Avaya Aura® Application Enablement Services

TSAPI for Communication Manager SDK

The Telephony Services Application Programming Interface (TSAPI) for Avaya Aura Communication Manager is a public interface to the TSAPI service resident on Avaya Aura Application Enablement (AE) Services. TSAPI for Communication Manager enables client applications to access the full complement of the third-party call control capabilities available on Communication Manager acting as an access server. The TSAPI Software Development Kit (TSAPI SDK) comprises tools to help C and C++ programmers create client applications that include basic or advanced call control functionality.

About AE Services

AE Services is a software platform that provides connectivity between client applications and Communication Manager. AE Services includes an enhanced set of Application Programming Interfaces (APIs), client-side libraries, protocols, and web services that expose the capabilities of Communication Manager to application developers.

About TSAPI for Communication Manager

TSAPI for Communication Manager is the C and C++ programming interface to the TSAPI service resident on the AE Services server. The TSAPI service provides a high-level abstraction of the proprietary, low-level Adjunct Switch Application Interface (ASAI) used within Communication Manager. Thus, TSAPI for Communication Manager enables C and C++ programmers to access the advanced third-party call control capabilities of Communication Manager.

Examples of third-party call control capabilities available through TSAPI include:

- The ability to make, screen, answer, log, transfer, hold, retrieve, divert, conference and drop calls.
- Control and interaction of calls in vector processing, predictive dialing and call classification, and skills-based routing.
- Provide a snapshot of a device, including information about calls on the device and the parties on those calls.
- Perform logical services such as Agent login and logout.

TSAPI SDK variants

The TSAPI SDK is available in two versions for different operating systems:

- TSAPI SDK for Windows: for installation on a host machine running the Windows 7, XP, 2003 or Server 2008 R2 operating system.
- TSAPI SDK for Linux: for installation on a machine running Red Hat Enterprise Linux (RHEL). The supported versions of RHEL depend on the AE Services release – see the TSAPI SDK documentation for details.

What’s in the TSAPI SDK?

The TSAPI SDK comprises:

- Header files: contain coding structures for designing and maintaining applications.

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The TSAPI SDK comprises:

- Header files: contain coding structures for designing and maintaining applications.
The TSAPI Client: provides applications with access to Communication Manager call processing. The primary component of the TSAPI Client is the TSAPI library. The TSAPI library is the C library of function calls that enables an application to request CSTA Services. The TSAPI Client must be installed separately from the TSAPI SDK.

Sample application code and TSAPI Exerciser (Windows only).

Sample applications:
The TSAPI SDK includes sample code for:

- **Outgoing Call Handling:** shows basic outgoing call handling on a single device for a single call.
- **Incoming Call Handling:** shows the differences between incoming and outgoing calls.
- **Multiple Call Handling:** shows how to keep track of multiple calls on a single device, including holding, retrieving and redirecting calls.
- **Conference Call Handling:** adds conferencing and call tracking, and shows how to track multiple connections on a single call.

Getting started

The TSAPI SDK is not currently available for download from the DevConnect web portal: DevConnect members can order the TSAPI SDK via their DevConnect procurement benefits.

The following guides are available on the DevConnect web portal to help developers get started:

- **AE Services TSAPI and CVLAN Client and SDK Installation Guide**
- **AE Services TSAPI for Avaya Communication Manager Programmer’s Reference:** for developing and maintaining TSAPI-based applications.
- **AE Services TSAPI Programmer’s Reference:** specifies the TSAPI services and C programming language syntax.

What else do developers need?

To develop client applications that use TSAPI, and to run the sample applications, developers will also need:

- **Access to an AE Services server connected to Communication Manager.** See Additional AE Services resources for developers, below.
- **AE Services license:** TSAPI basic user only, or TSAPI basic and advanced user, depending on the required level of call control functionality.
- **Avaya Communication Manager license:** Increased Adjunct Routes (optionally required for advanced call control).

Additional AE Services resources for developers

The DevConnect program offers members a range of additional resources to aid in development and testing activities, including:

- **Free community-based support Forums and Frequently Asked Questions (FAQs)** are available to all DevConnect members.
- **A software-only developer configuration of Communication Manager and AE Services,** known as the Avaya Aura Basic Development Environment, suitable for installation on a single server or desktop machine.
- **Free remote lab access options** to Avaya Aura Communication Manager and Application Enablement Services hardware and software configurations.
- **Sample applications,** in addition to those included with the SDKs, that can be used to aid in the development of new applications.
- **Discounted procurement options** for enhanced level members.

About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, networking and related services to companies of all sizes around the world. For more information please visit [www.avaya.com](http://www.avaya.com).

About the Avaya DevConnect Program

The Avaya DevConnect Program provides a wide range of developer resources, including access to APIs and SDKs for Avaya products, developer tools, technical support options and training materials. Registered membership is free to anyone interested in designing Avaya-compatible solutions. Enhanced membership options offer increased levels of technical support, compliance testing, and co-marketing of innovative solutions compatible with standards-based Avaya solutions. To learn more, or register for membership, please visit [www.avaya.com/devconnect](http://www.avaya.com/devconnect).

About Avaya

Avaya is a global provider of business collaboration and communications solutions, providing unified communications, contact centers, networking and related services to companies of all sizes around the world. For more information please visit [www.avaya.com](http://www.avaya.com).

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