



CLOUD REALITIES

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AWS re:Invent 2022 Summary
& Analysis with Hemant Sharma,
AWS

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[00:00:00] Doesn't look like it's doing anything and then all of a sudden it jumps into life. I think technology scares you, Dave, doesn't it? It does today, mate. We all set? All good?

All right. Hi, everybody. 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 are still at reInvent, end of day three now. So we're about to head off, pack up the gear and head home. With me still is Roving Reporter Rob Kernaghan.

Hello. How you doing mate? Yeah, last one. Bit sad. Bit sad, but relieved to be heading home. Yeah, and no pressure for him to come up with themes for [00:01:00] every episode anymore. No. Pressure's off. You'll be asleep next week. I will be. Get back to normal. Yeah, exactly. And we're delighted to say we've got Hemant Sharma, Partner Solutions Architect from AWS with us this afternoon.

Hi, Hamant. Were you going to say hello and say a bit about yourself and your role? Thanks, Dave. Thanks for having me. To all of you, I'm Hemant Sharma. I'm a dedicated partner solution architect for Capgemini. I work with to your idea with Capgemini build solution, work on the opportunity, deliver technical workshops, and anything related to technical, I work with the people in Capgemini.

Cool. Welcome. It's good to have you here. And what we're going to do in this in this final episode is just take a step back and have a look across the week. And see what are the big themes that have sprung out to us. So each day Rob has been reporting on the trends in the show. And what we've done is grouped them together.

We're thinking to into specific sort of areas that we think are going to really impact the industry over the course of the next 12 months So [00:02:00] we're gonna start with something that you may not be surprised by if you've listened to the episodes this week They are, we are focused quite heavily on the people and leadership elements of cloud transformation.

And we've seen that as a theme throughout the the conference itself. It's something we're particularly passionate about, but what have we seen about it, Rob, this week? Big conversation, especially with Phil, around lack of capability and skills, people needing to train up, people needing to change the way they think about the skills that they have and what they need to do for the future.

And then John talked about general purpose tools and how there's always a lag like in the industrial revolution. Yeah. So through that how do you make the people feel safe as they're changing their roles in their job, psychological security, and that they're able to get access to things they need to be able to pivot and change so we can get enough capacity into the system.

The other thing that's very notable is A lot of the announcements this week made it a lot easier for people to get things done. Yeah. So you can spend more time on high value activities, if you think about what we've [00:03:00] heard, and less time doing the basics. Less burden to deliver technology and architecture.

So we're making it easier for people, and we just need to double down on strong leadership to allow people to get the skills and the training they need, but make it in an environment where they can thrive, and they don't feel threatened about change in their environment. So for me, that was the sort of key areas that...

I heard and we've discussed on the podcast. Indeed, and this notion of psychological safety



has come a few times. We talked about it this week in terms of it's like a must have to create creative and agile environments, because it's within those sorts of environments that people feel free and able to create and not under pressure.

And actually... Have a safe space if something doesn't go particularly well and use that as a learning exercise So how does it how does that how does this theme resonate with you? What have you seen this week? That's caught your eye Yeah, absolutely. I'm totally with you on this. So as a Employer you want your employees to become?

Continuous enhancing your skill, right? Giving that space people that [00:04:00] they can spend some time and, and as their skills and intention is one part, but in AWS, you might've seen that we provide the infrastructure and the video trainings and testing labs where people can go and learn.

So intention is yes. Provide the psychological vision. But unless and until you have the underneath infrastructure for training that you can basically find in AWS, right? So for partners, we have hundreds of thousands of digital online program available. You can find a lot of free AWS services so people can go and get their hands dirty on, right?

