

Cisco Network Emergency Response Vehicle (NERV)



Rapidly Deployable
Field Mobile
Communications



Deploy
Anywhere with
Confidence



Automated & Secure
Cloud-enabled
Communications

Ensuring communication among first responders, especially during a crisis situation, is a major challenge for public safety agencies. Interoperability is critical for success. The Cisco® Network Emergency Response Vehicle (NERV) is a mobile communication center that is designed to establish interoperable communications in emergency situations. The NERV is supported by Cisco Crisis Response, a highly skilled and dedicated team that can mobilize and respond to natural disasters and other catastrophes when normal communications infrastructure have been degraded or destroyed.

Rapidly Deployable Field Mobile Communications

The Cisco NERV is a command and communications resource for first responders, critical infrastructure, and other organizations that have been affected by a catastrophic event

and require mission-critical networking to recover normal operations. It exceeds the National Incident Management System (NIMS) standards for Type III Mobile Communication Centers.

The Cisco NERV, along with its NIMS certified team, helps organizations by:

- Arriving for disaster response missions ready for up to 3 days of continuous operations before requiring utility power or refuel.
- Operating seamlessly with police, fire, emergency medical services, National Guard, and other responders within an incident command system or unified command structure.
- Receiving 24-hour, proactive intelligence and logistical support from Operations Centers.



Figure 1: Cisco Network Emergency Response Vehicle

The Cisco NERV and Crisis Response team have been deployed in support of a variety of incidents, including hurricanes, tornadoes, floods, earthquakes, wildfires and man-made disasters.

Deploy Anywhere with Confidence

In a crisis situation it is imperative that field communications be highly mobile and rapidly deployable. The Cisco NERV meets these demands by being a self-contained vehicle in which all technology travels together as a preconfigured package. Once on scene, the Cisco NERV can:

- Be fully operational within 15 minutes
- Be shut down within 15 minutes in order to redeploy to another location
- Power its systems using its on-board battery pack, multiple generators, or external shore power connection

Automated & Secure Cloud-enabled Communications

The Cisco NERV uses an IP network foundation and Internet-based platforms because large-scale disasters require a range of interoperable communications beyond traditional push-to-talk (PTT) radio. This approach ensures response organizations can:

- Engage and employ all resources on scene, regardless of where those resources geographically reside
- Interoperate with existing communications systems, enable access to cloud applications and provide a path to emerging internet-based communications systems

Fault-Tolerant Redundant Internet Uplinks

The Cisco NERV has multiple options for Internet connectivity, including satellite, cellular, wired circuits or broadband. It can be configured to failover from one connectivity source to another, providing a high level of fault tolerance and efficient use of bandwidth:

- The 1.0 meter satellite dish provides high throughput satellite (HTS) bandwidth for voice, video, and data applications that require access to the Internet or other remote networks.
- A Category 18 LTE/cellular gateway with up to 1.2 gigabits per second (Gbps) download / 150 megabits per second (Mbps) upload speed with multiple cellular carrier options.
- Gigabit Ethernet wide area networking (WAN) interfaces to connect to existing networks for internet uplink services.

Cloud Network Infrastructure

The core communications platform of the Cisco NERV consists of a Cisco Meraki cloud-managed network which provide highly secure access to public and private cloud resources, including access to collaboration services like Webex. A cloud-first networking approach improves Information and Communications Technology (ICT) operations, enables greater scalability and accommodates rapidly changing conditions better than autonomous systems or on-premise managers.



Cloud-delivered threat feeds from Cisco Talos (authors of the official Snort Rule Sets) and application programming interface (API)-based integrations into internet platforms such as Cisco Umbrella enable the Meraki MX unified threat management (UTM) platform to secure mission-critical workloads and served agencies with a low-touch, high-impact operator experience.

The NERV's Ethernet fabric provides Cisco Multigigabit and Universal PoE capability for extreme client demands, such as delivering 5 Gbps and 60 watts of power to the onboard Wi-Fi 6E wireless access points. 10/40Gbps switching capabilities provide fast access to local virtualized applications hosted by the local Cisco Hyperflex Edge cluster, a highly-available hyperconverged server platform, managed and monitored through the Cisco Intersight cloud server operations platform.

Why Cisco?

- Cisco offers an industry-leading portfolio of technology innovations. With networking, security, collaboration, cloud management, and more, we help to securely connect industries and communities.
- Cisco is committed to putting people, technology, and resources toward Powering an Inclusive Future for All, where everyone has the opportunity to thrive.
- Cisco Crisis Response leverages our people, technology, and financial resources to support nonprofit and emergency response partners that are working tirelessly on disaster preparedness and response.

Learn More

The Cisco NERV is available for emergency response throughout the continental United States during the acute phase of an emergency. To engage the Cisco NERV, or any of the other services provided by Cisco Crisis Response, please contact your Cisco account team. For more information about the Cisco Crisis Response, please visit our website: <http://www.cisco.com/go/crisisresponse>, or send email to crisisresponse-info@cisco.com.

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When disaster operations require large-scale wifi coverage, such as at a wildfire Incident Command Post (ICP), the NERV can deploy automatic and self-healing mesh networking with a Mesh Response Kit (MRK), another heavily-utilized solution designed and used by Cisco Crisis Response.

Radio and Voice Interoperability

Responders often struggle with different frequency bands and proprietary radio protocols. Cisco's NERV enables radio interoperability across all existing radio technologies via patching through software and on-board hardware systems.

Voice and Video Collaboration

The Cisco NERV provides a full suite of collaboration services through the Cisco Webex platform, which enables voice, video and meetings over a range of standards-based Cisco IP phones, collaboration devices such as the Webex Desk Pro or software clients on the three operator positions in the communications shelter.

