Transforming Government Through Digitalization

How cloud-based IT solutions can help

When the pandemic hit and moved much of work and life online, it accelerated digital transformation across sectors, including in state and local government. Now, as agencies shift to the "next normal," they need to prepare for a more permanent digital world. In a recent Center for Digital Government survey, nearly half of respondents said bill payments, records management and public meetings will remain online post-pandemic, while around one-third said the same about permitting and licensing processes.[1] Additionally, 60 percent of respondents believed a remote/hybrid workforce will be the way of the future.[2]

This data coincides with recent McKinsey & Company's research, which anticipates that digital technology absorption across government infrastructure will rise from one-third today to over two-thirds by 2030.[3]

A strong network foundation and cloud-based IT will be a big part of ensuring staff and citizens can successfully navigate a more digital government. This brief looks at how to make the transition to an easy-to-manage cloud-based network and why your agency can't afford to wait any longer to make the switch.

IMPROVED IT MANAGEMENT

Many state and local governments have limited IT resources to support a large number of facilities, users and devices. A cloud-based network can provide significant time and resource savings and allow IT teams to focus on more strategic work, especially when the entire network can be managed remotely from a single pane of glass.

For the Florida Department of Environmental Protection (DEP), which consists of a small team of only two senior network engineers, one part-time network engineer and two junior engineers, one challenge was a lack of visibility across the network due to the use of unmanaged switches. Initially, Florida DEP was looking at only refreshing its network switches for greater visibility — and it chose Cisco Meraki due to its performance and cost. However, after seeing how easy it was to manage the entire network through a single dashboard, enabled by the Meraki platform, the team decided to purchase Cisco Meraki access points and security appliances as well. They immediately realized several benefits.

"Across the whole Cisco Meraki product line there is flexibility, ease of installation and deployment, and

simplified firmware upgrades and maintenance — it is a single interface for managing switching, routing, wireless — the whole works," notes Arthur W. Wilson, a network engineer at Florida DEP.[4]

Having these capabilities allowed Florida DEP to save time and increase visibility, helping stretch resources further through more effective and efficient network management.

The city of Opelika, Ala., also moved to a Cisco Meraki cloud-managed wireless network for similar reasons. Only two members on the city's IT team have the skills to configure networking equipment with command line. By switching to the Cisco Meraki platform to configure and monitor the devices using the dashboard, which doesn't require any technical skills, the entire team can now manage the network in a simple, intuitive way.

They've also saved time and reduced troubleshooting issues, allowing them to better allocate resources. The platform, which monitors the entire wireless network, has given them greater visibility as well as access to analytics, which has helped them understand their network better and what improvements they need to make.[5]

INCREASED NETWORK SECURITY

Cybersecurity has always been an imperative for government agencies, but the need for effective protection has intensified in the current remote work environment. And with further digitalization of government services underway, the challenge and need are only growing greater. Consequently, cybersecurity solutions are one of the top three tools that state and local governments are most likely to adopt in the "next normal" after the pandemic.[6]

"As services move to the cloud, it becomes extremely important that governments prepare for

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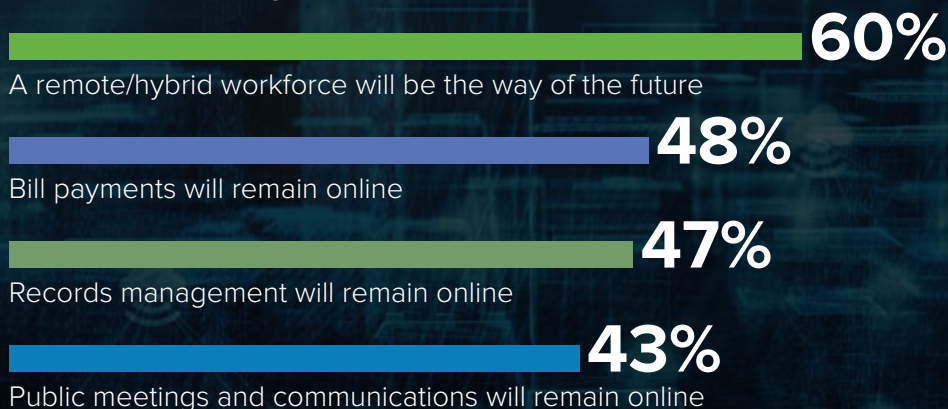
security. Not as an afterthought or a separate function, but as integral to the entire operation, embedded in the IT platform," notes Pravin Mahajan, Cisco Meraki Solutions Marketing Leader.

A cloud-based network platform can greatly improve network security and should be a key consideration for any government organization. For instance, cloud-based next-generation firewall capabilities give administrators complete control over user content and applications on their network.

Not only can pre-defined policies allow administrators to determine the level of security needed, but rulesets can be refreshed daily to ensure protection against the latest vulnerabilities — including exploits, viruses, rootkits and more. New policies and updates can also be pushed via the cloud to end devices within an hour with no manual staging or patching needed.

