



# CLOUD REALITIES

## CRLIVE 16

AWS re:Invent 23 Creating Impact  
with AWS GSI Solutions Architecture  
Rohan Karmarkar AWS

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## CRLIVE 16

# AWS re:Invent 23 Creating Impact with AWS GSI Solutions Architecture Rohan Karmarkar AWS

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[00:00:00] It is the least reassuring piece of equipment than you can imagine. But yeah, if it goes wrong, right, the shame, and there's been a lot of shame this week, but if this one goes wrong, this is like it. Then we have to do it all over again.

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. I'm Sjoukje Zaal, and I'm Rob Kernahan.

And we are back in Las Vegas for AWS's re:Invent 2023. I know it doesn't feel like a year.

Does it? No, it does not. It's very familiar. You come back and you go, Oh, I'm back. It literally feels I have never been away. I don't know whether [00:01:00] my life away from Vegas was like a dream. Is it still 2022? Is it still 2022? It's been a year, Dave. A year. Podcast is now a year and two weeks old, so there you go.

It is indeed, yeah. And we're back. We had our birthday, didn't we? We had our birthday, yeah. Very exciting. Yeah, this time last year we were literally just booting the thing up. It was all new and raw. It was indeed. A different experience. And we've got nicer chairs this year. Indeed. Very happy with that. Anyway, joining us on today's call is it's a podcast, Dave.

Just a small point. This is a podcast. Joining us today to to you know, talk to us about the trends and what's going on. And specifically from his particular position in AWS is Rohan Karmarkar. He's the director GSI of solutions architecture. Rohan. Good to see you. Good to you. Just wanna say a quick hello and introduce yourself a bit better than I did

No, absolutely. Firstly, happy to be my name is Rohan Karmarkar. I lead the solution architecture team for our global SI partners, our global [00:02:00] system integrators, where we manage you know, strategic 15 largest global sis from a partnership perspective and do joint go to market effect with them.

Been in this role under the AWS for over eight and a half years and I'm based out of Seattle. So what's the day job? Like you're working with the architecture teams in GSIs, you're working with leadership teams. What's the Well, you know, working with obviously the CTOs and the technical leads of the GSIs and with the customers as well.

And also working very closely with the AWS engineering teams and the services teams, you know, and bringing the best like technologies. For our GSI partners to use and build you know, applications for their customers. Cool, man. And yeah, so back in re:Invent? Back in re:Invent. This must be your like eighth or something like that?

Wait, how many have you been to? So, interestingly, I was like, the first two I attended as a partner, and then eight. As a employee, so this is my tenth arrearment. Wow. And there's only been like [00:03:00] eleven. Twelve. Twelve. This is the twelfth. Yeah. You get some sort of pin. A medal of honour. The badges. Yeah. Real pro tip from us this year though.

We've gone Airbnb instead of one of the strip hotels. Nice. So yeah, it's it's a lot less money to start with, but actually it's just a much more comfortable situation. You can get out of the frenzy for a little bit. Would you know one of the harder things there is to do with an AirBnB, Rohan?

What's that? Finding it, Rob. Oh. No. So Rob is the most prepared traveler that you'd, you've ever come across. He for many weeks at this point he's had his ESTA printed out and the address of our AirBnB printed out and in a plastic folder, right? Something like that, Dave. Maybe. So what happened when you landed, Rob?

It turns out the address was different to the one I thought we were going to. However, Dave,



Dave has omitted quite a lot of context from that story that completely exonerates me in this situation of having the wrong [00:04:00] address. And I'm just looking straight at our producer, Marcel, across the floor, who's currently chuckling to himself about the situation.

So So I'm going to say mitigating circumstances here, David. I'm going to say exonerate is a strong word, Robert. You were a bit in panic mode, right? Well, I found out at 33,000 feet on the plane over the attraction was different. Mild panic. That's the miracle of Wi-Fi in the air, isn't it? Yeah, no, it's great.

Great converged technology working to bring panic in the air, yeah. Alright, then look, on to the main event. So, so, Rohan, give us a view. So we are recording this just after the main keynote. So there is The introductory keynote last night, who was the introductory keynote? Peter DeSantis keynote. And then this morning it was Adam Selipsky.

Adam Selipsky. And there's been a number of kind of interesting announcements, and actually a ton being said, I think, For re:Invent this year, Rohan, do you want to give us your take on, you know, what we heard so far and what are you seeing as the big themes that are emerging? Yeah, definitely. I think you know, they've [00:05:00] been already 30 plus announcements that have happened in the last two keynotes.

