



<http://www.runasradio.com>



Richard
Campbell

RunAs Radio is a weekly Internet Audio Talk Show for IT Professionals working with Microsoft products. The full range of IT topics is covered from a Microsoft-centric viewpoint.



Greg
Hughes

Text Transcript of Show #066
(Transcription services provided by [PWOP Productions](#))



Daniel Nerenberg Helps Us Migrate Windows!
July 16, 2007



Daniel Nerenberg Helps Us Migrate Windows!

July 16, 2007

[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 #66, with guest Daniel Nerenberg, recorded Thursday, June 26, 2008. RunAs Radio is produced each week by PWOP Productions, providing professional media and podcasting services online at pwop.com.

Richard Campbell: Yes, this is RunAs Radio. You're listening to Richard Campbell and Greg Hughes.

Greg Hughes: Hey, how are you doing?

Richard Campbell: I am well, sir, and you?

Greg Hughes: Good and we're back, we're back.

Richard Campbell: More of the same, another week. It's actually my birthday today.

Greg Hughes: Happy birthday to you.

Richard Campbell: It doesn't matter much, you know, once you're past 40, it's all downhill from here anyway.

Greg Hughes: Yeah, I was going to ask you. So, how ancient are you now?

Richard Campbell: Just about as ancient as you are, sir, thank you.

Greg Hughes: 41, huh?

Richard Campbell: Yes, indeed. Yes, indeed.

Greg Hughes: Welcome to the club.

Richard Campbell: Yeah, I'm not complaining. It only gets better.

Greg Hughes: That's right. Yeah, and speaking of getting better, there are lots of Windows tools that have gotten better over time and that's what we're talking about this week.

Richard Campbell: All right, Greg. Let's introduce our guest. Daniel Nerenberg is an MCT, MCSE, MCITP, and an IT Strategy Advisor based in Montreal. He is also the President of the Montreal IT pro user group at mitpro.ca. Daniel is passionate about technology and the amazing problems that can be solved with its application. Driven by the desire to see cool technology bring people together in global

and local communities, he is always driven to learning about the next big thing. Daniel has had the honor of receiving the Microsoft Most Valuable Professional award for 2007 and 2008. Daniel has written and consulted on the topics of Windows Deployment, Application virtualization, and Windows infrastructure. Daniel also writes regular updates for "The Lazy Admin" Tech guidance website at www.thelazyadmin.com.

Greg Hughes: Ah yes.

Richard Campbell: Welcome Daniel.

Greg Hughes: Hi, Daniel.

Daniel Nerenberg: Hi, thank you very much.

Richard Campbell: So, we met -- of course, I've known you for a while now actually, but we met at TechEd IT Pro week. You were in Speaker Idol.

Daniel Nerenberg: I was and it was a lot of fun.

Richard Campbell: It is a gas, isn't it? Its hard work though, five-minute session is not an easy thing to do.

Greg Hughes: That is tough.

Daniel Nerenberg: No, especially for someone like me who just loves to talk.

Greg Hughes: I recall you did five minutes on the values and virtues of a Lazy Administrator; is that right?

Daniel Nerenberg: That's it, uh-huh. So I guess my goal was just that I'm opposed to doing work repetitively when there's an easier way.

Greg Hughes: Sure.

Daniel Nerenberg: And Microsoft has done a whole lot of really great things to make Lazy Administrators as light as possible.

Greg Hughes: Right.

Daniel Nerenberg: Amazingly, there's a ton of these things that are free or not free in the sense that go and grab them, but free in a sense that if you have the infrastructure, you can use these tools to better use that infrastructure.

Richard Campbell: It's cool.

Greg Hughes: Sure. A lot of things you can automate now in better ways of automating, but yeah, you're right. If you have somebody that's well trained



and they spend a lot of time just doing the same mundane thing over and over again, you're not really necessarily really spending your money very wisely, are you?

Daniel Nerenberg: That's it. Microsoft has a lot of -- they have the Microsoft Operations Framework.

