



CLOUD REALITIES

CRLIVE003

Lessons from a scale early
adopter with Dimitris
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[00:00:00] All right, let's go again. My apologies for that. It's like that. Think about that as like a practice run. Yeah Real live podcasting here on the beef

Welcome to Cloud Realities, a conversation show exploring the practical and exciting alternate realities that can be unleashed through cloud driven transformation. I'm David Chapman. and I'm Rob Kernahan and we're still at reInvent. Unfortunately, as I've said before Sjoukje was unable to join us, but roving reporter Rob Kernahan Still here, fresh looking this morning, Rob.

Yes, feeling a lot better today, got an early night last night. I think the jet lag is over, and fit as a fiddle. Fit as a fiddle. Absolutely. I cannot wait to hear what you've cooked up for us later. Oh yes, there's some [00:01:00] good themes today which we'll discuss later, but some interesting ones.

Introducing the theme of people, which will be quite interesting. I really do think the show is beginning to swim into a bit more focus, isn't it? Yeah, absolutely. But both in terms of the themes and my eyes this morning, it has to be said.

We've got Dimitris Perdikou from UK Home Office. How are you doing? It's your first re invent, I understand? Yeah, good thanks. Yeah, first re invent. Bit scary just how big it is and how many different people are here. I think I heard there's about 50, 000 people here. That's right. Depending on who you ask, I've heard between 40, I have no idea what the real number is, but it does feel like a lot.

Yeah, I have no idea I can cram this many people into one small space. No, exactly. One, one small space, but yeah. And what are your first impressions of the show? Yeah, it's great. So many different people here from different places. So I've been walking around the Expo Hall and there's loads of companies I've never heard of before.

Yeah. I'm really enjoying just meeting up with people both from the UK and abroad that I've never seen before. Meeting up with some of the AWS development teams as well. Yeah, really enjoying it. I do think one [00:02:00] of the things that reInvent does exceptionally well is gives you a sense of being able to explore your way through the industry and the expo hall here actually feels like a microcosm of what the cloud industry feels like, I think.

Yeah, definitely. Because I think we use so many different products all the time. I'm always learning about new ones. You forget that there's even more out there you've never even heard of before. And there's more people using some of the products in different ways as well. That's right. They pop up all the time.

And actually for anybody who's Not been to reinvent. The Expo Hall has got a big central section that is the sort of AWS marketplace. We're sat opposite that right now. And then around the outside there are, what, hundreds, tens, hundreds of booths of different sizes for different types of organizations.

So there's a lot you would recognize. But as Dimitris was saying, there are, there's like a lot of new, yeah. Stuff. New stuff popping up all over the place. New stuff. And that's the swag as well. Dunno how many pairs of socks I've picked up from all the swag. , what would you say your favorite bit of swag is so far?

Probably the battery pack. 'cause I keep forgetting to bring mine out I've got a new battery pack to keep my phone alive [00:03:00] through the day. That's a good one. That's a, I bet there's none of them left, Don. I . Anyway, look, thanks so much for joining us. Great to see you here. Why don't you introduce your role a little bit, and for those who might not have heard of what the Home Office does and how it fits into UKGov, just give us a picture of that.



Sure. Yeah, so I'm Head of Engineering at UK Home Office, one of the largest government departments in UK, covering things like immigration, borders, passport and policing. So my role was Head of Engineering, so I build out our central platform team, EBSA, Environment, Build, Support and Administration. So it's basically some guardrails and tools to empower our development team.

I've got a team of about 150 people or so that also focus on centralizing our CI capabilities, and we've also been exploring SRE for a few years as well. So yeah, quite a broad thing. What I think is extremely impressive about UK government around about 10 or so years ago now, and that was just before like a huge transformation has [00:04:00] started, and people sometimes look at public sector and think, Oh it...

behind the private sector, but I really from a point of view of tech innovation and ways of working, the acceleration is absolutely enormous. So what's been your lived experience of that? Yeah, it's exactly that. Actually, I think in the tech side, particularly cloud usage, we're really been trying to get ahead of the curve all the time.

