The Future of Cloud Reimagined – Part 1

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BRADLEY HOWARD (BH): Hello. You're listening to Tech Reimagined. I'm Bradley Howard and today we're going to focus on reimagining the cloud. According to IDG, 92% of organisations' IT environments are at least partially in the cloud, with only 8% reporting that their entire IT environment is on premises.

To understand more about the opportunities for moving more to the cloud, we've invited James Rosenthal, a director at Google Cloud, and Radu Vunvulea, Group Gead of Cloud at Endava, to join me today. James, would you like to introduce yourself?

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JAMES ROSENTHAL (JR): Thanks Bradley. I'm delighted to be here with you today. I am, as you say, a director at Google Cloud. I have been at Google for about 13 years and have worked across a range of different functions and teams within the business, and hopefully today I'll be able to explain to you what Google is doing already in the cloud and where we want it to get to, and how we think we can be of service to our users.

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BH: Thank you and welcome to the show James. Radu, would you like to introduce yourself?

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RADU VUNVULEA (RV): Hi guys. My name is Radu Vunvulea. I'm Group Head of Cloud at Endava. Part of my time I'm supporting the customers to be able to build their cloud vision and to embrace cloud.

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BH: Well, welcome to the show Radu. So, in 1943 IBM said "I think there is a world market for about five computers". Fast forward 80 years and we have a handful of cloud providers serving those 92% of companies we talked about.

Radu, do you think that IBM's prediction was correct in that we only have a handful of cloud providers today?

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RV: I think that the prediction, it was done in 1943 for the current times, was good, but things change from the time and nobody would imagine that computers will be used as they are nowadays.

Let's think about this year and the speed of digitalisation and the migration to the cloud that we started to see. It is pretty hard to do any kind of prediction, but if, for example, we would imagine our self in 1990 and we would talk about cloud and what would cloud would be in 2020, I think nobody would be able to imagine and to predict the current size of cloud nowadays.

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BH: And James, any further thoughts on that?

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JR: Well I think Radu's exactly right, like it's impossible to predict where things are going. We can take best bets. We can think about like what we've seen in the last few years, and particularly as

Radu says, like this year working from home, COVID and all the terrible implications and impact has also been a time in which I think like cloud computing and cloud storage has come into its own, because obviously it's so hard to manage on prem servers and think about generally how you're managing all your infrastructure if you have to be there, hands on fixing it, as opposed to using a public cloud where all of those things are taken care of for yourself.

So, hard to make predictions, but I think that it will continue to grow and I think, moreover, those players who are already big in that space; Microsoft, Amazon, Google, IBM etc, will continue to grow and, that said, there's always the new incumbent who one has to keep an eye out for.

Often at Google, when we're asked which of our competitors we're most concerned about, I think we generally think, well, it's probably two or three people who are hunched over their laptops in a garage, coming up with something that's really disruptive and transformational, rather than the sort of businesses that we all know well, the Microsofts, Amazons, who are all doing a brilliant job, but they're more of a known quantity.

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BH: Absolutely. And since IBM's statement in 1943, we've seen several technological waves going from mainframes to thin clients, to distributed fat clients and back again, and now to cloud. James, do you think that the cloud's architecture is going to stick around for a while?

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JR: Yeah. I think it's a really good question. I think we are absolutely convinced that the cloud architecture will stay around for the mid to long term. If we just look at the way that Google's business has grown on search, the app side, the map side, all of those services are run through cloud infrastructure, and I think that gives us the confidence as well, when you look at the other businesses today that are growing and doing well, it's all on the cloud.

So I think we just need to recognised how we're evolving and how our tech peers are evolving to see that this is the way of the future, and even though it's impossible to predict what's going to happen in a year's time, two years' time, what have you, I think this is a pretty safe bet.