Greg Hughes: Right.

Daniel Nerenberg: They have Microsoft Solutions Framework, just kind of the older big brother of MOSS, and then they also have stuff like IOI or Infrastructure Optimization. All these kind of frameworks and things kind of seem markety at first. You're not use to looking at them, but when you dig in, there are a lot of wealth of information and then they have a lot of tools that are coming out that are based around those infrastructures. So, it's almost like all these frameworks are the theory and then all these tools are the practical aspects of these frameworks and the implementational section and really the fun part because this is where you get to do really cool things and make very complex processes kind of happen at the snap of a finger and that's definitely where Windows Deployment Tools, which used to be called BDD or the Business Desktop Deployment comes in.

Greg Hughes: Right.

Richard Campbell: So why don't we just dive right into that? I thought generally our topic was around migrating to 2008?

Daniel Nerenberg: Absolutely.

Richard Campbell: But the Deployment Toolkit, these are important parts of making that migration happen?

Daniel Nerenberg: Oh sure. I thought I start with a very CliffsNotes history of Deployment in Windows.

Richard Campbell: Sure.

Daniel Nerenberg: Basically, a lot of the deployment knowledge is coming from Desktop Deployment Tools. So, as I mentioned before, BDD or Business Desktop Deployment came out about four years ago I think and was originally based on a whole bunch of scripts and the automation file that plugged in, so some of those scripts were kick starts, some were VB scripts, there's INI file, XML file. It was a loosely bound solution with some pretty decent guidance and it wasn't really what you would consider a Microsoft product. There wasn't an MC console, there wasn't very much there. There's some very basic Wizards. There was some disjointed processes to build your images and then to deploy your images.

It wasn't so clear cut and it could really be a project to get it going. Then when Vista was released, they came out with BDD 2007 and I think you've talked a little bit about that on the show before.

Richard Campbell: Yeah, Mitch Garvis talked about it last fall.

Daniel Nerenberg: Absolutely, so basically wrapping up the best practices that were in the original BDD version, taking all that knowledge, putting into a more product type kind of base I would say. So, basically we dropped all these scripting things and kind of wrapped it into a nice console that had a nice step by step feel to it. You could kind of logically go through it and build up your installation and build up your deployment points and whatnot and really get pretty quickly something that you can deploy, let's say, upgrade an XP to a Vista or refresh a Vista box or even manage your XP environment with their tool. The next step was of course Windows 2008 because Windows 2008 Server and Windows Vista are based on the same installation methodology, so using that WIM image concept where it lays down the image and then it kicks off some processes to build up the installation. Because of that, Microsoft was able to take what they learned from the BDD and they have rechristened it Windows Deployment Tools 2008 and so it's designed knowledge to deploy Vista or XP but also now to deploy Windows Server 2008 and if need be, I think you can even use 2003 these days.

Greg Hughes: Very cool.

Richard Campbell: Wow. Are these remote deployment tools?

Daniel Nerenberg: Sure; you can use a bunch of other components. The thing about Windows Deployment Tools is that there's still quite an array of technologies being used but what is pretty incredible is that you can get a lot of distance using and leveraging tools that Microsoft provides for free downloadable off their website and I think that's really what excites me because one of the things that they quickly realized way back in the beginning of this BDD thing was it wasn't just deploying bare metal workstations or servers even. They wanted to upgrade a server. They wanted to replace the machine. They wanted to refresh the operating system. So, they needed tools to kind of help facilitate that process so you get a tool like USMT or User State Migration Tool which is one of my favorite tools.

Richard Campbell: I shrinksterized this so I should bring this up, USMT is at shrinkster.com/zq6, Zulu, Quebec, 6. So, this is for moving user state data from XP to Vista?



Daniel Nerenberg: Correct, so XP to Vista. You can also use it to migrate terminal service profiles from 2003 to 2008.

Richard Campbell: Ah, okay.

Greg Hughes: That's pretty cool.

