Cisco CTI

This chapter gives an introduction to Cisco CTI. It includes the following:

- Purpose of Cisco CTI
- Brief description of the individual components that make up Cisco CTI

Note

With each version of Cisco CTI, it is Cisco’s intent to increase the number of components, and to enrich the existing components. This manual describes the components accompanying ICM software Version 4.6.

What is Cisco CTI?

Cisco CTI is a product set that helps programmers integrate CTI applications with Intelligent Contact Management software.

Cisco CTI consists of:

- Servers
- Desktop Components
- Application Programming Interfaces (APIs)
- Sample Applications
- Programming Examples
- Documentation
- Tutorials
Cisco CTI Components

The sample applications demonstrate simple client application functions, such as displaying a customer’s account information on the screen and processing a single customer call. Their intent is to provide the programmer a vehicle for quickly understanding how the CTI Server interacts with its clients. Once you install and configure the necessary software components, you can run these applications without modifying them.

In addition to the application executable files, all the associated source files, header files, resource files, and other related files for each sample application are included. You can edit a source file to create a modified version of a sample application to fit your particular needs; incorporate a portion of a source file in one of your existing applications; or use the source files as a guideline for creating a new client application. All source files include comments to describe the program flow and to point out significant program statements. Some of these source files are further discussed in the relevant manuals.

Cisco CTI Components

This section describes the various components of Cisco CTI. It discusses the following:

- Product Offerings
- Software
- Documentation
- Support
- Training

Product Offerings

Currently Cisco CTI consists of the following product offerings, which are discussed in more detail in Chapter 4, “Product Offering Descriptions.”

- **Cisco CTI Server**. The component that delivers agent, call, and customer data in real time and enables third-party call control.
• **Cisco CTI Object Server (CTI OS).** The component that provides an object-based interface to the CTI Server. It includes COM, Java, C, and C++ interfaces that share the same code base. CTI OS provides developers with the functionality to provide custom soft phones, screen pop applications, and other integration applications, using the data delivered by CTI Server. Additionally, CTI OS provides the following benefits:
  - Enables developers to build applications that can monitor or control more than one agent
  - Facilitates server-to-server integration
  - Reduces the need to account for switch-specific behavior

In addition to its programming interfaces, CTI OS includes a fully functional agent soft phone as well as a supervisor soft phone that enables call center supervisors to monitor the activities of their agents.

• **Cisco CTI Desktop.** A package for use in developing applications written in languages that support the Microsoft Component Object Model (COM).
  - **CTI Desktop Softphone.** A fully functional, out-of-the-box soft phone.
  - **Softphone Controls.** Lightweight ActiveX objects that allow you to embed soft phone functionality in any valid host container application or to customize the existing CTI Desktop Softphone by simply using drag-and-drop and property pages.
  - **AgentStatistics/SkillGroupStatistics.** ActiveX objects that deliver real-time agent/skill group statistics to the desktop.
  - **COMMonitor/CMIntercept.** The process through which CTI Desktop supplies fault-tolerance to the desktop.
  - **Desktop Control Server (DCS).** An out-of-process (.EXE) COM server in which CTIClient is embedded.
  - **CTIClient.** An in-process (.DLL) ActiveX server that sits between the client application and the CTI Server.

• **JavaClient.** A set of Java classes that sits between the Java application/applet and the CTI Server—the Java equivalent of CTIClient.

• **IPCC Media Termination.** The component that provides a soft alternative to the IP hard phone. It resides on the desktop and when used in conjunction with a soft phone, the IPCC media termination component transmits and receives audio and microphone over an IP connection.
For CTI OS users, refer to the *Cisco ICM Software CTI OS System Manager’s Guide* for more information about IPCC Media Termination.

For CTI Desktop users, refer to the *Cisco ICM Software CTI Programmer’s Guide* for more information about IPCC Media Termination.

- **Cisco Turnkey CTI.** A packaged CTI solution providing an out-of-the-box soft phone, supervisor features (such as supervisor to agent text chat), and the ability to create screen pops using keystroke macros rather than custom code.

Refer to the Cisco Turnkey CTI documentation for more information.

## Software

There are six Cisco CTI CDs. The CDs contain the following software.

### CTI OS

- **CTI Server Driver.** Module that communicates between CTI Server and CTI OS Server Node.
- **CTI Server Node.** Module that consists of the CTI OS Server.
- **CTI OS Trace Server.** Module that handles some logging for CTI OS.

### CTI OS Agent

- **CTI OS Agent Softphone.** An out-of-the-box agent soft phone that works with any ACD, including IPCC and Enterprise Agent.
- Controls necessary to run CTI OS Agent.

