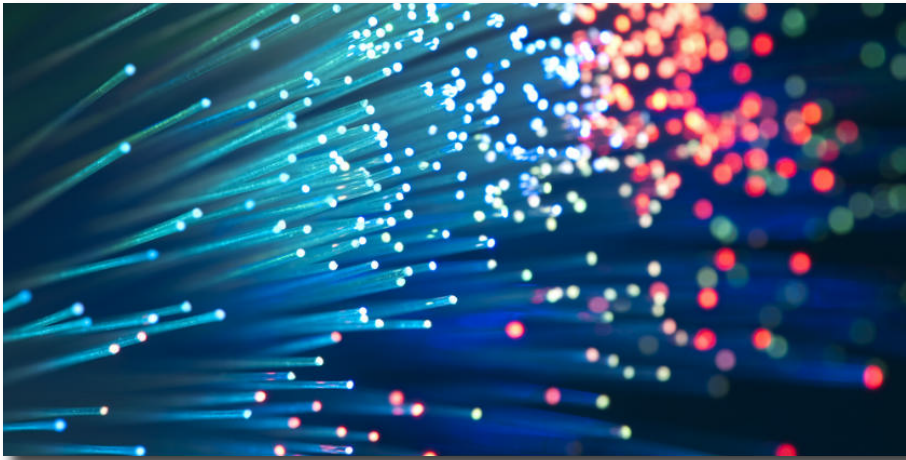


SDN Solutions Provide the Tools to Revolutionize the Enterprise

Written by Luke Stangel of Avaya



The recent buzz in the industry is astonishing. I would dare to argue that we have never before seen this level of activity and innovation around networking, not even during the heyday of the early 2000s. Not a day goes by without an SDN-related vendor announcement, a new startup entering the fray, or a new alliance being formed. Truly exciting times indeed!

However, amidst all this activity it is sometimes difficult to see the greater trend: SDN and related industry developments have initiated a far more fundamental shift. SDN and peripheral developments are

fundamentally altering the value network of the industry as value creation moves from traditional networking products to innovative, agile, software solutions.

As an extension, these technologies for the first time provide customers with the potential to provide application-controlled infrastructure agility across compute, storage, and network beyond the pure IT-centric automation solutions. This development finally enables enterprises and service providers alike to close the agility gap that has existed in most organizations, so that the business and the infrastructure can evolve in parallel.

Initial SDN offerings have focused largely on infrastructure automation and virtualized overlays to mitigate the lack of agility in the underlying, legacy network infrastructure. But in parallel, a new breed of SDN solutions is emerging that is providing far higher business value beyond the IT domain. These new solutions will enable innovators in various industries to definitively enhance their positions in the value network and the competitive landscape.

You might ask: What is the underlying issue driving these developments? Looking back over the past 20 years and the changes that have taken place in corporations globally since the emergence of IT and the Internet, it is obvious that value networks have been redrafted, as organizational structures have flattened and increasingly adopted matrix structures to deal with the needs to increase business agility.

In application development, where this change was mirrored, we have moved to agile development to cater for the need to quickly deal with uncertainty. Infrastructure virtualization has allowed us to keep up with the agility requirements in the data center.

However, the underlying networking infrastructure has remained complex and inflexible and has thus limited the deployment of more agile end-to-end solutions in many cases.

Life on the New Frontier: a Case Study

Emerging SDN applications and, to a lesser extent, selected SD-WAN solutions differ from traditional automation solutions in that they attempt to closely link business processes and supporting applications with the infrastructure, thus enabling the business to reconfigure on the fly as needed. They are the new frontier, beginning to enable even more innovation and efficiency, and will eventually deliver the real value of SDN in the enterprise.

SDN Solutions Provide the Tools to Revolutionize the Enterprise (cont.)

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To illustrate this, let me provide a sample use case:

Business Process Outsourcers (BPOs) are a subset of contact center operators that handle calls for a third-party organization—typically a high-volume, low-margin business where performance improvements can provide significant competitive advantages. BPOs operate the contact center voice infrastructure and access their clients' backend systems to provide services. In most cases, BPOs also span multiple geographies and languages, increasing complexity.

This means BPOs need to operate the contact center voice service infrastructure and applications, both of which are mature. Incumbent vendors are providing a range of innovative and mature systems and applications to manage these systems. These systems, in essence, mirror the BPO's business processes.

The other systems that BPOs operate are their multi-tenant data networks, which need manual and complex correlation to the need to securely segment customers in the data center, the WAN, and the campus. These networks are often so complex that a large, multi-site deployment of a new customer can take weeks or months to plan, schedule, and implement—adding significant cost, delaying revenue, reducing business agility and posing a risk to existing customers' SLAs.

An SDN application deployed in this environment that is able to translate the business process to the infrastructure and agent settings on the fly can reduce infrastructure cost, lower implementation cost, and shorten time-to-service to minutes, hence fundamentally altering the competitive landscape.

This is just one simple example of the power that SDN can offer in business environments to provide a true “game changer.” Other examples exist in just about any industry, from healthcare to industrial environments and from hospitality to media, to name just a few.

Time to Change the Game Plan

SDN applications that link business processes to all infrastructure components and enable businesses to alter the configuration of the business on the fly are real game changers and provide capabilities that have never been available in the full infrastructure stack to this extent, certainly not in networking.

However, successful reconfiguration of the enterprise and taking full advantage of SDN, requires a non-traditional approach to embedding IT into business processes. It also requires different skills and processes in the IT organization, with multi-domain knowledge and DevOps capabilities being key requirements. All this offers exciting new opportunities for IT staff willing to take the plunge.

Software-defined anything, as Gartner refers to it, is clearly still in its early stages—or, in Gartner's representation, in an early phase of the hype-cycle. However, SDN is having a significant impact today, and we are only just scratching the surface of what this technology can offer enterprises. Maximizing the business benefit of SDN will require different skills and novel approaches. SDN is not just the next IT initiative.

Consequently, organizations interested in SDN should be sure they make these initiatives broader business initiatives, and executives should be sure they understand the possibilities that these new technologies offer their businesses.