



Cisco IP Contact Center: Building the **Distributed** **Contact Center** Infrastructure



An integral part of Cisco AVVID (Architecture for Voice, Video, and Integrated Data), the Cisco IP Contact Center (IPCC) delivers intelligent call routing, network-to-desktop CTI, and multimedia contact management to contact center agents over an IP network. By combining software ACD functionality with IP telephony in a unified solution, IPCC enables companies to rapidly deploy a distributed contact center infrastructure to support their global e-sales and e-service initiatives.

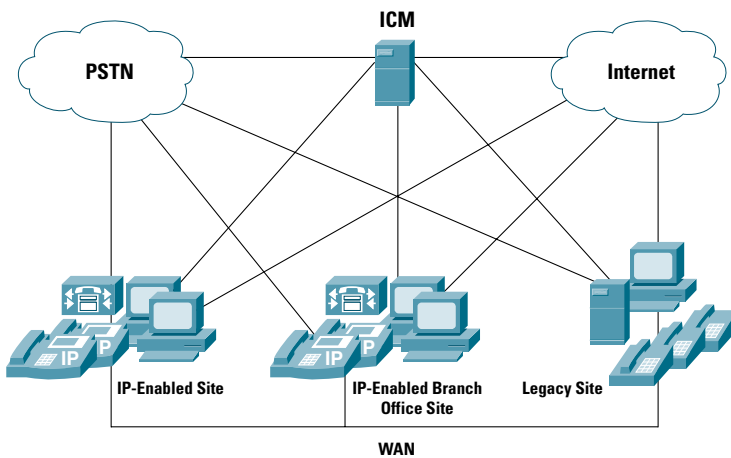
The Cisco IPCC delivers an integrated suite of proven solutions—including Cisco ICM, Cisco CallManager, Cisco IP-IVR, Cisco VoIP gateways and Cisco IP phones—that combine Cisco IP telephony and contact center solutions. It utilizes a company's existing IP network, thus optimizing investments in wide-area network (WAN) infrastructure and lowering administrative expenses. Moreover, this IP-centric architecture allows your business to easily extend the boundaries of the contact center enterprise to include branch offices and knowledge workers.

The Cisco IPCC integrates easily with legacy call center platforms and networks, enabling your organization to continue to leverage its investment in legacy systems while providing a smooth migration path to an IP infrastructure (Figure 1). Whether your company is expanding an existing operation or establishing its first contact center, the Cisco IPCC can help you realize the cost and performance benefits of converged networking, at your pace.

The Cisco IPCC is designed for implementation in both single-site and multi-site contact centers as well as service provider hosting environments. Specific capabilities include intelligent contact routing, automatic call distribution (ACD), network-to-desktop computer telephony integration (CTI), interactive voice response (IVR) integration, and real-time and historical reporting.

Figure 1

MULTI-SITE IPCC



IPCC Capabilities and Benefits

Support For Multiple Interaction Channels

In today's competitive business environment, companies need to expand their traditional channels of customer interaction to cement customer loyalty and maintain competitive advantage. Integration of PSTN and Web-based communication channels is key to optimizing customer service and improving customer retention rates. The Cisco IPCC, through its Web collaboration and e-mail response management capabilities, enables customers to interact with an organization through the communication channel of their choice. Cisco IPCC supports a wide range of interactions including telephone calls, e-mail, and interactive Web sessions. Benefits include greater customer satisfaction and loyalty and the opportunity to resolve a greater number of sales, service and support inquiries within a single transaction.

Skills-Based Routing

To ensure optimum routing decisions, IPCC agents are grouped according to skills. The system receives real-time skill group and status information directly from each agent's desktop and can even reserve an IPCC agent to ensure availability. The scripting environment provides a set of standard route-selection criteria as well as tools to easily customize call distribution to meet business requirements.

Pre-Routing

The Pre-Routing[®] function makes a routing decision for each customer inquiry while it is still in the IP network or Public Switched Telephone Network (PSTN) and before it is sent to an agent or other target—enabling the IPCC to segment customers and deliver each call to the best available resource the first time, every time. For multi-site operations, the ability to include IPCC agents in enterprise resource selections improves both contact-center performance and customer service.

