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Text Transcript of Show #161
(Transcription services provided by PWOP Productions)

Daniel Parker Adds Linux to Active Directory!
May 26, 2010

[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 #161, with guest Daniel Parker, recorded Friday, April 14, 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 RunAs Radio. I'm your host, Richard Campbell. With me as always, my co-host, Greg Hughes.

Greg Hughes: Hey, everyone. What's going on, Richard?

Richard Campbell: Ah, you know, everything is working. I'm pulling in the right direction. I've been repairing machines. I'm generally getting myself in order. It must be springtime. I'm doing a little digital spring cleaning.

Greg Hughes: Cool. I'm just neck deep in security projects, in IT security projects, and a whole bunch of other stuff that I actually can't really talk about in any great detail.

Richard Campbell: You're saying no in creative ways.

Greg Hughes: It's been a very busy period of time and appears it will continue to be busy for a very long period of time to come.

Richard Campbell: That's a good thing. I'm starting to feel like the recession has passed.

Greg Hughes: Yeah. Well, that would be a good thing for sure.

Richard Campbell: Absolutely. All right. Well, let's dive into our show here. It's going to be an interesting one because it's certainly a topic near and dear to my heart. We're talking to Daniel Parker. He lives in Washington DC and he is one of the premier field engineering core, our favorite people in some of our very, very best shows, working on Server OS. He has been in IT for a mere 11 years, he just a kid, and when he is not doing work he hangs out with his family, fishes, and watches football which is of course not going on right now. So are you watching the basketball play offs?

Daniel Parker: I try. I don't have much time for that though. Although I saw LeBron got removed last night.

Richard Campbell: Yeah. What's up with that? The Cubs without LeBron. That's not right. Of course, I'm a Canadian so I'm watching hockey and Montreal is still in it so nothing else matters.

Daniel Parker: An action people like that.

Richard Campbell: That's just me.

Greg Hughes: The Cub.

Richard Campbell: So Daniel, we've had a few PFEs on in the past. What do you particularly work on? You're in the DC area so I presume you're doing government work.

Daniel Parker: I am. I support the public government and like you said I did Server OS and try to steer clear of things like Exchange and so forth. It is hard. Yeah, I help make sure they're running topnotch. I help save us some packed dollars.

Richard Campbell: Typically when I think government I think you're still supporting some NT 4.0 machines.

Daniel Parker: Not me. Funny you say that. I'm actually pretty fortunate. I don't even have any Windows 2000 machines. They're on the network but they're not the ones I have to support.

Richard Campbell: Although from an Active Directory point of view, it doesn't really matter because you can upgrade to later versions of Active Directory even with old ADs in the mix.

Daniel Parker: You can but sometimes things don't go as they should.

Richard Campbell: Right. And I always think that the infrastructure there has got to be huge. Is it one great, big federated set of fours out of there or are they all little islands?

Daniel Parker: Between the agencies, islands.

Richard Campbell: Yeah.

Daniel Parker: Now, you know, some agencies are trying to make it one great, big happy family but that's always easier said than done.

Richard Campbell: Oh, absolutely.

Daniel Parker: But we're on that now. Everything is islands and that's kind of how it is.

Richard Campbell: And then of course there's a whole security side on this thing. I did enough work with the military where they literally run two network wires, one for classified, one for unclassified and only

one NIC per machine like this is an interesting world to live in.

Daniel Parker: It definitely is. It presents lots of unique challenges.

Richard Campbell: So we're talking about Linux in Active Directory today which is something I've done. Why are you dealing with this?

Daniel Parker: Well, it's funny. So people think because I work for Microsoft you don't ever have to deal with the Unix or Linux machines.

Richard Campbell: Yeah, what is this L word that you speak of?

Daniel Parker: You know, they tell me it's evil but there's a time and a place for everything. But currently in my customers they're actually integrating into the environment. I got there just a tad too late because they're actually purchasing tools to help them do it but you get some additional functionality but I don't have to actually rely with the whole process and the procedures that are needed to see what they're actually wanting to achieve so I thought that would be a good topic for us to discuss.

Richard Campbell: Absolutely and you know what? Somewhere around here I have the book that I referred to years ago to make Active Directory and Linux work together because it wasn't that tough because in the bottom level isn't Active Directory just Kerberos?

