## System Under Test Configuration Overview

<table>
<thead>
<tr>
<th>Scale Factor</th>
<th>Hadoop Software</th>
<th>Operating System</th>
<th>Other Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>CDP Private Cloud Base Edition 7.1.6</td>
<td>SUSE Linux Enterprise Server 12 SP5</td>
<td>None</td>
</tr>
</tbody>
</table>

### Physical Storage/Scale Factor: 149.31

<table>
<thead>
<tr>
<th>Total Number of Servers:</th>
<th>Total Processors/Cores/Threads:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17 (16x AS-1114S-WN10RT; 1x AS-1114S-WTRT) 17/544/1,088</td>
</tr>
</tbody>
</table>

### Server Configuration:

**Processors**
- Per AS-1114S-WN10RT
  - 1x AMD EPYC 75F3
  - 256 GB

**Memory**
- 1x 1 TB NVMe (12 nodes)
- 1x 960 GB NVMe (4 nodes)
- 7x 3.84 TB NVMe (all nodes)

**Storage Device**
- 1x Mellanox Dual-port ConnectX-5 Ex 100 GbE (12 nodes)
- 1x Mellanox Dual-port ConnectX-5 100 GbE (4 nodes)
- 1x Broadcom Dual-port 10 GbE (all nodes)

**Network**
- 1x SSE-C3632R 32-port 100 GbE
- 1x E1031 48-port 1/10G...
### HARDWARE

#### Data Nodes
- **H12SSW-NTR**, CSE-116TS-R10, RoHS
  - Description: 32GB DDR4-2400 2Rx4 ECC REG DIMM
  - Price: $1,477.00
  - Qty: 1
  - Unit Price: $1,477.00
  - Extended Price: $1,477.00
- **Kioxia CM6 3.84TB NVMe PCle 4x4 2.5" 15mm SIE 1DWPD**
  - Price: $96,208.00
  - Qty: 1
  - Unit Price: $96,208.00
  - Extended Price: $96,208.00

#### Master Node
- **H12SSW-NT**, CSV-116TS-R604WBP
  - Description: 32GB DDR4-2400 2Rx4 ECC REG DIMM
  - Price: $1,304.00
  - Qty: 1
  - Unit Price: $1,304.00
  - Extended Price: $1,304.00

#### Network and Cables
- **E1031 48-port 1/10G Ethernet ToR switch**
  - Price: $1,675.00
  - Qty: 1
  - Unit Price: $1,675.00
  - Extended Price: $1,675.00

### ASSEMBLY FEE
- **MC0037**
  - Price: $25.00
  - Qty: 1
  - Unit Price: $25.00
  - Extended Price: $25.00

### 0% 3 YRS LABOR, 3 YRS PARTS, 1 YR CRS UNDER LIMITED WRNTY
- **EWCSC**
  - Price: (included)
  - Qty: 1
  - Unit Price: (included)
  - Extended Price: (included)

### On Site 4hrs 24x7x365 Support 3 Years with Extended Wrnty
- **OS4HR3**
  - Price: $454.36
  - Qty: 1
  - Unit Price: $454.36
  - Extended Price: $454.36

### ADDRESS FEE
- **MC0037**
  - Price: $25.00
  - Qty: 1
  - Unit Price: $25.00
  - Extended Price: $25.00

### Infrastructure
- **4U Enclosure system**
  - Price: $1,516.30
  - Qty: 1
  - Unit Price: $1,516.30

#### Spares, Accessories
- **ETHERNET, 100Gbe, PASSIVE, 1.5m, RoHS**
  - Price: $139.50
  - Qty: 1
  - Unit Price: $139.50
  - Extended Price: $139.50

### HARDWARE Subtotals
- **$275,085.87**
- **$10,407.17**

(continued next page)
TPCx-HS 2.0.3
Executive Summary
Supermicro Cluster
Report Date  Sep. 16, 2021

Supermicro Cluster

TPC Pricing 2.7.0
Supermicro

Three-Year Cost of Ownership: $885,866

HSph@3TB: 36.49

$ / HSph@3TB: $24,276.96

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 pricing@tpc.org. Thank you.
### Numerical Quantities

#### Performance Run – Run 2

<table>
<thead>
<tr>
<th>Scale Factor</th>
<th>3TB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Start Time</td>
<td>2021-08-27 21:26:23.000</td>
</tr>
<tr>
<td>Run End Time</td>
<td>2021-08-27 21:31:17.000</td>
</tr>
<tr>
<td>Run Elapsed Time</td>
<td>296.000</td>
</tr>
<tr>
<td>HSGen Start Time</td>
<td>2021-08-27 21:26:23.000</td>
</tr>
<tr>
<td>HSGen End Time</td>
<td>2021-08-27 21:27:26.000</td>
</tr>
<tr>
<td>HSGen Elapsed Time</td>
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<td>HSSort Start Time</td>
<td>2021-08-27 21:27:29.000</td>
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<td>HSSort End Time</td>
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<td>HSSort Elapsed Time</td>
<td>187.623</td>
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<tr>
<td>HSValidate Start Time</td>
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<td>HSValidate End Time</td>
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<tr>
<td>HSValidate Elapsed Time</td>
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</table>

#### Repeatability Run – Run 1

<table>
<thead>
<tr>
<th>Scale Factor</th>
<th>3TB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Start Time</td>
<td>2021-08-27 21:11:26.000</td>
</tr>
<tr>
<td>Run End Time</td>
<td>2021-08-27 21:16:18.000</td>
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<tr>
<td>Run Elapsed Time</td>
<td>294.000</td>
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<tr>
<td>HSGen Start Time</td>
<td>2021-08-27 21:11:26.000</td>
</tr>
<tr>
<td>HSGen End Time</td>
<td>2021-08-27 21:12:28.000</td>
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<tr>
<td>HSGen Elapsed Time</td>
<td>62.365</td>
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<tr>
<td>HSSort Start Time</td>
<td>2021-08-27 21:12:31.000</td>
</tr>
<tr>
<td>HSSort End Time</td>
<td>2021-08-27 21:15:38.000</td>
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<tr>
<td>HSSort Elapsed Time</td>
<td>187.570</td>
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<tr>
<td>HSValidate Start Time</td>
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<tr>
<td>HSValidate End Time</td>
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<tr>
<td>HSValidate Elapsed Time</td>
<td>36.503</td>
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Run Report for Performance Run – Run 2

TPCx-HS Performance Metric (HSph@SF) Report

Test Run 2 Details
- Total Time = 296
- Total Size = 30000000000
- Scale-Factor = 3

TPCx-HS Performance Metric (HSph@SF): 36.4963

Run Report for Repeatability Run – Run 1

TPCx-HS Performance Metric (HSph@SF) Report

Test Run 1 Details
- Total Time = 294
- Total Size = 30000000000
- Scale-Factor = 3

TPCx-HS Performance Metric (HSph@SF): 36.7647
Supermicro Cluster

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Edition</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>September 16, 2021</td>
<td>First</td>
<td>Initial Publication</td>
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