Customer Case Study

Multinational Company Supports Team Collaboration with Voice, Video

Thiess implemented collaboration solutions that share same call control system and network, minimizing costs.

EXECUTIVE SUMMARY

Customer Name: Thiess
Industry: Mining, Construction, and Services
Location: Brisbane, Australia
Number of Employees: 20,000 Employees

CHALLENGE

- Optimize team performance
- Give mobile users access to experts and information
- Simplify IT

SOLUTION

- Centralized call control for multinational company with Cisco Unified Communications Manager
- Added Cisco TelePresence, which shares same call control
- Extended collaboration to mobile employees using Cisco Jabber

RESULTS

- Gained competitive advantage for bidding on jobs
- Increased ease of reaching mobile coworkers
- Simplified management

Challenge

Headquartered in Brisbane, Queensland, Australia, Thiess is a leading mining, construction, and services contractor with 20,000 employees. Part of Australia's largest project development and contracting group, Leighton Holdings Limited, Thiess plays a pivotal role in building vital infrastructure, delivering for the resources sector, and providing essential services for communities across Australia.

The workforce is very distributed because each of three business units (construction, mining, and services) maintains offices in each state in Australia, and the company also has offices in Indonesia and India. Collaboration presents a challenge because project teams are distributed across multiple locations. For example, the Victorian desalinisation project, completed in 2012, was managed from the Thiess' Melbourne offices, and executed from multiple temporary project offices along the 85 km long pipeline.

Previously, distributed teams had two choices for collaboration: joining audioconferences or traveling to meetings. "But audioconferences fall short, because people want to see each other to build rapport and develop relationships," says Mat Williams, data center manager. "And travel is costly and delays decision making."

Thiess had implemented an analog videoconferencing system to help distributed teams collaborate, and employees liked it. The drawback was high costs, including a separate call control system, separate ISDN line for each video endpoint, international calling charges, and IT overhead to help schedule meetings.

“Before increasing our use of videoconferencing, we first wanted to converge our separate networks and call control systems for voice and video,” says Daniel Leary, network engineer. Thiess also wants to help enable employees to join videoconferences from any device, including tablets, and anywhere, including locations with limited bandwidth.

A related challenge was to quickly deploy communications systems in temporary field offices, which operate only for the duration of the construction project, typically one to three years. Approximately 100 such offices are operational at any time.

Solution

Today, Thiess employees at any office or project site can initiate videoconferences with six-digit dialing, using Cisco® collaboration solutions. Solution elements include:

- Centralized voice platform: The company began using Cisco Unified Communications Manager in 2004. Over the years, Thiess has upgraded the platform multiple times to take advantage of new features, such as presence and instant messaging, simplified dial plans, new management tools, and support for Cisco TelePresence® sessions. Approximately 5500 employees have Cisco Unified IP Phones, and executives and managers use Cisco Unified IP Phone 9900 and 8900 Series with large color displays. New project sites do not need to wait for the phone company to provide a line, because they receive voice services over the IP network.
- Cisco TelePresence solutions, provide an in-person experience: “After evaluating videoconferencing systems, we selected Cisco TelePresence because Cisco is a market leader, fits into our current Cisco-based network, and because it can share call control with our existing Cisco voice system,” Williams says. The Information Communications Technology (ICT) team funded the Cisco TelePresence infrastructure, and individual business units purchase their own endpoints. To make it easy for employees to schedule videoconferences, an important factor in adoption, Thiess uses Cisco TelePresence Management Suite so that employees can quickly find available endpoints.
- Web conferencing: The mining business unit uses Cisco WebEx® Meetings to train employees in any office to use specialized software. To reduce travel costs but maintain the person-to-person interaction, the trainers, who are centrally located, can host one-to-one or one-to-many training sessions utilizing the Cisco tools, helping enable consistent, but personalized training delivery.
- Contact center: Some Thiess business units use Cisco Unified Contact Center Express to route calls to the first available agent with the right skills in any location. Built-in reporting helps managers optimize staffing.

- Presence and instant messaging: Adoption of Cisco presence and instant messaging has grown from 30 Windows users in a 2008 pilot to approximately 1000 Windows and iPad users today. A proposal writer who needs information from an engineer, for example, can use Cisco Jabber™ to find an available engineer and then just click to send an instant message. Another click escalates to a voice or videoconference. “Email doesn’t work well for collaboration,” Leary says. “Jabber allows real-time communications and group chat, and we can just click to escalate to a voice, video, or web conference.”

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> **— Daniel Leary, Network Engineer, Thiess Pty Ltd**

- Cisco Unified Computing System™ (Cisco UCS®): Thiess virtualized the Cisco Unified Communications applications including the Video Communications Server (VCS) on Cisco UCS B200 M2 Blade Servers and Cisco WebEx Meetings Server and Oracle VM Server on Cisco UCS B200 M3 Blade Servers. Operating multiple communications applications on a single blade server improves availability and lowers data center space, power, and cooling requirements compared to implementing a standalone server for each application. “Thiess has saved up to 60 percent rack space and 90 percent reduction in cable usage by utilizing UCS blade chassis,” says Brad McGinn, senior network architect.

