



Preface

This chapter describes the purpose, intended audience, and organization of this document and describes the conventions that convey instructions and other information. It contains the following topics:

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Purpose

This document describes the Cisco Unified TAPI implementation by detailing the functions that comprise the implementation software and illustrating how to use these functions to create applications that support the Cisco Unified Communications hardware, software, and processes. You should use this document with the Cisco Unified Communications Manager manuals to develop applications.

Audience

Cisco intends this document to be for use by telephony software engineers who are developing Cisco telephony applications that require TAPI. This document assumes that the engineer is familiar with both the C or C++ languages and the Microsoft TAPI specification.

This document assumes that you have knowledge of C or C++ languages and the Microsoft TAPI specification. You must also have knowledge or experience in the following areas:

- [Extensible Markup Language \(XML\)](#)
- [Hypertext Markup Language \(HTML\)](#)
- [Hypertext Transport Protocol \(HTTP\)](#)
- [Socket programming](#)

- TCP/IP Protocol
- [Web Service Definition Language \(WSDL\) 1.1](#)
- Secure Sockets Layer (SSL)

In addition, as a user of the Cisco Unified Communications Manager APIs, you must have a firm understanding of XML Schema. For more information about XML Schema, refer to <http://www.w3.org/TR/xmlschema-0/>.

You must have an understanding of Cisco Unified Communications Manager and its applications. See the [Related Documentation, on page iii](#) for Cisco Unified Communications Manager documents and other related technologies.

Organization

Chapter	Description
Overview	Outlines key concepts for Cisco Unified TAPI and lists all functions that are available in the implementation.
New and Changed Information	Provides a list new and changed features release-by-release of Cisco Unified Communications Manager (Unified CM).
Features Supported by TSP	Describes the features that Cisco Unified TAPI Service Provider (TSP) supports
Cisco Unified TAPI Installation	Provides installation procedures for Cisco Unified TAPI and Cisco Unified TSP.
Basic TAPI Implementation	Describes the supported functions in the Cisco implementation of standard Microsoft TAPI v2.1.
Cisco Device-Specific Extensions	Describes the functions that comprise the Cisco hardware-specific implementation classes.
Cisco TSP Media Driver	Describes how Cisco Media Driver helps TAPI-based applications to provide media interaction such as play announcements, record calls, and so on.
Cisco Unified TAPI Examples	Provides examples that illustrate the use of the Cisco Unified TAPI implementation.
Message Sequence Charts	Lists possible call scenarios and use cases.
Cisco Unified TAPI Interfaces	Lists APIs that are supported or not supported.
Troubleshooting Cisco Unified TAPI	Describes troubleshooting techniques.
Cisco Unified TAPI Operations-by-Release	Lists features, line functions, messages, and structures; phone functions, messages, and structures that have been added or modified by Cisco Unified Communications Manager release.
CTI Supported Devices	Lists CTI supported devices.

Related Documentation

This section lists documents and URLs that provide information on Cisco Unified Communications Manager, Cisco Unified IP Phones, TAPI specifications, and the technologies that are required to develop applications.

Cisco Unified Communications Manager Release 10.0(1)—A suite of documents that relate to the installation and configuration of Cisco Unified Communications Manager. Refer to the Cisco Unified Communications Manager Documentation Guide for Release 10.0(1) for a list of documents on installing and configuring Cisco Unified Communications Manager 10.0(1), including:

- Cisco Unified Communications Manager Administration Guide, Release 10.0(1)
- Cisco Unified Communications Manager System Guide, Release 10.0(1)
- Cisco Unified Communications Manager Features and Services Guide, Release 10.0(1)
- Cisco Unified Communications Manager Release Notes, Release 10.0(1)
 - Cisco Unified IP Phones and Services—A suite of documents that relate to the installation and configuration of Cisco Unified IP Phones.
 - Cisco Distributed Director—A suite of documents that relate to the installation and configuration of Cisco Distributed Director.

For more information about TAPI specifications, creating an application to use TAPI, or TAPI administration, see the following documents:

- Microsoft TAPI 2.1 Features
- <http://www.microsoft.com/ntserver/techresources/commnet/tele/tapi21.asp>
- Getting Started with Windows Telephony
- <http://www.microsoft.com/NTServer/commserv/deployment/planguides/getstartedtele.asp>
- Windows Telephony API (TAPI)
- <http://www.microsoft.com/NTServer/commserv/exec/overview/tapiabout.asp>
- Creating Next Generation Telephony Applications
- <http://www.microsoft.com/NTServer/commserv/techdetails/prodarch/tapi21wp.asp>
- The Microsoft Telephony Application Programming Interface (TAPI) Programmer's Reference
- “For the Telephony API, Press 1; For Unimodem, Press 2; or Stay on the Line”—A paper on TAPI by Hiroo Umeno, a COMM and TAPI specialist at Microsoft.
<http://www.microsoft.com/msj/0498/tapi.aspx>
- “TAPI 2.1 Microsoft TAPI Client Management”
- “TAPI 2.1 Administration Tool”

Cisco Developer Network

The Cisco Developer Network (CDN) portal provides access to multiple Cisco technology developer interfaces and collaborative support communities. CDN also provides formalized support services for these interfaces to enable developers, customers, and partners to accelerate their development. The formalized process provides access to CDN Engineers who are an extension of the product technology engineering teams. CDN Engineers have access to the resources necessary to provide expert support in a timely manner.

The Cisco Developer Network Program is designed for businesses (IHV's and ISV's) interested in going to market with Cisco. The CDN Program enables members to develop compelling solutions that unify data, voice, video, and mobile communications on Cisco's powerful communications platform. The program also allows members to take advantage of Cisco's brand, market leadership position, and installed base to help drive positive business results for themselves and their customers.

For additional information about the CDN Program and CDN support services go to <http://developer.cisco.com/web/devservices>.

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 italics.
[]	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	An unquoted 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 that the system displays are in screen font .
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> .
^	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.



Tip Means the following information might help you solve a problem.



Tip Means the described action saves time. You can save time by performing the action described in the paragraph.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the What's New in Cisco Product Documentation as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:

<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>.

If you require further assistance please contact us by sending email to export@cisco.com.

OpenSSL/Open SSL Project

The following link provides information about the OpenSSL notice:

http://www.cisco.com/en/US/products/hw/phones/ps379/products_licensing_information_listing.html