I mean, within 30 announcements in about 12 hours, including sleeping time. Yes, including sleeping time. So, you know, obviously they're buried across different technology ideas, right? From, you know, introducing new. Chipsets and new you know, instance types to all the way you know, do announcing Amazon queue, which is the generative AI based you know, chatbot assistant, right?

So, and then there are you know, other applications like zero ETL and you know, a couple of announcements on mainframe modernization to help customers modernize agent. So it's a variety of you know, things that are, happened in the last two days and we're just getting started.

We have three more keynotes. Yeah, no, absolutely Well, the ones that the one that struck us from DeSantis yesterday was actually his focus on so very sort of practical cloud Modernization and a route through modernization [00:06:00] to get to increased efficiency And I think he was talking particularly about leverage of power services and data services in particular So from your day job perspective you know, leading solution architecture, working with GSIs how do you see that changing the conversation with, you know, kind of customers?

And the reason I ask that is because obviously every organization that wants to do a cloud journey, ideally would like to have modernized on the way there. But actually sometimes just the scale of what they're trying to do gets in the way. Sometimes the business cases doesn't, don't quite work.

Give us your take on that. No, definitely. I think see you know, back around seven, eight years back you know, when a lot of large enterprises started moving to cloud initially, you know, their hypothesis was, hey, we need to get into the cloud, right? Get the, build that cloud muscle, how to operate, how to build applications and so on.

And the easiest step back then was just doing lift and shift. Right. Move your [00:07:00] applications to cloud and then go from there and then modernize. I think in the last you know, 12 months or 18 months, there's been a lot more focus on, you know, modernization because you know, when you build apps for the cloud.

Then it really drives down the cost. It brings in the innovation and the agility that Cloud brings. So, obviously, given, you know, the macroeconomic situations, the customers are, like,



looking at you know, a lot more of modernization you know, aspects, right? And over the last few years, they've built that cloud muscle now.

So they can take the Next step of modernizing and really being cloud native. So we've seen a lot of that as well, right? And then there are some customers who are like just getting started as well. So they are now thinking, hey, maybe we should just you know, when we go in, we should go in a modernized state rather than doing lift and shift and then modernization.

So you'll see different patterns from different customers, right? And you know, it's always kind of interesting when it always starts with the. Cost discussion. Hey, we will reduce the [00:08:00] cost, but it always changes quickly to agility, bringing more agility, bringing more, you know, enhanced developer experience.

I mean, you see a lot of, you see a, like a lot of conversation at the moment about like migration to cloud, having not actually delivered, you know, what it was promised to deliver, not necessarily just in cost, but also in things like speed and things like that. But actually, when you scratch below the surface of that argument, it is predominantly because.

The transformation hasn't actually occurred. They may well be rehosting their components somewhere else, but actually if they haven't transformed around that, both at the tech level and the organization level, you don't really get some of the big upsides do you? Definitely. Right. So the more native you are in there, like we call it going higher, the stack right in, in, in the cloud Lance.

So the more you do that, the more efficiencies, the more benefit, the more innovation, the more. Like cost benefits you can derive from it. I think the prize is massive [00:09:00] though if you get it right. So there's never a compromise. It's more efficient, more sustainable computes. You get change adaptability out of your architecture.

And you get a happier workforce because they're using modern tech. It's like the whole gamut's there. And there's enough stories out there that the proof points are in. But there's still this, I feel like there's still this inertia with some organizations where they can't quite get over the let's go transform our architecture for the benefit of.

Of all, because there was some amazing stats that came out of the keynote last night around an 80 percent compute efficiency if you use the platform database and things like this and it's that's a massive cost saving if you choose to take that step to convert. Yeah, definitely. And you know, if you look at that if you look at customers who like some customers are born in the cloud customers, they started their businesses when cloud was around.

So they built for the cloud. Right. So there you, you'll see them like they've got the happiness. They've got the architecture happiness. Exactly. Exactly. And then the, you know, customers who are now transforming themselves to be a, be more [00:10:00] cloud native. That journey is something that they need to really plan it out.

And there needs to be a top down commitment for that journey as well. Right. Because they, it will take time and it will, you know, get you the results, but you'll have to see through. It's hard, isn't it? It's you can't underestimate the pain that can go in a journey like that, but the results and the happiness at the end are huge, so.