Daniel Nerenberg: Anywhere with a profile, you can use this to migrate. You know Windows Easy Transfer. Everyone has heard of this tool. It's built into Vista. There was an earlier iteration for XP.

Richard Campbell: Sure.

Greg Hughes: Right.

Daniel Nerenberg: So USMT is kind of what I'd like to call the professional edition of Windows Easy Transfer.

Richard Campbell: All right, so are you transferring between machines here?

Daniel Nerenberg: Sure, you can actually -- that's the nice thing is you can create a user state backup for the same machines. Let's say you're doing what they call a refresh. A refresh is not upgrading the OS. What you're doing is you're taking a backup of the user state, you're wiping out the OS, you're layering on a new installation, you're putting an application back on fresh and then you're layering that user state back on top of that.

Richard Campbell: That's very cool and along the way, you may be going from XP to Vista at the same time but rather than actually doing an upgrade, you back up that state information, blow the machine clean, install Vista, set up all the apps, then load the user state back on.

Greg Hughes: Yeah, that's cool.

Daniel Nerenberg: Yeah, and even if you're just doing a -- you know, to address some environments where maybe Vista is still, let's say, a few months out or even a year out before they're going to a deployment, there's been a lot of talk about how your XP machine in some cases gets bogged down for whatever reason, well, that's another great use for USMT because you can incorporate that into your overall deployment process and refresh the box for the brand new, fresh, spanking clean installation.

Richard Campbell: So, not even changing the OS, just trying to clean, get the croft out of the machine, get it up and speedy again, you could do the same thing.

Daniel Nerenberg: One of my favorite stories about USMT was when we were doing a Windows XP deployment. This was back before Vista was released. We had a customer who had about 300 desktops and wanted to come and get a hold of things because they were just growing and growing and growing and they foresaw getting up to a thousand quite easily. That was one office they were doing this kind of pilot. "Can we get things under control?" Just to give you an idea of how out of control things were, they had two Active Directory domains and one Novell NDS domain.

Richard Campbell: Oh man. How many workstations?

Daniel Nerenberg: Pardon?

Richard Campbell: And how many workstations?

Daniel Nerenberg: About 300 workstations.

Richard Campbell: Holy cow! That's out of control.

Daniel Nerenberg: Yeah. So, on top of that, a large number of the Novell connected clients were configured as workgroups and the Windows logged on account was actually just the asset tag number that was assigned to a local user account and then they would log in with another user account to the Novell directory. We were in a meeting and they're talking about -- you know they have two projects on the table. One was migration to XP because they are all on 2000 NT force bill, and the other project was save us from ourselves, we want to get rid of these Novell stuff, we want to get one Active Directory now where we want to start over from scratch. So with USMT, it became clear that we could actually achieve all those goals in a single project and we merged those two projects and what we also do with USMT was modify the deployment process just a little bit so that we kind of specify the username of the new account or the destination account, the new domain, and it would go and it would scoop up the profile whether it was a number, whether it was the Novell name, whether it was an account in one of the tools active directories. It would rename those and then pull up the machine and when the new machine was pulled up, we had all the account documents and all the old information in the new account name, they've logged in with one account and they logged in against the new Active Directory. On top of that, they were using Lotus Domino and Lotus Notes and with USMT, you can figure pre-defined templates that will go and capture the Domino information out of the registry. So, we were able to migrate their Lotus Notes clients as well.

Richard Campbell: Awesome. What I really like is the fact that you can tinker with this so that you can



go in and grab additional information that it turns out is actually user state data. It is not just necessarily the app that you own.

Daniel Nerenberg: And one of the things that you are going to have to do once you start looking at USMT is to check out the CHM file because that's about the Help file that's included. A little note, a little caveat, it's not yet running on a Windows 2008 server so if you try to install it, you will get some friction, you will get some error messages and if you try the migration tools, it's not quite working yet.

Richard Campbell: Oh okay.

Greg Hughes: I noticed in the release notes, yeah.

