RunAs Radio

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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.

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Mitch Garvis Gets Us Deployed with MDT 2010!
December 30, 2009

[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 #141, with guest Mitch Garvis, recorded Wednesday, December 2, 2009. 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 Brandon. This is Richard Campbell with me as always, my co-host, Greg Hughes.

Greg Hughes: Hey, how is it going?

Richard Campbell: All is well, my friend, all is well and you know we are getting some email every so often although I haven't been reading them lately but if you do have a question or a concern or idea for show on RunAs, please send us an email at info@runasradio.com.

Greg Hughes: Yeah. Your information, your questions, your input is really a lot of what drives who we talk to on the show and the topics that we bring up.

Richard Campbell: Obviously it's time for me to get a bunch of RunAs mugs made up so I can bribe for more emails, too.

Greg Hughes: I want one too when you get one.

Richard Campbell: Okay, it's on my list of things to do. Well let's dive right into the show here, we have another returning guest, one of my favorites, Mitch Garvis. Mitch is an IT Trainer with a passion for community. Having founded and led two major Canadian user groups for IT Professionals he understands both the value and rewards of helping his peers. After several years as a consultant and in-house IT Pro for companies in Canada, he now works with various companies creating and delivering training for Microsoft to its partners and clients around the world. He is a Microsoft Certified Trainer, and has been recognized for his community work with the prestigious Microsoft Most Valuable Professional award. He is an avid writer, and blogs at garvis.ca, welcome my friend.

Greg Hughes: Hi Mitch.

Mitch Garvis: How are you guys doing today?

Richard Campbell: Real good. Now I hear you're in my town.

Mitch Garvis: I am, I'm sitting, overlooking the beautiful mountains from the Fairmont Vancouver Waterfront and just really enjoying the weather here.

Richard Campbell: Welcome to the best place in the world, my friend.

Greg Hughes: Nice spot.

Mitch Garvis: Thank you very much. Now, if I only have one of those RunAs radio mugs to be drinking my coffee from, I'd be all set.

Richard Campbell: All right, it's obviously a list of mugs I need to get done here. So Mitch we were literally talking yesterday and I said you know what I really need a show on? The Microsoft Deployment Toolkit 2010 and you said, "Hey, I'm talking about that in Vancouver this week."

Mitch Garvis: Well that's right Richard, I've been on a roll on Microsoft Deployment Toolkit 2010 for the last six months or so mainly because, you know that ever since BDD 2007 or Business Desktop Deployment 2007, I've been an avid deployment guy and we even spoke two or three years ago about BDD on the show and when I look at some of the new features of MDT 2010, I really have to say, "Wow, these are huge improvements." Now, the old version, 2008, was great and there are couple of new features that make me say wow, they actually found something to improve on a good thing.

Greg Hughes: So before we jump into new features and stuff, for people who are not familiar with what the Deployment Toolkit is, why don't you give us a quick run down, who uses it and what do they do with it?

Mitch Garvis: Let me explain to you as if I was explaining it to my mother.

Greg Hughes: Okay.

Mitch Garvis: We all have a computer, most people, once in their life, will either have to install an operating system or have someone else install an operating system for them, that's not who the Toolkit is for. Imagine you have two computers and you want them to be identical or you have 10 computers and you don't want to spend half an hour to an hour on each one installing the operating system and all of your applications. Imagine you have a hundred or a thousand or 10,000 computers where you want to install an operating system and applications and patches and drivers and then you need the Toolkit. So the Toolkit is an interface that allows us or an application from the Solutions Accelerator Team at Microsoft that allows us to import our operating systems and it's the source files, we are importing, if I look at mine right now I have the source files for all

the versions of Windows back to Windows XP Service Pack 3 and I've imported the source files from the original source media. I then have my applications in another tab and here I have Microsoft Office 2007 and Office 2010 Beta and my Adobe Reader and my Flash player and my, this is for personal use and for a demonstration I have tonight, so I have Microsoft Security Essentials which is the new anti virus offering from Microsoft...

Greg Hughes: Right.

Mitch Garvis: And I can import any application that I would need here, I then have a tab for out of box drivers so anything that is non-standard or not included in the base Windows installation that I need in my corporation or in my environment. I then have a tab for packages and packages can be patches, they can be service packs, they can be anything that you would normally either slipstream in or install right after you install the operating system, they could be language packs for example.

Greg Hughes: I got you.

Mitch Garvis: And all four of those together are the building blocks for what our computers are. Now, like I said for a single computer, this would be a waste of time...

