

Cisco Wide Area Application Engine

Product Overview

The Cisco® Wide Area Application Engine (WAE) platform consists of a portfolio of powerful, scalable network appliances that host Cisco WAN optimization and application acceleration solutions that enable branch-office server consolidation and performance improvements for centralized applications and provide remote users with LAN-like access to applications, storage, and content across the WAN.

Cisco WAE appliances provide a unified platform for hosting Cisco application acceleration and WAN optimization solutions, including Cisco Wide Area Application Services (WAAS) Software and Cisco Application and Content Networking System (ACNS) Software.

Cisco WAE Appliances Deployed with Cisco WAAS

Cisco WAE appliances deployed with Cisco WAAS enable organizations to accomplish these primary IT objectives:

- Improve employee productivity by enhancing the user experience for important business applications delivered over the WAN
- Reduce the cost of branch-office operations by centralizing IT resources in the data center and lowering the cost of WAN bandwidth
- Increase IT agility by reducing the time and resources required to deliver new IT services to the branch office
- Simplify branch-office data protection for regulatory compliance purposes



Cisco WAE Appliances Deployed with Cisco ACNS





Cisco ACNS is a digital-media delivery solution that optimizes delivery of video traffic over the WAN, from the data center to branch offices. Cisco ACNS allows enterprises to deliver large-scale corporate communications, on-demand training, and digital signage to remote offices with high quality and little effect on the network. For detailed information about Cisco ACNS, please visit <http://www.cisco.com/en/US/products/sw/conntsw/ps491/index.html>.

Product Line

Cisco WAE appliances address varying customer needs, from very small branch offices to massive data center deployments, and offer industry-leading single-device and clustered-device scalability (Table 1).

Table 1. Cisco WAE Appliance Product Line Positioning

Platform	Hardware	Positioning	Images
Cisco WAAS Network Module (NME-WAE)	<ul style="list-style-type: none"> • Up to 2 GB RAM • Up to 160 GB storage 	Router-integrated branch-office deployment; for details, please visit the Cisco WAAS Modules for Integrated Services Routers website or the Cisco ACNS NME-WAE website	
Cisco WAE-512	<ul style="list-style-type: none"> • 1 or 2 GB RAM • 250 GB storage 	Edge deployments at small and medium-sized branch offices	

Platform	Hardware	Positioning	Images
Cisco WAE-612	<ul style="list-style-type: none"> • 2 or 4 GB RAM • 300 GB storage • Hot-swap hard disk drive (HDD) replacement supported with Cisco WAAS 	<ul style="list-style-type: none"> • Edge deployments at medium-sized and large enterprise branch offices • Core deployments at small and medium-sized data centers 	
Cisco WAE-674	<ul style="list-style-type: none"> • 4 or 8 GB RAM • 600 GB storage • Redundant, hot-swappable power supplies as an upgrade option • Hot-swappable HDD replacement supported with Cisco WAAS 	<ul style="list-style-type: none"> • Edge deployments at medium-sized and large enterprise branch offices • Core deployments at small and medium-sized data centers 	
Cisco WAE-7341	<ul style="list-style-type: none"> • 12 GB RAM • 900 GB storage • Redundant, hot-swappable power supplies • Hot-swappable HDD replacement supported with Cisco WAAS 	Core deployments at large and very large data centers	
Cisco WAE-7371	<ul style="list-style-type: none"> • 24 GB RAM • 1.5 terabytes (TB) storage • Redundant, hot-swappable power supplies • Hot-swappable HDD replacement supported with Cisco WAAS 	Core deployments at very large data centers	

Cisco WAE Software and Product Function Matrix

Cisco WAE Configured with Cisco WAAS Software

Cisco WAAS Software has three license options:

- Cisco WAAS Transport license
- Cisco WAAS Enterprise license
- Cisco WAAS Central Manager license

All three Cisco WAAS license options are supported on the Cisco WAE-512, WAE-612, WAE-674, WAE-7341, and WAE-7371 appliances.

Cisco WAE Configured with Cisco ACNS Software

Cisco ACNS Software can be configured on some models as a content engine, content router, or content distribution manager (CDM). All products are ordered and shipped directly from the factory as content engines. On the supported models (Table 2), content engines can be changed with a command-line interface (CLI) command. The product can have only one function (content engine, content router, or CDM) and cannot be configured to perform any two functions simultaneously. Cisco ACNS is not supported on the Cisco WAE-7371.

Table 2. Cisco WAE Deployed with Cisco ACNS: Product Function Matrix

Product	Cisco WAE-512	Cisco WAE-612	Cisco WAE-674	Cisco WAE-7341
Cisco ACNS Software (Version 5.5.1)	Yes	Yes	Yes	Yes
Cisco ACNS CDM	No	Yes	Yes	Yes
Cisco ACNS Content Router	No	Yes	Yes	Yes

Cisco WAE Hardware Specifications

Table 3 presents the hardware specifications for the Cisco WAE appliances. For more information about the Cisco WAAS Network Module (NME) for the Cisco Integrated Services Routers (ISR) branch router, please visit the [Cisco WAAS Modules for Integrated Services Routers website](#). For more information about the Cisco ACNS NME for the Cisco ISR, please visit the [Cisco ACNS NME-WAE website](#).

