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CISCO

The bridge to possible

Speed Data-Driven Insights

Cisco UCS C890 M5 Rack Servers with large memory for SAP HANA

The more SAP HANA data you have, the more you need Cisco UCS® C890 M5 Rack Servers.

SAP HANA databases sit at the end of a chain of applications that create and process massive amounts of data. Because the database resides entirely in memory, you can transact and analyze information at blinding speeds—as long as you have access to plenty of memory and processors. Cisco UCS C890 M5 Rack Servers give you the memory capacity you need to keep big data close— and up to 8 processors to handle those large workloads and accelerate results.

Cisco UCS C890 M5 Rack Servers

Designed with SAP HANA deployments in mind, Cisco UCS C890 M5 Rack Servers deliver the processing power and flexible memory options you need to keep your business working at top speed. With up to 8 Intel® Xeon® Scalable processors and up to 36 TB of memory, your SAP HANA databases and other mission critical workloads can process more information and deliver better insights and results in less time.

Tap into large SAP HANA databases

- Support up 36T Memory 24T for SAP HANA Workloads

- Deploy your way with appliance or SAP Tailored Datacenter Integration (TDI) options

- Choose 4- or 8-CPU configurations or start small and scale up

- Tap into internal storage or your preferred external enterprise-grade systems

Innovation that delivers

If your organization is like most, you likely want to tap into structured and unstructured data to develop better intelligence and insight. As your workloads grow, data table sizes push the limits of typical server configurations. Cisco UCS C890 M5 Rack Servers running SAP HANA deliver the in-memory database capabilities you need (Figure 1). With these powerful servers, you can:
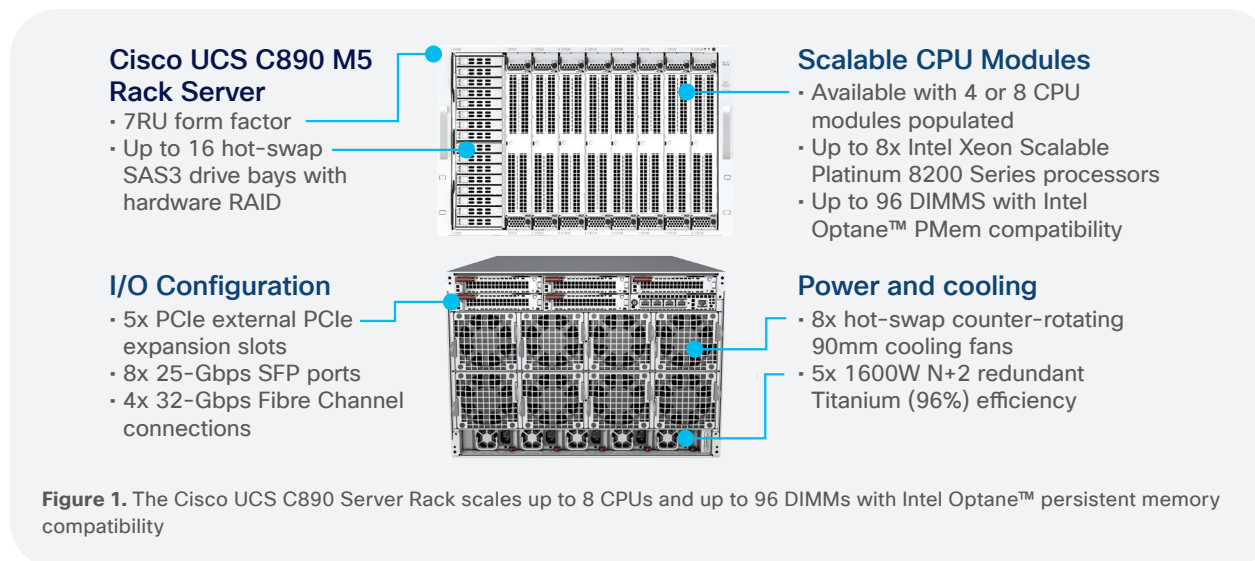
- Run big data and analytic applications faster
- Quickly retrieve, process, and store business-critical data
- Accelerate the flow of information to decision-making processes
- Analyze information faster by distributing data-loading and analysis tasks across more processors and cores

These high-performance servers for SAP HANA are built with innovative technology:

- **Scalable CPU modules:** 4 or 8 Intel Xeon Scalable Platinum 8200 Series processors deliver up to 224 cores to tackle your most demanding workloads (Figure 2). Built-in artificial intelligence (AI) acceleration, advanced security technologies, and fast processing make these servers ideal for mission-critical, real-time analytics that rely on SAP HANA databases.
- **Fast I/O:** Base configurations support even the most intense workloads, and multiple PCIe expansion slots and Fibre Channel connections provide connectivity for expansion.
- **Resiliency:** Up to 16 hot-swappable SAS3 drives with RAID technology and hot replacement of system components helps ensure that your data remains available.

