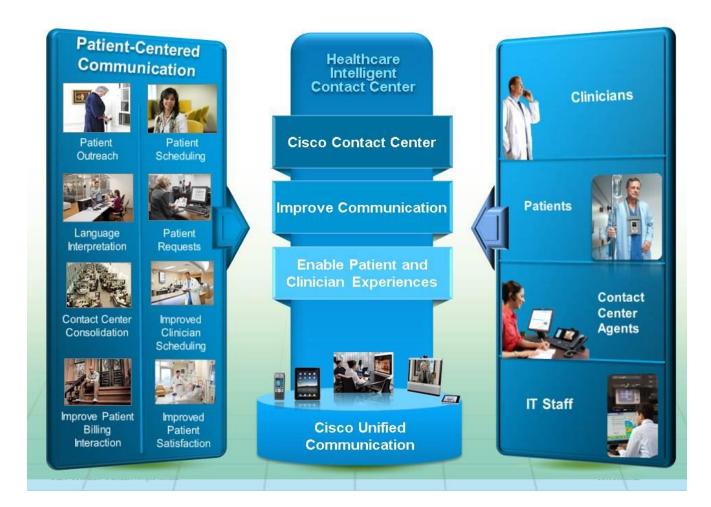# Cisco Healthcare Intelligent Contact Center

Cisco Healthcare Intelligent Contact Center provides a centralized approach to a virtualized contact center that can help improve communication with healthcare patients, clinicians and staff with the goal to increase efficiency, staff and patient satisfaction, and possible cost savings. The Cisco® Healthcare Intelligent Contact Center solution utilizes Cisco® Unified Communications along with Cisco® Contact Center application to provide a robust and agent friendly communications platform for healthcare providers. With this solution, contact center agents could possibly assist patients with scheduling of their appointments, provide direction for patient questions calls, support language interpretation services and support patient outreach campaigns.

Healthcare Contact Centers Challenges

Contact centers are valuable communications tools that help healthcare organizations unify their collaboration initiatives. Beneficial in routing phone calls that originate from patients and other healthcare clients through an organization's different departments, contact center technologies are also helpful for acquiring health information and disseminating information to prospective patients regarding offerings, locations, or directions.

Customer collaboration combines traditional call center technology and processes with important additions in critical areas to help enable businesses and healthcare organizations to build deeper relationships with their patients, strengthen loyalty, and increase revenue by working to reduce the amount of missed appointments by patients and assist them in scheduling those appointments. Customer collaboration empowers an organization to escape from the largely reactive mode of traditional call centers and instead embrace a much more proactive engagement model with their customers. The Contact Center platform, combined with qualified agents with knowledge of different clinical applications, supports direct engagement models needed by healthcare organizations pursuing patient-centric approaches.

Healthcare contact centers are migrating from just a call center to a critical component of patient interaction throughout the continuum of care by utilizing accountable care models. Historically the contact center was primarily used to handle incoming calls from patients. Today the contact center is being consolidated to reduce cost and leveraged with collaboration tools to increase patient satisfaction, loyalty, increase clinician productivity, and enhance a healthcare organization's profitability.

To achieve these goals healthcare providers are:

- Consolidating disparate centers onto a single virtualized platform.
- Integrating the contact center into information systems and applications such as EMRs, CRMs, clinical information systems, and scheduling.
- Leveraging these system integrations to provide intelligent routing of patient interactions.
- Using multichannel technology such as email, social media, and video.
- Providing seamless patient experience among mobile, web, IVR, and live agent channels.

 These integrations provide healthcare providers additional opportunities to enhance their service offerings and increase interaction with their patients. Examples of this include the ability to monitor social media to measure patients' perception of the healthcare organization's brand or a service and to provide specific community outreach touch points. Progressive healthcare organizations are modeling the retail and financial industries by providing patients the ability to communicate with their healthcare organization at any time and at any location using the device and media of their choice.

Healthcare Contact Center Scenarios

Patient Scheduling

Many organizations face challenges resulting from disparate scheduling systems, and patients often face inconvenience as a result. Traditionally, scheduling in a hospital environment has been a patchwork of different groups and technologies all of which provide the same basic function yet are completely unaware of each other. Cisco's Healthcare Intelligent Contact Center Solution provides an avenue where these different scheduling systems can be centrally accessible to serve the needs of the patient. Convenient and effective scheduling can be beneficial to organizations viewing patient assistance and retention as top of mind goals.

Consolidation of Non-Unified Contact Centers

Many healthcare organizations have different call center or contact centers handling patient and customer interactions. With virtualization of contact center resources, Cisco's Healthcare Intelligent Contact Center Solution can provide a more consistent patient experience, along with operational savings made possible by leveraging pooled resources.

