

How Agencies Are Modernizing Networks for Mission Success

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If there is one skill that workers have mastered in 2020, it is adaptability. As government employees everywhere have transitioned to remote work environments, they have had to learn to be flexible to stay on task as well as communicate effectively with their peers and the public. Not only do government employees need to adapt to these changing times; the networks on which they rely to do their jobs effectively must also be able to adapt.

According to a 2020 Ciena and GovLoop survey of government agencies, *Is Your Agency's Network Meeting Expectations?*, 78 percent of respondents consider network modernization a priority. Demands for modernization are only likely to increase as internet-connected devices such as wearables, wi-fi services, and machine-to-machine (M2M) interactions — and the traffic they generate — place unprecedented pressure on networks.

Fortunately, networks that adapt offer a prime opportunity for agencies to meet the rising expectations of network reliability and performance without overburdening their IT teams. The Adaptive Network™ uses automation, guided by analytics and intent-based policies, to rapidly scale, self-configure, and self-optimize by constantly assessing network pressures and demands. It is built on the following foundational elements: Programmable Infrastructure, Analytics and Intelligence, Software Control and Automation, and Services.

Still, the Adaptive Network is more than the sum of its parts. While each of these components can enhance network and business outcomes, together they empower government agencies to meet their mission during times of uncertainty with enhanced security, increased reliability, and greater manageability.



“All of these threats are driving the need for an interconnected, internetworked solution to offset adversaries and allow government agencies to defend themselves.”

— **Jim Westdorp** | Chief Technologist, Ciena Government Solutions

Enhanced Security

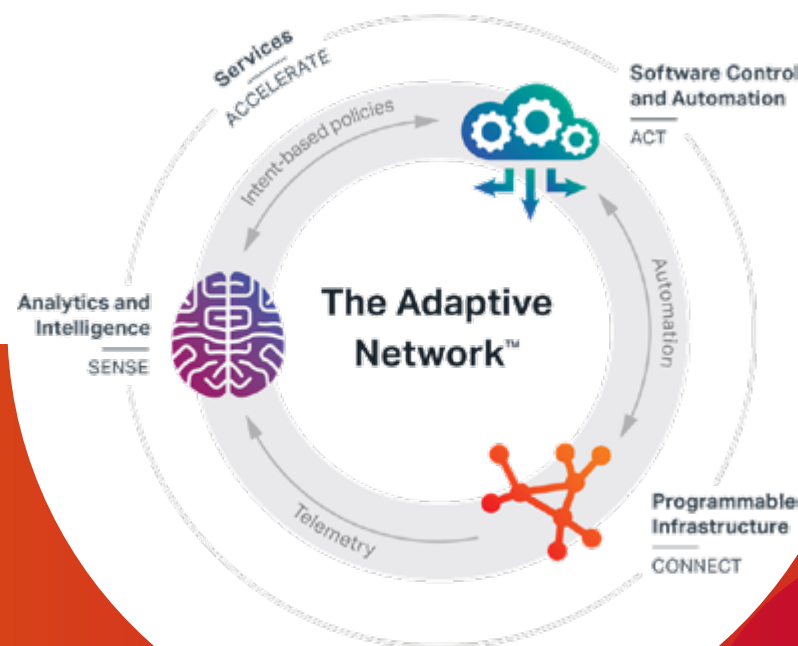
Government agencies are subject to a wide array of cyberthreats — from hackers and hacktivists to state-sponsored actors.

“All of these threats are driving the need for an interconnected, internetworked solution to offset adversaries and allow government agencies to defend themselves,” says Jim Westdorp, Chief Technologist at Ciena Government Solutions. “There are not many ways to holistically address these threats without the Adaptive Network.”

In fact, nearly 62 percent of survey respondents believe that a modern network would help them improve their cybersecurity defense, and the majority of respondents (75 percent) rank security highest among the top priorities for

network modernization, followed by reliability at 56 percent, performance at 31 percent, and ease of use at 21 percent.

The Adaptive Network can self-configure and optimize in response to emerging security threats. For example, by proactively providing updates based on occurrences such as a potential security threat, Ciena’s Adaptive Network can adjust network traffic flows to thwart an attack.



Ciena’s Adaptive Network can help your agency modernize effectively.

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Increased Reliability

Government agencies depend on network reliability to deliver critical services to both employees and constituents. Although nearly half, or 47 percent, of survey respondents report that their existing network provides them with the performance and reliability they need to do their job, there is still opportunity for improvement. Among respondents' biggest concerns are not enough capacity or speed (49 percent), a lack of security (39 percent), and an inability to keep pace with the changing demands of cloud-based technologies (30 percent).

The Adaptive Network, along with Ciena's Blue Planet® Network Health Predictor, can address these challenges by quickly identifying specific areas of risks in the network and moving agencies toward a proactive resolution to keep the network running smoothly.

"Network Health Predictor monitors the network, trends the overall health of the network, and allows agencies to make decisions about proactively changing the configuration of the network to move traffic away from problem areas before a traffic-impacting event actually occurs," says Westdorp.

Fiber types, network capacity, trends in aging, error patterns—all of these details are monitored and processed by an analytics engine to help agencies make real-time, accurate judgments on a network's health, as well as better anticipate potential risks. In fact, a staggering 80 percent of respondents report experiencing a network outage at least once in a while—evidence of the growing need for an intelligent approach to network reliability.

SURVEY RESULTS

From Ciena and GovLoop's survey, "Is Your Agency's Network Meeting Expectations?" Government participants responded with their biggest concerns with their existing network.

49%

NOT ENOUGH
SPEED
#1

39%

LACK OF
SECURITY
#2

30%

INABILITY TO PACE WITH
CLOUD-BASED TECH
#3

Greater Manageability

Government agencies can no longer afford to rely on traditional tools to manage their network.

“These days, government agencies require greater automation—either software or process automation—to deal with the fact that networks are bigger and more dynamic than ever,” says Westdorp.

Yet 45 percent of survey respondents still depend on spreadsheets to manage existing networks; and 43 percent use software that is reaching, or has reached, end of life. Fortunately, the Adaptive Network can get agencies up to speed by providing the automation, programmability, and flexibility needed to manage increasingly complex environments. For example, Ciena’s **Blue Planet Intelligent**

Automation Portfolio leverages Network Functions Virtualization (NFV) and Software-Defined Networking (SDN) to modernize and transform operations across IT and network operations.

Together, these critical parts of the Adaptive Network—security, reliability, and manageability—serve to benefit government agencies and their constituents during today’s challenging times, and well into the future.

Ciena’s Adaptive Network can help your agency modernize effectively.

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