

Southern California
brush fire

Best of both worlds

Hybrid emergency mass-notification systems offer the security and control of on-premise systems and the cost savings of hosted services

By Aviv Siegel

Examine any emergency, natural or manmade, and more often than not the success of the response correlates directly to the timeliness and effectiveness of the alerting system in place at the time. From an earthquake to a terrorist attack, alerting individuals and groups that are in danger quickly and reliably is the mission of emergency management and preparedness directors.

Network-centric mass notification currently represents the state of the art in emergency-alert technology. It leverages the ubiquitous Internet Protocol (IP) network and transforms an organization's existing IP network and its connected devices into a rapid and pervasive emergency-notification system. A network-centric unified notification system can reach people through multiple redundant channels in minutes — with detailed information for a safe course of action.

Additionally, emergency managers can provide detailed instructions for action to all personnel and receive feedback to ensure a safe response — a capability absent on traditional passive-alert systems.

However, there are multiple deployment scenarios to consider when it comes to implementing a network-centric, emergency mass-notification technology. So the question then becomes, what constitutes the best way to deploy such systems? An examination of on-premise, hosted-service and hybrid approaches will shed light on the deployment options.

An on-premise solution places the mass-notification platform behind the customer's firewall. Data is protected and vital lists, such as Active Directory, can be used to update alert recipients' contact information, ensuring that accurate data is available when needed.

On-premise emergency-notification solutions enable enterprises to alert personnel quickly, effectively and securely via IP-connected personal devices such as computers, telephones and cell phones. Additionally, with an on-premise system, emergency mass-notification solutions readily can be integrated with legacy mass-notification devices such as Giant Voice, private branch exchange, fire alarms, physical security sensors and other traditional alerting systems.

Another approach to consider for on-demand mass-notification alerts is "software as a service," or SaaS. Available from a remote hosting facility, this service exists in the "cloud" and offers economies of scale as organizations can leverage mass-notification solutions with committed capacity without taxing local communication services. This method also speeds deployment and lowers costs as there is no additional equipment to install.

An added benefit of this approach is that it allows organizations to provision services in the cloud when demand on their internal computing resources exceeds capability. However, a drawback of this method is that local integration is not possible, so there is no connecting with Active Directory or other on-premise services.

The cloud option is viable for emergency mass-notification deployments by public safety and national security organizations, which constantly are searching for ways to deliver the best safety and security services while reducing costs. Cloud provisioning provides savings in addition to those mentioned previously because emergency-management agencies can reduce the number of servers they need. This reduces operational costs related to server provisioning and power consumption. Also, fewer servers means that fewer IT professionals are needed to keep them running, which further reduces operations costs.

Another valuable benefit of the cloud is risk mitigation for business continuity and disaster recovery. When systems are down at an organization's headquarters, cloud deployment enables emergency managers to access the system from any IP-connected device, as long as the managers have the proper security authorization.

An innovative approach to deploying mass-notification systems is the hybrid solution, which leverages an on-premise system that taps into cloud-provisioned, distributed communications services for notification delivery.

With an off-site hosted notification delivery system (SaaS, cloud provisioned) for telephony, local resources are not stretched because the delivery resources are external. Redundancy is built into the architecture of the distributed notification-delivery systems, so emergency managers have access to communications when other systems are down on site. This failover capability

enables organizations to leverage out-of-enterprise capacity and offers redundancy and continuity of operations for emergency alerting.

MULTIPLE CHOICE

On-premise

Entire system is deployed behind the firewall; it securely integrates with user directory databases and internal resources.

Hosted

Available as a service from a remote hosting facility; it speeds deployment and eliminates the need for on-site hardware.

Hybrid

Application software is installed locally with secure access to a remote communications center that handles mass telephony dialing and text messaging without taxing local telephony resources.

At the same time, the sensitivity of the information (such as alert scenarios, recipient lists and contact details) is not compromised because it resides on premise, protected behind the customer's firewall. The customer is in full control; only the data that is needed to deliver a certain alert is securely transmitted to the distributed communication services that will make the phone calls. This data is transient only — no sensitive data is stored remotely in a persistent manner. A local on-premise system also can tap into local notification-delivery systems, such as outdoor and indoor speaker systems and digital displays.

A hybrid deployment enables organizations to employ multiple models for their critical emergency-alerting needs, providing a mass-notification solution deployment tailored to individual organization needs. This approach offers flexible deployment models without compromising data security, sensitivity and privacy.

Further, the hybrid model enables customers to lower capital investments with all the features and functionality necessary for effective mass notification, while addressing security and network topology concerns. By enabling customers to lower capital investments, this approach removes the barrier to entry for customers and sets the standard for network-centric mass-notification deployment.

Aviv Siegel is chief technology officer for emergency mass-notification solutions provider AtHoc in San Mateo, Calif.