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**Mitch Garvis Gets Us Using Microsoft Business Desktop
Deployment!
October 3, 2007**



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[Music]

Carl Franklin: From runasradio.com, you're listening to RunAs Radio, the weekly Internet audio talk show for IT professionals with Richard Campbell and Greg Hughes. This is Carl Franklin, introducing show #26, with guest Mitch Garvis, recorded Monday, September 24, 2007. RunAs Radio is produced each week by PWOP Productions, offering professional media and podcasting services online at pwop.com.

Richard Campbell: Hi! This is Richard Campbell and you're listening to RunAs Radio. With me as always, my co-host, Greg Hughes.

Greg Hughes: Hi again everybody. Richard, how have you been?

Richard Campbell: I'm doing well. I'm back from the Netherlands. I had a great adventure over there speaking on various topics and mostly talking about scaling ASP.NET sites these days. This is a crazy conference fall. I'm going across the pond three times in two months.

Greg Hughes: Yeah. You got a lot of travel going on, Netherlands, Bulgaria. We're going to Barcelona together and it sounds like we're probably going to end up in Vegas together as well.

Richard Campbell: Right. So, we were planning on doing Barcelona. That's TechEd IT Forum, TechEd Europe in Barcelona and that's the second week of November. The first week of November, I was planning on being at DevConnections in Las Vegas working with Carl on .NET Rocks! but there's a whole section of connections that is IT-oriented and the organizers came and said, "Hey, why aren't we having RunAs Radio there too?"

Greg Hughes: Sure. Hey, I think it makes sense. There's a lot, as you say, of IT content that goes on down there and people who are really focused on delivering IT messages, it's sort of a ripe environment if you will for talking to some people and putting together some shows.

Richard Campbell: Well, we had a great time at TechEd US doing shows with Microsoft folks. This one's going to be more industry guys. They've got a great contingent of Exchange speakers, some SQL speakers, as well as general security and Windows as

a whole. It'll be tough to choose, but we'll get as many as we can.

Greg Hughes: Yeah. It will be fun. We can do some running around.

Richard Campbell: Yeah, you bet. So, stay tuned for more info as far as what we do at DevConnections. We're working on that and if you got something special you'd like to see either a regular show or something we could do in front of an audience, send us an email, info@runasradio.com. All right, Greg. Let's introduce Mitch Garvis. Mitch is a Microsoft Certified Trainer with a passion for community. As a Founding President of the Montreal IT Professionals Community, he learned both the value and rewards of helping his peers. After several years as a consultant and an in-house IT professional for several companies in Montreal, he now works with InFront Consulting Group delivering training for Microsoft to its partners throughout the United States and Canada. He has also contributed to the creation of several exams for Microsoft Learning. Mitch is not married, has no kids, and has never been to Cleveland. Mitch holds numerous Microsoft certifications including MCSA, MCITP, MCDST, and MCTS. He is also a Microsoft Certified Trainer and has been recognized for his community work with the prestigious Microsoft Most Valuable Professional award. He is an avid blogger and can be found on the web at <http://blog.mitchgarvis.com>. Mitch will be taking time out of his training schedule to speak at several community events this year, including the upcoming SMB Nation 2007 in Redmond, Washington, where he will present Simplified Desktop Deployment for Small and Medium Businesses. Welcome, Mitch.

Mitch Garvis: How are you guys doing today?

Richard Campbell: Things are good, man. I know you've lived most of your life in Montreal, but you have no accent at all.

Mitch Garvis: Well, thank you very much. Unfortunately, I was finally deported. I now moved to Toronto or the Greater Toronto area, but I had to leave my accent at the Ottawa River.

Richard Campbell: Right.



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Greg Hughes: I thought you were going to say you moved to Cleveland but not quite that far, huh?

Mitch Garvis: Actually, that's an old bio. I swear to God I was in Cleveland for the first time last week.

Richard Campbell: It's out of date now. I've read a mistruth!

Mitch Garvis: Nobody's ever going to trust you again.

Richard Campbell: I roll right over those things. You're reading a bio. You want to get it right, just a steady rhythm, so I just went straight through it. I didn't even check my facts. I feel bad.

