

NETWORK AND APPLICATION PERFORMANCE PLATFORMS—KEYS TO EFFICIENT AGENCY OPERATIONS

For federal government agencies, knowing how well networks and applications perform can mean the difference between being an organization that runs its operations optimally in serving the public or one that must navigate a fog of inefficiency and unreliability.

The push toward digital transformation, which includes most agencies, requires networks and applications to always perform at peak levels. The only way to ensure this is to have visibility into IT assets and be able to share that visibility with key stakeholders throughout the organization.

By leveraging platforms that deliver that performance knowledge, personnel in agencies' Network Operations Centers (NOCs) and Security Operations Centers (SOCs) can respond rapidly to any issues that might arise. They can leverage detailed insights into problems to provide just the right fix—quickly, before any outages or degradation of services impact the mission, employees, or citizens.

Network and application visibility platforms are especially important for larger agencies that have more complex IT infrastructures, and more employees and partners who rely on those infrastructures to do their jobs.

“Application and network visibility are incredibly important to any agency or any organization,” says Marlin McFate, CTO for public sector at Riverbed, a provider of software and hardware products for network performance management, application performance management, WAN optimization, and SD-WAN.



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Breaking down Silos

“The most important part is taking that information and unifying it across an organization,” McFate says. “This breaks down silos [and] creates better collaboration and communication among different departments.”

If agencies can provide a unified view of performance across the entire network and all applications—and teams collaborate on the performance data, they will be much more efficient in finding problems, faster resolving them and effective in alleviating issues, such as cyber risks, McFate says.

The more the different factions of an agency work together to understand the IT infrastructure, their specific roles and the roles of their peers, the better the outcomes in terms of IT performance, says Sean Applegate, CTO at Swish Data, a provider of technology and engineering services and solutions.

“When you think of having an application owner or developer, a network engineer or director, the team

supporting the desktops, the folks building cloud applications and running the cloud infrastructure, and employees from other agencies consuming your shared services, there’s a lot of complexity,” Applegate says. “The ability to work together as an organization to solve problems quickly and monitor your service levels is absolutely critical. It ties directly back to using technology to achieve your agency’s objectives.”

Many federal agency departments have historically made individual decisions and purchases of tools such as network monitoring devices, routers, switches, and WAN optimization systems, Applegate says.

“In many cases those purchases were made in a silo, with a department level budget and there’s been very little coordination across departments,” Applegate says. “We’re starting to see the agencies that are on the cutting edge making strategic buys that leverage the purchases across many different departments.”

Those agencies are also starting to gather performance data into data lakes or other shared data resources, so they can apply advanced analytics and gain forensic detail to make effective improvements, Applegate says. Unfortunately, not every agency is at that point.

“You are going to see a range of government agencies; some on the very mature, advanced side and others that are siloed and not well connected across departments,” Applegate says. “Understanding where you are as an agency is an important first step.”

Those agencies that have not advanced in terms of collaborating on network and application performance are likely experiencing a lot of duplication of efforts, as well as redundant systems and capabilities.

“That’s not necessarily the best way to go about it financially,” McFate says. “If they’re not doing things like unified visibility and correlation of data across the different silos, they’re missing the larger picture. Without combining that information from one group to another group, you don’t find the significance of the problem nearly as fast.”

Leveraging Metrics

Agencies looking to enhance their network and application performance in a unified way across the organization should consider using three key metrics: utilization, saturation, and errors (USE), Applegate says. The USE method is a methodology for analyzing the performance of virtually any type of system.

The metrics enable agencies to know how much a system is being used, how extensively it’s being pushed through the organization, and the rate of errors it experiences. “You can apply these metrics across any system, whether it’s a network, application, desktop, or cloud infrastructure,” Applegate says.

By measuring these factors, agencies know how well they are leveraging different systems throughout the

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enterprise and how well—or how poorly—they are performing. This can help identify specific problem areas within the IT infrastructure, for quick and effective remediation.

While technology is a key component of improving network and application performance, it’s important for agencies to remember that non-technology factors also matter.

“There is most certainly an operational, procedural, and cultural shift that needs to take place too,” McFate says. “And this needs to start from the top. With a new culture and new procedures in place, you can start to break down the silos from a data sharing perspective. Then you can begin implementing the technology tools after that.”

Changing the way things are done within an organization is not easy, especially if people or departments have been doing things the same way for a long time. It’s also not easy getting groups to give up some of the control they’re accustomed to having.

“We often see groups with fiefdoms to a degree,” Applegate says. “A group might feel that having control over data protects it in some way. You have to break down that mentality and bring them to the realization that sharing data and correlating data is actually more productive.”

Tearing down barriers in the effort to improve performance can also help agencies get the most value out of the data. “Organizations oftentimes have tons and tons of data, but they don’t necessarily know what to do with it,” McFate says.

“Data that might seem insignificant and expendable to the network team, for example, might be extremely significant to the cyber security team.”

As part of the new culture that agencies need to create, agency leaders should encourage a highly cooperative environment in which people are trained in how to communicate effectively across departments in a generative way where messengers are trusted, bridging is encouraged, and teams align with mission objectives.

“This is all about solving problems and getting better as a team,” Applegate says. “It’s not about you claiming a victory for your team and then blaming and pointing fingers at the other guys because their network has a problem, or their application is slow. It is about collectively working together to deliver on the mission.”

If done well, taking the necessary technology and process steps to improve network and application performance can provide a significant return on investment.

“For a large agency, the first two or three big outages that you avoid for a major application will typically more than pay for the cost of the solution you deploy to avoid the outages,” Applegate says. “What we often find is even greater value in getting different teams to work better together. It’s hard to put a dollar figure on a high-performance team but that’s what creates the momentum your organization needs to rapidly digitally transform.”

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