# STRATOSPHERE NETWORKS

HOW TO BUILD A 3,000-BED HOSPITAL'S IT, CYBER AND TELECOM NETWORK IN 2 WEEKS

CLIENT BACKGROUND

McCormick Place, located just south of downtown Chicago, is the largest convention center in North America. The Illinois Emergency Management Agency (IEMA) is responsible for preparing for and responding to natural, man-made and technological hazards, disasters and acts of terrorism.
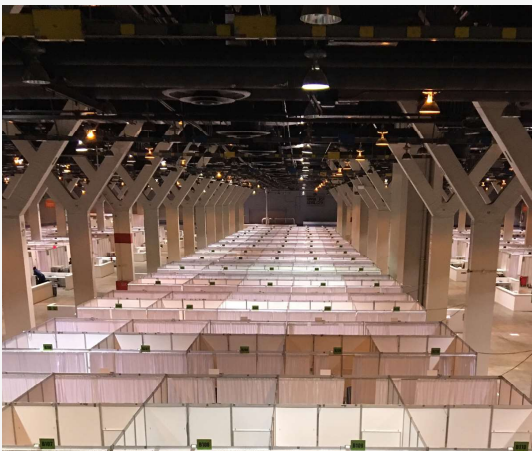
BUSINESS CHALLENGE

IEMA and the city of Chicago needed to develop a strategic response to the coronavirus disease 2019 (COVID-19) pandemic. State and city officials decided to turn McCormick Place into the McCormick Alternate Care Facility (MACF), a 3,000+-bed field hospital for COVID-19 relief efforts. With the possibility of a significant influx of patients affected by the coronavirus outbreak, the Chicago area needed the MACF as a preventive measure to ensure local hospitals didn't get overwhelmed.

STRATOSPHERE NETWORKS SOLUTION

The Stratosphere team first received a call about the project on a Sunday asking to architect, design, procure, and implement an entire IT and telecom network for a fully functional hospital in 15 days. "The magnitude and timing made the project particularly daunting, but our team rose to the challenge with determination, hard work and dedication to delivering exceptional service."

Within a few days, we had already confirmed equipment availability and designed the architecture of the telecom and IT network for the care facility. To ensure a smooth roll out on an accelerated time frame, we provided on-site and remote project management services and professional services.

The first phase of the project involved the following key components:

- Phase 1 device procurement. Despite limited stock and resources, we were able to rapidly obtain large quantities through our relationships with key suppliers and distributors.

- On-site deployment of Stratosphere engineers for set-up and installation.

- Collaboration between the Stratosphere team and various entities as part of the deployment – including the state of Illinois, the city of Chicago, Rush Medical Center, DuPage Medical Group, the Illinois National Guard and the Illinois Emergency Management Agency.

- HIPAA-compliant cloud phone system deployment, including the capability to make and take calls from mobile devices procured via our partnerships with distributors.

- Project management services, including coordination of communication between all parties involved in each individual aspect of the overall project.

- Mobile Device Management and facilitation of fast-paced ways to push out apps to devices.

- Patient health record solution implementation via partnerships with other hospitals.

- Disaster recovery solutions like Desktop as a Service and LTE set up.

- Engagement between our team, other states and hospitals to facilitate emergency IT and UC set-up.
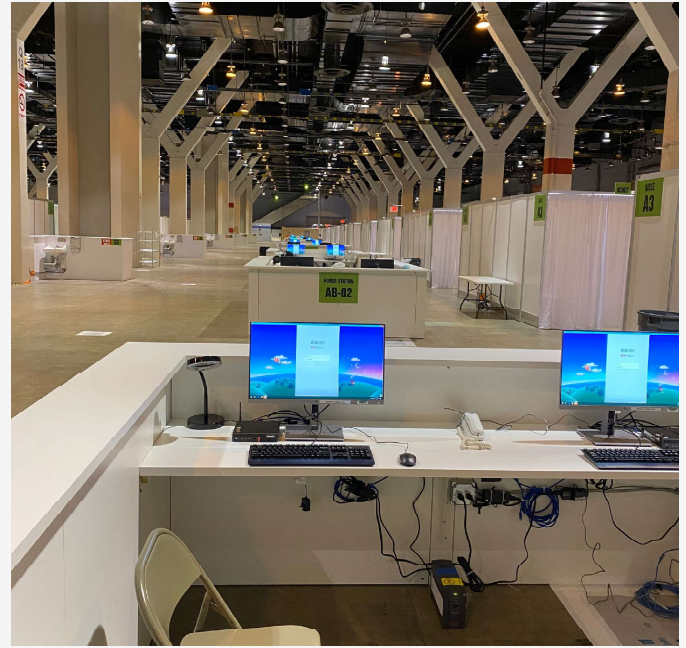
Our Design Process: Creating a Hospital IT and Telecom Network

The Stratosphere team's approach to coming up with the architecture for the hospital's IT and telecom network involved the following key phases:

Network Connectivity:

Our objective was to establish a secure method of connectivity, only allowing approved applications through the firewall. Because McCormick Place didn't have an on-site firewall, part of our scope involved implementing one. This phase included the following:

- Implemented dual high-availability firewalls via the main internet connection at McCormick Place

- Set up firewall rules to securely segment traffic from McCormick Place, McCormick ACF and Rush Hospital for the Unified Communication (UC) Application, the Electronic Medical Records Application (EMR) and Language Translation Application

- Ensured proper communication and carrying out continuous monitoring

Mobile Devices:

Our goal was to quickly deploy mobile devices that ACF staff could use to access the EMR, Language Translation and UC apps. We accomplished that with the following steps:

- Working with the hospital IT team to configure devices using an existing Mobile Device Management (MDM) solution

- Created custom image for the ACF facility to lock down devices to only allowed applications

- Deployed and tested all mobile devices utilizing the existing MDM solution

Desktops/End User Computing:

We needed to set up workstations with access to the EMR (the only app provided, for security reasons). Completing that task involved the following steps:

- Worked with the hospital IT team to develop custom image for access to EMR

- Properly secured workstations with anti-virus

- Configured printers in nursing areas

- Carried out physical deployments of workstations

Unified Communication Solution:

To ensure effective communication for internal and external stakeholders, our team needed to set up a UC solution. We did so by completing the following tasks:

- Deployed a softphone application to all mobile devices, without dedicated VoIP phones

- Configured all softphones and labeled each individual mobile device with a custom phone number and device ID

- Ensured the solution was fully HIPAA compliant.

- Tested with the firewall to ensure that traffic was properly communicated to mobile devices.

Ultimately, through hard work and dedication, our tech experts quickly and efficiently designed and deployed a fully functioning network for the field hospital.

Everyone involved in the first phase of this undertaking demonstrated incredible dedication and team spirit, putting in 12+ hour days and coming in on the weekend to get everything done in an extremely short time frame. There were numerous moments during this two-week time period when the Stratosphere Networks team, other teams and government officials came together to overcome obstacles and deliver exceptional services.

BENEFITS

Ultimately, we were able to complete a project that usually would have taken a year or two in just two weeks. IEMA and the city of Chicago received a fully functional IT and telecom network for their field hospital, allowing them to deliver care to patients affected by COVID-19 in the event of major stresses to the healthcare network in Chicago.