

Introducing the Virtual Room

Cisco IT adds Spark to the customer support experience.

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Cisco in Customer Relationship Management: an Introduction

Customer relationship management (CRM) forces companies to think about all their touchpoints with customers and partners. It forces companies to commonly define their customers and partners across all lines of business. Often, companies discover that sales and marketing define “the customer” differently, all the way down to the data level. Getting to a single definition usually requires difficult business conversations, shared investments, and a service-oriented approach to managing business capabilities and IT architecture.

Most of all, CRM forces business people to think about the customer experience they have created. What’s it like to do business with us? To see the status of a quote or order? To get in touch with customer service or open a technical support case at 11 p.m.? The sad truth is most enterprises design user experience from an internal perspective, with little or no customer participation in the process. To succeed at CRM, you have to find out how customers and partners view your processes, your website and mobile applications, and the quality of your service experience. In the end, ease of doing business is what CRM is all about.

CRM system architecture must deliver strategies for customer information and communications:

- Creating a “golden thread” of consistent data about customer accounts, contacts, opportunities, and service and support cases consumed by all customer-facing and back-office applications. That way, the enterprise has a holistic view of its customers and how all parts of the business are treating them. And customers can see consistent information about themselves and their companies, whether they are looking up an order or opening a support case. Know Thy Customer is the guiding principle of CRM.
- Bridging the gap between communications tools (e.g., phone, email, video, online meetings) and the business applications that manage the business processes that serve the customer. These include opportunity management, quoting and ordering, and case management in customer service and technical support.

Adding to the usual technical challenges, in recent years web 2.0 has changed the way we think about CRM. Customers and partners seek more intimacy and immediacy when they do business. All the major CRM vendors – Seibel, Salesforce.com, SugarCRM, etc. – are reflecting this trend. The right data has to be in front of the right people at the right time, with communication methods built into the CRM system itself.

Cisco is fortunate. We have been able to apply our own data virtualization and collaboration products to overcome the data *and* collaboration challenges that confront many major CRM programs.

Embedding Collaboration in CRM Workflows: the Virtual Room

Think about all the information shared in a simple, five-minute phone conversation when you open a tech support case. When you hang up, it's gone.

Think about an important online meeting following up on the same case. After the meeting is over, you send emails with action items. You attach the meeting recording to inform people who weren't there. You schedule more meetings. You use several different applications to keep your "thread" of communications and activity on track.

Then people reply to the emails. Think about all the information in a long, multiparty email thread where people get imaginative and passionate. How often do you find yourself cutting and pasting nuggets of insight or information into another application, or even between emails?

It's ironic: with all the advanced software we use in business, it's still a struggle to connect the things people say, write, and do, because they all happen in different systems that don't interoperate.

Voice over IP (VoIP) systems were designed to manage a specific activity, *phone communication*. Chat systems are designed to create synchronous or asynchronous *text messaging*. CRM platforms were designed to automate business operations by managing *workflow and data*.

But what happens when a technical support engineer makes a series of phone calls, or emails, or chats, and all that media strings itself together into a thread and attaches to the case record in the CRM system?

Now, everyone can become aware of what everyone else is saying and doing about the case, and may become aware at the same time regardless of the specific business application they are using. The standard user experience of going to the phone app to find relevant phone calls, going to the email app to find relevant email about the same thing, and going to the business app to add information to the lead record is transformed. Now all the relevant emails, chats, phone calls attach themselves to the business record. They can find you.

The simple act of communication is converted into the more serendipitous activity of collaboration – people working together on a goal.

My colleague, Steve Quatrano, from Cisco's Contact Center Business Applications Unit, first explained this concept to me as "collaborative threads" – a thread being a series of related communications – a series of phone calls, or emails, or chats sharing a common context.

Achieving this level of integration can't be solved with application plug-ins, or by moving applications from the data center to the cloud. A paradigm shift is required, from user- or IT-driven integration between applications to automated, contextual synthesis using intelligence that operates across clouds. Applications must become aware of each other's events and media artifacts in real time, so connections to business events can be made in real time.

What's needed is a container, a context that brings together all the related communications on a topic or a problem, regardless of media, and binds them to a business object – a lead, a quote, an order, a case – that is managed in a business application.

We need a room, a "virtual room."

From Communication to Collaboration

Communication is a synchronous activity. It may be goal-oriented, informative, or casual in nature. Two or more people must be present for it to happen, which limits its usefulness in business activity.

Collaboration is a goal-oriented activity. It requires communication and information sharing, whether or not people are present at the same time. It can include synchronous communication such as phone calls or real-time chat, but it envelops these in an asynchronous experience.

Collaboration combines a wider variety of communication methods, asynchronous as well as synchronous, to create an immersive experience for people who are solving problems together. When you create an application space that allows people to post comments regardless of presence, share documents, and add voice and video communications, you create an immersive space. At Cisco we call this space the Virtual Room.

