

NETEVENTS

EMEA PRESS SPOTLIGHT ON 'THE CLOUD'

FINAL

*Guest Speaker Presentation:
How to build a scalable, cost-effective and a secure high-
performance hybrid cloud?*

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Interviewer:

Manek Dubash

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Guys, thank you very much for having me over. Before I just start can I just have a quick show of hands about how comfortable you are in understanding cloud, about things like OpenStack, first off. So just a quick shows of hands so I can level set? Okay, fair enough. Thank you; let's start then.

So Manek's already introduced myself. Let's get some important looking stuff out of the way, right, so forward looking statements. It's a lot of stuff to read but basically what it says do not sell your house on the back of this presentation, right; stay in it. So basically let's get that going as well. And then a bit about Rackspace, right. So this is not meant to be a shameless plug on how cool Rackspace is or what a great service company Rackspace is, right, but this is just to give you a sense of the company, where we come from and what we do for our customers.

So we are let's say it's 5,000 plus Rackers on the top; we're about 5,300 now effectively, split globally. Rackspace started in Texas, San Antonio. That's where our headquarters are and then we have a global presence in terms of – we've currently got about – again I think we're missing some stuff here, over here, but that is actually 205,000 customers and we manage over – close to about 100,000 servers for our customers. Our customers come from about 120 countries and we have nine global data centres which are effectively in London, in the US, in Hong Kong and in Sydney. We currently serve about 40 percent of the FTSE 100, nearly 60 percent of the FTSE

1000 companies and then also our revenues, analysed revenues are close to \$1.3 billion at this stage.

But at the back of it, right, what Rackspace's mission is is to be the world's greatest service company. That's our stated mission. We do not sell these services that you see here, right, but effectively what we do is we provide our customers with fanatical support. And fanatical support very simply means that we promise to offer our customer unrivalled customer service. We want to be the best customer service provider for our customers. And then we provide these services out of our data centres around which we wrap fanatical support for our customers, right? So, yes, we're not in the managed hosting business, right, but we're in the business of actually selling them managed hosting, public cloud, hybrid cloud, all backed by our fanatical support promise.

So three years ago, roughly around July 2010, and a little before that when Rackspace was evaluating the cloud market, our customers were telling us one thing and that was we do not want to get locked into a single vendor. We want the ability to be able to port our workloads from cloud to a different service provider if the need be and that's when the Rackspace came together with NASA in the US and we open sourced the code for cloud computing. And that is what you now know as OpenStack, which is effectively a group of companies now coming together. We currently have close to – a little over 10,000 individual contributors, contributing code to the OpenStack movement. We have over 200 companies as a part of that initiative; you only see some mainstream names in here. This list is very, very long. And effectively what this does for our customers, what this does for the industry, it generates momentum around cloud. What it does, it gives customers the option, that as long as they have developed a workload using the open standard, OpenStack API, they can port that workload across multiple service providers.

Now, the reasons to port that workload may be different. Somebody wants better pricing, somebody may want a geographical footprint where their current service provider doesn't operate, some may have the need for a particular function or feature in their cloud which their current service provider doesn't offer, right? But with OpenStack customers now have that choice, they have that flexibility and the pace of innovation has fastened.

Basically on the back of that the industry was then questioning Rackspace as well as to are you not exposing yourself to competitive threat by open sourcing your cloud computing code? And we said, absolutely not because we believe that OpenStack is a good thing for the industry. It will generate momentum, but also we are very sure that we will still be the only OpenStack cloud provider which will offer a cloud backed by fanatical support. So that is our positioning on OpenStack.

So just a bit about where we currently see the industry. So you see three distinct tracks. Infrastructure as a Service where effectively we are able to provide our customers with compute resources, and by compute resources I effectively do not mean just cloud service but the entire building block to develop a workload across public cloud only. We've then got Software as a Service; this is more your

salesforce.com sort of environments. And then you've got Platform as a Service, a growing niche within the cloud space. So you've got the likes of Heroku, Beanstalk providing customers with different deployment options, coupled with the infrastructure to deploy that code on.

I think it's interesting to just note how some of the stuff and the applications which are currently used by customers quite ubiquitously around things like YouTube, Facebook, Instagram, Twitter, these initiatives, these organisations, these companies have fastened and hastened the pace of innovation within the industry. So no longer are these environments built on copper-bottomed or very dedicated, high-performance hardware. They're just using commodity hardware. The Open Compute Project actually addresses some of those needs because the hardware industry was not meeting the needs for some of these companies which are growing very, very rapidly.