Daniel Parker: Well, it's an LDAP Directory which uses Kerberos. Of course, in the Windows world it can fall back to NTLM as well, but it's not difficult to setup. It's just which way is right for you? Because, you know, now like in government or even private business you want to have things as secure as possible so you probably don't want to pass your credentials in quartets.

Richard Campbell: Oh, yeah. That's one, but it's also just what services are we trying to get access to. So what's a Linux box doing for your customer, if you're allowed to talk about that, that they would need to connect to Active Directory to it?

Daniel Parker: So I don't know exactly what the Linux boxes are doing. I can speculate. I don't really get into these details with them. It doesn't matter to me. But the reason that they want it is for management. They don't want people logging in their Linux boxes. Each box has a CyLog so everybody has a root actually.

Richard Campbell: Right.

Daniel Parker: So it comes down to management of users and resources.

Richard Campbell: Is this really just a single sign-on problem more than anything?

Daniel Parker: Yeah. Well, a single sign-on along with accountability.

Richard Campbell: So, the audit trail as well.

Daniel Parker: Exactly. Because, you know, nobody wants you to use shared accounts. You know, if you're using shared root account and every Linux and UNIX box has a different root password possibly...

Greg Hughes: Right.

Daniel Parker: And you have 10 people who have this password, how do you hold anybody accountable?

Greg Hughes: It's like having a bunch of Windows '98 or a bunch of workgroup machines that are not joined to in Active Directory or domains sitting out there as individual machines.

Daniel Parker: That's exactly right. And everything is in place. They have the authoritative directory there so you might as well use it.

Greg Hughes: So what does it look like when you actually take a Linux infrastructure and attach it to an Active Directory infrastructure? What does it look like from an administrator's standpoint and what's the functionality that I do get versus the functionality I don't get that I might be used to on a Windows, you know, with the Windows environment?

Daniel Parker: From the Windows point of view, nothing changes depending on how you do your configuration. But from like just a general Windows admin, it's all the same. It's all users and computer accounts that you see in there really. From the Linux side instead of logging in locally with the user account, you're hitting a domain controller and it's all transparent. Nobody really notices any difference.

Richard Campbell: Now the big thing that I recall was that I actually had to sort of mapped out what a given role from an AD perspective meant in the Linux box so there was a file somewhere. I'm really scratching old memories here. It must have been 10 years ago of how I wrapped these roles out.

Daniel Parker: Now, you have to forgive me. I'm not a Linux admin. I don't remember all the filenames but I know that you can control access to the Linux system. There's a file, I can't remember the beginning of the file, something that do not file, breaking control access too so it can do whatever on the system. So you can login for example.

Richard Campbell: Right.

Daniel Parker: So you can definitely still do that, and you know one of the benefits of running it is so you can completely script everything to make everything somewhat manageable I guess as far as that goes for that configuration.

Richard Campbell: Now there are a few different layers here as well. I mean, it's one thing to just be able to log into the box. I mean, is that what people really want to do? They want to get to the shell of the Linux box with their existing credentials or is it more of I'm using the Linux box like a file server and I want access the files?

Daniel Parker: From my experience of why people use Linux, typically they're running Oracle databases on it.

Richard Campbell: Ah, so it's the big O.

Daniel Parker: Yeah. I mean, yeah. To be honest, that's primarily where I've seen Linux boxes in enterprise, they're usually running Oracle. Of course, we have a lot of folks who still run Bind and anytime you have anything that's touching the enterprise network and security is concern, you want to have a good way to manage who's getting access to these resources. I'm sure there are other resources out there people use more often. That's my experience.

Richard Campbell: Yeah, and the funny thing here is you can get Oracle for Windows as well. Like why would you go through this pain?

Daniel Parker: Well, old habits die hard. Some people are still steadfast that performance is much better on Linux. Some people are just Oracle diehards, some are just Linux diehards. I mean, there are various reasons. Some people just don't like SQL. I mean, it's hard to say.

Richard Campbell: Yeah and believe me, I don't have a problem with Oracle per se. I've dealt with enough installations one way or the other. I would rather use SQL Server. I've seen plenty of apps that were successful with Oracle products but I've also seen them on SCO, or Linux, or NT and it didn't matter. The OS is not a big deal in this equation.

