



Preface

This chapter introduces Cisco JTAPI implementation, describes the purpose of this document, and outlines the required software. The following topics are included:

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Introduction

Java Telephony Application Programming Interface (JTAPI) is a portable, object-oriented API for computer telephony integrated call control. The package of JTAPI interfaces located in the `javax.telephony.*` hierarchy, defines a programming model by which Java applications interact with telephony resources such as PBXs and telephones. The Cisco JTAPI implementation supports Java application access to Cisco Architecture for Voice, Video and Integrated Data (AVVID) communication systems according to the JTAPI v 1.2 specification. Furthermore, Cisco JTAPI exposes Cisco specific events and methods for certain telephony resources such as calls and connections.

Purpose

One of the primary goals of a standard Application Programming Interface (API) such as JTAPI is to provide an unchanging programming interface under which varied implementations may stand. Cisco's goal in implementing JTAPI for the Cisco CallManager platform is to conform as closely as possible to the JTAPI specification, while providing extensions that enhance JTAPI and expose the advanced features of Cisco CallManager to applications.

As new versions of Cisco CallManager and the Cisco JTAPI implementation are released, variances in the API should be very minor, and should tend in the direction of compliance. Cisco is committed to maintaining its API extensions with the same stability and reliability, though additional extensions may be provided as new Cisco CallManager features become available.

This document outlines some basic JTAPI concepts including transfer and conference extensions. It also describes the support of extensions to the JTAPI v 1.2 specification.

Audience

This document is intended for telephony software developers who are developing Cisco IP Telephony applications that require JTAPI. This document assumes that the programmer is familiar with both the Java language and the Sun JTAPI v 1.2 specification.

Organization

The table below provides an outline of this document's organization.

Chapter	Description
Chapter 1, "JTAPI Concepts"	Important concepts to understand before starting to write JTAPI applications for Cisco IP Telephony.
Chapter 2, "Cisco JTAPI Implementation"	Cisco extension classes and interfaces. Includes a list of the classes and interfaces in a hierarchical format and a detailed description of each class or interface.
Chapter 3, "Cisco JTAPI Examples"	Source code for makecall, the Cisco JTAPI program that tests the JTAPI installation.
Appendix A, "Cisco JTAPI Classes and Interfaces"	Lists of all the classes and interfaces available in the Cisco JTAPI implementation for Cisco CallManager.
Appendix B, "CTI Error Codes"	Lists and describes CTI error codes.

Related Documentation

The companion document Cisco JTAPI Developer Reference (JTAPI v 1.2 Specification) contains the Sun JTAPI specification for the supported interfaces and classes and their respective methods. The specification was downloaded from the Sun JTAPI web site and included in this document set as a convenience to Cisco JTAPI programmers. Note that the writing style in that book conforms to the Sun specification, it does not conform to the Cisco writing style.

To obtain the very latest version of the JTAPI specification files, go directly to the web site at:

- The Sun Microsystems Inc. JTAPI v 1.2 specification
<http://java.sun.com/products/jtapi/jtapi-1.2/packages.html>

Required Software

The table below lists software requirements for the following applications: JTAPI applications, JTPREFS, and sample code

Application	Required Software	Examples
JTAPI applications	Any JDK 1.1 compliant java environment	<ul style="list-style-type: none"> • Microsoft Internet Explorer 4.01 or later • Sun JDK 1.1, 1.2, or 1.3
JTPREFS	Microsoft Internet Explorer 4.01 or later	
Sample code	Microsoft Internet Explorer 4.01 or later	

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Commands and keywords are in boldface .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[]	Elements in square brackets are optional.
{ x y z }	Alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
screen font	Terminal sessions and information the system displays are in <code>screen font</code> .
boldface screen font	Information you must enter is in boldface screen font .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
→	This pointer highlights an important line of text in an example.
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.
< >	Nonprinting characters, such as passwords are in angle brackets.

Notes use the following conventions:



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Obtaining Documentation

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

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

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- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

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San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

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Developer Support

The Developer Support Program provides formalized support for Cisco Systems interfaces to enable developers, customers, and partners in the Cisco Service Provider Solutions Ecosystem and Cisco AVVID Partner programs to accelerate their delivery of compatible solutions.

The Developer Support Engineers are an extension of the product technology engineering teams. They have direct access to the resources necessary to provide expert support in a timely manner.

For additional information on this program, refer to the Developer Support Program Web Site at www.cisco.com/go/developer-support/.

Developers using Cisco CallManager JTAPI are encouraged to join the Cisco Developer Support Program. This new program provides a consistent level of support while leveraging Cisco interfaces in development projects.



Note

Cisco Technical Assistance Center (TAC) support does not include Cisco CallManager JTAPI support and is limited to Cisco AVVID installation/configuration and Cisco-developed applications. For more information about the Developer Support Program, please contact Cisco at developer-support@cisco.com.

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

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

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

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

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

<http://www.cisco.com/tac/caseopen>

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

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