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CRLIVE 13
Google Cloud Next23

Cloud native transformation with Chen Goldberg, GM of Google Kubernetes and Serverless, Google Cloud

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[00:00:00] You know, how long, how long you can sit in a bath full of bag beans, you know, that kind of thing. Oh, no, there's point to that, David. That's, that's just heroic you.

Welcome to Cloud Realities Live from Google Next in 2023, we're a conversation show, exploring the practical and exciting alternate realities unleashed through cloud driven transformation. I'm Dave Chapman. And I'm Rob Kernahan. And Rob, it's our last show. Very sad. It's come around fast. Yeah, it has come around very fast.

It's, it's both come round fast and felt like an eternity at the same time. I dunno about you. I can't remember where I live. Dunno where to go. Remember what your wife looks like. Yeah. Do I have a family? Yeah. I can't remember how many kids I've got. No. But it has [00:01:00] been good. Sad. It's the last podcast. .

But, um, yeah, it's been, we'll go out with a bang. It's been a journey. It has, there's been lots of experiences on the way through. I'm just open my go home. Travel arrangements do not mirror that, which got me here. Well, I'm traveling with you on the way. On You are. So, I, I deeply hope you are right, although I did, I did.

I'm not gonna name the airline, but I did spend my time doing my complaints registration earlier. I had six individual complaints on the same thing. That's probably a new record. They'll, they'll receive that in their call. I'll send, and they'll be like, we haven't had one like this before. There'll be a picture of you on the wall.

Exactly. Yeah. Well look, it is the last show and we're gonna come round at the end with some, some additional guests and some friends who are gonna give their views on, on what the last few days have been like so we get a broader perspective. But before that, and joining us, here on the show is Chen Goldberg, the VP and GM of Kubernetes and Serverless at, Google Cloud Hen.

It's so nice to see you [00:02:00] and thank you so much for making the time. Thank you so much for having me. Brilliant to see you. Well, you wanna tell us a little bit about yourself, and obviously you have got. Quite the day job. So why don't you tell us a little bit about how long you've been doing that and what, what journey you've been on with it.

So starting with Google, I joined Google about eight years ago, to lead the Kubernetes team, right? , at the beginning it was, mostly I would say engineering led, initiative, and really ever since, it's been an amazing journey to our goal from. The get go was to make sure that we are not building something like a niche platform.

Right? Right. So how can it be applicable for more workload and really have the impact we thought it can have? , so we've been investing in, a lot of things. So not just scale and orchestration, but also user experience and developer experience and ecosystem and um, quality. So that has been an amazing, journey.

[00:03:00] And before that, I've done a lot of things and I think that's also what. Contributes to my unique perspective. I started my career in the Israeli army. Right. Wow. Right. Wow. What, what were you doing there? I was leading a, a department in the IT organization. Right. So wearing a pager. oh. Yeah. We've all done that.

I hope we have not all done that because it's not so fun. That's, that is true. I was never the, I was never the big fan of like the 3:00 AM meeting, the 3:00 AM meetings when the servers went down. It, um, it operations, you can never win. 'cause if it's perfect, everybody says, well, that's your job. And when it goes wrong, they go, what you doing?

Yeah. Yes. And when it's perfect, like, why do you need all these people? Yeah, yeah, yeah. Wait until 3:00 AM and then you'll be glad they're around. Yeah. Um, and then I, um, Yeah, I

did a short stint with professional services and then joined HP building enterprise software. So really going, you know, thinking about [00:04:00] our customers, seeing it from all perspective.

Right, right, and that's where I felt that cloud and containers is probably the tech stack I was waiting for as a leader. So, so at the time you took on the Kubernetes team, it, it probably wasn't that old at that point, right? What, two or three years maybe? , it was probably two years max. Yeah, yeah. Yes.

Sounds about right. So as you, so as you inherited it, it was predominantly like very engineering centric by the sounds of it. You see, people can't see because there is no video, but I'm smiling. Um, in essence it was, first of all, I think the team was on the edge of burning out completely right. Right.

Because Kubernetes started to take off and open source. It was, it was huge. Almost overnight. Conceptually, it's, it felt like that anyway. It felt like that, but then it even became bigger. Right? Right. Which we, we [00:05:00] didn't expect, as quickly, but doing that transition from a technology to something that is valuable.

For everyone. Right? A pro, like a fully-fledged product. I, I think that, like, I feel like that's been, one of my contributions to the project, really bringing product management, right, skills to how to manage that, working with customers, iteration quality and testing. Right. You actually do that.

