

How should an enterprise move toward Unified Communications?

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Introduction

Avaya defines Unified Communications as orchestrated communication and collaboration across locations, time, and medium to accelerate business results. It is achieved through the convergence of real-time, near-real-time, and non-real-time business communication applications including: calling, conferencing, messaging, contacts, calendaring, collaboration, and rich presence with voice, video, text, and visual elements. Users can access these capabilities using multiple modalities including voice, data, and speech access, through telephones, PCs, and mobile devices. These communications services are increasingly designed to be embedded into structured and unstructured business processes. This takes Unified Communications to the next level in terms of IP voice and video telephony; audio, web and video conferencing; unified messaging of voicemail, email, and fax; instant messaging and more.

There is no single strategy via which enterprises will move forward with Unified Communications since each customer has a unique set of needs and existing infrastructure. Avaya understands this and moves customers toward Unified Communications to support complex and flexible work environments. The consultative process begins with a business assessment to understand the communication patterns within the organization, and to identify where business processes slow or bog down. Implementing Unified Communications entails multiple initiatives over time as noted in figure 1. Some follow in series; others can be done in parallel.

Typical starting points include:

- Improve support for mobile workers
- Bring telephony to the PC
- Bring computer applications to the telephone
- Establish Unified Messaging
- Enterprise Instant Messaging Integration
- Introduce Unified Conferencing
- Add Video

UNIFIED ACCESS

Avaya one-X® Communicator

Softphone and UC client for voice and video via H.323 or SIP

Avaya one-X® Portal

Web based telephony, messaging, contacts, conferencing for Windows, Mac, Linux

Avaya one-X® Mobile

Calling, call routing, visual voice mail, contacts (BlackBerry, iPhone, Windows Mobile, Palm, Java)

Avaya one-X® Speech

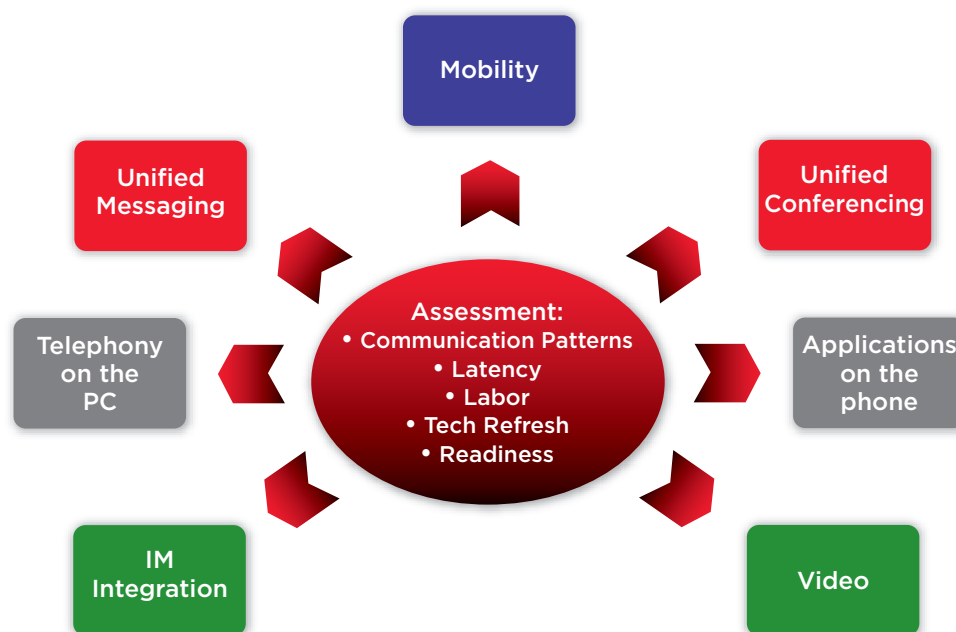
Speech access to telephony, email, voice mail, contacts, calendar, calling, conferencing

Avaya one-X® Deskphone

Applications enabled IP telephones via H.323 or SIP designed for various user/usage types

A business assessment that evaluates communications patterns of the employee base is critical to successfully planning for Unified Communications. Information workers are becoming increasingly mobile and working remotely in order to service customers and to perform their jobs. Depending on the job being performed, work environments may change throughout the day, week, or month to include any combination of locations: at a desk in the office, an alternate location within the office, at a customer location, in the car, in a hotel room, or at a home or a virtual office. To identify opportunities for Unified Communications, business processes should be evaluated to identify where latencies exist due to human interaction and communication.

Figure 1: Identifying opportunities for the application of Unified Communications



Unified Communications by its very nature will change behavior and the way people communicate and work. A Unified Communications solution does not have to be implemented as a single project. Rather, it can be implemented as a series of initiatives, all based on a single vision.

