SDN AT THE SPEED OF BUSINESS

THE NEW AUTONOMOUS PARADIGM FOR SERVICE PROVIDERS

FAST-PATH TO INNOVATIVE, PROFITABLE SERVICES
Software Defined Networking (SDN) and Network Function Virtualization (NFV) are truly a revolution. Companies are looking to realize quantum leaps in their ability to leverage bandwidth globally on corporate campuses and over Telecom networks. The Enterprise market is coming to realize how deeply impactful the potential for SDN and NFV are. However, the path to this level of optimization has been largely unrealized until now due to some key limitations.

Current reports estimate the SDN market to be as much as $12 billion or more. Within the next five years, SDN is set to expand even further alongside developing technologies.
SDN is a business accelerator on many levels. It may be helpful to consider SDN to be a broad set of technology solutions that are programmable, policy-driven and automated, all working together to make organizations far more agile and efficient.

Interest in SDN is on the rise as more companies learn exactly what it can deliver. A 2016 TechPro Research survey cited by ZDNet looked at the attitudes among 203 respondents regarding SDN.

According to these results, 59 percent of the survey subjects said they were either “somewhat” or “very” familiar with what SDN is. While just 13 percent said their company had already implemented SDN solutions, 15 percent said they were planning to implement SDN within 12 months.
**SDN solutions radically reduce not only the cost of network bandwidth, but enable rapid deployment of software applications and realization of virtualized data center capabilities**

Bandwidth requirements are increasing at a blinding pace, as well. According to the Cisco Visual Networking Index, 2016 will see global IP traffic exceed the rate of 1 zettabyte per year, and reach double that by 2019. A Zettabyte is the equivalent of one billion terabytes or 1,000,000,000,000 gigabytes of data.

The source also said that 62 percent of internet traffic in 2019 will be driven by content delivery networks, as global fixed broadband speeds more than double the Mbps rate from 2014.
With the advent of SDN/NFV revolution, the industry is inevitably transforming toward a more innovative model paradigm:

- On-demand services definition & development.
- Real-time services provisioning.
- Integrated automation & data across service offerings.
- Instant monitoring, control, billing, & management.
- Independent of vendor & abstracted from provider.
- Glue/integration between legacy OSS/BSS, new SDN. NFV offerings, and telecom hardware infrastructure.

Here’s a brief look at what SDN is, what it’s poised to do and how your company can profit by planning for a smarter transformation.
### The Dream vs. the Reality: A Brief History of SDN

Because SDN and NFV are massive projects for Communications Services Providers, their time and energy has been correctly focused on planning, designing and implementing these capabilities at the network level. To date, the industry has been heavily “Southbound” focused and because the “Northbound” side is dependent upon the Southbound side being functional and available, it has been a bit of an afterthought.

As a result, Operators have been initially and primarily achieving the CapEx and OpEx savings benefits of SDN and NFV. It’s a logical and paradigm-shifting first step.
However, with the Southbound side becoming more solidified and standardized, it’s time to turn our attention to realizing the other specific benefits of these newly created capabilities. Doing this will capitalize beyond CapEx and OpEx savings on toward generating further streams of new revenue.

Originally, SDN was presented as a complete revolution paving the way for more innovation. Over the past four years, the reality of adopting SDN has started to sink in, with the need for clearly-defined ROI becoming more apparent.

The conversation needs to shift toward how a software-based environment will generate more revenue while still driving technology forward – driving monetization and productization for SDN products. After the initial peak in expectations, companies are likely to see a dip in results until they reach their desired productivity rates.
Realizing the Benefits of the SDN/NFV Revolution

- The industry has been heavily Southbound focused.
- The Northbound side is dependent upon the Southbound side being functional and available, but both require attention.
- Operators have been primarily concerned with CapEx & OpEx savings benefits of SDN/NFV.
- The Southbound side is becoming more solidified and standardized.
- A few industry leaders have realized the momentum derived from new services opportunities.
- Creation of new on-demand services for enterprise customers, require development across the Northbound and Southbound spectrum.
- Rapidly deploying new on-demand services is feasible with focus, commitment, and a specific development methodology.
- Product-led software engineering can be the catalyst to rapid innovation and value creation.

Smart Transformation into Northbound SDN/NFV Solution now provide Productization and monetization of those solutions to create new revenue streams, cut costs (increase ARPU) and increase over customer experience – giving Service Providers a competitive advantage in the market.
Enterprise Demand and Bandwidth on Demand

Expectations for internet speed are increasing, and businesses need to follow the same path that many consumer-facing services are. The new model will foster more agility within networks.

Once SDN has become more widespread, it will offer the following:

- Usage-based pricing: With this plan, carriers will be more adaptable to however much bandwidth a given user needs.
- Built-in security: SDN may pose security challenges, but it also allows for strategic security checks to be worked into the overall network architecture.
- Pay-as-you-grow: This pricing model lets users match their network architecture with the size of their current bandwidth needs.

Lifecycle Service Orchestration will also play a large role in how telecom companies approach network structure in the future.
This catchall term applies to the full breadth of what software can do within and integrated model. As with SDN, the expectations are great, but the possible rewards are even greater.

**Practical Deployment**

CloudSmartz understands the changes currently in motion and will help businesses get technological advances and real ROI from them. As we’ve said, the future will be driven by adaptability, and that’s a core part of what we offer.

Our solutions are scalable to meet enterprise demand, and our engineers are ready to address concerns for a variety of projects based on our existing experience as well as our proven framework.

These solutions are also platform-agnostic and open source. Even though we have our own models for developing SDN tools, we also customize our approach to provide the best long-lasting value.
The Future is Now:

- **Always Your Choice**: Bandwidth when you want it, not when you don’t.
- **Real-Time Pricing**: Costs are based on the duration and usage of bandwidth commitment, including the ability to increase/decrease bandwidth when required.
- **Flexible Terms**: Pay-as-you-use flexible terms, including hourly and auto-renew.
- **Self-Service Automation**: Links with specified bandwidth, latency and QoS can be established, changed and suspended at will either by human action through our portal or automated based on established network parameters or under the direct control of your software through our APIs.
- **Instant Execution**: Provision a network in minutes not weeks and months.
- **Always in Control**: Take control of your network and network costs - you can have the network at your fingertips.
How are you using SDN to create a fast-path to innovative, profitable services?

Bandwidth on Demand is a Great Start, and could lead to integrated On Demand Services across all SDN domains including SD-WAN, Network Function Marketplace, and a variety of other software defined network solutions.

Contact CloudSmartz today to discuss how our capabilities can help you kick-start your organization’s innovation and start optimize your network interface. We can get you to market within 4-6 months – paving the way with a smarter transformation to the future of the network.

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