



Preface

This section introduces the Cisco Unified Telephony Application Programming Interface (TAPI) for Service Providers implementation, describes the purpose of this document, and outlines the required software. The section includes the following topics:

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Introduction

The Cisco Unified Telephony Application Programming Interface (TAPI) comprises the set of classes and principles of operation that constitute a telephony application programming interface. The Cisco Unified TAPI implementations provide the interface between computer telephony applications and telephony services. The Cisco Unified Communications Manager (formerly Cisco Unified CallManager) includes a TAPI Service Provider (Cisco Unified TSP), which allows developers to create customized IP telephony applications for Cisco users; for example, voice messaging with other TAPI-compliant systems, automatic call distribution (ACD), and caller ID screen pop-ups. Cisco Unified TSP enables the Cisco Unified Communications system to understand commands from the user-level application such as Cisco SoftPhone via the operating system.

The Cisco Unified TAPI implementation uses the Microsoft TAPI v2.1 specification and supplies extension functions to support Cisco Unified Communications Solutions.

To enable a Cisco Unified TAPI-based solution, you must have the following items:

- TAPI support/service that is running on the operating system
- A TAPI-based software application
- A Cisco Unified Communications phone system


Note

The system does not support using Cisco TAPI 2.1 TSP via the TAPI 3.x compatibility layer.

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.

A primary goal of a standard Application Programming Interface (API) such as TAPI specifies providing an unchanging programming interface under which varied implementations may stand. The goal of Cisco in implementing TAPI for the Cisco Unified Communications Manager platform remains to conform as closely as possible to the TAPI specification, while providing extensions that enhance TAPI and expose the advanced features of Cisco Unified Communications Manager to applications.

As new versions of Cisco Unified Communications Manager and Cisco Unified TSP are released, variances in the API should be minor and should tend in the direction of compliance. Cisco stays committed to maintaining its API extensions with the same stability and reliability, though additional extensions may be provided as new Cisco Unified Communications Manager features become available.

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.

Organization

Chapter	Description
Chapter 1, “Overview”	Outlines key concepts for Cisco Unified TAPI and lists all functions that are available in the implementation.
Chapter 2, “Cisco Unified TAPI Installation”	Provides installation procedures for Cisco Unified TAPI and Cisco Unified TSP.
Chapter 3, “Cisco Unified TAPI Implementation”	Describes the supported functions in the Cisco implementation of standard Microsoft TAPI v2.1.
Chapter 4, “Cisco Device-Specific Extensions”	Describes the functions that comprise the Cisco hardware-specific implementation classes.

Chapter	Description
Chapter 5, “Cisco Unified TAPI Examples”	Provides examples that illustrate the use of the Cisco Unified TAPI implementation.
Appendix A, “Cisco Unified TSP Interfaces”	List APIs that are supported or not supported.

New and Changed Information

The Release Notes for each release describe new features and/or changes for Cisco Unified TAPI or Cisco Unified TAPI Service Provider (TSP) that are pertinent to a specified release of Cisco Unified Communications Manager.

This document contains the cumulative definition of the interface, not just the new information for the current release.

Related Documentation

For more information about TAPI specifications, creating an application to use TAPI, or TAPI administration, see

- 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.
- “TAPI 2.1 Microsoft TAPI Client Management”
- “TAPI 2.1 Administration Tool”

Required Software

Cisco Unified TSP requires the following software:

- Cisco Unified Communications Manager version 6.0(1) (or later) on the Cisco Unified Communications Manager server
- 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	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 <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.



Tip

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



Timesaver

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

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, 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>

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/wl/export/crypto/tool/stqrg.html> .

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