The Virtual Room is the most promising collaboration paradigm for CRM, for people working within the enterprise, and most important, for customers and partners. It is replacing email as the dominant method of asynchronous communications because it is more efficient in presenting and managing information, and provides a richer, more intimate user experience.

Consumer social media such as Facebook, Twitter, Google Hangouts, and even simple SMS text messaging have popularized the asynchronous paradigm. A whole generation of people are reducing their use of email to communicate with each other in favor of texting or posting.

In business, email has been the dominant asynchronous medium since the 1980s. Asynchronous is starting to catch on as an improvement over email because it has a number of advantages. Posting creates a cumulative record of comments, uploads, shared links, etc., that everyone can see. When you bring new people into an asynchronous thread, they see everything that's been previously posted. There's no need to forward email threads or meeting recordings to bring someone up to speed. This efficiency adds much to the customer touchpoints at the heart of CRM.

Salesforce.com broke ground in the CRM world when it introduced Chatter, which displays a Facebook-like wall where salespeople working on deals and service agents working on cases can post comments, like comments, invite commenters, and share documents as part of the CRM business record and workflow.

Newer products such as Slack and Atlassian's HipChat pushed the paradigm, creating a more immersive experience that can easily integrate applications for posting events and content of interest through "bots" into the thread. These products have created a new software market space that Gartner calls business messaging.

With the introduction of our own product, Cisco Spark™, we've added out-of-box voice and video, creating a true Virtual Room experience that combines both asynchronous and synchronous communication. Spark is the only product in the business messaging space with the encryption and security features needed to protect customer posts and uploads. Spark also supports enterprise Single Sign-On systems through OAuth2 workflow, making it easier to integrate in the enterprise and secure access. It will soon have the ability to integrate Cisco Unified Communication phone and telepresence endpoints, leveraging the investment in on-premises communications technology that companies have made over the years.

Spark APIs create a common communications plane upon which any application can bind communications and shared documents to CRM objects. These APIs enable a common communications medium across all the different touchpoints that customers have with your business. It works in Sales as well as it does in Customer Service.

Technical Assistance Center Spark

Cisco IT got an early look at Spark prior to its public release in March 2015. Developers and business people quickly saw its potential. The first business application built internally with Spark, using the Spark APIs, is a prototype called Technical Assistance Center (TAC) Spark, or TAC Spark.

Cisco TAC is one of the largest, most complex service cloud implementations in the world, with 10,000 TAC engineers in 15 global support centers. They support the largest install base of any network equipment provider, handling 1.4 million service requests a year and working with 50,000 individual customers every day.

Cisco TAC operates the largest implementation of Salesforce.com's Service Cloud product, a CRM case management system used to track the progress of all technical support cases. TAC operates in a follow-the-sun model, passing a case to engineers in earlier time zones until the customer's problem is resolved.

TAC is not a call center or a help desk. It's a high-touch, knowledge-driven engineering support operation. Cases are not pushed to engineers through rigidly managed queues, and success is not measured strictly on time to resolution. Rather, TAC engineers accept cases that have been grouped in queues based on a sophisticated, proprietary case routing algorithm. After an engineer has accepted a case, TAC's own knowledge management system allows TAC engineers to reuse case resolutions and other technical content to help customers. As part of the Consortium for Service Innovation, an alliance of organizations focused on innovation for the support industry, Cisco TAC continues to be a pioneer in the development of knowledge-centered support (KCS).

For all the innovation the TAC has driven, it still relies on traditional methods of customer engagement: email and phone plus our own Cisco WebEx[®] meetings. While emails are logged and added to the case record, the case management system is blind to what happens on the phone and in WebEx meetings. We can't measure the impact of these communications on worker productivity, and we can't mine the content for knowledge.

Enter Cisco Spark

One of the challenges in a follow-the-sun support model is keeping everyone in different time zones informed and allowing them to work freely together on problem-solving. As the number of people involved in a case increases from the initial customer contact and engineer engagement, giving everyone visibility into information exchanged through emails and phone calls is difficult to near impossible. Managing the different phone numbers and email addresses is also a challenge.

A year ago Cisco IT asked, "What if we could simply give the customer and engineer a single URL to go to, a Virtual Room where they could post, upload, draw, talk, and see each other any time of the day, and invite people to join them, until the case is closed?" It's a similar concept to the old conference call P1 bridge, a single toll-free phone number everyone called when there was an urgent case. The difference, of course, in the Virtual Room is the richness of the experience and capture of information, all of it tied to the case record in the case management system. See Figures 1 and 2 for the conceptual current and proposed target state architectures.

