



Mission-Critical Networks—In Six Days or Less

Why Boston, New York and Chicago Marathon Organizers Lean Heavily on the Capabilities and Know-How of Versatile.

“At an event of this magnitude there are so many potential points of failure: the phone connections, the wired and wireless networks, the computer systems, [Our] network ran like a champ. It worked beautifully during the event, so I was able to turn my attention to other areas. In fact, the network was one area I didn’t have to worry about.”

—Paul Farmer Director of Information Technology Bank of America Chicago Marathon

Summary

Marathons are big business. With tens of thousands of paying participants, hundreds of thousands of onsite spectators, international media attention and lucrative sponsorship programs, they often rival large enterprises in revenue potential and community impact.

Their networking needs also equal those of enterprise corporations. For the Boston Marathon, ING New York City Marathon and Bank of America Chicago Marathon—three of the five World Major Marathons—event success is reliant on data and communications networks that feature high availability, rock solid security and precise performance. Adding to the challenge is a dubious timeline that requires the networks to be built from the ground up in six days or less.

So far, only one company has hit such a stride: Versatile.

Going Digital

For its 100th anniversary, the Boston Marathon went digital in 1996. Event organizers wanted more sophisticated and accurate timing. They hoped to reach new, online audiences and expand sponsorship opportunities. And they sought to modernize the world’s oldest annual marathon.

The results were less than optimal. Vendors had under a week to establish a data and communications “Race Day Network.” And while the marathon commenced as planned, a slew of behind-the-scenes issues threatened to cast a large shadow over the proceedings. There were server, database and connectivity problems. A lack of network redundancy created a domino effect when network elements failed. And race results didn’t appear online for more than 48 hours due to timing issues.

To overcome such setbacks, event organizers sought the services and networking expertise of Versatile the following year. Since then, Versatile has handled the complex, grueling and mission-critical networking needs of not only the Boston Marathon, but also the ING New York City Marathon and Bank of America Chicago Marathon.

More than Timing

While accuracy of timing and scoring is the primary goal of any Race Day Network, it is but one of many. Data and communications networks for modern road races must keep event organizers and emergency responders connected to one another and to real-time race information. They need to deliver live television feeds and Internet broadcasts while supporting the needs of onsite media representatives.

They are tasked with sending automated, real-time race updates via text and email to runners' family and friends. They provide connectivity and race results for sponsors, spectators and VIP parties. And they even help categorize and authenticate runners' times.

The Race Day Networks built by Versatile bring together a unified command center for marathon organizers and emergency planners; a timing center for race judges; start and finish lines; press room; medical tents; sponsored event locations; and dozens of wireless checkpoints throughout the course.

"The Race Day Networks we establish for the Boston, New York and Chicago marathons are complex and multifaceted," says Kevin Meany, CTO of Versatile. "Not only do they have to support a variety of functions and areas, but they also must be parceled differently for various users."

Sophisticated access control, he explains, helps solidify network security and allows event organizers to tailor the network for each user, whether they are a sponsor's guest, media representative or medical worker. "Two people could be standing next to each other, log in to the race network and see different things based on different levels of security granted," says Meany.

While the network infrastructures are different for each marathon, the Boston, New York and Chicago Race Day Networks have several commonalities. All have roughly 30 core and edge switches; approximately six firewalls; nearly 30 wireless access points; as many as 14 servers; and the backing of an offsite data center. Wired elements support key zones, such as the unified command center, start and finish lines, timing center and press room, while high-speed wireless elements support on-course checkpoints and hospitality areas.

"Every network is different," says Meany, "and we tailor them based on the particular situation and requirements. Like many enterprises, marathons need high availability, precise performance, tight security and a seamless, customized user experience. The difference, of course, is the six day implementation and the criticality of the six hour race window, but we like a challenge."

Ensuring Success

As with any mission-critical technology infrastructure, Race Day Networks help determine the success of the Boston, New York and Chicago marathons. If network failures occur, race organizers and the communities they support are hit where it counts most: the bottom line.

"At an event of this magnitude there are so many potential points of failure: the phone connections, the wired and wireless networks, the computer systems," says Paul Farmer, Director of Information Technology for the Bank of America Chicago Marathon. "[Our] network ran like a champ. It worked beautifully during the event, so I was able to turn my attention to other areas. In fact, the network was one area I didn't have to worry about."

In addition to facilitating event timing and scoring, the Race Day Networks built by Versatile support revenue-producing sponsorship programs. They help broadcast event results and grow the prominence of the races around the world. And they aid event planners and emergency personnel who work tirelessly to ensure each marathon runs smoothly. "Seamless races, accurate results, global publicity and successful sponsor programs foster the longevity of these marathons and boost the financial prospects of their communities," says Meany. "We're proud to have played a key role by delivering Race Day Networks for the past 14 years...and counting."

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