

Radisys Integrated Conferencing Solution Improves Economics and Flexibility in Next-Generation Architecture

Case Study

radisys®

Industry/Market

Hosted Conferencing Services in Asia Pacific.

The Challenge

Reduce cost by migrating from TDM-based audio bridge infrastructure to an all IP-based solution that delivers exceptional economics with new features and flexibilities.

The Business Environment

Demand for hosted conferencing services is growing rapidly in the Asia Pacific, leading to increased competition and pricing pressures.

The Solution

Radisys media servers and SIPware conferencing platform for hosted IP-based collaboration.

The Benefits

The Radisys solution provides the economics, flexibility and advanced features required for next-generation hosted collaboration service offerings.

Customer Profile

One of the largest independent conferencing and collaboration service providers in China.



Asia Pacific is the fastest growing geography for conferencing services, according to Wainhouse Research. Minutes of use in the region are forecasted to increase at a 19 percent compound annual growth rate (CAGR) from 2011 to 2016. This trend is due, in large part, to an upsurge in Chinese conferencing business, particularly between Chinese-based businesses conducting international conference calls.

An emerging conferencing service provider (CSP) based in China was an early innovator in supplying conferencing services to the growing Asia Pacific opportunity. They initially launched their business using legacy time-division multiplexing (TDM) audio bridge infrastructure. But as the CSP's business grew, the capital and ongoing operational costs of the TDM equipment limited their ability to compete with new entrants and competitors in the Asia-Pacific conferencing market. In addition, the solution lacked the ability to leverage economical VoIP technologies and network interconnection, while limiting the flexibility to integrate with other IP-based communication and back office systems. Clearly, a more cost-effective solution was needed to sustain rapid business growth in the face of the inevitable downward price pressures stemming from increased competition.



As the adoption of conferencing services in Asia is still very much in its infancy, we see immense opportunity in being an early innovator in hosted collaboration services. The Radisys solution enables us to deliver economical, integrated and feature-rich conferencing service offerings to our business customers.

CEO Conferencing and Collaboration Service Provider in China



The selection and deployment of a Radisys Integrated Conferencing Solution, consisting of the SIPware conferencing platform with Radisys media servers, allowed the Chinese CSP to offer high-value differentiated conferencing services, while reducing operating expenses using a low cost, flexible VoIP architecture. In addition, the Radisys SIPware software eases integration of the CSP's web conferencing services, smartphone applications and back-end business systems.

A More Competitive Conferencing Solution

The Chinese CSP sought a solution capable of delivering the cost benefits of IP-based long distance communication, while enabling high-quality audio, advanced control and usability features. Radisys satisfied these requirements with an offering that excelled in a number of areas, including economics, flexibility and differentiation opportunities.

Economics: Lowering Operating Costs

The Radisys conferencing solution leverages the cost-efficiencies of IP-based, overseas networks and implements least-cost routing algorithms to determine the lowest cost interconnection between nodes.

SIPware uses a signaling control protocol, called the Session Initiation Protocol (SIP), that can establish, modify and terminate multimedia sessions or calls communicated over Internet Protocol (IP). This capability allows SIPware to take full advantage of cost-efficient SIP trunking with carrier networks, supporting significant ongoing interconnection cost reductions compared to traditional circuit-based TDM trunks typically used in older audio bridge products.

The solution also reduces IP backhaul traffic by mixing regional participants together and sending a single signal over long distances (transoceanic) instead of transmitting an individual media stream for each participant. Through cascaded conferencing, the platform implements economical global conferencing for a single call comprising thousands of participants.

Figure 1 illustrates how this is accomplished using cascaded Radisys media servers. In this example, a regional media server in Beijing mixes together conference participants calling in from Shanghai, Nanjing and Tianjin, and the single aggregated mix is backhauled to the regional media server in San Francisco. Similarly, the media server in San Francisco mixes participants calling from cities in California with the aggregated overseas mix. In summary, only a single bi-directional VoIP packet stream is transmitted overseas instead of one stream per participant, thus significantly cutting overseas network bandwidth and costs. Cascading is not an option with TDM conferencing equipment because all participants must be backhauled to the same TDM audio bridge for conference mixing.