Table 3. Cisco WAE Hardware Specifications: Cisco WAE-512, WAE-612, WAE-674, WAE-7341, and WAE-7371

Feature	Cisco WAE-512	Cisco WAE-612	Cisco WAE-674	Cisco WAE-7341	Cisco WAE-7371
Baseline RAM	1 or 2 GB	2 or 4 GB	4 or 8 GB	12 GB	24 GB
Usable storage*	250 GB	300 GB	600 GB	900 GB	1.5 TB
Maximum HDD	Two 250 GB HDD	Two 300 GB HDD	Three 300 GB HDD	Four 300 GB HDD	Six 300 GB HDD
RAID support**	RAID-1	RAID-1	RAID-5	RAID-5	RAID-5
Network interfaces	Two 10/100/1000BASE-T	Two 10/100/1000BASE-T	Two 10/100/1000BASE-T	Two 10/100/1000BASE-T	Two 10/100/1000BASE-T
Power	One 350W AC power supply	One 350W AC power supply	<ul style="list-style-type: none"> One 835W hot-swappable AC power supply Redundant power available as an option 	Two 835W hot-swappable redundant AC power supplies	Two 835W hot-swappable redundant AC power supplies
Rack units	1	1	2	2	2
Optional: Support for 4-port network interface card (NIC) for inline Cisco WAAS deployment	Up to 1 inline card	Up to 1 inline card	Up to 2 inline cards	Up to 2 inline cards	Up to 2 inline cards
Compact flash memory	128 MB	128 MB	128 MB	128 MB	128 MB
Height	1.75 in. (43 mm)	1.75 in. (43 mm)	3.36 in. (85.4 mm)	3.36 in. (85.4 mm)	3.36 in. (85.4 mm)
Width	17.2 in. (440 mm)	17.2 in. (440 mm)	17.5 in. (443.6 mm)	17.5 in. (443.6 mm)	17.5 in. (443.6 mm)
Depth	22.1 in. (559 mm)	22.1 in. (559 mm)	27.64 in. (702.0 mm)	27.64 in. (702.0 mm)	27.64 in. (702.0 mm)
Shipping dimensions (with packaging)	39 x 23 x 6.5 in. (990.6 x 584.2 x 165.1 mm); 6 boxes per pallet	39 x 23 x 6.5 in. (990.6 x 584.2 x 165.1 mm); 6 boxes per pallet	39 x 23 x 6.5 in. (990.6 x 584.2 x 254 mm); 4 boxes per pallet	39 x 23 x 6.5 in. (990.6 x 584.2 x 254 mm); 4 boxes per pallet	39 x 23 x 6.5 in. (990.6 x 584.2 x 254 mm); 4 boxes per pallet
Maximum weight	28 lb (12.7 kg)	28 lb (12.7 kg)	64 lb (29.03 kg)	64 lb (29.03 kg)	64 lb (29.03 kg)
Universal input	<ul style="list-style-type: none"> Input voltage low range: 100 to 127 VAC Input voltage high range: 200 to 240 VAC Input kilovolt-amperes (kVA; approximate): <ul style="list-style-type: none"> Minimum: 0.102 kVA Maximum: 0.55 kVA 	<ul style="list-style-type: none"> Input voltage low range: 100 to 127 VAC Input voltage high range: 200 to 240 VAC Input kVA (approximate): <ul style="list-style-type: none"> Minimum: 0.102 kVA Maximum: 0.55 kVA 	<ul style="list-style-type: none"> Input voltage low range: 100 to 127 VAC Input voltage high range: 180 to 265 VAC Input kVA (approximate): <ul style="list-style-type: none"> Minimum: 0.29 kVA Maximum: 1.0 kVA 	<ul style="list-style-type: none"> Input voltage low range: 100 to 127 VAC Input voltage high range: 180 to 265 VAC Input kVA (approximate): <ul style="list-style-type: none"> Minimum: 0.29 kVA Maximum: 1.0 kVA 	<ul style="list-style-type: none"> Input voltage low range: 100 to 127 VAC Input voltage high range: 180 to 265 VAC Input kVA (approximate): <ul style="list-style-type: none"> Minimum: 0.29 kVA Maximum: 1.0 kVA
Operating Environment					
Operating temperature	50 to 95°F (10 to 35°C)	50 to 95°F (10 to 35°C)	50 to 95°F (10 to 35°C)	50 to 95°F (10 to 35°C)	50 to 95°F (10 to 35°C)
Nonoperating temperature	-40 to 140°F (-40 to 60°C)	-40 to 140°F (-40 to 60°C)	-40 to 140°F (-40 to 60°C)	-40 to 140°F (-40 to 60°C)	-40 to 140°F (-40 to 60°C)
Humidity	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%
Altitude	Maximum altitude: 6500 ft (2000m)	Maximum altitude: 6500 ft (2000m)	Maximum altitude: 7000 ft (2133m)	Maximum altitude: 7000 ft (2133m)	Maximum altitude: 7000 ft (2133m)
Compliance	CE marking	CE marking	CE marking	CE marking	CE marking
Safety	<ul style="list-style-type: none"> UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950 	<ul style="list-style-type: none"> UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950 	<ul style="list-style-type: none"> UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950 	<ul style="list-style-type: none"> UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950 	<ul style="list-style-type: none"> UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950

