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Eriq Neale Puts Macs in Active Directory!
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[Music]

Brandon Wenn: From runasradio.com, you're listening to RunAs Radio, the Internet audio talk show for IT professionals with Richard Campbell and Greg Hughes. This is Brandon Wenn, announcing show #156, with guest Eriq Neale, recorded Thursday, April 1, 2010. RunAs Radio is produced each week by PWOP Productions, providing professional media and podcasting services online at pwop.com. You can follow the boys on Twitter at twitter.com/runasradio.

Richard Campbell: Thank you very much, Brandon. This is Richard Campbell. With me as always, my co-host, Greg Hughes.

Greg Hughes: Hey, everybody. What's up, Richard?

Richard Campbell: Not too much, my friend. Are you ready to do a show?

Greg Hughes: Yeah, let's do one. Jump right in.

Richard Campbell: All right. Before we bail straight in here, I've been reading the proceedings of the IETF, that's the Internet Engineering Task Force where they sort of talk about how the internet's going which is really kind of wacky.

Greg Hughes: Yeah.

Richard Campbell: So they're on track for running out of IPv4 addresses in 2012.

Greg Hughes: Who was it? Was it Sean Siler from Microsoft, was that who it was that come on and talk to us several shows ago about that?

Richard Campbell: Yeah. They were talking a switch over to IPv6 which is going on right now although pretty much everything is tunneling in. One of the PCs in the IETF proceedings was Tornado versus 624 which are two different protocol techniques for packaging IPv6 traffic in IPv4.

Greg Hughes: Right.

Richard Campbell: They were showing that the Tornado, which is the one that Microsoft is backing, is losing momentum and 624 is being more successful. But here's the one that really surprised me. Of that small percentage of IPv4 addresses that are still available, a bunch of them are considered "dirty." They're being used in internal networks in ways they're not supposed to be used so that if they actually do ship those IPv4 addresses, light them up, they're going to wreak havoc if they use them.

Greg Hughes: Because there will be routing conflicts.

Richard Campbell: That's right.

Greg Hughes: Wow.

Richard Campbell: Because other operators within the IPv4 internet network are using them inappropriately. It's very interesting.

Greg Hughes: I mean, the obvious benefits by IPv6 is just orders and orders of magnitude more IP addresses available. There are lots of other benefits, security and other related benefits associated with making a move to a real IPv6 as well.

Richard Campbell: The other part of this whole conversation in the IETF was what they called silicon cockroaches. They figured there will be an order of magnitude more non-PC type devices with IP addresses in them...

Greg Hughes: Sure.

Richard Campbell: Than there will be PCs.

Greg Hughes: Well, I think if you just look at the number of phones that are out there that are consuming IP address space now, but you know with the mobile, what's interesting is some of the mobile carriers have been the early adopters of IPv6 because of the number of devices that they have to put on their network.

Richard Campbell: Right, and they have been doing everything NAT and that's causing its own problems so this is a better solution.

Greg Hughes: Yup, yup.

Richard Campbell: It does feel to me like this is going to be one of those year 2000 events. We're going to move to IPv6 and nobody is going to even notice and wonder what the big deal was.

Greg Hughes: Yeah. The people who will notice are the people that keep things running behind the scenes already.

Richard Campbell: Right, who already noticed.

Greg Hughes: Yeah, who have been noticing for quite a while now.

Richard Campbell: Yes, without a doubt.

Greg Hughes: And have been jumping up and down and screaming behind under their code of silence.

Richard Campbell: But I do think that the users and consumers are basically just going to -- it's just going to happen one day and they will barely notice.

Greg Hughes: In a way, it already is. I mean, some stuff is being migrated, but I guess end-to-end IPv6 sounds like is what you're talking about.

Richard Campbell: Yeah.

Greg Hughes: And it will be a good thing.

Richard Campbell: Well, it will be interesting to see how we actually pull that piece off, how long it's going to take to actually transition out of the IPv4.

Greg Hughes: Well, I mean if you think about just DNS.

Richard Campbell: Oh yeah.

Greg Hughes: Think about the billions of domain records that are out there that have name services with them that are all IPv4 addresses.

Richard Campbell: Yeah. We may never get there.

Greg Hughes: Yeah.

