

# Avaya Agile Communication Environment™ (ACE) Developer Toolkit

A powerful developer platform for the rapid creation of communications-enabled applications and business processes

Avaya Agile Communication Environment™ (ACE) delivers communications-enabled applications (CEA) and business processes (CEBP) quickly and easily using powerful IT developer focused toolkits and packaged plug-and-play applications. Avaya ACE™ is an open software solution for integrating multi-vendor communications into business applications and processes using Web service application programming interfaces (API's) conforming to service-oriented architecture (SOA). The developer toolkit consists of high level and low level API's and adapters for control of Avaya Aura™ and multi-vendor communication systems. What would have taken weeks, even months, to develop by specialist telecommunications developers can now be created easily by IT developers in days.

## Key Features and Benefits

### Speed

New communications-enabled applications can be created quickly and easily using Web services and adherence to a service-

oriented architecture (SOA) framework. Applications that would previously have taken weeks or months to develop using traditional telephony protocols, such as JTAPI or TR-87, can be completed within a matter of days, even hours, with the Avaya ACE developer toolkit. The Avaya ACE programming code can be re-used multiple times to enable more rapid and cost effective delivery of these applications. The task of interfacing with and instructing the underlying multi-vendor communications infrastructure is done using pre-written communication server adapters. Up to 80% code reduction and development time savings are commonly achieved.

### Simplicity

IT application developers do not need to become telephony experts or contend with individual application programming interfaces (API's) of each piece of a communications infrastructure, which often includes multiple vendors and systems. The task of converting Web

services code into command and control language that the communications systems can understand is done by Avaya ACE Adapters packaged software code. Avaya ACE Application Integration Engine (AIE) exposes Avaya ACE Web services through simple application programming interfaces (APIs) built on REpresentational State Transfer (REST) design principles. Web application developers can invoke RESTful API operations to communications-enable Web applications or business processes in their environment without requiring detailed knowledge of underlying communication network implementation or protocols. Avaya AIE provides a single point of access for all hosted applications.

### Flexibility

Web services can easily be exported into the IT developer's preferred software programming environment such as Microsoft Visual Studio or Eclipse open source software development environment.

## Avaya ACE™ Web service application programming interfaces

Web Service	Description
<b>Third Party Call Control (v2)</b>	Create an application with click-to-call functionality to initiate a call between any two parties connected to a call server.
<b>Third Party Call Control (v3)</b>	Create an application that invokes a click-to-call Web service on Avaya ACE™ to initiate a call between multiple parties through a call server. You can also initiate a call with only a single party, for example, to play an audio message to a call participant using the Audio Call Web service.
<b>Third Party Mid Call Control</b>	Create a Web service that allows an application to perform call control functions: answer, transfer, hold, retrieve.
<b>Call Notification</b>	Allow an application to receive an event each time a user's phone is called, containing the number of the party attempting to place the call.
<b>Call Forwarding</b>	Create an application that remotely manages call forwarding functionality on a device. The Web service allows you to specify the number to which calls are redirected.

Web Service	Description
Call History	Allow an application to retrieve call records for incoming calls and outgoing calls.
Terminal Location	Allow an application to retrieve location information about a mobile terminal, which can then be queried by another application to trigger other events. Location is expressed in terms of latitude, longitude, altitude, and accuracy. Also provide a custom Location Supplier Web service that allows a device to publish information about its location, based on a specific condition. Avaya ACE stores this information and can provide it to client applications querying location information for the device.
Audio Call	Allow an application to add or drop audio content in an existing call and to monitor delivery of the audio message. It can be used to create an application that plays a pre-recorded message to participants in an ongoing call. For example, you can send an automated meeting reminder to an end user or broadcast a message to a group of clients at a specified time. You can also check the play status of the message to verify that the message was delivered and remove the audio content from the call. Support for Text to Speech exists using AudioCallplayTextMessage.
Multimedia Conference	Allow an Avaya ACE™ client application to create multimedia conferences and dynamically manage the participants involved.
Presence	Create an application that collects presence information and communication capabilities about a user who is registered with one or more network elements (for example, a call server or an instant messaging server). The Web service interface supports queries for individual device presence, or queries for aggregated presence information for a user across multiple devices.
System Monitoring	Allow a service client to monitor the health of Avaya ACE.
User Profile	Allow an application to create and manage user profiles on Avaya ACE.
Subscriber Management	Allow Avaya ACE client applications to query subscriber information either locally or globally.
Message Drop and Message Blast	Provide orchestration of audio recording and call control Web services provided by Avaya ACE to enable automation of voice recording and broadcasting of audio messages to specified recipients. MsgDropBlast is an application residing on the Avaya ACE server that provides the high level Web service-based interfaces for the various telecommunication capabilities. In a typical deployment, the MsgDropBlast application interfaces with a Customer Relationship Management (CRM) system to provide click-to-dial and automated audio recording and broadcast capabilities.

## Supported Customer Environment

Avaya ACE™ uses standard Web services (Open Mobile Alliance Parlay X and Avaya defined) and developers can export the Web Services Description Language (WSDL) into their favorite programming environment. Avaya ACE Adapters are pre-written to interface with multi-vendor systems, including Avaya, Cisco, IBM, Microsoft, Nortel and Tandberg. New Avaya ACE Adapters will be developed based on lead customer demand. Avaya ACE connectors will also be developed as pre-packaged software for leading software packages, such as CRM, ERP, and others.

## Developer Portal

The developer portal is a rich collaborative environment to foster the creation of a vibrant developer community around Avaya Agile Communication Environment. Developers can sign up to access up-to-date software, technical information and expert advice on how to integrate Avaya ACE with enterprise, desktop and mobile applications. Video clips that show how easy it is to write custom communications-enabled applications and business processes are also available.

## Packaged Applications

The Avaya ACE software platform used by developers for custom applications also

comes with a suite of licensed packaged applications that are plug-and-play. These applications that span desktop, mobile, and business process integration are easy to order and implement.

## Learn More

For more information on how Avaya Agile Communication Environment™ can help your organization gain competitive advantage by integrating business processes with existing communications systems, contact your Avaya Account Manager, an Avaya Authorized Partner, or visit [www.avaya.com](http://www.avaya.com).

## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).



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