



About This Guide

This guide describes how to administer and maintain the Cisco IP Solution Center Traffic Engineering Management (ISC TEM) software. This chapter describes how this guide is organized, who should read it, related information, and the document conventions used throughout the guide.

Objective and Audience

The purpose of this user guide is to enable users to take advantage of the features provided by ISC TEM to enhance the traffic performance and predictability in an IP network.

This book is written as a resource for experienced users and administrators who must install, configure, deploy and monitor the ISC TEM software.

It is assumed you have a basic understanding of network design, operation, and terminology, a general familiarity with the ISC software, and that you are familiar with your own network configurations.

A general understanding of MPLS TE concepts and traffic engineering is also required.

How This Guide Is Organized

This guide is organized as follows:

[Chapter 1, “Introduction to ISC TEM,”](#) gives an overview of the ISC TEM software.

[Chapter 2, “Setting Up the Service,”](#) describes the bootstrapping process required to enable network data collection and deployment of TE configurations on the network.

[Chapter 3, “TE Network Discovery,”](#) describes the process of discovering the network for a particular TE provider.

[Chapter 4, “TE Resource Management,”](#) explains how to modify resource characteristics to optimize tunnel placement.

[Chapter 5, “Basic Tunnel Management,”](#) provides an overview of the stages required to create and deploy primary and backup tunnels with a base license.

[Chapter 6, “Advanced Primary Tunnel Management,”](#) describes the stages required to create and deploy primary tunnels using the planning functions.

[Chapter 7, “Protection Planning,”](#) explains how to compute protection tunnels for network elements and deploy these on the network.

[Chapter 8, “Traffic Admission,”](#) explains how to assign traffic to traffic-engineered tunnels.

Chapter 9, “Administration,” describes various administrative tools and features.

Chapter 10, “Task Monitoring,” explains how deployment and collection tasks are monitored and how task details are logged.

Chapter 11, “TE Topology,” explains how to use the TE Topology tool to display the layout of the network.

Appendix A, “Traffic Engineering Management GUI,” describes the ISC TEM GUI and the various fields and other GUI elements.

Appendix B, “Warnings and Violations,” lists warnings and violations that might be invoked when using the planning tools in ISC TEM.

Appendix C, “Document Type Definition (DTD) File,” contains a sample DTD file that specifies the structure and rules used for XML import.

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.

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>

Conventions and Terminology

This section discusses conventions and terminology used throughout this manual.

- *pointer*—indicates where the mouse action is to occur
- *select*—to push and hold down the left mouse button
- *release*—to let up on a mouse button to initiate an action
- *click*—to select and release a mouse button without moving the pointer
- *double-click*—to click a mouse button twice quickly without moving the pointer

- *drag*—to move the pointer by sliding the mouse with one or more buttons selected.

This manual uses this terminology throughout (even though it is possible for individual users to customize their devices to use the buttons in an alternative manner). In situations that allow more than one item to be selected from a list simultaneously, the following actions are supported:

- To select a single item in a list, click on the entry. Clicking a second time on a previously selected entry deselects it.
- To select a contiguous block of items, click on the first entry; then, without releasing the mouse button, drag to the last desired entry and release. (A subsequent click anywhere on the screen deselects all previous selections.)
- To extend a currently selected block, hold the **Shift** key down and click on the entry at the end of the group to be added
- To add a non-contiguous entry to the selection group, press the **Ctrl** (Control) key and click on the entry to be added.

Names of on-screen elements that you click, or select (menu names and commands, and controls such as buttons, drop-down lists, and so on) are printed in **bold** font. **Bold** font is also used for keywords, names of commands, and names of keys on the keyboard. Text displayed as on-screen examples is printed in `courier` font.

When set off from the main text, words and characters you should enter by the keyboard are printed in **bold** font. When the word or character string is enclosed in angle brackets (< and >), you should substitute your own character string for the example presented in the text.

For example, when you see:

```
login: root
```

you should specify the string **root** at the **login** prompt. However, when you see:

```
password: <rootpassword>
```

you should specify your own password in place of the character string <**rootpassword**>. The *italic style* is used to emphasize words, to introduce new terms, and for titles of printed publications (however, not titles of CD-ROMs or floppy disks).