Richard Campbell: All right. Let us jump into the show here. I'm going to introduce our guest. His name is Eric Neale and he is a small business technology specialist based in Denton, Texas. He was the lead author for two books on Small Business Server and a contributor to a number of other technical publications. Eriq has been helping to prepare IT Professionals for supporting Small Business Server 2008 through conference and user group presentations, as well as through the monthly SBS 2008 webinar hosted by Third Tier. Eriq maintains two blogs and has a weekly internet radio program -- hey, what a grand idea -- on small business technology that has been running since October 2005. He is recognized as an MVP for Small Business Server since 2006. Welcome, Eriq.

Greg Hughes: Hi, Eriq.

Eriq Neale: Good morning, gentlemen. Glad to be with you.

Richard Campbell: So you're a strange cat. Besides being an MVP in SBS, you deliberately use Macs.

Eriq Neale: Yup. I have actually been a Mac user since 1991 so a little bit long in the tooth with the platform.

Richard Campbell: No kidding. Yeah, that's only like second generation Macintosh.

Greg Hughes: I remember those ones.

Richard Campbell: They were small and gray.

Greg Hughes: And toastery.

Richard Campbell: So do you tend to find that the world is sort of split up into Mac Offices and PC Offices, that “ne’r the the two shall meet?”

Eriq Neale: You know, it used to be that way for some degree but it's really certainly not the case and really haven't been for at least the last five years. Yes, you do have those diehard Windows only shops and you do have those diehard Mac only shops but part of what I've done with my practice here in Denton is to focus on dealing with customers who are needing that sort of cross-platform integration and increasingly it's becoming more and more of those operations out there.

Richard Campbell: Everything speaks TCP/IP so they should be able to plug into the same network.

Eriq Neale: Yup.

Greg Hughes: Is this more a case of like the diehard IT person, or is this sort of the we've all seen that sort of bipolar mentality about Mac versus PC and I've always sort of said Mac and PC is the whole co-exist kind of thing. I see it coming from IT departments or IT administrators and people who have just decided one or the other and that's it. Is that what you see?

Eriq Neale: In my experience, and I'll admit that I have not encountered every IT operations out there, but in the organizations that I've worked with, in those areas that have become sort of, if you will, no, it's not Windows only shops, that approach has definitely been driven by the responsible IT parties. In a small organization, maybe there is one IT guy and he's just "We're Windows. I'm not dealing with the Macs. We're simply not touching that more so than the other side." The Mac buildup has always sort of grassroots if you will where until there's been a reason not to, if the majority of people involved there are comfortable using Mac's spade, go in and do it. Because historically and a little bit stereo typically, the Mac has been a lot more able to be self supported by their end-users. In general, there hasn't been a very huge need for those Mac only shops to have any sort of dedicated IT resource because they have just been able to kind of make things work. Now that works really well in a small shop where you just got basically peer-to-peer and what-not. Once you start to grow and realize, oh, we want to get some things like centralized file sharing or things like Zap, then it can get a bit more complex. But in those places where it's been the sort of absolute Windows only or absolute Mac only, the decision point there does tend to come more from the Windows side of the house than the Mac side of the house.

Greg Hughes: It seems like too when you get into even a much larger company, an enterprise-size company, the need for compliance reporting and for really being able to know that your whole infrastructure is running the way that it is supposed to, could be a real challenge for people who don't have experience with that. I mean, overtime hasn't the sort of the state of the art from managing Mac computers in an environment where you maybe start as a Windows shop, has that improved overtime?

Eriq Neale: Yeah, it really has. To be perfectly honest, what we're seeing a lot of these days and I'm talking about in the last couple of years, we're seeing that, yes, there are people that are really comfortable with their Mac platform, they really want to bring the Mac in-house and again this is going to be more from the small and medium business sector side than necessarily the enterprise where there's a little bit more flexibility in this in some regard, but they're bringing in their Mac so they want to have the comfort of having their Mac Operating System perform in those places where the business tools that they have, that they need to do to get their job done within the company are Windows only. We're seeing a lot of people that are either using some sort of virtualization on their Mac to run a Windows environment, or they may just simply be using Boot Camp and installing Windows directly on the Macintosh hardware.

Greg Hughes: Right.

Eriq Neale: But as far as the management tools, there are a growing number of third party tools that will allow for management reporting of the Mac systems in the traditional Windows network environment and it just depends on what it is that you're trying to accomplish and how much you're willing to pay for that service.