And we actually do that. Yeah. Yeah. Good stuff. And we've been doing it both in open source and of course with our product Google Kubernetes engine. Right. And, I I wanted to talk to you, about what you think Cloud Native is, and the, the reason I wanna kick off our conversation with that is because often you, you can ask people about what, what people think cloud native is, and, and often you get just a very technically centric answer, particularly if you've asked an engineer.

But, but often what comes back are things like Kubernetes as a, [00:06:00] as a core cloud native technology. So for somebody who's actually driving Kubernetes, what's your definition of cloud native? So maybe I will start with a story. Yeah, back, early in my career, I was responsible of building a, a pess like environment for a pess.

The, the little suite? The little suite. No platform as a service. Oh, I see. PS David. Yeah. Yeah, for mainframe engineers. So Right. How you can do some, maybe some math, but building in Kabul and, and so on, and we had an amazing platform. Okay. And people could develop applications like literally in minutes.

Right, but then there were some new technologies and new development, and then everything that was a little bit outside of that pattern. Was actually really hard to achieve. And what I like about cloud native, first of all, you know, think about containers and microservices. So being [00:07:00] able to build small pieces and which also makes it modular and provide flexibility.

So that's one. The second thing is the elasticity, or that you don't have to plan for everything right, ahead of time. Um, and last but not least, one of the things that. I think, you know, and, and really by the way, giving credit to companies like Docker Inc. With Docker Project. So thinking about the container.

I think what they've made back then is making that technology, which was not new, right. Really accessible. And what we all worked together is building an ecosystem, a community that made it, makes it better. Right. Um, which again comes back to speed of innovation and,

and flexibility, so this is a little bit from a technology perspective when you ask customers, H.

And by the way, it's not matter if it's like a bank or if it's a no. Yesterday I had on stage, [00:08:00] um, Laura from VIS Bank and I had Cameron from, snap and Bezel from OP lobbying, like three different profile of companies. The only thing they all care about is how quickly they can innovate, right? Yeah. Right.

A adaptability and innovation to me feel like, you know, when people talk about digital transformation, that's, that's at the heart of it for me is like, if, if you get to the end of whatever transformation that you have done, irrespective of your tech stack, irrespective of the, the products that you provide as a business, if you have not become more adaptable and can move faster to respond to your market, you're still not gonna be acting like a digital company.

Yes. And, and it's really. It's critical for anyone to compete. -h, and innovate. And I will say also my philosophy. People are saying, Hey Chen, what's your strategy for the next four or five years? And so on. I think, have you looked at my question sheet, Ken? Oh my [00:09:00] god, I'm coming to that. Okay. So maybe I can answer now.

Yeah. Yeah. I think that as humans, we're actually not that good at predicting the future. That's right. There's been quite a lot of proof of that exact point in the last few years. Oh my God.

So that's why experiments and iterations are super important. Right. And also listening, to what's happening. There's a really great, I bang on about this a lot, so Rob might groan in the background, but there's a fantastic, um, framework that helps with that called the FIN Framework. Have you heard of that?

No, I haven't. So very, very briefly, it's like a Boston grid, so it's like a two by two and effectively it splits the world into, into two different types of world, a world of order and a world of chaos. And in the world of order you've got order itself and complicated. And those are, um, worlds where.

Unknown unknowns are predictable, are relatively low. Yep. You understand the risks and how to manage the risks. So therefore, [00:10:00] in the world of order you can have complete repeatability, like a contact center or in the world of complicated, you might be doing something vastly difficult like building this conference center, but it, but we understand structural mechanics, we understand, you know, geology.

We know how to build. So, you know, give or take 15%, you're gonna, you're gonna basically hit that on time, three years out from now. So predictability. Effectively in the world of chaos, you've got chaos itself, which is like the world going into covid. Like nobody knew what was going on. So like every hour somebody was making a bad call about something.

And then the final up, you know, kind of upper left quadrant is complexity, which is, um, you've got much shorter cycles and the cycles are driven by listening. And they're driven by talking to your market. So, so in my, it, it really resonated with what, what you said. 'cause in my mind, most organizations that are in the legacy space work in a complicated way.

Annual planning cycles, you know, [00:11:00] we are gonna do this no matter what our market tells us to do practically, but shifting into a complex way of thinking, that's digital transformation. To me that's a, that's a great framework. Um, I think this, you know, if you do it right, it helps you take risks. . And because it's all about risk.