And again it's also just making the environment, the public cloud environment infrastructure available at scale. So the risk model has completely shifted. Previously in the dedicated hosting environment a customer used to sign the contract, then get the hardware installed in the DC and then sign and commit to a minimum term. With cloud, with true cloud service providers, those resources are available as and when the customer needs it. There is no contract to sign and effectively the customer can use it for as low as an hour, in the case of Rackspace, and then spin those resources down and just pay for that one hour and we are able to bill customers on utility basis for that.

So all of these things have come together to start this cloud revolution within the industry and then also the spending model has shifted. Customers are now able to pay for it on an ongoing basis rather than making capital expenditure, or capital investments in buying hardware which is then sitting in the DCs.

Just a quick view on where we think right now the industry is. Again, as I mentioned earlier, this is where you see most of the activity; within the Infrastructure as a Service market, within the Infrastructure as a Service space which is effectively cloud providers like Rackspace providing resources within cloud which are allowing customers to build complete workloads, deploy complete solutions on public cloud itself. And then on the other end you've got Platform as a Service which is coming into its own at this stage, right. It's still growing, it's still very, very early days.

But even generally within the cloud space, right, no matter how much we read about it, no matter the momentum that is generating within the industry, it is still an industry which is very early in its evolution. And that means that service providers are still looking to establish themselves within the market. They're still trying to fine-tune their offer, pricing, their proposition and their position in that marketplace. And customers are also evaluating? Some customers are holding back to see before I make any investment in cloud, is this something that is here to stay or not? So I think these are all the questions that are indicative that this industry is still in its infancy, it's still growing.

And again, on the back of that, there is independent research which still tells you that almost 85 percent of all computing is still done out of enterprise customers' own data centres, right, and that is absolutely true. Some of the reasons around that is, as I've

just mentioned, right, it's still an early-stage industry at this point in time. However there is also the traditional enterprise IT teams which are hugging their servers in-house; they do not want to let those servers go. They do not want to let those servers go because they know that their budgets will take a hit because of that, right. So there is a certain, unfounded element of job security as well. Will I still have a job if I outsource everything on to cloud? And again there are sunk costs as well. There are investments made in hardware which is still sitting in enterprise DCs and organisations need to make sure that they're getting the most out of it, right, so that's what organisations are holding back on. But also it is the fact that some enterprise IT teams are taking the view that it is a passing phenomena. Cloud is something like service-oriented architecture, it is like enterprise application integration, buzzwords in the industry from a previous time and they have passed away, right? Nobody knows about them or nobody talks about them anymore. Some of the enterprise IT teams are taking the view, you know, if we just hold back on this, this will pass away as well, but that is not the case because C-level executives, the CEOs and CIOs, are already talking about cloud. So there is top-down pressure on the IT teams to make things happen as well.

So just a view on how customers with Rackspace are using cloud, right. This is real-world examples. So they're using it for e-commerce, hybrid hosting, test and development, big data and they're making sure that they're using this for any spikes in their IT demand, right. So Dominos here, which I hope everybody can see even at the back, Dominos is one of our big customers in the UK and effectively they run an offer which is called Two for Tuesdays right, or Tuesday for Two. So basically on Tuesday you order one pizza, you get another pizza free and that means that their website takes a lot of load on that Tuesday and all of that extra load is handled by cloud. So all of that extra load is this spike. This is the typical Tuesday for Dominos, right. This is all put on cloud. So as soon as they've met that spike, they just spin the resources down and all of their cloud infrastructure comes down again then. And their predictable workload, where they know that their traffic is about 80 to 90 percent constant, they are putting it on to managed hosting, dedicated resources, right.

And that's what hybrid hosting is all about, right, it is not the fact that Rackspace would then advocate to customers that you need to rip and replace whatever you've got in your DCs. You need to lift and shift all of that on to our public cloud or on to our dedicated environment or on to our private cloud. No, that is not the case. With somebody like Rackspace, customers get the option, depending upon their measures, they can use public cloud, they can use dedicated servers or they can even go for an OpenStack based private cloud which means that that is something they can deploy either in Rackspace data centres or it is something they can deploy within their own DCs. And Rackspace is then able to provide fanatical support across the three environments, right, and customers then choose the right environment for them. We do not just go and say, public cloud is the only answer. Public cloud is something that will save you. No. They need to look at their enterprise environments and then decide best as to what is the right environment for the use case.

And again our customers are telling us, that one of the big things that they're facing right now which unlocks the value from cloud for them is their ability to deploy a dev-ops mentality within the organisation, right. So I hope people can relate to this image, but effectively it's an ongoing conversation. Development says, well guys, I built it and operation broke it, right. But our customers are slowly making that change, by bringing in new people within the organisation, dev people who understand ops and vice versa as well, so ops people who get a bit of dev as well, right. And then it's not only a procedural change but it's also a culture shift within the customer organisation.

