As the global workforce continues to expand – through mobilization, expansion of regional offices and strategic partnerships -- enterprises need to keep their employees and partners within the communication fold. High-quality video conferencing sessions via desktop, hand-held devices and dedicated rooms bring people together in ways that bypass travel without sacrificing the experience of immediacy and interaction. The need to improve and facilitate collaboration and communication is driving the evolution of technology that brings people together across the enterprise.

Scalable solutions are key to enterprise-wide collaboration, and appliances like the communication server, conference server and gateway are integral to facilitating that ability to communicate a growing number of people. Scalability clearly needs to be a priority for enterprises in light of the number mobile devices that are flooding the network. According to research by Gartner, the number of tablet devices should grow to 320 million in 2015, while mobile devices will increase to 1.2 billion by 2015.

While video networks are predominantly based on the H.323 protocol, video conferencing systems must accommodate both H.323 and SIP protocols. Each are scalable, and both have their advantages. SIP can support multiple devices for unified communications – including telephony, presence and messaging. H.323 is tailored for multipoint conferencing. For users connecting via legacy systems, gateways take information from one format, such as SIP, and translate it into another, such as H.323.

Polycom RealPresence Platform

Polycom’s RealPresence Platform is a software infrastructure that supports SIP and H.323, and can switch between the two – a feature that lends itself to scalability. Polycom supports scalability for communication servers (also known as Gatekeepers) and conference servers (MCUs). (For a deeper look at scalability among these appliances, as well as among directories, recording and calendaring applications, please read Polycom’s white paper.)

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To increase scalability, the Polycom DMA 7000 and the CMA 5000 – both signaling servers -- query directories, a process that improves the efficiency of call set-up and breakdown. Because they process signals and not media, they can scale up to thousands of users. Networking the communication servers increases the scalability even more. In a super-cluster configuration, the DMA 7000 can support up to 75,000 registrants and 25,000 concurrent calls, as well as large numbers of users in UC solutions that include PBX, VOIP, video and Lync and SameTime.

Polycom solutions also accommodate the different codecs that require transcoding, and even the same standards, such as H.264, that are encoded differently. The DMA 7000 virtualizes both Polycom and non-Polycom infrastructures, treating them as if they are one huge server.

For organizations with offices and conference servers spread around the world, the larger the pool of server resources, the more efficiently they can balance the load of calls. To support scalability in conference servers, Polycom’s RealPresence Platform uses AdvancedTCA (ATCA). Conference servers that are cascaded can accommodate larger conferences and more participants. The DMS 7000 can virtualize up to 64 Polycom conference servers so that they act as one server, enabling it to choose the server that can best handle the number of participants at a certain video quality. Thus, IT managers can route calls around failed or busy conference servers, allowing the network to expand as necessary.