New Cisco ACE Application Control Engine ACE30 Module Hardware and Cisco ACE Software Release A4(1.0)

Unified Architecture across multiple hardware form factors and Superior Capacity to handle web transaction loads are enabled with the new ACE30 Module complementing the existing ACE 4710 Appliance. Both the Cisco ACE30 Module and the Cisco ACE 4710 Appliance are powered by the new Cisco ACE Software Release A4(1.0) which introduces new features in addition to providing similar functionality across the two hardware form factors.

The Cisco ACE30 Module for the Cisco Catalyst® 6500 Series Switches and Cisco 7600 Series Routers is one of the industry-leading application switches, increasing the availability, accelerating the performance, and enhancing the security of data center applications.

The Cisco ACE30 Module allows enterprises and service providers to accomplish four primary IT objectives for application delivery:

- Increase application availability
- Accelerate application performance
- Secure the data center and critical business applications
- Facilitate data center consolidation through the use of fewer servers and load balancers

New Cisco ACE30 Module

The new Cisco ACE30 Module plugs into a single slot of a Cisco Catalyst 6500 Series Switch or Cisco 7600 Series Router.

Cisco ACE30 Module hardware provides the following new and superior features in the module form factor:

- New web application acceleration capability through hardware-based HTTP compression with a maximum throughput of 6 Gbps
- Superior SSL offload performance compared to the Cisco ACE10 and ACE20 Modules, doubling the maximum performance limit
- Improved Layer 4 and 7 performance powered by the latest generation of network processors

New Features in Cisco ACE Software Release A4(1.0)

Cisco ACE Software Release A4(1.0) runs on the new Cisco ACE30 Module and the existing Cisco ACE 4710 appliance. The release does not run on the Cisco ACE10 or ACE20 Module.

Cisco ACE Software Release 4.1.0 adds to existing features in the Cisco ACE Module Software 2(3.0) release train and Cisco ACE 4710 Software 3(2.1) release train, bringing parity to the features available on the two separate hardware form factors: the Cisco ACE30 Module and Cisco ACE 4710 appliance.

The following new features, detailed in Table 1, are available on the Cisco ACE30 Module running Cisco ACE Software Release A4(1.0) in comparison to the Cisco ACE10 or ACE20 Module running Cisco ACE Software Release A2(3.0):

- Application Acceleration
  - **HTTP Compression:** Support for the following output file formats: GZIP (RFC1952), X-GZIP (RFC2616) and ZLIB (aka DEFLATE) RFC1950 for HTTP 1.1
- Application Availability
  - **In-band TCP Health Checking:** Ability to determine the health of server based on Layer 4 TCP analysis of application traffic between ACE and back-end server
  - **Cipher based load balancing:** Distribution of application traffic based on the SSL cipher information
  - Efficient HTTP Sticky Load Balancing through Ability to Set Cookie Value in HTTP response from Server to Client
  - Improved global application availability through KAL-AP enhancements in Global Server Load Balancing
- Management and Integration
  - Ease of configuration for Probes through Probe Port Inheritance
  - Syslogs for SIP Load balancing

Table 1.   New Features in Cisco ACE 4710 Appliance Running Cisco ACE Software Release 4.1.0

Feature	Description	Benefit
HTTP Compression	The Cisco ACE30 Module can compress the data being downloaded from the back-end server to the client browser. The compression algorithms supported are ZIP, GZIP, and Deflate. The maximum throughput for compression is 6 Gbps.	Reduces the WAN bandwidth consumption, leading to cost savings and faster download times
In-Band TCP Health Checking	The Cisco ACE30 Module can check the health of an application server before forwarding traffic to it by using the TCP Layer 4 responses from the application server.	Enables more connections to be set up per second because there are no separate health check probes; hence it can serve a higher rate of incoming connections
Cipher-Based Load Balancing	The Cisco ACE30 Module can make load balancing decisions based on the specific SSL cipher or cipher strength used to initiate an SSL session.	Enables traffic distribution to separate server pools based on the SSL encryption method
Cookie Value Specification	The Cisco ACE30 Module can enter a cookie string value of the real server for HTTP cookie insertion when establishing a sticky connection. With this feature enabled, the Cisco ACE inserts the cookie in the Set-Cookie header of the response from the server to the client.	Enables intelligent web serving with stickiness of the same client to the same real server using server-side information
KAL-AP Enhancements	The Cisco ACE30 Module uses this enhancement in global server load balancing, through which the Cisco Global Site Selector (GSS) reports the correct state of a failed Cisco ACE30 Module in the Domain Name System (DNS) response to the client if a redundant Cisco ACE is present in a secondary data center.	Reduces application downtime for end users for a globally load-balanced application due to failure of the primary Cisco ACE in a distributed cluster of Cisco ACE load balancers (one or more in each global site)
Probe Port Inheritance	The Cisco ACE30 Module can dynamically inherit the port number for a probe from the real server specified in a server farm or from the virtual IP address specified in a Layer 3 or 4 class map.	Provides ease of configuration for probing real servers; only a single probe configuration is sufficient to probe a real server on multiple ports or on all virtual IP ports
Syslog Reporting for SIP Load Balancing	The Cisco ACE30 Module can report the Layer 7 processing status for SIP packets as well as the reason for dropping any SIP packet during Layer 7 processing.	Enables the service provider or enterprise IT operator to troubleshoot SIP-based communication

System Requirements

Table 2 lists the supported chassis, supervisors, and Cisco IOS® Software releases for the Cisco Catalyst 6500 Series Switches and the Cisco ACE30 Module.

