

Cisco IT Consolidates Jabber into a Single Environment



Cisco IT Methods

Introduction

Scores of companies are growing increasingly global. They are expanding their footprint into areas of greater customer growth while taking advantage of lower labor costs and a wider talent pool. Cisco is no exception. One of the main challenges that we face is enabling our employees to work together across distances while maintaining productivity, cost effectiveness, and quality.

Currently, 40 percent of Cisco employees work in a different location than their managers, and the number of teleworkers has increased by 50 percent in the past two years. To save travel budget, increase productivity, and more importantly, build long-lasting relationships with colleagues, partners, and customers, we explored integrating an end-to-end collaboration solution by replacing Cisco WebEx Connect[®] with Cisco Jabber[®].

Cisco Jabber is a unified communications application that streamlines communications and enhances productivity by integrating presence, instant messaging (IM), video, voice, voicemail for Cisco Unity[®] Connection, calendar, desktop sharing, and WebEx conferencing capabilities into one client rather than several separate services (see Figure 1).

Figure 1. Cisco Jabber Capabilities



Solution

User experience is a priority for Cisco[®] collaboration tools and several drivers have accelerated the collaboration paradigm. These include pervasive video and mobility, cloud-based services, synchronous communication and an always-on work culture, and collaborating within existing business workflows.

An end-to-end collaborative solution that enables users to access all collaboration tools from any device, anywhere, and at any time posed a few challenges. Above all, Cisco Jabber needed to be accessible and fulfill user requirements for mobility and video interaction.

Jabber provided an integrated video solution without demand for an additional fleet of hard endpoints for each employee, thus helping pervasive video adoption across the company. Strategically using existing working business flows to drive daily use and adoption significantly helped in the success of the Cisco Jabber solution.

“The ability to do video anywhere, on any device, is something we didn’t have with WebEx Connect,” says Necole Jackson, Cisco IT Jabber service owner for web conferencing and instant messaging. “At the core of Jabber is mobility. To leverage that capability, we structured Jabber through Cisco Unified Communications Manager [CUCM, formerly CallManager].”

Jabber registers to the existing call control through CUCM, and users have access to a single-dial plan. Employees have a Cisco phone number that resides in their CUCM account. Jabber assigns a desktop account to CUCM. Employees can assign accounts for any of their mobile devices, including iPhones, iPads, and Android devices, and the devices become linked to the employees’ Cisco phone number.

Cisco IT focused on collaboration-enabled business processes to incorporate user-friendly, time-saving features. On any device, access to Cisco Directory gives users the ability to search for and communicate with any Cisco employee. Users can also click to dial from within the Cisco Web Directory, which leverages Jabber client to make the call.

Additionally, by implementing Cisco Expressway for Mobile and Remote Access Cisco Jabber users can securely and remotely connect to voice and video without using Cisco AnyConnect® or VPN to connect to the internal network.

Deployment

The Cisco IT Unified Communications and Video team established requirements to deploy Jabber in a single environment. Chief among them:

- Ensure the core program team is cross-functional, partners with IT, and interacts with Sales and Engineering
- Develop use cases for video mobility and any device
- Test architecture and platform for readiness to manage capacity and load (Wireless Application Protocol, Unity, CUCM protocols)
- Define which clients to move forward with, including which operating systems, version, and address interoperability concerns
- Pilot deployment scalability, application lifecycle, and support for service readiness
- Communicate to users about capabilities, benefits, and use cases.

To make voice a pervasive technology, using a low-cost model, Cisco Jabber phone number was provisioned to all employees rather than requiring employees to request it. By default, when new employees are onboarded, a phone number is provisioned along with a Jabber voice and video account.

To make self-provisioning easy, Cisco eStore, our internal, automated application and service provisioning storefront, was leveraged. Integrating service management into the process enabled lower costs of operation.

When the Jabber solution was initially launched, the architecture included video and voice call control, IM, presence, corporate directory, meetings, voice messaging, security, and network access (see Figure 2).

“In September 2014, Jabber was migrated to the Windows client,” says Jackson, “and within six months, we saw a 700 percent increase in video usage and 300 percent increase in audio usage. We always said Jabber was going to drive our pervasive video strategy, and it was the first time we had video on a soft client.”

Because WebEx Connect services had audio, the notable increase in audio usage signaled to the team that making audio available on desktops by default was the best strategy.

Figure 2. Cisco Jabber Solution Architecture, Network, and Platform Services



Interoperability and Compatibility

Cisco IT had to address interoperability and compatibility issues including bring-your-own-device (BYOD) functionality, operating system dependencies, manual configurations, and data sharing capabilities.

Jabber is not a standalone client with one service, but rather it is a service connected into voice, voicemail, WebEx Meeting Center, and IM, and must work across all the mobile devices that Cisco employees use. Initially, the code base for iOS, Android, Mac, and Windows was different, which required additional validation and deployment planning by the service management group. However, with Jabber Client Framework, all the clients use a common set of cross-platform libraries. This commonality provides a consistent set of unified communication capabilities for the entire Jabber portfolio and makes the deployment much more seamless.

As a large organization with 95,000 users and 117,000 unique active logins per day, Cisco had a great deal at stake. Maintaining strong partnerships with the business units allows Cisco IT to alert teams when interoperability or compatibility issues emerge, and efficiently remedy issues to enable a better user experience.

A unique feature of the Jabber single environment is that it doesn't depend on a specific operating system such as Windows or iOS. Cisco Jabber escalates to WebEx and WebEx integrates with video endpoints such as Collaborative Meeting Rooms. Integrating WebEx and Cisco TelePresence® automatically reduces the amount of manual configurations users previously needed to schedule and join meetings. Employees can focus on the meeting rather than the technology.

