

CASE STUDY

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How the City of Williamsburg Uses Auvik to Empower a Small IT Team



Challenges

- Manual management
- Lack of visibility

Solution

- Automated asset management
- Network visibility
- Alerting

Benefits

- Cost savings
- Optimized resources
- Reactive to proactive IT

About the City of Williamsburg

Williamsburg is one of the oldest municipalities in Virginia with an estimated population of 14,954, as of 2019. In the 2020 State of the City, City Council unveiled a new vision statement, the Williamsburg of 2040, that outlined strategic initiatives for various goals including modernization of the city. The city's Information Technology team aims to provide exceptional systems and services to people, both internal and external, that support the mission and vision of the City of Williamsburg and to do so in an efficient and cost-effective manner.

Needs and Challenges

The city's Director of Information Technology (IT), Mark Barham, and his team are responsible for providing digital service delivery for Williamsburg's citizens, and that means managing networks across all government departments and services, including the city manager's office, economic development, finance, fire, police, human services, human resources, parks and recreations, human resources, public and utility works.

Their small team — a Network Administrator, IT support representative, and System Analyst — oversees an average of 50 to 75 change requests, monthly. Mark and his team relied on basic tools like Excel spreadsheets to log and track configuration changes, device statuses, and details of available IT assets. With zero visibility into their networks, the team had to spend hours to find the root causes behind network issues. For IT teams serving government bodies, the need to maintain network uptime is critical, as it's tied to emergency services, citizen communications, public health access, and other key aspects of daily business and citizen engagement. They needed a solution which could both automate many of the manual processes to network management, and provide the real-time network visibility they needed.

The City of Williamsburg deployed Auvik to manage its hyper-converged virtual environment, and today, they've realized both their goals. After a successful trial, Auvik proved it was the tool they were looking for, providing automated services for tasks like network inventory and documentation, and the ability to standardize network management across all departments. As Mark says, Auvik is now their source for "network truth" to understand the devices on the network and deeper insights into what's happening on the network before an incident occurs.

Solution in Detail

Automated IT asset management

At the City of Williamsburg, Mark and team had to toggle between multiple Excel spreadsheets and tools to find even simple information about a device on their network. It was not only time consuming, but also difficult to track every change that occurred on the network. As the city worked toward modernization of citizen services, managing network assets became critical for ensuring continuous service delivery.

Auvik's automated network inventory and documentation captures full details for every device on the network, and dynamically updates the documentation when changes are made. With Auvik, it's fast and easy to locate a device, find details, or review logs. Vital configuration files for switches, routers, and firewalls are also backed up to central location automatically. If the running config is altered, the latest config is automatically backed up, and the old config gets logged into a version index that's always available for review or rollback. "On multiple occasions, we could pull previous config statements (working config) and replace the running config to resolve an issue", says Mark.

Real-time network visibility

In the past, Williamsburg's sole Network Administrator had to physically trace wires, and reverse engineer the changes to understand network interconnections during troubleshooting. Now, Auvik's automated network discovery dynamically updates the network as it evolves. Auvik pulls data from various sources like LLDP, CDP, forward tables, ARP, IP assignments, and VLAN associations to model the network diagram in real-time, showing exactly what's on the network and how it's connected.

This has been particularly helpful for the team when it comes to device upgrades. During the planning phase, Auvik was able to provide deep discovery and mapping across the entire city network infrastructure. With that, the Network Administrator could pre-validate the impact of the project. Post deployment, they were able to confirm the interfaces were all working properly, and valid connections were in place. "With network visibility," said Mark, "my team can now pre-play the changes and confirm that expectations are met."

"As the city worked toward modernization of citizen services, managing network assets became critical for ensuring continuous service delivery."

Troubleshooting and alerting

Addressing requests from the help desk is also one of the key responsibilities of Mark's team. Any application or data requests are assigned to their System Analyst, and network change requests to the Network Administrator. In the past, during a network incident, the team would learn about the incident only after a help desk ticket was raised. Then, they'd have to go through lines of code for multiple devices, and refer to manual documentation to resolve the issue. Auvik simplified and streamlined the troubleshooting process with a set of 50 proactive alerts and in-depth visibility.

The IT team was able to configure Auvik's customizable alerts to notify the team about any issues in the network of particular importance. In one situation, Mark explains, "I was doing Palo Alto (firewall) upgrades early in the morning. As part of the upgrades, we had to reboot the device, and it disconnects the internet connection which was part of a critical infrastructure. Auvik notified my network administrator that the interface is down. Though it was not an issue, Auvik sends real-time updates, providing complete visibility into what's happening in the network." Auvik also replaced the need for two resources to monitor IPSec tunnels for potential risks. With network mapping and custom alerts, Auvik monitors the tunnels and sends alerts in case of any issues.

What is Auvik for the City of Williamsburg?



"For the City of Williamsburg, Auvik is an essential tool in helping us visually understand our network and, more importantly, helps us identify and mitigate issues across our network largely before we even know about them. Auvik has proven itself to be a life-saver many times over for us."

Mark Barham, CGCIO
Director of Information Technology

Key Benefits

Cost and time savings:
Automated network discovery reduced the time taken to troubleshoot from days to minutes with real-time visibility of the network.

Optimized resources:
Rather than allocating additional resources at the site location to monitor critical networks, now they leverage network topology maps and have to visit the site only if there is an issue.

Reactive to proactive IT:
City of Williamsburg moved to a proactive approach of addressing network issues. In countless situations, Auvik notified the IT team proactively so that they could stay on top of all incidents.



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