BCG weathers any storm using CenturyLink

Incident management systems team utilizes scalable cloud services to provide 24/7 accessibility to mission-critical information

Challenge

Deliver a bulletproof, secure incident management system that scales with demand

No two disasters are exactly alike. Some, like hurricanes, you can see coming. Others simply happen. Managing disasters requires numerous phases from preparedness and planning to response, recovery and mitigation. A myriad of tasks are involved in each phase with multiple agencies engaged and sometimes hundreds of responders. To further complicate things, information does not always flow from one phase to another. Coordinating all that activity is a massive undertaking sometimes with life and death stakes.

In the incident management product line, Buffalo Computer Graphics, Inc. (BCG) works with private sector and government agencies that provide emergency services in disasters such as hurricane response. BCG's DisasterLAN (DLAN) incident management system is a single, web-based platform that manages all known relevant operational data. It does this through a variety of tools for monitoring social media, issuing mass notifications, GIS mapping, monitoring video feeds, tracking assets and finances and more. The combination of these features provides situational awareness and a common operational picture to responders. DLAN is built to scale seamlessly for users who have no time for complex IT administration in the midst of a disaster.

The DLAN Mobile Responder App can be loaded onto almost any device to be used for day-to-day operations and during all phases of an event or incident. For instance, recovery workers or other relief personnel in the field can use the store-and-forward application to hold collected information (e.g., data on family needs, pictures of devastation) until it can connect to the BCG cloud platform over any available internet or cellular connection for data synchronization.

At a glance

Industry: Public Safety & Disaster Response - Crisis Incident Management Software

Challenge: Deliver a secure, highly available, scalable, bulletproof disaster response platform

Solution: Centurylink Cloud® hosting and CenturyLink® Managed Disaster Response and Recovery Services

Buffalo Computer Graphics, Inc. (BCG) is a veteran-owned engineering and consulting firm based in Blasdell, New York. The company operates four lines of business: Incident Management Systems, Maritime Simulation Solutions, Mass Notification Systems and Custom Hardware and Software Engineering. Given the diversity of the company's product lines, it works with both private industry and government agencies at the local, state and federal levels.

Once acquired, this information becomes mission-critical in a very literal sense. Recovery workers and those in need depend on its accuracy and availability in what can be a chaotic time. It must be accessible 24/7 under less than ideal conditions. Even after a storm or another disaster passes, the recovery operation can go on for months and still experience power outages and other unpredictable fluctuations. Throughout this time, the data cannot afford to be lost. Additionally, processes may change during long-term projects as new or unforeseen challenges arise. It is essential to retain accurate data without compromising security.

Scalability is key to any solution. Incidents go through peaks and valleys of activity that can continue even after the initial storm when rescue efforts have concluded. Tied to that scalability is the billing flexibility to pay only for the capacity used in a given period.

Solution

CenturyLink Cloud® hosting backed up with Managed Disaster Recovery Services

BCG was introduced to CenturyLink Cloud by one of their customers who was using the solution for other hosting needs. The customer asked BCG to work with CenturyLink for their instance of the DLAN system. BCG's relationship with CenturyLink grew as they experienced the flexibility offered by CenturyLink Cloud.

"We really liked the idea of self-managing our cloud needs," said John Paul Wiejaczka, Director of Quality Assurance at BCG. "With CenturyLink, we have the ability to adjust our systems on the fly."

The CenturyLink Cloud management portal was particularly useful for Wiejaczka's role in quality assurance. It allowed him to see customer usage patterns both across the customer base and for individual customers. He could prepare for spikes or make sure a given incident had all the resources it needed for cleanup and getting people back into their homes.

"Quickly and easily scaling in a self-service manner is incredibly important for us to respond to customers in real time."

**- John Paul Wiejaczka,
   Director of Quality Assurance**

Wiejaczka added CenturyLink® Managed Disaster Recovery Services (MDRS), as customers requested further resilience in the offering. MDRS allows customers to protect data and applications in production servers by replicating them virtually within CenturyLink Cloud. The replicas are only activated in the case of a disruption in the main systems. It's a complete backup service without capital expense or extensive management.

MDRS gives BCG an added layer of resiliency and peace of mind, especially during the chaotic early days of incident management engagements.

Results

Peace of mind in ongoing operations

Natural disasters create chaos and uncertainty for those victims struck hardest by Mother Nature. In recent years, major disasters have occurred across the United States and its territories. Hurricanes, in particular, have created havoc for so many along the coasts. These events can require an all hands-on-deck response from BCG.

"When we respond to the damage done by a major hurricane, we can be sort of a Swiss Army knife, acting both as software developers and filling operational holes on site," Wiejaczka said. "There is no such thing as a routine disaster. Disasters start and end locally and we must be able to meet the local community's unique needs depending on when and where the incident occurs."

BCG and its DLAN solution have been part of the response to Hurricane Irma and Maria since October 2017. Speed of response and scalability were tested in the post-disaster period. Staff deployed to the field started collecting data associated with damages shortly after the storms passed. BCG was initially assigned to collect data for 20,000 individual locations. However, the platform — from the mobile front end to the back end in the CenturyLink Cloud

— processed and stored those records so quickly that disaster management officials kept raising the inspection load assigned to BCG. Each time, BCG was able to meet or exceed expectations for local, state and federal partners. Eventually, BCG processed more than 380,000 home and building inspection records — more than 19x the initial requirement.

The flexibility of CenturyLink Cloud helped BCG scale quickly to support thousands of concurrent users and add capability as needed. Because of the fragile nature of infrastructure following a hurricane's passing, not only do BCG's DLAN tools operate with MDRS, but data is replicated through MDRS to add another layer of resilience. For instance, MDRS enables BCG to preserve data captured by the mobile application and replicate it to a secondary data center. BCG uses the MDRS Test Failover (TFO) assistance and reporting to demonstrate for disaster management officials that any data or on-site servers are mirrored in the CenturyLink Cloud. That gives officials the peace of mind to focus on helping people rather than worrying about their own infrastructure.

With survivors signing up for services weeks after an event, the scalability of the overall solution and the presence of MDRS has continued to help ensure the preservation of data as well as the stability of the DLAN website. Months after any disaster, BCG is still helping manage data and the ongoing recovery.

"I don't think these programs would be successful without the scalability of the CenturyLink Cloud."

**- John Paul Wiejaczka,
  Director of Quality Assurance**

According to Wiejaczka, the programs ramp up so quickly that they might have been delayed with another vendor with less scaling capacity. The feedback they received from their partners was overwhelmingly positive. The partners told BCG that in all their years of incident management, no other company was as responsive and flexible as the BCG platform and team.

Future plans

More agencies, more needs

BCG continues to add customers among government agencies and private sector Fortune 500 companies. Thus, the relationship with CenturyLink is growing even as it winds down other hosting arrangements.

"CenturyLink gave us the flexibility and scalability that we need to help people prepare, respond and recover from disaster situations."

**- John Paul Wiejaczka,
  Director of Quality Assurance**

BCG recommends customers use MDRS when preservation of data and continuity of service are mission critical.

CenturyLink®