Yeah the, it seems to me that the, it's like really important to get the business casing of it right, either, either at the outset of the journey, or it might be that, you know, you've phased it, so at some point you'll get, you'll hit something that looks more like a modernization case than it does a, than it does like a pure kind of re hosting case, or a cost saving case.



But it's useful, though, I think, of some of the metrics that were described by DeSantis in terms of the level of saving applied. Are there that set of metrics, which were, you know, I read that as being clearly trying to signpost, you can business case in a stronger way. Is that like a new set of [00:11:00] metrics as a result of some new technology, or are we just talking about that now because there's more data being gathered on?

What the upsides of modernization actually are. Yeah, I think there's a lot more you know, customers who have gone through that journey, right? So that data is available now. You know, another reference today you know, in the keynote was from the Pfizer team was saying that, you know, they're going to see potential savings of up to a couple of billion of dollars, billions of dollars, right?

Using Bedrock and. Generative AI technology, so those are the kind of anecdotes and examples that we have today that we didn't have probably a few years back. And have you got a good example or two that come to mind that you could share with us? The Pfizer example I was just talking about.

That's a strong example as well, right? And then, you know, there are a few other examples that come to mind where customers have really reduced their infrastructure footprint by being cloud native, right? Like when they were running cloud native. Hundreds of VMs have gone serverless, you know, [00:12:00] the operation costs have reduced, their development you know, deployment, agility has increased a lot, right?

So you'll see a lot of those references coming up from our customers. And it's always the pounds, shillings and pence at the end, the savings with case studies like that are mighty. So that's the motivator of you can actually save a lot of dough. And use that to transform more, your positive feedback loop helps a lot as well, doesn't it?

Yeah, and you know, I think the other thing that I think that always strikes me from case studies that have actually delivered the saving as well, is that, you know, is make sure you actually land land the saving that you're going for. But what I love about that case study as well is, it's based with a company that's got heritage, has traditional architecture patterns and things like that.

They've managed to achieve the outcome, so it's not the born in the cloud story, but it's like some, an organization that's managed to transform itself very successfully. Well, let's move on to the the other big news of this morning in Andy's keynote, which was AWS Q [00:13:00] and Amazon Q.

First of all, tell us a little bit about what Q actually is for anyone who's not seen the news on it yet. Yeah, definitely. I think so Amazon Q is you know, think of it as a assistant, right? That's built on generative AI which is available, you know, in, in different places.

It's available in the console. It's available in the CLI and documentation and also in services like Amazon Connect. Where you know, you can use you, you can use natural language tools. Get questions answered on your architectures on how you would build certain things, right? When you're using AWS platform, today, the way you do that is you have to go through a bunch of forums and search queries and maybe talk to a lot of people to get those answers, right? So this is something now which will be available to you. You can talk about, hey, I need to scale this application, scale up, scale down. How do I do it? Or you know, what would be the kind of, like security I need to build for these kind of compliances and so on, right?

So these kind of [00:14:00] questions you can ask. Now, this, the interesting thing is how this this entire model has been built on, is built on you know, based on like last 17 years of data



that we internally within the AWS have had, right? With, through solution architects and. You know, support teams and all those things.

We've collected this data and use that data to train the smart, right, to make it more, you know, more kind of user friendly and enhance the experience of the developers and the builders using this. I think what I really like about it is it's moving up the intellectual property stack with the higher level.

Requirements associated with I'm seeking an answer and it's a complicated answer So it's a good example of ever increasing complexity and capability from these type of prompts. Yeah, right Yeah, it's and so what's the output that it gives you? Is it like is it documentation at the moment?

Which is like he's how we suggest you go about doing it or is it actually building anything for you? And if it's not do you see that as like a natural next step? So [00:15:00] it's not just documentation, right? It's generating the content for you based on your questions, right? And it'll try to answer the question using some of the, you know, the documentation data and other things, right?

So it'll give you, it'll be a very conversational chatbot type experience where you'll get a response in a natural language again as to what And how context aware is it for the solution that you're trying to build? So, will it take a really complex natural language question I'm literally going to make this off the top of my head we have a situation where we're trying to scale a solution for a particular line of business application.

That line of business application has got, you know, these sort of usage patterns attached to it. It has been migrated over at the moment. It's only been refactored. You know, so, will it take a series of sort of complex queries like that? It will, right? It will take you can pass a lot of context and get, you know, more and more refined responses.