### CTI OS Supervisor

- **CTI OS Supervisor Softphone.** An out-of-the-box supervisor soft phone that works with any ACD, including IPCC and Enterprise Agent. It also includes an agent monitor window.
- Controls necessary to run CTI OS Supervisor.
CTI Desktop

- A sample program directory that contains sample applications. This directory contains the following subdirectories:

  **CTIClient.** This directory contains sample applications that use the CTIClient DLL to communicate with the CTI Server:

    - **Delphi.** This directory contains sample code for CTIClient usage in Delphi.

    - **PhoneForDemo.** This directory contains a Visual Basic version of a sample soft phone built with CTIClient.

    - **PowerBuilder.** This directory contains sample code for CTIClient usage in PowerBuilder.

    - **Screenpop.** This directory contains HTML, Visual Basic, and Visual C++ versions of a sample CTIClient screen pop application.

  **DCS.** This directory contains sample applications that use the Desktop Control Server to communicate with the CTI Server:

    - **Vbsamp.** This directory contains a Visual Basic version of a sample DCS application that processes a single customer call.

    - **Vcsamp.** This directory contains a Visual C++ version of a sample DCS screen pop application.

  **Softphone.** This directory contains sample Softphone Controls applications:

    - **EnterpriseAgentPhone.** This directory contains a Softphone compliant with Enterprise Agent.

    - **IPCCPhone.** This directory contains a Softphone compliant with IPCC.

    - **GeoTelDemo.** This directory contains a fully functional Softphone Controls application written in Visual Basic.

    - **IE4.** This directory contains a Softphone Controls application accessible from Internet Explorer.

    - **Screenpop.** This directory contains a Softphone Controls screen pop application written in Visual Basic.

    - **Sft_vb_ddesamp.** This directory contains a sample application using DDE for interprocess communication.
Softphone. This directory contains the Visual Basic code used to create CTI Desktop Softphone.

- CTI Desktop Softphone. A fully functional soft phone that enables agents to perform telephony functions from the desktop
- Softphone Controls
- Desktop Control Server
- CTIClient
- JavaClient
- CTISim. A utility that can be used in place of CTI Server while developing applications; it simulates most of the functionality of the actual CTI Server
- CTITest. A client utility for testing CTI Server
- Documentation. Adobe Acrobat (.PDF) files of the CTI manuals described in the next section

Turnkey CTI Agent

- **Cisco Turnkey CTI Agent.** The module providing out-of-the-box soft phone capabilities as well as workflow automation (including screen pop) via keystroke macro recording.
- **Cisco Turnkey CTI Enterprise Data.** The module providing IVR and other call context data to the agent desktop.
- **Cisco Turnkey CTI Call/Chat.** The module enabling agents to communicate with supervisors using text chat.
- **Cisco Turnkey CTI Supervisor.** The module providing supervisor capabilities, including the ability to view logged on agents and their current call status, as well as the ability to communicate with agents using text chat and via marquee messages.

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**Note**
The Cisco Turnkey CTI documentation is only available on this CD.
Turnkey CTI Server

- Directory Services
- Cisco Turnkey CTI Enterprise Server
- Cisco Turnkey CTI Call/Chat Server
- Cisco Turnkey CTI Administration, which includes:
  - Cisco Turnkey CTI Administrator
  - Cisco Turnkey CTI Enterprise Administrator
  - Cisco Turnkey CTI Administrator documentation
  - Cisco Turnkey CTI Agent installation program
  - Cisco Turnkey CTI Supervisor installation program
  - Cisco ICM Client Admin Workstation

Documentation

The Cisco CTI Desktop CD includes the following manuals:

- *Cisco ICM Software CTIClient Reference Guide*
- *Cisco ICM Software CTI Driver for Siebel Reference Guide*
- *Cisco ICM Software CTI Product Description*
- *Cisco ICM Software CTI Programmer’s Guide*
- *Cisco ICM Software CTI Server Message Reference Guide*
- *Cisco ICM Software Desktop Control Server Reference Guide*
- *Cisco ICM Software JavaClient Reference Guide*
- *Cisco ICM Software Softphone Controls Reference Guide*

The Cisco CTI OS CD includes the following manuals:

- *Cisco ICM Software CTI OS System Manager’s Guide*
- *Cisco ICM Software CTI OS Developer’s Guide*
- *Cisco ICM Software IPCC CTI OS Agent Desktop User Guide*
- *Cisco ICM Software IPCC Supervisor Desktop User Guide*
For descriptions of these manuals, please see the “CTI (Computer Telephony Integration) Toolkit Documentation” section on page ix in “About This Guide.”

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Note


Support and Training

Support and Training

Contact your Cisco sales representative for information on availability and pricing of support and training.