It's a really exciting place to work. It hasn't got the traditional connotations of what UK government is like. Thankfully. In fact, I'm constantly trying to find other people out in industry to compare stories with, compare learnings and We really struggle sometimes, depending on the organizations.

There's a few big ones that we keep trying to attain touch with. Obviously your Netflix and Spotify's, which are massive. Yeah, of course. But there's a lot of, I didn't realize there's a lot of our industry which are still on premise or I've done a simple lift and shift to the cloud as well.

Yeah. So yeah, we talked about on one of the, one of the last week's launch shows actually that. Cloud seems to be everywhere. You hear about it all of the time on like mainstream and tech news, but actually the reality of it is we're still in quite [00:05:00] early stages of adoption in wider industry.

Yeah, definitely. I think I heard someone say the other day that they reckon 30 percent of workloads are in the cloud, which I'm not sure if that's quite right or something, but I think. For me, because of the people I end up talking to, we're in our own little bubble, right? And it feels like everyone's on the cloud.

There's a huge amount more to come. And you're constantly behind the whole time. It hasn't stopped changing. I can't keep up with even just AWS's notices. This week they've already announced so many different things. There's a massive list of things to read into when I get back home. Yeah, exactly. You didn't expect homework from this as well.

No. Let's actually then talk a little bit about the home office's journey, because I think what's fascinating about this, because you guys got going very early, and you've had a continued rate of innovation over the course of the last five or so five or 10 years, you are in a rare breed, where you're coming to the end almost of your first adoption cycle of cloud technologies.

So take us right back to the beginning. Like, how did it start? What were early first steps into the world of cloud. Yeah, sure. So you're right. We're going through [00:06:00] a big rearchitecture, which has given me some time to reflect. So we've been in AWS now for about seven or eight years. And we quickly realized we didn't want to just lift and shift.

That wasn't where we wanted to And when this isn't working. This is not how AWS is made. So let's go and use some of their wider services. So we immediately started using things like



RDS, managed services, and the bigger thing is we were quite early on the container path. So we've done a whole bunch of jumps through there already.

We were on Rancher originally, then onto COPS, and now looking towards EKS as well. And at the time we were a program of about 150 people. But now, due to the success of getting things moving, getting things into production really quickly, being able to move even faster, that's just kept succeeding.

So we've slowly grown our program. There's about 3,000 people in the program now. Wow. Absolutely massive, and we keep having to re-explore new tools that we've realized. We're using, weren't as many managed services back when we started using it. And funny being here because we keep having to reinvent.

So you did that as you were [00:07:00] going through it, let's not lose the point though when you decided that lift and shift wasn't quite doing it. So how big a reorientation of the team at that point was that I think it was a massive thing because there weren't many people out there which really understood how to make use of those other services.

Yeah. So every single one you had to sit down and go, is this worth it? Why is this worth doing it to me? And some of 'em were, use cases were really easy. Like we, we always had problems with our databases on failing over and backups and things like that. So that was really useful.

I particularly work in government. It's a really big security thing. So when we were looking at load balancers and firewalls, that became a much harder discussion about how to make that work and how to go into deep dives of AWS to understand that. And yeah, just treating them one at a time and being flexible.

As you've now gone forward, at what point did you start to think our current architectures are starting to creak a little bit, and tell us a little bit about what that creaking is, so why are you now exploring re-architecting? [00:08:00] We're always doing some level of reinventing. Everyone's got a bit of tech debt going, trying to deal with the tech debt, and shifting services, maybe more managed services where they are, cropping up.

Obviously different services come out and aren't quite mature, so you've got to keep track of that going there. For us, the big difference has been looking at the scale of what we're trying to do. Because we've got a multi-tenanted structure now because we've got a huge scale of things. In the meantime, loads of new tools have come out in this space.

ASEA was the first one developed by the Canadian government. It was really exciting of how to create landing zones in the clouds. And I'm... And just briefly go into that? Just give us an insight into that? Yeah, so we had a few AWS accounts, but largely had a production account. And really the...

What the modern way of using cloud is separate all your workloads into different isolated areas. And that was really hard originally, and you can separate them at different levels up the stack. So now we're moving to get keep getting completely segregated. Okay. Anyway, sorry, I didn't mean to interrupt.

