INTERVIEW | Dell predicts 2018 as year of open networking, digital transformation, merchant silicon
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Interview conducted by Alan Zeichick
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We've heard about what to expect in 2018: Digital transformation, IT transformation, and cloud computing, and a shift in how enterprises will acquire products and services from the industry.

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Tom Burns, SVP of Dell EMC Networking, doesn't want 2018 to be like 2017. Frankly, none of us in tech want to hit the "repeat" button either. And we won't, not with increased adoption of blockchain, machine learning/deep learning, security-as-a-service, software-defined everything, and critical enterprise traffic over the public Internet.

Of course, not all possible trends are positive ones. Everyone should prepare for more ransomware, more dangerous data breaches, newly discovered flaws in microprocessors and operating systems, lawsuits over GDPR, and political attacks on Net Neutrality. Yet, as the tech industry embraces 5G wireless and practical applications of the Internet of Things, let's be optimistic, and hope that innovation outweighs the downsides of fast-moving technology.

Here, Dell has become a major force in networking across the globe. The company's platform, known as Dell EMC Open Networking, includes a portfolio of data center switches and software, as well as solutions for campus and branch networks. Plus, Dell offers end-to-end services for digital transformation, training, and multivendor environment support.

Burns heads up Dell's networking business – which became even larger in September 2106, which Dell closed on its US$67 billion acquisition of EMC Corp. Before joining Dell in 2012, Burns was a senior executive at Alcatel-Lucent for many years.

This interview was conducted in Silicon Valley.

Q: What's the biggest tech trend from 2017 that you see continuing into 2018?

Tom Burns (TB): The trend that I think that will continue into 2018 and even beyond is around digital transformation. And I recognize that everyone may have a different definition of what that means, but what we at Dell Technologies believe it means is that the number of connected devices exploding, whether it be cell phones or RFIDs or intelligent type of devices that are looking at our factories and so forth.

And all of this information needs to be collected and analyzed, with what some call artificial intelligence. Some of it needs to be aggregated at the edge. Some of it's going to be brought back

to the core data centers. This is what we infer to as IT transformation, to enable workforce transformation and other capabilities to deliver the applications, the information, the video, the voice communications, in real time to the users and give them the intelligence from the information that's being gathered to make real-time decisions or whatever they need the information for.

Q: What do you see as being the tech trend from 2017 that you hope *won't* continue into 2018?

TB: The trend that won't continue into 2018 is the old buying habits around previous-generation technology. CIOs and CEOs, whether in enterprises or in service providers, are going to have to think of a new way to deliver their services and applications on a real-time basis, and the traditional architectures that have driven our data centers over the years just is not going to work anymore. It's not scalable. It's not flexible. It doesn't drive out the costs that are necessary in order to enable those new applications.

So one of the things that I think is going to stop in 2018 is the old way of thinking – proprietary applications, proprietary full stacks. I think disaggregation, open, is going to be adopted much, much faster.

Q: If you could name one thing that will predict how the tech industry will do business next year, what do you think it will be?

TB: Well, I think one of the major changes, and we've started to see it already, and in fact, Dell Technologies announced it about a year ago, is how is our technology being consumed? We've been, let's face it, box sellers or even solution providers that look at it from a CapEx standpoint. We go in, talk to our customers, we help them enable a new application as a service, and we kind of walk away. We sell them the product, and then obviously we support the product.

More and more, I think the customers and the consumers are looking for different ways to consume that technology, so we've started things like consumption models like pay as you grow, pay as you turn on, consumption models that allows us to basically ignite new services on demand. We have some several customers that are doing this, particularly around the service provider area. So I think one way tech companies are going to change on how they deliver is this whole thing around pay as a service, consumption models and a new way to really provide the technology capabilities to our customers and then how do they enable them.

Q: If you could predict one thing that will change how enterprise customers do business next year…?

TB: One that we see as a huge, tremendous impact on how customers are going to operate is SD-WAN. The traditional way of connecting branches and office buildings and providing services to those particular branches is going to change. If you look at the traditional router, a proprietary architecture, dedicated lines, SD-WAN is offering a much lower cost but same level of service opportunity for customers to have that data center interconnectivity or branch connectivity,

providing some of the services, maybe a full even office in the box, but security services, segmentation services, at a much lower cost basis. So I think that one of the major changes for enterprises next year and service providers is going to be this whole concept and idea with real technology behind it around Software-Defined WAN.

Q: So let's talk about cloud and service providers. What will happen in 2018 to change how they do business?

