

TOP TEN WAYS HIGH-PERFORMANCE ETHERNET TRANSFORMS GOVERNMENT

By 2050, the World Health Organization estimates 70 percent of the U.S. population will live in or near urban areas to take advantage of the services these regions will offer. The promise of 'Smart' Cities hinges on each region's use of modern, high-performance networks to monitor and streamline decision-making, especially regarding the condition of critical infrastructure such as roads, subways, water, power, and primary buildings. Gathering this information, processing it intelligently, and re-distributing it to constituents requires a high-capacity, highly reliable network infrastructure. State and local governments must find ways to optimize their resources and deliver relevant new services to citizens.

With millions of connected devices and systems already exchanging information in real time, legacy communications infrastructures are under enormous pressure to keep pace with growing demands and unpredictability. At the same time, by digitizing many government services and fostering greater interoperability, state and local agencies have increased their requirements for secure, reliable, high-bandwidth connectivity. Luckily, advanced Ethernet technology is available to help transform government services and the way public servants and their constituents interact. Here are ten ways Ethernet is driving the evolution of high-performance networks across states and municipalities today.

1. To help lower costs, convergence is key. Converging disparate and redundant network infrastructure can reduce expenses, while also improving performance. Not only is Carrier Ethernet a more cost-efficient and stable platform to support advanced network applications such as VoIP, it also provides the flexibility to use Ethernet Quality of Service (QoS) techniques to isolate and segregate voice, data, and Internet traffic. Using these techniques, differentiated traffic can be accommodated on a single infrastructure, further reducing complexity and cost.

2. States and localities are embracing virtualization, fast.

As public sector organizations have discovered, nearly every IT function that can be virtualized is quickly heading in that direction. Even government organizations that would prefer a managed Ethernet service for functions not considered mission-critical have found that virtualizing networks—including those functions that previously required specialized hardware appliances—can improve operations and reduce costs.

3. Cloud services are driving network performance demands.

Those services accessed locally on a device but run on a remote server in a data center are driving demand for high-performance Ethernet networks. Such services might include storage, compute, or infrastructure as a service. Indeed, advanced WANs make up the essential, if sometimes under-appreciated, link that connects people inside and outside government to data in the cloud. This allows doctors and patients to collaborate via telemedicine, enables virtualization to deliver attractive cost savings, and underpins a host of other game-changing benefits.

4. Ethernet networks are also evolving, fast. Today, many Ethernet networks running at 10 Gb/s are being expanded to 100 Gb/s. These networks can be used to aggregate everything, accepting traffic from multiple sources including cell towers, office buildings, and residences to help local governments deliver new apps and services to help traffic flow managers, water engineers, first-responders, and citizens. As states and municipalities work to roll out new services, especially those leveraging video or mobile apps, these advances put tremendous strain on traditional networks. And this challenge is easily resolved on Ethernet networks that now deliver the exact capacity required, to any point on a network, up to 100 Gb/s.

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