Daniel Nerenberg: However, you can count on it in 2003 so you will need that in your environment in order to run the tools. It will run, of course, on an XP box and on a Vista box.

Richard Campbell: Right, but what a great solution for mass migrations like that.

Daniel Nerenberg: Exactly and the beautiful thing about it is that you can go and download this today and leverage those tools right now today. So if you're kind of wondering, you know, I have maybe a bunch of laptops which are about to become managed boxes and how do I get the user state out there because that's the one thing all my users are screening for, you can take USMT and go and do that without having to think about any other deployment tool.

Greg Hughes: When you say user state, for people that haven't looked at this tool yet or actually haven't done this, maybe they're doing it all by hand, what are always included in "user state?"

Daniel Nerenberg: Great question because user state, you can say the Document and Settings folder slash the username, it can be all the user state accounts on a particular machine. You can literally specify with USMT if you want to go and scoop up all that data, move that over to another machine. You can specify a single account. You can specify you want all the domain accounts, all the local accounts. There's a lot of granularity and a lot of play you have with the tool. It also includes a lot of application data and it provides an opportunity for you to modify the built-in application templates. So, there's a bunch of XML files that are included with USMT that allow you to specify or customize the user state capture to the application user information you want to capture. So for instance, if you're using an application that doesn't follow a code in or Microsoft's standards, so it doesn't put the user data or the user configuration information

to the user's profile. It puts C:/Program Name or Program Files, Program Data or something like that.

Greg Hughes: Sure.

Daniel Nerenberg: What you can do is you can actually customize USMT to go and pick that file up or to go and capture its registry keys even at a registry that's specifically configured that application use. Now, you have to remember, when you reapply that profile, you usually want the application to be installed and that's where you're going to have...

Richard Campbell: Right.

Greg Hughes: It needs to be there ahead of time, sure.

Daniel Nerenberg: Some leg work to do because you have to kind of get the order right when you take that application away and when you paste it back down onto the new box or when you reinstall it on the old box. You have to make sure that the order that you put the user data down and then the application down, the works, usually it's the application first, then the customized data.

Richard Campbell: And I can see doing this a few times in the lab to try and get it right but ultimately it will save you a ton of time in the 100, 200, 500 workstations you've got to roll it out to.

Daniel Nerenberg: Absolutely and it's a sweet spot too. It's funny you mentioned because there are tools that Microsoft released like Configuration Manager that are designed to help with this as well. It's just that there's been kind of a gray area or a tough spot where the value of those tools is hard to justify at that 200, 300 desktops or server deployment level. These tools have come in and really filled a bit of a gap because they have provided enough automation so that you can still keep a relatively small team to manage a quite large environment.

Greg Hughes: Right.

Richard Campbell: It does seem that there are a class of tools out there that are really aimed at the 1000+ seat mark and are just clumsy and overkill for the 200 mark.

Daniel Nerenberg: Well, that's it because the time you would have to invest to get that tool working just right for 500 computers is not really that great a return but when you're talking 50,000, well, you can set up a team and you can have that team trained and you can bring in the consultant...

Richard Campbell: Sure.



Daniel Nerenberg: You can spend the money, bring that tool up and then push out your migration pieces. So going back to the Windows Deployment Tools that there are three different ways you can deploy it and in context of our previous discussion around USMT. So, there's the light touch which means that you still kind of have to go to the computer and press F12 to get it to do a network boot and download that information.

Richard Campbell: Right.

Daniel Nerenberg: And then there's what they call zero touch and that's where you start integrating those higher end applications where you're basically able to do it without going to the computer and then you have the Holy Grail of deployment which they call zero touch with provisioning and that's basically the user is able to kind of log on to a website and say, "Well, I want my computer refreshed for Monday morning," and he kind of schedules that for Friday at 5:00 and Friday at 5:00, he gets up out of his desk, leaves his computer on which automatically downloads an image and goes through the whole process without anyone really caring and maybe, at most, the manager will authenticate that or approve that reinstall.