Let's go back to the main thread. So we were talking about the things that were starting to happen that meant that I was leading you to a re-architect. Yeah, just [00:09:00] supporting more and more people. We're seeing more services come up. Many of the services we now have weren't even envisioned when we first started moving to the cloud seven years ago.

But as we've made more use of it, we've got more services cropping up. And so as we've got those, we've been trying to learn how we maintain those, how we integrate them, how we segregate them at the same time. It's always been a big challenge securing them and



securing the wider stack, whilst trying to get some convergence and shared tooling.

And you mentioned managed services. So managed services in the cloud exist. In the market, but I'm not sure they have yet been fully cracked, particularly very cloud native managed services where you're trying to integrate potentially third party and customers say DevOps teams, for example, so let's explore that a little bit.

So what a managed services mean to you guys? And what sort of services would you ideally want to consume? If you could raise a, if you could wave a magic wand, what would good managed services look like for you? Yeah, so really for me, is managed services about getting [00:10:00] someone who's an expert in something else and giving them the problem.

I like that. That's why Rob's here.

Yeah, so ideally it's lots of areas. I want to focus on what's high value for us. So it's new services, new functionality, improve our customer experience. So I think I give someone else that problem. The easiest one I said for us is RDS because no one really wants to be managing the guffins of a database and how to back it up and so on.

But there's lots of other levels of that as well. In fact, I've just come from a talk with the central observability team. It's a really exciting area I think because we're really learning new lessons on how we do monitoring, alerting, logging in the cloud. But equally there's a broad spectrum of tools available there.

So it's exploring whether what the different capabilities are, how we combine them together. And that's a really big challenge. So would you want to, are you in your mind, if you think about like old school architectures, you have infrastructure separate from applications, right?

So you can buy application management services, application development services, and fairly standard infrastructure run services. Running data centers are running at server [00:11:00] level. Are you horizontally delineating like that? Are you going for vertical product stacks when you're thinking about like managed services, for example?

So it's actually a really big mix. Depends on the managed services. So different managed services doing things. We're trying to go for the vertical product. And we've got some really good teams now that are working that product way of working and really delivering that. But other areas, it's just not possible yet.

There's some tools out there and some capabilities that aren't quite there yet. Yeah, you've not seen it. And are you integrating third party providers with your development team? So like a DevOps team might be like a multi organization team. Yeah, it's one of the really interesting things.

So we've got a lot of different suppliers. We've got lots of civil servants coming on board. We're really grown out technical base, but we're also still using lots of different supplies for their expertise. And then particularly the managed service. I was actually just talking about the Dynatrace team.

We really get on with Dynatrace as well. And we've got a SaaS solution from them. So able to shift some of our monitoring out to them as well. So it's a bit of a mix. Very good, and what advice would you give to other organizations that are maybe coming, maybe not [00:12:00] quite where you are in the cycle?

Let's say you know what you know now, but three years ago, what would you do differently over the last three years, do you think? Yeah I think we, definitely don't just lift and shift, look at the capabilities you're looking for. I think the biggest thing I've learned is look at



where you want to deliver value, focus on that and then look if you can pump everything else off on somebody else who can give you a managed service or something similar so that you can focus on those capabilities.

Too many times we're a bit, worried about different managed services or SaaS solutions. And then we just gave ourselves too much pain because we're not experts in those things. Yeah I love that perspective because of course like early cloud adoption and as you were saying earlier, like lots of organizations are still in early cloud adoption.

There was this kind of huge unilateral rush to re insource everything, wasn't there? And it's like you had to own the whole stack and it sounds like that you're reflecting on that and actually coming to some different conclusions now seven years on. Yeah, definitely. And the other thing, I think big thing that's changed is I'm really keen on open source.

It's nothing wrong with saying there isn't a good open source [00:13:00] product out there. There's some great open source products out there. Prometheus is another one. The monitoring space is absolutely amazing, but in other areas, there just isn't a great open source. There's nothing wrong with doing that.

I'm also seeing some of the cloud providers is, particularly for someone supporting capabilities they're either very cheap or even free. So we're looking at things like Secrets Manager at the moment, which is Extremely cheap. So maybe there would be an open source alternative somewhere, but the use case really adds up.