Outreach - Post Discharge Patient Status

Patients often require careful communication and collaboration from their providers after being discharged from a hospital. As a follow-up service to patients, the call center agent can place an outbound call to see if the patient had any question on the discharge instructions, are taking the prescribed medications, or if they have any health concerns from their inpatient stay. In this scenario the best solution is to have a clinician to be a staff member at the contact center or be able to be reachable as an expert on demand. If the patient requires clinical assistance, the contact center agent can escalate to a trained physician or nurse to provide guidance on what the patient needs to do for a better recovery or schedule the patient to be seen by the attending physician or surgeon.

Outreach - Patient Appointment Reminders

Missed appointments and last minute rescheduling of appointments can directly affect physician productivity and lead to a loss of revenue. Using the interactive voice response (IVR) capabilities of the Cisco Healthcare Intelligent Contact Center Solution, you can provide an automatic outbound call to the patient a day or two before their scheduled appointment. This can help to confirm that the patient will arrive as well as give them the option to speak with a contact center agent if they need to reschedule their appointment date and time.

Patient Billing Services Operational Efficiency

Timely answers concerning patient's bills and other insurance questions can help avoid payment delays. The automatic call distribution component of Cisco's Healthcare Intelligent Contact Center Solution helps ensure that the proper person or department is contacted and the patients questions can be answered quickly.

Cisco Healthcare Intelligent Contact Center Solution

Cisco Healthcare Intelligent Contact Center Solution utilizes Cisco Packaged Contact Center Enterprise (Packaged CCE) as the core platform for the solution. The advantages of this packaged solution include a simplified management interface, a smaller hardware footprint, and reduced time to install. The solution comes packaged with Cisco Unified Intelligence Center for comprehensive reporting and Cisco Finesse desktop software for an enhanced, next-generation, desktop experience.

Packaged CCE is a VMware-based deployment that provides a pre-packaged, all-in-one, contact center solution for medium to large sized contact centers with up to 1,000 agents and offers easier ordering, simplified deployment, and reduced maintenance. This new package allows a customer to quickly and easily get an inbound voice solution up and running while offering the ability to add other options as needed.

Packaged CCE delivers Cisco Unified CCE on a single pair of core, duplexed, Unified Computing System (UCS) C210-Series servers. Packaged CCE is deployed in a virtualized environment using open virtualization archive (OVA) templates that are downloaded from Cisco.

Packaged CCE provides a core set of contact center functionality including call processing, prompts and rich VoiceXML scripting, voice response collection, agent selection, queuing, and reporting. With its controlled and customizable environment with well-defined configuration and deployment boundaries, Packaged CCE is a robust solution with high-availability and solution serviceability.

Healthcare Intelligent Contact Center Technology Portfolio

Cisco Unified Communications Manager

Cisco Unified Communications Manager (Unified CM) is a software application that controls the Voice Gateways and IP phones and provides the foundation for a VoIP solution. Unified CM runs on Cisco Media Convergence Servers (MCS) and the software running on a server is referred to as a Unified CM server. Multiple Unified CM servers can be grouped into a cluster to provide for scalability and fault tolerance. Unified CM communicates with the gateways using standard protocols such as H.323, Media Gateway Control Protocol (MGCP), and Session Initiation Protocol (SIP) and it communicates with the IP phones using SIP or Skinny Call Control Protocol (SCCP).Unified Access extends the network architecture with capabilities to enable BYOD, mobile care, video, collaboration, and virtualization consistent across all forms of access (wired, wireless, or VPN).

Contact Center Agent Phones

The following three families of phones are in the Cisco portfolio and are fully supported by the Cisco Healthcare Intelligent Contact Center offering:

- Cisco Unified IP Phones 7900 Series
- Cisco Unified IP Phones 6900 Series
- Cisco Unified IP Phones 8900 Series and 9900 Series

Precision Call Routing

Precision Routing enhances and can replace traditional routing of just transferring phone calls to set call center agents. Precision routing looks at all of the skills to which an agent has qualified for and maps the agents to be able to serve the specific business needs of the patient. Precision Routing can provide call directing based on department, agent capabilities, and language specialization with simple configuration, scripting, and reporting. Agents are represented through multiple skills and the capabilities of each agent are accurately presented, bringing more value to the business.

You can use a combination of attributes to create multidimensional precision queues. Using Unified CCE scripting, you can map the precision queues to direct a call to the agent that best matches the precise business needs of the caller.