Mitch Garvis: You'll learn.

Richard Campbell: All right. We've only got a half an hour and we're taking on Business Desktop Deployment, so we better rip through this because I think it's a huge product.

Greg Hughes: Big topic.

Richard Campbell: So, maybe just fundamentally, what is this?

Mitch Garvis: Business Desktop Deployment is really black magic. It has the ability to install Vista, Windows Vista or Windows XP with all of your applications and all of your settings and all of your configuration from a centralized location without leaving your desk. It requires no interaction on the user side and really a user can leave his Windows XP machine or his Windows 2000 machine at 5:00 Thursday afternoon and a couple of hours later, usually Friday morning, he can come into his office, nobody has touched his machine, and boot up into Windows Vista.

Richard Campbell: Wow!

Greg Hughes: That's a pretty big deal.

Richard Campbell: So, you're talking about a full operating system install and all of the productivity tools that are used like Office installed remotely.

Mitch Garvis: Well, it's not only an operating system install. It's all of your applications, it's all of your settings, and there are four different possibilities of course. There is a New System Install where you are plugging in a machine for the first time. There is a Refresh Computer where it will go into your existing profile, back up your user state data, delete the operating system, install the operating system, install all of your applications and settings, then restore your user profile back. There is the upgrade scenario where it just goes in and does an upgrade of the operating system and there is the Replace Computer scenario. The Replace Computer scenario is exactly that. It does the same as the Refresh scenario. It backs up your user state onto a network share. You take the old computer and you hopefully give it to charity. You plug in your new computer and the system knows automatically to do the installation and then restore the user state from that secure network location.

Greg Hughes: That's pretty cool.

Richard Campbell: I'm just trying to believe in it. This is almost tooth fairy-like to me.

Mitch Garvis: Well, it really is, Richard. It's something that two years ago, if you would have looked at this, this was a really complicated scenario. The old BDD 2.0 and 2.5 were really that. It was a five-day course that I usually refer to as sitting there with your brain bleeding out of your ear.

Richard Campbell: Nice.

Mitch Garvis: Now, with BDD 3.0 or BDD 2007, they have come full circle so much so to the point that I now am giving a user group presentation across the country and I'll be giving it at SMB Nation next week and at about an hour-and-a-half, I will start, I will boot up a server, I will install all the tools, and I will do an actual deployment all in an hour-and-a-half with everybody watching.

Greg Hughes: It used to take weeks and days or months or however long it would take depending on your knowledge and how much you needed to learn to script all of this kind of stuff by hand. It sounds like what you're saying is we now have the ability to use a packaged system to do all that heavy lifting done for us. What we need to do now is really



concentrate on what is the end state that we want to arrive at. Is that accurate?

Mitch Garvis: Well, that's exactly right and it is a series of tools and there are a couple of different types that we can look at. We can look at a light touch implementation or LTI scenario where there is somebody that I jokingly refer to in my classes as the guy at the other end pressing keys. He has a little bit of interaction. He turns on the computer or he initiates the install and he might have to answer a couple of questions and if he's got an OEM machine, you can tell him to enter the serial number, which is on the side of his computer, and then it goes and installs on its own. That's a really simple scenario. It uses the Windows Vista DVD, it uses the Business Desktop Deployment workbench, and it uses the Windows Automated Installation Kit for LTI. For a zero touch implementation or a ZTI scenario, it is something that you would expect to see at the network engineers at Hogwarts School for Wizards and Witches.

Greg Hughes: Witchcraft, which means that it involves SMS, right?

Mitch Garvis: Well, that's right. It does involve what we used to refer to as SMS, now the System Center Configuration Manager and the OSD or the Operating System Deployment feature pack. That really requires no interaction from the user and is of course a little more complicated. You're not going to set this up with very little infrastructure in an hour-and-a-half presentation, but you can set it up with your SMS or your SCCM Server and there is literally no interaction from the user at the other end, zero touch implementation. You're not forcing the user to possibly get it right or possibly get it wrong. You're doing it yourself. You also with the ZTI have a better ability to control your installations, control your upgrades and monitor and manage these things, whereas LTI is really fire and forget. You are just letting people do it without a whole lot of management. The zero touch is managed and controlled by you, the administrator, the deployment operator from start to finish.

