# Goldilocks v3.1 Standard Edition on KTNF KR580S2

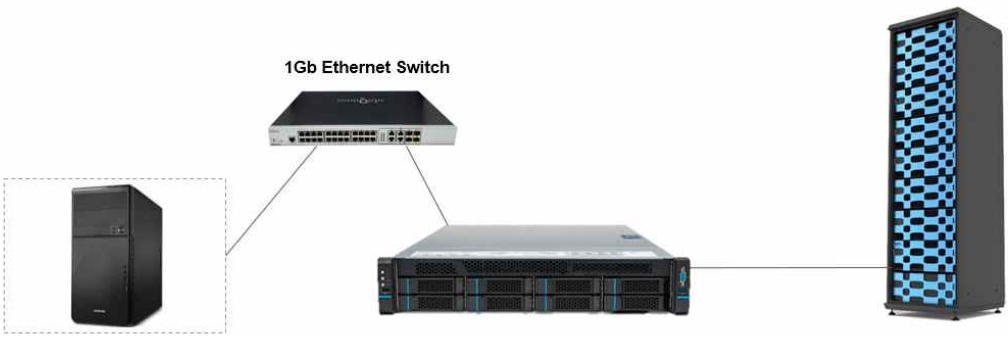
**TPC-C Version 5.11.0**
**TPC Pricing 2.7.0**

Report Date
**16-Dec-2021**

| Total System Cost | TPC-C Throughput | Price/Performance | Availability Date |
|---|---|---|---|
| **₩ 260,814,000 (KRW)** | **101,550 tpmC** | **2,569 KRW/tpmC** | **Available Now** |

| Server Processors/Cores/Threads | Database Manager | Operating System | Other Software | Number of Users |
|---|---|---|---|---|
| **2/36/72** | **Goldilocks v3.1 Standard Edition** | **RHEL 7.9** | **JBoss Web Server** | **80,000** |

## Priced Configuration (KTNF)




**Web Application Server**

**2 x HANSUNG DT-S170G1IV0**
- 1 x Intel(R) Core(TM) i7-10700K CPU @ 3.80GHz
- 1 x 32GB Memory
- 1 x 2TB SATA HDD
- 1 x 512GB SATA SSD
- 1 x 2-port 10G Ethernet
- 1 x 1G Ethernet

**Database Server**

**1 x KTNF KR580S2**
- 2 x Intel(R) Xeon(R) Gold 6354 CPU @ 3.00GHz
- 32 x 32GB (1,024GB) Memory
- 1 x 480GB SATA SSD
- 1 x 16Gb 2-Port Host Bus Adaptor
- 1 x single-port 1G Ethernet(Intel® Ethernet Controller I210-IT)

**Storage**

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

| System Components | DB Server | | WAS Server | |
|---|---|---|---|---|
| | Quantity | Description | Quantity | Description |
| Processors/Cores/Threads | 2/36/72 | Intel(R) Xeon(R) Gold 6354 CPU @ 3.00GHz | 1/8/16 | Intel(R) Core(TM) i7-10700K CPU @ 3.80GHz |
| Memory | 32 | 32GB | 1 | 32GB |
| Storage Controller | 1 | - EMULEX LightPulse LPe16002 HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter | | |
| Storage Device | 1<br>8 | 480GB SATA SSD<br>1.6TB FMD (External, Write back) | 1<br>1 | 1TB SATA HDD<br>512GB SATA SSD |
| Total Storage Capacity | | 14.8TB | | |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|---|---|---|

| Description | Part Number | Source | Unit Price | Qty | Price | 3-Yr. Maint. Price |
|---|---|---|---|---|---|---|
| **Server Hardware** | | | | | | |
| **KTNF KR580S2 Server** | KR580S2 | 1 | 30,470,000 | 1 | **30,470,000** | |
| 2U-12Bay, FH Riser (3slots PCIe Gen4.0 x16, x8, x8) x2, OCP3.0 slot x1, 1P 1G RJ-45, 1300W x2, Rail 1 | SYS | 1 | (included) | 1 | | |
| Intel Xeon Gold 6354 Processor (18C/36T 3.0GHz, 39MB, 205W) | CPU | 1 | (included) | 2 | | |
| 32GB DDR4 3200 RDIMM memory | RAM | 1 | (included) | 32 | | |
| Samsung 480GB, 2.5" SATA SSD | SSD | 1 | (included) | 1 | | |
| Emulex Dual port 16Gbps FC HBA Adapter | HBA | 1 | (included) | 1 | | |
| 3year, 24x7x4hr Onsite Support Service 1 | Maintenance | 1 | (included) | 1 | | |
| | | | | | | |
| **WAS Servers (per server) - DT-S170G1IV0 (w/spares)** | DT-S170G1IV0 | 2 | 1,551,000 | 4 | **6,204,000** | |
| Intel® Core Processor i7-10700K, 3.8GHz | - | 2 | (included) | 1 | | |
| DDR4 32GB, Samsung, UDIMM PC4-25600U | — | 2 | (included) | 1 | | |
| Seagate Barracuda ST2000DM008 2 TB 3.5" | - | 2 | (included) | 1 | | |
| HP SSD EX900 512GB | - | 2 | (included) | 1 | | |
| 2-port 10G Ethernet Controller | - | 2 | (included) | 1 | | |
| **Server Hardware Sub Total** | | | | | **36,674,000** | |
| | | | | | | |
| **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 | RP-CPS(OS) | 4 | 6,000,000 | 3 | | 18,000,000 |


