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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.



Greg
Hughes

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Jeff Atwood Has A Server Fault!
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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 #109, with guest Jeff Atwood, recorded Thursday, April 23, 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, thank you Brandon and this is Richard Campbell, with me as always my co-host Greg Hughes.

Greg Hughes: Hey everybody. Richard, how are you this fine day?

Richard Campbell: Ah, very good. Spring is here, the allergies are on. Everything is fine.

Greg Hughes: I moved to Oregon not intentionally but, well, I could say intentionally but it wasn't really in part to escape the allergies. So, everything grows here but where I moved from in New Mexico, that was just brutal.

Richard Campbell: And most people move to New Mexico to get away from allergies.

Greg Hughes: I don't know why. I mean I was just miserable for three or four months out of the year down there unless I got shots and all kinds of stuff. So, up here in the Pacific Northwest, everything is green and I don't have allergies.

Richard Campbell: Well, it's the opposite for me, man. Hey, the TechEd sweepstakes is still going on. You can go to it at dotnetrocks.com and see the link there for the TechEd site. You can win yourself a free pass, airfare, and hotel to TechEd, you've just get to enter the sweepstakes. So by all means, take a look at that and I'll be at TechEd. Unfortunately my friend, you will not.

Greg Hughes: Nope, not this time around. Hopefully next time, sorry I can't meet you down there but that's the way scheduling goes sometimes.

Richard Campbell: Yeah and I'm deep in the middle of bowls of Speaker Idol right now getting all the contestants lined up. So if you'd like to be a contestant on Speaker Idol, send us an email info@runasradio.com.

Greg Hughes: Yeah, that's a whole lot of fun. So if you've never spoken at the conference before or

if it's something that you think you'd be good at and something you can do, jump right in and get involved.

Richard Campbell: You bet. All right, let's get to our guest. Jeff Atwood lives in Berkeley, California with his wife, two cats, a new human being, and a whole lot of computers. He has a particular interest in the human side of software development as represented in his Coding Horror blog. Jeff is also the CEO of Stack Overflow, a fledgling Question and Answer community for programmers, with his business partner Joel Spolsky. Welcome, Jeff.

Greg Hughes: Hi, Jeff.

Jeff Atwood: Yeah, thanks, thanks for having me.

Richard Campbell: Stack Overflow is a website that's focused on the dev community, but you're working on an IT one now as well, right?

Jeff Atwood: That's right. There was a lot of crossover between programmers who had questions, and in fact this actually caused a problem to us because with any community I believe you have to establish sort of what the community is.

Richard Campbell: Right.

Greg Hughes: Right.

Jeff Atwood: That means establishing what it's not which means certain questions, it's not that they're bad questions or you're a bad person for asking them, but they just don't really belong in that place and this frustrated a lot of people and there were certainly a class of questions that were sort of in this gray area between, you know, you're a programmer you have code that you need to run but you also need to set up servers sort of test your code...

Greg Hughes: Right.

Jeff Atwood: Say web servers and mail servers and things like that. So they have to ask these questions and then we would close them because we'd say, okay, that's not really a programming question but it makes sense to have another site where you could actually legitimately ask those questions and it's going to be called serverfault.com...

Greg Hughes: Very cool.

Jeff Atwood: And it's pretty much exactly the Stack Overflow model with tightly focused question and answers but with more of a system admin/IT-type focus to the questions.



Richard Campbell: Cool and of course the model Stack Overflow is awesome. It's sort of community centric. You ask your question and everybody answers and they rank the answers so that naturally the best answer rises to the top.

Jeff Atwood: That's right. It's sort of a next generation foreign system in that we've tried to take aspects of blogs, of Wikipedia, of Digg and Reddit and sort of folded all together and sort of have a mash up if you will. So the coolest and most useful concepts in terms of, because I know as a programmer, I spent tons of time on the web, I sort of observe what works, what doesn't work and I've been a part of online communities since the bad old days of like CompuServe and 300 Baud modems and things like that. So I have been around the block a few times on community and I have some strong ideas and so does my partner, Joel Spolsky about how community should be run and what actually works and what doesn't.