What we're also seeing, I think what's been interesting of late is it's not just pure plays and tech businesses that are embracing this kind of architecture and this kind of infrastructure. It's significant traditional businesses who recognise that the simplicity that's afforded to them by moving onto cloud, you know, and a large part, like part of this 92%, but particularly those who are doing it in a more all-encompassing way, is a great advantage to them in terms of the efficiencies it brings, and also the ability to mine their data and do something useful with it.

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BH: And Radu?

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RV: From what I see on the market, the kind of architecture that are using the cloud, especially for the in-fill projects, we can see a lot of micro services and serverless and a lot of customers that are looking especially to product-as-a-service and software-as-a-service.

But also what is interesting, especially for line of business and large organisations, is to do the migration as is, basically finding more easily to spin-up their applications and their systems, on top of virtual machines of Google or of AWS, or on top of Azure versus to rewrite a product from scratch.

So, taking this into account, I see cloud in the near future, for the next three or five years, as a combination of fat clients that were migrated from on premise to cloud, and new greenfield projects or recurrent projects that basically used most of the juice, that used most of the software-as-a-service and platform-as-a-service services available inside cloud.

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BH: And turning back to James, what's Google's strategy on this? Is it to reach the remaining 8% of companies, or looking for opportunities in the existing 92% that have already migrated to cloud?

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JR: Google's strategy is that we want to think about all clients or all customers who could benefit from using any of our products or services in the cloud. So we are proudly open source and open system. We want to work with clients who will be able to use some of our strength in security, some of our strength in machine learning, data processing and analytics, and if those customers are currently using other cloud providers, that's fine.

I think we want to make sure that we're very supportive of multi cloud environments. We're very supportive of doing whatever's best for the customer. I don't think we want, it's not for us to dictate how our customers want to set up their cloud or their overall storage and processing situations or positions. I think we just want to make sure that we're able to be useful, and where there's something that we're good at that we can do for them, we'll lean in and get it done.

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BH: That's a nice, neutral all-encompassing answer there. Radu, when you imagine what cloud might look like in, say, the long term future, 20 years' time, do you think that we'll still have a small number of big vendors like Google's GCB and Amazon AWS, Microsoft Azure and Alibaba?

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RV: It is pretty challenging to do such a forecast, but what I think that will happen and what we'll see, I think we'll see four or five big players on the market, like AWS, GCP or Azure together with Alibaba, and also other small cloud vendors, especially the ones that have their own products or can provide more social service, functionality, especially managing the data, and we already started to see such vendors that start to appear on the market.

So because problem for smaller vendors, small cloud vendors, to be able to reach the size that, for example, Google or AWS has nowadays, is that you need to buy for a long period of time a lot of CPU storage to be able that mass, that size that the current big vendors have.

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BH: But there's a lot of infrastructure and investment required in order to compete with some of the existing players. As James said before; that Google are always looking out for the next people that are working in their garage, working on the next competitive element. So James, what's your view of 20 years' time and the marketplace?

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JR: I don't know. I struggle to think about what's going to happen in 20 days' time as like COVID and wildfires in California, and all of these things happen. I'm reminded there's a book and a quote by William Goldman, the screenwriter, which is titled, it's about Hollywood, but he basically says "nobody knows anything", and I think that's true of like how successful films will be when they launch, and it's true of this kind of space. It's like we don't know.

So what we're trying to do is continue to build products that we believe serve our users well, and recognise the fact that, I think there's currently, the last stat that I saw was about four and a half billion or 4.6 billion people are currently online globally. There's seven, seven and a half billion people in the world.

So kind of regardless of how we currently see things, in the next hopefully five, 10 years, all of those people will be online. That will put a lot more pressure and need for robust resources, and robust tooling, robust services and architecture, so I think that's something that we're gearing up for and, regardless almost of cloud, this is something that we think about in terms of our other products, like how robust they are, how easy they are to use, how they're translated into multiple languages etc. We've got nine products which currently have more than a billion users.