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| | | | | | | |
|---|---|---|---|---|---|---|
| Red Hat JBoss Web Server 4-Core Standard 3Year | MW00123F3 | 4 | 2,144,000 | 4 | 8,576,000 | |
| JBoss Web Server per 4Core 3Year Maintenance | RP-CPS(WAS) | 4 | 12,000,000 | 4 | | 48,000,000 |
| 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** | | | | | **116,870,000** | **96,000,000** |
| | | | | | | |
| **Other Hardware** | | | | | | |
| UbiQuoss uSafe3010-24ps (10G, 24-port)(w/spares) | 22917889 | 6 | 1,900,000 | 3 | 5,700,000 | |
| **Other Hardware Sub Total** | | | | | **5,700,000** | |
| | | | | | | |
| **Discounts*** | | | | | | |
| Red Hat OS Discount | | | | | -5,094,000 | -12,000,000 |
| Red Hat JBoss Discount | | | | | -3,536,000 | -24,000,000 |
| SW Discount - Goldilocks | | | | | -64,000,000 | -15,600,000 |
| **Discounts Sub Total** | | | | | **-72,630,000** | **-51,600,000** |
| | | | | | | |
| | | | | | | |
| **Total** | | | | | **190,064,000** | **70,750,000** |

**Pricing Notes**

1) KTNF Inc.
2) Hansung Corporation.
3) UNIWIDE Technologies Inc.
4) Rockplace Inc.
5) Sunjesoft 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(₩): 260,814,000**

**TPC-C throughput: 101,550 tpmC**

**Price/Performance: 2,569 ₩ / 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 | 101,550 tpmC | |
|---|---|---|

| Response Times (seconds) | Min | Average | 90th | Max |
|---|---|---|---|---|
| New-Order | 0.102 | 0.104 | 0.105 | 4.915 |
| Payment | 0.102 | 0.104 | 0.105 | 1.446 |
| Order-Status | 0.102 | 0.103 | 0.103 | 1.282 |
| Delivery (interactive portion) | 0.101 | 0.101 | 0.101 | 0.723 |
| Delivery (deferred portion) | 0.002 | 0.006 | 0.008 | 5.092 |
| Stock-Level | 0.102 | 0.103 | 0.103 | 1.281 |
| Menu | 0.101 | 0.101 | 0.102 | 0.881 |

Emulated Display Delay: 0.1 sePc.

| Transaction Mix | Percent | Number |
|---|---|---|
| New-Order | 44.980% | 42,651,272 |
| Payment | 43.011% | 40,784,729 |
| Order-Status | 4.003% | 3,795,420 |
| Delivery | 4.003% | 3,796,002 |
| Stock-Level | 4.003% | 3,796,131 |

| Keying Times (seconds) | Min | Average | Max |
|---|---|---|---|
| New-Order | 18.001 | 18.001 | 18.004 |
| Payment | 3.001 | 3.001 | 3.012 |
| Order-Status | 2.001 | 2.001 | 2.011 |
| Delivery | 2.001 | 2.001 | 2.011 |
| Stock-Level | 2.001 | 2.001 | 2.010 |

| Think Times (seconds) | Min | Average | Max |
|---|---|---|---|
| New-Order | 0.001 | 12.046 | 120.501 |
| Payment | 0.001 | 12.044 | 120.501 |
| Order-Status | 0.001 | 10.054 | 100.501 |
| Delivery | 0.001 | 5.038 | 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 | 16 |
| Checkpoint Interval (Average / Max) | 26:11 min / 26:13 min |
| Number of Transactions in MI (all types) | 94,823,554 |


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