Daniel Parker: No. It's really a perception issue. Years ago it may have been an issue. So I've dealt and perform Microsoft, I've dealt with Oracle on Windows, I've dealt with Oracle on Linux and there's a perception that you couldn't get the performance scheme out of Windows that you would out of Linux. The overhead at the GUI and so forth was the big claim now.

Richard Campbell: Right.

Daniel Parker: The problem was people weren't taking real benchmarks on that.

Richard Campbell: Yeah.

Daniel Parker: So you have a lot of people go that route and now they've got these systems ingrained and it's hard to pull them out if they want to migrate.

Richard Campbell: Yeah, and there is not an easy migration path to move from Linux to Windows.

Daniel Parker: Yeah, it's not trivial. That's for sure.

Richard Campbell: Yeah. That's for sure.

Daniel Parker: Depending on the role that the Linux servers are doing.

Richard Campbell: So typically, if you just got a Linux box running Oracle like that, what kind of permissions do I need in that box to be able to utilize it?

Daniel Parker: Well, so it's like anything else. I mean, it's like Windows. So if you have want to lock those or I mean if you want to lock down your OS, you want to lock in your database, same thing on the Linux side.

Richard Campbell: Right.

Daniel Parker: It's all ones and zeros at the end of the day. So you're going to treat that box just like you would any other box.

Richard Campbell: Yeah. You don't actually need disc level of access in that machine. You don't need root access in that machine. You just want to be able to communicate with Oracle and make your queries.

Daniel Parker: That's correct. Right.

Richard Campbell: Now are able to do that sort of the same sort of thing we do in SQL Server that shared login going all the way through the Oracle so that my AD creds actually gets me to the Oracle system itself?

Daniel Parker: No. I'm not an Oracle guy but yes, I have seen that and you don't have to use local accounts for Oracle. You can delegate that out.

Richard Campbell: So now you're talking two layers, one layer of getting through the firewall or the security of Linux itself, and then actually propagating that into this application that is Oracle.

Daniel Parker: Yes, and let me tell you from firsthand experience that that's difficult.

Richard Campbell: Yeah.

Daniel Parker: If and when it goes wrong, there's a lot of troubleshooting that has to take place to try to isolate where the issue is at. When you have a project like that, you have Oracle DBAs, you have Linux admins or a Windows admin and let's be honest, none of them are ever going to agree where the problem is at.

Richard Campbell: Right. They do all agree. They just agree that it's not their problem.

Daniel Parker: That's true.

Richard Campbell: All right.

Daniel Parker: That's probably one of the biggest challenges.

Richard Campbell: Yes. It's just a number of different people involved in this whole process.

Daniel Parker: Yeah, because a lot of times Linux guys don't understand Windows. Windows don't understand Linux, and Oracle DBAs only knows databases. That's the perception.

Greg Hughes: I mean that's pretty much the way Richard and I operate. I mean if we don't agree on something, then Richard's wrong and that's just the way it is.

Richard Campbell: Right.

[Laughter]

Greg Hughes: Right. Wait a minute. Does that make me Linux or does that make me Windows?

Richard Campbell: I think you're Oracle actually.

Daniel Parker: You know, Oracle actually owns a form of Linux now too.

Richard Campbell: Yeah. They do, don't they? Well, they own Sun so what does that mean.

Daniel Parker: Oh, that's right, that's right. I can't speak about trying to hold that up. I've tried it and it's not for me. I'll leave it at that.

Richard Campbell: Really.

Daniel Parker: Yeah. I got used to Red Hat so I'm a Red Hat guy. If I mess with any Linux, it's going to be Red Hat.

Richard Campbell: Yeah, yeah. I know what you mean. It's certainly familiar for me as well though I think I've got a Mandrake Installation floating around somewhere which just dates me instantly and I think I still have one Debian as well.

Daniel Parker: I've tried Debian. It's not bad. You know, I have Ubuntu loaded up now. They just did a .NET 4.0 release and it's got a nice front-end on it.

Richard Campbell: Yeah. I've always thought that's more of a workstation incarnation of Linux.

Daniel Parker: Yes, it is.

Richard Campbell: So I understand that we can make Active Directory work against Linux. Without any tools, it's just a pain in the butt.