So, [00:16:00] you can really prompt it to get to where you want to go. You know, what's funny about this is the emerging engineering skill, which is prompt engineer, which is becoming more and more of a Yes, a reality of how to use the system best to get the right results out of it So it is a skill of the future that is you know a year ago if you went to anybody prompt engineer They go you are and now you go.

Oh, yeah. No, they're really important now. Absolutely. It's like a job that appeared overnight It literally is and it's one that like it's gonna be millions of people doing it. Let's face it both professionally and personally It's going to be the next big thing, I think. And we talk about organizational shapes changing off the back of AI generally in the future.

This is a good example of a rebalancing of skill sets within an organization. Yeah, very much so. Yeah, very much so. So when is Q going to be available? It is available. It is available already? Yeah, it was launched today. Great. Available with the console and like the CLI and the documentation. Yeah. A few other, I think it's also available in the mobile app as well.

[00:17:00]

What I like is as you're configuring your architecture, maybe it'll be more advanced to say. I wouldn't do that if I were you. I don't think that configuration is what you really want to do now. What do you mean, you'd be like, judgmental? You're not a very good architect, are you? I was going to say, that's much like any other architect I've ever met.

That's not very cost effective. Just judging. It raises a virtual eyebrow at you and rolls its eyes. If you want to be a good architect, you need to be very strongly opinionated. Yeah. And not listen to the response. I work constantly with two of them, mate. I know exactly what



you're talking about.

Easy, easy. But I mean, talking about texture and stretching a little bit outside of So the technical element of it, and I don't know whether Q is doing this at the moment but just sort of generally when you think about Rob's point about things like prompt engineering, things like the advantages that AI is going to give you, and Q being a very fast example of that is going to take a lot of toil out of the work that needs [00:18:00] to be done.

So what are you seeing at the moment in terms of how it's impacting organizations? And I asked that question from a point of view of saying, it clearly is already, but I'm not sure how many organizations are doing full transformations yet. I absolutely fully expect by this time next year probably still be in Vegas, but, and we'll be seeing organizations that are changing, and changing quite materially.

Have you started to think about that yet, Rohan? Where's your head at on that? Yeah, no, that's a very good question, right? And you know, I think Adam said this a few months ago, saying that we are three steps into a marathon comes to generate AI, right? So still pretty early days. But the way you know, we think about it is that it's going to be it's going to change the experience of the entire aspect of You know, application development, application management, security, a lot of these things, right?

So, let's take an example of a developer experience today, right? Like with with tools [00:19:00] like CodeWhisperer, they can generate the code, right? And to generate the code, again, you need to have the right prompts and, you know, things. And then those tools are like getting better, right? We also announced a bunch of things around you know, support for SDKs and cloud formation cloud formation generation and other kind of third party code generation snippets as well, right?

So, so as a developer, now you need to use these tools to be more productive or to be more efficient at your job, right? Same with applications, you know, every part of the application now will be infused with generative AMV. Right. They'll make different parts of it. When you do security, you know, you can see some of that operations also will have a lot of generally a infusion in it, right?

For example, for AWS config. Now we also launched something where you can query AWS config in a natural language saying, Hey, tell me which of the S3 buckets are open to public. Right? So these kind of you know, like [00:20:00] prompts you can do. to even get better at identifying your risk and mitigating the risk and so on.

So all parts of the building blocks of an application as well as the the individuals are working on it will have some infusion of this technology. Right. And you're right. And a year from now, you'll see a lot more of that. I think that's absolutely true. And we're getting, it feels like we're getting to the, we're finally getting to.

Computers that can work like the computer on the Starship Enterprise, aren't we? Yeah, you just talked to it. Although I did actually think, I just thought to myself there, What if developers didn't tell the world about Gen AI and then hid it away? And then they just used it, and then had a big house party.

And nobody ever knew anything about it. They just talked to the computer and off they go yeah. And we're all none the wiser, yeah, just think about that. They've missed out there, haven't they? They probably didn't think of that, Rob. So keen they were to bring Gen AI to the world. Yeah, they didn't think about, hang on, if we don't tell anyone, just think how we can get away.





[00:21:00] Not doing anything for the rest of our lives. On that note, Sjoukje! Before we get on to the remainder of the things that have been announced over the course of the first 12 hours or so of Re:Invent, this is your first one, right? This is my first one. Yeah. First impressions? Highly impressed. Huge conference, good vibe.

