		TPC-C Version 5.11.0 TPC Pricing 2.6.0
TTA	# Goldilocks v3.1 Standard Edition on UNIWIDE RC2212	Report Date **2-Nov-2020**

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
₩ 222,550,000 (KRW)	**76,174 tpmC**	**2,922 KRW/tpmC**	**Available Now**

Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
2/20/40	**Goldilocks v3.1 Standard Edition**	**RHEL 7.8**	**JBoss Web Server**	**60,000**

1Gb Ethernet Switch

Web Application Server

2 x ATEC A6HGBCP
- 1 x Intel Xeon E3-1270 V5 3.60GHz
- 2 x 8GB Memory
- 1 x 1TB SATA HDD
- 1 x 250GB SATA SSD
- 1 x 1Gb Ethernet

Database Server

1 x UNIWIDE RC2212
- 2 x Intel Xeon Silver 4210 2.20GHz
- 24 x 32GB (768GB) Memory
- 2 x 1.2TB SAS HDD
- 1 x 16Gb 2-Port Host Bus Adaptor
- 1 x 2-port 10Gb Ethernet

Storage

1 x UNIWIDE FCH2800
- 16 x 32GB (512GB) Cache Memory
- 8 x 1.6TB FMD Drive
- 4 x 8/16Gb 8-Port Host Bus Adaptor

System Components	DB Server		WAS Server	
	Quantity	Description	Quantity	Description
Processors/Cores/Threads	2/20/40	Intel Xeon Silver 4210 2.20GHz	1/4/8	Intel Xeon E3-1270 V5 3.60GHz
Memory	24	32GB	2	8GB
Network	1 1	Intel® Ethernet Server Adapter I350 Intel® Ethernet Controller 10G X550T	1	Intel® Ethernet Connection I219-LM
Storage Controller	1 1 1	MegaRAID SAS-3 3108 C620 Series SATA Controller QLogic QLE2692 16Gb HBA	1	Intel® Sunrise Point-H SATA controller
Storage Device	2 8	1.2TB SAS HDD 1.6TB FMD SSD (External)	1 1	1TB SATA HDD 250GB SATA SSD
Total Storage Capacity		15.2TB		1.25 TB

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Description	Part Number	Source	Unit Price	Qty	Price	3-Yr. Maint. Price
Server Hardware						
1 x DB Server – Uniwide RC2212	SR285 K2	1	9,230,000	1	**9,230,000**	
Uni RC2212(800Wx2)_3.5x12_RAID 2GB	SVR-UNI-RC2212-0010	1	(included)	1		
Intel Xeon Silver 4210 10C/20T 2.2GHz 14MB 85W, SRFBL	CPU-S4200-IN-0030	1	(included)	2		
32GB DDR4-2666 R ECC	MEM-D4R26-SA-0030	1	(included)	24		
HDD SAS 12G 1.2TB 10K 2.5 인치 512e	HDD-SAS0-RP-0050	1	(included)	2		
FC Ctrl 16Gb/s 2CH QLE2692	HBA-16G2P-RP-0010	1	(included)	1		
CARD LAN Intel 10G 2port UTP	LAN-10G2PR-IN-0010	1	(included)	1		
Maintenance - 7x24x4 Care Pack (3-yrs)		1	(included)	1		
2 x WAS Servers (per server) - A6HGBDPNN	A6HGBDPNN	2	1,925,000		**3,850,000**	
Intel® Xeon® Processor XEON E3-1270V5, 3.6GHz		2	(included)	1		
DDR4 8GB (2400MHz / PC4 19000 / ECC / REG)		2	(included)	2		
Samsung 850EVO, 250GB, SATA3, TLC, MEX		2	(included)	1		
1TB, 7200RPM, 64M, SATAIII, ST1000DM010		2	(included)	1		
KUB-1407, USB, Black		2	(included)	1		
MUB-1407, USB, 1000DPI, Black		2	(included)	1		
Tower, 500W, ATX		2	(included)	1		
UTP CAT5e Ethernet Cable 1M		2	(included)	1		
Power Cord, NICETECH, 2.5M		2	(included)	1		
A6HGBDPNN 7x24x4 Care Pack (3-yrs)		2	(included)	1		
Server Hardware Sub Total					**13,080,000**	
Storage Hardware						
All Flash Storage - FCH2800	FCH2800	3	72,250,000	1	**72,250,000**	
FCH2800 Controller Device	T0001-0117-00	3	(included)	1		
Back-end Bus Adapter 12G SAS	T0001-0117-01	3	(included)	1		
16G 8-Port Host Bus Adapter	T0001-0117-02	3	(included)	4		
Cache Interconnect Adapter	T0001-0117-03	3	(included)	1		
Cache Memory DDR-3 (32GB)	T0001-0117-04	3	(included)	16		
FCH2800 Flash Disk Drive Expantion Unit	T0001-0117-05	3	(included)	1		
FCH2800 controller cpu Board	T0001-0117-06	3	(included)	1		
Rack 600x1200x2010 mm (WxDxH) 42U	T0001-0117-07	3	(included)	1		
Storage Management SW	T0001-0117-08	3	(included)	1		
UTP CAT5e Ethernet Cable 1M	61001-0001-00	3	(included)	1		
Power Cord, NICETECH, 2.5M	42119-0005-00	3	(included)	2		