And so, I think it's making sure all of that, as I say, kind of going back to robust and security first and foremost, so yeah, we will continue to invest in this space. I was actually just looking through our website, and it was talking about all of the data centres we've got, which I think there's now like 13 or 14 globally. What's great to see is there are so many in Europe. So we've got in Ireland, in Denmark, in Belgium, Finland, Netherlands, and I sense there'll only, you know, there'll be more and more of that as we go along, as the required capacity grows.

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BH: Cloud and data go hand in hand, so James, in your opinion, how positively does it impact the customer experience to use cloud based CRM marketing, automation, and customer support tools that are all connected together in the cloud?

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JR: I think it's imperative, like one of the areas where we think about this is that we know we're good, if you kind of go back to our mission statement of organising all the world's information and making it universally accessible, and I think we can bring that skill and that service to any of our users of Google cloud, insofar as the same tools that we use, like BigQuery and the various different machine learning principles that we use for organising all of our data, and all the searches that are conducted every day, and all the videos that are uploaded to YouTube, and all the different ways traffic updates, you know, using that same ability to process data quickly and get insights I think is exactly the sweet spot of what it is we're trying to do, whilst obviously making sure security and everything is top-notch.

I think the other thing that we're all kind of aware of is it isn't just having the data. It's obviously knowing what to do with the insights, or being able to drive the insights from it and then do something about it, and so I think as this move to the cloud continues, more and more time will be spent working with businesses like Endava, thinking about what it is that those data signals are telling a business, and pivoting or changing course as necessary to make the most of the insights.

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BH: And Radu?

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RV: James gave a very good example, and I would like to add here would be if, for example, three or four years ago people would say that data is gold. I think that nowadays it's more important how you process the data and how you get the real insights from it, versus having the data themselves.

And because of this, the cloud vendors that provide the ability to easily any kind of queries on the data and to apply different ML algorithms on top of that will be the one that will have success, and will attract more and more organisations to store and run their system on top of their cloud services.

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JR: Yeah, definitely.

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RV: And from a security point of view, this year I think that a very interesting thing happened, not only most of the cloud vendors provide out of the box functionality that is allowing us to input the data and to keep it stored in the right regions and countries, taking into account different regulations and local laws, but also we're seeing a lot of countries that accept to store their data outside their country because they didn't have the capability to process the data fast enough to be able to respond to different internal events, for example the spread of COVID in their own country.

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BH: Something that James mentioned earlier was about security. Now according to Computer Weekly, 46% of all European company data is stored in the cloud, and alarmingly only half, or 54% of that sensitive cloud-based data is encrypted.

There's a concern that rapid deployment of cloud source could leave organisations exposed to threats. James, what are the cloud providers, or at least Google, doing to encourage companies to encrypt the data and follow other security best practices?

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JR: Yeah that's a good question and I think we, you know, as I said earlier, and as Radu mentioned as well, like security is first and foremost for us, and we sort of extend the view that we take in terms of protecting all of our users' data insofar as, if you've got a Gmail account, which I suspect you have, if you have YouTube channels, if you use Google productivity tools like Docs and Sheets, all of that has to be secure to the utmost, because the last thing we would want is for there to be any breaches in terms of that, because ultimately we don't own any of our consumers, any of our users.

So if they felt or if they saw that the security was in any way compromised or they didn't feel confident in it, they'd just go to another provider, another source, be it of search, be it of mail, be it of maps or what have you.

So, I think we take the approach that this is probably the most important thing, and then we do everything we can on the cloud side to reduce the risks. So of course, we're like ISO compliant and all the various different compliance tools that we need to be.

What we've found as well is that in recent years and what have you, we've been able to improve the monitoring, improve various different tools, like looking out for like spam or phishing attacks, ensuring that there is multiple redundancies insofar as regardless of what happens in the world, they're not any risk to the data that you hold, and this has started to be very compelling for clients, I mean not least, say, Deutsche Bank who have, we announced a few weeks ago signing a cloud transformation deal with them.

