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Brocade CMO

Brocade Chief Marketing Officer John McHugh shares his views on Convergence 2.0 and the lessons learned from previous convergence efforts.

Q&A: The Realities behind Network Convergence 2.0

What do you mean by the term “Convergence 2.0?”

“Anyone who has been around the industry as long as I have still remembers the voice, video, and data convergence movement from about 10 years ago. I consider that Convergence 1.0.

And I often wonder whether anyone has really considered what we learned from that movement in regard to what’s happening today with the convergence of storage and data networks, or what I like to call Convergence 2.0.”

How does that correspond to what you’re seeing today?

“If you recall, in 1998, we were told that if you didn’t have voice over IP, or VoIP, in your network, you were going to be left behind. Despite all the hype and warnings, most companies didn’t actually transition to the new technology until they had a compelling business reason to do so.

Many of the companies that embraced the first generation of VoIP products were disappointed, because those products were typically developed by vendors unfamiliar with enterprise voice deployment. They lacked basic functionality and weren’t really ‘voice-grade’ solutions.

If you fast forward to today, vendors that are novices in the data center are now saying that you can simply stitch together your storage network with your data center IP network. Unfortunately, their solutions lack basic functionality and don’t include the resiliency that well-designed storage solutions must provide.

Look at some of the first-generation solutions being proposed for network convergence today. Do they provide a choice of configurations? Do they support multivendor environments? Do they support resilient line-rate, non-blocking, multipath architectures? Do they integrate natively with your existing infrastructure?

Some vendors would have you believe that uniting these storage and data networks is a relatively trivial process. But I think we need to challenge that assertion.”

What's the best strategy for Convergence 2.0?

"There are two fundamental strategies for designing information architectures. You should understand both and consider the differences before you deploy any products.

One strategy is to pick a subset of components and *vertically* integrate the pieces. This approach is typically closed, proprietary, and often sourced from a single vendor or a single set of vendors. The argument for this approach is that the only way to conquer complexity is to integrate everything in advance. This strategy is typical for first-generation products and stems from the era of mainframes 35 years ago. It's essentially simplification through limitation.

The other approach is to *horizontally* integrate best-in-class components using open interfaces and industry standards. In this approach, you solve complexity by utilizing validated solutions developed by an ecosystem of technology leaders. This is the approach Brocade® takes. It's about simplification through innovation."

Does the horizontal approach always prevail?

"If you go back to the early days of computing, vertically integrated systems have eventually failed or at best been reduced to niche status. It might take a long time and they might shrink slowly, but eventually they cannot keep up with the pace of innovation of horizontal solutions.

On the other hand, horizontal solutions stimulate open market competition and they embrace standard interfaces and multivendor interoperability. A wide range of alternatives are available, and innovation happens freely and rapidly. As a result, vertical solutions quickly become dinosaurs."

Don't horizontal systems have limitations too?

"Of course, it's impractical to believe that some random combination of components and software will actually work. In reality, there's a happy medium.

The industry has adopted some relatively well-defined interface points and standards that enable multivendor solutions. But to truly make the systems operate seamlessly, we have to go well beyond those standard interfaces with cooperative development. Brocade has been doing this for over a decade, and it's one of

the key traits separating us from vendors who don't have those strategic partner relationships."

What advice would you give to someone who is thinking about network convergence?

"First of all, talk to a data center networking expert, someone from a company that has been developing data center solutions for years, not months. You don't want to be a proof-of-concept project for some vendor's first-generation attempt at a converged data center.

The vendors you work with should value simplified operations, maximum choice, and open, best-in-class solutions. They should have a clearly defined vision of how to implement convergence when and where it makes business sense. And they should be able to demonstrate tangible ROI.

At a minimum, any convergence solution should reduce complexity, maintain the utmost level of uptime and data integrity, and allow you to continue using your existing equipment."

What unique value does Brocade bring to Convergence 2.0?

"As a networking leader with years of data center expertise, Brocade understands the power and potential of convergence to integrate and simplify your infrastructure. We are leaders in data center bridging, FCoE, 8 Gbps Fibre Channel, 10 and 100 Gigabit Ethernet switching, and converged network adapters.

In addition, we offer a complete family of LAN switching, routing, and application delivery solutions for enterprises and service providers. We understand the full range of networking requirements.

However, we believe that data center convergence is merely a stepping stone that allows you to embrace truly distributed cloud computing. Brocade is unique in the industry because we recognize that, if you want to virtualize your information and applications into the cloud, the real challenge is maintaining the reliability and performance standards of your storage network throughout your *entire* network.

We don't shy away from the issues of data center convergence, but we have a realistic respect for the complexity of the problem. Most importantly, we're embracing this movement wherever and whenever it can deliver real value to our customers."

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