Greg Hughes: So, where I have a managed domain and network and directory system, I'm using SMS or whatever they're calling it this year. I'm able to leverage that, add a couple more tools on top of

that and then do those deployments in a fully automated manner, that's your zero touch.

Mitch Garvis: That's exactly right and when I say fully automated, you are telling it when to install, when to run the installation, which computers to install it on, and that can be based on any number of criteria. That can be based on a MAC address or that can be based on an organizational unit or geography. Depending on your network infrastructure, it can be as detailed as you want that control to be.

Greg Hughes: That's interesting. A question for you then, can I do both? Maybe I have a whole set of desktop machines and laptops that are used for productivity where it's a managed environment, but I also have maybe a subset of machines that are more dynamic, a lot of development and test type machines. I need to be able to do automated installs on those, but they're not running in a managed environment. Can you mix and match like that?

Mitch Garvis: Well, absolutely. Nothing is going to tell you that these machines cannot do that. Like we said, you will take the managed machines, the controlled environment, and initiate your ZTI and put in the either MAC addresses or computer names or organizational units and you won't enter those or you won't create an advertisement for the more free environment and you will build for them an LTI scenario where they can install. They can do it as often as you want. We know developers tend to muck up machines left and right. They can reinstall Windows literally at the end of every day. They can just kick off the installation and come back tomorrow to a clean machine.

Greg Hughes: That's pretty cool. I have these questions popping up in my mind. What about virtual machines? Does this work for installing two virtual machines as well?

Mitch Garvis: Absolutely, the virtual machines, as long as they are following the right criteria, as long as they have access to the network. My presentation, unfortunately, I can't travel the country with a server and three different laptops to show it on.

Greg Hughes: Ah, that's a good point.



Mitch Garvis: So, I do bring one server with me and the virtual server is running the implementation server and the virtual desktop is being built or upgraded as the case may be.

Richard Campbell: Okay. I'm trying to imagine how you make a bare machine do zero touch. Is it a part of the network boot? That it goes and looks for a boot profile?

Mitch Garvis: A bare machine, as long as it has the controllable network, can be booted remotely, the Wake on LAN feature.

Richard Campbell: Right.

Mitch Garvis: It goes out and sends a command looking for the specific MAC address. Now, if you buy one computer from Dell, they're not going to be very cooperative, but if you go to Dell or IBM or Hewlett-Packard and say, "Okay, I'm gonna buy 10,000 machines from you," they're going to be very cooperative. First of all, they're going to give you in a spreadsheet the MAC addresses of the computers you want according to the name and everything that you want it to be and they'll say, "Okay, this is computer #1. Plug this into desk #1." You can import that spreadsheet into your SMS or your SCCM with your Operating System Deployment feature pack and it will kick it off automatically.

Greg Hughes: Interesting.

Richard Campbell: Okay. I used to do stuff like this with Ghost and I'm thinking are we building an image here then applying that image to different machines that then I make underlying changes for a particular user? What's the setup like to get to this point?

Mitch Garvis: That's a great question.

Greg Hughes: That raises an important question about what about thin images and fat images or what if I have multiple machine images. Just to add on to Richard's question, how do we deal with that and how flexible is this? I think a lot of IT shops, a lot of them aren't running a fully managed environment necessarily with SMS or something similar, but I think we might have a lot of IT shops that are really in sort of that light touch type of environment and then also some people that are

listening that may be able to do zero touch, but imaging and maintained ability of machine images is pretty darn important and pretty much all of those environments.

Mitch Garvis: Absolutely. I agree with you 100%. Now, ghosting was a great technology when it was required especially with Windows XP and the previous iterations of Windows. Don't forget. The installation process for Windows XP was developed back in the mid-1990s and hadn't changed a lot since. So, when the Vista development team came around, they rebuilt the way Windows Vista deploys, so Windows Vista, you are not installing Windows Vista like you did Windows XP. In Windows XP, you could actually follow file by file what was being extracted from the CAB files and that was fine, but it also made a deployment a lot more complicated.

