What's New in April - 2nd Gen Intel Xeon Scalable Processors, Optane DC Persistent Memory and Server Options
Article

New servers with Gen 2 processors

Announcing the new Lenovo ThinkSystem servers, based on the *second generation of the Intel Xeon Processor Scalable Family (Xeon SP Gen 2).* The links below take you to the Lenovo Press materials where you can learn about the new systems.

4S-8S rack servers

- Lenovo ThinkSystem SR950 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR860 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR850 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)

2S rack servers

- Lenovo ThinkSystem SR650 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR630 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR590 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR570 Server (Xeon SP Gen 2)
    - Datasheet (Updated)
    - Product Guide (New)
    - Interactive 3D Tour (Updated)

- Lenovo ThinkSystem SR550 Server (Xeon SP Gen 2)
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SR530 Server (Xeon SP Gen 2)
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)

Density optimized server

- Lenovo ThinkSystem SD530 Server (Xeon SP Gen 2) and D2 Enclosure
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SD650 Server (Xeon SP Gen 2) and n1200 DWC Enclosure
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)

Compute nodes for Flex System

- Lenovo ThinkSystem SN550 Server (Xeon SP Gen 2)
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)
- Lenovo ThinkSystem SN850 Server (Xeon SP Gen 2)
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)

Tower servers

- Lenovo ThinkSystem ST550 Server (Xeon SP Gen 2)
  - Datasheet (Updated)
  - Product Guide (New)
  - Interactive 3D Tour (Updated)

In addition, we have published these three materials to support the launch of the new servers:

- Performance paper, Balanced Memory Configurations with Second-Generation Intel Xeon Scalable Processors
- Article, Lenovo Security in the Data Center Powered by ThinkShield
- OSIG - Operating System Interoperability Guide

New Intel Optane DC Persistent Memory

Intel Optane DC Persistent Memory is an innovative technology that delivers a unique combination of affordable large memory capacity and persistence (non-volatility). Persistent Memory is supported on most ThinkSystem servers with second-generation Intel Xeon Scalable processors.

Learn more about this new offering from Lenovo:

- Video walkthrough
- Product guide
- App Direct Mode paper, *Analyzing the Performance of Intel Optane DC Persistent Memory in App Direct Mode in Lenovo ThinkSystem Servers*
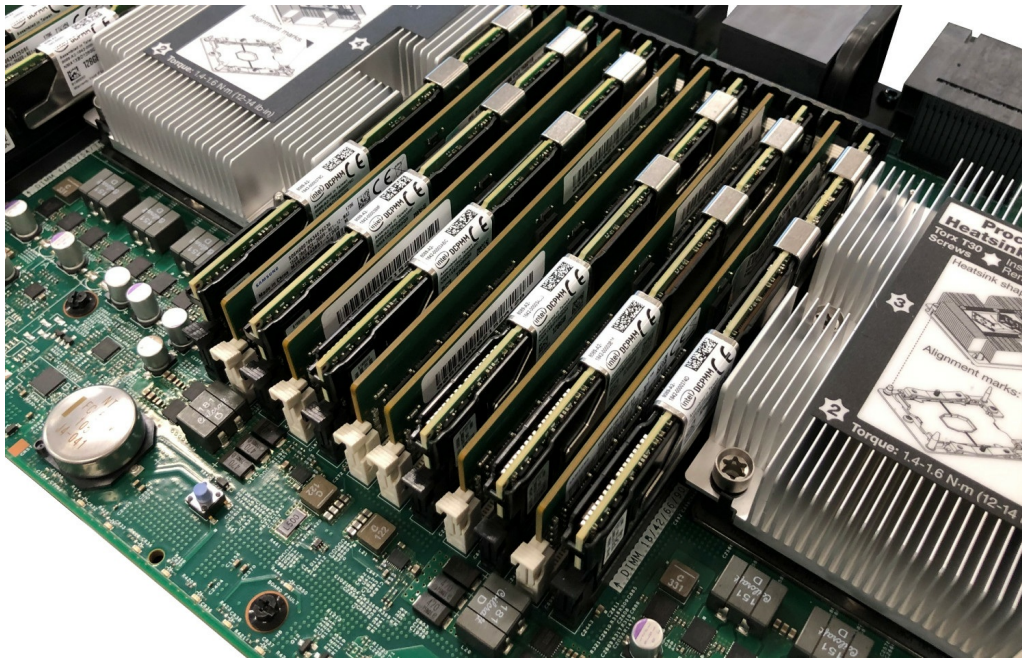