Richard Campbell: Part of me wonders why we'd ever want Macs in the environment. But presuming that we need one, maybe it's a design thing, you know I always tend to think about the PhotoShop, the graphic art guys for these sort of things, but for me the first thing more than anything would be file sharing between the machines, between Macs or PCs, or getting access to my central file store for Macs. Is there a particular trick to doing that?

Eriq Neale: There are a couple of things that can get in the way. It's certainly much easier than it was five years ago and we're using the SMB protocol for Windows machines connecting to Windows servers to get to common file shares. The Mac threw a Samba implementation as support for SMB connectivity for a while. There have been some little hiccups in terms of localize directory lookup that she had to overcome for a while, but getting SMB connectivity is not that big of a deal. The one trick that seems to catch everybody is a Windows domain controller that is also acting as a file server. It has, by default, encrypted SMB connections required and the Mac Samba implementation does not support SMB encrypted connections.

Richard Campbell: Right.

Eriq Neale: So what you have to do to get the Macs to talk to the shares that are on a server that does have those is to loosen the SMB encryption requirements. Some documents out there have said, oops, just turn them off altogether, you don't need it. But there are ways where you can still allow those encrypted connections or devices that do support SMB encryption without requiring it so the Macs can come in and get access to those file shares. Yeah, there are alternative courses as to stand up another server that's not a PC or doesn't have those SMB encryption requirements on it and use that device to file share. Again, a little bit easier to accomplish in a larger organization enterprise orientation necessarily than the smaller end of the business scale. But there are also third party tools that you run on the Mac that will allow it to go through and use the full native Windows space, the SMB encryption tools. Again, it's just a matter of are you trying to keep things simple and use native tools on your system or do you really have to have this SMB encryption requirement for business or other reasons and that is the dividing line on which way you're going to swing and try to implement it.

Richard Campbell: So if I caught all of that, by default the Mac does not have all that encryption turned on but it could and you can also loosen the encryption requirements on the Windows side of things so that the default Mac configuration can work.

Eriq Neale: That's correct.

Richard Campbell: Okay. So either way that you want to go, it's either to tweak the Mac or tweak the Windows box.

Eriq Neale: Yeah. And by tweaking the Mac, and you were talking about requiring a third party solution which means there's an additional cost associated with it.

Richard Campbell: Right.

Eriq Neale: So if cost is a factor and security requirements are not a requirement so to speak, then you can simply make adjustments on the Windows servers connectivity enabled. If your organization requires that level of encryption and that simply can't be done around, then you have to go with the third party solution to be able to achieve that.

Richard Campbell: Okay, that makes sense. So what about Active Directory? Can Mac participate in sort of the single sign on rules?

Eriq Neale: Absolutely and that is probably one of the biggest NIC about getting a Mac involved in an AD network. It's yes it can and one of the biggest benefit for that is for the single sign on needing not necessarily so much for the actual single sign on per se, but for the ability of saying, hey, we're needing to, God forbid, terminate an employee, you disable that employee's account in Active Directory and immediately they lose access to signing to the Mac.

Richard Campbell: Right.

Eriq Neale: So that's probably the number one thing that people would benefit from by incorporating their Macs into Active Directory. Otherwise, from a Mac user perspective, they sit down, they're presented the username and password, they sign in, there is no indication that they're signing into Active Directory versus to the local user database.

Richard Campbell: And it works exactly the same way so how about going the other way? What kind of policies can I push from my Active Directory stores onto Macs?

Eriq Neale: There's the kicker. Natively, the Mac OS does not understand anything to do with group policy. It cannot process any default group policy elements. There are third party solutions and there are at least a couple of different ones our there, two major ones that are pretty well in play that will, again, you install this solutions on the Macs and they are able to extend Mac support for reading and processing group policy off of server. It depends on what it is that you're trying to accomplish third group policy. Things like pushing an application installed down to a Mac are probably not something you're going to do because you're not going to pushing Windows applications around on the Mac OS.

Richard Campbell: Right. Well, you could try but it isn't going to go well.

Eriq Neale: Right, right. But things like password policies, things that don't necessarily impacted the machine directly, those types of group policies still apply in Active Directory. So it's going to be for things like do we want to push out certain drive mappings or printer setups or things like that, and again the implementation of what can be done to a group policy is going to depend on what that third party solution actually supports. In most of the mixed environments that we manage and support, we have not found that the lack of native support for group policy has really been a hindrance.

Richard Campbell: Right.

