Virtualized Unified Communications

Recorded May 31, 2013
Discussion Transcript*

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Patte Johnson: Welcome to another Webtorials® discussion on virtualized unified communications.

I would like to introduce our participants. Steve Taylor is Webtorials® founder and publisher. He has been an analyst and author for almost 30 years and helped develop the concept of web-based training more than 15 years ago. Prior to that, he has real-world experience as a networking engineer with the University of North Carolina. And he will be speaking with Tac Berry, Senior Product Marketing Manager with Avaya. He has been involved with voice and data communications in both marketing and business development roles for more than 30 years. He holds a bachelor's degree in electrical engineering and a master's degree in electrical engineering from Ohio State University.

With that, I'll turn it over to you, Steve.

Steven Taylor: Thanks so much, Patte, and thanks to all of our audience for joining us, and particularly thanks to Tac. I've known and worked with Tac for over 20 years now, back to the days we would have lively discussions about Frame Relay versus SMDS, when I was writing for a magazine called *Networking Management*. And even to put it into more perspective, now that we all have at least a hundred megabit per second communications hither and yon, I first met Tac when he was working for a company that did T3 TDM- type multiplexers. So, we go back quite a ways and it's also a very appropriate person for this topic and for this conversation, since like most of our

community members, we both have a background in communications that's evolving into the entire IT infrastructure. So thanks so much for joining us and welcome, Tac.

Tac Berry: Steve, thank you very much. Let me take a breath thinking about all those years we've known each other. That's quite a start, but yes, you're right, things have changed and we're changing with it, and coming up with some new ideas, so I look forward to our discussion today.

Steven Taylor: And thanks so much to you, Tac, for joining us today. For this discussion on virtualizing unified communications, I figured we needed some kind of a structure for it and couldn't think of anything better than the five "W's" of any good story: "What," "Why," "Where," "When," and "Who."

Let's start with the "What." Tac, over the past 20 years we've seen virtualization happening on a lot of fronts -- so, it's not exactly something new. We had virtual circuits in communications for decades, and of course, in many ways, virtual machines go all the way back to the 80's and VM, meaning virtual machine running on IBM mainframes. The major emphasis there has always been to optimize the use of resources in some way. Can you give us a quick update on the "What" question of "What is virtualization today?" and what it might mean to us?

Tac Berry: Sure. I think that you are absolutely right. Virtualization -- virtual machines -- have been around for a while. The concept is not new. What has been updated over the last several years is the infrastructure that we are using to virtualize. So, as servers gain more capabilities, as servers get more processors, as processors get faster, they get more core processors, it's a faster interface to resources to memory to storage. As those technology improvements happen, then the idea of virtualizing that server has become more and more useful.

Of course, you know, VMware, Citrix, and Microsoft have been in this business for multiple years -- VMware since the late 90's. And the key has been that they noticed the concept where processors don't use all of the time that you give them. So to run most applications, there's a lot of down time in any processor in any computer that's running. Even your desktop computer has, theoretically, the capability to run more than one application at the same time by interspersing the instructions, by interspersing the code.

They took this concept, though, to a much higher level when they said, "Well, let's start to virtualize servers," with the idea that any server can now act as multiple servers virtually. And that's exactly what we're talking about. Now, traditionally this has been started in the data business, and in the data capability, the data centers, in desktop applications, those types of applications which probably don't have as much real-time requirement. They were more easily virtualized in terms of being able to run multiple applications in parallel.

What we're going to talk a little more about today, and where Avaya has moved into this industry, is the fact that to do real-time type applications you have to have immediate response, you can't have delay, you can't have changes in the packet structure, if you will, as you're talking, because people notice that. So to be able to do real-time communications in the same sort of virtual infrastructure has not been as easy.

What has happened in the last few years is again, as servers have gotten better, as the hypervisor, as the VMware or Citrix software has gotten better, they are able to handle these shorter delays and these quicker responses. So they are able to handle real time. So, we really see this as a natural step in terms of where virtualization was, where it is today, and the next natural step is to start to add other types of applications such as communications -- unified communications, and real-time activities.

Steven Taylor: Okay, great. And so, of course, one of challenges that we've been looking at over the past 20 or so years is what has often been called convergence. Started off, of course, at many times with convergence just being voice and data convergence, but also, the convergence now of IT and communications. And so, that's kind of been the last holdout in terms of this has been on the telephony side, with data having become integrated a lot more quickly. So, I guess this kind of leads to the "Why" part of the question. How do you see this continuing to evolve, in particular concerning the unified communications and telephony?