Figure 1. Current State Architecture (Conceptual)

- Separate events, no interoperation
- Separate contact lists and masters
- Separate metrics to be extracted and combined
- Different programming models

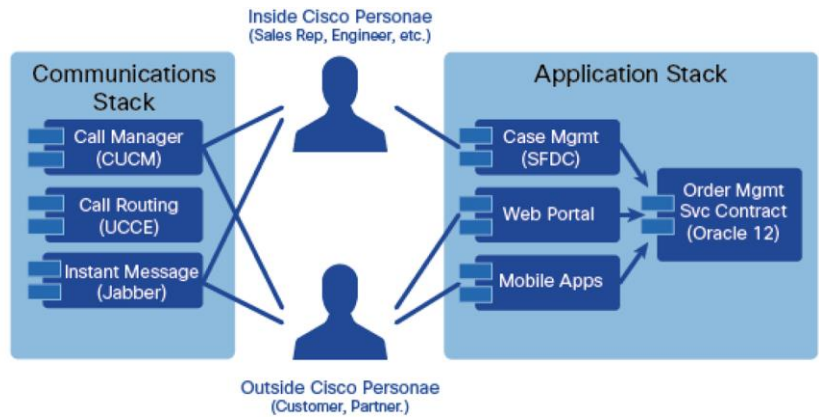
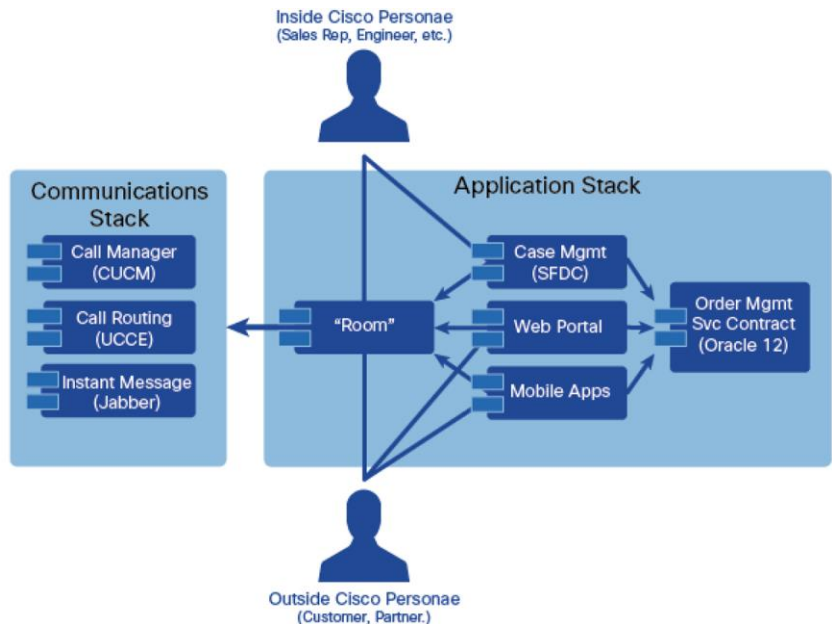


Figure 2. Proposed Target State Architecture (Conceptual)

- Communications events triggered by applications
- Common contact list and master, sourced from applications
- All events logged in application
- Single programming model, through APIs



From the start, we defined seven rules for the Virtual Room experience:

1. The room is created when a case is created and accessible through a single URL.
2. The room is open 24/7 and closed with the case.
3. Everyone can join the room from the application they're using.
4. Customer or engineer may invite people to join the room.
5. When anyone enters or leaves the room, everyone is notified.
6. When documents are uploaded to the room, everyone is notified.
7. Every room becomes a thread: All notes, transcripts, and documents are linked to the case and searchable from the business app (Salesforce.com).

Using the Spark API, when a case is created in Salesforce.com, Service Cloud creates a Spark Room, names it after the unique case number, and invites the customer contact and the case engineer to join.

Customer and engineer use the native Spark web or mobile client to post comments, upload content, and meet to their heart's content. For the engineer, the Spark user interface (UI) is mashed up inside the Service Cloud application.

When the case rotates to an engineer in another time zone, the new engineer is invited to the Spark Room.

Notification means that when the engineer is taking a break, or otherwise not at his desk, he knows when his customer is in the room or posting. Cisco Spark's full-featured implementation on both web and mobile platforms delivers this capability out of the box.

When the case is closed, Service Cloud removes all the users from the room and archives the content and event logs to the Salesforce.com case record, preserving the confidentiality and security of the information and allowing Cisco to mine the technical content for reuse. By using the event logs for operational metrics, we can, for the first time, begin to measure the business value of collaboration in business processes.

In the third calendar quarter of 2015, the TAC Spark process workflow underwent field testing with selected Cisco partners, and so far the feedback has been good. "The process was very efficient for [a recent case where we had multiple people on the customer and Cisco sides working on a problem], much better than the old email and phone tag process. I'd like to see them keep the project going," says Monte Young, Engineer at Presidio, a Cisco Gold Certified Partner.

We're signing up additional partners for more field trials. With continued feedback from the field, the Virtual Room may well transform the customer care experience. Phone and chat-based support has been criticized as "a bunch of people talking in the dark." Cisco Spark's implementation of the Virtual Room adds the light of day.

For More Information

[Cisco Spark](#)

[Cisco Partner Perspective: Presidio, Inc.](#)

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