Star2Star® COMMUNICATIONS

Scalable Cloud Communications:

Non-Stop, Fail-Safe Communications For The Public Sector

Scalable Cloud Communications: Must-Have Technology for Every Organization

When Hurricane Sandy hit the East Coast in 2012, the devastation was massive and unprecedented. Several boroughs of New York City and many towns along the New York and New Jersey coasts were inaccessible, with many areas under several feet of water. Tens of thousands of people across several states lost their homes to the flood waters and unrelenting winds; many are still displaced today. Local businesses were paralyzed, and many failed when they lost not only their buildings and inventory, but also their customers.

Residents and businesses were not the only ones impacted, however. Local governments—including the emergency responders who support communities—were also deeply affected. Landline communications were out in many areas, websites went down, and electricity was out. Local governments found themselves with limited ability to communicate with constituents. Residents were often unable to communicate with emergency services personnel. Systems that normally showed the physical location of callers failed in some cases, leaving first responders in the dark about how to locate people in need.

Star2Star Delivers Reliability

During hurricane Sandy, a large number of businesses in the New York City area lost power and phone service. Star2Star customers were able to conduct business as usual.

While Hurricane Sandy was an anomaly for the northern East Coast, disasters of similar magnitude happen frequently around the country. When Hurricane Katrina impacted the Gulf Coast in 2005, local and state government services and systems were crippled. Emergency communications were disrupted, delaying the delivery of services to impacted areas. Nothing was immune from the storm; wireless network towers, landline telephone poles, central offices and Public Safety dispatch centers were all knocked out of service. Primary and backup power sources were impaired. Broadcast systems, including cable television, broadcast TV and radio were also severely damaged. In some areas, communications systems were out for weeks.

24/7/365 Availability is Critical

A government entity's ability to recover from events such as these depends on how well they plan and execute on a disaster recovery plan. It also depends heavily on the reliability and capabilities of the communications systems and services they've chosen. Communications systems for government agencies – regardless of their size and mission – need to provide high reliability and resiliency. Automated 24/7 service monitoring is essential. In an era of ever-tightening budgets, such a system must also be cost-effective.

Disaster recovery is defined as the ability of a business or government agency to resume normal operations after a catastrophe, which could be a natural disaster, accident, or even a terrorist attack. It includes both disaster contingency and disaster recovery planning. A disaster contingency plan identifies potential weaknesses in systems and puts resources in place—such as backup systems, supplies and services—for essential communications and information processing if the primary system is compromised. A recovery plan includes both immediate actions and long-term measures for responding to the emergency.

In the case of hurricanes Sandy and Katrina - as is the case in most natural disasters, everyone was caught off guard. Even where disaster recovery and business continuity plans were in place, many failed because of the widespread nature of the devastation. However, many plans did work well in Hurricane Sandy and in other recent incidents because they utilized cloud-based communications. These systems are much less susceptible to service disruption, and they are able to restore services quickly if they do go down.

The Public Sector Needs Cloud Solutions More Than Ever

The pace of technology growth since Hurricane Katrina has been staggering. Who could have predicted 10 years ago that infrastructure would move at such a rapid pace from hardware-based solutions to software-based ones? Or that servers would become "virtual?" Or than cellular phones would be "smart" enough that we would want to use them for work? Let's take a look at some of the technology factors impacting the public sector today:

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- Today's workforce is increasingly mobile. Employees no longer sit at one desk all day long. In fact, they may have two or three offices across a county, for example, or drive around in a car inspecting bridges all day. Yet they still need the same access to services as if they were in the home office.
- Video is everywhere. More and more legitimate video is entering the workplace in the form of training videos and video conferencing.
- Big Data is getting bigger. Everything from car registrations to dog licenses to resident surveys can now be accomplished by constituents online. Filing cabinets are being replaced with servers to hold the growing e-data. And many of those servers are "in the cloud," meaning they are housed in a data center in the next town or halfway across the country.
- Cyber security needs are on rise. As data grows, so do the threats against that data. The public sector is not immune to these threats, and needs strong protection of critical assets.

While technology is moving fast, the public sector's often methods of contracting are not, and departments have often been caught developing in-depth Requests for Proposal (RFPs) and then withdrawing them after a drawn-out process because technology advances around them change their requirements. These activities complicate the procurement process and can delay project starts, hampering government efficiency.