Richard Campbell: Right.

Mitch Garvis: Because for one single computer I install my operating system and then I install my applications and if I were to build my deployment environment in MDT, it would then take the same amount of time to do it and this isn't necessary but if I want to do an office's five computers, I can import all of my operating systems, applications, drivers and packages, I can then create a task sequence, a task sequence literally says what do you do first, what do you do next, do you wait, do you not wait and that goes from picking up information, picking up your profile, formatting or partition your hard drive, installing the operating system, pressing next, all of that happens in the task sequence and once you have your task sequence, you build your deployment point, the deployment point is going to be either a network share where you boot from Windows PE or Windows pre-installation environment into the deployment share and from the remote network share, it installs your operating system and all of your applications or it can be on a DVD where you do that from or it can be on a USB key. So now we're all playing with these little netbooks like my little Dell that I have here, there's no CD-Rom in it, there's no DVD or CD Rom so I have to have another way of installing my operating system and if I happen to be sitting on a hotel room in Vancouver, I don't have my network infrastructure to play with. So I'm going to build a USB key with my operating system and my applications or my entire Media Deployment Point, plug it into my netbook, turn it on and boot from USB and everything gets done automatically.

Richard Campbell: No kidding?

Mitch Garvis: That's what the Deployment Tool Kit does.

Richard Campbell: Will it actually build a bootable USB for you too?

Mitch Garvis: It doesn't boot the bootable USB, what it does is it creates, it gives you all of the files that you would copy onto a bootable USB and you can go to my website at garvis.ca and there is a very simple blog post called creating a bootable USB drive, five or six simple steps in this part and it will also create an ISO image for you. So if you're not creating a USB, if you're creating a DVD, all you have to do is burn your ISO image to your DVD. Now there's a third option that we said before is the network boot and the network boot I have several ways of doing it, I can boot from, I can send you a link, if you have a Windows XP or a Windows Vista machine running, I can send you a link and you click on that link and it accesses my network deployment point and it kicks off the installation from there or I can create for you, for machines that you're not upgrading a Windows PE disc that will access my network or I can import that Windows PE disc into Windows deployment services and have Windows DS as my network boot and that accesses my deployment share created in MDT. So I have all sorts of options here and the great part about this is everybody says, "You know, this sounds very complicated." I have been preaching to crowds for three, four, five years on how this works and everybody has always said it's not worth the trouble to learn and it's not worth the time to set up. Well then when I set foot in front of their audience and while I'm talking and joking with them, in about 55 minutes I have not only set up the environment from scratch but also kicked off my first deployment.

Greg Hughes: Right.

Mitch Garvis: Now if I'm talking over that then chances are it could have been done in 20 because you know that I like to talk then we have a ball game then they say, "Wait a minute, 20, 25 minutes to create a deployment infrastructure? Maybe this is something I should look into."

Greg Hughes: Now when you're describing this, you're talking about I have a tab for this and I have a tab for that, this is a wizard driven or a tool that I can use to do this, I'm not cobbling this together and going to .ini files or creating my own XML files, this is something that helps me along the way.

Mitch Garvis: There are XML files in the background, there are .ini files in the background you don't see any of them. You load the deployment workbench, the deployment workbench is a Microsoft management console that has three columns and I'm looking at them right now. The first column is My Navigation, my second column is what's within each tab in the navigation columns. So if I click on operating systems, I see all of my operating systems and if I click on task sequences I see all of my task sequences and my third tab is My Actions pane and that's it. So if I were to, for example, I wanted to create a media deployment point right now I would go into the navigation bar under advanced configurations, I click on media and in the actions pane I click on new media and I'm going to do it for you right now, I'm going to say I have a directory, I actually have to create that directory on my hard drive in order for that to work. So let's say I'm creating a media point and I'm going to call it media, on my E: drive my media path is E: media, my comments, this is my media deployment point. I click on next, it gives me all the details, next thank you very much and it has taken, it's done by the way, we're finished. I'm looking at the confirmation script that says it's completed successfully and it says it's created my new deployment point or my new media deployment point. Now it hasn't copied all of the files into that yet that's the next step and the great, I told you there were two new huge new features in MDT 2010, the first one is that it's all PowerShell driven. So on this confirmation screen I can click on view script and see the PowerShell script that is everything that happened in the background...

Greg Hughes: Oh, okay.