And our customers are using automation and self-service around cloud to get the most out of it. So using tools like Puppet, Chef and, as I mentioned the open API around OpenStack, right, open standards, so they can deploy against that, and then they're able to move workload from another environment to another, different service provider if the need be.

And last but not least, even with our comprehensive portfolio, we still have an ecosystem of independent partners around our environment which help customers get more out of it, right. So for instance RightScale helps customer use multiple clouds, right, and manage multiple clouds because customers do not want to lock into a single vendor. Cloudability helps customers manage their spend on cloud environments. It sends them daily emails which says, you've spent so much and this is what your monthly bill is going to look like if you do not do or spin down certain things. And then that resets customers' expectations what their bill would be because they're paying on a per hour basis for this. And again CloudPassage is somebody which helps a customer implement level two security on their cloud environments.

So in a nutshell our customers are picking up a platform, not simply just going for cloud. They are developing their teams and their skills around that and then making sure that they are unlocking the true value from using hybrid cloud, right. It's not only just dedicated or public or private only, but it's the right mix of those environments coming together which is helping customers get value out of this.

On that note, I mean, absolutely cloud is for everyone; everyone will use cloud, but not for everything, right. Depending on the right workload, customers will choose different environments. Thank you very much.

Guest Speaker Interview & Audience Q&A

Manek Dubash

Right, thank you. Thank you Khurram. If you'd like to take a seat, make yourself comfortable. You are up here of course as a cloud provider so you're going to have to take the hit on behalf of the whole cloud industry. Now, who here hasn't noticed just how hyped cloud has become. Obviously cloud has become embedded in pretty much everything we do or say when it comes to IT these days, but people I talk to – I'm

involved in a number of enterprise fora and things like that, the feedback I'm getting is the cloud is heavily over-hyped. The industry is talking about it like it's some brand-new revolutionary thing and yet, you know, what, we've been here before, haven't we? We've been here before there was the PC, when there was centralised computing, when there was basically it was all about – well, we've had outsourcing before. We've had the application service provider, and I'm sorry to go back to basics on this because this is a well-trodden path, but tell me why you think it is that there's so many people out there that have still remained unconvinced that cloud computing is actually the big revolutionary thing that so many people in the industry seem to believe it is.

Khurram Ijaz

Yes, I think it's a good question. So Rackspace's view on cloud and where the industry is going right now, as I mentioned earlier, that we believe it is an industry which is still in its infancy. People are still trying to understand what real tangible benefits the cloud brings to them, right. Once again our philosophy and our message back to our customers from our perspective is that we are not saying that it is a question of cloud or nothing, right.

Have a good, hard look at your environment, try and determine where you can get the most value out of using something like public cloud. So let's take an example, right. Again for the case of Dominos, the use case for the customer reference that I quoted, for a firm like Dominos and for the spike in its traffic which it experienced every Tuesday when it runs its well known promotion, right –

Before cloud it would have had to still buy dedicated physical servers to meet that spike. But that's a once in a week spike right?

For the rest of the six days that hardware was sitting there doing (relatively) nothing. Probably people were playing Solitaire or Doom on it right? But with cloud now Dominos is able to say, okay guys, you know what, for the six days of the week except Tuesday we know what our traffic looks like and we will put that traffic on to a dedicated environment with Rackspace. However, in order to meet that spike we will go to public cloud. We know it hits up for about six hours; we will use public cloud only for six hours, and then once that spike comes down we will bring our cloud environment down until next Tuesday, right.

So yes let's talk about this from a practical and pragmatic real world perspective, I think it's where people are rightly sceptical about this new computing opportunity that we now have. What I mean is, where companies are advocating a complete rip and replace “lift and shift” of an existing IT environment on to cloud, it will only be some customers that get the right value in that action. Many others will say to themselves -- I've got so much investment that I've already made into my existing IT environment, how (or indeed why) do I just get rid of and put it all on to cloud. And I'm not really sure whether that will do the trick for me or not.

So we've got customers like Dominos who is taking a very measured approach and they are true light-bearers for hybrid cloud.

Manek Dubash

I'll leave to one side whether or not we should actually be helping people eat more pizza, but that's a health question and not for this discussion. So the other big issue I think that you raised, tangentially perhaps, is that you're providing this open API, this way, the OpenStack idea. And obviously stacked up against that, if you'll excuse the pun, is one other very large cloud provider, whose name shall not be mentioned, which is going down the proprietary route and which is getting a lot of traction that way. Isn't the whole – isn't the open source thing, maybe only in this particular environment, actually not really working that well?

