How Cisco Uses Live Broadcasts and Video on Demand to Save Cost of Onsite Meetings

Streaming media broadcasts affirm the value of Cisco ACNS software and Cisco content delivery networks.

Cisco IT Case Study /Video / IP Video for Companywide Broadcasts: Executives at Cisco Systems needed an efficient and economical way to communicate with employees in the newly formed sales group for emerging markets. Because these employees are located around the world, bringing them to an onsite meeting was costly and impractical. This case study discusses how Cisco used its own video and content delivery products to transmit a live broadcast and stored video for a group event over the Cisco WAN. Customers can draw on Cisco IT's real-world experience in this area to help support similar enterprise needs.

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>
> **– Marcelo Durand, Emerging Markets SE Director**

CHALLENGE

During a period of organizational change, it is important to communicate with employees in a timely, efficient, and consistent manner. A common way to meet this need is to bring all employees together for an onsite meeting, held at the company headquarters or other central location.

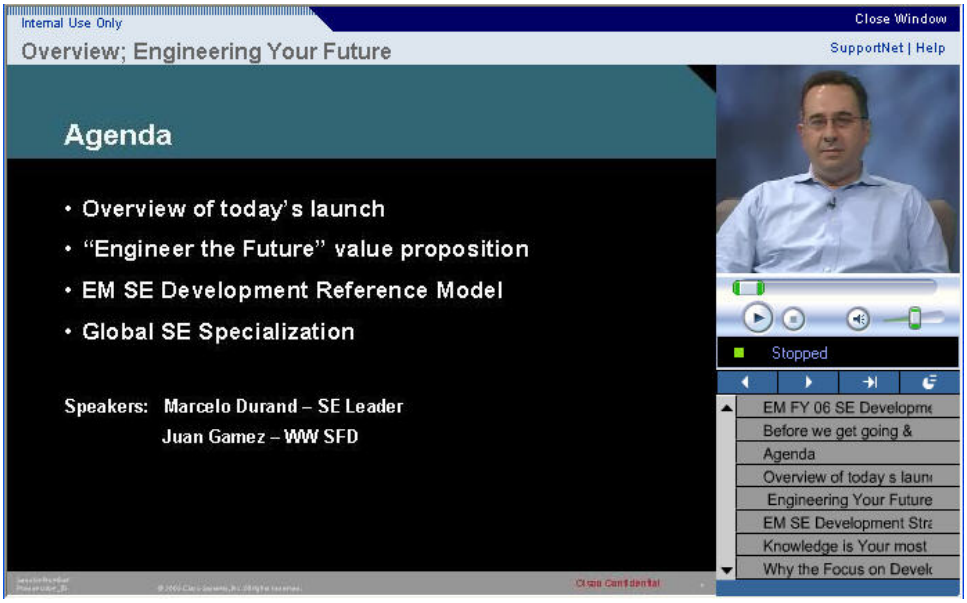
When Cisco Systems® created a sales group to serve emerging markets, company executives wanted to quickly meet with this new group to establish a team identity and present Cisco's market development strategy at the beginning of a new fiscal year. It was clear that a traditional onsite meeting would not be feasible or cost-efficient—the group's 300 systems engineers (SEs) were located on five continents. Cisco needed a different way to communicate with the group.

SOLUTION

The solution was an IP-based, live video broadcast from the emerging markets group's leadership team. The live broadcast and a stored video on demand (VoD) module were produced by the Cisco Media Network team. "This event did not replace a traditional onsite meeting; it was the only possible way to do it," says Marcelo Durand, Cisco Emerging Markets SE Director.

Working with a Cisco Media Network producer, Durand and other team members designed a broadcast event that featured several speakers. As the event host, Durand worked with field SE managers and the Cisco Worldwide Sales Development team to create Microsoft PowerPoint slides to be shown during the broadcast. In addition, multiple question-and-answer sessions were established to encourage audience participation during the broadcast (Figure 1).

Figure 1. During the live broadcast, viewers saw the presenter slides and video stream on the same browser display.



The event was planned for early morning U.S. Pacific Time to serve the targeted audience in Cisco's Latin America, Europe, Middle East, and Africa regions. Field managers were encouraged to host local meetings so that SE teams could watch and discuss the event as a group.

The live event was broadcast from a Cisco studio over the Cisco WAN. To watch, viewers entered the event's URL in a Web browser. Cisco content delivery systems automatically detected the viewer's location and provided the best-available quality for the video stream. Cisco Application and Content Networking System (ACNS) software supported remote VPN access for telecommuters. Multicast delivery of the live streams was performed directly over internal WAN links for employees watching the broadcast at a Cisco office.

METHODOLOGY

The multicast-enabled Cisco WAN uses a variety of elements and capabilities to support live video broadcasts. Multicast transmissions send a single, high-quality stream to many users without overloading the network. This method serves employees working in a Cisco campus site. Unicast streams are sent point-to-point from a single source to a single destination. This method serves remote Cisco employees who use VPN access to the intranet. External partners and customers are also served by unicast streams when accessing public broadcasts on Cisco.com.