Greg Hughes: Right.

Mitch Garvis: Vista is delivered as a WIM or Windows Imaging File, which even if you buy a full packaged product from Best Buy or whoever your retailer of choice is, when you put that DVD in, you are actually doing a deployment.

Richard Campbell: Right.

Mitch Garvis: That is actually deploying. We might not need thin images versus thick images like we used to. They are still options and we can still do that. Now, with Windows Vista, we can still build our thin image or our thick image if we want. We can actually capture the image, do a sys prep, the ImageX to capture our image, and then deploy it either using BDD or even Windows Deployment Services.

Greg Hughes: Right.

Mitch Garvis: That is with Windows XP the best way to go because you do still have the old installation process. It wasn't delivered in a WIM image and there were limitations. However, with Vista, I won't say more fun, but it's certainly more adaptable. Instead of building an image and capturing it, we can import our operating system files into the BDD workbench. We can then import our application files into the BDD workbench. We can import our third party drivers and we can import our hot fixes and security packs. Don't forget, Windows Vista will be hardware agnostic, which is a huge



feature of Vista over XP. So, you've now imported all of these into the BDD workbench rather than creating a different build or a different image for each iteration of hardware or each hardware set. We can now create a build or deployment point from our operating system, from the applications that we set out, from our third party drivers, and from our hot fixes and security patches and literally do with deployment over the network without actually having to capture the image. That's new to BDD 2007 and that's huge. That leverages into new technologies. Ghost or image-based deployment was a great technology because we had nothing else, so we had to rely on our thin images, we had to rely on our thick images. Now, we have this third alternative, which really just makes everything simpler and to make matters even more interesting, you can build your own WIM file. You can customize your Vista deployment package by maybe installing your anti-virus. Maybe you want to install Forefront Client Security or maybe you want to put in a couple of low-level packages then capture that as an application package or as an operating system package and import it in as a custom Windows Vista DVD that you've created yourself and then build the deployment based on that rather than basing it on the standard image.

Greg Hughes: Let me try to compartmentalize this and tell me if what I'm saying is accurate. What we used to do with XP is we used to deploy images, but you almost had to do an installation and then make an image then deploy that. What you're talking about now, so we're installing an operating system, we're actually deploying an operating system now and so we're sort of taking one step out of the process.

Mitch Garvis: Well, that's right. You don't have to install and then capture and do your sys prep and do your capture and then deploy the image that you've created. You can literally just take the components that you want and deploy them naturally in their natural environment. Windows XP and BDD 2.5, we were really forcing technology from 1996 to do what we wanted it to do in today's world. Windows Vista is much newer technology and it is a lot more culminating. It is natural for it to install or to deploy the way we are trying to do it now.

Greg Hughes: Yeah, the idea of if I have 12 different desktop and laptop machines in my organization and I have to maintain 12 unique images and always keep those up-to-date, it sounds like what

you're saying and what you're telling is that that really can be a thing of the past.

Mitch Garvis: Well, you talked about 12. We have a pharmaceutical company that we use as our example that had 19 images across 75,000 desktops.

Richard Campbell: That's not a bad ratio, but it's still 19 images.

Mitch Garvis: Nineteen images. When I talk to my classes, I say, "What do the deployment people do on Patch Tuesday? They drink." Frankly, what they had to do in the past, they would have to take all of those 19 images, deploy them to hardware, apply their patches, sys prep that image, recapture that image 19 times. Now, not only do we not have to do it 19 times because we're down to one image, but on that one image, we don't even have to deploy it once and do any of this. All we do is we inject our patches into the BDD workbench and we're done. What used to be a two-, three-, four-, five-day job is now 10 minutes of work.

Richard Campbell: Somewhere in there I'm hoping they're doing, not to be cynical or anything, a little bit of testing.

Mitch Garvis: Well, absolutely and I always tell people it's the same thing in carpentry. We measure twice, you cut once.

Richard Campbell: Right.

