster Edition 7x24x4 Technical Support	-	5	25,500.00	2		51,000.00
<b>Sub-Total</b>					<b>170,000.00</b>	<b>66,588.00</b>
<b>Infrastructure</b>						
HP EliteDisplay E190i 18.9-inch LED Backlit IPS Monitor (w/ spares)	E4U30A8#ABA	6	179.00	3	537.00	
HP C2500 Desktop(Keyboard and Mouse) (w/ spares)	H3C53AA#ABA	6	35.00	3	105.00	
<b>Sub-Total</b>					<b>642.00</b>	<b>-</b>
<b>Discounts*</b>						
Machbase v6.5.1 Cluster Edition (includes 1y 7x24x4 Technical Support)	-				(25,000.00)	
Machbase v6.5.1 Cluster Edition 7x24x4 Technical Support	-					(7,500.00)
<b>Sub-Total</b>					<b>(25,500.00)</b>	<b>(7,500.00)</b>
<b>Total</b>					<b>\$233,719.00 USD</b>	<b>\$69,069.00 USD</b>
<b>Price Source</b>						
1) Super Micro Computer Inc. 2) NVIDIA Inc. 3) Mellanox Technologies Inc. 4) Red Hat Inc. 5) Machbase Inc. 6) Hewlett Packard Inc.						
<b>Audited by Pre-Publication Board</b>						
*All discounts are based on US list prices and for similar quantities and configurations. Discounts for similarly sized configurations will be similar to those quoted here, but may vary based on the components in the configuration.						
					<b>Three-Year Cost of Ownership: \$302,788 USD</b>	
					<b>IoTps: 3,410,800.16</b>	
					<b>USD/kIoTps: \$88.78 USD</b>	
<p><i>Prices used in TPC benchmarks must reflect the actual prices a customer would pay for purchase of the components in all regions specified in the result. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing conventions for the listed components. For complete details, see the pricing section of the TPC benchmark specification. If you find that stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.</i></p>						

	<h1>Machbase 6.5.1</h1>	<table border="0"> <tr> <td>TPCx-IoT</td> <td style="text-align: right;">2.0.0</td> </tr> <tr> <td>TPC Pricing</td> <td style="text-align: right;">2.6.0</td> </tr> <tr> <td>Report Date</td> <td style="text-align: right;">April. 02, 2021</td> </tr> </table>	TPCx-IoT	2.0.0	TPC Pricing	2.6.0	Report Date	April. 02, 2021
TPCx-IoT	2.0.0							
TPC Pricing	2.6.0							
Report Date	April. 02, 2021							
<h2>Numerical Quantities</h2>								
<p>Scale Factor</p>	<p>6440000000</p>							
<p>Performance Run (Run2)</p>								
<p>Warmup Run Start Time</p>	<p>2021-03-03 02:02:07.000</p>							
<p>Warmup Run End Time</p>	<p>2021-03-03 02:32:50.000</p>							
<p>Warmup Run Elapsed Time</p>	<p>1,841.657</p>							
<p>Measured Run Start Time</p>	<p>2021-03-03 02:32:50.000</p>							
<p>Measured Run End Time</p>	<p>2021-03-03 03:04:19.000</p>							
<p>Measured Run Elapsed Time</p>	<p>1,888.120</p>							
<p>Performance Metric (IoTps)</p>	<p><b>3,410,800.16</b></p>							
<p>Repeatability Run (Run1)</p>								
<p>Warmup Run Start Time</p>	<p>2021-03-03 00:54:58.000</p>							
<p>Warmup Run End Time</p>	<p>2021-03-03 01:25:02.000</p>							
<p>Warmup Run Elapsed Time</p>	<p>1,802.580</p>							
<p>Measured Run Start Time</p>	<p>2021-03-03 01:25:02.000</p>							
<p>Measured Run End Time</p>	<p>2021-03-03 01:56:09.000</p>							
<p>Measured Run Elapsed Time</p>	<p>1,866.829</p>							
<p>Performance Metric (IoTps)</p>	<p>3,449,699.99</p>							



# Machbase 6.5.1

TPCx-IoT	2.0.0
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## Performance Run Report (Run2)

=====  
 TPCx-IoT Performance Metric (IoTps) Report  
 Test Run2 details : Total Time For Warmup Run In Seconds = 1,841.657  
 Test Run2 details : Total Time In Seconds = 1,888.120  
 Total Number of Records = 6440000000

TPCx-IoT Performance Metric (IoTps): 3410800.1610

## Repeatability Run Report (Run1)

=====  
 TPCx-IoT Performance Metric (IoTps) Report  
 Test Run1 details : Total Time For Warmup Run In Seconds = 1,802.580  
 Test Run1 details : Total Time In Seconds = 1,866.829  
 Total Number of Records = 6440000000

TPCx-IoT Performance Metric (IoTps): 3449699.9993

Summary details of the run reports are show above. For the complete run reports, see the [Supporting Files Archive](#).

	<h1>Machbase 6.5.1</h1>	<table> <tr> <td>TPCx-IoT</td> <td>2.0.0</td> </tr> <tr> <td>TPC Pricing</td> <td>2.6.0</td> </tr> <tr> <td>Report Date</td> <td>April. 02, 2021</td> </tr> </table>	TPCx-IoT	2.0.0	TPC Pricing	2.6.0	Report Date	April. 02, 2021
TPCx-IoT	2.0.0							
TPC Pricing	2.6.0							
Report Date	April. 02, 2021							

Revision History

Date	Edition	Description
March 15, 2021	First	Initial Publication
April 2, 2021	Second	Update Price Performance Metric