Figure: DCPMMs installed in an SR950 system board

New Benchmark Results

The following performance benchmark reports have been published, highlighting the leadership performance of our ThinkSystem SR950 and SR650 servers:

ThinkSystem SR950 performance benchmark reports:

- ThinkSystem SR950 Sets World Record with New SAP BW Edition for SAP HANA (10.4B Records) Benchmark Result
- ThinkSystem SR950 Sets Three World Records with Four-Socket SPECvirt_sc2013 Benchmark Result
- ThinkSystem SR950 with Intel Optane DC Persistent Memory Sets New World Records with New STAC-M3 Result
- ThinkSystem SR950 Delivers Outstanding Result with 8-Socket SAP SD Two-Tier Benchmark Result
- ThinkSystem SR950 Sets World Record with 4-Socket SAP SD Two-Tier Benchmark Result
- ThinkSystem SR950 Sets World Record with New 3-Socket SPECompG Result
- ThinkSystem SR950 Sets World Record with New One-Node 8-Socket SPECmpiM Result
- ThinkSystem SR950 Sets World Record with New One-Node 6-Socket SPECmpiM Result
- ThinkSystem SR950 Sets World Record with New One-Node 3-Socket SPECmpiM Result

ThinkSystem SR650 performance benchmark reports:

- ThinkSystem SR650 with Intel Optane DC Persistent Memory Sets New World Records with New STAC-M3 Result
- ThinkSystem SR650 Achieves Single-Socket Leadership Performance per Watt with SPECpower_ssj2008 Benchmark Result
- ThinkSystem SR650 Sets World Record with New One-Node SPEC ACCEL OpenMP Result
- ThinkSystem SR650 Sets World Record with New One-Node SPEC ACCEL OpenCL Result
- ThinkSystem SR650 Sets World Record with New One-Node SPEC ACCEL OpenACC Result
- ThinkSystem SR650 Sets World Record with New Two-Node SPECmpiM Result
- ThinkSystem SR650 Sets World Record with New Three-Node SPECmpiM Result
- ThinkSystem SR650 Sets World Record with New Five-Node SPECmpiM Result
- ThinkSystem SR650 Sets World Record with New Six-Node SPECmpiM Result

Server Options

This month, we announced a new M.2 capacity point and a 3.5-inch version of a PM883 drive:

- ThinkSystem M.2 5100 240GB SATA 6Gbps Non-Hot Swap SSD
- ThinkSystem 3.5" PM883 3.84TB Entry SATA 6Gb Hot Swap SSD

This month we also expanded server support of the following options:

- Drives:
  - ThinkSystem 5200 6Gb SATA Entry SSDs
  - ThinkSystem 5200 Mainstream SATA 6Gb SSDs
  - ThinkSystem Intel S4610 Mainstream SATA 6Gb SSDs
  - ThinkSystem Intel P4610 Mainstream NVMe PCIe 3.0 x4 SSDs
- GPUs - See ThinkSystem GPU Summary:
  - NVIDIA Tesla T4
  - AMD Radeon Pro V340
- Network adapters:
  - Mellanox ConnectX-4 Adapters
  - ThinkSystem QLogic QL41262 PCIe 25Gb 2-Port SFP28 Ethernet Adapter
  - Intel XXV710-DA2 PCIe 25Gb 2-Port SFP28 Ethernet Adapter
- Flash storage adapters
  - ThinkSystem KCM51V Mainstream NVMe PCIe 3.0 x4 Flash Adapters
- Backup units
  - ThinkSystem Internal Half High LTO Gen8 SAS Tape Drive

HPC offerings

The following documents were updated in support of our updated HPC offerings:

- Lenovo Intelligent Computing Orchestration (LiCO) 5.3
  - Datasheet
  - Product Guide
- Lenovo Scalable Infrastructure (LeSI)
  - Datasheet
  - Product Guide
- Lenovo Distributed Storage Solution for IBM Spectrum Scale (DSS-G)
  - Datasheet
  - Product Guide

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