Feature	Cisco WAE-512	Cisco WAE-612	Cisco WAE-674	Cisco WAE-7341	Cisco WAE-7371
EMC	<ul style="list-style-type: none"> FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1 	<ul style="list-style-type: none"> FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1 	<ul style="list-style-type: none"> FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1 	<ul style="list-style-type: none"> FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1 	<ul style="list-style-type: none"> FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1

* For Cisco WAAS only.

** RAID is supported with Cisco WAAS software but not Cisco ACNS software.

Ordering Information

Cisco WAE hardware must be ordered with either Cisco WAAS or Cisco ACNS Software (Table 4).

Table 4. Ordering Information for Cisco WAE Hardware

Part Number	Hardware and Software Configuration Options
WAE-512-K9	<ul style="list-style-type: none"> Software and license options: Cisco WAAS or Cisco ACNS Storage options: One or two 250-GB SATA drives (part number DISK-SATA2-250GB) Memory options: Additional 1-GB memory (part number MEM-WAE-1GB) Optional 4-port network interface card (NIC) to support in-path (inline) deployments using Cisco WAAS (WAE-INLN-4CG)
WAE-612-K9	<ul style="list-style-type: none"> Software and license options: Cisco WAAS Software or Cisco ACNS Software Storage options: Two 300-GB SAS drives (part number DISK-SAS-300GB) Memory options: Additional 2-GB memory (part number MEM-WAE-2GB) Optional 4-port NIC to support in-path (inline) deployments using Cisco WAAS (part number WAE-INLN-4CG)
WAE-674-K9	<ul style="list-style-type: none"> Includes 3 X 300 GB HDD and 4 GB RAM; no other HDD options are available Software and license options: Cisco WAAS Software or Cisco ACNS Software Memory options: Additional 4-GB memory (part number MEM-WAE-4GB) supported with Cisco WAAS only Power and fan option: Additional (redundant) power and fan available (part number RED-PWR-FAN-674) Optional 4-port NIC to support in-path (inline) deployments using Cisco WAAS (part number WAE-INLN-4CG)
WAE-7341-K9	<ul style="list-style-type: none"> Includes 4 X 300 GB HDD and 12 GB RAM; no other RAM or HDD options are available Software and license options: Cisco WAAS Software or Cisco ACNS Software Optional 4-port NIC to support in-path (inline) deployments using Cisco WAAS (part number WAE-INLN-4CG)
WAE-7371-K9	<ul style="list-style-type: none"> Includes 6 X 300 GB HDD and 24 GB RAM; no other RAM or HDD options are available Software and license options: Cisco WAAS Software or Cisco ACNS Software Optional 4-port NIC to support in-path (inline) deployments using Cisco WAAS (part number WAE-INLN-4CG)
Hardware Spares	
WAE-INLN-4CG=	4-port NIC to support in-path (inline) deployments using Cisco WAAS
DISK-SATA2-250GB(=)	250-GB HDD (SATA2); spare
DISK-SAS-300GB(=)	300-GB HDD (SAS) for Cisco WAE-612; spare
DISK-300GB-6/7SER(=)	300-GB HDD (SAS) for Cisco WAE-674, WAE-7341, and WAE-7371 only; spare
MEM-WAE-1GB(=)	1 Cisco WAE 1-GB memory module; spare
MEM-WAE-2GB(=)	2 Cisco WAE 1-GB memory modules; spare
MEM-WAE-4GB(=)	2 Cisco WAE 2-GB memory modules; spare
RED-PWR-FAN-674(=)	Redundant power and fan option for Cisco WAE-674; spare

Web Cache Communication Protocol Support

Web Cache Communication Protocol (WCCP) is a free Cisco IOS® Software feature that runs on the following Cisco platforms:

- Cisco routers such as the Cisco 1800, 2800, and 3800 Series ISR; Cisco 1900, 2900, and 3900 Series Integrated Services Routers Generation 2 (ISR G2); and Cisco 7000 Series Routers
- Cisco switches such as the Cisco Catalyst® 4500 and 6500 Series Switches and Cisco Nexus® 7000 Series Switches

Services and Support

Cisco offers a wide range of services to accelerate customer success, delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, see [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).

For More Information

For more information about Cisco WAAS, visit <http://www.cisco.com/go/waas> or contact your local account representative.



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