Mitch Garvis: So all I would have to do, if I wanted to recreate this, is save this PowerShell script and import it into my new deployment point. Imagine the repercussions for a small business consultant who has 20 clients, 30 clients, 50 clients where he only has to do rather than going through everything, all he has to do to make sure that every environment that he manages is a uniform environment is copy all of his PowerShell scripts from his gold image and bring them over to every other client. He could then have a $20 an hour technician do this rather than having to spend his valuable time...

Greg Hughes: Sure.

Mitch Garvis: Making sure that everything was identical across the board.

Greg Hughes: You know Mitch, that raises a question in my mind. If you are dealing with multiple companies as a consultant for example or even if you're an organization that doesn't have maybe a volume license agreement, so you'll have to deal with individual installation or software license keys for each copy of Windows for example, does that work in this environment or does it require sort of a single key volume license type of application?

Mitch Garvis: It absolutely works in this environment. Let me go through, I'm going to create a new deployment share and I'm going to call deployment share one and I'm going to give it a new name called deployment share one string and I'm just going to go through this. Now my next screen is allow image capture and I'll talk about that in a minute and I can say yes or no. The next screen asks the user to set the local administrator password, yes or no, then next screen is you want to ask users for a product key. Now, in what we're calling the LTI or Light Touch Installation...

Greg Hughes: Right.

Mitch Garvis: This isn't all done automatically, it's for the most automatically and at the other end there's an end user who presses a few buttons based on the script that you pulled. You give a new employee a printed sheet of paper that says follow these instructions and they go through about seven or eight screens and they run their deployment.

Greg Hughes: Yeah, I remember way back in, what was it, 2007, you talked about Light Touch and Zero Touch installations, it sounds like you're kind of going back to the same theme here.

Mitch Garvis: Deployment methodology for Windows Vista or Windows 7 hasn't changed a whole lot, LTI Light Touch and Zero Touch or ZTI are still very much in play and if I do have an organization which has a configuration manager, systems center or a config manager set up then I could certainly set up my ZTI but this is a simplified deployment for anybody to use. This is for companies of fewer than 500, this is for companies that have let's say 500 or fewer workstations...

Richard Campbell: That's right.

Mitch Garvis: So they can set this up, ask the end user to enter their product key because it's written on a sticker on the side of their box and you don't have to worry about volume license keys anymore. Now the alternative to that, I can say that don't ask the user for a product key and I have my volume license keys to my company because you can get one if you have five workstations I believe, for five copies of Windows.

Greg Hughes: Right.

Mitch Garvis: I enter that, it gets pushed down and that's another step for the end user or the guy at the other end pressing keys, it doesn't have to input.

Richard Campbell: Mitch, why don't we dig into drivers just a little bit because I think that's the hardest part of these especially operating system level deployment is how do you deal with the different driver requirements of different machines?

Mitch Garvis: Sure. Drivers, now if I were to install my Windows 7 on a machine I bought six months to go, that was a standard desktop with a standard or a common video card that's included in the Windows 7 Media, I don't need to worry about drivers but let's say I'm looking at a Dell Latitude E6500, like the one I have in possession. Now there are some components here that are not standard, the fingerprint reader, the card scanner or the card slot, all of these are hardware components that are not standard and are not included in the Windows 7 bill that we get our media from. So what I would do if I had 10 of these or 20 of these or 50 of these or 500 of these in my organization, I would go into my deployment share into the out of box drivers tab and I would import my drivers out. I'll probably create a new folder called E6500 and I would then import all of my drivers that I've downloaded from Dell's site and I would inject those or import those into my out of box drivers folder. When the deployment kicks off, the deployment template; the deployment wizard, sorry, will detect using WMI calls, the type of hardware that is there and it would install the proper drivers automatically. Now I can also, imagine I have a hundred different types of hardware in my organization...

Greg Hughes: Right.

Mitch Garvis: First, I'm going to completely change the way I plan my hardware because that's not a good way of doing it, but I'm going to go into my advance configuration tab which is another new feature in the deployment workbench, I'm going to create a profile and under my profile, by default, we have everything, we have all drivers and packages, I'm going to create a new selection profile for my E6500, that E6500 will include all of my out of box drivers for my Dell E6500. So every time I kick off a deployment, I will kick off using that profile. I will create my Windows, my media deployment point or my network deployment point for a Dell E6500 or for an HP laptop or for an HP tablet, whichever hardware profile I want, I will import the proper drivers and it will inject those drivers into the installation so that it gets done automatically. Now when I install, when I use a standard MDT installation as I'm going to do tonight for my user group meeting, I'm not going to do this so when I click on and this is all smoke and mirrors in my presentation, I don't actually show all of the behind the scenes if I were to click on my computer, manage, look at my drivers, there will be a few driver's missing because they're not included in the standard build. If I created a profile for the particular machine I'm deploying to that wouldn't be the case, I wouldn't have to do that extra step afterwards and I would save the end user in need to call IT for help with. Some of the common ones are fingerprint readers or audio drivers or wireless network cards, all of these things that users will call the IT support staff for...

