

Supercharge All Your SAP HANA Environments with Cisco C880 M4 Servers

Solution Brief
January 2016



With Intelligent Intel Xeon Processors

Highlights

Scalable and Predictable Performance

- A single Cisco® C880 M4 Server runs SAP HANA for analytic workloads including SAP Business Warehouse (BW) and transactional workloads such as SAP S4/HANA (SAP Business Suite for HANA).

Built for Business Continuity and Data Integrity

- The solution has built-in high availability for business continuity and data integrity with high performance for data access.

Match Servers with Workloads

- You can choose 2-terabyte (TB) to 6-TB memory configurations depending on your processing needs.

Works with Your Data Center

- The integrated architecture of the Cisco solution works with the data center you have today without the need for staff retraining or process adjustment. This capability radically simplifies management, data center services, and data movement between applications.

Reduced Risk

- The certified solution accelerates the time to value for customers and reduces risk and deployment challenges.

If you need a high-powered SAP HANA solution, you need one based on the Cisco® C880 M4 Server with Intel® Xeon® processors.



Works with the Data Center You Have Today

What if you could easily deliver eight-processor power with mission-critical reliability to your SAP applications? Cisco Solutions for SAP HANA support SAP S4/HANA (SAP Business Suite for HANA) and SAP Analytics such as SAP Business Warehouse (BW) and integrate into your existing data center (Figure 1). Our solutions are designed to interoperate with the data center you have today. Using industry-standard architecture and recognized best practices, no special IT processes are needed to incorporate or maintain Cisco solutions in your data center. Our solutions are designed to support data center readiness requirements, including high availability, reliability, and business continuance. In contrast to vendors that lock you in with proprietary storage and file systems, we work with industry-standard storage solutions to develop prepackaged solutions that you can deploy using a predefined bill of materials with help from us or our partners.

High-Performance Scale-Up Solution

For businesses that need eight sockets of Intel Xeon processor power, we offer the Cisco C880 M4 Server in several configurations (Table 1):



Figure 1. Cisco C880 M4 Servers Provide Immense Scalability to Support 2-TB to 6-TB Solution Sizes for Your Biggest SAP Challenges

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Table 1. Cisco Solutions for SAP based on SAP HANA Can Be Configured to Meet Your Business Needs Now and Into the Future

Solution	Scale-Up 2-TB Solution for: • S4/HANA • Analytic Workloads Such as SAP BW with SPS 10	Scale-Up 3-TB Solution for: • S4/HANA • Analytic Workloads Such as SAP BW with SPS 10	Scale-Up 4-TB Solution for: • S4/HANA • Analytic Workloads Such as SAP BW with SPS 11	Scale-Up 5-TB Solution for: • S4/HANA	Scale-Up 6-TB Solution for: • S4/HANA
Computing	<p>Cisco C880 M4 Rack Server with:</p> <ul style="list-style-type: none"> • 8 Intel Xeon processors E7-8880 v3 at 2.8 GHz and 15 cores each • 2 TB of DDR4 memory (base kit) • 8 dual-channel 10-Gbps LAN cards (Enhanced Small Form-Factor Pluggable [SFP+]) • 4 dual-channel 16-GBps Fibre Channel HBAs • Dual-channel 1-GE base card • Dual-channel 6-Gbps SAS RAID controller card 	<p>Cisco C880 M4 Rack Server with:</p> <ul style="list-style-type: none"> • 8 Intel Xeon processors E7-8880 v3 at 2.8 GHz and 15 cores each • 3 TB of DDR4 memory (2 TB base kit plus 1 TB expansion kit) • 8 dual-channel 10-Gbps LAN cards (SFP+) • 4 dual-channel 16-GBps Fibre Channel HBAs • Dual-channel 1-GE base card • Dual-channel 6-Gbps SAS RAID controller card 	<p>Cisco C880 M4 Rack Server with:</p> <ul style="list-style-type: none"> • 8 Intel Xeon processors E7-8880 v3 at 2.8 GHz and 15 cores each • 4 TB of DDR4 memory (2 TB base kit plus 2 1-TB expansion kits) • 8 dual-channel 10-Gbps LAN cards (SFP+) • 4 dual-channel 16-GBps Fibre Channel HBAs • Dual-channel 1-GE base card • Dual-channel 6-Gbps SAS RAID controller card 	<p>Cisco C880 M4 Rack Server with:</p> <ul style="list-style-type: none"> • 8 Intel Xeon processors E7-8880 v3 at 2.8 GHz and 15 cores each • 5 TB of DDR4 memory (2 TB base kit plus 3 1-TB expansion kits) • 8 dual-channel 10-Gbps LAN cards (SFP+) • 4 dual-channel 16-GBps Fibre Channel HBAs • Dual-channel 1-GE base card • Dual-channel 6-Gbps SAS RAID controller card 	<p>Cisco C880 M4 Rack Server with:</p> <ul style="list-style-type: none"> • 8 Intel Xeon processors E7-8880 v3 at 2.8 GHz and 15 cores each • 6 TB of DDR4 memory (2 TB base kit plus 4 1-TB expansion kits) • 8 dual-channel 10-Gbps LAN cards (SFP+) • 4 dual-channel 16-GBps Fibre Channel HBAs • Dual-channel 1-GE base card • Dual-channel 6-Gbps SAS RAID controller card
Storage	<p>1 Cisco C880 Storage Subsystem with:</p> <ul style="list-style-type: none"> • 22 900-GB 10K-rpm SAS drives configurable with RAID 0, 1, 5, 6, 10, 50, and 60 	<p>1 Cisco C880 Storage Subsystem with:</p> <ul style="list-style-type: none"> • 22 900-GB 10K-rpm SAS drives configurable with RAID 0, 1, 5, 6, 10, 50, and 60 	<p>1 Cisco C880 Storage Subsystem with:</p> <ul style="list-style-type: none"> • 22 900-GB 10K-rpm SAS drives configurable with RAID 0, 1, 5, 6, 10, 50, and 60 	<p>1 Cisco C880 Storage Subsystem with:</p> <ul style="list-style-type: none"> • 22 900-GB 10K-rpm SAS drives configurable with RAID 0, 1, 5, 6, 10, 50, and 60 	<p>1 Cisco C880 Storage Subsystems with a total of:</p> <ul style="list-style-type: none"> • 22 900-GB 10K-rpm SAS drives configurable with RAID 0, 1, 5, 6, 10, 50, and 60



