

NETEVENTS

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Final

### *Partnering for Success with OpenStack and Open Networking: Dell and ST Telemedia Connect*

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Hey. So my name is Jonathan Seckler, I lead the Product Marketing Team for Dell Networking. I'm headquartered in Austin, Texas.

I wanted to start this conversation off with a tweet that I read on Monday. And it was really interesting, it was a tweet from Josh O'Brien. He's one of these networking pundits that you see and a blogger whose column I read occasionally. And what he said is, "isn't it amazing that we all talk about the future of networking, but the future of networking is not being built in the vendors' labs it's being built by the customers and the people actually deploying networking"

And I think that's a really telling message for today and for open networking, because that really is the goal and the intent of open networking with Dell.

So I wanted to start and spend maybe five minutes just talk about what it is about open networking that Dell is about and how that fits in to this idea of innovation and the future of networking, before I introduce David to come up on stage and talk about what he's doing.

Open networking is the idea that a switch at the end of the day really is nothing more than a server, if you think about it. Right? They're all -- all these network devices out there, they're all running on industry standard CPUs, you know, from Intel or ARM or someone like that. Their chipsets more and more often are coming from the mass

market, for a lot of us. And then on top of that, the operating systems that run on the switches tend to be something like Linux or something similar to that.

And so if you think about it, the tradition or the idea of a network is becoming much more similar, much more open, much more like, you know, the way the datacentre has moved from mainframes to industry standard servers, to virtualized environments. And that is the goal of open networking, is this idea that you can treat the switch, that the transition of networking is at the point where you can treat your network the same way you would treat the rest of your datacentre. And that's what we're here to talk a little bit about today.

Dell's idea or platform for being able to enable this can be broken down into three flavors. We look at it in terms of disaggregation. The first idea of disaggregation is separating the hardware from the software. We provide and we're the first major OEM or vendor out there to provide a platform of switching that supports a host of different operating systems for networking..

We support companies like Cumulus Linux, which is a Linux operating system. We support companies like Pluribus Networks. And what we're going to talk a little bit about today is another partner of ours, Big Switch Networks, which is a key SDN vendor in the network out there today, in the industry.

The other thing we -- the way we look at disaggregation is the disaggregation of physical and virtual. In virtualized environments, the networking part or the virtual part of the network has become more and more complex, more and more like the real network, with firewalls and routing and switching and all these capabilities inside the network. And so there's this idea that you've got to abstract that network from the physical portion so that, if one thing happens to the physical, your virtualized environment is not affected.

I think VMware is a big key proponent of something like this. And you see this at VMware, you see it in OpenStack and some other areas.

And then finally, I think the goal from an open networking standpoint is to get to this software-defined network where you've separated the control of the network on a per-device basis all the way to a centrally managed and orchestrated environment that's most commonly referred to when we talk about SDN.

And so from a platform standpoint, that's Dell's vision of how the network should be built. And the beauty of it is, and so what it does is it delivers a platform to our customers and delivers a platform to the industry that can be innovated on and where you can have the flexibility and choice to do the things that you need to do for your unique environments as a service provider or for your customer base. And that's what we're going to talk about with STT Connect today, is how they have innovated on top of an open networking platform to deliver the services and things that they have.

One of the things that also we've announced recently this year is our next generation of operating systems at Dell. And this is interesting too, because what we've done at this stage is not only disaggregated the hardware and the software, but we've actually disaggregated the software inside the system and separated the base OS from the

actual applications and services that run on it, again giving customers and giving third parties this opportunity to innovate, to integrate and to make changes to their network in a way that's open and flexible.

And we call our next-generation operating system OS10. We announced it in January. soon after we announced it in January, we had a further announcement where we released the base layer of the operating system, the open base, in partnership with Microsoft to the OCP project as an open source project, which has now become known as Sonic.

So in the open source world, we have a Dell operating system, Linux-based, called Sonic, that's integrated with technology from Microsoft, Mellanox and others. And then from Dell, we have that same base operating system available that we're in the process of converging all of our existing legacy operating systems from Dell to that model, so that we can simplify and deliver a great user experience.

Now I want to talk a little bit about how those solutions work. Last month at OpenStack Summit, Verizon announced the world's largest NFV deployment. And it was based on the platform that you see here, a platform based on open networking with Dell, Red Hat Linux, OpenStack, and Big Switch Networks which provided the cloud services and cloud fabric for their deployment. And they demonstrated this and released this information across five of their datacentres in the US.

And it's unique and interesting because, not only is it the largest NFV deployment announced worldwide, but it's also one based on open networking ideas and open source and OpenStack.

[Redacted at the request of the participant]