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Insight for the Connected Enterprise

Avaya, FatPipe Forge Software-Defined Integration

FatPipe Networks – 19 Jul, 2016

With "software defined" stuff being around for well over five years now, one of the challenges that's arisen is that we've created a world of software-defined silos... we have the software-defined WAN (SD-WAN), the software-defined network (SDN), and the software-defined data center (SDDC), just to name a few. The problem is, businesses no longer live in a world of silos. Using cross-domain technologies, they've broken down the walls so that all infrastructure components work together to deliver services.

Take the cloud, for example. The cloud isn't just a data center thing or a WAN thing but rather a network-centric compute model. This means companies must consider the whole network when moving to cloud-first models. Having to manage separate SD-WAN and SDN environments can slow down a company's ability to make changes at cloud speeds, a problem that is in contradiction to one of the big value propositions of software-defined anything -- as "SDx" is supposed to mean speed and agility.

Together As One

This week Avaya and FatPipe Networks jointly announced a strategic partnership aimed at bringing these two worlds together. The two vendors will combine expertise to deliver a single, integrated, validated solution that is both a data-center focused SDN and an SD-WAN.

The handful of businesses I've talked to that have tried putting SDN and SD-WAN environments together have needed to do so primarily with human middleware. In other words, the network managers wind up being the integration point between these two worlds. The Avaya-FatPipe integrated solution will take all of the manual labor, tweaking of the network, and tuning out of the deployment.

This solution has strong potential given the partners' solid technologies. FatPipe, founded in 1989, began offering SD-WAN solutions long before the term became part of our vernacular. Back when I was a network engineer in the '90s, I actually deployed FatPipe network gear to make real-time applications, such as VoIP and thin-client computing, work better over Internet VPNs by aggregating ISP links and creating a single "fat pipe" out of a number of smaller connections. Since then, FatPipe has continued to evolve this line, adding features such as zero-touch provisioning and automation and bringing it in line with the modern definition of SD-WAN.

Avaya's SDN Fx is a standards-based SDN solution based on OpenStack cloud computing software, the OpenDaylight SDN platform, and Shortest Path Bridging. SDN Fx works by shifting the intelligence to the network edge and making the core transparent to the network traffic. This creates a network in which any packet is always a single hop away from any other point, thus significantly reducing latency and speeding up transport. While SDN Fx doesn't have the same kind of brand-name recognition as some of the other products in the space, Avaya told me it has 675 customers and more than 12,500 nodes in service, far more than almost every vendor not named Cisco or VMware.

End-to-End Story

The combined solution is geared at delivering SDN-level agility across the entire network, with FatPipe extending Avaya's SDN solution across the WAN to create a seamless, single network. SDN Fx does an excellent job of interconnecting data centers and other large dispersed locations, and is particularly good at knowing when the performance of applications like VoIP and video degrades. Now when this happens, the integrated solution will automatically provision and re-route traffic around the degraded connection, improving uptime as well as bettering the overall experience.

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T generally lives by the rule of thumb that says if the solution is more complicated than the problem, then don't do it. Software-defined products can be much more complicated than legacy network gear, but do offer a much higher level of agility and control. The joint Avaya-FatPipe solution not only makes the network more dynamic and flexible but also simplifies the deployment through technical integration. This should ensure that apps operating in hybrid environments perform optimally.

Moving forward, I would expect to see more of the SDN and SD- pure-plays partnering to meet the needs of the end-to-end network.