Daniel Parker: It can be, yes. From the Windows point of view there's really not a lot of work that you have to do to make it work.

Richard Campbell: Right.

Daniel Parker: It's there because, you know, it's going to be using Kerberos authentication which we use out of the box.

Richard Campbell: Right.

Daniel Parker: On the Linux side, the problem is we have all these different modules, or applications that you need installed and then depending on the version of the app it may or may not work so if you're not real good with Linux you may run into some issues.

Richard Campbell: And you made the point here that basically it's Linux conforming to Windows rules around LDAP and Kerberos, not the other way around.

Daniel Parker: I wouldn't say conforming to Windows. Conforming to RST standards. So before Microsoft went completely supporting Kerberos, NTLM was the way to go and out of the box Linux obviously doesn't support that. That's a Windows implementation and before Kerberos picked up the force that it has now with all the standards, it wasn't everywhere. So to get the two boxes to talk, it was virtually impossible. Now that they both shared that common platform of Kerberos, it makes time to do it that much easier. LDAP again is another standard that would both conform to Microsoft, and UNIX, and Linux world too.

Richard Campbell: But there are third party products that you can buy to sort of ease this as well.

Daniel Parker: Absolutely and actually my customers, they purchased the Quest tools.

Richard Campbell: Oh, right.

Daniel Parker: Yeah. I think they used to be called Vintel. I don't know the...

Greg Hughes: Yeah, the old Vintel. Quest Authentication Services they call it now.

Daniel Parker: So they bought Quest and I've looked at those and I'm not going to lie, it was pretty impressive. It made it really easy to get it working and then when you go look at the backend of how they're doing it, you're just kind of laugh. You go, wow, that's it.

Richard Campbell: Well, and this is mostly about putting a GUI over the top of what it takes to make all these different bits and pieces work.

Daniel Parker: Exactly. So when you look at the GUI on the Microsoft side, all they're really doing is exposing the attributes that are already there. So they're making them visible in users and computers kind of like it. If you install services for UNIX, it's a similar tab with the same types of information.

Richard Campbell: Right. Because this is something that Windows has in it, there are services for UNIX.

Daniel Parker: That's correct.

Richard Campbell: But does that help with Linux as well?

Daniel Parker: Well, yeah. And that again goes back to how do you want to configure your Linux environment to authenticate?

Richard Campbell: Right.

Daniel Parker: Because in the services for UNIX they won't to use an IS which is inherently insecure. You know, you could set it up that way. That will work and it will pull you group membership, all that good stuff they will work definitely and you can secure it with SSL and so forth.

Richard Campbell: It sounds like you don't recommend that method. That's an IIS rather than just going to LDAP and Kerberos.

Daniel Parker: Right. That's how I would because that's the easy way to do it though.

Richard Campbell: Really.

Daniel Parker: LDAP to Kerberos, for me it is. You use Winbond.

Richard Campbell: And what's Winbind all about?

Daniel Parker: WinBind is part of Samba. It gives you the interpretation basically between the Linux and the Windows environment.

Richard Campbell: Okay, yeah. And Samba, wasn't that really about file sharing?

Daniel Parker: It is and it works. I've had some good use with that before, but yeah. My main issue with the whole Linux integration is if you upgrade your stuff in your application, it may not work when you're done. That's been my experience.

Richard Campbell: Like you update the version of Oracle, that kind of thing?

Daniel Parker: Well, update my version of say Samba for example.

Richard Campbell: Right.

Daniel Parker: Or I do a PAM upgrade so the newest version. In 2008 R2 out of the box we don't support DES and triple DES encryption anymore. So a lot of the older installation of Linux or even some of the newer ones that just aren't running the current binaries aren't going to support AES encryption so therefore as soon as you enter this with 2008 R2 box your total authentication mechanism goes broke if you're still using DES or triple DES which should not be common.

Richard Campbell: Which they probably are.

Daniel Parker: Yes, exactly.

Richard Campbell: Yeah. And so then you basically go back to the 2008 box and reinstall DES and triple DES or do you force the other stuff too?

Daniel Parker: Well, you don't have to reinstall 2008 so it's just a simple policy change that you can just enable it.

Richard Campbell: Oh, I see.