Richard Campbell: Then it's just a workflow request and that's it. That just seems a little *Holy Grail-ish*, but I see where you're going with that and I guess when we're talking about the Windows Deployment Tools, and that's at shrinkster.com/zq8, so Zulu, Quebec, 8, and when you actually go there, it says Microsoft Deployment Toolkit so let's not get too confused.

Daniel Nerenberg: That's right.

Richard Campbell: If I'm thinking in the context of a typical server farm, I'd probably be pretty comfortable with that light touch configuration. I'm going to go do half-a-dozen or a dozen servers that I'm upgrading to 2008. That seems acceptable to me.

Daniel Nerenberg: Don't forget that there are even ways to go and get even that zero touch where you get your server and you'll get the information about the server so you can pre-populate, for instance, an Active Directory with the BIOS with GUIDs, that's like kind of a unique identifier for that computer in your Active Directory, and then when that computer boots up, it will not have an operating system so it will default to the network boot procedure with Windows Deployment Server and when it gets that, it basically grab that image and deploy it right down bare metal. You don't have to do much more than just turn the machine on.

Richard Campbell: Yeah. Of course the challenge here is to try to coordinate all these different products. When you talk about Windows Deployment Server, this is the Microsoft Deployment Toolkit, there's also Systems Center Configuration Manager...

Greg Hughes: The Automated Installation kit. There's a bunch of different stuff.

Richard Campbell: Yeah, don't forget about SMS. I think it's a struggle just to figure out where all these products fit into the equation.

Daniel Nerenberg: Yeah. It's tough for someone who is going to look at this for the first time and I've talked to a lot of those administrators who are the kind of the firefighter types who say, "You're talking about stuff that I would just love to do but I'm so busy with my life as an administrator; I just don't know where to begin."

Richard Campbell: Right.

Daniel Nerenberg: I think that they feel overwhelmed. They feel like there is just so much out there. I would suggest as a path to start with downloading the Microsoft Deployment Tools. I kind of messed up before calling it the Windows Deployment Tools and of course that gets a little bit confusing because you have Windows Deployment Services which is the piece that is responsible for pushing out images over the network. So, Microsoft Deployment Tools 2008, it's a small download but from there you can actually go and get that USMT. You can go out and get the Application Compatibility Toolkit which was the other tool that I just really quickly want to touch on it if we have a bit more time.

Richard Campbell: Sure.

Daniel Nerenberg: It will also provide a lot of documentation on kind of where are the steps to go and get not necessarily the Holy Grail, but at least about 75% of the way there.

Richard Campbell: It sounds to me like the Microsoft Deployment Toolkit is the hub of this, start here, and that will lead you to USMT and to ACT as well.

Daniel Nerenberg: That's what I would say as well. That's a very fair statement and I think that the Application Compatibility Toolkit, so that was the other thing about pushing out and this is specifically to moving from, let's say, XP to Vista.

Richard Campbell: Right.

Daniel Nerenberg: One of the reasons I like this particular tool is that it allows you to get an inventory



for free, I call it. You basically can create a little package to scan for a specific thing. So now you can scan for the applications that are installed on your workstation that are out there and you can also scan for the web applications that people are using and check whether or not those applications will have problems in IE with restricted mode. The interesting stuff about that is once you bring that all down to the database because basically how it works is you design this profile, you push out that application using an installation software so you can manually go and install in the workstations or you can push that with group policy or you can use a logon script to push that out, and once that's installed, it runs for X number of days and you define that in the application compatibility toolkit and then it brings back that information to the central database and it's a very simple way. It works extremely simply. It just pushes the file to a share and then the server that's running the app compatibility toolkit scoops up those files, process them into the database and after about three or four days, you get a pretty fair look at what's going on in your network.

Richard Campbell: Okay, let me just see if I get this. So, I'm using the Application Compatibility Toolkit, that's at shrinkster.com/zq9, Zulu, Quebec, 9. So, I install this on my workstations either via group policy or manual install, doesn't matter, and it actually watches my users using their machines and to figure out what apps their using?

