



## Preface

---

This guide describes how to set up the Gateway policy in the ACE XML Manager web console, the browser-based interface for configuring and administering the ACE XML Gateway and Manager.

This preface contains the following major sections:

- [Audience, page xv](#)
- [Document Organization, page xvi](#)
- [Document Conventions, page xviii](#)
- [Related Documentation, page xviii](#)
- [Obtaining Documentation, page xix](#)
- [Documentation Feedback, page xix](#)
- [Cisco Product Security Overview, page xx](#)
- [Product Alerts and Field Notices, page xxi](#)
- [Obtaining Technical Assistance, page xxi](#)
- [Obtaining Additional Publications and Information, page xxiii](#)
- [Open Source License Acknowledgements, page xxiv](#)

## Audience

This guide is intended for the following personnel who are responsible for configuring, monitoring, and maintaining the ACE XML Gateway:

- System administrator
- System operator
- Policy developer

To use this guide profitably, you should be familiar with XML, SOAP, HTTP, authentication protocols, and cryptographic technologies such as SSL and TLS.

# Document Organization

This guide includes the following sections:

| Title   | Description  |
|---|--|
| Chapter 1, “Introducing the Cisco ACE XML Gateway”                  | Introduces the ACE XML Gateway and Manager, and describes how their capabilities can be used to secure, manage, and accelerate application networking.                                     |
| Chapter 2, “Basic Concepts”   | Explains background concepts important for understanding how to configure and operate the ACE XML Gateway.   |
| Chapter 3, “First Steps”  | Lists procedures for accessing the ACE XML Manager web console, the development environment for the policy, and getting started configuring service routing in the ACE XML Gateway policy. |
| Chapter 4, “Working with Virtual Services”                          | Describes virtual services, the policy objects that represent external services at the Gateway.  |
| Chapter 5, “Working with Handlers, Routes, and Service Descriptors” | Describes how to define services at the ACE XML Gateway with objects that separately define the consumer and backend server interfaces.  |
| Chapter 6, “Controlling Access to Services”                         | Provides information on setting up authentication and authorization rules in the policy.   |
| Chapter 7, “Authenticating Requests to Backend Systems”             | Describes how to configure credential generation and mediation for outgoing requests.  |
| Chapter 8, “Editing and Maintaining Virtual Services”               | Describes how to manage imported WSDLs in the policy, and how to apply updates to the WSDL.  |
| Chapter 9, “Using Variables in Paths”                               | Explains how to handle variable elements in request paths at the consumer interface, and propagate those variables to the URL used to invoke the backend service.                          |
| Chapter 10, “Validating Messages”                                   | Describes how to check incoming messages to ensure that they are correctly structured and composed.  |
| Chapter 11, “Processing SOAP Messages”                              | Describes how to configure the ACE XML Gateway to process and generate web service features in messages.   |
| Chapter 12, “XML Encryption and XML Signature”                      | Lists the steps for encrypting and decrypting message content in W3C XML Encryption format, as well as generating and validating XML signatures.   |
| Chapter 13, “Transforming Messages with XSLT”                       | Describes how to apply content transformation scripts to messages in the form of XSL Transformations.  |
| Chapter 14, “Configuring Backend Server Settings”                   | Provides information on configuring settings for backend server connections.   |
| Chapter 15, “Opening Ports at the ACE XML Gateway”                  | Describes how to open HTTP listening ports. Describes how to set up virtual hosting for the Gateway  |
| Chapter 16, “Working With JMS Traffic”                              | Explains how to route JMS messaging traffic at the Gateway using the JMS add-on extension.   |
| Chapter 17, “Working with TIB/RV and MQ Services”                   | Explains how to route messaging format TIBCO Rendezvous® and IBM MQSeries® traffic at the Gateway using add-on extensions.   |

| Title   | Description   |
|---|---|
| Chapter 18, “Working with ebXML Traffic”              | Provides information on setting up the policy for processing ebXML traffic.   |
| Chapter 19, “Securing Traffic with SSL/TLS”           | Describes how to set up the consumer and backend service connections from the ACE XML Gateway to use Transport Layer Security (TLS) and its predecessor, Secure Sockets Layer (SSL).  |
| Chapter 20, “Configuring Reactor Processing”          | Introduces the high-performance, stream-oriented message processing engine in the ACE XML Gateway, the Reactor.   |
| Chapter 21, “Caching Service Responses”               | Describes how to improve system performance by caching responses at the ACE XML Gateway.  |
| Chapter 22, “Configuring Errors and Exceptions”       | Describes the exception mapping behavior of the Gateway and how to customize the exception responses sent to service consumers for service processing errors.   |
| Chapter 23, “Setting Global Traffic Rules”            | Provides instructions on screening and replacing message content at the ACE XML Gateway.  |
| Chapter 24, “Managing Resource Files”                 | Lists the types of resources used in an ACE XML Gateway policy.   |
| Chapter 25, “Deploying the Policy”                    | Describes how to deploy the working policy in the ACE XML Manager web console to the ACE XML Gateway, where it is applied to network traffic.   |
| Chapter 26, “Organizing and Administering Policies”   | Explains how subpolicies can be used to organize large, complex policies. Lists the steps for exporting and importing policies as PPF files, as well as how to move objects between policies and subpolicies.                                   |
| Chapter 27, “Approval-Based Deployment”               | Describes the two-phase policy deployment option in the ACE XML Manager. In two-phase deployment, a policy developer requests approval of policy deployment from an administrator, who accepts or rejects the policy change deployment request. |
| Chapter 28, “Publishing Service Information”          | Describes how to advertise that availability of services at the ACE XML Gateway, using standard mechanisms such as WSDL and UDDI.   |
| Chapter 29, “Monitoring System Status”                | Overviews the capabilities of the system for providing information on the activities of the system.   |
| Chapter 30, “Managing Web Console Users”              | Provides information on the user accounts and roles in the ACE XML Manager web console.   |
| Chapter 31, “Managing Gateway Clusters”               | Describes how to create and manage multiple clusters of ACE XML Gateways from a single Manager.   |
| Chapter 32, “Configuring the XML Manager Web Console” | Lists and describes the configuration settings that control the behavior and appearance of the ACE XML Manager web console interface.   |
| Chapter 33, “Using the ACE XML Manager SOAP API”      | Provides information on the SOAP programming interface for developing and managing the ACE XML Gateway policy.  |
| Chapter 34, “Troubleshooting”                         | Explains how to troubleshoot service and system errors.   |
| Chapter 35, “Log Messages”                            | Lists error messages generated by the system.   |