Yeah. Look, man, thanks so much for that. Really good advice for someone who is so far through their journey that you're second generation now. So congratulations on your journey. It's some brilliant stuff. Thank you. Thank you very much. Rob. Hello. You've been roving around the floor, trying to soak up all of the new information.

I have. What's the new trends? So we have some new themes. Today. So the story of evolution, not revolution absolutely continues and we saw that in the keynote this morning. How do I scale faster, take out the complexity, use the service and integrate, but it's on the existing tool stack that you've already had, right?

And so So what are they actually providing? Is it just like [00:14:00] stripping away and simplifying? Or is there actually tools that are helping that skirting journey? So if you had to do two things, it's about working across availability zones and scale. And the second is about automatic integration. So you've got data sets easier to connect.

So then you can use the higher order services above that, and that gets you to your insight faster. I thought, you mentioned scaling as being one of your concerns, Dimi, in terms of your re architecture. Are tools and themes like that are in the show this year appealing to you in terms of your next steps?

Yeah, definitely. I think they were only still learning how to do cloud at an enterprise level. A lot of the early days we were just having to make things work. So yes, getting an enterprise level is a whole different ballgame. So yeah, there's definitely been a few key things. Was it security data late?

Was it? I think it's Yeah, It's the minority report of security issues where it finds the crime before it's been committed. Disappointed to know they don't have precogs lying in a bathroom. It's gotta happen, isn't it? Sorry Rob, go on. But the first theme that popped out yesterday that was very [00:15:00] interesting to talk about is people.

Obviously the most important part of any organization. Yeah. And then there was a conversation about innovation. So we spoke yesterday about with Tom about innovation



and driving that. But there was a good, a great conversation about psychological safety and organizations that provide psychological safety make happier people with the right leadership skills and then they can innovate in a much more compelling way.

Psychological safety for those that maybe have not heard that phrase, just want to set out what that is and why that might be so important to say good innovation. Yeah essentially the best way to describe it is that everything around you is stable and you're happy with it.

So therefore you're able to focus on the task at hand which is about driving the innovation in the organization and finding the new way to do things, inventing new business models. If you're in a chaotic environment and you don't know what's going to happen next, obviously as an individual you might feel a bit more insecure and therefore your mind is elsewhere.

So this type of point is that place. Yeah, or you might be nervous or scared to make something, make a decision or do something that you... You might perceive [00:16:00] as risky. Yeah, that's right. So incumbent to what Phil was saying yesterday about the leadership traits that have to create that environment where people can thrive.

And there was a good conversation about that's the key to making innovation work properly. Yeah. Is that's something that you see in your teams? Yeah, we were talking quite a lot recently about how we empower people in the teams. It sounds like from the same thing when they're comfortable there and they feel empowered, they're going to explore new things.

Talk up talk, talk up in different discussions. Yeah, absolutely. Speaking up, it's so critical, isn't it? Yeah, definitely. The second part was keeping up for people. We've seen a lot of services come out recently in cloud creates a high cognitive load on people. And there's quite interesting points came out, actually.

There was a conversation yesterday about the exams aren't keeping up. Yeah. So you're going through the certification process, but because of the rate of pace of change, the exams sometimes struggle to introduce the new services and the learning as well. So that cycle about how do I train myself up and everything that's happening and struggling to keep pace.

And that actually get also that connects to some of the [00:17:00] reskilling points that Phil was making yesterday, which is if you're still working traditionally and you're intimidated to go into like the world of cloud because it looks enormous and different to what you're used to. The constant rate of innovation must, must be even more threatening to that, absolutely. And in fact, within Amazon, I think they're also struggling with that as well, or AWS I should say, with as the new services launch, differences in UI experience, the way they integrate, how you configure it, etc. And I think one of the things we might discuss soon is about how they Consolidate and converge and make a more consistent operating experience for people using their cloud, right?

Yeah I mean that really feels like you know You're talking from a customer perspective being an early adopter moving into second gen It feels like that's what's going on at the show this year Yeah, definitely And it reminds me of something else where someone told me get your exam in now in December because they haven't had time to Go and update the exam Might be the best piece of advice cool.