Initiative 1: Improve support for mobile workers

Enabling mobile workers to be effective from any location can increase employee availability, productivity and responsiveness. Consider, for example, teleworkers who work from home or mobile associates who work from anywhere. They should be equipped with a single number where they can be reached from anywhere: at the office, on a mobile device, a virtual or home office, or hotel room. The same number would be used for special services such as fax, caller requested notifications, TTY, and video. In order for single number to be effective, the user should have a single identity for outbound communications. Today people call a device

COLLABORATION AND INTERACTION SOLUTIONS

Avaya Aura™ Communication Manager

Call routing, feature server, and management; 5-9s reliability; to 36K/1M users system/network

Modular Messaging

Unified Messaging via Outlook, Notes, IMAP4 Exchange, Domino; to 240 ports, 20K users

Meeting Exchange™

Reservation-less, scheduled, or event based audio conferencing; to 14K ports

Avaya Web Conferencing

Web based collaboration: presentations, polling, app sharing, white boarding, chat, recording

Avaya Video Telephony Solution

Desktop, group, multi-point, high definition, and telepresence video solutions

hoping to reach the individual. Unified Communications can change behavior so that people call one number and rely on the network and automated personal assistants to reach the device and ultimately, the individual.

Users should have only one mailbox so that messages do not get stranded in a personal mobile mailbox where they cannot be forwarded to a co-worker for action and context. UC client software on a PC allows users to manage calls, directing the voice path to the PC using VoIP through the PBX or to a designated telephone — leveraging the dial plan, least cost routing, tracking, and management of Avaya Aura™ Communication Manager. Cellular phone expenses can be reduced by using alternatives to the cell phone when away from the office, and by directing all inbound and outbound calls through the IP PBX including those made or answered on the cell phone. Client software on a mobile device — be it Research in Motion BlackBerry, Apple iPhone, Windows Mobile, Palm, J2ME (e.g. Motorola Razer), Symbian (e.g. Nokia) — empowers a user to manage their enterprise communications when they are not connected to a land line or their PC. Speech recognition provides hands-free, eyes-free, speaker-independent access from any phone to email, voice mail, calendar, personal and enterprise directories, calling and conferencing. While in the office but still mobile, users can be empowered to shift a call to and from their mobile device and deskphone while a call is in progress, and can leverage wireless WiFi or DECT networks to communicate while they roam the enterprise space. The Avaya All Inclusive offer through the Avaya Unified Communications Standard Edition includes applications to make mobile workers more effective, including Extension To Cellular, Avaya one-X® Mobile, VPNremote, Avaya one-X® Portal and Avaya one-X® Communicator; Avaya one-X® Speech is included with Avaya Modular Messaging.

Initiative 2: Bring telephony to the PC

Softphone technology is a powerful tool, but in many organizations broad deployment has been rejected because it was seen as a replacement for the desk phone. In reality, softphone technology complements the desk phone in addition to enabling mobile workers. The softphone has now evolved to a more robust Unified Communications client. From a voice perspective, it makes it very easy to access the many features available on Communication Manager for increased customer service, collaboration, administrator/manager interactions, security, and productivity. It is simple to manage multiple calls simultaneously including bridged lines. It provides access to presence, directories, communication logs, and applications such as voice mail, conferencing, and video ... all behind a simple point-and-click interface. For IT departments that don't want to manage additional desktop software, they can deploy it in a web-based model to make it securely available to all employees from anywhere they have an intra- or internet connection. Voice via Communication Manager can be integrated into Microsoft Office Communicator, IBM Lotus Sametime, and Jabber instant messaging clients. This extends click-to-call and telephony presence into instant messaging, email, and collaboration applications. The Avaya Unified Communications Standard Edition includes Avaya one-X® Portal and Avaya one-X® Communicator, and can be used equally by those that are working remotely and by those that are working in the office. The UC Standard Edition includes integrations to Microsoft Office Communications Server and IBM Lotus Sametime.

Initiative 3: Bring computer applications to the telephone

When developing a Unified Communications strategy, do not overlook the importance of the business telephone. Whether the phone is on the desk or connected via VPN software from the home office, the business phone is a persistent “always-on” device that provides access to business applications and information. This might meet the

CORE COMMUNICATION SERVICES

Avaya Aura™ Communication Manager

Call routing, feature server, and management; 5-9s reliability; to 36K/1M users system/network

Avaya Aura™ Application Enablement Services

API gateway to Avaya voice & video services including UC, contact center, business apps

Avaya Aura™ Presence Services

Multi-protocol/multi-application presence aggregation, distribution, policy management

Avaya Aura™ SIP Enablement Services

SIP routing platform: proxy, registrar, location, presence, event servers

Avaya Aura™ Session Manager

Centralized high scale SIP routing and user/application mapping, scaling to 250,000 stations

needs for special communication applications, or address those situations where a computer is not available or turned on. Applications examples include:

- Business Dashboard providing real time updates on key performance indicators that are always available at the user's fingertips
- Access a corporate wide LDAP directory
- Obtain information from the intra- or internet including RSS feeds
- Access email, calendar, and contacts
- Appointment pop-up reminders that allow you to place the associated call with a single button
- Utilize specialized vertical applications such as:
 - Room service menus in a hospitality scenario
 - Class attendance rosters for K-12 education
 - Contacting the surgeon on call for health care
 - Accessing live stock feeds, currency rates, and the latest financial news in financial services or general business