Greg Hughes: Yeah.

Mitch Garvis: For help with after the installation it gets eliminated because this machine was installed from the profile for that particular hardware set.

Richard Campbell: That's cool and so you just don't have these issues essentially, you can keep them separate basically based on the hardware and I mean I found scenarios where I get, I go and buy a second lot of the same model number of a machine and chipsets have changed.

Greg Hughes: Yeah, the hardware is actually different.

Mitch Garvis: And that does happen from time to time. Now the best way to mitigate that, if I were to look at the chipset or my laptop, let's say it's, I think it's currently at revision 13, if they were to sell me the same laptop six months from now and it's revision 15, the best way to mitigate that particular issue is when you buy new hardware, just update the drivers in your deployment point because when they release new firmware the new drivers will support the old drivers even though the old drivers may not support the new firmware. So if you keep your drivers up to date you don't have to go from machine to machine.

Greg Hughes: There are also companies, some of the big supplier companies for the hardware that will, for one year, two year, maybe three year, I know at least a couple of year period of time can say, "Hey, we're going to sell you this if this is your standard, if you settle on this then we will provide you compatible hardware for the next one or two years so that you don't have to worry about drivers." They sort of guarantee that for you.

Mitch Garvis: And that's absolutely the case with business class laptops or business class desktops or servers. By the way, I should mention that since we last spoke, the MDT 2010 supports deployment for server operating systems as well.

Greg Hughes: Oh, okay.

Mitch Garvis: But we're going to do that in other show. So imagine, we've release a new firmware that still has perfect compatibility to the old firmware but if they're perfectly compatible, why did they release a new one? Well chances are there are improvements to the product...

Greg Hughes: Right.

Mitch Garvis: That if you're using the old drivers it won't be there. So even if they're providing you the same, backward compatibility guarantee, your best bet when you buy new lots of the same hardware is to make sure that you have the latest firmware on hand.

Richard Campbell: All right, it all makes sense. I know you said servers later but why don't we dig into this a little bit? How would I do this with servers, how is it different?

Mitch Garvis: It's very simple, we have two operating system platforms, we have a desktop operating system platform and some of the common features that we'll install on a desktop are applications, are user profiles, are tools and antivirus and things like that. Now, are you going to install the same anti virus on your Exchange server as you are on your Windows 7 client?

Richard Campbell: Yeah.

Greg Hughes: You better not be

Richard Campbell: Better not be.

Mitch Garvis: No. So the server deployment will allow us to take rather than having all of those building blocks, we would have, for example an Exchange Server building block, a SQL Server building block and it would deploy maybe a Forefront Server Security block and all of these would be deployed and rather than creating a standard client task sequence, we've created a standard server deployment task sequence.

Richard Campbell: All right. With Exchange, I just don't feel like we do it often enough to make that worthwhile, with a WebFarm I guess I would buy into that idea.

Mitch Garvis: Absolutely. Now when you said that you wouldn't have do it with Exchange, you're not taking it into account that this also works for test environments.

Richard Campbell: All right.

Mitch Garvis: For those guys who are testing applications and testing different plug-ins that they have to deploy the same server over and over again.

Richard Campbell: Yeah and I can definitely buy into he idea that you're using it in test environments, just using this to actually have a standardized configuration, here is a configuration of our production Exchange server exactly and we can instantly replicate it. Can I do this with virtual machines as well this way?

Mitch Garvis: I will say that yes you can but if you remember the last time we spoke, we talked about System Center Virtual Machine Manager...

Richard Campbell: Right.

Mitch Garvis: And we're now in VMM 2008 R2 and if you're using a virtual environment, the VMM R2 has some really cool tools to deploy your servers that do include the building block libraries, so you would have a standard configuration for an Exchange server and that can be done in a matter of minutes as well, it's just two different ways of doing the same thing.

Richard Campbell: Okay and what about updates? Is this just for base deployment and you switch to Windows updates services after that?

Mitch Garvis: That's right and we are going to include in our base image all of our GPO's. So one of the things will say is we need to join a domain and most of your domain machines will be getting patches automatically.

Richard Campbell: Right.