Daniel Nerenberg: Correct.

Richard Campbell: Well, that's really cool. So you get a real inventory, not what's installed on the machine but what actually got used over some time period.

Daniel Nerenberg: Right. You get both. So it will pull it down what's on there anyway, but it will also pull down a good listing of what's being used and that's one of the ways it protects us. It also looks at how that application is using the system.

Richard Campbell: Right.

Daniel Nerenberg: So it can watch a custom app execute and go on play an HKEY local machine which is a big no-no when you get to Vista.

Richard Campbell: Right.

Greg Hughes: Right.

Daniel Nerenberg: It will kind of say, "Okay, well, you might have to do something to resolve the issue with this application."

Richard Campbell: What a great way to figure the problems out ahead of time as you actually see. It's not that I know what this app is or what version it is, but this is what the app did and that's why it's going to cost problems.

Daniel Nerenberg: Correct, and then you can further go out and pull down a collective information that Microsoft allows people to contribute to; to go on find what they call shims, to go on fix those application issue. Amazingly, this little piece of software is essentially free. Another great tool that I find really hits that sweet spot between getting past 50 computers up to 500 to 600 computers and this the kind of tool that can really save a lot of time and help you be as we mentioned before a lazy admin because who wants to walk around every computer and inventory them manually.

Richard Campbell: Yeah, and even if you did do that, you're not going to get the kind of profile information that these tools are going to gather over a span of a week. How much overhead does ACT actually put on the machine then? Does the customer or does the user really feels that that app is actually running?

Daniel Nerenberg: So, it really depends on the machine that it is running on and you see that that mileage may vary kind of saying because some machines, it will be very transparent. Other machines, they may actually be, say, the policy might caused some flaw which brings up a really good point, it's that if you're going to use this tool, I highly recommend a very strong communication plan to use it because as you mentioned, you're not just looking at the applications that are installed which kind of raise the fur on people's neck sometimes in some situations, but you also get the applications by using the websites that you go to.

Richard Campbell: Right.

Daniel Nerenberg: So people like to be aware of these types of things even if they have no reason to be aware. It helps things kind of move forward and...

Richard Campbell: You're now going to know how much time they spend on Facebook.

Daniel Nerenberg: Exactly and whether or not Facebook works on Vista, which of course I think it does.

Richard Campbell: Yeah, I'm betting it will.

Daniel Nerenberg: Again, it's just a question of making sure your users are aware of what's going on because I have seen situations where these tools have been deployed indiscriminately because they



were trial and the only way they could really feel they have a way of trialing it or testing it out was to push it on to an unsuspecting group of users and of course they will come in Monday morning and I think they named the package because you can custom name these little packages you create to go and collect these data and they call it something like looking at website information that people are browsing or something, .msi.

Richard Campbell: Nice.

Daniel Nerenberg: Of course, everyone saw this on their computers in their logon process, installing and looking at where you're browsing .msi and people naturally got a little bit uptight and kind of freaked out.

Richard Campbell: Yeah, this is right on the edge of spying on your users.

Daniel Nerenberg: Absolutely and then it comes down to you may not be allowed to run this application in some instances.

Richard Campbell: Sure.

Daniel Nerenberg: It's definitely an important aspect of any kind of deployment project just to understand how the tools you're going to use make your life easier has an impact to people in the computer environment that you're migrating or you're affecting.

Richard Campbell: You don't want to create an HR nightmare over you're just trying to figure out how to migrate to Vista safely.

Daniel Nerenberg: Exactly and it is the same thing that goes for user state migration tools. Some of the areas you have to watch out for are encrypted files. A lot of the times, that user state migration tool is not going to run in the instance of the user that you're migrating. So if that person has gone and encrypted some files on their hard drive that they haven't told you about, it's possible that you get left behind or you can create little error states for your migration to say, "I'm going to stop now because I just hit some encrypted files."