The Cisco Media Network team uses Cisco video products and Cisco ACNS software for multicast broadcasts on the Cisco network. For each live event broadcast, three streams are encoded:

- 900 Kbps for satellite distribution to areas where the terrestrial WAN does not have sufficient bandwidth
- 500 and 100 Kbps for access over the terrestrial WAN
- Unicast streams to serve remote employees, partners, and customers who watch the broadcast outside of Cisco offices

For partners and customers who access the broadcast over the Internet, Cisco serves multiple streams, including:

- 14 Kbps Windows Audio
- 56, 100, and 300 Kbps Windows Video
- 28 Kbps Real Audio 8

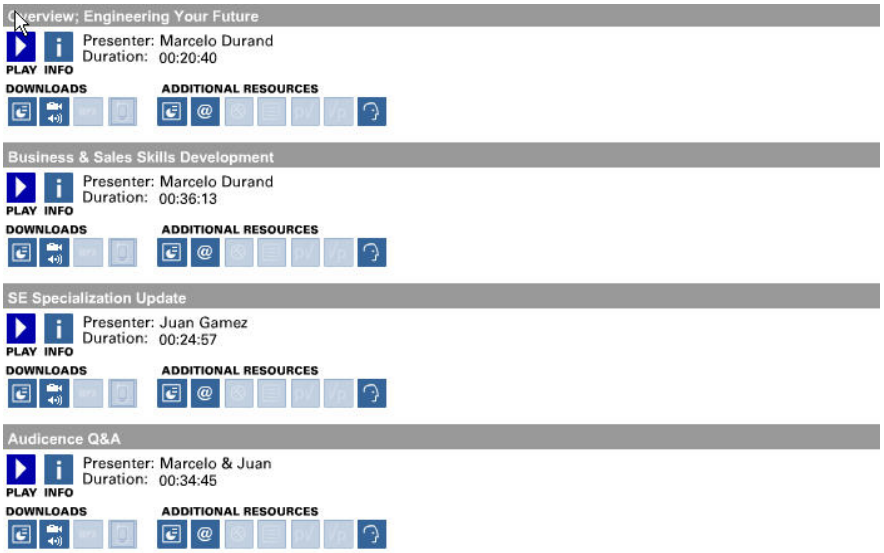
- 56, 100, and 300 Kbps Real Video 8

These encoded streams are directed to a global ISP, which provides nearest-proximity streaming to the partners and customers. To serve unicast streams to remote VPN employees, Cisco uses its content delivery network to split streams in a cascading design that supports 14-Kbps audio streams and 56- and 100-Kbps video streams.

During the broadcast, the presenter's slides were automatically synchronized with the video and audio streams. At any time during the event, viewers could submit questions using their browser's text dialog feature. After each major section in the presentation, the questions asked during the broadcast were provided to the event hosts by the producers and the answers were broadcast to the entire audience. A projector and speakers were attached to PCs at sites where the SEs met as a group to watch the broadcast.

After the event, the producers created four VoD modules for employees who were unable to watch the live broadcast. These modules were available on the Cisco intranet the next day (Figure 2).

Figure 2. After the live event, employees accessed the stored video files as VoD modules.



Once created, every Cisco VoD is uploaded to the Cisco content delivery network, given meta-tags, and released to production by Cisco ACNS. For employee access, Cisco ACNS also pre-positions the content on local Cisco content engines. The Cisco ACNS solution, which includes Cisco content engines and the Cisco 4600 Series Content Distribution Manager, helps ensure that content is highly available at expected quality levels without significantly impacting available bandwidth on the network backbone. Cisco ACNS invisibly redirects high-bandwidth content requests, such as for a VoD module, to the geographically nearest Cisco content engine for fast response.

RESULTS

More than 250 SEs, individually and in groups, watched the live event from locations all over the world. In addition, nearly 100 viewers watched the VoD within two weeks after the event.

This event saved the time and travel expense usually incurred for an onsite meeting. More importantly, the event met its primary goal of quickly and effectively delivering information with minimal disruption of current sales activities. A survey of participating employees, conducted after the live event, indicated a high level of satisfaction with the session's content as well as the quality of the audio, video, and slide display.

"The value of this event was huge—it allowed me to reach at least 90 percent of my 300 SEs in the emerging markets group in one session," says Durand. "This surpassed my expectations in terms of audience reach, participant ratings, and the length of the Q&A session."

The ability to deliver live broadcasts and VoD modules over the Cisco network offers several financial advantages that are not available with other communications methods.

- **Direct and rapid information delivery.** With video broadcasts and VoD modules, content can be delivered quickly and conveniently to employees and other audiences, regardless of time zones and geographical location.
- **Reduced travel time and expenses.** Enterprises can avoid the direct expenses of employee travel as well as facility rental and services for onsite meetings, seminars, or training events. By using the corporate network, streaming media communications can reach employees in a timely and cost-effective manner.
- **Streamlined content production and distribution.** Traditional communications methods usually include the production and material costs for items such as books or audio and video discs. Streaming media communications are entirely network-based and do not require the expense, efforts, and delays of producing and distributing materials.
- **Faster information dissemination.** Reducing or eliminating travel time correlate directly to increased employee productivity and efficiency. Employees can access streaming media communications without leaving their desks.
- **Easier management.** A Cisco content delivery network makes it easier to uniformly organize and manage streaming media communications. Usage reports and statistics identify ways to promote network consistency and access to content, which can make a positive contribution to an organization's overall performance.
- **Increased sales and revenues.** Employees such as sales representatives can access content at any time, from any location connected to the Cisco intranet. This flexibility allows employees to spend more time with customers, focused on increasing sales.
- **Improved customer service and product quality.** The timely and easily accessible nature of streaming media gives support representatives effective information to help customers. In addition, streaming media supports options for two-way communications between presenters and viewers, such as question and answer sessions, audience surveys, and online chat functions. As one example, this capability enables product managers and engineers to receive direct and timely feedback for product enhancements.

LESSONS LEARNED

For Cisco IT, streaming media broadcasts affirm the value of Cisco ACNS software and Cisco content delivery networks as solutions for delivering timely and effective communications to employees worldwide. For the Cisco sales organization, the positive feedback about this broadcast event and the associated VoD has proven the value of using streaming media technology as an alternative to onsite meetings in the future.

FOR MORE INFORMATION

To read the entire case study or for additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT www.cisco.com/go/ciscoit

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