It do it. Yeah, exactly. But you're iterating through them trying rather than trying to randomly plan them. The short cycle inherently reduces risk. 'cause your investment in that

cycle is small. Therefore, if something goes wrong, you learn for it and move on. Yeah. And I love, I love it. So actually that's part of like, when I talk with customers, that's exactly what I'm trying to convey.

Like, to help them understand what's. That barrier to entry and what is the risk? Like what happens if it goes wrong? Right, right, by the way, I also use it with my own team. Like, you know, when we went through this journey. So by the way, today I'm responsible for all Kubernetes and serverless within Google Cloud.

And, [00:12:00] you know, just keep thinking about like, I, I even tell my kid like, the only thing that it's the end of the world. It's the end of the world. . And it's a little bit of a freeing thought. Yeah. Right, right. Okay. Like, what's the worst thing that can happen? Yeah. Yeah. Eh, the chances are it's gonna be less worse than the end of the world.

Yes, for sure. Yeah. Yeah, yeah. And generally speaking, I'm, I'm usually an optimistic, right. So I always plan for success. Yeah. That's much nicer. Very cool. Talking of which, talking of which, coming back to the conference, what, what have you and your team been talking about at the conference and what, what, what's particularly exciting to you?

This is for me, this next, first of all, it. Amazing to be back. Okay. The last time I was speaking at Google Next was 2019. Right, and you can feel the energy. Yeah in the room. And my team is here working with customers. And for me, this, together by the way, with, the excitement around the opportunity, generative ai, [00:13:00] I see customers everywhere are really leaning in.

To modern environments and making a decision that moving to the cloud, like you said, like it's, it's a must. Right? Right, and what we've been working on is making sure that our products are one, applicable for more use cases, but also to the point before our, helping customers take risk maybe from their land.

So how can we reduce the barrier to entry? So for one example we've announced a new edition of a. CGP Google Kubernetes engine, the Enterprise Edition. And what it does, it really helps companies bring their mission critical workloads. And we see data that shows that customers are planning to use much, to run many more.

So 90% of customers are planning to run containerized applications in production by 2027. It's huge. increase from 2021, which was only 40%. Right, right. What, what, what's your read on [00:14:00] what's driving that? Is that. Is that because you've, you've, you've now introduced some functionality or security measures or something like that, that gives more confidence or is it just, you know, we, we just, so this is a journey.

Yeah. I, I mean, people ask me, so how long have you been working on that? And I'm like, well, actually probably 10 years. Yeah. Because it's a journey, meaning lots of the, the things, you know, we made a platform more reliable and so on. But then we have those platform teams. That want to empower their development team.

So they have now new requirements. So we're talking about self-service experience, right. Which again, is not a new experience, but now bringing that things that people are used to, at scale to a cloud native environment, is important. So that's one thing. The second thing that we are really investing in is surprise Gen AI.

I was gonna ask you, I was gonna ask you if you'd noticed that it gets mentioned at the conference quite a bit. I have you noticed? I have noticed, yeah. Yes. [00:15:00] Um, but this is, you know, for Google Cloud, it's an exciting time from that perspective. Yeah. I think, you know, in previous years, definitely we are known for, being a container first cloud.

But we're also known for expertise in, AI and ml. Lots of the research, of course, that has brought all of those, um, solutions now into market is actually origin with Google Research. Right, right, so this is very exciting, specifically, can I go a little bit techy? You certainly can, yeah. Yes.

Can't promise to understand it. Okay. Rob, you might be on this one, Rob. Well, I'll, I'll, I'll pretend to understand this one. Yeah, yeah. No, please do check. Please do it, I feel like there is some characteristics of cloud native. How did you say it? Cloud Native Yeah. I'm gonna use it and.

That really fits the use cases of journey of ai, first of all, the experiments, [00:16:00] right? You have to move fast and you can move fast, scale is critical, right? , not only right when you, some of those models when you need to train them, they actually are, do not fit a single node or a single machine.

So managing those workloads at scale is becoming critical. And then when you think about serving, then how do you scale up and scale down based on demand? Those are really expensive, right, right. Resources. You don't wanna over-provision. No. Right. So that sweet spot, like what we are seeing is, and it was interesting just before next we, we said, okay, let's, let's look like who is doing what on, on our fleet.