TB: One of the things that could impact the cloud and service providers, and by the way, I don't hope it happens, is a cyber-attack, a security threat that actually changes the game on how they provision and offer their services. There's been activity this year obviously in mostly enterprise-type customers, and actually a few outages here and there really related to human fault and error associated with getting companies disconnected from their services and applications that they negotiated. But I think one potential threat and that really would change the game on how they operate, is if there's a security threat at some time that not only takes down the applications and services and connectivity but then obviously gives that threat of what do they have access to, what are they going to do with it, et cetera?

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So I think one of the challenging things for the service provider market and the cloud operators is to see how they proactively address this. I'm sure they're doing it, but I think that that's one thing that if it were to occur, it would definitely change the game.

Q: We've been talking about trends for disruption. What do you think are some of the companies that might be doing the disrupting? Can you name three of them?

TB: Well, for sure, I'm going to have to start with Dell Technologies. If you look at our approach around open, disaggregated, being the essential infrastructure company to help companies go towards the digital transformation, we believe we're leading a charge, and I'll try to give a couple of examples. We talked about SD-WAN, the VMware acquisition of VeloCloud and Dell EMC helping provide the infrastructure that's going to sit on, and the capabilities that VMware can offer to its customers associated with services at the branch, just very exciting, opportunistic type of technologies that is going to disrupt the market quite a bit from a traditional standpoint.

Another area is the advancement of merchant silicon with companies such as Barefoot and Innovium. Obviously, you've got great product capabilities from Broadcom and traditional leaders, but the whole subject around programmability and telemetry and intent-based networking, this is really being driven by a lot of these start-ups and some of the traditional players, but we like what we see from some of the start-ups, and who would have thought that there would have been new merchant silicon companies out there a few years ago? But some great technologies there.

And then I think from the third one, it will be interesting to see if a service provider actually surprises us, whether it's a complete implementation for 5G, whether it's how they deploy 5G, whether it's how they enable IoT. We are working with a lot of telecommunication providers

today that are really in the forefront of advancing this new level of technology to deliver the digital transformation, and they're moving very quickly, and coming from my previous background in the telecommunications world, you generally didn't see telco players making these types of advances very quickly and living a little bit on the risk but also understanding the benefit.

So I couldn't really name a company, but I think that we could be surprised that some of this disruption's actually driven by some of these larger telecommunication providers that have traditionally been very conservative.

Q: So what's the best thing you think could happen in technology in 2018?

TB: The best thing that could happen in 2018 in technology is really the full adoption, full appreciation and acceptance on how the technology is changing around open, disaggregated and really the end-to-end provisioning from core all the way to edge is an opportunity for disruption, but providing scalability, performance, connectivity at a much lower cost. And so I think that this could be something very exciting in the coming year, and I believe and hope that most enterprises and service providers look to adopt these new technologies and embrace the digital transformation, because I think if they don't, there's going to be real challenges in order to continue to remain competitive.

Q: Tom, I hate to ask it, but what do you think's the worst thing that could happen in technology in 2018?

TB: The worst thing that could happen in tech in 2018 is the old status quo. It works today, fine, let's keep it that way, but that doesn't really embrace what's happening around technology and digital transformation. Status quo slows companies down. It limits competitiveness. It's actually not engaging with the workforce transformation that's occurring, and I think that there's a level of technology, there's a level of new innovation, that can really provide companies and service providers a way to enable these services their applications, their workflows, in a much more cost-effective, open, agile infrastructure. Ultimately, our customers want to talk about outcomes, how are they benefiting their customers, their employees, their partners? What are the applications needed to enable them? They don't want to think about infrastructure, and I think the bad thing that could happen is we continue to lie in the past, rather than embracing the future.

Q: And finally, let me ask one disruptive question just of you. What do you think will be a surprising prediction for 2018?

TB: A surprising prediction I'd like to make for next year, which is a little bit on the edge, is that traditional networking is going to go bye-bye. I think the adoption of white-box switching, the adoption of disaggregated switching between hardware and software and even the advancement of disaggregating networking operating software is going to accelerate at a much faster pace, and I believe traditional networking is going to start to decline significantly.

And we'll begin to see some of the traditional networking players, such as Cisco or Arista or even others, starting to align with a Dell EMC Technologies approach to networking – open, disaggregated, disaggregated even at a NOS level, which provides much more flexibility, much more scalability, much more consistency between server storage and networking. So I think the old way of selling networking is going to go out the door, and the new innovative approach to open networking's going to happen.

We've already seen it a bit with some of our competitors announcing that their software can now run on white-box solutions, and I think we're going to see more and more in that. In fact, my prediction is you're going to see it even from the number one – well, the supposed number one in switching today.