



About This Guide

The *Cisco IP Solution Center API Programmer Guide, 4.0* describes APIs that are available to third party Operations Support System (OSS) products. The ISC API provides a mechanism for inserting, retrieving, updating, and removing data from the ISC servers using an eXtensible Markup Language (XML) interface.

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Who Should Use This Book

This guide is intended to be a technical resource for application developers who want to use the ISC API to provision network services.

You should have an advanced level of understanding of Internet network design, operation, and terminology, be familiar with Cisco Internetwork Operating System (IOS) software and its commands, and have a basic understanding of the Cisco IP Solution Center (ISC) product.

Service provider developers that use the API should also have an understanding of a high-level programming language such as Java, or an equivalent language. Additionally, we recommend that you have knowledge of the following:

- Hypertext Transport Protocol (HTTP/HTTPS)
- Socket programming
- XML and XML Schema

You should be familiar with the ISC GUI and how to use it to provision your network. In most cases, API operations correlate to GUI operations. See [Appendix A, “GUI to API Mapping,”](#) for more information.

How This Book Is Organized

This programmer guide is organized as follows:

- These chapters describe the ISC API fundamentals.
 - [Chapter 1, “Introduction to the ISC API,”](#) describes the fundamental concepts for using the XML API, and includes the API model, components, and operations.
 - [Chapter 2, “Getting Started,”](#) describes the steps required to log into the API, and the basic steps for creating inventory, service requests, and service policies.
 - [Chapter 3, “Common APIs,”](#) describes the APIs for operations that are common to all ISC services.
 - [Chapter 4, “Using Templates,”](#) describes ISC templates and how to use them to download configurations and use them in a service request.
 - [Chapter 5, “Monitoring APIs,”](#) describes how to use the API to monitor services and create reports.
- These chapters describe the concepts for each service and provide a provisioning example, which includes the steps required to provision the services using the ISC API.
 - [Chapter 6, “MPLS Provisioning.”](#)
 - [Chapter 7, “L2VPN Provisioning.”](#)
 - [Chapter 8, “VPLS Provisioning.”](#)
 - [Chapter 9, “QoS Provisioning.”](#)
 - [Chapter 10, “IPsec Provisioning.”](#) **(This feature is not supported in this release.)**
 - [Chapter 11, “NAT Provisioning.”](#) **(This feature is not supported in this release.)**
 - [Chapter 12, “Firewall Provisioning.”](#) **(This feature is not supported in this release.)**
- Additional information:
 - [Appendix A, “GUI to API Mapping,”](#) maps the GUI operations to the corresponding APIs.
 - [Appendix B, “Implementing a Notification Server,”](#) provides an example for implementing a servlet to receive notification events from ISC, and lists all events that can be collected for notification.
 - [Appendix C, “Scripts,”](#) provides the list of scripts available with the ISC software application.

Related Documentation

The entire documentation set for Cisco IP Solution Center, 4.0 can be accessed at:

http://www.cisco.com/univercd/cc/td/doc/product/rtrmgmt/isc/4_0

The following documents comprise the ISC 4.0 documentation set.

General documentation (in suggested reading order):

- [Cisco IP Solution Center Documentation Guide, 4.0](#)
- [Cisco IP Solution Center Release Notes, 4.0](#)
- [Cisco IP Solution Center Installation Guide, 4.0](#)
- [Cisco IP Solution Center Infrastructure Reference, 4.0](#)

- [Cisco IP Solution Center System Error Messages, 4.0](#)

Application and technology documentation (listed alphabetically):

- [Cisco IP Solution Center L2VPN User Guide, 4.0](#)
- [Cisco IP Solution Center MPLS VPN User Guide, 4.0](#)
- [Cisco IP Solution Center Quality of Service User Guide, 4.0](#)
- [Cisco IP Solution Center Traffic Engineering Management User Guide, 4.0](#)

API documentation:

- [Cisco IP Solution Center API Programmer Guide, 4.0](#)
- Index: [Cisco IP Solution Center API Programmer Reference, 4.0](#)



Note

All documentation *might* be upgraded.

Developer Services

The Cisco Developer Support Program provides a central resource point for API users to get additional services such as training, FAQs, support, and consulting. For more information, see the following URL:

http://www.cisco.com/en/US/products/svcs/ps3034/ps5408/ps5418/serv_home.html

Developer Services for ISC include a download page from which independent software vendors (ISVs), partners, and customers can download sample repositories, API code examples, and get links to documentation. For more information, see the following URL:

<http://www.cisco.com/cgi-bin/front.x/cse/DSFC/SubsecTopic.pl?secID=74&secName=Network%20Management%20-%20OSS%20FBSS>

Additional Information

- For Tomcat web server:
<http://jakarta.apache.org/tomcat/index.html>
- For SOAP plug-in:
 - <http://xml.apache.org/soap/>
- For XML and XML Schema
 - <http://www.w3.org/XML>
 - <http://www.w3.org/TR/xmlschema-0/>
- For events and notifications through the CIM event model
<http://www.dmtf.org/standards/documents/CIM/DSP0107.pdf>
- For CIM Objects over HTTP, DMTF
<http://www.dmtf.org/standards/documents/WBEM/DSP200.html>

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

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

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

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

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:
<http://www.cisco.com/en/US/partner/ordering/index.shtml>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support 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, 365 days a year at this URL:

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

Access to all tools on the Cisco Technical Support 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>

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 automatically provides recommended solutions. If your issue is not resolved using the recommended resources, your service request will be assigned to a Cisco TAC 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 TAC 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)—Your 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 operation 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 your network is impaired, but 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.

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

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

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

<http://cisco.com/univercd/cc/td/doc/pcat/>

- *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 Cisco Systems technical user magazine for maximizing Internet and networking investments. 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 access Packet magazine at this URL:

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

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

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

- *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>

- 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>