

Verizon **Frontline** deployed in support of National Guard training exercise



The Verizon Frontline Crisis Response Team completed a deployment in support of Homeland Defender 23, a four-day training exercise coordinated by the Indiana National Guard and held at the Muscatatuck Urban Training Center with more than 500 participants. Verizon Frontline support of this training was provided at the invitation of the Indiana National Guard. This year's exercise also featured National Guard units from Illinois, Kentucky and Ohio. The exercise brought together National Guard units, civilian emergency management personnel, first responders and industry partners like Verizon Frontline to practice disaster response operations based on simulated emergency scenarios. The goal of the exercise is to prepare civilian and military organizations to work together as they would on the front lines of an actual disaster.

The Challenge

Major emergencies such as an earthquake require close coordination among multiple Federal, Civilian and commercial partners for effective response. During such natural disasters, in addition to the need for interoperability among these first responders and their command centers, the challenge is generally lack of macro network coverage in austere environments where these disasters strike. No network means no communication, collaboration, coordination or situational awareness (SA). As such, rapid deployment of a mission critical ad-hoc network through deployable assets in such zero-coverage environments becomes a paramount operational need and hence a challenge. To provide capacity connectivity augmentation and uniform RAN side coverage in disconnected zones, mobile and deployable assets with LEO satellite backhaul are required.

SA is then achieved through unmanned land and aerial systems as well as mission-critical comms systems and software that terminate in interconnected mobile command vehicles. To achieve the connectivity and SA goal, a reference architecture (RA) composed of many integrated solutions enabling a common operating picture (CoP) of the disaster environment was established.

The RA and Solutions

Emulating a First Responder Emergency Support Model, the Verizon Frontline Crisis Response Team (CRT) develops an Ad-Hoc RA based on a caller emergency description. The Verizon Frontline CRT developed a list of deployable solutions that would be needed to provide communication and situational awareness to the Homeland Defender 23 theater of operations. Simultaneously, a virtual emergency operations center is also activated.

The Verizon Frontline Crisis Response Team then established and supported mission-critical communication capabilities for exercise participants at multiple locations across the installation. Given limited or no connectivity scenario of this theater, these Verizon Frontline solutions were deployed to provide coverage and to increase situational awareness: several Satellite Picocells on Trailers (SPOT), Verizon Frontline's Tactical Humanitarian Operations Response (THOR) vehicle and Verizon's Rapid Response Connectivity Unit and multiple drones. While on site, THOR delivered network connectivity and enhanced situational awareness for exercise participants while also serving as a mobile command center.

Asset	Purpose
THOR (Tactical Humanitarian Operations Response)	Provided small cell network coverage across the urban training center due to lack of macro sites
SPOT (Satellite Picocell on Trailer)	Deployed remote area coverage for multiple scenarios including the floating bridge, flooded village, and command HQ. It also utilized streaming capabilities from the mast camera for situational awareness
LEO Satellite (Low Earth Orbit)	Used in remote areas to provide mission critical communications for specific missions that needed rapid deployment including the school collapse, civil unrest and search and water/helicopter rescue areas
RRCU (Rapid Response Connectivity Unit)	Acting as a mini-SPOT, this allowed us to provide connectivity to specific areas while being able to broadcast secure wifi and cellular communications
MCAV (Mobile Connected Agile Vehicle)	Equipped with LEO backhaul, this electric bike allowed us to create a cellular network in areas where 4-wheeled vehicles couldn't traverse
Robotic Dog	Used at multiple scenarios, including the school collapse, search and water/helicopter rescue, and civil unrest, this asset, fixed with an Axon body cam, streamed the scenario back to Incident Command
Dejero Gateways	Provided connectivity to the command center and HQ
UAS Missions	12 missions were flown by 3 licensed pilots that included support of the search and rescue, flooded village, flooded reservoir, civil unrest, and school collapse scenarios
WiFi Access Points	Provided wifi connectivity to the command center and HQ
eFemto	Provided cellular connectivity to the command center and HQ
Antennas	Increased coverage for the above connectivity methods
Charging Stations	Used at incident command and in the field, this allowed soldiers a location to recharge their assets
Enterprise Routers /MCC	Utilized inside the Civil Air Patrol airplane, incident command, and HQ to provide wifi connectivity
Remote IP Cameras	Provided situational awareness of multiple areas back to the command staff for viewing

The Outcome

The training at Homeland Defender 23 centered around a simulated major earthquake along the Wabash Valley Seismic Zone, which is located in Southeastern Illinois and Southwestern Indiana and capable of producing up to magnitude 7.0 earthquakes. Exercise participants conducted a variety of emergency response drills tied to training scenarios including evacuations and urban search and extraction operations.

These blue sky events help agencies prepare for actual disasters and demonstrate Verizon Frontline's commitment to first responders and the public safety community. The Verizon Frontline Crisis Response Team provides support from the start of the crisis to when agencies conclude the incident.

"Participation in exercises like Homeland Defender is a foundational element of Verizon Frontline's overall response strategy," said Cory Davis, Assistant Vice President, Verizon Frontline. "By working side-by-side with military and public safety agency partners during realistic training scenarios, we've been able to build and gain critical insight into their mission and needs during emergency response operations, enabling us to continue to meet those needs."

Learn more

Verizon Frontline is the advanced network and technology built for first responders – developed over three decades of partnership with public safety officials and agencies on the front lines – to meet their unique and evolving needs.

The Verizon Frontline Response Team provides on-demand, emergency assistance during crisis situations to government agencies and emergency responders, on a 24/7 basis. Verizon Frontline Crisis Response Team members set up portable cell sites, WiFi hotspots, free charging stations and other Verizon Frontline devices and solutions that enable communications and/or boost network performance. Visit [verizon.com/frontline](https://www.verizon.com/frontline) to learn more.