Table 2.   Cisco Catalyst 6500 Series System Requirements for Cisco ACE30 Module

Requirement	Description
Cisco Catalyst 6500 Series Chassis	Cisco Catalyst 6503E, 6504E, 6506E, 6509E, 6509-V-E, or 6513 Switches
Cisco Catalyst 6500 Series Supervisors	WS-SUP720-3B, WS-SUP720-3BXL, VS-S720-10G-3C, VS-S720-10G-3CXL

Requirement	Description
Chassis OS	Cisco Catalyst 6500 Series running Cisco IOS Software Release 12.2(33)SXI4 (or later)
Chassis Connectivity	Functions as a fabric-enabled line card
Chassis Slots	Occupies one slot in the chassis

Table 3 lists the supported chassis, supervisors, and Cisco IOS Software releases for the Cisco 7600 Series Routers and the Cisco ACE30 Module.

Table 3. Cisco 7600 Series System Requirements for Cisco ACE30 Module

Requirement	Description
Cisco 7600 Series Router Chassis	Cisco 7603, 7604, 7609, 7613, 7603-S, 7604-S, 7606-S, or 7609-S Routers
Cisco 7600 Series Router Supervisors	WS-SUP720-3B, WS-SUP720-3BXL, RSP720-3C-GE, RSP720-3CXL-GE, RSP720-3C-10GE, RSP720-3CXL-10GE
Chassis OS	Cisco 7600 Series running Cisco IOS Software Release 15.0(1)S (or later)
Chassis Connectivity	Functions as a fabric-enabled line card
Chassis Slots	Occupies one slot in the chassis

Cisco ACE30 Software License Requirements

Table 4 provides license information for the Cisco ACE30 Module.

Table 4. Cisco ACE30 License Information

Part Number	Type	Throughput (Gbps)	Compression (Gbps)	SSL (Transactions per Second [TPS])	Virtual Contexts
ACE30-MOD-16-K9	High-End	16	6	30,000	250
ACE30-MOD-08-K9	Mid-Range	8	6	30,000	250
ACE30-MOD-04-K9	Entry	4	4	30,000	250
ACE30-BASE-04-K9	Base	4	1	1,000	5

Migration from Cisco ACE10 or ACE20 to Cisco ACE30

Customers that have an existing Cisco ACE10 or ACE20 Module can migrate to a Cisco ACE30 Module based on a Throughput license purchased with the Cisco ACE10 or ACE20 Module, using one of the three part numbers listed in Table 5.

Table 5. Information for Migration from Cisco ACE10 or ACE20 to Cisco ACE30

Part Number	Description of Migration
ACE30-UPG-04-K9=	Cisco ACE10 or ACE20 with 4-Gbps Throughput license to Cisco ACE30 with 4-Gbps (Entry) license
ACE30-UPG-08-K9=	Cisco ACE10 or ACE20 with 8-Gbps Throughput license to Cisco ACE30 with 8-Gbps (Mid-Range) license
ACE30-UPG-16-K9=	Cisco ACE10 or ACE20 with 16-Gbps Throughput license to Cisco ACE30 with 16-Gbps (High-End) license

Ordering Information

Table 6 provides ordering information for the Cisco ACE30 Module.

Table 6.   Ordering Information

Part Number	Description
ACE30-MOD-K9	Cisco ACE30 Service Module for Cisco Catalyst 6500 Series and Cisco 7600 Router
ACE30-MOD-K9=	Cisco ACE30 Service Module for Cisco Catalyst 6500 Series and Cisco 7600 Router (spare)
ACE30-MOD-16-K9	ACE30 Module with 16G, 6G Comp, 30K SSL TPS and 250VC
ACE30-MOD-08-K9	ACE30 Module with 8G, 6G Comp, 30K SSL TPS and 250VC
ACE30-MOD-04-K9	ACE30 Module with 4G, 4G Comp, 30K SSL TPS and 250VC
ACE30-BASE-04-K9	ACE30 Module with 4G, 1G Comp, 1K SSL TPS and 5VC
ACE30-UPG-04-K9=	ACE10 or ACE20 to ACE30 Upgrade for 4 Gbps Throughput
ACE30-UPG-08-K9=	ACE10 or ACE20 to ACE30 Upgrade for 8 Gbps Throughput
ACE30-UPG-16-K9=	ACE10 or ACE20 to ACE30 Upgrade for 16 Gbps Throughput

For More Information

For more information about the Cisco ACE Module, visit http://www.cisco.com/go/ace or contact your local Cisco account representative.

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