Greg Hughes: Yeah.

Jeff Atwood: So it's kind of exciting to have the opportunity to sort of tweak the formula and try to put something out there that you think is really going to improve the situation for the average person looking for the answer to their problem.

Greg Hughes: So is the site already available? What should people expect, and where and how can I find it?

Jeff Atwood: At serverfault.com. So it should be up and running by the time you're hearing this. I don't know if it will be public yet, I think it probably will be. We're going to have a really short beta period because we feel like the software is already in place, we know how the software works and this is just a different community with different visual style and different physical server that it's running on.

Richard Campbell: Stack Overflow took off like gang busters. As I recall watching your blog, it's been a real race for you just handling the infrastructure to keep the Stack Overflow site running well.

Jeff Atwood: That's true. It has grown quite a lot and we kind of cheated because Joel and I have these really large audiences and this is sort of a variable for me with the system admin/IT site with Server Fault. It's been hard to identify the IT community. It's really hard to find prominent system admin/IT type of people on the net. There seems to be a much more easy to find community of like programmer bloggers. It feels like almost every programmer is a blogger.

Richard Campbell: Right.

Greg Hughes: Right.

Jeff Atwood: I mean we joke about that but you know, it's really not true. Actually there are tons of developers that are not bloggers but there's a big community that's easy to find. Now when it comes to system admin/IT types, it's just not as easy to find them for some reason so I'm really concern and we're actually going to feed the community with people like me who, you know, I actually love servers and hardware and stuff like that, but not every programmer does but there's definitely a community of programmers that really enjoy sort of the system admin/IT/hardware side of things and those are the people we're going to try to feed the community with and of course anybody else who really wants to be involved if you're a real bonafide system admin or IT guru, then absolutely you're welcome to participate. Seeding it is going to be awkward, let's see how it goes.

Greg Hughes: Well, I know I'll be writing about it over on my blog and I'm really looking forward to seeing it once you release this and come out. The model that you have for Stack Overflow I think will apply quite well to the IT side of the house.

Jeff Atwood: Yeah, that's another thing as we felt like community was closely enough related because really when we build Stack Overflow we had a very specific community in mind. A lot of the decisions we made we're not sure would work for, say, doctors or lawyers or something like that, but for programmers, you know, we knew programmers, we were programmers and to the extent that I do IT stuff and I do system admin stuff myself, there are actually questions that I have that I want answered...

Richard Campbell: Right.

Jeff Atwood: And would love to post on Server Fault and I haven't been able to, in fact it has been personally frustrating to me, it's like I want the tool to be up there for very selfish reasons because I actually have questions that I would like other people to help me resolve.

Greg Hughes: Exactly.

Richard Campbell: I remember your blog post about, you know, you're doing all the right things when you first got your new servers in, those Lenovo servers and got your RAID array all set up and then immediately broke it, pulled one of the mirror drives to see how it reacted.



Jeff Atwood: Oh God, I don't even want to talk about the RAID array. We've had such, ah, it's been kind of a nightmare with the RAID array like I did so much due diligence on that RAID array in terms of setting it up, testing it and burning it in, everything I could and granted I'm not a genius when it comes to this stuff but I have enough experience, I know enough to be dangerous and I'm good at doing research. So I set up the RAID array, got it all configured and I had to update of Firmware and that end up being the big stumble block. I was kind of afraid to mess with RAID Firmware just because it seemed kind of scary.

Richard Campbell: Yeah, you could break the controller if you did it wrong.

Jeff Atwood: Well, that plus it's like all your data like it doesn't matter how good your mirroring is when the array it's just completely nonfunctional.

Greg Hughes: Exactly.

Richard Campbell: Right.