And as a partner solution architect, we also conduct a lot of labs and workshops. With these mechanism intention plus the services provided by AWS, that basically will gain the end result of scale enhancement. Yeah, that's an excellent shout out to the free tier services. One of the big things for me is experiential learning, going and doing it on the job.

trying it but not having to pay for it. Yeah, absolutely. And all being [00:05:00] free means it's easy, a very low bar of entry to go and try it. Fire up the nano instances, get them and see what you can do. And I think that point about low bar of entry is so important. It's so critical to tap into communities that might have felt excluded by, very high bars to entry in careers like this.

And the other thing that resonated with me that that Phil was talking about is really organizations really focusing on re skilling their existing staff. Just because say your data center teams don't know cloud today, doesn't mean that they can't retrain in cloud and bring all of the...

knowledge of your organization forward with them. In fact, those are the people who you should be retraining to become platform engineers because they've got the same type of skill. They just need to learn the new tools. Absolutely, totally with you. And these are the guys who possess the right skill.

They know the enterprise architecture, which they already implemented. So it gives them an edge. So if you're helping yourself by helping an employee learn a new skill. Yeah, absolutely. Said. Moving on to the second major theme then [00:06:00] for us this week. It has all been around data and machine learning, lots of innovation around the tool set on machine learning machine learning sessions in particular, a number of our guys have been out on the floor and going to a lot of sessions have noted just how rammed machine learning sessions are at the moment.

So what's going on with that, Rob? What's your observation about its popularity? It's obviously a hot topic. Everyone's interested in it. And people can feel the potential in ML. But a lot of sessions this week have been very technically focused. Because people are learning the trade. They're starting to understand how it works and how to create the environments where they can apply it.

I think over the next 12 24 months, you've got to see the business and sector applications



associated with these ML environments. There's a lot out there, but I think it's the... I know it's a great thing, but how do I apply it to get the use case element to really bring it to life? Yeah. And I think when you get the power in that in the previous podcast, we were talking about Alexa.

What do I need to worry about today? It's the ML doing [00:07:00] the hunting to find the interesting points. So I don't have to spend hours trawling through data. So you think about the productivity gain that it could bring for us for, and again, going back to allowing people to spend more time on high value activities, it's going to be one of the key productivity boosts we get in Business over the next few years, I think, and then what's been your observations this year about the focus on data and more importantly bringing some intelligence to using the thing in a different way.

Perhaps, yeah, absolutely. I would just would like to take a step back. And if you look at the past to reinvent themes, so data analytics and machine learning was one of the top tier focus point, right? And we rolled out like end to end machine learning pipelines and rolling out a single ID for machine learning where all the team can.

go and work as a single project. Earlier before SageMaker Studio, there was not a single ML based ID for it. Because if you look at the lifespan of a ML project, it is basically different from a traditional application life cycle. So we spend a lot of effort [00:08:00] and energy on that.

And if you look at this year, we are like enhancing on those products. If you look at what we rolled out this year we rolled out the machine learning governance on top of SageMaker, right? So different teams might be working on different data, but what we are driving now that we are giving a ML governance framework.

Where all the team can see that, okay, what is the performance of all the model deployed on the production? Or look at the monitoring of ML who got access to what kind of data? So all this kind of government is basically getting deployed on that. One more side thing to ML I would like to highlight is ML is one thing, but you need a data feed for ML.

All right. And here comes the ETL part. Cool. You might have heard this particular thing that ML is one thing, but in ML projects, 70 percent of the time goes in the ETL data cleansing and data augmentation. Much like any other data project in history, it's all about the quality of the data.

So another theme, which basically aligned with ML theme is that reduce ETL time [00:09:00] or automate your entire ETL, right? So if you look at what we have done this year, it's basically now water data goes into Aurora. That is. In zero time, it is totally available for the Redshift. And whatever data is in the Redshift, it is available for the Spark.

So suppose if you're running Spark on Glue or EMR, so basically you got your Spark data from Redshift and coming from Aurora. And that was one of the other themes we discussed this week, which is integration of the services, making everything available, really easily, so you reduce the friction, so I can get results faster out of all the platforms, and that's that maturity rise that we see.