Mitch Garvis: In BDD as in anything that you should be doing as a network administrator worth your salt, you should have a lab environment that mirrors your real environment and everything you do, before you do it in your physical environment, before you deploy any patch to 75,000 computers, run it in your test environment and make sure that it's not breaking anything.

Greg Hughes: Absolutely.

Mitch Garvis: Make sure that it does what it's supposed to do.

Richard Campbell: Is it still a fair statement then in that scenario, Mitch, that those guys in that lab still need those 19 machines even though they're deploying the same image every time? Hardware



neutrality is a nice concept, but it's worth checking them all?

Mitch Garvis: Well, we can take as many precautions as we want and frankly, you're right. If we are testing patch drivers or, for example, something that interacts with the hardware, that would make sense, but a security patch, a patch to Microsoft Office, these aren't things that are going to be hardware-dependent, so you can do it in a virtual environment. If you have patches for your network card, then sure.

Richard Campbell: And that's specific to the platform anyway.

Mitch Garvis: That's right.

Richard Campbell: So, you're probably doing a smaller rollout, but definitely now it matters to separate what are application level patch is or OS level patch is from what our hardware patch is.

Mitch Garvis: Exactly. So, yes, you probably should have all 19 hardware types in your lab, but those 19 machines are going to do a lot less work than they did before.

Richard Campbell: Right.

Greg Hughes: And you could actually deploy to those 19 machines using the new system for deployment and then test it on that different hardware where you do have the hardware dependencies as opposed to having to maintain 19 separate images.

Mitch Garvis: Well, of course. Remember I said measure twice, cut once. Like you mirrored your hardware in the lab, you should mirror your deployment environment in the lab too. You should use the same deployment methodology in your lab that you would in the real world network.

Greg Hughes: So, I use this to deploy the operating system and at the same I can install Office and get my settings and my user environment all set up. Do I continue to use this system to deploy future changes to it? How does that work? I mean if we deploy a machine today, our standards, our build or however you want to describe it changes 30 days from now, what's the story there and how do people

get future updates out and maintain the system in a working model?

Mitch Garvis: That's more a question of patch management than it is of deployment. This is really deployment of your computer from the ground up. BDD does cover those four scenarios, a new computer, refresh, replace, and upgrade for patching or changes of operating system. What you would do in a light touch environment, you would probably have a patch server such as Windows Server Update Services running and in your zero touch environment, you would use SMS to advertise the package changes as native.

Greg Hughes: Gotcha. I wanted to make sure that we were being clear that what we're talking about here is deployment and not ongoing maintenance.

Mitch Garvis: Exactly.

Richard Campbell: You don't use this for rolling out your apps.

Mitch Garvis: No, you would not want to do this for rolling out your apps unless you said, "Well, I have a smaller environment of 20 machines and the app is significant enough that it's worth redeploying your entire operating system for."

Richard Campbell: Right.

Mitch Garvis: Now, on 20 machines, what you can do over a weekend, that may be reasonable. On this environment with 75,000 computers, that took several months, so it's probably not the way to go.

Greg Hughes: Gotcha.

Richard Campbell: You definitely have a phased rollout.

Mitch Garvis: Yes.

Richard Campbell: But there are lighter weight ways to roll out app updates.

Mitch Garvis: Exactly, advertising your SMS packages or your SCCM packages or your Windows Server Update Services. Exactly.



Richard Campbell: All right, gentlemen. Last five minutes. Am I reading this right, this is free? BDD?

Mitch Garvis: Well, of course. This is not a tool that you are going to have to go out and say, "Okay. I want to invest heavily in this." If you have the zero touch needs, then you have to invest in your SMS or your SCCM 2007, but you can go to www.microsoft.com/technet/desktopdeployment and you'll be able to download the BDD 2007 workbench. As well from microsoft.com/downloads, you can download the Windows AIK or the Windows Automated Installation Kit. These are completely free to use. They are really just an extension of the operating system. It is a package. It is a product and as such it is supported by PSS, but it's a completely free one that you can download and work with at no extra cost to you.