Jeff Atwood: So I was a little leery of doing that but once I updated the Firmware it was fine, or so I thought and then with the database server, which is a two-use, it has actually six drives and there are two arrays, there's a RAID 10 array of four drives and then there's a mirror array that the operating system is on and that controller has given us continual problems like we just continue to get these IO timeouts under heavy load like if there is anything going on like the database is doing a backup or it's in full recovery mode so it's writing tons of data to the drives, it just occasionally times out on IO and we've updated bios to be absolutely bleeding edge version. That's actually scary, how many bios that they've been served for this machine, like since I shifted out there was a critical -- I should be out in February, there was a critical bios update for it in the middle of March just to give you an idea what's going on there. So that was as a whole scary and even updating everything to the latest possible revisions. We're actually going to try swapping out physical drives now. We have a suspicion that maybe the controller doesn't like this particular brand of drive we're using. We sort of violated the rule which is that we're supposed to buy everything from the same vendor so that they're supported.

Greg Hughes: Right.

Richard Campbell: Right.

Jeff Atwood: I was unwilling to pay essentially five times cost premium for the Lenovo special SATA drive.

Greg Hughes: The drive premium.

Jeff Atwood: In retrospect, maybe I should have but we're going to actually try a different physical drive and see if that helps with the RAID array. If that doesn't work, then we're literally looking at ripping up the RAID card and putting it into their phone. It's just going to be excruciating.

Greg Hughes: Yeah, I was going to ask you if you've replace the controller card yet and/or if it's a single controller or a multiple controller that you have running in there.

Jeff Atwood: Well, this particular model is a rebranded adapt tech controller, it's called the ServeRAID...

Greg Hughes: Yeah.

Jeff Atwood: That's what IBM Flash Lenovo calls it and there's also the transition point where IBM gave their server business to Lenovo so it's essentially the same exact hardware but like with different name and different model numbers. So that makes it a little more complicated too because you have a Lenovo server that's truly identical to the old IBM servers that works with all the same parts. So they actually are different, sort of blast RAID controllers that you could put on the machine and if swapping the physical drives doesn't result in an improvement, and by improvement I mean no more mysterious IO timeouts that we can't diagnose, I mean everything is the latest possible version, latest possible like Windows 2008 driver, latest possible bios and we actually updated the bios of the -- there's something else when it's in the back plane, we actually updated the bios for that even and it's still timing out on us. So if changing the physical drives doesn't work, then yeah, we're going to flick it, either going aimed at network attached storage which is very, very expensive, or replacing the RAID controller.

Greg Hughes: Sure.

Jeff Atwood: So yeah, you could see why I love to be able to talk about that kind of stuff on Server Fault. This is clearly not programming related so I can't ask about it on Stack Overflow.

Greg Hughes: Right, it's the kind of stuff that all of us, in the IT community, deal with everyday, it's those types of problems and Lord knows the IT community, when it comes to talking about RAIDing, geeking out on that kind of stuff and other similar topics, we'll certainly have a lot to say and there's a ton of valuable information out there. A place to go and find it will be really useful.



Jeff Atwood: Oh absolutely. I mean that's what I'm saying, it's I want to build it because I need it.

Richard Campbell: It's for you actually.

Jeff Atwood: Yeah and the RAID is very cool. A lot of people criticize me because when buying a server I opted to kind of not really build my own but I those old servers and I assemble them myself and sort of put in all the parts and sort of upgrade the CPUs myself because I really want to touch this stuff, like I want to physically touch the servers, put the memory in, put the CPU in, put the drives in and just run it through its paces to make sure I personally understood like if something went wrong at the datacenter because we're co-located like I would be able to help troubleshoot and not just be like a newbie, like oh I have no idea, it's hardware, I can't compile it. I guess I'm a little bit of a OCD in that I like to have control over everything that goes into our system.

Greg Hughes: Well, if you're co-locating servers or if you don't have physical access to them, then just knowing what they physically look like when you take the cover off so that you can talk to somebody who was looking at it, there can be a lot of value in that, understanding not only how it works but what it looks like under the hood.