Daniel Parker: Or you could go to your Linux boxes and upgrade them to support that.

Richard Campbell: To support AES.

Daniel Parker: Yes.

Richard Campbell: So yeah, now you're getting me, Daniel. I get it right. This is the challenge, it's who are we moving here. I mean, I appreciate the idea that DES has been largely defeated but putting AES on all of those Linux boxes is not going to be easy. It might be much easier to just go in in my R2 boxes and allow triple DES again to work.

Daniel Parker: That's correct. In fact, for most customers we'll do that initially until they have a good plan on how they're going to address that on their Linux environment.

Richard Campbell: Push themselves up to AES.

Daniel Parker: Yeah.

Richard Campbell: Yeah, that's a tough one because really we end up pushing that back to a business case and it's a subtle one. I think most business people aren't going to appreciate the vulnerability of one encryption in protocol over another, like there's no easy way to explain that.

Daniel Parker: No. If you take that to an executive, they're just going to look at you like a deer in the headlights. They're going to be like "What? Is it encrypted?" "Yes." They're like, "We're done then."

Richard Campbell: Well, not quite because there's a few different flavors of encryption and they have various exploits and yeah.

Daniel Parker: Exactly. So for example, in the federal states they're all about keeping it as secure as possible and there would be a lot of talk how to make it happen. If you do this, how do you bring your Linux environment up to support the AES encryption in for example?

Richard Campbell: Right.

Daniel Parker: It's definitely a challenge.

Richard Campbell: You know you can make the policy change in a minute and have it work but upgrading to AES, yeah, you've got to go find the piece of software. You've got to tinker with it and get it configured correctly. There are different sets of rules around AES as well so actually getting the AES to match well is going to be a problem.

Daniel Parker: Well, I'll give you an example. So I was actually going through this and I set my encryption to use AES by default. So it was a clean install and I was like, well, let's just test this and see how well it works on a clean install of a Red Hat installation. So 5.3 I think it was, and AES out of the box didn't work. In fact, I had to actually lock myself out of my Linux box. They wouldn't let me go again.

Richard Campbell: I don't trust you anymore.

Daniel Parker: But I mean that was the whole purpose, that I wanted to see how it would act because out of the box it had DES and triple DES first in the list of trying to authenticate that so I was required to do AES first and they didn't like that.

Richard Campbell: Really. So switching it. So the simple thing is it did have AES on the list. You just change up the order and do AES first.

Daniel Parker: Yeah.

Richard Campbell: And that didn't work.

Daniel Parker: Yes. So actually I went out and did an update. I grabbed some new binaries and that fixed it but I would have assumed being a Windows guy that out of the box, and I just downloaded from the web, that I thought it would have current binaries.

Richard Campbell: Right.

Daniel Parker: I was incorrect.

Richard Campbell: Yeah, yeah. Interesting, and this was not necessarily configuration setting. This was a different implementation of it.

Daniel Parker: Yeah. So it's not even an implementation of AES. It would how PAM was configured to handle that.

Richard Campbell: This is tricky especially for a group of Windows people who are just trying to make a Linux box work.

Daniel Parker: It is. So I mean, even in the PFE world where I'm at, the front people who understand the whole integration piece of it, it's a challenge. I mean, get Kerberos. I mean get all of that. But when you have to start working with the Linux guys to see why it's broke, it becomes a challenge.

Richard Campbell: Yeah. Well, and I think the level of understanding for most folks on encryption ends at the acronym.

Daniel Parker: That's true.

Richard Campbell: I've got AES. What more do you want from me, man.

Daniel Parker: Very true.

Richard Campbell: Yeah.

Greg Hughes: It is complicated. Dirty stuff to get them into.

Richard Campbell: So what other pieces that we're talking about here?

Daniel Parker: So there are a couple of moving parts on the Linux side that you can use. Yeah, like the Samba/Winbond, and you have PAM, you have NSS. I mean, there's a whole lot of different

ways you can do this. You can bring SSL into the fold. You can use services for UNIX on the Windows side to help map that stuff out. Well, yeah, there's just a lot of moving parts depending on how you configure. I mean, for example you have to somehow map your UNIX users to your Windows users. How do you do that? There are methods that you can do it. Some are better than others. So you really have to spend some time engineering a real solution in order to understand in large environments. I mean for an environment that's only got a dozen Linux servers, it's not a big deal. But if you've got 1200 Linux servers, that's a whole another town. You really got to spend some time whether you do a COTS application like Quest where you just use the built-in features with the open source on the Linux side.

