The Computerworld Honors Program

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Final Copy of Case Study

Status:
Laureate

Year:
2013

Organization Name:
Cisco Systems

Organization URL:
http://www.cisco.com/web/about/doing_business/business_continuity/tacops.html

Project Name:
Cisco Tactical Operations (TacOps)

Please select the category in which you are submitting your entry:
Safety & Security

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

When a major emergency such as an earthquake or hurricane strikes, response organizations require immediate communications support to save lives, establish relief operations and provide ongoing assistance in affected communities. The Cisco Tactical Operations (TacOps) team consists of expert networking, radio communications and systems engineers along with logistics and operations coordinators. By quickly deploying support for the acute phase of emergencies that require communications free of charge, the TacOps team establishes IP-based communications for first responders, government agencies, relief organizations, and others who require mission-critical connectivity to respond effectively. The TacOps team manages the Cisco Disaster Incident Response Team (DIRT) and provides on-the-ground support using rapidly deployable

satellite-based networks, advanced Cisco technology and Cisco Network Emergency Response Vehicles (NERVs).

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

Established in 2003, the TacOps was moved under the leadership of John N. Stewart, senior vice president and chief security officer, Global Government and Corporate Security, Cisco in 2009. At that time, TacOps refocused its mission to prepare for and to respond to any type of disaster, whenever needed. In order to support this mission, the TacOps team looked at different technology upgrade opportunities, evaluating newer versions of Emergency Communication Kits (ECK) and upgraded technologies inside Cisco Network Emergency Response Vehicles (NERV). The TacOps team has since continued to upgrade their technologies. Upgraded implementations include: Cisco ISR G2 routers providing intelligence and scalability to enable service delivery for cloud, mobile devices and multimedia applications; IP Interoperability and Collaboration System (IPICS) server software to streamline operations and allow organizations to rapidly respond to incidents or emergencies; Video Surveillance Operations Manager (VSOM) software to quickly and effectively configure and manage video communications services throughout an emergency; Back-end infrastructure with Demilitarized Zone (DMZ) Network with redundant services, i.e. call manager; Cisco Tandberg teleconferencing suite to host and manage video endpoints; TelePresence endpoints to and from vehicles for customers and first responders. The Disaster Incident Response Team (DIRT) includes trained Cisco volunteers to augment full-time TacOps staff. DIRT volunteers receive training on an annual basis through a series of drills and exercises. The DIRT program continues to expand globally; within the last two years, the DIRT program has expanded to China, Brazil and the UK.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

The TacOps project is never "complete," as the program is always expanding and exploring new opportunities to improve capabilities with the latest technologies from both Cisco and external vendors. As part of an ongoing improvement process on a quarterly and annual basis, the TacOps engineering team evaluates, tests and implements new technologies. In an effort to continuously raise visibility and expand the TacOps program, DIRT is growing through recruitment of new employee volunteers from more countries and regions. TacOps currently provides the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) with emergency response communications

assistance during UN disaster relief missions. This partnership allows TacOps and UN OCHA to better collaborate in terms of crisis preparedness, disaster response and technical coordination. TacOps also partners with many non-profit organizations and non-governmental organizations (NGOs), such as American Red Cross, NetHope, Doctors Without Borders, and Mercy Corps, providing resources and services that enhance each organization's capabilities. TacOps has plans to establish more formal relationships with different organizations within the United Nations as well as with other disaster response agencies.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

In October 2012, Hurricane Sandy, a Category 1 hurricane, caused severe damage across the northeastern United States and accounted for over 100 deaths. Disasters the scale of Sandy can quickly overload communications infrastructures built to handle "ordinary" emergencies. Therefore, Cisco's ability to rapidly deploy up-to-date emergency communications and close relationships with relief organizations enable timely and welcome assistance in disaster situations. For Hurricane Sandy, the TacOps team provided emergency communications support to ensure first responders, government agencies and relief organizations were able to deliver critical services including food, water, medical care and shelter to people displaced by the disaster. One example of Cisco TacOps Hurricane Sandy actions, Executive Director Jim Killoran of Habitat for Humanity of Westchester County needed Internet and phone access to recruit and organize volunteers, secure supplies, coordinate with relief agencies and communicate with staff. The TacOps team became aware of Jim's need via William DeKnatel, a Cisco employee and Habitat for Humanity advocate, in the New York City area. Within three hours, the TacOps team activated to respond. Partnering with Hughes Network Systems, the TacOps team provided Habitat for Humanity Westchester a satellite-based Internet uplink, IP phones and an Emergency Communications Kita small cabinet containing Cisco technology to provide rapid deployable, field-based voice and data communications. Matt Altman, a Cisco TacOps engineer, ensured Habitat had access to Cisco ECK as long as they needed it and helped with the transition to landline when it was appropriate. After connecting the Habitat's makeshift office, the TacOps team boarded NERV and assisted other agencies in New York and New Jersey that lacked connectivity. Cisco provided humanitarian relief in response to many other crises throughout the world including after the 2011 Japan earthquake and Tsunami, 2010 Haiti earthquake, and Hurricane Katrina 2005.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

TacOps supports innovation and research in emergency communications by working with the global disaster technology community to develop standards and long-term solutions leveraging the latest network-centric technologies and applications. Cisco is dedicated to working with partners to create innovative solutions that can be replicated to better respond to emergencies. Examples where Cisco TacOps was supported by partner organizations include: During Sandy, Hughes Network Systems provided satellite access while Cisco provided free IP phones and an Emergency Communications Kit for Habitat for Humanity. In the San Bruno, California gas pipeline explosion and fire, a Geographic Information Systems (GIS) partner helped provide the local first responder team with up-to-date mapping data so they could determine which houses and neighborhoods might be in danger. The Cisco NERV was used to provide Internet connectivity (in the field) to this GIS team. On an international level, a large logistics partner helped with the Japan tsunami relief efforts by shipping TacOps' equipment free of charge.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

As part of their corporate social responsibility efforts, many organizations contribute money to charities. However, Cisco has a strong and long-established culture of giving back to communities, beyond financial donations. Cisco has taken this ethic to the next level by investing significant resources in the TacOps team. The TacOps team has received significant support from across Cisco. Without Cisco's full support from top executives to employee volunteers, the TacOps team might not have survived through the last decade of turbulent economic times. This initiative provides services free of charge and is an example of Cisco's commitment and dedication to giving back to the global community by leveraging its core competencies in the human interest its depth of networking and communications technology expertise.