And one more thing I would like to you might have seen one of the announcement for INF2 instance. So all the deep learning model who uses which basically uses high compute, high memory. So we rolled out the INF1 last year, and then now INF2. So INF2 basically gives you 50 percent better performance per watt.

So we are covering sustainability, right? I was going to comment on sustainability. Yeah,



absolutely. INF2 provides better performance, but with a [00:10:00] similar power consumption. And we are providing more tools and capacity for our ML geeks. They can run and deploy deep learning models in INF2. So let's just dwell on the point you make about sustainability, though, which is, ML by its nature hugely processor heavy.

And therefore, could burn more cycles and such so just what is it to do and how does it contribute to that? In basically if you look at for training your deep learning machine model, if you're not using our SageMaker, which is our managed service as a ML geek, if you simply want that, okay.

Just give me a very powerhouse packed instance where all the G P O based instances there with. With a better capacity. So we got Inf2. Yeah. It's a GPT loaded and you can run your deep learning machine learning model, which is anyway GPU and compute heavy. Inf2 is a successor of Inf1.

And, in nutshell, if I try to compare... Same wattage, but 50 percent better performance compared to [00:11:00] InFont. Very good. Very good. Okay, moving on to the big theme 3 that we picked out, which is this notion of absurd scale. Obviously the cloud itself has got absurd scale. But I think what we are spotting here is infrastructures.

Maybe not as a single keystroke, but of a, a much more simplified scaling model. Absolutely. So what we, especially today, we heard that things that would have taken us months to prepare for even just a few years ago can now be done in moments. 10,000 node. Clusters, event driven architectures that can answer the world's largest use cases for the world's biggest organizations.

So you don't have to worry now, it's all taken care of. But also that maturity of that which is the observability of what's going on over the top. When you've got these super massive architectures, how do you know what's going on? So not only is it the ability to get that scale at pace, it's also the ability to understand what's going on.

And then when you apply it to the data point and the [00:12:00] all the discovery things that are going on around using the machine to tell you what to worry about, you suddenly bring a real practicality to these things can do great things and they're easy to manage. Whereas normally these types of architectures were very unwieldy.

Yeah. Yeah. Too hard to manage, too hard to scale, too hard to control. And also costs associated with it. Whereas now we. So you get a much easier entry point into these types of playgrounds. Haman, have you been seeing the same thing? Absolutely. So if you look at one of the features which we got rolled out in CloudWatch.

So CloudWatch, as is it collects log matrices and events, right? So in this event, basically, we rolled out a new feature, CloudWatch, which basically provides you visibility cross account, cross region, right? So you might have deployed your workload in Singapore or in India or in the U.

S., right? So using this particular capability, Now you get the visibility of all the logs, which is happening across the regions, right? Yeah. Yeah. And same goes with the Grafana. So we rolled out a couple of new features with Grafana where it's supposed to within the VP c it got the alerting system now.

So absolutely we are [00:13:00] seeing more and more security and observability related features coming out of, in this rainbow. Yeah. Yeah, absolutely. And like Rob from a point of view of triggering super massive architectures have you got thoughts on what a case study might be or what a use case for something like that might be?



It, this is where the imagination has to kick in about what you can do with it. But if you think about retail on very large scale, massive supply chain architectures, the logistics associated with those global integrations, being able to see in real time where things are within those types of infrastructures, the physical infrastructures.

Can allow very large organizations to pivot quickly and make better business decisions. And not only that as well, I think when you do apply to something like supply chain. Yeah. There's a huge sustainability uplift for optimizing that situation. Yeah, into it, you understand what's going on and you can optimize.

So operational excellence, which many organizations will need to think about, especially in 2023 and optimization. These are the types of tools and techniques that you're going to have to apply to understand. And then you can make. [00:14:00] Decisions. And not subjective ones. Yeah. So you can get the clarity you need to be able to then go and execute, but when you do execute, you can do it on scale very quickly as well.

