

Common Alerting Protocol (CAP) Implementation

Release Date: Jun 24, 2020

Background

The Common Alerting Protocol (CAP) allows emergency messages to be simultaneously disseminated over a wide variety of existing and emerging public alerting systems. CAP is an international technical data specification developed by the Organization for the Advancement of Structured Information Standards (OASIS).

In addition to the basic CAP standard, a supplemental IPAWS Profile technical specification was developed to ensure compatibility with existing warning systems used in the United States. FEMA has formally adopted CAP and the IPAWS Profile to implement the Integrated Public Alert and Warning System (IPAWS).

What Systems Will Use CAP?

Emergency Alert System (EAS) participants (radio, television, cable, satellite, and wireline providers) were required to upgrade their equipment to receive CAP-formatted alerts under Federal Communications Commission (FCC) rules.

Wireless Emergency Alerts (WEAs) are transmitted to the IPAWS-Open Platform for Emergency Networks (OPEN) in CAP format. The major wireless providers implemented the capability to broadcast Presidential, imminent threat, public safety, and AMBER alerts to cell phones in April 2012.

The National Weather Service (NWS) uses a form of CAP to receive Non-Weather Emergency Messages (NWEMs) from authorized public officials for relay over its family of dissemination systems, including NOAA Weather Radio. NWS also uses CAP to relay NWS-originated warnings via IPAWS. Additional public and private sector systems can incorporate CAP and the IPAWS Profile standards to be interoperable with IPAWS.



What Are the Benefits of CAP?

As more systems are built or upgraded to CAP, a single alert can trigger a wide variety of public warning systems, increasing the likelihood that intended recipients receive the alert by one or more communication pathways. CAP also provides the capability to include rich content, such as photographs, maps, streaming video and more. It enables geo-targeting alerts to a defined warning area, limited only by the capacity of the delivery system used.

IPAWS does not provide translation services, but CAP does provide the capability to issue alerts in multiple languages. Because it can incorporate both text and equivalent audio, CAP alerts can better serve the needs of hearing or visually impaired persons.

For more information, see <https://www.fema.gov/ipaws>. Contact the IPAWS Project Management Office at ipaws@fema.dhs.gov.

The Integrated Public Alert and Warning System (IPAWS) is a national system for local alerting that provides authenticated emergency alert and information messaging to the public through cell phones and internet applications using Wireless Emergency Alerts, and to radio and television via the Emergency Alert System.

