

Extending Enterprise Application Ecosystems for Big Data

Highlights

Unified and Centralized Management

- Cisco Unified Computing System™ (Cisco UCS®) provides integrated, unified management with Cisco UCS Manager and Cisco UCS Central Software, which enable organizations to manage up to 10,000 servers and the associated network infrastructure. This capability dramatically simplifies deployment and operation tasks.

Scalable and Predictable Performance

- The Cisco® Common Platform Architecture (CPA) for Big Data, based on Cisco UCS, provides a framework for scaling linearly as processing needs grow without degrading performance or increasing management challenges and while continuing to deliver predictable and consistent performance.

Integration with Enterprise Applications

- The integrated architecture of Cisco UCS enables organizations to host both enterprise applications and big data applications in the same management domain. This capability radically simplifies management, data center services, and data movement between applications.

Reduced Risk

- The pretested and validated architecture accelerates the time to value for customers and reduces risk and deployment challenges.

Lower Total Cost of Ownership

- The solution requires lower capital costs because of the simplified architecture of Cisco UCS and lower operating costs because of the system's integrated, unified management.

Meet your big data analytics needs while accelerating and streamlining integration with enterprise applications.

Big data has become mainstream as businesses realize its benefits, including improved operation efficiency, better customer experience, and more accurate predictions. However, companies are often challenged by the complexities of traditional server solutions. Big data solutions must enable high performance and scale as the business demands. To meet these requirements, Cisco designed a comprehensive solution: Cisco® Common Platform Architecture (CPA) for Big Data. Cisco CPA for Big Data includes compute, storage, connectivity, and unified management features that enable rapid deployment, predictable performance, and reduced total cost of ownership (TCO). In addition to these benefits, Cisco CPA for Big Data offers unique data and management integration with enterprise applications hosted on the Cisco Unified Computing System™ (Cisco UCS®) (Figure 1).

Cisco CPA for Big Data is built using:

- **Cisco UCS 6200 Series Fabric Interconnects**, which provide high-speed, low-latency connectivity for servers and integrated, unified management for all connected devices
- **Cisco UCS 2200 Series Fabric Extenders**, which provide highly scalable and extremely cost-effective connectivity for a large number of nodes
- **Cisco UCS C240 M3 Rack Servers**, which are two-rack-unit (2RU) servers designed for a wide range of compute, I/O, and storage capacity demands

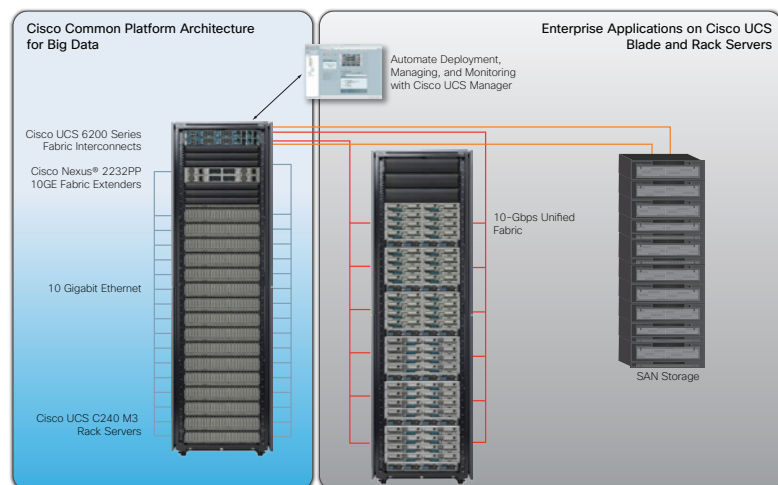


Figure 1. Cisco CPA for Big Data Smoothly Integrates with Enterprise Applications on Cisco UCS

Table 1. Cisco CPA for Big Data Can Be Ordered with a Single Part Number

	Big Data High Capacity	Big Data High Performance	MPP High-Performance Half Rack
Provides	Industry leading storage density, ideal for high-capacity Hadoop deployments. The typical user storage capacity is 720 TB (3-way replicated and compressed). Scales up to 10 racks (7.2 petabytes) with no additional switching infrastructure. Examples: MapR, Cloudera, Greenplum MR, HortonWorks, Intel Hadoop, and Pivotal HD	Balanced computing power, I/O bandwidth, and storage capacity. Good for high-performance Hadoop and NoSQL database deployments. Supports 32 GBps of I/O bandwidth and a typical storage capacity of 480 TB (3-way replicated, compressed). Scales to 10 racks with no additional switching infrastructure. Examples: MapR, Cloudera, Greenplum MR, HortonWorks, HBase, Intel Hadoop, Oracle NoSQL Database, MarkLogic, and Pivotal HD	High performance for demanding massively parallel processing (MPP) databases. Powered by the fastest Intel Xeon E5-2600 series, the configuration supports 21 GBps of I/O bandwidth in a half rack. The configuration provides higher performance at less cost than proprietary solutions. Scales up to 80 servers with no additional switching infrastructure. Examples: ParAccel and Greenplum DB
Compute and Storage	16 Cisco UCS C240 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon E5-2640 at 2.5 GHz • 128 GB of memory • Cisco UCS VIC 1225 • 12 LFF 3-TB 7.2K 3.5-inch SAS HDD • LSI MegaRAID 9266-CV 8i card 	16 Cisco UCS C240 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon E5-2665 at 2.4 GHz • 256 GB of memory • Cisco UCS VIC 1225 • 24 SFF 1-TB 7.2K SFF SATA HDD • LSI MegaRAID 9266-CV 8i card 	8 Cisco UCS C240 M3 Rack Servers, each with: <ul style="list-style-type: none"> • 2 Intel Xeon E5-2690 at 2.9 GHz • 256 GB of memory • Cisco UCS VIC 1225 • 24 SFF SAS 600-GB 10K SFF SAS HDD • LSI MegaRAID 9266-CV 8i card
Network	10-Gbps unified fabric supported by: <ul style="list-style-type: none"> • 2 Cisco UCS 6296UP 96-Port Fabric Interconnects • 2 Cisco Nexus 2232PP 10GE Fabric Extenders 		10-Gbps unified fabric supported by: <ul style="list-style-type: none"> • 2 Cisco UCS 6248UP (48 Ports) • 2 Cisco Nexus 2232PP

Big Data Leaders

Cisco and its partners understand the importance of effective big data infrastructure, and the leading big data software distributors have worked with Cisco to test and validate their solutions on Cisco CPA for Big Data.

(Table 1). With only a single part number to order, the program makes it easy to quickly deploy a powerful, secure big data environment in your enterprise without the expense or risk entailed in designing and building your own custom solution.

For more information about Cisco UCS big data solutions, please visit <http://www.cisco.com/go/bigdata>.

For more information about the Cisco CPA for Big Data, please visit <http://blogs.cisco.com/datacenter/cpa/>.

Easy Ordering

Cisco CPA for Big Data is available through the Cisco Smart Play program

For More Information

For more information about the Cisco Smart Play program, please visit <http://www.cisco.com/go/smartplay>.



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