Jeff Atwood: Absolutely. I think it was, to me it was valuable, just like an investment on my time, I mean on a pure cost basis maybe it doesn't really make sense like I will probably that time and do, I don't know, something else like work on Stack Overflow but for me it was almost like fun time, like I got to learn about stuff that I've never really worked really high in servers before and this was my opportunity to do so and particularly it's RAID, I mean RAID is the key ingredient to how to use servers in terms of scalability and performance and things like that and I want to have a basic handle on it and I've learned a tremendous amount. So from that perspective, it's been very successful and I think on Stack Overflow and hopefully on Server Fault too that's really what the community is about, like let's learn about this stuff together, let's share information, let's learn. I don't have all the answers, I'm kind of amateur but I've always liked the mindset of coming in as an amateur in that thing, become an expert, I know everything there is to know but like I know this, I know these things and I think this and share that with the community and see what kind of reaction they have to it and maybe I'll learn something and maybe they'll learn something from me.

Richard Campbell: And you've built the software so you were in this great position as you know how the code runs so you can't very well blame the

software, that's your fault anyway actually getting your site to run fast. Because you're just traveling the lines so well, you get to play back and forth on those problems. How often do we see this battle where the developer says, hey, it runs great on my machine, must be your servers and you're convinced your servers are configured correctly so that this guy may have problems with the software.

Jeff Atwood: Yeah, absolutely and I think I have a background, although I have that one job at a fairly large company, I worked at a lot of small companies where you wear a lot of different hats and one of those hats I always wore was I was the IT guy anyway. I was the programmer and I was the IT guy.

Richard Campbell: Yeah.

Jeff Atwood: And I enjoyed that because to me it was just fun to sort of switch gears, not all the time because it gets ridiculous, but every so often just to switch gears and say, you know, I'm just going to bluff and steam and I actually worked with hardware for a little bit just to get a slightly different experience under my belt. So I actually enjoy working with sort of different technology at any given time, not just being pure software and I think in terms of integration, that absolutely helps you because some of the problems we have on Stack Overflow, if you weren't able to sort of look at the hardware and diagnose the hardware to some basic degree, you would just kind of be dead in the water.

Richard Campbell: Absolutely and I remember you're a posting about moving over to the new datacenter with the fancy new servers and everything is bigger and better and then you actually fire the side up and it's slower.

Jeff Atwood: Oh, that was a great story. I should tell that story, you write...

Richard Campbell: Absolutely, tell us the story. It's a classic.

Jeff Atwood: Yeah. It was totally classic; we were all excited. So we bought this new awesome server that I spent like a month and a half just learning and getting it configured and they look really good, I've done all the due diligence, and I've really done my homework, and shipping to datacenter, you know, UPS and they arrived, we finally got them plugged in and Jeff goes down and slide them into the rack, gets it all set up and we turn them on and we run our first, we finally got all the code up and running because that takes a little effort yet to transfer the database over, and it's all ready to go. So like awesome, let's fire it up and let's like do a page load, and we did a page load and it was like twice as slow as the old system which is on like 50% slower



machine across the board like hard drive is half the memory, half the CPU speed. We were just like you could hear a deflating sound, kind of like a balloon. We were like what happened here.

Richard Campbell: Yup and we play a sad trombone here.

Jeff Atwood: Exactly and then it took a while to figure out like what was going on because we had to sort of go down the checklist. I was like, okay, either an IO problem, either a CPU problem, we had it like produce all these variables up which is, you know, a synthesis. I'm messing with the software and messing with the server remote, we just sort of manipulating it.

Greg Hughes: Sure.

Jeff Atwood: And finally, we had eliminated all the possibilities and we were like kind of freaking out a little bit about it. We couldn't figure out what was wrong, like why would it be twice as slow, that doesn't make any sense and the queries were returning fast like we would run the queries on database and those look good so we knew it wasn't the database with IO and Hello World typed pages loaded very, very fast as well, so we're like wow, what's the variable here, and then I started thinking, okay, the network. So the way our code works, it will actually do a lot of queries. It's not super optimal because we use the technology called the LINQ to SQL and a lot of times it would generate more queries than you would probably want if you're hand-tuning everything but it abstract stuff away in the code so it's like easier to write the code. That's the trade off. It's less coding work but it's more queries than a database. This turns out to be okay for the most part because the modern stack we're using, the SQL Server 2008 and Windows Server 2008 are actually very, very fast. You could get away with the stuff but I was noticing that the heavier the page was in terms of queries, the worse it did. So naturally I'm thinking about the network and sure enough on a lark, I was like let's update the network drivers just to see what happens.

