

Cisco ACE XML Gateway

Product Overview

The Cisco ACE XML Gateway is part of the Cisco® Application Control Engine (ACE) family of products. It brings application intelligence into the network, enabling enterprises to efficiently deploy, control, and cost-effectively scale their Web service environments that are based on XML (Extensible Markup Language) and SOAP (Simple Object Access Protocol) using a shared, network infrastructure. By allowing autoprovisioning of Web services from Universal Description, Discovery, and Integration (UDDI) registry and application servers and by providing transport and message-level security for XML and SOAP-based network traffic, the Cisco ACE XML Gateway greatly enhances the ease of securely deploying XML-based service networks.

By offloading nonbusiness, computationally expensive operations directly to the network infrastructure, the Cisco ACE XML Gateway provides a shared-service environment, reduces end-to-end latency, and allows business services to scale to meet capacity imperatives while improving server utilization.

XML-based services require outstanding throughput to support today's complex integrated application systems. Cisco ACE XML Gateways deliver industry-leading performance exceeding 30,000 transactions per second (tps). All-in-memory processing and store-and-forward processing modes help ensure that messages of all sizes can be processed without compromising security, interoperability, or system reliability. The result is exceptionally secure, efficient, and flexible end-to-end message processing performance. The dramatic performance improvements provided by a Cisco appliance eliminate the barriers to employing XML wherever it makes sense.

Optimizing the performance of XML-based services requires the capability to deliver assured throughput, high concurrency, low latency, and support for critical operations such as security and availability. The Cisco ACE XML Gateway solution offers the following:

- Fast implementation with minimal disruption to your existing application services
- Quick start with transparent expansion to accommodate growing capacity requirements
- Quick return on investment (ROI) through improved server utilization, reduced application and service latency, and improved IT productivity

The industry-leading Cisco XML processing function is available on a high-performance network appliance to accommodate all your development and deployment requirements. Whether you are showing proof of concept, implementing a small set of Web services, or deploying a broad set of enterprise-wide, mission-critical services, Cisco offers an exceptional XML acceleration solution that will scale to meet your network infrastructure availability and performance requirements.

Features and Benefits

Table 1 summarizes the main features and benefits of the Cisco ACE XML Gateway.

Key Benefits

- Reduce service latency and improve the user experience and server utilization by implementing a high-performance, highly parallel event-driven architecture
- Manage unpredictable service outage and usage by providing a shared, scalable infrastructure that actively enforces service latency agreements
- Implement consistent security and message processing policies for enterprisewide XML-based services

Key Features

- Codeless environment for policy definition
 - Configure security, integration, and routing policies in one centralized policy management system, without programming
 - Autodiscover services to simplify policy definition and enforcement
 - Use unique 4Way policy configuration to define policies and bridge protocols at all points in the request-response process
- Comprehensive XML threat defense
 - Protect against identity, content-based, personnel, response-compliance, message-transport, and XML denial-of-service (DoS) attacks
 - Cost-effectively enforce schema at runtime and prevent structural attacks
 - Provide native integration with commercial directory and identity systems such as Lightweight Directory Access Protocol (LDAP), Kerberos and Active Directory, CA Netegrity, and IBM Tivoli Access Manager
- Exceptional XML acceleration
 - Free up to 90 percent of server resources by offloading expensive operations
 - Upgrade to future performance enhancements without the need for new hardware
- Multiple management access options
 - Enterprisewide management accessible anywhere on the network through the Cisco ACE XML Gateway Web GUI or Secure Shell (SSH) character interface; direct platform connections are supported through Video Graphics Array (VGA) or serial cable.
- Hardware Secure Sockets Layer (SSL) key store
 - Complying fully with Federal Information Processing Standards (FIPS) requirements, the Cisco ACE XML Gateway protects against SSL key hijacking by persistently storing private SSL keys in the platform hardware.
- Service virtualization
 - Abstract the business logic in your XML-based service from the standards, transport and authentication protocols, and data semantics used across different internal systems and by different business partners
 - Create and maintain multiple service instances appropriate for different consumers and service versions
- Routing and transformation

- Determine the destination of XML messages based on user-defined content and policy including payload, envelope, and specific XML Path Language (XPath)
- Perform high-speed XML transformation using Extensible Style Language Transformation (XSLT), GUI mapping, and Java
- Extend XML transformations and customize message processing using the Cisco ACE XML Gateway Software Development Kit (SDK)

Table 1. Features and Benefits

Feature	Benefit
Threat mitigation	Defend against all XML threats
Access control and privacy	Exert comprehensive, enterprisewide, policy control for service access and data privacy
Encryption and signing	<ul style="list-style-type: none"> • Provide secure access to applications • Maintain message integrity and confidentiality
Provisioning and versioning	<ul style="list-style-type: none"> • Increase developer productivity • Improve deployment flexibility with sophisticated rollback and versioning capabilities
Acceleration and offloading	<ul style="list-style-type: none"> • Accelerate computation-intensive XML operations • Improve server utilization by offloading computationally intensive operations
Virtualization and load balancing	Scale application services easily and prevent service disruption by decoupling service consumers and providers
Routing	Dynamically route to valuable XML resources based on message content and context
Monitoring	Quickly debug and monitor services
Auditing and logging	Satisfy compliance needs with audit and nonrepudiation capabilities
Bridging and transformation	<ul style="list-style-type: none"> • Switch and bridge messages across data, transport, credentials, and security standards • Transform between XML and non-XML messages and standards