Very good. So our final theme of the day is evolution, not revolution. I think our observation is it's been an important year because it's been a year of doubling down on maturity. Yeah. Simplifying, pulling together, componentry into sort of more platform based structures. That ultimately I think will lead to more industry cloud use cases.

So what else has been going on that's given us the impression that there's been nothing majorly new, but a really important set of releases in terms of maturing the platform? Absolutely. We've seen a maturity cycle. There's still a bit of catch up to go. We discussed about certification catch up and consistency of interaction model.

What we've seen is all the things that would trouble us around the plumbing that add not little value, but were necessary have been fixed for us. So the big thing for me is through that maturity, the abstraction, the ability to, we discussed the [00:15:00] the thing from the marketplace deployed straight to live that would strike fear into some people, enjoy into others at the beginning these types of things, the deep level of.

Abstraction means that the high value stuff can go on and that just strikes immaturity. The optimization under the covers allowing us to do better things above. And it's very clear integration, data scale, performance, all of the things that we would want naturally have just been massively improved this year.

And I think with something like that, it's very aligned with what we're seeing in the market more widely. That's right. So platform architectures in particular are becoming just more and more more and more usable and more and more integrable. So moving away from built, like real toolbox componentry.

to actually integrating a platform level. Yeah, and I think in IT there's a trait where people want to reinvent the wheel a lot, because it's quite good fun building the wheel in technology and rebuilding platforms. The, people are waking up, lack of skills, need to get to be able to go faster.

To get pace into my organization that we want one platform. [00:16:00] We want to drive consistency and we want to go fast and focus on outcomes, which is what John was on about. And I think that there's organizational maturity kicking in about the stop the toil and start the value work and the value creation work going on.

And I think the sort of announcements we heard this week are really going to enable. These organizations to, to, faster time to delivery. Absolutely. Yeah. Yeah. Aman, sound good? Absolutely. Not only we came out of with the feature, which aligned with the evolution, but



if we look at we are addressing some of the common use cases like governance, right?

So when I talk about spread some governance over the ml, Or like one of the other features we rolled out Amazon Data Zone, right? So basically, in an organization, think of a scenario, different team might be working in silos, and one team might have already done, which other team is trying to do it again, right?

If, think of a scenario that, A, team A want to share some data with team B, which they don't know anything about it. Amazon Data Zone is like addressing that problem that you have publisher, you have subscriber, and without an organizational boundaries with using the inbuilt [00:17:00] governance model, you can.

and share this data. Yeah. It's not only the features, but governance and the no ETL, which we talk about the automation of the ETL. So as a developer, I don't have to worry about when I'm sleeping, my data will be flowing from Aurora to Redshift, right? So it's one of my problems. So next day I'll go and run whatever I do.

So it's features, governance, automation, that kind of stuff working. Very good. And then when you look at all of that in the rounds, we've got to focus on. On people, making sure they're skilled, making sure they're psychologically safe and becoming effective. And it's that combination of things that will drive agility, supported by increasing numbers of machine learning tools, but being driven on sustainable infrastructures or increasingly sustainable infrastructures.

Which also helps support ability to create super massive architectures in a much more simple, straightforward, and I assume, highly likely to be automated ways. And then finally, across the entire platform, a drive to simplify, a drive to sort, a drive to make it more usable. And again, I guess that's going to play [00:18:00] into the agility piece.

So what have we missed from you going looking around? We missed anything key? We didn't miss it actually, but if I look at from a different angle, so as I mentioned that for Amazon data analytics and ML was always a front on the frontier, right? But on top of that, there is one more trend. If you look at the serverless piece right within data analytics and machine learning.

So if you can recall the last re invent, we rolled out a lot of serverless. Less applications in data and analytics. Amazon, e m r Redshift, then managed service of Kafka. And I can see the same thing is driven in this reinvent. Also, we rolled out open search as a serverless application.