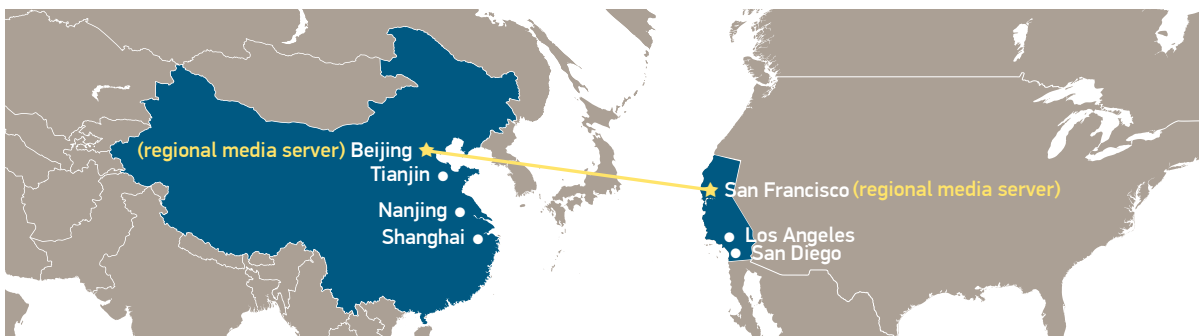


Figure 1. Backhaul traffic is reduced using cascaded Radisys media servers.

Flexibility: Adding New User Features

The Radisys SIPware conferencing platform enables CSPs to rapidly integrate with their web conferencing, smartphone clients and back-office systems. For example, with the Radisys rollout, the Chinese CSP created an Apple iPhone application for conference controls, as shown in Figure 2, downloadable from the online Apple store.

SIPware, together with the multi-language support in the Radisys media server, allows for localization of all customer-facing audio prompts. For this Chinese CSP, Radisys worked to develop a complete suite of Cantonese and Mandarin announcements, positioning the CSP to offer hosted collaboration solutions that are customized for Chinese culture and markets, thus providing a competitive advantage over foreign multi-nationals offering similar services in Asia-Pacific markets.

The Radisys Service Creation Environment (SCE) is a flexible tool used to rapidly add new services or change call flow logic. It is a Windows-based GUI application that allows CSPs to quickly and easily create multimedia communication services with “drag and drop” simplicity in an environment that provides everything developers need to create full-featured applications. For example, the Radisys SCE allows a service provider integration team, or Radisys professional services, to modify the assignment of Telephony User Interface (TUI) keys on any phone device, to change TUI functions for mute or unmute, or identify the number of participants on the call. With the flexibility of the SCE, the CSP customer was able to exactly replicate all existing TDM audio bridge functions, which made it much easier for existing business customers to learn a new conferencing system.

The SIPware solution also offers a flexible, yet comprehensive Application Programming Interface (API) based on Web 2.0 and HTTP/XML integration models. Using this API, the system was rapidly integrated with existing customer care and billing systems.



Figure 2. Screenshot for conferencing moderator application on the Apple iPhone.

By coupling Radisys software and hardware into an integrated platform, our customer has selected a compelling, IP-based architecture that provides the scalability, reliability, features and cost-efficiencies needed to compete and thrive in both existing and emerging conferencing markets.

Amit Agarwal Vice President and General Manager, Software and Solutions, Radisys

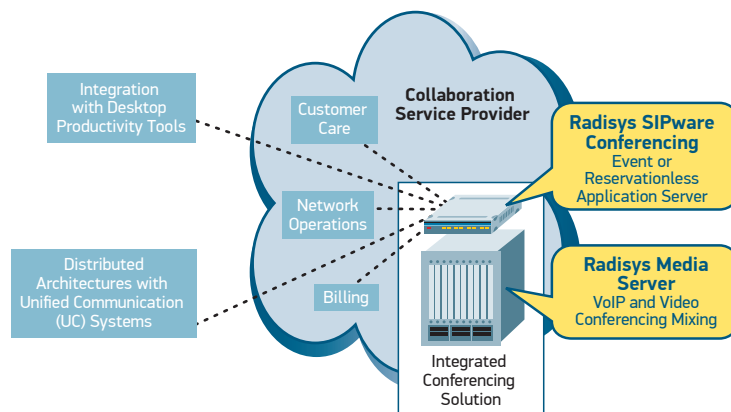
Radisys Integrated Conferencing Solution Overview

The Radisys Integrated Conferencing Solution consists of the SIPware Conferencing Application Server and Radisys Media Servers. SIPware hosts the signaling processing between endpoints and call processing logic, along with “controlling” the Radisys media server to perform the actual VoIP conference mixing between dozens—even hundreds of endpoints.

Radisys SIPware can be combined with a Radisys software media server on a single commercial-off-the-shelf (COTS) service platform or scaled into large multi-site configurations supporting hundreds of thousands of ports. The distributed architecture supports fault recovery without session disruption if any single solution component or geographic location might fail.