Additionally, auto VPN technology eliminates tedious and time-consuming manual configuration. And security settings can be synchronized across thousands of sites using templates, making it quick and easy to secure the network.

Expect More Digital Government in the "Next Normal"

60%
A remote/hybrid workforce will be the way of the future

48%
Bill payments will remain online

47%
Records management will remain online

43%
Public meetings and communications will remain online

Source: The Center for Digital Government

For the city of Opelika, the additional security features of the Cisco Meraki cloud-based wireless network were another selling point. For instance, each city department and the guest network has its own SSID, enabling the IT team to enforce an access control list at every access point and at the switch level, providing two layers of security.

The city is also using firewall and traffic shaping rules on access points, and P2P applications are blocked with the rules enforced on the access point rather than the controller, saving significant bandwidth on the network while providing increased security.

In addition, the team can easily track and shut down rogue devices on the network. If someone plugs a wireless router into the office network, the network detects it and stops the device from connecting. For threat management and to detect network hackers and failing devices, the city uses a security information and event management (SIEM) tool that is connected to the Cisco Meraki platform through an API. If there are more than 200 connections per minute from a single device trying to connect to one access point, the city receives an email and can easily ban the suspicious IP or MAC addresses.

In a Center for Digital Government survey taken during the pandemic,

32%
of citizens said they wanted access to more services online.

38%
said they wanted digital services that are easier to use.

A BETTER CITIZEN EXPERIENCE

In a Center for Digital Government survey taken during the pandemic, 32 percent of citizens said they wanted access to more services online and 38 percent said they wanted digital services that are easier to use.[7]

"Citizen expectations and demands have increased, so the response has to match the demand," says Mahajan. "Speed matters and so does flexibility."

The flexibility and extensibility of the cloud makes it easier to add new websites or capacity, as well as to extend wireless services and support more devices. It also makes it easier for government agencies to extend wireless access points, enabling more citizens to get online in more places, which is especially important for citizens without home-based internet.

AUGMENTING FACILITY SECURITY

The physical security of government facilities and assets is another important part of the overall security picture for state and local governments. One way to bolster facility and asset security is through cloud-based networks, which can support smart cameras that provide reliable monitoring.

"Physical security has to complement IT security to make the entire operations and workforce more secure. A cloud-based model can combine IoT and IT security together into an integrated digital posture," says Cisco Meraki's Mahajan.

The city of Fayetteville in northwest Arkansas not only improved the security of its facilities through the use of smart cameras but has saved the IT team time. By installing Cisco Meraki cameras across the city, IT can use the camera's Motion Search feature to quickly and easily find footage in seconds. They even use the cameras to solve minor problems, especially since they can give access to each department's cameras to specific users within the department.

"We used to get requests to search for something small before, and would have to say no, we're not spending time on that. But now, the division head or facilities manager can search for what they need very quickly," says Brad Fulmer, infrastructure manager for the city.

In addition to Motion Search, the IT team also leverages the Heat Map tool. The Heat Map functionality shows seven days of motion data on a per-day or per-hour basis, allowing the IT team to look at an aggregated amount of data to make informed business decisions.

For example, they can see who delivered packages, and identify the offenders when a package is damaged. In the city gym, they can see what sporting equipment is being used most frequently, allowing them to plan accordingly and replace equipment when it's worn out.[8]

In Rancho Cordova, a city located in the Sacramento Metropolitan Area, leaders are working to expand internet access by providing WiFi to public spaces around the city. The intuitive, centralized management of Cisco Meraki hardware across all locations via the cloud-based dashboard and wireless access points has made remote management simple and quick. And automated network alerts that notify the IT department if devices go offline or if a rogue AP is detected has allowed the city to provide reliable WiFi and continue to expand it to even more parts of the city.[9]

DIGITALIZATION CAN'T WAIT FOR TOMORROW

For Florida DEP, having a cloud-based network that simplifies troubleshooting and monitoring and provides visibility across the entire network has been essential with such a small team and so many facilities to support across a broad geographic region.

Junior engineers were able to configure and support the switches without having in-depth knowledge. The flexibility of user authentication, ease of installation and the simplicity of firmware upgrades have also made overall network management much easier. Florida DEP has even been able to provide secure access to the network and the proper telecommunications circuit.

What Florida DEP has been able to achieve through its Cisco Meraki deployment has enabled the department to work more efficiently, effectively and securely — which should be the goal of all government agencies.

Previously, it could only get a DSL or other lower bandwidth connection, but after deploying Cisco Meraki integrated routers, it was able to capture all traffic that comes in, encrypt it and create a VPN tunnel back to the main headquarters in Tallahassee — finally providing a secure connection.

What Florida DEP has been able to achieve through its Cisco Meraki deployment has enabled the department to work more efficiently, effectively and securely — which should be the goal of all government agencies. It's also the reason, in a world where digitalization will only continue to increase, that moving to a simplified cloud-based network today is so critical.

This piece was developed and written by the Government Technology Content Studio, with information and input from Cisco Meraki.

PHOTOS PROVIDED BY SHUTTERSTOCK.COM

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