Greg Hughes: Wait a minute. What in your experience is the most cost effective way generally to do this? Maybe you can sort of cage that in the context of if you have X number of machines or users, then maybe you ought to be thinking about going one route but if it's over a certain size maybe you're going a different route. I can imagine. I mean, the risk seems like it would be that by just trying to solve compliance or an audit problem or one kind of management problem that you could really end up creating some other pretty serious management problems if you don't do this the right way given your particular situation.

Daniel Parker: You're right. So they're very cost effective. I hate to say it but it really depends. If you're in the small environment, I don't think it's cost effective for you to go get a third party tool. That's me. I mean, like small being if you have a hundred servers total, it's probably not real cost effective. You can script a lot of that on a small set of servers like that. If you have several thousands of servers that are globally dispersed, that's different. There are a lot of factors into what's considered cost effective in management.

Greg Hughes: Sure.

Daniel Parker: By using Quest you know where the patches are getting. It should not break your system. If you're using for example satellites, now that shouldn't break your system but it may break your configuration because there's no consistency across the configurations there. Does that make any sense?

Greg Hughes: Sure.

Daniel Parker: Because everybody can do things differently. Whereas in Quest, they give you a limited scope of how you could administer that stuff and you get what you get basically. So the cost is difficult to say without having a full list of requirements and a set of work.

Greg Hughes: I guess when I think about things like scripting and then as the environment grows, or if I think about -- I haven't messed around with Samba to much lately but in the past, you know, you can get pretty deep into that and get kind of lost.

Daniel Parker: You can.

Greg Hughes: It has a bit of reputation for being difficult to setup, administer and manage.

Daniel Parker: I would agree depending on what you're trying to do. It's kind of like when you send a mail. To get mail to float if you send a mail, okay, that's easy but if you're going to dive into the real jigsaw the thing is how many pages long. Yeah, it can definitely be overwhelming.

Greg Hughes: Yeah.

Daniel Parker: I had to think a lot about the skill set of your employees too.

Greg Hughes: That makes sense.

Daniel Parker: I've worked some Linux and if you aren't big Perl scripter, a COTS application is perfect for these guys. I've worked with some that are just, they're magnificent and they've managed a thousand servers with only a couple of people and it's been truly amazing at how well they ran. It's because they've clearly divide processes as well though.

Richard Campbell: If you've got a thousand Linux servers, you have a bunch of Linux admins and other than just figuring out how to get along with those guys, you're going to be able to work it out. I've got to think the toughest scenario is I have a Linux box or a couple of them in a basically Windows world and I only have Windows skills, how do I make this work?

Daniel Parker: Yeah. For something like that I would definitely go with the COTS application personally.

Richard Campbell: Right.

Daniel Parker: It's difficult to turn a Windows guy to be a Linux admin especially if they don't want to learn it.

Richard Campbell: Right.

Daniel Parker: Yeah, that would be very difficult. I think you'd be asking for disaster. So yeah, because like you have to weigh the risk.

Richard Campbell: I don't know if you've run into this particular scenario where Linux people perceive Windows as hopeless and just have no interest in trying to figure the out stuff out. Their answer to any problem here is go get a real operating system.

Daniel Parker: Actually I run into that quite frequently. The last time I run into that was actually from Sun folks but then they told me what version of Sun they're running and I just kind of laughed at them because they said Sun 7.0 and I'm like, "And you're laughing at me?" My OS hasn't been Sun 7.0 since 15 years or more??

Richard Campbell: Yeah. You're running the Windows equivalent of NT 3.5.1.

Daniel Parker: Exactly. So I'm like, "Nah." But that's a difficult conversation without offending anybody. But yes, that's not uncommon to hear. Well, if you take the GUI away from the Windows admin, what can you do? Well, there are still a lot you can do.

Richard Campbell: Yeah, and I feel like that's starting to change now with Core and PowerShell as well, but it's funny how much that one element colors the perception of Linux people.