Tac Berry: Well, I think convergence is a very good term. I think it is exactly the area that we're spending our time on right now. Once we've added applications to a virtual environment and virtual architecture, the next step is for the customer to understand how to implement these applications and this new infrastructure in this new architecture into their existing data center, into their existing network. And, of course, with a lot of customers this is now the combination of what is the IT department's responsibility and the communication department's responsibility. And you are absolutely right, these two groups now are starting to look at, "Well, I need resources to run conferencing," and the IT department is saying, "Well, I'm using those resources for doing some database manipulation."

So, how do they combine that? How do they get to one goal? How do they get the benefits of virtualization -- the benefits which include reducing of hardware, reducing of rack space, footprint, reduction of energy consumption? How do they get those benefits as they're adding these other new applications? We really see that the companies that are most aggressive in this area, that are seeing the biggest benefits the quickest, are the ones who are able to really combine this IT mentality with the communications mentality -- who really see the benefits of unified communications in a virtual environment -- is a move ahead for both sides. And that's a real positive as we see those companies move in that direction.

Steven Taylor:	Super, Tac. Thanks for that, but I have one particular question that I'd like to ask of you, because Avaya has, in many ways, for years had a strength of being a company that deals with telephony. And with all due respect to our telephony counterparts, the traditional telephony-oriented folks have sometimes been the last to come along in terms of new technology. Does Avaya bring something special to that particular group as compared to some of the other folks?
Tac Berry:	I don't know that I would call it "special," Steve, but I certainly think that Avaya has put a lot of effort and a lot of resources into developing this phase of where they see the technology moving. We've actually been doing virtualization at some level since the end of the 90's. We've tested Xen, we've tested VMware earlier. So, we actually have put a lot of effort into making sure we saw where virtualization would fit, where it could work or couldn't work in the early stages, and made sure that we kept up with that. We have a mid-sized product today, for example, called Avaya Aura$^{®}$ Solution for Mid-Sized Enterprise that is a virtualized, single server that actually runs eight applications on Xen. And that's been out for several years now.
	So, we've seen this as a growing pattern. We've seen it as a growing requirement, and we think within Avaya we have the resources and we have the technology capabilities that allow us to take the best of that world, if you will, virtualization, and move it into exactly what you said. Our expertise is as a telephony provider -- our expertise as a unified communications provider. So, we see that not as a stumbling block. We see that as a positive for our company in terms of we have that capability to do that.
	Now, at the same time, we have a great partnership with VMware right now. They have been very helpful. They've been working with us all along in terms of us releasing our new products and getting them approved. We see that as important as the industry goes forward, as well as you need this combination of companies -- of technologies -- to work together, and that again is something that we've worked real hard on and we see that as nothing but positive in terms of what the future for communications is going to be.
Steven Taylor:	Okay, excellent. Thanks for that insight. You know, I said we're going to start off with the five "W's," but a lot of times there's also a sixth "W" that's at least at the end of the word, and that's "How." So, how are we going to do this? And how is this all going to work? How comfortable are you that this really works? Earlier you mentioned real-time and non-real-time applications having really different needs, because you can't afford to wait for a few milliseconds or even a couple of seconds that might not be noticed in a data application. So, are you comfortable that a virtual environment can really meet these needs, and how do you ensure this?
Tac Berry:	Well, as you and I learned a long time ago, Steve, confidence is based on doing good work and getting the testing and getting the evaluation done correctly, and I think that's, again, a strong point from Avaya. We have tested

our virtualized applications at the same level, the same capability, the same testing process, that we test our dedicated server solutions.

Let me make a quick point on this, if you don't mind.

Avaya still continues to offer an appliance model, a dedicated server model. As you understand, as you know, way back when there were PBX's which were little boxes that did all the phone communications, and that's moved to the fact that what it is now is software-based that runs on some sort of architecture of servers -- whether it's servers that the communication vendor supplies like Avaya has done traditionally, or whether it's servers that the customer provides which is what happens when you virtualize. But either way, it's a group of servers running software.

Well, we still offer the dedicated server solution, and we still have some very good customers of ours who want to use that. And that's fine. We think that's very positive.