# Document Conventions

This guide uses these basic conventions to represent text and table information:

| Convention                  | Description   |
|-----------------------------|---|
| <b>boldface font</b>        | Commands, keywords, and button names are in <b>boldface</b> .   |
| <i>italic font</i>          | Variables for which you supply values are in <i>italics</i> . Directory names and filenames are also in italics.  |
| screen font                 | Terminal sessions and information the system displays are printed in screen font.   |
| <b>boldface screen font</b> | Information you must enter is in <b>boldface screen font</b> .  |
| <i>italic screen font</i>   | Variables you enter are printed in <i>italic screen font</i> .  |
| plain font                  | Enter one of a range of options as listed in the syntax description.  |
| <b>^D or Ctrl-D</b>         | Hold the <b>Ctrl</b> key while you press the <b>D</b> key.  |
| string                      | Defined as a nonquoted set of characters.<br><br>For example, when setting a community string for SNMP to “public,” do not use quotation marks around the string, or the string will include the quotation marks. |
| Vertical bars (   )         | Vertical bars separate alternative, mutually exclusive, elements.   |
| { }                         | Elements in braces are required elements.   |
| [ ]                         | Elements in square brackets are optional.   |
| {x   y   z}                 | Required keywords are grouped in braces and separated by vertical bars.   |
| [x   y   z]                 | Optional keywords are grouped in brackets and separated by vertical bars.   |
| {{ }}                       | Braces within square brackets indicate a required choice within an optional element.  |



## Note

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in the manual.



## Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

# Related Documentation

For additional information on the Cisco ACE XML Gateway software, see the following documentation:

- *ACE XML Gateway Quick Start Guide*
- *ACE XML Gateway Administration Guide*

The following sections provide sources for obtaining documentation from Cisco Systems.

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. This section explains the product documentation resources that Cisco offers.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/techsupport>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

<http://www.cisco.com/univercd/home/home.htm>

The Product Documentation DVD is created monthly and is released in the middle of the month. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

### Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

<http://www.cisco.com/go/marketplace/docstore>

If you do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Technical Support & Documentation site area by entering your comments in the feedback form available in every online document.

# Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you will find information about how to do the following:

- Report security vulnerabilities in Cisco products
- Obtain assistance with security incidents that involve Cisco products
- Register to receive security information from Cisco

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only—[security-alert@cisco.com](mailto:security-alert@cisco.com)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532



### Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

---

## Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive Cisco Product Alerts and Cisco Field Notices by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. (To register as a Cisco.com user, go to this URL: <http://tools.cisco.com/RPF/register/register.do>) Registered users can access the tool at this URL: <http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>



Use the **Cisco Product Identification Tool** to locate your product serial number before submitting a request for service online or by phone. You can access this tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This tool offers three search options: by product ID or model name; by tree view; or, for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

---

**Tip****Displaying and Searching on Cisco.com**

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing F5.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. On the Cisco.com home page, click the **Advanced Search** link under the Search box and then click the **Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411

Australia: 1 800 805 227

EMEA: +32 2 704 55 55

USA: 1 800 553 2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

**Severity 1 (S1)**—An existing network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Severity 2 (S2)**—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Severity 3 (S3)**—Operational performance of the network is impaired while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

<http://www.cisco.com/go/guide>

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- Cisco Press publishes a wide range of general networking, training, and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the magazine for Cisco networking professionals. Each quarter, *Packet* delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can subscribe to *Packet* magazine at this URL:

<http://www.cisco.com/packet>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the *Internet Protocol Journal* at this URL:

<http://www.cisco.com/ipj>

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

<http://www.cisco.com/en/US/products/index.html>

- Networking Professionals Connection is an interactive website where networking professionals share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- “What’s New in Cisco Documentation” is an online publication that provides information about the latest documentation releases for Cisco products. Updated monthly, this online publication is organized by product category to direct you quickly to the documentation for your products. You can view the latest release of “What’s New in Cisco Documentation” at this URL:

<http://www.cisco.com/univercd/cc/td/doc/abtnicd/136957.htm>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

## Open Source License Acknowledgements

The following acknowledgements pertain to this software license.

### OpenSSL/Open SSL Project

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

### License Issues

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).

#### OpenSSL License:

© 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment: “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)”
4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).
5. Products derived from this software may not be called “OpenSSL” nor may “OpenSSL” appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment:  
“This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT “AS IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN

NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

**Original SSLeay License:**

© 1995-1998 Eric Young (eay@cryptsoft.com). All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

“This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)”.

The word ‘cryptographic’ can be left out if the routines from the library being used are not cryptography-related.

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: “This product includes software written by Tim Hudson (tjh@cryptsoft.com)”.

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The license and distribution terms for any publicly available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License].