Richard Campbell: I've got to wonder if I was doing that whole user state migration or the whole concept of a refresh to the machine or an upgrade to the machine to just snap an image of the current state of the machine that I could always revert to given that I have scads of disk space sitting around to store all these images.

Daniel Nerenberg: Sure and there is actually something to distant planning in there about that and basically yeah, you have to have enough space to

store a complete image of the PC if you wanted to do that, and now with ImageX, it used to be that you did it with a ghost, so you ghost to the box before you did any real action to it up to the server and in a lot of cases, my customers will keep that for upwards of six months.

Richard Campbell: Yeah.

Daniel Nerenberg: And then every time that they're missing a file or something, they had a few emergencies where they really needed that old image back, they were able to layer it down on 200 test boxes and give it to the person for a day or even just go with a browsing tool and pull that file out of the image.

Richard Campbell: Yeah.

Daniel Nerenberg: Now, that's all built in with Microsoft Deployment Tools so that it's going to copy the PC image as a WIM image, so even better, you can mount it to their computer as you need or you can mount it to your own administrative console and browse through their files, grab that file and send it out to them.

Richard Campbell: Yeah, it just becomes a driver letter on the machine. It's a very compelling model given you have the disk space because these things are big. It's very compelling.

Daniel Nerenberg: Yes. We blew out a few network attached devices, storage devices that are doing a migration of 300 boxes before where we were backing up everyone. I mean they had about five of those built-in a pizza box appliances with 2 terabytes each. It's pretty impressive how fast it can blow through a terabyte of data.

Greg Hughes: All these tools have really grown up. The usability has really improved then and it's back to the original point about a lazy administrator or maybe the thing is about there's a lazy administrator that can be lazy or is just sitting around just watching and things are running smoothly, that's really what you're looking for. These tools have really changed and grown overtime to help support that.

Daniel Nerenberg: Absolutely and it's a great point you bring up about lazy administrator. It's something that I always like to address and say that the lazy administrator isn't someone who is going to address an issue that comes up with what happened.

Greg Hughes: Right.

Daniel Nerenberg: It's just by nature you don't want to do that and the way you accomplish that is to



use the best practices, use the tools that are available and implement them in effective ways possible to accomplish and kind of reap the most benefit which should be that you're watching a finely tune machine and you can kind of put your feet up on the desk and enjoy that sense of accomplishment and work on the next challenge which is going to be doing extra automating wire or whatever.

Greg Hughes: Yeah, it's the proactive approach. It's kind of the do I want to be proactive and prevent problems or do I want to be fighting fighters and responding to them all the time? I think it's a very good point and something that IT people should be thinking about every day.

Richard Campbell: Daniel, we're getting to the end of the half hour, if you can believe it. So I think we've sort of outlined the sort of spread of plate tools that folks need to look at if they're going to make these migrations. Any final words?

Daniel Nerenberg: It's been an absolute pleasure talking with both of you guys and I think just to speak back, we did kind of jump around a bit. We covered a lot of different tools and talked about a lot of interesting things. You know, small bite, don't get overwhelmed. There's so much that I haven't seen and I haven't looked at in a lot of areas around deployment and around managing and monitoring deployment and the only way that I get through it every day is I take a small bite for today and I go through and I learn something new and looking at this, the Microsoft Deployment Tools, looking at USMT, and Application Compatibility Toolkit, just take small bites. Download one tool, learn it, find a use for it, test it out in your lab environment and as you move forward, you'll kind of get comfortable and you'll add it to your tool belt.

Richard Campbell: Absolutely.

Greg Hughes: For more information or to read even more about what Daniel is talking about, don't forget about thelazyadmin.com, which really is a great site, Daniel. You've got some good stuff there.

Daniel Nerenberg: Absolutely. Thank you very much guys.

Richard Campbell: Daniel Nerenberg, thanks so much for coming on the show and we'll talk to you next week on RunAs Radio.