

Portable and Mobile IP Based Communications

The Cisco Emergency Communication Kit (ECK) is designed to quickly, securely and reliably establish voice and data communication in austere environments requiring critical reach back capabilities. The Cisco ECK solution, with its rugged design, can withstand harsh conditions and when pre-configured, is simple to deploy and use. The ECK is based on commercial off-the-shelf products, using open-standard Internet Protocol (IP) and Cisco's voice-over-IP (VoIP) technology solutions. When integrated with a data connectivity source, the Emergency Communication Kit is a powerful asset in environments where the communications infrastructure is unavailable and is required.

The Solution

The ECK case contains routing and switching hardware, IP Phones, internal wireless capability and external access points for wireless bridging. It will interface with a data connectivity device to provide secure and reliable communications. Specifically designed to be deployed in a field location, the ECK is ruggedized and can operate on external grid, generator or inverter power. The portable rack-mount case has side handles and wheels for easy transportation via aircraft or automobile.

Secure Wired and Wireless Infrastructure

The core network of the ECK consists of a Cisco Integrated Services Router, which provides highly secure VPN tunneling services to back-end resources, firewall, and telephony services using Cisco Unified Communications Manager Express (CUCME).



Figure 1: The Cisco Emergency Response Kit

The Emergency Communications Kit can support multiple data connections including LTE or any Ethernet compatible satellite platform device, such as the broadband global area network (BGAN) or a very small aperture terminal (VSAT) device.

With a backhaul solution the ECK allows multiple users to make calls, access the Internet, share files and check emails simultaneously, in a wired or wireless fashion.

The VoIP solution allows for local wired Power over Ethernet (PoE) IP phones. When combined with the use of a central or distributed VoIP Cisco CallManager, it can significantly reduce satellite and cellular toll charges. The solution can be configured to leverage SIP trunks. It can also be configured as a PSTN gateway to provide off-net, or VoIP to PSTN, call support. The PSTN gateway functionality can be located at headquarters for all remote devices to connect back to, or it can be local to the kit.

Benefits of the Cisco ECK

- Voice over IP
- Data capabilities (internet, chat, email, file sharing)
- Wired and Wireless voice and data
- Wireless bridging
- Power over Ethernet
- Security – Firewall and VPN tunneling
- Local Paging – Cisco Unified Communications Manager Express (CUCME)
- Ruggedized and portable
- Works with any Ethernet compatible connectivity source (BGAN, VSAT, etc) or cellular based technology (3G, LTE)
- Fully operational in 5 minutes, when pre-configured



Who Needs the ECK?

The ECK has been deployed by first responders, defense and relief agencies around the world. It was designed as a suitcase size “network in a box” to address the challenges faced by many disaster relief agencies, operating in areas severely lacking telecommunications infrastructure. Daily operations in austere environments, such as those experienced by the Gas/Oil sector, and any organizations concerned about business resiliency, in times of crisis, could also benefit from the ECK.

Based on Cisco’s commercial off-the-shelf and 3rd party products, Customers or Cisco Partners can assemble a custom kit to meet mission-specific needs. The Cisco Tactical Operations Team has a limited number of loan kits, available to fulfill communication needs, during the acute phase of emergencies.

Scalability and Optional Capabilities

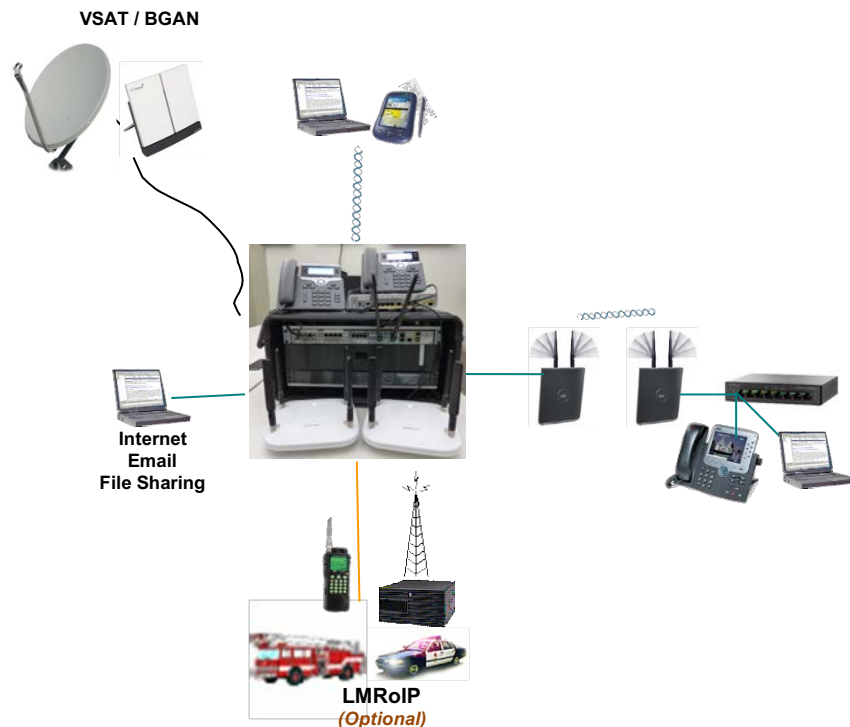
IP telephony offers flexibility with multiple options:

- Integration with existing enterprise Cisco Unified Communications IP Telephony deployments
- Connectivity to PSTN via legacy analog POTS lines on scene
- Fax connectivity
- Wireless Mesh or Point-to-Point bridging extending wireless access up to several miles
- Scalable to 35 IP phones per kit (based on uplink bandwidth available)

To achieve the maximum distance, mobility, and interoperability, Land Mobile Radio over IP (LMRoIP) capability can be integrated to enable an IP phone to “call” a radio and allow disparate radio systems (VHF, UHF, 800 MHz, trunked or conventional, etc.) to talk to each other.

Video Conferencing capability can easily be added to the solution.

Cisco ECK Deployment Scenario



Why Cisco?

- Cisco is a leader in providing the intelligent, secure, resilient network infrastructure with mobility that is the platform for this solution.
- Cisco is a leader in unified communications, which is core to the solution and uses the network as the platform.
- Cisco has a proven record in introducing technologies in the safety and security market that easily integrate with Cisco network architecture.
- Cisco collaborates with safety and security technology partners to meet your requirements for a converged network solution.

Learn More

For more information about the Cisco Tactical Operations team, please visit our website <http://www.cisco.com/go/tacops>, or send email to tacops-info@cisco.com.