Federal agencies supporting the mission—more efficiently and at a reduced cost

Federal agencies are on the brink of digital transformation. At the beginning of the COVID-19 pandemic, agencies were forced to adjust to new technologies to succeed. As agencies worked to modernize rapidly, they needed to transition away from legacy single-function systems. With NFV, government agencies were able to pivot to a remote environment more quickly. Now that the nation has settled in to the new normal, various pieces of legislation like the Federal Information Technology Acquisition Reform Act (FITARA), and motivation from the Technology Modernization Fund (TMF), are helping agencies work quickly to migrate legacy systems and accelerate cloud adoption.

In agencies’ transformation journeys, NFV delivers virtual appliances without the operations headache. Services can be delivered in a matter of minutes instead of days or weeks. After implementing NFV, federal network operators can focus on their mission instead of worrying about troubleshooting, supporting, and managing large numbers of different physical devices. Virtualization scales down and offers virtual applications through networks or servers to reduce expenses and improve efficiency. Virtualization also allows agencies to simplify, and to reallocate large technology costs away from constantly having to replace legacy systems or hardware. So how can the federal government begin to adopt NFV to reduce costs and improve efficiency?

Ciena’s Virtualized Edge Solution

Agencies need reliable, scalable, and secure connectivity—and Ciena’s solution provides just that. With connectivity at the core of the strategy, virtualization becomes reliable, scalable, secure, and easy to deploy and maintain. Virtualization introduces the new technologies, processes, tools, and required skills agencies need to propel themselves into the future and continue to meet legislative requirements.

Ciena’s Virtualized Edge Solution offers a comprehensive and modular end-to-end solution composed of its leading packet products, intelligent automation software, and professional services capabilities. Together, these elements deliver carrier-class connectivity, multiple x86 server options, real-time analytics and automation, and the implementation know-how to support any virtualization strategy.²

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The benefits of moving to NFV include increased flexibility and lower costs, as well as reduced power, space, and cooling requirements, and fewer problems.

Powered by Blue Planet® Network Function Virtualization Orchestration (NFVO), the solution simplifies service fulfillment through intelligent automation. Key components include:

**Advanced packet platforms**

Leveraging Ciena’s 3906 and 3926 advanced packet platforms and D-NFVI software, the Virtualized Edge Solution delivers a highly scalable and reliable carrier-class infrastructure. It supports services up to 10 Gb/s, has multiple options for in-field replaceable x86 servers, and offers multi-vendor virtualized network function hosting capabilities. This solution is ideal for customers transitioning from a physical to a virtual network edge infrastructure.

**Intelligent automation software**

Blue Planet’s multi-vendor Virtual Edge Automation capabilities—leveraging NFVO and Multi-Domain Service Orchestration (MDSO), as well as Unified Assurance and Analytics (UAA)—enable customers to rapidly deliver high-value managed services like firewalls, routers, and other edge services. As part of Ciena’s Virtualized Edge Solution, these capabilities reduce the order-to-service interval to minutes, increase service revenues by up to 20 percent, and cut OPEX by up to 80 percent.

For service providers and enterprises seeking reliable, high-performance branch office connectivity, Blue Planet also offers an SD-WAN Automation Solution. This solution is proven to speed service activation by up to 75 percent and decrease related OPEX by up to 90 percent.³

The solution also includes Ciena’s microservice-based Manage, Control and Plan (MCP) domain controller to support and simplify multi-layer Ciena implementations.

**Systems Integration Service for the Virtualized Edge**

Complex network evolution requires highly specialized Systems Integration (SI) capabilities. Ciena’s SI Service provides deep expertise and experience, gained by enabling some of the world’s largest and most complex networks. We focus on service providers’ operational processes and network environments. With Ciena’s industry-leading hardware and software solutions, this service makes Ciena the ideal systems integration partner for your network evolution.

Virtualization is more than Virtualized Network Functions (VNFs). It is about automation, assurance, and lifecycle management. Ciena is a trusted, field-proven partner to support your agency’s unique virtualization journey. Virtualize your network today: [https://www.ciena.com/products/virtualized-edge-solution/](https://www.ciena.com/products/virtualized-edge-solution/)

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