Richard Campbell: But obviously you need your licenses for Office, your licenses for the operating system and so forth. Is this really designed for the volume license guy? Can a regular CAL guy, you know, the 20-seat environment, use this without being in violation of any licensing?

Mitch Garvis: If you have 20 machines and you have 20 licenses, then absolutely you can deploy using BDD. You are not installing to anything using BDD that you wouldn't be installing normally except you're doing it a lot more efficiently, you're doing it a lot more intelligently. Everybody has been saying work smarter, not harder. That's what BDD is all about.

Richard Campbell: I think the big thing here is making sure I've got identical images across all my machines in my shop and being able to get back to that image without a lot of pain.

Mitch Garvis: Well, that's right, but you don't only have to have one scenario. If you have 10 different development teams, you can advertise in that light touch environment, different packages and different configurations, and they can make the choice based on their individual needs rather than based on maybe the guy next to him needs .NET 3.0 and he needs ASP.NET.

Richard Campbell: Right.

Mitch Garvis: Think of it on the organizational scale. Your CEO needs one build of Microsoft Office. Chances are, the guy designing flowcharts and work charts for development processes will need Visio and probably not maybe Excel. The CEO needs OneNote and Outlook, but not InfoPath. So, you can go down to the nitty-gritty and say, "These are the options that we want to install. These are the choices we want to give to our end users and they could pick based on their needs or you can assign it based on their needs from the SMS."

Richard Campbell: This almost sounds like it would be worthwhile in that scenario with 20 seats that you could have 20 different configurations. The main thing is that you have a copy of everything. You have this provisioning for all of it and an inventory of all of it so you can always get back to where you were.

Mitch Garvis: Well, absolutely.

Greg Hughes: Let's say that I do need to have 10 or 20 different options we'll call them, if you will, to deploy. Does that mean that I need to create those 10 or 20 separate deployment packages or are these options that I can create within a single deployment package? How does that work in terms of the setup administration of making this happen the first time?

Mitch Garvis: Now, on a light touch implementation, and we are talking about our power users who want to be able to control this themselves, what you would do is you would just import the packages and then create the build. The build, when you boot into the light touch will give a menu and say "please select the applications that you want to install."

Richard Campbell: So, it's not a given configuration. It's a list of potential apps.

Mitch Garvis: Exactly.

Richard Campbell: Okay.

Greg Hughes: So, provide the users the options and then allows them to make those choices.

Mitch Garvis: I wouldn't suggest that for your secretaries and your customer service reps, but for your developers who really are power users who do



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need those 20 different configurations, the people that you are not assigning to zero touch because you need to give them the granular control, absolutely.

Greg Hughes: Right.

Richard Campbell: Yeah. You're right. Devs are the ones you're going to have the most trouble with. They usually take a base install and then right away they are in customizing it themselves.

Mitch Garvis: I have always said that devs give us the most headaches.

Richard Campbell: But if you can handle the devs, you can handle anybody else.

Mitch Garvis: That's right.

Greg Hughes: Don't know if I agree with that in every case, but I understand where you're coming from.

Richard Campbell: Hey, Mitch, there goes a half an hour.

Mitch Garvis: Well, it's been a lot of fun, Greg, Richard. Thank you for having me and I hope to speak to you guys again soon.

Greg Hughes: Mitch, one thing I'd like to point out to you, you talked about linking to microsoft.com/desktopdeployment, I looked up there while you were speaking and there's also what looks like a really good TechNet article with a walkthrough and some high level setting up, a good starter point for getting started with the Solution Accelerator for Desktop Deployment. Thanks a bunch for spending some time with us.

Mitch Garvis: Absolutely and I'm going to give you a couple of other really good links if you are interested in learning more about BDD. Not only that, go to my blog and go to thelazyadmin.com, these are places that really have a lot of articles about BDD in practical usage scenarios.

Greg Hughes: Why don't you tell everybody your blog address again?

Mitch Garvis: That's blog.mitchgarvis.com.

Richard Campbell: Excellent! Gentlemen, that's a show.

Greg Hughes: Thanks a bunch, Mitch.

Mitch Garvis: Thanks for having me guys.

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