Cisco Computer Telephony Integration

Cisco® Unified Communications Solutions unify voice, video, data, and mobile applications on fixed and mobile networks, enabling easy collaboration every time from any workspace.

Product Overview

Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise and Hosted offer a range of agent and supervisor desktop solutions to meet various customer needs. Cisco desktop solutions offer customers a choice, ranging from out-of-the-box computer-telephony-integration (CTI) solutions to preintegrated solutions with leading customer-relationship-management (CRM) vendors, to desktop tools that allow for fully customized CTI implementations. Any of the desktop solutions used will take advantage of the fault-tolerant, carrier-class architecture of the Cisco Unified Intelligent Contact Management and Unified Contact Center Enterprise or Hosted applications:

- Cisco Agent Desktop[1]: A feature-rich "out-of-the-box" agent desktop
- Cisco CTI Toolkit: A software toolkit for building a customized agent and supervisor desktop application, customizing a standard desktop, or developing an integration to a home-grown or third-party CRM or other application
- Cisco Unified CRM Connectors: A set of prebuilt integrations with major CRM applications, such as SAP, Siebel, Salesforce, Microsoft Dynamics CRM, and others. In fact, these CRM connectors have all been built using the CTI Toolkit.

Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise and Hosted can help companies deploy a complete network-to-desktop CTI strategy, including comprehensive functions at the agent's workstation. These contact center solutions deliver a rich set of data to business applications, providing enterprisewide call-event and customer-profile information to a targeted agent's desktop. This comprehensive CTI strategy enables the full use of corporate data in support of business rules and objectives at the point of customer contact.

Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise and Hosted can help companies use their corporate resources more effectively by taking advantage of information collected from the Internet, carrier networks, automatic call distributors (ACDs), interactive-voice-response (IVR) systems, web servers, email servers, databases, and other applications. Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise and Hosted set a new standard for true enterprise CTI by unifying contact center systems from the network to the desktop — and across the enterprise — with minimal custom development or systems integration, enabling an organization to implement CTI quickly and cost-effectively.

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[1] Cisco Agent Desktop is available only for Cisco Unified Contact Center Enterprise and Hosted — not for Cisco Unified Intelligent Contact Management.

Features and Benefits

- Advanced computer telephony connections that deliver rich CTI data: The Cisco CTI Option provides a rich data set to the desktop through advanced computer telephony connections among the system and carrier networks, ACDs, IVRs, and web and email servers. Information from these disparate resources is normalized and then used in triggering integrated desktop telephony applications such as screen pops and voice and data transfers. Data elements can include dialed number, calling line ID (CLID), and customer-entered digits (CEDs); information submitted on a web form; and information extracted from databases or created as a result of contact routing, voice processing, and agent transactions. Cisco Unified Intelligent Contact Management and Unified Contact Center Enterprise and Hosted route call-event and call-detail information to a targeted desktop when and where the contact is delivered.

- Screen pop: One of the most important aspects of a CTI implementation is the ability to provide caller data to the agent's application at the desktop, commonly referred to as a screen pop. To achieve the screen pop, information about the call and the caller is gathered from the network and provided to the CTI application. This information is provided along with information from the IVR to the desktop application, which looks up the customer's information and delivers the appropriate customer record screen to the agent's PC. A screen pop enables contact center agents to handle calls more quickly (agents are not required to query the customer for basic information), and provide better service (customers are not required to restate information that they may have already provided to an IVR). The screen pop information is also available to any agent who may subsequently join the call, for example, through a transfer or conference operation.

- Preroute indications: Database lookups, particularly data-mining operations in which multiple records are queried, are time-consuming. When using Cisco Unified Intelligent Contact Management or Unified Contact Center Enterprise or Hosted to deliver routing instructions to a carrier network, the system delivers preroute indications to a CTI client, enabling these database operations to take place before a contact arrives at a contact center and permitting complex data-mining results to be delivered to the desktop before contact arrival. When the system returns a route destination to the network, it simultaneously passes the customer-profile data to the CTI client. While the contact is still in the network, the client delivers appropriate database information to the agent desktop. As a result, screen pops occur when they are most useful — on or before the first ring of the agent's phone.

- Coordinated voice and data transfer across the enterprise: Cisco CTI Toolkit delivers benefits to both the customer and the contact center — and these benefits do not stop when the first agent receives the contact. If the contact is subsequently transferred to another agent, CTI Toolkit provides coordinated voice and data transfer by sending customer-profile data along with the contact. The system maintains the customer state and data, even across heterogeneous equipment, throughout the life of a contact — from IVR to agent, to another agent and from site to site.

- Distributed fault tolerance: Cisco CTI Toolkit inherently possesses distributed fault tolerance. If a connection fails, client links are automatically established to a redundant server. The contact's history and any updates remain in effect if the client connection fails and is reestablished.