Greg Hughes: Right.

Jeff Atwood: And this is kind of sketchy because you're doing it remotely, you're doing it over the network.

Richard Campbell: Yeah, this is a breaking change. If you do this wrong, you're going to the datacenter.

Jeff Atwood: Yeah, exactly and luckily one of our guys, one of the reasons we pick this particular datacenter was literally it was like a mile from Jeff's

house so we do actually have the ultimate remote hand technology which is Jeff and he is very cool about the stuff but we knew it was risky and I said, okay, I'll just try it one of the web tiers and I was able to do it remotely. The driver actually, to Windows 2008 server's credit, it was very smooth, I mean updated the driver and it just immediately shifted over as if nothing else had happened. That was great, and then sure enough, as soon as I updated, and I believe it was Broadcom, I believe it's the drivers, as soon as we did that, bam, the performance was 20% to 30% faster which was what we were expecting because of what we know.

Greg Hughes: That's a common problem and network applications with multiple machines talking to each other is you'll get your full duplex, full speed connection or drop the half duplex and some really loose bin, next thing you know that seems like what happened to my application.

Jeff Atwood: Well, exactly and it was such a relatively obscure thing because for me, on the desktop machines I built, I didn't think about network drivers, I can't even remember the last time in Windows Vista or Windows XP before that, I don't even care about what version of the network software I was using, I mean it's usually below zero in terms of your power, it's like video driver, yeah, sure, absolutely but never driver, usually it doesn't register and we have this little managed switch that we've got, it's actually kind of bullets, it's not a very pricey device but it has a web UI and you can go into it. We actually updated the Firmware on that thing too just in case. So we were like updating everything we could think of. That's one thing I've kind of learned, it's like when in doubt update all your bios and all your Firmware as much as you can. I know it sounds risky and I guess it might be, but man, I've seen it just solve so many problems for us.

Greg Hughes: If I was to go back and try to think of the number of times that network negotiation problems have caused the application problems in the datacenter environment, I mean I wouldn't be able to count on my hands and feet, that's for sure, it's a lot more than that and I think a lot of the time, especially like some of the over catalyst switches, the Cisco switches and just different combinations of network hardware, you just get failures on auto negotiations and/or old drivers and like you're saying, updating those can make all the difference in the world but checking the status of your duplex and speed on your switches and on your network card will tell you whether that's true or not.

Richard Campbell: You made an interesting point there, Greg. You know, Jeff, you didn't actually diagnose the problem, you made it go away, you found roughly where it was...



Greg Hughes: Yeah.

Richard Campbell: But you don't know what was the network NIC doing wrong that made everything slower.

Jeff Atwood: That's true and that's where it takes like a real system admin, you know, somebody who puts a network guru actually look at that. We're doing something like a gross level of troubleshooting, we're trying to sort of narrow it down to certain areas we can kind of randomly shoot giant cannonballs at it and hope that we fix it.

Greg Hughes: This is where Server Fault comes in, right.

Jeff Atwood: What's that?

Greg Hughes: This is where Server Fault comes in and I imagine this could be a really great question just to see it get started, to have that conversation because there are people out there that that's all they do all day long and they love to share that information.

Jeff Atwood: Well, that's right and I love leaving, I call it the trail of bread crumbs, I feel like okay, I had an experience, and actually did write about this on the Stack Overflow blog, but I feel like there's so many situations where people had a problem, they solve it through some really clever troubleshooting and maybe it's not even clever, but the fact is they solved it, this could help other people.

Greg Hughes: Yeah.