Initiative 4: Establish Unified Messaging

Unified Messaging can be accomplished by leveraging Microsoft Exchange or IBM Lotus Domino as the message store, or by utilizing Microsoft Outlook, IBM Lotus Notes, or an IMAP4 compatible email client to unify desktop access to email and voice mail stored in separate servers. Integration to a wide variety of PBXs or communication servers may be by way of IP or TDM technology to allow organizations to move to Unified Communications at their own pace. Likewise, support for older releases of the email system such as Exchange 2000, 2003, or 2007 and Domino 6.5, 7.X, 8.X allow organizations to layer unified messaging onto an existing infrastructure. Modular Messaging supports a variety of email versions and 3rd party PBX integrations to allow a more flexible Unified Communications rollout strategy. In addition to access to voice messages through the email client, speech to text transcribes voice messages to text and can be delivered to any email address. Modular Messaging and Avaya one-X® Speech provides text to speech access to email messages so that email messages can be listened to. Avaya Aura™ Communication Manager Messaging and INTUITY AUDIX LX support IMAP4 integrations with Microsoft Outlook, IBM Lotus Notes, and other email clients.

Initiative 5: Enterprise Instant Messaging Integration

Companies today are deploying Enterprise Instant Messaging (EIM) with presence. While some EIM solutions provide point-to-point voice and video capabilities, for many reasons it may not be practical for enterprise use. To overcome these obstacles, Avaya telephony and managed video can be easily integrated into these clients to allow for click-to-call, call control, and presence integration. Presence status will indicate that a user is on the phone when using the Deskphone, mobile device, VPNremote phone, softphone or web portal. This leverages Avaya voice and video technology to allow for click-to-call, click-to-video call and click-to-conference from the EIM clients. These productivity features are available while users are at their desk phones or while working remotely using a VPNremote phone, or a softclient. Avaya Aura™ Application Enablement Services integrates with Microsoft Office Communications Server 2007, Live Communications Server 2005, and IBM Lotus Sametime. Integrations to Microsoft and IBM Lotus are included in the Avaya Unified Communications Standard Edition.

Initiative 6: Introduce Unified Conferencing

There is a huge ROI potential by bringing service provider based audio and web conferencing services in house. An excess of 5,000 conferencing minutes per month can provide a payback within 6-8 months of a Unified Conferencing investment. In addition, since most traffic is generated by internal use, the enterprise can also save the access costs by running these services across the enterprise network. The use of audio, web, and video conferencing capabilities can reduce travel requirements saving travel expense and reducing unproductive time. Managing an audio conference call with a PC interface makes meetings more effective by allowing users to spend more time on the purpose of the meeting and less time managing logistics. Moderators and participants can see the names of people who are participating in the call and identify who is speaking. Moderators are empowered to mute noisy lines or the whole conference, add or drop participants, and lock the conference to make it more secure. Web Conferencing on its own is a great collaboration tool, but the ability to control the audio participation from the web conference interface provides even better meeting management. Adding streaming video allows users to see the active speaker adding important context and maintaining attendee participation. Calendar integration of Microsoft Outlook or IBM Lotus Notes with Avaya Meeting Exchange enables conferencing resources to be booked at the same time the meeting is scheduled, and the simplicity of click-to-join directly from the calendar entry expedites the start of a meeting.

Initiative 7: Add Video

More than 50% of communication is non-verbal. In the past video was thought to be too complex to be used as an everyday tool. Today video is as easy to use as a telephone. For the same price of a single competitive video conferencing solution, Avaya offers high-quality unified video solutions for thousands of desktops. Audio and Video can be unified so that hold, transfer, conference, call coverage, etc. work together. When making an audio call it can sense if both ends are video enabled and automatically establish the video connection. Unifying audio and video together through Communication Manager means that class of service can be applied to ensure that the appropriate bandwidth is provided where needed, and that there is a single dial plan that applies to both media. Avaya Video Telephony Solution allows the mixing of different protocols (SIP or H.323 based) and different video resources including desktop, group, multi-site, High Definition and telepresence applications.

Conclusion

Unified Communications is orchestrated communication and collaboration across locations, time, and medium to accelerate business results. It can improve customer service by simplifying the interaction between customers and the enterprise, and by making workers more available and responsive. Productivity can be increased measured not just by the seconds or minutes it can save an employee to execute a task, but by the compression of overall business processes measured in hours or days. Unified Communications can enhance collaboration by accelerating work flow, improving decision making, and leveraging the social network. Unified Communications can reduce costs by lowering corporate communication and mobile phone expenses, by reducing meeting and travel expenses, and lowering real estate requirements. And, Unified Communications can cost as little as 15 cents per day per employee with costs spread over a three-year period.

The key to moving forward with Unified Communications is to conduct a business assessment to identify where there are delays in business processes caused by the interaction of individuals. This should be done in parallel with a technology assessment to determine the state of readiness for moving forward and leveraging current investments on the path toward Unified Communications.

About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit www.avaya.com.



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