Yeah, I'm highly impressed. Yeah. What you, what's your particular big, well that's that's interesting. That's different to the other ones I've been to? Yeah, I think what is really different is the amount of people, right? This conference just started, so, about the content, I cannot judge about at this moment, but the amount of people and the vibe that we have here in Las Vegas, that's really terrific, yeah.

Cool, brilliant. Well, we might come back to your observations as we go through the week, but tell us we talked about the big stuff from DeSantis last night, which is focusing on you know, using power solutions, using modernization to both drive productivity, but also kind of [00:22:00] take costs out. We've talked about Amazon Q, the big thing from this morning.

What else? Yeah, I think then the major announcement that stick to me was around quantum computing and more about error connection improvement. So, a question about that. What do you see for quantum computing in the future? Do you see that it's going to be available for customers soon, or does it take a lot of time?

I think some of it, again it's one of those disruptive technologies, right? Which will Really change the way we look at you know, compute and you know, overall application performance and what we can do with them, right? But again it's a pretty early days there. So today customers can use it for certain use cases.

The technology is still you know, I would say in the in, in the incubation phase right. Then it's been incubated. We do have some offerings around that as well. And it's an area which you know, we are all keeping a very close eye on, to see how things shape up, right? But that's the next big you know, thing in my mind.

Yeah. That's [00:23:00] going to change. After GNI quantum yeah. Well, it seems to me that we talked about both of those subjects relatively often on the show itself. And it seems to me that within the next ten year period, you're going to have not only potential AGI starting to emerge, but emerging at the same time as Commercially available quantum.

That's a world changer, isn't it? Yep, definitely. There's that famous quote, I think it was We always overestimate what the next two years are going to bring, but we always underestimate the next ten years. And you just know that there's going to be a massive, well, quantum leap. Eh? See what I did there, Dave?

Were you leading all the way up to that joke from what you said? I have been sat on that for weeks.

Cool. Thanks, Sjoukje. We'll return to you at the end of each show to get to get the mop up of the rest of the trends and things like that. Good stuff. Brilliant. Well, look, Rohan, thanks so much for joining us today. It's been a real pleasure talking to you and getting your insights. The pleasure's been mine.

Thank you very much for having me. [00:24:00] But before you leave, we end every episode of the podcast by asking our guests what they're excited about doing next. And of course, because it's Vegas, we have to ask you about, you know, what you're excited about doing next in Vegas. And that could be I've got, you know, a seat booked at one of Gordon Ramsay's 25 restaurants in Vegas.

Or it could be something you're excited about, a particular keynote or something that's going



on in the show. So what are you excited about doing next in Vegas? A couple of things, right? Obviously, there are, like I said three more keynotes on the next two days. So very excited about what would get announced there.

Looking forward to the keynote. Looking forward to the partner keynote by Rupa Borno as well, which is tomorrow. And yeah, there's another tradition that we have as a team, right? Whenever we come to Vegas, like before we leave Vegas, we go have steaks at Capital Grill right across the road. So looking forward to that as well.

Nice. So, couple of questions on that. That's really caught my interest. So, preferred cut of steak, and preferred sauce to go with it? Ah, [00:25:00] that's a good one. Thank you. I like the ribeyes, but yeah, I'm not a big sauce fan. Not a Bearnaise man? No, I'm a big, yeah, Bearnaise sauce for steak. Cote de Bouffe from Bearnaise sauce, happy days.

Is that your favourite Cote de Boeuf? Cote de Boeuf. For two? Which is basically ribeye on the bone. Is that for two, Rob? Occasionally just for me. For a man? Yeah, I have been known to eat a whole Cote de Boeuf on my own, so, yeah. Bit of a meat sweat after that, I would imagine. Very happy though, after it.

Oh, yeah. Sjoukje, your favorite cut of steak and do you have a preferred sauce? For me it's filet mignon. I had that yesterday. Classic. Very good. Without sauce. Without sauce. Yeah. What's this like a sauce? I don't. It's much healthier. Peppercorn all the way. Much healthier. Peppercorn all the way. But I do like a filet mignon.

I'm right with you on that. Yeah. I really love it. Yeah. Thanks again, Rohan. Thank you. So a huge thanks to our guest this week, Rohan. Thank you so much for being on the show. Thanks also to our sound and editing wizards, Ben and Louis, our [00:26:00] chef, driver, and producer, Marcel. 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.

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