Jeff Atwood: So if you could reduce that friction, so okay, you don't have to write a blog entry, that's kind of a pain the butt, you have to have a blog, you have to know how to use the blog, you have to sit down and take -- I mean when I write a blog entry it's usually like 30 minutes to an hour minimum to even begin writing it. So with Server Fault and with Stack Overflow, the intent is you can go on there, you don't even have to log in, literally there's no log in, you could just go on there and just start typing and just get the minimum amount of information in there, and then for example about this networking problem, and then once you submit the question, other people can edit it and improve it and see this all the time on Stack Overflow and I'm hoping we'll see it on Server Fault as well, for people would take these questions and just really build them up and make them into awesome resources for other people that are having the same problem as you are.

Greg Hughes: Right.

Jeff Atwood: In a way, that really gets people to participate, really lowers the bar for participation and kind of make it fun too because we have like a reputation system. So if you post stuff that's helpful, people voted up and you get credit for that and then you can do more stuff on this system. So it's sort of a really nice positive feedback. It's not only that you're helping sort of your peers, but you're also helping yourself. You know, you can find this information later, you can look it up and you get a reputation for it. Other people can see what you've done and you can actually use it as kind of a calling card and different scenarios too so you can get something out of it too.

Greg Hughes: Sure.

Richard Campbell: I love the fact that you diagnosed out, improved, and solved your networking problem using Firebug.

Greg Hughes: Yeah.

Richard Campbell: That's such a developer solution.

Jeff Atwood: Yes, it is absolutely.

Richard Campbell: You fired it up...

Jeff Atwood: We do have this tool called Cacti. I don't know if you guys have used that.

Richard Campbell: No, what is it?

Jeff Atwood: Cacti, I think, feeds into the monitoring protocols. I think one is the SNMP, again I'm not a really good system admin so I don't actually know...

Greg Hughes: Feeding SNMP traps.

Jeff Atwood: It gives us like statistics on bandwidth and True Put and things like that and you can hook it up to any SNMP counters. So if you do run that on a server, you know how much bandwidth you are using, how much CPU are you using, it will track CPU on all the different CPUs and all the servers and have these really cool graphs, but yeah, I would have loved to post this on Server Fault and have somebody give me this really detailed information about what I could have done with some other tools that I could have used that I don't know about.

Greg Hughes: Sure.

Jeff Atwood: I would love that.



Richard Campbell: Yeah, I'm just thinking about all the different ways we could have diagnosed down to that problem like PerfMon is your friend for this sort of thing. You could have seen that your request times were like or what your packet sizes were like, yeah, the other tool would be Wireshark.

Greg Hughes: Wireshark is a good tool.

Richard Campbell: Those are IT tools for doing network diagnoses but you know, you definitely showed off a developer chap solving a networking problem with Firebug, it's fabulous. I love it and I think it's almost the encouragement like we should be using more of these tools because Firebug and YSlow, those are great ways to look at website behavior.

Greg Hughes: They are.

Jeff Atwood: Absolutely, and I think too if there's some cross pollination between developer and really pros, network pros, that's awesome. I mean if we can learn from each other, that certainly is the philosophy of Stack Overflow where we have Java developers, we have C# developers, we have Python developers.

Greg Hughes: Right.

Jeff Atwood: We're really saying, you know, this is about us learning the craft together more than being religious about a toolset, it's about what can we learn from each other.

Greg Hughes: Exactly.

Jeff Atwood: I would love it if that same mindset could extend what can developers learn from networking pros and system admin gurus.

Greg Hughes: Well, and with Stack Overflow and then Server Fault being part of the same family if you will, I mean I imagine you'll probably get some people that are participating in both, but anything that we can do to bridge the divide if you will, that cliché divided between and IT and everybody work a little closer together and better understand each other roles and responsibilities and needs is just a good thing.

Jeff Atwood: Yeah, absolutely, absolutely and there will be ways to move questions, for example, on the system and if you have an account, and right now we could only go one way because Server Fault is just in its infancy, but you can actually transfer some of your reputation over although we do feel that people should be able to build their reputations separately like we think skill on the IT and system admin side is not, it doesn't mean that you

have, just your programming skills doesn't mean you have other skills in other areas...