Khurram Ijaz

So, as you've just mentioned, that organisation which will not be named, they are absolutely doing an amazing job, right. They're absolutely doing an amazing job in providing services to their customers and that cloud platform. However, with OpenStack and the open source environment, right, the key message back to the market from somebody like Rackspace is that ours is the only cloud on which you are still able to pick up the phone and speak to someone if something is not working on your cloud environment, right. This is a significant part of what differentiates Rackspace as a company and as a technology option in cloud, responsiveness, support and the ability to provide human interaction at whatever level of technical competency for the customer in question, at any time.

You are able to pick up the phone and speak to somebody about what are best practices on building a cloud-aware application. What are best practices on utilising the API. And just with one organisation, just leading the entire charge, they're still not able to meet the demands of an industry which is still in its very early stages. So at this point in time the philosophy behind OpenStack was – and customers were telling us, we do not want to get locked into a single vendor, no matter how great that vendor is. We want cloud computing to do more for us and OpenStack said, well you know what, we can do it better, we can be more creative and we can do it together.

And please bear in mind OpenStack is only about three years old, right, so it's still early days in this industry. And I think OpenStack is gaining a lot of traction in that sense.

Manek Dubash

Do we actually have an example of companies that have successfully moved large workloads across cloud providers?

Khurram Ijaz

So I'll give you an example again, all right; this is not Rackspace advocating that public cloud is the only way to go. Since Rackspace opened up its private cloud distribution on OpenStack, so which is giving customers the ability to deploy our version of OpenStack in their own data centres or in our DCs, that went live

somewhere around the April, May timeframe this year. And up until now we've had about 32,000 unique, individual downloads of that. And that is again customers just saying, okay, you know what, I don't have to put everything on to public cloud straightaway. I will deploy OpenStack in my own, private environment and I will play with it and I will try and understand what value does it bring for me. So again I think that's the flexibility and choice that OpenStack has placed in customers' hands which was not there before.

Manek Dubash

Thanks Khurram. Okay, questions? Bob.

Bob Emmerson, International Editor, TMC Group

Actually two questions. First of all I thought I knew what Platform as a Service was. Does that mean in fact you're using the hardware or the functionality of the cloud to develop your applications, so that's the platform on which you develop? Is that correct?

Khurram Ijaz

So that is one of the way it's being defined, yes. So if you look at somebody like Heroku which would give customers an all-in environment where they can develop and simply just throw code for an automated deployment onto that infrastructure, that's what Heroku would do for you. On the other hand you have somebody like Beanstalk where you have more flexibility and more control about how you deploy environments and develop code for a certain environment, but it means that customer also needs to do more. And then you've got Microsoft Azure somewhere in the middle as well, right, providing a software development kit but along with the infrastructure as well. So again, as I mentioned, I think it's still being defined and it's still quite early days, especially within that Platform as a Service space.

From the Floor

Because you said pick the platform before you pick the cloud on one of your last slides so that threw me slightly. And I'll just get the other part of the question through and then you can answer both. If you want to move from one cloud to another, from one vendor to another, is that done with OpenFlow?

Khurram Ijaz

So, to your first question when I mentioned – perhaps I should have been clearer about it, right, so when I said pick a platform and not a cloud, by which I meant that depending upon your workload and your existing enterprise IT environment and the use cases that you're looking to meet, you then get to choose whether you want to use a dedicated hardware for that, public cloud or private cloud. That's what I meant by choose the platform and then move over to it.

With regards to your second question around migration, if I've understood it correctly, between cloud providers right, so again I think that's a mutual effort between how one

vendors works with another vendor, right. But effectively if you're on an open platform, then you're able to work in a way where you can say, okay, this is what my existing environment looks like. I can take some image snapshots and still deploy it on to another environment which works on the same API as my current environment does.

Manek Dubash

Okay, questions. Any more questions? No?

Thierry Outrebon, Editor in Chief, Informatiquenews

Thierry Outrebon from Informatiquenews in France. I wonder do you know if you have any plans to install a new data centre in Western Europe, out of London?

Khurram Ijaz

So our presence right now is – as far as Europe is concerned, we only have data centres in London at this stage. As I mentioned, we've got customers that use that data centre from across the world. Not all of our customers come from the UK on that data centre. Having said that, we're always evaluating opportunities. We're always on the lookout for new opportunities. Yes, that's all I can say on the subject, but again I think it's based on where we're seeing most demand for, in terms of our customers, right, and that's the main decision criteria for us on that.

Manek Dubash

Okay. Any more questions for Khurram? If not, we're going to be carrying on discussing these issues that he's raised. And I think you're on the next panel as well, aren't you? Yes. So there's still plenty of time to dream up some questions. Ladies and gentlemen, Khurram Ijaz, thank you very much.

[End]