



# Get past the FUD of virtualized, software-defined services.

Why savvy IT professionals are needed now more than ever.

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## Software-defined networking (SDN) and network functions virtualization (NFV) are changing the way applications and network services are deployed while delivering undeniable benefits.

There is a perception, however, that deploying these technologies changes how IT staff do their jobs – sometimes even eliminating functions previously performed by people. Fundamentally, virtualized services mean there are fewer physical devices to manage. Managed services automation replaces a myriad of manual processes, thus offloading work from network administrators, developers and other support professionals.

It's no wonder that there is fear, uncertainty and doubt (FUD) in many IT organizations. The good news is that if you're an IT professional, you're still very much in demand. But with virtualization, the role of IT is evolving. And to stay competitive, you'll need to re-position yourself to focus on the mission-critical initiatives that will have the biggest strategic value for your organization.

### The new normal

The benefits of virtualization, SDN and cloud services are clear. They control CapEx with less hardware to buy; simplify and speed up the ability to deploy, change or take down services; and bring massive scalability and flexibility. Services that incorporate these new innovations, like software-defined wide area networks (SD-WAN), can add great cost and operational efficiencies. Businesses ignore them at their peril. And if you don't use the latest solutions available, your competitors will. These solutions now enable you to rapidly deploy services and activate devices, branches and applications. Business objectives can be quickly turned into technology-based solutions.

The benefits are clear. Virtualization, SDN and the cloud can help you simplify, accelerate and scale your services easily. Ignoring them could mean falling behind.

You can move quickly to new network solutions using managed virtualized services. Do it strategically, where needed. Providers like Verizon have been working with companies of all sizes and types for years now and we know you're concerned about loss of control and the need to respond quickly to end user needs. So are we.

But with new tools come new ways of doing things. With a virtualized, programmable, cloud services environments provided as a managed service, high IT CapEx can be a thing of the past, replaced by clearly-defined monthly OpEx charges based on usage. No more need for over-capacity planning. End-to-end network software intelligence allows policies that include proactive network diagnostics that safeguard high performance and promote efficiencies. End user support is prioritized to make sure questions and issues are promptly handled.

### Case in point: SD-WAN

SD-WAN is an example of the type of digital transformation that is changing the roles of IT professionals.

Mobile, cloud, video, VoIP, presence, Internet of Things (IoT) and business applications are driving increasing enterprise bandwidth requirements. On the flip side, these applications are spotlighting the need for higher quality of service and strong security. They pose particular challenges to the WAN that connects mobile users and branch offices to headquarters.

To handle the load with high quality of service and security while managing their costs, many enterprise IT organizations are looking at SD-WAN as a solution.

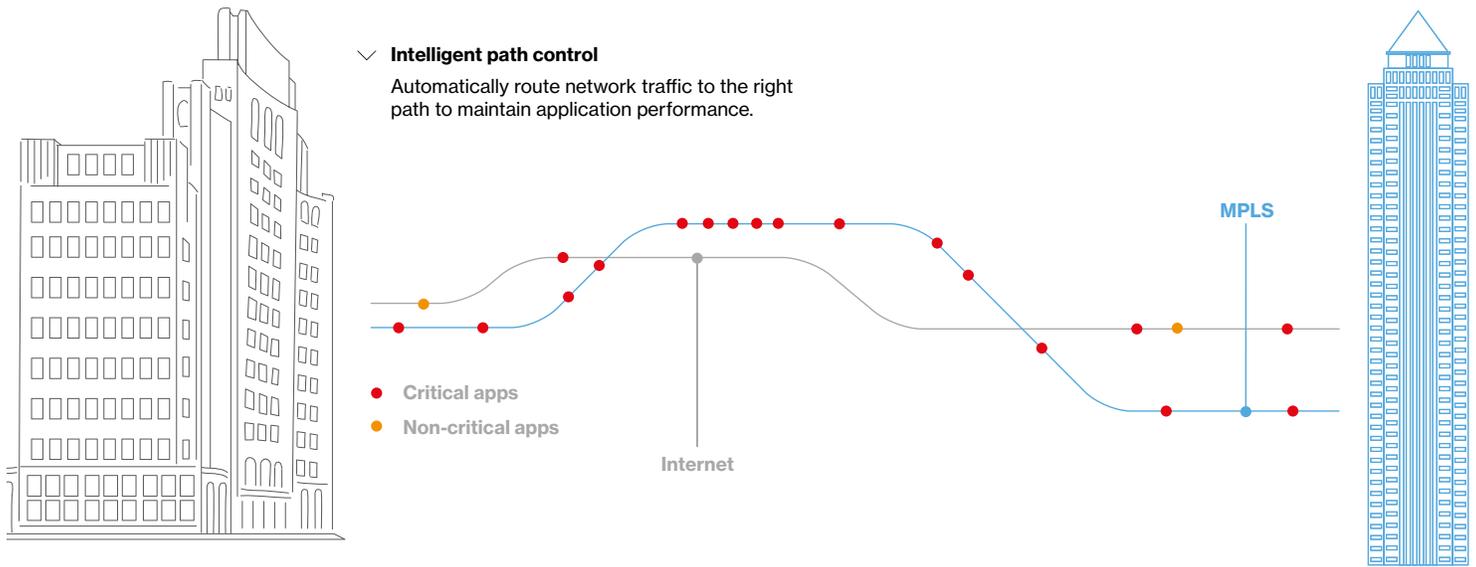
SD-WAN technology lets your company route mission-critical traffic (e.g., applications considered essential for customer interaction and commerce as well as employee productivity) on a policy-defined app by app basis through high-quality private WAN connections, while offloading non-critical traffic (such as guest Wi-Fi and video) to internet and broadband connections. It uses the SDN architecture, which separates the control plane from the data plane, to dynamically assign bandwidth and other resources as the demand changes.