So that's the only probably piece I would say that going along with the data and analytics and machine learning, there has been a maturity lift again in the serverless and the serverless sock. And in fact, serverless architecture will probably in the next 12, 24 months come of age and we'll see a much higher level of adoption inside major enterprises.

I think there's, it's been in the market long enough for people to get a feel so that we don't get the [00:19:00] clash of the asynchronous architectures causing issues and people are getting more used to designing systems that weren't using serverless. Yeah. That brings us to a bit of a conclusion on that, but before we leave the conversation, I always wonder about your personal highlights.

So I always love coming to Vegas. Bright Lights, big city. Yeah. But I also love picking up my boarding pass and getting on the plane and going home, because it really does take out of you. The energy at this place is amazing, but it's very intense, and it's been a hard week, but it's been a good week. That moment of deep comfort when the the plane pushes back from



the terminal and starts to taxi.

It's that is the most relaxing moment of the week. Hey man, what about you? Personal highlight? Yeah first thing that, it's my first re invent and first time I've been to... This is your first re invent? Yeah, absolutely. I did not know that. Yeah. Oh yeah so what are your impressions then? It's huge, it's humongous and look at the motivation and the end to people carried.

Innovation is in the air, we can clearly see that. And you talk to a lot of people and then you find a lot of connections and things roll out in your favor. I [00:20:00] have a couple of occasions, probably I'll tell you after. But and second thing being a techie. I love the Amazon data zone.

Right? That solves a governance problem. People don't know what's going on in their own organization. So that's pick for me. Very good. And for me, the highlight really is actually where we spent most of the week, which is the export floor. So the expo floor to me has just, has been so vibrant and energetic this year.

It hasn't, it's felt more like a festival, I think, than a sort of a trade show. And what I love about it is it's it almost represents a microcosm of the industry itself. So you look around, you can see things changing the whole time, like year on year. There's companies that go away, companies that get added, there's an amazing amount of new stuff in the hall this year.

I think there's a lot about platform abstraction still, like lots of things going on that are helping build platforms. That's probably, I always have a bit of doubt about platform abstraction, but we'll leave that for another podcast, but there's a bunch of [00:21:00] the third parties doing that at the moment, I think, but anyway, yes, the expo.

Connecting with people has just been amazing. I've seen so many people here that I haven't seen since last re invent, probably. Look, we like to end the show by asking our guests what you're excited about doing next. For me, I think I would see more emphasis and focus on the evaluation part.

I think data analytics serverless would be there, but I am really happy the way the governance piece is being addressed now and the automation ETL. So I would also like to see more evaluation part in next reinvent also along with the big, a couple of big Brilliant. I thought you were going to say go home.

Very good answer. Very well, well done. Look, so thanks Hema. It was really good to see you and thanks for taking the time to do it. A lot of fun. Thanks for your insights. Same here. Thanks a lot for having me. My pleasure. Rob, what an amazing job you guys have done this week. Oh, and I'd just like to make a shout out for Sam Price and John Ogden, who have been supplying me with lots of intel and [00:22:00] insight and attending the sessions.

You said you were the roving one. There may have been a small team working with me. They've done a great job, you guys. Yeah, thanks so much guys, feeding us with the information that has allowed us to... try and paint a picture of it so quickly the show's barely even finished yet.

There's so much scale to this place to try and capture the essence of it. It's been a tough call for those guys but they've done a fantastic job. Yeah, exactly. I want to thank Marcel, Ben and the production team for all of the support and the work that's gone into this week. Turning the episodes around quickly is no mean feat and that has been great.

So thank you very much for that. Thanks to our producer Marcel, our sound and editing wizards, Ben and Louis, and of course, to all of our listeners.



We're on LinkedIn and X, Dave Chapman, Rob Kernahan, and Sjoukje Zaal. Feel free to follow or connect with us and please get in touch if you have any comments or ideas for the show. And of course, if you haven't already done that, rate and subscribe to our podcast.

See you in another reality next week.[00:23:00]

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