And we found that there are top 15 customers of G K E are already running AI workloads on GCP. Is that right? So that's amazing. Yeah. Yeah. And, and I think when you go back to your about the pager and IT ops think, think back then the technology you had to be able to achieve your goal and what is coming outta the technology now and the freedom you get because it's taken [00:17:00] care of.

You can scale quickly. It's easy to deploy. Software life cycles are much simpler. Can you imagine they, somebody had told you when you were doing the IT ops job, that was the world that was going to be be very exciting future. And, and to be clear, we carry the pager. Um, But there is a lot of automation.

You know, one of my favorite stories, that's not nice to say because it starts with the passing of the queen, right? , in September 22, but luckily the team actually, re-architected, their platform on top of a serverless solution cloud run. That's not right. And, and that was what for?

So they could handle the higher workloads that were gonna be driven by that event, and of course, no one knew that that would happen. And in a. In a single minute, they saw a spike change from usually the 50 to 100 container instances to 1000. Wow. Wow. Almost a tenfold increase, basically. And the infrastructure just scaled up.

[00:18:00] There's a happy architect somewhere at the end of that story, and I talked with him and I talk with him and you know, like it, it's his story to tell, but he said like, Hey, I was sitting with my kid. And then, you know, the phone goes up and then I look at my dashboard and ha. I can continue and play with my kid.

Yeah. Yeah. Sad the queens died, but look at what my architecture just achieved. That's amazing. So, um, you were talking about AI there and, and, and how AI workloads are running on top of your product set. What are you, what are you guys doing with AI inside your product set? Have you got to that yet, or is there an application of it?

Of course. So, so first of all, I think that one of the things that is really is a no-brainer, and we've been doing it internally with Google, is how AI can help productivity, right? Starting with developers.

There are some things, you know, as a developers, engineers that we are doing, um, there is a little [00:19:00] bit busy work, like, you know, we're looking for examples and, yeah. Yeah. And we can have that and, and we think Google Cloud, we call it.ai, that peer programmer, that assistant, that really suggests things for you and make things simpler.

One of the things that I'm super excited about, and it's not my team, but definitely a user, we've introduced a lot of improvement in workspace. How often does it get happen to you that you get an email with like, 20 replies and threads. Oh, it's chaos, isn't it? And imagine you'll just get a suary at the top.

Yeah, that would be, that would be great, wouldn't it? And, and I, yes. Particularly on, particularly on Modern Productivity Suite. Rob, this is true. David, this, I, know. Is there a private joke here? No Rob is really struggling to get his head around G Suite and Google Works versus I must learn.

I must learn. Okay. I'm very excited about due AI actually. 'cause the whole, we. Mentioned the last [00:20:00] podcast, but the concept of not having to attend a meeting and it tells me what happened. I got so excited. It's like unusually excited. We, we were, yes, we were thinking about that as well. Um, but I think that there is a lot of, value in that.

Like one of the things that we've shown in the demo, when you have like, for example, incident management internally at Google. So, you know, folks will just record everything that happened. Right. And then I come in and I really try to understand like what happened and I have to go and scroll. And I think it's gonna be really helpful, to summarize things.

Absolutely. Getting action items. How many times have you been to meetings that nobody sent a summary? No. Right, right. Or, or people do send a suary and it's, it's hopelessly worded. It actually doesn't reflect what went on at the meeting particularly, you know, 'cause they've maybe. Waited a couple of days, gone to their notes, can't read their notes.

Then again, it comes back and somebody's like, I don't recognize this meeting. Well, the, it's the corporate crime of the century. Somebody sends you an email, it's 30 emails longer. They say, what you think of [00:21:00] this and you've got to try and decipher it. It's just like, this isn't good. No, it's half a day worth ai.

Please. Yeah, yeah. Ding, ding. No. So more of that. Yeah. But, and we we're seeing a lot of, again, AI is not new. We were asking what we've been doing. Yeah. So we've been doing internally with on, within our product, we've been using AI for a long time for recoendations, and so on, but now, we have an opportunity, um, to achieve that, I would say faster.

so one of the things that we've been doing, we've been, training our, large language models, lamb on our own internal data. Right, right. And call base. And then, you know, the answers are better, higher quality, and it gives you an opportunity to experiment with things more. H. Sure. Well, look, um, I want to, um, return us to one of the themes that we talked about at the beginning of our conversation, by way of maybe bringing it to a bit of a conclusion.