Prioritize your network traffic with SD-WAN and keep essential applications running on-time. Push mission-critical requests through high-quality private connections, while moving non-critical traffic on to public ones.

Within SD-WAN, intelligent path control helps improve application performance by providing path selection based on measured network performance criteria such as delay, jitter, and packet loss. Critical network traffic takes the most efficient path and all traffic can be routed, failed over, and load-balanced across all available links while maintaining a consistent end user experience.

This technology enables companies to have flexible, highly secure, site-to-site connectivity through the use of an over-the-top network on the underlying infrastructure. It lets you use a combination of both MPLS private connections as well as internet and broadband connections in a single unified secure network.

That's SD-WAN in a nutshell, a terrific solution that frees you from the drudgery of routine network management. You no longer have to travel to remote branch offices to tweak network configurations manually. Adding bandwidth to those branch networks no longer requires programming and on-site hardware installations. Connecting multiple technologies is fast and simplified because you manage application performance instead of devices. And it's all done centrally through a simple portal GUI.



**From tactical to strategic**

Technologies like SD-WAN are among the drivers moving IT from the back office to the front office. In the era of digital transformation, IT is rapidly getting out of the business of just maintaining systems to freeing staff to focus on innovations and insights for customer service, sales, marketing and management.

Companies are increasingly looking to IT departments as innovation partners. Business units and departments within the company turn to you for the best solutions to provide creative solutions to their day-to-day operations issues. Hundreds of solution providers compete for your attention. Meanwhile, the people, applications, devices, data center infrastructure and vendors you are responsible for continue to grow in size and complexity.

With all of these dynamic changes, how should the smart IT professional respond?

**It's time to upskill**

Programming and development skills will still be needed, but Computerworld's Forecast 2017 survey of IT professionals found that both project management and technical support were among the top 10 most sought-after IT skills. The 2016 TEKsystems Annual IT Forecast found that the biggest IT salary increases went to programmers and developers with experience in security and cloud.

The technical skills, certifications and experience you'll need to contribute meaningfully to your IT organization will of course vary based on your position and organization.

Here are some emerging areas that we believe will be at the forefront of digitization.

- Application development
- Business intelligence and analytics; big data
- Cloud computing and software-as-a-service
- Mobile apps and device management
- Cybersecurity, compliance and governance
- Machine learning
- Project management
- User interface design

**Be an IT accelerator: embrace managed services**

Another aspect of the changing role of IT is the hyper-accelerated timeframes of modern business. The world is now accustomed to services on-demand. To respond, businesses must be savvy and strategic in how they use people and resources.

That's why IT departments are increasingly choosing managed services for a variety of network needs. Outsourcing network management and security, for example, lets your company focus IT development and support resources on bottom line projects that can directly generate revenue or increase efficiencies. The best managed services resources focus on proactive measures to further maintain smooth operations and pride themselves on being super responsive to end users.

**Get beyond the FUD**

Embrace the opportunities and benefits that are coming to IT careers with digitization. You have nothing to fear with new technologies like SDN and much to gain. IT has moved from being just a back office cost center to a strategic and indispensable resource.

Your role is now mission-critical within your company. With so many new ways to design and sell products, make decisions, serve customers, partner, support, measure, collaborate and train with the right skills you're going to be in increasingly high demand.

Verizon can help IT professionals better understand how technologies like SDN can result in positive outcomes for your company and your role within the organization.

**Visit us at [www.verizonenterprise.com](http://www.verizonenterprise.com) to find out more.**