Post-Routing

The Post-Routing[®] function provides intelligent redistribution of calls that have already been connected with a live agent. Post-Routing allows an agent to request a new contact destination such as an ACD, private branch exchange (PBX), or IVR system. When a call requires redirection, the Cisco IPCC applies the same business logic used in the Pre-Routing function and forwards the inquiry to the best available enterprise resource. The new target can be another agent, a skill group or service within the IPCC, or a skill group or service on another ACD. For calls flowing between sites, across business applications, and into or out of IVRs, the Post-Routing function optimizes each customer's interaction with your business.

Network-to-Desktop CTI

The Cisco IPCC delivers a uniquely rich set of customer- and transaction-specific information collected from the Internet, carrier networks, IVRs, databases, and other applications to the targeted agent desktop with every call—enabling the full utilization of corporate data at the point of customer contact. Specific capabilities include:

Data-rich screen pop—Screen pops enable agents to spend more time servicing customers and less time collecting information. The Cisco IPCC solution delivers identical screen-pop data to both IP agents and legacy ACD agents, ensuring that a consistent level of customer service is maintained throughout the enterprise.



Third-party call control—The Cisco IPCC’s third-party call-control features allow agents to control telephony functions such as answer, hold, transfer, and conference from within a desktop application. For example, voice and data collected by an IPCC agent can be transferred within the IPCC or across multi-vendor switches, allowing customer and transaction data to accompany a call from agent to agent or site to site as required. This capability improves customer service and increases contact center efficiency by eliminating time spent verbally soliciting information that is already available.

Agent statistics—Each IPCC agent can be provided with immediate feedback through a visual display of personal statistics such as number of contacts handled, average call work time, average talk time, cumulative available time, and total login time. This functionality provides agents, who are often compensated based on performance, with real-time incentives to meet or exceed goals.

CTI options for Cisco IPCC include:

- Cisco Turnkey CTI Suite
- CTI Toolkit
- Server-to-Server Integration for Third-Party Applications

Cisco Turnkey CTI Suite

The Cisco Turnkey CTI Suite is a robust computer telephony integration solution for single-site and multi-site contact centers that’s easy to deploy, configure, and manage.

It provides agents and supervisors with powerful tools to increase agent productivity, improve customer satisfaction and reduce costs. Its powerful, GUI-based administration decreases IT dependency and supports simplified customization, maintenance and change management. Due to its turnkey nature, the solution can be installed and operational in a contact center in typically less than one week.

The Cisco Turnkey CTI Suite includes agent software that provides softphone capabilities such as call answer, hold, conference, and transfer, allowing agents to control telephony functions from their PCs rather than traditional handset telephones. The softphone desktop component requires minimum screen real estate and enables agents to customize functionality to individual needs. The Cisco Turnkey CTI Suite’s softphone capability also includes a telephone directory that allows agents to manage contacts in groups on their desktops and initiate outbound dialing.

CTI Toolkit

The Cisco CTI Toolkit includes a collection of ActiveX controls that are bundled with a fully functional softphone that enables agents to perform telephony and contact center functions from their desktops. The softphone controls include answer, release, hold, transfer, conference, log-in, ready, not ready and the ability to provide screen pops within the desired desktop application. Your IT resource can easily customize the bundled softphone or create one suited to your department’s specific business needs by dragging and dropping controls into a compatible application.

Server-to-Server Integration for Third-Party Applications

Cisco’s server-to-server integration for third-party applications supports tight integration with several leading CRM, logging, recording and workforce management solutions. The CRM integration allows you to select a CRM application as the central focus for all your agent's transactions. Cisco’s server-to-server integration for third party applications enables you to use a single application on the agent's desktop to provides customer contact information, call control and agent state controls—allowing your agents to efficiently manage all of their customer interactions.



Consolidated Reporting

The open architecture of the Cisco IPCC allows for the consolidation of timely and accurate information from resources such as the Internet, carrier networks, legacy ACDs, IVRs, agent desktops and other resources. This information is stored in a Microsoft SQL Server (Structured Query Language) database for use in real-time and historical call center reporting. Users can generate and build customized reports using provided templates for effective management of enterprise resources.

IPCC Components

Cisco Intelligent Contact Management Software

As part of the Cisco IPCC, Cisco ICM software provides ACD functionality including monitoring and control of agent state, routing and queuing of contacts, CTI capabilities, real-time data for agents and supervisors, and historical reporting for management.

Cisco CallManager

Cisco CallManager software provides traditional PBX telephony features and functions (basic call processing, signaling, and connection services) to packet telephony devices such as Cisco IP phones and VoIP gateways.