Eriq Neale: Many of the things that we're doing, the single sign-on, the fact that you can attach to a share on a server without having to enter your credentials again, some things like that are sufficient for what in the businesses we support the Mac users are trying to do in terms of integrating with the network. So again, it's going to depend on the environment that you're in and what it is that you're trying to accomplish as to whether you'd want to look at this third party solutions to achieve a certain task or if the fact that, okay, we can handle most user level settings or third group policy that's not necessarily going to impact anything or not be able to impact anything on the Mac side.

Richard Campbell: When I think of one policy that I would want to push to every machine, it would be something like Smart Card, that every machine must login with a Smart Card. Trivial to do with a PC, but that means definitely pushing policy onto the Mac.

Eriq Neale: Yeah and that's assuming that you're going to have a Mac that's going to have that Smart Card for the Mac side.

Richard Campbell: Right.

Eriq Neale: You know, your third party solution would have to support pulling that policy information down and finding a way of enforcing that on the local Mac.

Richard Campbell: But such a thing does exist.

Eriq Neale: The solutions out there for being able to process group policy on the Mac are there. Like I said there are two major solutions out there. They do have different levels of things that they support and it's not necessarily native support for the existing policies in Active Directory. In some cases, it may be that they are extending Active Directory to create some policies that their tool can then download and process on the Mac side.

Greg Hughes: What are the two solutions that you're talking about? That's intriguing. I think people would be interested to know which ones you're thinking of.

Eriq Neale: The two major solutions that will add group policy support for the Mac are a solution from Centrify and a solution from Likewise Enterprise. The Likewise Enterprise product actually will extend group policy to UNIX, Linux, and Mac, again since the Mac is actually based on a BSD derivative. The Centrify solution add some additional things that are specifically for the Mac Operating System group policy, Smart Card support, some other pieces for that. So those are the two major players in that area, but they're not the only two.

Richard Campbell: Yeah. I just poked around the Likewise side and saw that a desktop starter pack for 10 seats was $1,800 so it's certainly not free but it's not outrageous either just to get it. If you have a few Macs in; the fact that you could probably install something for a few hundred dollars per workstation to get them to be part of AD at the group policy level is pretty interesting.

Greg Hughes: Yeah.

Richard Campbell: And a good reminder that the new Mac OS is actually over the top of UNIX so it's not that big of a stretch to make that happen.

Eriq Neale: Yeah.

Richard Campbell: I mean fundamentally under the hood, Active Director is still Kerberos and that's actually a UNIX protocol.

Eriq Neale: Uh-hmm.

Richard Campbell: So yeah, it doesn't seem all that far away because the other side of this is that I do see since Mac switched over to the Intel hardware and all of the Windows capabilities became possible, whether it's through parallels or Boot Camps and so forth, Mac hardware runs Windows really, really well.

Eriq Neale: Yeah. I've run across several people who had gone out and bought Mac hardware specifically so they can install Windows on it.

Richard Campbell: Right.

Eriq Neale: They have no interest in running the Mac Operating System. They're just like -- there is a perception out there and I'm not going to qualify whether it's right or wrong, but there's a perception out there that the Apple hardware is generally a better quality hardware than the other PC manufacturers and the people who buy into that line are saying, okay, we're going to buy Mac hardware but run Windows on it and get the best of both worlds.

Richard Campbell: Are you aware of any issues as far as once Windows is running on Mac hardware, all the AD stuff just works as if it's just Windows again, it's no big deal?

Eriq Neale: It is just Windows, yeah. Like I said, when you're doing the Boot Camp implementation where you're installing the Windows Operating System directly on the Mac hardware and there's no virtualization layer involved at all, it is native Windows running on hardware so it's just like running Windows on anybody else's manufactured PC.

Richard Campbell: For as long as you've got drivers, you're fine.

Eriq Neale: Yup.

Richard Campbell: There in lies the only real issue that I can think of, is do we have decent set of drivers.

Eriq Neale: Well, and since Apple is manufacturing a hardware and has control over the hardware and is the one who has developed the Boot Camp piece, then yes, they have control over the drivers. There have been a couple of instances when Windows 7.0 first came out that Apple was a little slow getting certain drivers available for the Boot Camp install; but that was honestly during the Windows 7.0 beta period. Once Windows 7.0 was fully released, Apple had their Boot Camp up in place and had the drivers set in there. So in the experience that I've had with the people who have done the Boot Camp and installed the Windows directly on the Mac hardware, I have yet to run across anybody who has had a single driver hiccup.