By considering cloud computing as a significant part of the technology mix, government entities can now concentrate on the specific requirements they need to meet, instead of which specific pieces of hardware or software can solve those needs. While the cost savings of the cloud are certainly attractive to cash-strapped local and state governments, flexibility, scalability and agility to respond to new challenges and opportunities are also growing in importance. Because of that, many local and state governments now view the role of infrastructure in a whole new light.

A recent study by Unisys [1] revealed that 46 percent of all U.S. state and local jurisdictions have implemented some form of cloud services or are planning to put them in place in the near future. Where the cloud has been embraced, public sector entities are seeing significant cost savings, in some cases to the tune of hundreds of thousands or even millions of dollars.

Complicated situations such as disaster recovery planning in the cloud can play out in many different ways for the public sector, and that's beyond the scope of this paper. However, all disaster recovery plans involve restoring services as quickly as possible, especially critical communications services.

Blending Cloud, On-Premises Solutions Creates Best-Case Scenario

If restoring essential communications services is the top priority for the public sector in emergency situations, it's also safe to assume that having communications services available 24/7/365 is also a high priority. Unified communications (UC) is emerging as a way to help the public sector realize cost savings but still receive high-reliability services for their increasingly mobile workers. But how can state and local governments justify investing in UC when they already have an installed base of communications equipment?

24/7/365 Monitoring is part of every Star2Star System

Star2Star Communications' Blended Architecture™ system offers the public sector a different type of business model than traditional VoIP and UC providers. Rather than sticking completely with an antiquated phone network or ripping that out and implementing a standard voice over IP (VoIP) system, the company's Blended Architecture makes the most of a company's current on-premise resources while also embracing the cloud.

For example, Star2Star connects the existing office phone network to cloud-based services—hosted at secure, redundant data centers—using its StarBox Cloud Connection Manager. This connection creates an overarching, closely integrated communications system complete with all the advanced functionality that UC offers, including features like Find Me/Follow Me that

1 "5 Things to Look for in a Cloud Computing Provider", copyright 2013, e.Republic **click here to read**

can transfer calls to mobile phones to keep employees in touch wherever they travel. The platform combines voice, fax, videoconferencing, presence management and instant messaging communications into one solution leading to increased productivity, collaboration, visibility and lower communications costs.

Star2Star also utilizes the cloud for an innovative pooling and bursting feature that helps government entities keep monthly telephone costs down while ensuring there are always enough lines available, no matter how busy things get. Star2Star phone lines are virtual, not physical, and are multi-location, meaning they can be part of a pool of lines that can be used from any location within the group. This unique approach allows a local government, for example, to purchase a pool of lines that is large enough to meet its entire peak usage needs, without having to obtain (and pay a monthly fee for) a fixed number of lines per department.

If the demand for lines—either from incoming or outgoing calls—exceeds the number of lines available, the Star2Star platform will automatically add additional lines on the fly. This "bursting" feature ensures that additional lines are always available when needed, either for incoming or outbound calls.

So how would this work in the case of an emergency, like a natural disaster or burst water pipe that impacts government operations? If services are disrupted for some reason, at the town hall or police station for example, or even both, calls coming into those numbers can be rerouted quickly and easily to any other phone, including mobile numbers, home phones or even to dispatchers in a nearby community that is not impacted. The re-routing can be managed remotely using the Star2Star Web interface. When dozens of calls coming in flood emergency phone lines, the system scales dynamically to increase capacity, meaning callers never receive a busy signal.

In an Emergency and Every Day

Reliable, scalable communications services are a must for the public sector, regardless of whether it's business as usual or the next emergency situation. By embracing the cloud, state and local governments can easily make the transition to cost-effective UC services, adding the advanced capabilities they need to serve their constituents while saving seeing significant cost savings to help keep in line with tight budgets.

Partnering with a trusted provider such as Star2Star Communications means government entities can scale services quickly and easily across the multiple locations within their jurisdiction to help deal with an emergency, or just part of their shifting day-to-day operations. In doing so, they can maximize their existing infrastructure while taking advantage of all the benefits the cloud has to offer.

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