1.6TB Flash Memory Disk Drive	T22601-0117-03	3	3,900,000	8	31,200,000	
3-yrs 24x7x4hrs Onsite Support Service		3	26,350,000	1		26,350,000
Storage Hardware Sub Total					**103,450,000**	**26,350,000**
Client/Server Software						
Red Hat Enterprise Linux Server Standard 3yrs	RH00004F3	4	4,098,000	3	12,294,000	
RHEL Server Standard Maintenance - 3yrs 24x7x4hrs	RSC-LSF3	4	6,000,000	3		18,000,000
Red Hat JBoss Web Server 4-Core Standard 3Year	MW00123F3	4	2,144,000	2	4,288,000	
JBoss Web Server per 16Core 3Year Maintenance	RSC-JSF3	4	12,000,000	2		24,000,000
Goldilocks v3.1 Standard Edition		5	96,000,000	1	96,000,000	
Goldilocks v3.1 Standard Edition Technical Supports		5	10,000,000	3		30,000,000
Software Sub Total					**112,582,000**	**72,000,000**
Other Hardware						
UbiQuoss uSafe3010-24T (10G, 24-port)(w/spares)	22917889	6	1,850,000	3	5,550,000	
Other Hardware Sub Total					**5,550,000**	
Discounts*						
SW Discount - Goldilocks					-64,000,000	-15,600,000
Red Hat OS Discount					-5,094,000	-12,000,000
Red Hat JBoss Discount					-1,768,000	-12,000,000
Discounts Sub Total					**-70,862,000**	**-39,600,000**
Total					**163,800,000**	**58,750,000**

Pricing Notes
1) UNIWIDE Technologies Inc.   4) Rockplace Inc.
2) ATECSYSTEM Co., Ltd.   5) Sunjesoft Inc.
3) UNIWIDE Technologies Inc.   6) UbiQuoss Inc.

All of the prices are based on South Korea's currency, KRW (₩, Korean Won) and excluded VAT.

* All discounts are based on Korea 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.

Three year cost of ownership KRW(₩):   222,550,000

TPC-C throughput: 76,174 tpmC

Price/Performance: 2,922 ₩ / tpmC

Benchmark implementation and results independantly audited by Doug Johnson of InfoSizing (www.sizing.com)

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

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MQTh, computed Maximum Qualified Throughput	**76,174 tpmC**	

Response Times (seconds)	**Min**	**Average**	**90th**	**Max**
New-Order	0.102	0.104	0.105	0.495
Payment	0.102	0.104	0.105	0.484
Order-Status	0.102	0.103	0.103	0.435
Delivery (interactive portion)	0.101	0.101	0.101	0.354
Delivery (deferred portion)	0.002	0.006	0.009	0.325
Stock-Level	0.102	0.103	0.104	0.499
Menu	0.101	0.102	0.102	0.503

Emulated Display Delay: 0.1 sec.

Transaction Mix	**Percent**	**Number**
New-Order	44.980%	31,993,327
Payment	43.011%	30,592,647
Order-Status	4.003%	2,846,997
Delivery	4.003%	2,847,317
Stock-Level	4.003%	2,847,380

Keying Times (seconds)	**Min**	**Average**	**Max**
New-Order	18.001	18.001	18.001
Payment	3.001	3.001	3.001
Order-Status	2.001	2.001	2.001
Delivery	2.001	2.001	2.001
Stock-Level	2.001	2.001	2.001

Think Times (seconds)	**Min**	**Average**	**Max**
New-Order	0.001	12.043	120.501
Payment	0.001	12.043	120.501
Order-Status	0.001	10.045	100.501
Delivery	0.001	5.026	50.301
Stock-Level	0.001	5.029	50.301

Test Duration	
Ramp-up time	65 min
Measurement Interval (MI)	420 min
Checkpoints in MI	15
Checkpoint Interval (Average / Max)	27.58 min / 27.59 min
Number of Transactions in MI (all types)	71,127,668