- **2 to 6-terabyte (TB) memory solutions** for S4/HANA
- **2 and 3-TB memory solutions** for SAP BW running on SAP HANA Support Package Stack (SPS) 10 or greater
- **4-TB memory solutions** for SAP BW running on SAP HANA SPS 11 or greater

These high-performance Cisco Solutions for SAP HANA are built with the components listed below:

- **Cisco C880 M4 Server** is a 10 rack-unit (10RU) server designed for enterprise and mission-critical applications, large-scale virtualization, and database applications. It can support up to 6 TB of memory to power the most demanding workloads. The server is designed to increase uptime and data integrity through the use of the highly resilient Intel Xeon

processor E7 v3 family CPUs. These processors are designed to handle recoverable and unrecoverable errors for the utmost in data protection; memory protection including multiple-bit error recovery, memory mirroring, guaranteed read and write operations, and memory scrubbing; component-level redundancy; hot replacement of all system components; and online firmware update. The solution supports four internal Small Form-Factor (SFF) 900-GB SAS drives to hold the operating system and application.

- **Cisco C880 Storage Subsystem** supports up to 22 SFF disk drives each. Connected through SAS, this subsystem provides direct-attached storage for your SAP HANA data.
- **16-Gbps Fibre Channel host bus adapters (HBAs)** provide connectivity to EMC or NetApp

storage devices when the solution is deployed through SAP HANA Tailored Datacenter Integration (TDI) engagements and backup solutions.

Solution Options

Choose Your Operating Systems

This Cisco Solution for SAP HANA supports your choice of operating system: Red Hat Enterprise Linux (RHEL) for SAP HANA and SUSE Linux Enterprise Server (SLES) for SAP Applications.

Scale Storage with SAP HANA TDI Engagements

Both these solutions pair with direct-attached disk storage. SAP HANA TDI engagements allow you to use Cisco certified server configurations with your own enterprise storage and networking components that have been certified by SAP to complete the solution.

Simplified Management with Cisco UCS Director

The solution's server and storage resources can be simply managed by Cisco UCS Director. This management and orchestration platform helps you deliver IT infrastructure through a single interface with point-and-click simplicity. A self-service portal lets administrators and trusted clients quickly request and receive the infrastructure they need, whether it is physical or virtual. The solution supports heterogeneous environments, so you can use Cisco UCS Director to automate a range of different specific technology stacks, including the infrastructure for your SAP Landscape.

For your SAP Landscape infrastructure, Cisco UCS Director provides:

- End-to-end infrastructure provisioning for SAP HANA deployments
- SAP HANA-specific workflows and task library to automate infrastructure provisioning
- Broad multivendor support

Role- and Policy-Based Management

Cisco UCS Director is role and policy based, so your subject-matter experts can work together to define your

policies and best practices once. Then any level of administrator can use the policies to provision resources for clients. For example:

- **Network engineers** define the VLANs and network configurations for specific groups and applications.
- **Storage engineers** define data protection and SAN configurations.
- **Server administrators** define allowable resource configurations and pools.

SAP administrators work with these staff members to define quality-of-service (QoS) parameters, storage sizing, data protection scenarios, disaster recovery requirements, and delivery requirements.

Policies are implemented with workflows that automate the entire application lifecycle, including resource allocation, provisioning, monitoring, and management, and that allow resources to be reclaimed when they are no longer needed. The product comes with more than 1200 predefined tasks that you can combine into workflows.

Cisco UCS Director lets you test workflows, and it is designed so that if a workflow is not successful, the process is backed out to its original state.

Cisco Support

The Cisco hardware is supported by your choice of nonproduction, production, and business-critical levels of Cisco SMARTnet™ Service.

Easy Ordering

Cisco partners make it easy to purchase a Cisco Solution for SAP HANA, with simplified ordering and onsite installation services available. We make it easy to quickly deploy a small but powerful, SAP HANA environment in your enterprise without the expense or risk entailed in designing and building your own custom solution.

For More Information

Learn more about the Cisco C880 M4 Server and Cisco Solutions for SAP HANA at <http://www.cisco.com/go/sap>.

For more information about Cisco UCS Director, visit <http://www.cisco.com/go/ucsdirector>.

Solution power consumption varies with the specific server and storage configurations ordered. Please contact your sales representative or your product solutions specialist to determine the exact power requirements for your configuration.



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