We feel it's our duty to make sure that we are as strong as possible in this area, and in order to be as strong as possible, we have to be able to persuade and give comfort to institutions like banks that we have everything necessary in place.

So, I think we continue to push that. I don't think there's any reason for not, for clients not using all of the encryption tools available to them.

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BH: Right. How do you describe what the differentiators are between each of the different cloud providers that are out there?

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JR: How do I do it? Obviously respectfully and politely [laughs], whilst trying to sell Google Cloud. I think we all have our strengths. I think Microsoft has a legacy and a footprint with all businesses of being there, being reliable, insofar as the old adage about IBM, no one gets fired for buying Microsoft, and I think they're highly competent.

I think AWS invented this sort of space insofar as making it consumable and does a great job with businesses. I think they are very much the sort of bread and butter of making sure that the processing and what have you, and the storage is all done and good.

I think where Google is really strong is not just being able to hopefully match Microsoft and Amazon in those core areas, as is often, as we're often shown to in the Gartner reports and what have you, but moreover recognising that when customers are thinking about going off prem and into the cloud, it's often just one element of a broader business transformation they're trying to carry out, and so what we think about is where we can be of value to those businesses in terms of broader transformations they're looking to carry out, and that ties back to our ability to process enormous amounts of data, and drive insights that are really actionable, or our ability to work with Kubernetes, or our ability to think more broadly from a cultural point of view of where we can be useful.

So I think we try and take, I know it's a bit of a cliché or trite, but try and take a holistic view of what it is our customers are trying to do, and see where we can be useful.

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BH: And Radu, from your perspective, how do you see the differentiators?

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RV: I think one of the differential factors of the current cloud vendors on the market in the COVID times is the locations, where they have their datacentres, and the second thing would be the availability, because if we remember the times from February and March, there were some cloud vendors that have some storage and computation availability, and this might be a differential factor in the future, because customers will need to take this into account in the case of an out stage, what they should do, what kind of cloud vendor they could rely on.

Most of the cloud vendors have a very strong portfolio from the ML, AI, like cognitive services, handwriting recognition, speech to text, text to speech and so on, but as James said, I think that the ones that will offer an easy way to be able to execute queries and that will be able to extract data from big data repositories, will be the one that will be able to differential from the others.

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BH: Finally to you James, how does a business avoid being locked in to one cloud provider? I suspect you probably have to answer this regularly.

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JR: Yeah, I think it's a super question and it's something that we always face, and I think I mentioned earlier on about us, in everything we default to open and we believe in open source, we believe in open cloud. We support hybrid, multi cloud. We've got the Anthos product and way of looking at things, so we want to give customers flexibility.

I think that's possibly one area where we are slightly different than Microsoft or Amazon insofar as we are very open, keep using that word open, to whatever it is the customer's trying to do, and we're not trying to force our cloud on them. What we're trying to do is help them transform their businesses in a way that allows them to remain relevant and profitable and efficient, and to the extent that they want to use other software and service providers, other cloud providers, great, and our products are designed to work as seamlessly as possible.

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BH: Radu, anything to expand on that?

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RV: As we know, Google created Kubernetes, so I would say that they are the parents, the mother and father of micro services as we know nowadays, and with the lockdown topic, one thing that many times customers are forgetting about is to do the match between the lockdown and the lifecycle of the application, especially if you have a lifecycle of five or eight years. Sometimes we shouldn't avoid so much lockdown, but more to take into account how much we want to have our systems or our application locked partially or fully to a specific cloud vendor, because the cost of creating a system that it has zero lockdown to a specific cloud vendor could be very, very high.

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BH: So what are your recommendations to avoid that lockdown?

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RV: My recommendation would be first of all to analyse if the lifecycle of the systems or the applications overlaps with the contraction part with the specific cloud vendor, meaning that if you, for example, use a specific cloud vendor for the next five years and the lifecycle of the application is the same, then you shouldn't try too much to have locked in to a specific cloud vendor.