So theme two, [00:18:00] again, data. We had the Swami's keynote this morning and it was all about scale processing, large data sets connected, working across regions. ML is absolutely everywhere. And those sessions are rams. So it's very hard to get in. So there's a lot of interest in ML and what they're doing.



However, there's a bit of mysticism in there and the language they're using. And a lot of people they're split on it. It's very jargon and maths focus. So there's a bit about. Great, we've got the technical tools to do what we need to do and maybe use ML, but how do we apply that to a sector, or a business, or how do I use that differently to think about how I might get insight?

And It's actually a fairly typical technology arc, isn't it? Which is those that are interested in the sort of deep technology aspect of it are the ones that get initially interested and the ones that start advocating for it, which is where you get a lot of conversations that are generally tech led.

Yeah. But actually what you really need to bring it alive is some use case. There was one good use case mentioned this morning, which was about using ML on geospatial data to direct teams on the ground in disaster zones. The ability to see flooded roads, [00:19:00] and you can direct the team safely, or the route of best, or least friction to where they need to get to.

We did see one use case. That's clever. Yeah, but the thing that's come out is the huge amount of processing power required to put this over huge data sets. There is a sort of... sustainability and cost angle to this that I think as this ML world matures, we'll start to see better ways of handling it from a FinOps perspective.

Yeah. I think from a chip set design point of view, that's becoming such a core element now to running these massive processor heavy workloads, isn't it? Where the chip sets and the power consumption of a specific chip set has to be a big consideration in this day and age. And I think we saw a nod to that.

With the DeSantis keynotes, but hopefully Verna tomorrow will also be talking about the sort of the evolution of that and the Graviton sets and things and such like to you. Fantastic. We've got Tom Metzeler back, I think tomorrow morning in the first show tomorrow talking about cloud sustainability.

Absolutely. And the final thing we will continue is sovereign and security. Not a very rock and roll thing, but I will say it [00:20:00] is a passion subject for you. But they did launch a service where you can put hardware security modules back to the KMS in the cloud, which means for high security organizations, again, that theme of building your cloud to be high security.

Interestingly, in that session, it split the audience. Some were very excited, and there was, in fact, whooping about hardware security modules, which was very interesting. And the other side of the room was a bit more meh. We'll wait to see. But clearly some very passionate people about such things in technology.

So I thought I would call it out. Can't shut him up about sovereignty. But on a serious note, that must be important for you guys, right? Yeah, really important. It's always been a big sticking point for us for different workloads, getting the right sovereignty. Because I've seen some of the team, they've got a dedicated team now in AWS who are talking about the sovereignty.

So I'm excited to see what they come out with in some of the frameworks to hopefully just help make our lives a bit easier to get the permission to go and use more services. Yeah, absolutely. Absolutely. Look, excellent stuff. I think the themes of the week really starting to emerge now.

Absolutely, yeah. We're starting to see big themes, [00:21:00] people, data, scale reducing complexity. Maturity, yeah. And then the maturity and the convergence about how everything works together. Absolutely. Fantastic. Looking forward to keeping tracking it



during the rest of the week then. Brilliant. Four more this afternoon?

Hopefully, yes. You're putting the pressure on here, Dave. But yeah, I'll find four more. So Demi, we'd like to end the show by asking our guests what you're excited about doing next. And that can be anything from, I'm dying to go home at this point. to a good, to a good keynote you wanna say?

So yeah, I think the two, two things actually from me is gonna be. The Verner Keynote. Looking forward to see what he does. Yeah. Also, he talked a bit about disasters, and there's a disaster recovery vehicle somewhere here. A specced out Jeep that they used in various disasters. Is that right?

I want to go and have a look at that. Where is it? Over in the Caesars Forum. That does sound good. Yeah. Look, man, thanks so much for taking time out of your busy schedule to come and talk to us. It was brilliant talking to you. Thank you for having me. Cool. Rob, thanks as ever. Okay. See you soon. Thanks everyone.

Thanks to our producer Marcel, our sound and editing wizards, Ben and Louis, and of course, to all of our listeners.

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See you in another reality next week.[00:22:00]

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