Integrating WebEx and TelePresence also offers seamless data-sharing capabilities. In the past, data sharing was tedious because users had to connect their screens to the TelePresence unit as well as share via WebEx. With integration, participants have to share either on WebEx or TelePresence.

Cisco IT deployed Cisco Jabber as not only a consolidated platform but as a consolidated client for multiple OS and devices. Cisco IT took a conservative approach to deployment because a large amount of infrastructure changes were under way to prepare for the Jabber platform. End-to-end Session Initiation Protocol (SIP) enablement offers a better voice and video experience and better data-sharing capabilities.

"We also wanted to ensure we were deploying the right client," says Jackson, "because although we're Cisco's best customer, we need to ensure we're providing the best services we can to our employees. WebEx and Jabber are largely used within Cisco across teams, so improving the internal user experience without disrupting that experience was a priority for our team."

The first client version of Jabber we deployed was for iPad in April 2013, followed by an optional Windows client upgrade to version 9.2 in September 2013. Within the first week of deploying v9.2 for Windows, 50 percent of users downloaded the client. Within the first two weeks, more than 2000 employees migrated to Jabber from WebEx Connect daily. Only 4 percent of support cases were from users who migrated, a percentage that's usually higher during migration to a new platform. In December 2013, we deployed Jabber for Mac and iPhone. Within Cisco we're currently using the following versions of Cisco Jabber:

- Jabber for Windows v10.5.0
- Jabber for Mac v10.5.1
- Jabber for iPhone v10.5.2
- Jabber for Android v10.5.2

In January 2014, Cisco Jabber replaced all our previous software phone and IM clients. Jabber 10.5x delivers a consistent, enhanced user experience across the platforms.

Security

Cisco IT leverages layered security, network security for internal connectivity, VPN for external connectivity, and Cisco Virtual Office (CVO) for remote teleworkers. Jabber client is certified secure. Contacts are built into the cloud.

Management

Cisco IT manages consolidating and integrating Jabber into a single environment. A cross-functional group comprised of a cloud management team, platform teams for Jabber and WebEx Messenger focused on Unity and CUCM, and the service team for client validation and roadmap continually work to deploy new Jabber features. Using cloud-based messenger service helps optimize labor for IT service management and minimize operating expenses. In addition to these teams, account management, client upgrades, and metrics are also managed by Cisco IT.

- **User Account Management:** We have integrated CUCM account provisioning with the Cisco eStore. Voice and video are enabled by default for Cisco Jabber on all laptops. New hire accounts are auto-provisioned as well. eStore provides self-service provisioning of Cisco Jabber accounts on mobile devices.
- **Mobile app store:** Cisco Jabber apps for mobile devices are listed in the eStore mobile app store, which provides a one place for all enterprise IT supported apps.
- **Jabber client upgrades:** The IT service management team uses Org Admin, a cloud-based tool, to manage upgrades of Cisco Jabber client on Windows and Mac. Mobile apps get upgrades through external app stores including Apple App Store and Android Play Store.
- **Metrics:** The IT service management teams analyze metrics reports to measure adoption and utilization, and assess user experience. We leverage a consolidated metrics dashboard for the entire unified communications and video collaboration portfolio.

Service and Support

Cisco IT requests feedback from users enterprise-wide to improve deployments and user experience for WebEx and Jabber. Coordinating with engineering and product development teams helps ensure that problems are acknowledged and remedied efficiently. This allows Cisco IT to release upgrades and deployments more effectively, with minimal disruption to the user base.

"I've got a great team that does client validation," says Jackson. "We have strong relationships with the business unit and meet weekly to discuss products and challenges."

In addition, our internal, self-service portal (Cisco eStore) enables employees to start using Cisco Jabber without additional manual help, which reduces the IT support cases.

Lessons Learned

Cisco IT strategically managed the consolidation of Cisco Jabber into a single environment. Cisco IT offers the following tips for deploying Cisco Jabber:

Meet with a sales account manager and set up time with Cisco IT Jabber service manager and the web conferencing and instant messaging team to discuss how to deploy Cisco Jabber.

Ensure the company network infrastructure can sustain Cisco Jabber. Cisco Jabber requires varying bandwidth for audio, video, and data sharing. Jabber uses video rate adaptation to negotiate optimum video quality. Cisco Jabber video call resolution is based on the available bandwidth. It varies between 144p (minimum required upload speed is 384kbps) and 720p30 (minimum required upload speed is 2000kbps). We use a shared video queue, with varying drop precedence for video endpoints and Cisco Jabber, to define the Quality of Service configuration on the network.

Implement strong service management to provision access and de-provision access to the technology. Cisco Jabber and Cisco WebEx offer scalable, low-cost mobility. Automating the service will ensure a low cost management portfolio.

Have the right people on the team. Service managers who understand the vision and strategy end to end will play a key role in deployment and ongoing service management.

Save time with client validation. Catching and remedying issues at the beginning of deployment saves valuable time later in the process.

Optimize Cisco Jabber with standardized accessories. Recommending quality accessories based on the user's environment will greatly improve service and the user experience. Cisco IT categorizes recommendations for users who share space, have private offices, or are mobile.

For More Information

Cisco IT Case Study: [How Cisco IT Introduced Cisco Jabber](#)

To read additional Cisco IT case studies about a variety of business solutions, visit [Cisco on Cisco: Inside Cisco IT](#).

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