Cisco Unified Customer Voice Portal (CVP)

Cisco Unified CVP operates with both TDM- and IP-based contact centers to provide a call management and treatment solution with a self-service IVR option that can use information available to customers on the corporate web server. With support for Automatic Speech Recognition (ASR) and Text-To-Speech (TTS) capabilities, callers can obtain personalized answers to their questions and conduct business in innovative ways without the facility incurring the costs of live agent interactions.

Unified CVP can support multiple dialects for prerecorded announcements in several languages. Unified CVP can also access customer databases and applications through the Cisco Unified CCE software.

Unified CVP provides a queuing platform for the Unified CCE solution. Voice and video calls can remain queued on Unified CVP until they are routed to a contact center agent or external system. The system can play back music or videos while the caller is on hold and when Unified CCE routes the call to an agent, the agent is able to send videos to a caller from the agent desktop application.

Unified CVP also supports Agent Greeting recording and playback when integrated with Unified CCE. A pre-installed CVP VXML application is provided to allow agents to record and manage their greetings. Unified CCE instructs the CVP to play back the agent's specific greeting to the caller and agent when the agent answers the call.

Unified CVP also supports the Whisper Announcement feature to play a pre-recorded announcement to the agent when they answer the call.

Cisco Unified Contact Center Management Portal

The Cisco Unified Contact Center Management Portal (CCMP) provides a simple-to-use, web-based user interface to streamline the day-to-day provisioning and configuration operations performed by contact center managers, team leads, or administrators. These operations include moves, adds, or modifications of phones, agents, skill groups, teams, and other common contact center administrative functions. The unified configuration of the management portal is designed to simplify administration of both the applicable IP-based contact center elements and the Cisco Unified CM components. The Cisco Unified CCMP is a partitioned system that can support multiple business units with complete autonomy and it offers hierarchical administration to support multiple business-level users with specific roles and responsibilities. Finally, to help administrators and managers keep track of contact center modifications, it provides audit-trail reports detailing all configuration changes and usage of the management portal.

Cisco Finesse Agent Desktop

The Cisco Finesse desktop is a next-generation agent and supervisor desktop solution designed to provide easy access to the applications and information required by a healthcare organization through a customizable, web-based interface. For IT professionals, the Cisco Finesse application offers a thin-client agent desktop that integrates smoothly with the Cisco Collaboration portfolio. It is standards-compliant and offers low cost of customization of the agent and supervisor desktops.

Cisco Finesse advantages:

- An agent and supervisor desktop that integrates traditional contact center functions into a thin-client desktop
- A 100 percent browser-based desktop implemented through a web 2.0 interface with no client-side installations required
- A single customizable "cockpit", or interface, that gives customer care providers quick and easy access to multiple assets and information sources
- Open web 2.0 APIs that simplify the development and integration of value-added applications and minimize the need for detailed desktop development expertise

Network and Infrastructure

The networking and infrastructure layer consists of the level 2/3 switch infrastructure and should be designed and installed based on the Cisco Medical Grade Network (MGN) 2.0* specifications and architecture recommendations to ensure a high level of voice quality.

Why Cisco

Cisco is the leader in healthcare connectivity and a catalyst in transforming healthcare based on its industry innovation, participation, open standards, and collaboration. The Cisco Healthcare Intelligent Contact Center solution leverages Cisco MGN 2.0* and Cisco Contact Center Enterprise Packaged to provide stability, flexibility and consistent security while lowering the total cost of ownership of the solution. Healthcare organizations benefit from advanced customer collaboration to provide a positive patient experience and allow for consolidation of disparate contact centers.

Healthcare Intelligent Contact Center Benefits

- Enhanced next generation healthcare contact center for a superior patient collaboration and interaction experience

- Simplified Management interface for supervisors and administrators

- Virtualized Voice ACD, Outbound dialer, Self Service, Web 2.0 Reporting

- Easy to use Web 2.0 Finesse agent desktop with integration opportunities for CRM and social media

- Mobile Agent and remote agent support

- Well defined, bounded solution resulting in a low risk deployment

Additional Resources

Cisco in Healthcare: http://www.cisco.com/web/strategy/healthcare/index.html
Cisco Customer Collaboration: http://www.cisco.com/en/US/products/sw/custcosw/Products_Sub_Category_Home.html
Cisco Packaged Contact Center Enterprise: http://www.cisco.com/en/US/products/ps12586/index.html
Cisco Medical Grade Network 2.0: http://www.cisco.com/web/strategy/healthcare/cisco_medical-grade_network.html
*Note: The Cisco Medical-Grade Network (MGN) is a set of Cisco recommended guidelines for building an optimal healthcare network.