Greg Hughes: Right.

Jeff Atwood: So the reputation systems are independent, there would just be this tiny bonus for when you first come over because we figure, okay, you know how to use our software, you learned how to use Stack Overflow so you don't need to go through the newbie training wheels on Server Fault like everybody else.

Richard Campbell: So what is the infrastructure that runs Stack Overflow? We sort of talk around it but what gear are you using now?

Jeff Atwood: So right now it's, we have some additional servers there but the real active servers are the Lenovo 2U which is six hard drives, two CPUs, and 24 gigs of memory. That's our database server.

Richard Campbell: Right.

Jeff Atwood: And then the web tier is another Lenovo server, the 1U. It has single CPU quad core, 8 gigs of memory, and just dual mirrored hard drives. So that's really what's doing the heavy lifting right now. We also have a network attached towards the device which is like super, super low-end, which I kind of regret buying now, that's storing our backups and stuff, and a little managed switch and then we have some other web servers we're going to bring online like Server Fault is going to have its own 1U but it will share the database server.

Greg Hughes: Got you.

Richard Campbell: No redundancy to the hardware at all? If you lose a web server, you're down?

Jeff Atwood: Well, we could transfer over. You know, the database is being backed up pretty regularly to the network storage. So let's say all the running servers get blown up, we have servers online and ready to go in the different roles, we have two extra servers sitting there doing nothing.

Richard Campbell: Right.

Greg Hughes: Got you.

Jeff Atwood: So they would be pressed into service as the database server and one of them to be pressed into service as the web server, or in a worse case scenario it could all be on one machine. So it's like a lukewarm failover.



Richard Campbell: Yeah, I was about to say that's a warm failover. You've got to step in and switch it over, but that's fine, at least you have some redundancy and the reality is Stack Overflow is a great site, I hate it when it's down but I'm not going to die.

Jeff Atwood: Right.

Greg Hughes: That's an appropriate level of service continuity.

Jeff Atwood: Exactly, although as we start to get more sort of revenue attached inside, because we do want this to be self-sustaining business, otherwise I won't be able to pay myself, I won't be able to pay Gerard, the other programmer I worked with, and ideally Jeff, a second programmer as well.

Greg Hughes: Sure.

Jeff Atwood: So it does starts to hurt us, like we've start to actually be more careful about when we take the site down. We have a certain amount of ad revenue that we have to generate just to be running profitable.

Greg Hughes: Got you.

Jeff Atwood: In other words, we don't have enough to keep the lights on, to keep everybody on the ship if you will. So yeah, we're starting to be sensitive to that. I think the pressure is going to come internally for that more than anything else.

Greg Hughes: I see that this year, you've got a logo contest going on. Have you finalized your logo yet or when do you plan to do that? People might be willing to get involved.

Jeff Atwood: Yeah, we did. I'm actually really happy with it because we use the site 99designs.com, which is like an aggregated design source where anybody can sort of picture design and you pick an eventual winner and they actually symmetrically sort of there's a theme between the logos of Stack Overflow and Server Fault which is great because as you brought up, this really is a sister site of Stack Overflow. These sites will be really related in a lot of ways so they're going to look similar, they're going to have a different visual styles, different domain names, different communities to grow up around them, but they're closely related. So that the logos can express that relationship was very, very cool. So I was greatly pleased it was done.

Greg Hughes: Good.

Richard Campbell: Well guys, I think we're just about out of time. Jeff, any little call outs there?

Certainly I could enjoy Server Fault, I think I'm going to hang out there at certainly topics I care about. Anything else?

Greg Hughes: I know I'll be there.

Jeff Atwood: No. Just visit us on Server Fault and if we're doing it wrong, let us know, we want to hear that too.

Richard Campbell: You bet. Jeff Atwood, thanks so much for coming on the show.

Greg Hughes: Thanks Jeff.

Jeff Atwood: Hey, you're welcome.

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