At the same time, we have other customers who are very strong in virtualization, very strong with VMware, who say, "Hey, I like this opportunity to move these applications to my own infrastructure that I control, that I provision, that I monitor, that I have the trained staff to support." And that's fine, too.

So, our point was we're going to offer both solutions. And we're going to make the solution flexible enough to meet the needs of whatever our customer wants. But to do that, we have to guarantee to that customer that it's going to work at the same level. So, we've done extensive testing, extensive evaluation. Our initial releases of our virtualized applications, which came out late last year, are at the same level, same scale, same number of users, as our dedicated server versions.

We feel very confident that with the level of VMware, the level of the hypervisor, the level of the virtualization technology, combined with the level of our expertise and our capabilities in what we've learned about virtualization and moving our applications to that context. We feel very confident that we're able to meet our customers' requirements.

Steven Taylor: Okay, excellent. And in talking about this ability to have various types of servers, everywhere et cetera, let's move a little bit to a discussion of hybrid environments. And in this case, I think we can actually combine two of the "W's," the "Where" and "When" in terms of both the topography of the services, and also how quickly or flexibly somebody can move from one to the other. Because, of course, one of the biggest advantages to virtualization is the ability to use servers in the data center, which we might call our private cloud, or truly cloud-based servers, or a hybrid of these. And, how does Avaya approach this decision, and what do you see as some of the options there?

Tac Berry: Well, certainly it's an interesting discussion, isn't it, Steve, as we start to talk about things like virtual and clouds. It's an interesting move that we've made in terms of where communications has come in today's world. But, certainly the cloud solution -- what I like to call the hosted solution -- has become very, very important to the industry in general. We don't necessarily see a lot of our large customers move in that direction yet, but we certainly think that they might. Certainly, small businesses, small/medium-sized businesses, see that as a great opportunity.

One of the interesting responses we've gotten from virtualizing our unified communications applications is that we see service providers and companies that want to start to host UC, looking at this as a great opportunity for them to start adding UC into their architecture with less servers, less hardware, again less rack space if you will, less energy, and allow them to handle more customers on a managed hosted basis.

So, we actually see virtualization of these applications helping move UC to a hosted architecture, because they see this as an advantage where they no longer have to continue to buy servers per customer, they can use servers for multiple customers. And, of course, that gives them a great return on their investment and a great scaling capability in terms of what they're going to have to charge for their services.

We actually see virtualization as helping that process. And we've gotten very positive response from service providers, and even business partners who when they look at doing that as an opportunity, that they see virtualization of UC as a great step toward … in that direction.

Steven Taylor: That's great, Tac. You mentioned earlier that you still also offered dedicated appliances. I'm assuming that there's full operability between the dedicated appliances and the virtualized services, or running the server as an appliance. Is that pretty much true? Could you elaborate on that just a little?

Tac Berry: Yes, absolutely true. In terms of … again one of the keys was we wanted to make sure that a virtualization of Avaya Aura®, which is what we call our platform applications, is consistent with our dedicated appliance version. So absolutely -- we have customers today who may have a server version installed and running and are happy with it, but are ready to expand, ready to add more features. Well, they can add the features virtually. You can take virtualized applications and add them to an existing dedicated server solution.

The Avaya Aura® applications are Avaya Aura® quality, Avaya Aura® functionality, regardless of the platform. And that's, by the way, a point we like to make to our customers and our partners when we talk to them about this, is that once the application is running, you don't know whether it's on a dedicated server or if it's on virtual machine, because it's an Avaya Aura® application running on a server. As long as you have the resources available -- and we give them pretty good information, configuration information of the resources that are required -- as long as you have all of the pieces in place

once that application is running, it looks the same. And in fact, the provisioning is the same. The management is the same. All of the interface, once it's running, is like any other Avaya Aura® application.

It's actually very straight forward, and by the way, one of the things virtualization does add is the fact that now when you install applications using VMware tools, and VMware has a very good management tool called vCenter, if the people aren't familiar with that, vCenter is actually a management tool that allows you to load, install, the Avaya Aura® applications onto the virtualized architecture. Very straight forward, very easy to do, especially for Avaya people who have experience with VMware. We're finding even people who are just learning VMware can learn this very quickly. And it actually reduces the time to get those applications running within their environment, ready for the next step.

So, we see that as an additional benefit, by virtualizing. But certainly, we see customers who want to mix the two can do that. Customers who want to move from a dedicated server to a virtualized solution can do that. The key is, we want to stay flexible and give the solution our customers need to move ahead with the Avaya Aura® and our unified communications.