Cisco VoIP Gateway

The Cisco VoIP gateway provides a connection path between the PSTN and the Cisco AVVID IP telephony network that converts analog and digital voice into IP packets.

Cisco IP Telephones

Agents connected to the IPCC utilize Cisco IP Telephones. These full-featured, second-generation voice instruments use IP transport technology to consolidate data and voice into a single network infrastructure—including a single cable plant, a single switched Ethernet fabric for campus or branch offices, and unified systems for operations, administration, and management.

Interactive Voice Response Unit

Within the IPCC, an IVR performs self-service functions in addition to providing call treatment messages to queued callers. These call treatment messages can include pre-defined greetings as well as dynamically generated content to convey queue status. The Cisco IPCC supports a variety of IVR options—both premises-based and network-based solutions including the Cisco IP-IVR as well as solutions from Cisco ecosystem partners.

Sample IPCC Voice/Data Flow

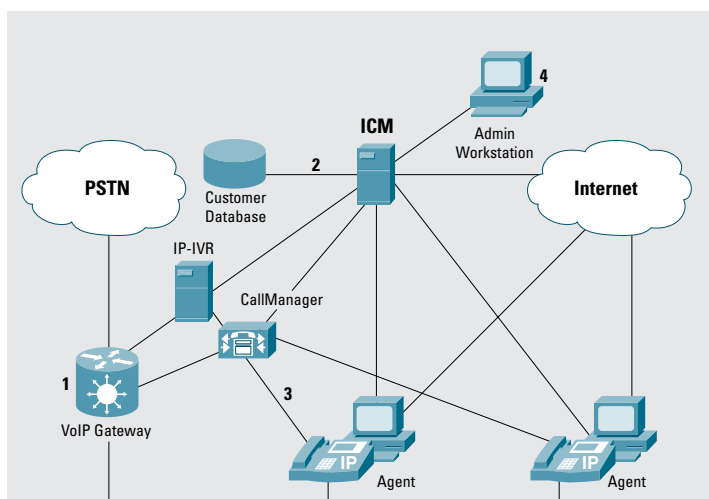


Figure 2

1. Customer dials a PSTN phone number and the call is routed by the PSTN to the VoIP Gateway.
2. ICM invokes a routing script that first retrieves a customer database record using the CLID and then checks to find the most appropriate agent based upon information in the customer database record.
3. The ICM instructs the CallManager to send the call to the IP Phone of the selected agent while the ICM sends a screen pop of the customer database record to the selected agent's desktop.
4. Upon completion of call, agent enters wrap-up information which is then compiled with other call information into detailed reports.

Support and Service

Success in the contact center today requires your technology to be aligned with your business strategy. Cisco works with your organization to bridge the gap between your contact center technology investment and your business goals to ensure total alignment. From planning and assessments to post-audits, our enterprise services take a holistic approach by focusing on technology, people, and processes. The result: customers who are able to utilize their contact centers to full capacity and have the confidence that their business objectives will be achieved.

Delivered directly or through an ecosystem of best-of-breed service partners, Cisco provides strategic and consultative support that maps to each stage of the solution lifecycle: planning, design, implementation, operation and optimization.

Rapid deployment services help you confidently plan, design, and implement your Cisco IP Contact Center. With our proven practices, you achieve results for your business solutions and uncover new service opportunities.

Core services provide the maintenance and troubleshooting you need to keep your contact center operational. Our industry-leading technical support will improve the availability and reliability of your applications and provide all you need to secure its infrastructure. Advanced services

let you optimize your IPCC technology to maximize stability and availability. Our expertise and highly regarded best practices help you deploy complex business applications that advance your business success thus ensuring a stronger return on your IT investments.

Delivered by Cisco or our partners, our service portfolio helps end-users supplement expertise gaps, optimize technology, and maintain unparalleled uptime and performance.

To learn more about Cisco IPCC service offerings, please contact your Cisco representative or visit www.cisco.com.

Summary

The Cisco IPCC offers an integrated suite of products for establishing new contact centers as well as a proven migration strategy for introducing VoIP into the contact center. The IPCC includes capabilities such as intelligent contact routing, legacy ACD functionality, network-to-desktop CTI, IVR integration, and consolidated reporting. The IP-centric architecture of the platform makes it possible to readily extend the boundaries of the contact center enterprise, making it the ideal solution for both single-site and multi-site environments.



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