Features that speed SAP HANA workloads

- Support for bare-metal and virtualized deployments
- Accelerated computation and processing with more processors and cores in a system
- Large and flexible memory configurations
- Massive data capacity that stores information and keeps it close to processors
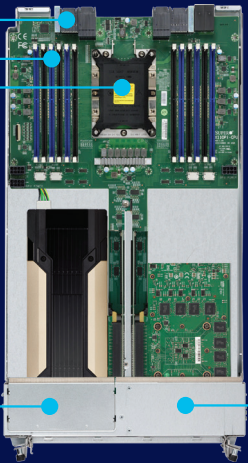- Fast recovery from failure with nonvolatile memory storing SAP HANA data

Cisco UCS C890 M5 Rack Server
- 7RU form factor
- Up to 16 hot-swap SAS3 drive bays with hardware RAID

Scalable CPU Modules
- Available with 4 or 8 CPU modules populated
- Up to 8x Intel Xeon Scalable Platinum 8200 Series processors
- Up to 96 DIMMS with Intel Optane™ PMem compatibility

I/O Configuration
- 5x PCIe external PCIe expansion slots
- 8x 25-Gbps SFP ports
- 4x 32-Gbps Fibre Channel connections

Power and cooling
- 8x hot-swap counter-rotating 90mm cooling fans
- 5x 1600W N+2 redundant Titanium (96%) efficiency

Figure 1. The Cisco UCS C890 Server Rack scales up to 8 CPUs and up to 96 DIMMs with Intel Optane™ persistent memory compatibility

The bridge to possible

Scalable CPU Modules

Up to 8 per server

CPU, memory, and interconnect
- 1x Intel Xeon Scalable Platinum 8200 Series processor
- Up to 12 DIMMs (Intel Optane PMem compatible)
- Midplane connector for symmetric multiprocessing

PCIe slot #1
- NVMe storage
- GPU accelerator
- Network adapter

PCIe slot #2
- NVMe storage
- Network adapter

Figure 2. Each CPU module provides a single Intel Xeon Scalable Platinum 8200 Series processor, memory, and I/O expansion capacity, scalable up to 8 modules

Scalability to meet demand

As with all Cisco® systems, you can start small and scale to support hundreds or thousands of users and terabytes of data. These innovative servers span from four-processor solutions to very large eight-processor systems, and support both bare-metal and virtualized deployments. These choices let you to start where you plan to be this year and scale within the server as demand rises.

Processing power isn't the only configurable option. You can choose to deploy traditional memory alone or in combination with Intel Optane persistent memory (Intel Optane PMem) to create large, fast, and cost-effective memory configurations that support SAP HANA databases and your performance requirements (Figure 3). The result is a system that lets you access, modify, and analyze very large data sets with the same number of processors, as well as accelerate time to recovery.
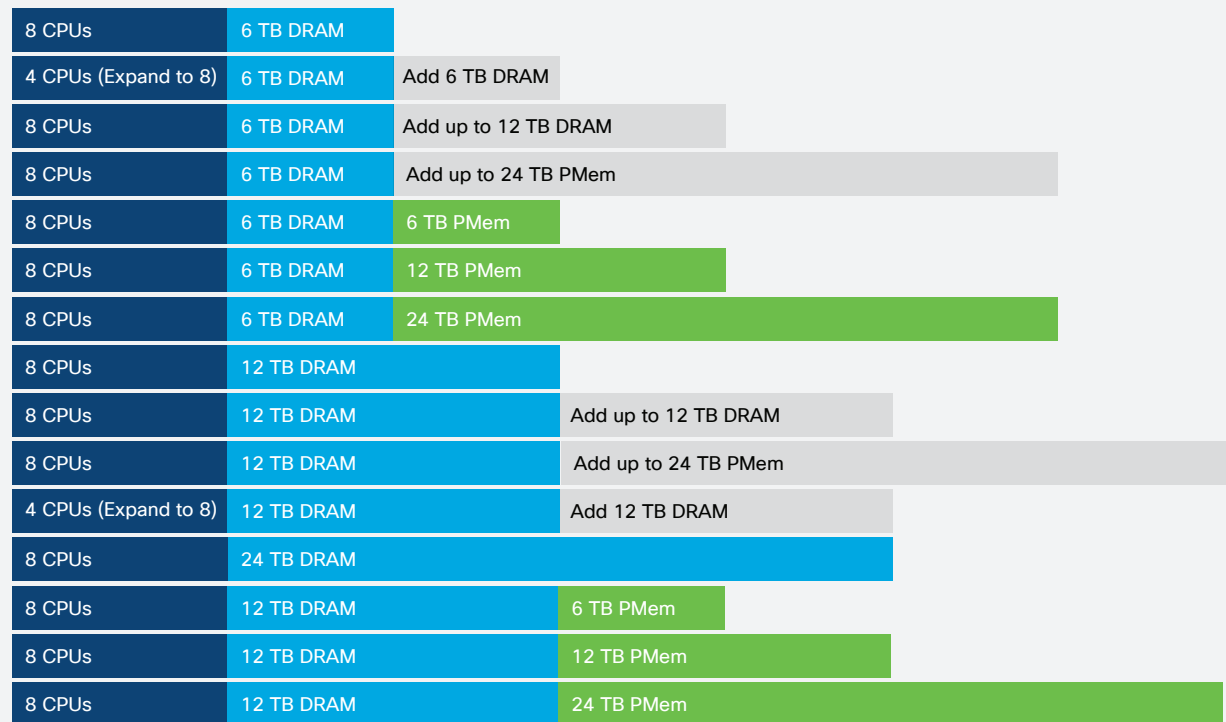
8 CPUs	6 TB DRAM	
4 CPUs (Expand to 8)	6 TB DRAM	Add 6 TB DRAM
8 CPUs	6 TB DRAM	Add up to 12 TB DRAM
8 CPUs	6 TB DRAM	Add up to 24 TB PMem
8 CPUs	6 TB DRAM	6 TB PMem
8 CPUs	6 TB DRAM	12 TB PMem
8 CPUs	6 TB DRAM	24 TB PMem
8 CPUs	12 TB DRAM	
8 CPUs	12 TB DRAM	Add up to 12 TB DRAM
8 CPUs	12 TB DRAM	Add up to 24 TB PMem
4 CPUs (Expand to 8)	12 TB DRAM	Add 12 TB DRAM
8 CPUs	24 TB DRAM	
8 CPUs	12 TB DRAM	6 TB PMem
8 CPUs	12 TB DRAM	12 TB PMem
8 CPUs	12 TB DRAM	24 TB PMem