Results

Improved Collaboration within Distributed Teams

The ability to collaborate with an in-person experience without travel helps Thiess teams work more efficiently and effectively:

- When the company works on roads and tunnels spanning miles, managers at the head office and various project sites can meet using videoconferencing facilities, avoiding loss of productivity during travel.
- Design engineers work in major offices that have the bandwidth for computer-aided design and sharing large image files. Working in these offices no longer means giving up in-person interactions with construction engineers at project sites.
- The company’s ICT council, which includes members in Australia, Indonesia, and India, holds regular monthly Cisco TelePresence sessions instead of audioconferences. “Seeing the other people on the team with Cisco TelePresence has helped to build rapport within geographically distributed teams,” McGinn says. “The ability to see body language improves communication and understanding across geographical and cultural boundaries, thereby increasing efficiency while decreasing meeting duration.”
- Senior executives regularly conduct management meetings using Cisco TelePresence, avoiding the time and costs for personnel to travel from across Australia to travel to a central location.
- Preparation of tenders, budgets, and other highly collaborative tasks within a geographically dispersed organization provides significant challenges. “By utilizing the Cisco technologies, subject-matter experts can collaborate independent of their location, reducing the costs of project delivery and increasing the ability of teams to collaborate,” says Ben Willey, manager, mining technology and innovation.

Excellent Contact Center Experience

A Thiess subsidiary that provides telecommunications services for municipalities uses Cisco Unified Contact Center Express for customer service calls. “The intelligent call routing and on-demand reports in Cisco Unified Contact Center Express help us to provide the excellent service needed to meet service-level agreements,” says McGinn. For some sites that have just a few contact center agents, the Thiess ICT group uses the Cisco Unity® Connection voice messaging solution because of its built-in call-routing features. Callers press a number to reach the appropriate individual, and if the individual is not available, the call is placed into voicemail.

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> **— Brad McGinn, Senior Network Architect, Thiess Pty Ltd**

Next Steps

The company is transitioning to Cisco Jabber one office at a time, giving employees a single, convenient interface for presence, instant messaging, voice, voicemail, and joining Cisco TelePresence sessions. Mobile employees will be able to request Cisco Jabber for their iPads. “When mobile employees don’t need to find a phone every time they need to reach out to a coworker, projects move along more quickly,” says Leary. Another idea is for personnel at construction sites to use Cisco Jabber Video for TelePresence on iPads to capture video to share with design engineers in other locations, helping to accelerate issue resolution.

Technical Implementation

Thiess made the following decisions to provide a quality experience with video and to minimize costs.

Bandwidth Allocation

Thiess allocates bandwidth according to the size of the site, providing approximately 1.5 Mbps for each Cisco TelePresence session. Project sites typically receive 2 Mbps or 4 Mbps connections, helping enabling personnel to conduct one or two concurrent Cisco TelePresence sessions. Larger sites might receive 10+ Mbps.

The Thiess ICT team uses call admission control (CAC) to initiate a Cisco TelePresence session only if sufficient bandwidth is available for a high quality of experience. If not, the session is started as a voice call. In the rare event that insufficient bandwidth is available for a voice call, the network routes the call over the public switched telephony network (PSTN).

SIP Trunking

Most Thiess offices connect to the voice service provider over 10 - 30 primary rate interface (PRI) lines. To lower costs, the company has transitioned the first of its offices to session initiation protocol (SIP) trunking, using the Cisco Unified Border Element (CUBE) in the office’s Cisco Integrated Services Router (ISR). “Consolidating from multiple PRI lines to a SIP trunk will lower our hardware costs,” Leary says. “The initial estimates are showing a 46 percent saving in capital setup cost and a 30 percent saving in monthly ongoing costs.” In the future, the ICT team plans to provide centralized SIP connections for all sites in a state.

PRODUCT LIST

Unified Communications

- Cisco Unified Communications Manager
- Cisco Unified IP Phones 9951 Series, 8945 Series, and 7900 Series
- Cisco Unified Border Element (CUBE)

Wireless

- Cisco Prime Infrastructure
- Cisco Wireless Controllers 5500 Series, 2500 Series
- Cisco Wireless Access Points 1140 Series, 1260 Series, 3600 Series

TelePresence

- Cisco TelePresence Systems MXP Series, EX Series, and C-Series Codecs
- Cisco TelePresence Video Communications Server
- Cisco TelePresence Management Suite

Collaboration Applications

- Cisco WebEx Meetings Server
- Cisco Jabber
- Cisco Unity Connection

Customer Care

- Cisco Unified Contact Center Express

Data Center

- Cisco Unified Computing System (UCS) with B200 M2 and B200 M3 Blade Servers
- Cisco Unified Computing System (Cisco UCS) with C420 M3 Rack Servers
- Cisco Nexus 1000V Series Switches
- Cisco Catalyst 6500 Series and 4900 Series Switches

For More Information

To find out more about Cisco Unified Communications go to: http://www.cisco.com/go/uc.

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