- Server integration: The Cisco CTI Toolkit facilitates server integration to provide a high-performance, scalable, fault-tolerant, server-based solution for deploying the CTI application — providing for a single point of integration for third-party applications, including CRM systems, data mining, recorders, and workflow solutions. System configuration information is managed at the server level, simplifying customization, updates, and maintenance. Thin-client and browser-based applications that do not require Cisco software on the desktop can easily be developed and deployed in this configuration. With all ACD-specific logic residing at the server level within the CTI Toolkit, Cisco next-generation server integration also eliminates the need for CTI applications to account for switch-specific behavior.

- A desktop option: In addition to server integration, Cisco offers a range of agent and supervisor desktop solutions to meet the varied needs of our customers.

- Packaged, configurable agent and supervisor desktop application: To address the need for contact centers to deploy simplified agent and supervisor desktop applications, Cisco offers an out-of-the-box solution that provides call-control capabilities such as call answer, hold, conference, and transfer, allowing agents to control traditional telephony functions from their PCs rather than their Cisco or third-party telephones. The agent desktop application requires minimum screen real estate and allows agents to customize functions to individual needs. The application also can be configured to match the needs of each contact center without the need for full customization by enabling an administrator to easily adjust the functions required by the contact center agents to perform their tasks efficiently and effectively.

- Customizable packaged agent or supervisor desktop application: For customers who have requirements that go beyond the packaged agent or supervisor desktop application, Cisco CTI Toolkit contains the sources that allow their partner or their own IT department to change the packaged applications. This setup is ideal for customers who need unique requirements addressed, either now or in the future. With CTI Toolkit all options are kept open to address future requirements.

- Developer tools for custom solutions: For customers who desire a fully customized solution, Cisco provides powerful development tools that offer ultimate flexibility for CTI solutions. Cisco CTI Toolkits provide numerous application programming interfaces (APIs) for developing integrations between third-party (desktop) applications and Cisco Unified Intelligent Contact Management and Unified Contact Center Enterprise or Hosted. The CTI Toolkit allows developers in a Windows or Linux environment to drag and drop telephony controls into an existing application. Additionally, it includes numerous examples of sample code that perform functions such as screen pops and third-party call control through custom softphones. The CTI Toolkit preserves investments in existing desktop technology by helping developers design applications for a variety of platforms using multiple development environments.

  Cisco CTI Toolkit supports a Java version of the API for customers who wish to develop platform-independent client applications to CTI. CTI Toolkit also provides a .NET API. Cisco CTI Toolkit continues to support C++ and C++/COM CIL APIs as well as an ActiveX Control Toolkit for custom CTI client integration.

- CTI support for Cisco Outbound Option: Cisco CTI Toolkit supports the Cisco Outbound Option for agents in blended mode; these agents can switch between receipt of inbound

and outbound calls on a call-by-call basis — by delivering customer information to the agent either prior to an outbound call or as an inbound call is received.

- Silent monitoring with Cisco Unified Contact Center Enterprise: Silent monitor gives a contact center supervisor a means to listen in on agent calls in a Cisco Unified Contact Center Enterprise environment. Starting with Release 6.0 the Cisco Unified Communications Manager component of Cisco Unified Contact Center Enterprise provides silent monitoring capabilities. For customers using earlier releases of Cisco Unified Communications Manager or for customers using the Cisco Mobile Agent feature of Cisco Unified Contact Center Enterprise or Hosted, where agents are not using a Cisco IP Phone but a third-party phone, CTI toolkit has the built-in capabilities to provide silent monitoring.

  Independent of which silent monitoring method is used, supervisors can send silent monitor requests to agent desktops with or without the agent's being aware of any monitoring activity. Voice packets sent to and received by the monitored agent's phone are captured from the network and sent to the supervisor's IP phone or the supervisor desktop. At the supervisor desktop, these voice packets are decoded and played on the supervisor PC's sound card.

Partner Integrations Using Cisco CTI Toolkit

As part of the Cisco Technology Developer Program, many partners have used Cisco CTI Toolkit to integrate their own or third-party agent CRM and desktop applications with Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise or Hosted. Through the Cisco Technology Developer Program, partners offer these solutions to customers. To learn more, visit http://www.cisco-partners.info/.

Ordering Information

To place an order, visit the Cisco Ordering Home Page: http://www.cisco.com/en/US/ordering/index.shtml.

Cisco Unified Communications Services

Cisco Unified Communications Services allows you to accelerate cost savings and productivity gains associated with deploying a secure, resilient Cisco Unified Communications Solution. Delivered by Cisco and our certified partners, our portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks. Our unique lifecycle approach to services can enhance your technology experience to accelerate true business advantage.

Summary

The CTI capabilities of Cisco Unified Intelligent Contact Management Enterprise and Cisco Unified Contact Center Enterprise are essential for companies that want to take advantage of enterprisewide data to obtain maximum customer service levels. The ability of the system to deliver accurate customer-profile and contact center information to the desktop, perform agent-to-agent transfer of call-detail information across multiple sites, and allow selection of best-of-class desktop solutions can enable businesses to achieve higher levels of contact center efficiency and customer satisfaction — continuing the evolution toward a true Customer Interaction Network.

For More Information

For more information about Cisco Agent Desktop, Cisco CTI Toolkit, or Cisco Unified CRM Connectors, visit www.cisco.com/go/cc or contact your local Cisco account representative.