SIPware also supports open IP-based APIs, allowing rapid integration with existing operations and administration systems, web-based applications and portals, along with integration with desktop productivity tools and unified communications systems.

The Radisys SIPware conferencing platform is a complete, turnkey solution integrated with Radisys media servers.



Differentiated Features: Improving The Conferencing Experience

The Radisys SIPware solution positions the Chinese CSP to offer its customers a differentiated, high-quality end-user conferencing experience across a variety of conferencing modes and control interfaces.

Top Quality Audio

The Radisys media server supports a comprehensive Voice Quality Enhancement (VQE) feature set to overcome background noise, packet loss, acoustic echo and variable network delays, the four most common sources of audio quality problems in a VoIP network. This comprehensive VQE solution also generates VoIP quality metrics that can be used to support service level agreements.

Reservationless and Meet-Me Conferences

Subscribers can set up conference calls dynamically in reservationless mode acting as an “always on” meeting number or URI—or schedule a traditional Meet-Me conference call at a specific time. Subscriber PINs and Passwords allow easy, instant access to services. Economical reservationless conferencing services make up over 95 percent of the conferencing minutes of a modern CSP.

Event Conferences

The same SIPware platform also supports the Radisys Event Conference Manager (ECM), a sophisticated, PC-based conference management software program for operators conducting large-scale conferences. The software allows operators to easily provision and manage conferences, handle operator requests and participant arrivals, and assist participants during question-and-answer sessions for these premium audio conferencing services. Flyout windows enable operators to view information about conferences, participants, bells, prelists and requests all on one screen—eliminating the need to toggle between windows.

Mobile Chair Person

Using Radisys SIPware APIs, the Chinese CSP also developed an iPhone application, allowing a conference moderator to start and manage a conference call from a mobile smartphone device.

Collaboration

During working meetings, conference participants want to share and edit documents while on a call. To create this functionality, CSPs need to integrate enterprise customer environments and new business models. Designed with collaborative services in mind, SIPware's IP-based architecture facilitates integration with web-based GUIs, unified communications (UC) clients, web conferencing services, desktop calendaring and productivity tools, as well as existing network management and customer care systems. Moreover, SIPware provides detailed session records in the format required by the CSP's existing billing systems.

The Radisys Next-Generation Integrated Conferencing Solution

The Radisys turn-key audio conferencing solution, featuring Radisys SIPware™ conferencing platform and media servers, delivers high-quality audio, feature-rich services and the ability to efficiently scale to very large configurations. The solution also:

- Supports existing TDM-based endpoints, with emerging IP-based devices using a common IP-based conferencing solution.
- Delivers feature-rich event conferencing and reservationless conferencing with web and Microsoft Outlook integration, conference recording, Internet broadcast and other IP-based enhancements.
- Enables rapid and cost-effective customization of services to meet CSPs' needs, including the addition of new languages and features.
- Increases port density and reduces overall footprint.
- Reduces backhaul costs for long distance conferencing services using SIP trunking and cascaded conferencing feature.
- Provides high quality VoIP audio through Voice Quality Enhancement (VQE) capabilities.
- Enhances flexibility to rapidly add new services and call flow models using the SIPware Service Creation Environment.

Prepare For Explosive Growth

Conference service providers (CSPs) serving the Chinese market are aware that conferencing services are forecasted to grow significantly in the coming years. Those CSPs who are still operating a legacy TDM-based audio bridge infrastructure need to migrate to a cost-efficient pure VoIP conferencing solution to remain cost-competitive. Mobile operators that want to increase the average revenue per user (ARPU) of their subscriber base should consider adding a business conferencing solution service. For all of these cases and others, Radisys, the leading supplier of media processing technologies and solutions for the telecommunications industry, has solutions that provide the economics, flexibility and differentiated features needed to address the growing conferencing opportunity around the world.



About the Intel® Intelligent Systems Alliance: From modular components to market-ready systems, Intel and the 200+ global member companies of the Intel® Intelligent Systems Alliance provide the performance, connectivity, manageability, and security developers need to create smart, connected systems. Learn more at: intel.com/go/intelligentsystems-alliance.

The Radisys logo, consisting of the word "radisys" in a lowercase, sans-serif font, with a registered trademark symbol (®) to the right. The logo is set against a dark red rectangular background.

Corporate Headquarters

5435 NE Dawson Creek Drive
Hillsboro, OR 97124 USA
503-615-1100 | Fax 503-615-1121
Toll-Free: 800-950-0044
www.radisys.com | info@radisys.com

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