Steven Taylor: Okay, I'm glad to hear that. And in fact, I was thinking as you were answering that one of my questions was going to be, "Well, gee, do you have the same user interface for the folks who are managing this, in terms of a dashboard or a console?" And it sounds as if the question there is absolutely yes, you really can't tell the difference from the management interface.

Tac Berry: That's correct. The System Manager, which is our management system -- which is also virtualized, by the way -- you can run it on a virtual machine, as well. But yes, it handles Avaya Aura® like Avaya Aura®, regardless of the platform that it's running on.

Steven Taylor: Excellent. Well, obviously, particularly with all of our history, we could go on with this for hours, or even days, but let's get to the final "W" here, and leave the questions like prioritization of different tasks within the environment, and security, and all of those for a later conversation.-- the fifth of the "W's" which is "Who." Most suppliers in this space offer virtualized products to some degree. Microsoft, for instance, is highly virtualized with no or virtually no proprietary hardware. Cisco still has a legacy of being a hardware vendor. So, why should our community choose Avaya? What do you guys bring uniquely to the table?

Tac Berry: Well, let me address that a couple ways. I think number one is we're -- as you have pointed out earlier, we're what was known as a telephony company, and now a unified communications company, and that's our focus. That's what we do best. That's what we provide our customers. And that's really our intent. We provide servers to customers, but as you understand, we resell other vendors' servers. We don't make our own servers. So that isn't part of what we have to do to keep -- maintain our business and to work with

our customers. Our key is to give them the best solution for unified communications for business collaboration.

What we've done when we virtualize, is we've made sure that the same capabilities that were in our Avaya Aura® dedicated server solution are going to be available. As I mentioned earlier, you can mix them. But additionally, things like system reliability, system redundancy, which we think are very key for the communications side. We maintain that. We still have, for example, our Communications Manager -- which is our basic call/control application -- still has survivable options in the virtualized solution as it does in the dedicated server version. Same sort of solutions. Our Session Manager, - which is our SIP interface, has the same redundancy, reliability features in the virtualized version as in the server version. So one of the things we made sure was, when we moved to VMware, when we moved to a virtualized solution, yes, that brings some additional tools for us to use, but we wanted to make sure that we maintained the same level and capability of Avaya Aura® regardless of the platform. And we've done that.

Now, when you add the capability of VMware, and their set of tools which are very useful and work very well, even in a real-time environment today, you actually add more benefits by virtualizing Avaya Aura®. But the key is, we wanted to maintain our reputation, our capabilities, as a leading UC supplier, so we made sure we did that.

We offer both solutions: again, server version or virtualized version. We thought our customers wanted to have that flexible choice, that flexible decision point, that they can go either way. We're not forcing them to go one way or the other. If they're not comfortable with virtualization, that's fine. We will still have the products they need from us.

And then finally, of course, Avaya is famous for their service and support. And it's a strong point for any business, but it's a very strong point for Avaya and our customers will constantly talk about how well we provide support service, even after the system has been installed. And we will continue to do that. We will continue to support Avaya Aura® regardless of the platform, continue to provide the managed services, the operational services, the service and support our customers have come to rely on from Avaya will still be there.

So, what I like to say is that, yes, we virtualized the solution, but what we've done is we've virtualized Avaya functionality. So, the strong points of Avaya are still there. We've just given you another deployment option, and we've also given you some flexibility in your - in how you want to add Avaya to your system.

Steven Taylor: Okay, that's fantastic, and Tac, it has been great to catch up with you on all of these new capabilities and exciting things that you're doing. So, let me remind everybody, by the way, that in many ways even though we're approaching the end of the podcast, in some ways we're just starting the

discussion, because we do have all of the capabilities available for our listeners and readers at Webtorials® to become active participants in this conversation through adding on comments, questions, et cetera. Tac, thank you very much for your time today.

Tac Berry: Steve, it's definitely been my pleasure and I really appreciate you taking the time to talk with me.

Steven Taylor: Well, it's our pleasure and Patte, I'll turn it back over to you.

Patte Johnson: Great. Well, thank you, Steve and Tac. It was an informative discussion and again, we encourage all of our readers and listeners to visit the Webtorials® website, and continue the discussion with your questions and comments.

Thank you.

* The discussion has been edited slightly for clarity and length.