Richard Campbell: What about printers?

Eriq Neale: What about it?

Richard Campbell: Well, I guess you need a different driver if you're running on a Mac but if they're through in network share or through a file server, is there any particular challenges to having PCs and Mac share a network connected printer?

Eriq Neale: You hit on the kicker there and that is that there has to be some sort of print driver support for the Mac OS for the printer that's going to be shared. The Mac OS does natively support IP printing. It supports Windows shared printer printing. The kicker is that historically, the Mac OS has wanted to use postscripts as its print driver language.

Richard Campbell: Right.

Eriq Neale: And there's a multiple decade history of that in there. It is up to the printer manufacturer to decide if they're going to have Mac drivers available for their particular printer and that usually is -- HP is a little bit different but in most cases, most of the other major manufacturers that do have Mac per driver support is basically simply a printer/driver element that gets loaded into the Mac OS and they use the native Mac communication tools to be able to stick with the printer. Printers that have been designed from the GetGo to the mixed or cross-platform printers will oftentimes also have native Mac network protocol support to advertise those printers on the network to make it even easier for the Macs to find them using the Bonjour protocol which is a self-advertising IP-based protocol which is the Mac printer at base, you pull it up and it does a query, it says okay, any Bonjour printers out there? If the printer has that built-in network edit support, it will respond. The two devices talk to each other, boom, you've got your printer setup. If you're printing, managing your

printing through a Windows Server environment and keeping all of your printers shared out through print queues on a Windows Server, the process is not as automatic but the print queues can be set up on the Mac side again provided there is driver support for the printer and the process will go happily through the Windows printer. That's another case where having the Mac bound to Active Directory and having the user sign in with Windows credentials on the Mac environment is helpful if that printer queues shared on the Windows Server is restricted as to which users or groups are going to be allowed to print to that device.

Richard Campbell: So what about the Active Directory broadcast of printer discovery? Can the back read that and find printers that way?

Eriq Neale: Yes, it can. It's not as automatic as the virus type advertising and discovery. You do have to tell the Mac printer interface, hey, I'm going to look for these Windows-based printers but as best as I recall that support is out there.

Richard Campbell: That's very cool. So through the ages, there has always been this myth and I've known it's a myth that Macs just aren't subject to viruses and the like and I think it's more of just a population thing that there are so many/fewer machines that is worth exploiting, but what about virus protection in that sort of stuff for the Mac?

Eriq Neale: There's actually a lot of misconception about that topic and in the whole topic of Mac security as opposed to just the antivirus thing. You know, back in the day in the early '80s, there were a number of Macintosh viruses and a lot of them were incredibly destructive. Very early in the Mac lifespan, there were specific antivirus products for the Mac and then of course the Microsoft with the 90% market share and the very big bull's eye on its back, these malicious coders went after the big market and the whole virus and malware thing blew up on the Windows side. We have seen an increase. We're not talking orders of magnitude increase, but we have seen an increase in the number of threats that are specifically aimed at the Mac OS or in particular web browsers that are running on the Mac.

Richard Campbell: Right. Like Safari.

Eriq Neale: Yeah, exactly. And there have been, you know, the annual hacker contests where everybody tries to go and do that, that recently tasked and sure enough there was a vulnerability in Safari that was exploited and compromise the system fairly quickly, but the same thing happens in Firefox, in Internet Explorer as we also got an update on that recently.

Richard Campbell: Yes.

Eriq Neale: There's no such thing as total security, but there are vulnerabilities that are out there and like you've mentioned the level of risk is associated with a user who's running in Mac is lower than the level of risk from the user who's using a PC. Now, of course as soon as you start installing Windows on your Mac, all bets are off, you are open to exactly the same vulnerabilities as in the other Windows users.

Richard Campbell: Right.

Eriq Neale: But Apple does release security updates for their operating system and their native applications. As a matter of fact, just like week they release 10.6.3 for Snow Leopard which addressed 93 bugs and improvements in the operating system. That was the largest single bundled update that they had ever released for any of their OS X operating systems. So there are vulnerabilities out there and Apple is looking into that. I'm going to sort of step aside from my brethren who is also do cross-platform Mac, PC support and then I take this stand where I think that antivirus protection on the Mac is not only a really good idea but I still think it's essential.