Technical Specifications

Tables 2 and 3 list the software and hardware specifications for the Cisco ACE XML Gateway

Table 2. Software Specifications

Item	Specification
Standards	<ul style="list-style-type: none"> • SOAP 1.1 and 1.2 • SOAP with Attachment (SWA) 1.1 • Web Services Description Language (WSDL) 1.1 and 1.2 • XPath • E-business XML (ebXML) • Representational State Transfer (REST) • Really Simple Syndication (RSS) • Atom 1.0 • XSLT 1.0 • Web Service (WS)-Addressing <p>Many industry-standard document formats such as the Association for Cooperative Operations Research and Development (ACORD) XML are available.</p>
Transport	<ul style="list-style-type: none"> • TCP • IP Multicast • HTTP • Java Messaging Service (JM) • IBM WebSphere • MQ • Tibco RMS • Tibco Element Management Solution (EMS) • User Datagram Protocol (UDP)

Security	<ul style="list-style-type: none"> • WS-Security 1.0 and 1.1 • Security Assertion Markup Language (SAML) 1.0 and 2.0 • XML Encryption and XML Digital Signature • XML Schema and Document Type Definition (DTD) • SSL 2.0 and 3.0 • Transport Layer Security (TLS) 1.0
Cryptographic support	<p>Cryptographic algorithms including the following:</p> <ul style="list-style-type: none"> • Advanced Encryption Standard (AES) • Data Encryption Standard (DES) • Triple DES (3DES) • Blowfish • Rivest, Shamir, and Adelman (RSA) • Diffie-Helman • Digital Signature Algorithm (DSA) • Secure Hash Algorithm 1 (SHA-1) • Message-Digest Algorithm 5 (MD5) • Applicability Statement 2 (AS2) (RFC 3335)
Message formats	<ul style="list-style-type: none"> • XML • SOAP 1.1+SWA • SOAP 1.2 • Message Transmission Optimization Mechanism (MTOM) • Flat file <p>Many industry-standard document styles are supported.</p>
Transformation	<ul style="list-style-type: none"> • XSLT • XPath • GUI mapping • SDK
Message routing	<ul style="list-style-type: none"> • Configurable routes • Policy-based processing
Administration	<ul style="list-style-type: none"> • Web user interface and command-line interface (CLI) • Secure Shell (SSH) and Simple Network Management Protocol (SNMP) • Role-based access control (RBAC) • Delegated administration • Central policy management and distributed enforcement • Import and export of configuration, statistics, and logs
Logging, monitoring, and auditing	<ul style="list-style-type: none"> • Syslog and message and event logs • Traffic and service-level agreement (SLA) monitoring and reporting • Statistics for monitoring and various alerts and triggers • Audit trail of administrative operations • Integration with third-party Web service management tools

Table 3. Hardware Specifications

Item	Specification
Chassis	<ul style="list-style-type: none"> • Dimensions: 1 standard rack-mount unit (1.70 x 16.78 x 27.75 in. (4.32 x 42.62 x 70.49 cm)) • Weight: 35 lb (15.87 kg) fully configured (per unit, not including shipping materials)
Processor	2 dual-core Intel Xeon processors
Hardware accelerators	1 nCipher nForce 4000 FIPS 140-2 Level 3 compliant
Ports	4-GB Ethernet ports plus a dedicated management Ethernet port
Memory	RAM: 2 GB (fixed)
Storage	Dual hot-swappable 72-GB SAS HDD with RAID (20 GB usable)
Power	Dual 700W redundant
Performance	More than 5000 tps

Ordering Information

Customers should understand all the components they need to purchase to install and use the product. This section provides a direct link to the Cisco Ordering Tool and lists part numbers for customer convenience (see Table 4).

To place an order, visit the Cisco Ordering Home Page. To download software, visit the Cisco Software Center.

Table 4. Ordering Information

Product Name	Part Number
ACE XML Gateway Appliance	ACE-XML-K9
ACE XML Gateway - License	ACE-XML-GATE
ACE XML Manager - License	ACE-XML-MGMT
FIPS License	ACE-XML-FIPS



Americas Headquarters
 Cisco Systems, Inc.
 170 West Tasman Drive
 San Jose, CA 95134-1706
 USA
www.cisco.com
 Tel: 408 526-4000
 800 553-NETS (6387)
 Fax: 408 527-0883

Asia Pacific Headquarters
 Cisco Systems, Inc.
 168 Robinson Road
 #28-01 Capital Tower
 Singapore 068912
www.cisco.com
 Tel: +65 6317 7777
 Fax: +65 6317 7799

Europe Headquarters
 Cisco Systems International BV
 Haarlerbergpark
 Haarlerbergweg 13-19
 1101 CH Amsterdam
 The Netherlands
www-europe.cisco.com
 Tel: +31 0 800 020 0791
 Fax: +31 0 20 357 1100

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

©2007 Cisco Systems, Inc. All rights reserved. CCVP, the Cisco logo, and the Cisco Square Bridge logo are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, GigaStack, HomeLink, Internet Quotient, IOS, iPhone, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, MeetingPlace, MGX, Networking Academy, Network Registrar, Packet, PIX, ProConnect, RateMUX, ScriptShare, SlideCast, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0701R)