Mitch Garvis: Now if you have major patch releases such as service pack or a patch roll up, you can include that as a package. So when you deploy new machines or better yet when you redeploy old machines, they get the new patches automatically without having to. Let's face it, if you were to install a Windows Vista machine right now, it would spend an hour and a half downloading patches. Well, rather than having to do that, include that in the deployment, save your WSUS server and save your bandwidth and save your time.

Richard Campbell: Yeah, now that sounds like an awesome approach to it. When we redeploy a machine, is there any way to save the My Documents, that sort of thing? Can I use this as a recovery tool for somebody's machine and still preserve their data?

Mitch Garvis: You know, it's not only a recovery tool, this is one of my favorite features in MDT 2010 and it's a feature that you can't get with config manager without having NDT 2010 and you can't get it any other way, it's called hard links. The hard links wow, the guys who wrote this package told me about this, I said, "Wow, this I've got to see." Now if you create your deployment point, unless you change this in the task sequence, one of the things that it's going to do is reformat your hard drive. Now when you reformat your hard drive, the first thing that it does is it wipes all of your data, right?

Richard Campbell: Right.

Mitch Garvis: Wrong. What it does is it wipes the table of contents to tell you where your data is so

it looks like you have a blank hard drive. Now during my demo this evening I have a Windows XP machine that has 40 gigabytes of documents and videos and music and pictures. It has two or three user profiles and what I'm going to do is I'm going to kick off my deployment of my XP machine from within Windows XP, it is going to go through the whole process of formatting the machine but before it does that is it takes a note of where those files are, formats the machine, brings it back up in Windows 7 and restores the links to those files...

Greg Hughes: Right.

Mitch Garvis: So rather than having to copy, there are ways of backing up your profile and storing it on the network or storing it on a local hard drive one or an external hard drive and that's all fine, those are great ways of doing it but on 40 gigabytes of data, do you know how long, how much bandwidth that's going to take? How much time it's going to take? Rather than doing that, I changed the operating system underneath it, I wiped my hard drive but then I restored those links and rather than taking several hours and having to plug in an external hard drive or having to measure bandwidth, it's all done for me right then and there.

Richard Campbell: That's cool.

Mitch Garvis: That for me is the coolest new feature of MDT 2010.

Richard Campbell: This is about not burying your network and shuffling these big chunks of data around?

Mitch Garvis: No shuffling is involved. It's cleaning your hard drive. Your hard drive wants to be cleaned because over the course of three years that you're using it, we have clutter, we have all sorts of junk that every user puts on it that we want wiped out.

Richard Campbell: Yup.

Mitch Garvis: But we don't want the data like that. So it literally, imagine you have a piece of furniture, you have a table in the middle of your room and everything it underneath is dirty. Well you pick up the table, you vacuum underneath and you put the table back down, that's what's happening with your files.

Richard Campbell: Is it just me or does that feel like Voodoo?

Mitch Garvis: I've been telling you for three years Richard that deployment is black magic because if it takes me an hour to install a machine, how can it take me five hours to install 500 machines?

Richard Campbell: Yeah, no kidding.

Mitch Garvis: But there it is.

Richard Campbell: Yeah.

Mitch Garvis: This is all, Arthur Clarke said any sufficiently advanced technology is indistinguishable from magic. Well this is definitely magic...

Richard Campbell: Nice.

Mitch Garvis: And this is definitely advanced technology but if you look at it, it's simple.

Richard Campbell: Yeah and when you get right into it, I think you've really conveyed that, it is pretty straight forward. So Mitch, where do folks go to get more information?

Mitch Garvis: For more information you can go to all sorts of great links and I'm going to give you a few of them. I'm not corporately involved with any of them but microsoft.com/desktopdeployment is the main source and by the way if you install the deployment workbench, the MDT 2010 which by the way, did I mention, it's a free product? If you install that, all of the documentation is included within and if you click on the information center and click on documents, you can check for updates to see any changes that they've made recently. So that's one great resource. Another great resource is Xtreme Consulting Group, I think it's xtremecgi.com, have some great articles about that. One of the guys who wrote the MDT 2010 recently left and went over there so he's been publishing like mad and of course the best site on the internet is garvis.ca.

Richard Campbell: Of course. Mitch thanks so much for coming on and setting us straight on MDT 2010.

Greg Hughes: Thanks Mitch, good stuff.

Mitch Garvis: Guys, it's always a pleasure. Any time you want to talk you just let me know.

Richard Campbell: All right and we'll talk to you next week on RunAs Radio.