Greg Hughes: Sure.

Eriq Neale: Unfortunately, there are very few antivirus products that are truly cross-platform that gives you the same interface, the same management tools, the same updating piece on the Windows side of the Mac side. But the reason that I take that stand is because just because there maybe a malware threat that cannot actually infect or compromise a Mac does not mean that a Mac user can't be a carrier and transmit that very same threat on to some in the Windows world.

Richard Campbell: True, yeah. Interesting point.

Eriq Neale: And that if you're running cross-platform antivirus on your Mac, even if that threat is not going to affect your machine, the fact that you've got a tool on there that will detect it and alert you before you have a chance to send them off on to somebody else, that's just being a good net citizen these days.

Richard Campbell: Yeah, yeah, absolutely. I mean, you easily carry stuff through mail or in attachment form and so forth and so absolutely true, and you're not going to detect it because it's not a virus for you per se.

Eriq Neale: Yeah, yeah. So you may open the document and say, oh, okay. And of course when we first started saying a lot of the macro viruses that started hitting off us, because the Mac version of Office supported the same backend scripting tools that the Windows version of Office did, you had a lot

of those Word macro viruses that were truly cross-platform and the nasty ones would open up the Word doc, it would write some sort of Windows file out to your disk and attempt to deploy it. Clearly that piece didn't work on the macro side of things but other macro viruses that would make changes to your Word documents or do some other unusual things, you know, did work cross-platform. So I do think that making sure that you're keeping your Mac as protected as possible that you just don't get these blinders on it and say, "Oh, I'm on a Mac, I'm safe. I don't have to worry," I really do think that that's -- and unfortunately, the Apple ads that had gone out said, "Hey, we're more secure. We're not as impacted," have reinforced that false belief and that's one area where I've been really disappointed in the Apple marketing engine on that. It's because it's not the case and we have seen cases where Mac users have unwillingly transmitted really nasty stuff from one Windows user to another and again Activie is the conduit even though they weren't specifically impacted themselves.

Richard Campbell: Now, have we missed anything as far as getting Macs to work and play well in the Windows world? Are there other tricks or tips that people should know about and places they should look?

Eriq Neale: There are always a number of questions about how do we do this and how do I do that. Where I get a lot of my questions from when people come to me and say, "Hey, I'm having some trouble integrating this Mac into this Windows environment," is from the IT support professionals who is not well versed in the Mac side of things and there are a number of resources out there that have guidance for how to do these kinds of integrations. macfixit.com is one very popular site. Macwindows.com is another one that has a lot of cross-platform support information. Again, it depends on what it is that you're trying to accomplish. If you want to say, "Hey, I've got the essential file repository," I want everybody in our network to be able to read and write information for file repository whether they're on a Mac or PC, that's fairly straightforward. Email integration is also not that difficult to do. Setting up shared printing in an environment, you know, not that difficult to do. If you're trying to do things like, oh, I've got, you know, there's this one user over here who's trying to share something out from his PC individually rather than a shared essential resource, there maybe some more challenges to getting that up, or maybe the Mac users have been opening up file sharing on their Macs and share data back and forth between all the Mac users and they want to allow another Windows user to come in and connect to those resources, there is somebody who just steps there. But in the traditional Active Directory Windows environment where again your primary goals are can I get this user to easily authenticate a network, can I give this Macintosh easy access to my shared data and shared resources, there's really not that much to it. To kind of circle back to one item that we talked about at the first part of the call which is the sort of mandated all Windows or all Mac, in the SMB space I work with a lot of IT consultants who absolutely refused to do any Mac support for any of their customers to the point that some will even refuse to take on a customer that has Macs involve and I'm like, you know, in this economy these days I don't know that I can afford to be turning away potential clients. It's so, I won't say easy, but it's so possible to go through and pick up the skills to do Mac support to get those tests accomplished that is really not like you're going to need years of training. If you've already got basic network understanding and if you know how AD operates, it's not going to take you that much to pick up the skills that you need to clear how to get these Mac things integrated. Again, for the small business IT professionals to go out and open a whole new market for you as our environment begins to change.

Richard Campbell: Eriq Neale, thanks so much for coming on the show.

Greg Hughes: Thanks, Eriq. Great stuff.

Eriq Neale: I appreciate the opportunity, gentlemen. Great talking with you.

Richard Campbell: And we'll talk to you next week on RunAs Radio.