Daniel Parker: You're exactly right. So the Core has made a huge step. I was excited to see that we released Core because I am a fan of the command line. I work faster that way. So I thought that was terrific to finally be able to do that and I think as people start using that, people will start becoming more and more familiar with it and it will dispel the perception that's out there from the Linux guys and UNIX guys.

Richard Campbell: Yeah. I find I just take them out for barbeque, you know. Let them eat and eat.

Daniel Parker: It works still.

Richard Campbell: Yeah and they all will get along better. Nothing like some good food. Maybe we got to just do a show on the psychology of making IT teams work together especially when you have these...

Greg Hughes: Well, I'm for it. That sounds good to me.

Richard Campbell: Yeah, it's some sort of you deal with these rival technologies and yeah, the first thing I do is get them out of the office and get them around a table where you can just talk for a while because so much of the pain is the same and actually we're trying to deliver results.

Daniel Parker: And it all comes down to communication.

Richard Campbell: Yeah, it really does. Isn't it?

Daniel Parker: It absolutely does. I mean, it's not impossible to make them work and in fact like I said it's rather easy depending on the solution.

Greg Hughes: It's about putting the right people around the table with each other a lot of times. I mean, you know that's a lot of the consulting that I've done over the years, it's improving the quality by tea teams and that's not a technology thing, that's people thing 95%of the time.

Daniel Parker: That's exactly it. I see it from both sides of the fence. Actually, you know, Windows guys not liking Linux guys and vice versa, and that's sad because everybody is here for a reason. I mean, we're all here to work together and whether it's in the corporate world or the private or public sector world, we're all here to support our customers and the people we work with.

Richard Campbell: Yup, that is the goal in the end.

Greg Hughes: Ultimately if you can't get along, then sorry but go somewhere else.

Richard Campbell: Yes, this is less...

Greg Hughes: Or draw a line somewhere.

Richard Campbell: The interop really is less of a technology problem and more just a plain old understanding problem.

Daniel Parker: That's true.

Greg Hughes: Yeah, that's a lot of truth.

Daniel Parker: Again it goes back to the Windows guys don't understand PAM, they don't understand NSS, they don't understand any of that. The Linux guys, they might understand LDAP but they'll come back and say Microsoft likes to do their own implementations of LDAP and just break it so that we can't conform. There's a lot that they can share out there and it's just a matter of communication setting everybody straight so that everybody understands what's there and what's not there.

Richard Campbell: Yeah, and it is a question of is that ever true? I mean Microsoft does do their own implementation of things but they seem to comply with the standards most of the time.

Daniel Parker: You're exactly right but, except for this. I mean, we obviously comply. I mean, where Kerberos compliant where you couldn't make this work. I mean, it just wouldn't work.

Richard Campbell: Right.

Daniel Parker: And we're LDAP compliant. We do extend on that? Absolutely. That's why so many organizations run Active Directory because we've extended on it and we made it that much better.

Richard Campbell: Right. Yeah, Active Directory does seem to have largely won in the marketplace in terms of the sort of generalized directory services for enterprises.

Daniel Parker: Yes. Now, I've personally tried to stand up in years some open LDAP solutions, OpenLDAP for example, and underneath the hood it's the same but make them work in a large enterprise it presents quite a few challenges. I mean, Replication. I haven't looked at it for while but Replication is a huge challenge. So yeah.

Richard Campbell: Yeah. Replication isn't fun and games in the Active Directory world either.

Daniel Parker: No. In large organization, when it breaks it's difficult to track down.

Richard Campbell: Yeah, it could be terrible pain.

Greg Hughes: Yeah.

Daniel Parker: We won't do that and that's a whole other conversation.

Richard Campbell: All right. Guys, we're just about out of time. Any final words around Linux in AD?

Daniel Parker: I encourage people not to be scared of it. I mean, it's not as bad as you think. Just talk to the Linux guys and the Linux guys talk to the Windows guys. There are lots of resources out there. You just got to pick out the good stuff and know what's valid.

Richard Campbell: And if you're just a Windows guy dealing with Linux, get some help.

Daniel Parker: Exactly. Don't be scared of it, that's the big thing.

Richard Campbell: Daniel Parker, thanks so much for coming on the show.

Daniel Parker: Thank you guys. Have a great day.

Greg Hughes: Thanks, Daniel.

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