And the second thing would be; try to put on the paper the cost of using some of the services, especially from the social service from a specific cloud provider, versus creating or managing by yourself the specific services to avoid the lockdown, especially services that are enabling to process the data and to analyse them.

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BH: OK so now we're going to move on to our quick-fire section. I'm going to ask you some questions, and we're looking for really short answers, as best as possible please. We'll start with James on the first question. What did you want to be when you grew up?

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JR: Lawyer.

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BH: And Radu?

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RV: An historical researcher.

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BH: Wow. That's the first time we've heard that answer. Second question; excluding current employers, who do you think is the most innovative company? Starting with James.

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JR: I'm really getting into Garmin at the moment. I like their watch and I've become obsessed with looking at my blood oxygen levels on the back of COVID, so I think they're doing pretty good things. I like their products.

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BH: How's it looking at the moment?

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JR: So yeah, it's not bad, like 93%, 94%. I think I'm alright. But yeah, I think what I like about them is that they make all of their data and tools fun, accessible, easy to use. I'm not particularly into exercise or fitness, but they are nudging me in a behavioural economics kind of way to be more healthy.

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BH: Excellent. And Radu?

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RV: It is Microsoft with Office 365 toolset, and why? Because they were able to bring especially data ML and AI very close to end customers, and many times customer don't even know that behind the scene there is strong ML system processing their documents or their emails and providing them insights.

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BH: And sticking with Radu, what's your favourite phone app?

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RV: My favourite phone app is FATMAP and it's very useful if you want to go hiking or riding your bike in the mountain especially, because it provides you a very nice view related to the landscape where you have roads or where you have a very big difference of altitude, and the most used application I would say, after Facebook of course, it is Outlook.

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BH: And over to James, excluding your employer, what is your favourite mobile phone app?

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JR: I use, well yeah, taking away like productivity tools, I use Spotify every single day. I'm very happy with it. I like the fact they brought in podcasts, which makes my life easier, and it's probably, I mean I pay for premium, not showing off [laughs], but it's probably the best £10 I spend a month insofar as, as I said, I use it every day, it finds new music that I'm going to like and I don't listen to ads or anything like that. It's pretty cool.

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BH: Over to Radu. If you could invite one person to dinner, dead or alive, who would it be and why?

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RV: I would invite Ray Dalio, the author of Principles. It's one of my favourite books, and the stories that he has behind each principle, each code are amazing, and I'd really enjoy a dinner with him, sharing maybe with me his life experiences and his stories.

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BH: And to James?

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JR: Wow, I'm impressed with Radu's choice. It sounds fascinating. I'll have to read that book. I was thinking about this a lot and I think it's easy to be flippant. At the moment, because the world's so miserable, I'd probably have someone who's funny, like Stephen Fry, but generally there's a book that I keep going back to, which is Victor Frankel's Man's Search for Meaning.

And it was written about his experiences in concentration camps and then he became a psychiatrist, and how he coined a lot of the thinking around how, you know, regardless of how bad things might be at any particular point, or how good they are, we all individually own how we react, and being able to recognise that.

So I think he's a fascinating human being who's been able to positively touch so many people with his work, and I think it would just be interesting to see how he managed to keep a positive outlook when things were terrible.

[00:28:14]
BH: Absolutely. And while we're all passionate about digital and devices, it's important to disconnect. What's your favourite unplugged hobby Radu?

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RV: Hard to say, but in the last few months I started to enjoy trail running, especially in the forest, so I would say my favourite unplugged hobby now is trail running by myself.

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BH: And James?

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JR: Hanging out with my family, hanging out with my two daughters, wife and going for walks with the dog.

[00:28:42]
BH: Ah that's lovely. Thank you both for your time today. It's been really fascinating. In part two, I'll be asking James and Radu about their careers and any advice they have to share. Please remember to like this podcast and hit the subscribe button.

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