Figure 3. Cisco UCS C890 M5 Rack Servers are available in 4 or 8 CPU configurations with multiple memory options to match your workload needs

Choice of models

In addition to our appliance deployment model, we also enthusiastically support the SAP Tailored Datacenter Integration (TDI) deployment model, which offers flexibility in the way that you size and deploy servers to support SAP HANA in your data center. You can choose the model you prefer.

· **Proven, certified appliances:** Configurations are based on the fastest DDR memory deployed in a "shared nothing" configuration that uses dedicated servers, switching, and storage to help ensure the highest performing SAP landscape.

· **Cost-saving SAP TDI model:** This model starts with the appliance configurations specified in this document. Costs are reduced because with this model you can share your existing data center network and use enterprise shared storage systems if they are certified for use with SAP.

Learn more

· cisco.com/go/sap

· Cisco UCS C890 M5 Rack Server

Easy management

Simplifying the integration and management of new servers in your environment continues to be a focus at Cisco. We recognize the importance of easy and efficient ongoing administration. That's why Cisco UCS C890 M5 Rack Servers offer the following management tools:

· CLI and GUI based interfaces

· IPMI-based software

· Remote KVM capabilities

· Cisco Intersight™ cloud operations platform

Cisco Intersight is a software-as-a-service platform that is comprised of a modular set of services that bridge applications and infrastructure to meet your specific needs. A single management interface makes it easy to manage your infrastructure lifecycle, including Cisco UCS C890 M5 Rack Servers, other Cisco modular, blade, and rack servers, Cisco converged infrastructure solutions, and third-party endpoints from a single location.

Support you can trust

In addition to the standard 3-year hardware warranty, contracted support services from Cisco Technical Assistance Center can provide up to 24x7 on-site support with within four hours. You can gain a 24-hour primary point of contact, product solution and interoperability expertise, priority response, and product support team coordination.

SAP HANA deployment and migration services

When you transition to SAP HANA on the Cisco UCS C890 Rack Server, our deployment and migration services can advise, implement, and optimize your solution. We provide architectural design services, deployment services that get your SAP HANA environment up and running, and we provide managed maintenance and support services.

Take the next step

If your SAP operations are among the few that need to support up to very large database sizes, then you want to have the best server and support available anywhere—Cisco Unified Computing System™ with Cisco support. While you migrate your data to the Cisco UCS C890 M5 Rack Server, we are integrating the server into the Cisco Intersight portfolio, so you can use the same lifecycle management capabilities for all of your infrastructure, from the smallest server offerings to the most capable server we offer.

Discuss how to migrate to the Cisco UCS C890 M5 Rack Server with your Cisco sales representative. We have a team of SAP-experienced sales representatives ready to make your migration as smooth as possible.