I wanna return back to Cloud Nativeness, but maybe come at it from a, from a different perspective and come at it from the cultural [00:22:00] perspective. Um, because for me, when I'm asked to define Cloudnative, I, I, I always describe it with a number of different elements. So obviously the tech stack, but just as important are things like ways of working culture.

You know, the, the human aspects of Cloud Native. So what do you think, when you think about the human aspects of Cloud Native and how does that, how does that distinguish itself from, more legacy thinking?

I, it's, it's interesting because I just came out from a customer meeting. H. And most of the time we spend talking about the people. Right, right. Um, because this is a, it's, it's a big transformation. Yeah, absolutely. Huge. And for the entire organization. Yeah, in some sense, you know, not everybody wanna let go of the pager.

That's right. As one example, or lose maybe the things that made them successful, in the past. And there's also a lot of concerns, you [00:23:00] know, the things that I take care of, like how can I trust, someone else to do the work. So that's one aspect of the people and skills. The second thing, That's really what you, you we talked about at the beginning of experiments and doing things with uncertainty.and being agile, right? When we talk about software development, we talk about the difference between waterfall method, and being agile, which is very different, very agile with how the team, operates. Where I've seen most success, one. And it, okay. It depends how scale, like you can always do it with small teams.

Sure, yeah. But if you wanna scale it within a large organization, do it like an enterprise level, you have to have, the leadership team, coitment and engagement towards that. And, and it's not easy always. So, you know, what I hear from what I see is [00:24:00] that a lot of time, if you can show the impact it'll have on the business, And what's possible, that's where we see success.

So that's one. The second thing is, um, I think we need to spend time of training people and showing what's possible. It's actually not easy. To learn new stuff stuff. Yeah. To transition in that way. Yeah. Right. I think there's a big part in that, which is seeing is believing. And once you've lived the experience, there's this aha moment that goes on about, oh, okay, it does work.

Let's go. Yeah. Yeah. You have to almost be in the, in the Mele to understand the, well if the benefit, if you, if you've spent your entire career being trained in annual planning and being able to accurately predict what you're doing 12 or 18 months out, and then somebody comes to you and goes, Yeah, that's important.

But actually we're gonna focus on the next three months and iterate between now the next three months. And we might go somewhere completely different between now and the end of the year. It, it blows their mind, you know, they might not declare that, but it [00:25:00] actually blows their mind. 'cause it's like, well that means I'm not gonna have delivered anything.

Right. You know, so it, it's, it's, it's such a huge leap for some people I think. I, I agree and I think that, you know, there's an opportunity to, to do some new language. Of how to think about it because you actually do achieve, you achieve learnings. So within our team, we talk about time to learn, right?

Right. And how we optimize for that. And we talk about hypothesis that we have and what kind of signals we want to see. Because by the way, it's not about not planning to be clear. That's That's right, not about It's is about being strategic. You are gonna be strategic. Well, it was that remember the, yeah.

I think you may hear it less these days at least I hope you do. But there was a period when Agile just launched. But everybody thought it was just a random free for all. You know? It's just like, no, it's just a, it's a different way of working. Sometimes Free, sometimes, David, it still is free. Yeah. Badly done Agile.

Remember the theme park? Yeah. Yeah, that's true. None of the rollercoaster's work. And the, the last thing I would say, going back about risk taking and burial to entry. [00:26:00] We

don’t have to boil the ocean with everything we do. Right? Right. So what can we keep, what can we bring forward? There are some assets that we bring and, and by the way, I can share like, When I joined Google eight years ago, it was the really early days of Google Cloud.

I brought some customer centric, some processes, but I remember thinking, you know, I need terms of like what I don’t wanna mess up. Right? Right. There are a lot of things that are making everything around me so successful, and you need to understand that and you need to keep, keep it going. And one of the things that we’ve been investing a lot.

In our, cloud runtime strategy Is how can I, the skills and a lot of skills, like actually making processes familiar for what you’ve been used to doing before. Yeah. Right. Maybe the technology stack is different, but not everything has to be different. Right? Right. Um, can I bring some of my [00:27:00] tools?

Can I bring my identities? Can I bring whatever it is that worked well for me before? How can I bring it over? Um, because I have a lot of appreciation to experience. Yeah. Yeah, so we need to make sure that people can, utilize that. Right. Very good. Ken, thank you very much for sharing your stories with us today.

Um, we’re going to return to the conference now and have, a little bit of a rundown of what we’ve seen this week. So at the beginning of the week, Rob and I made some, not so much predictions, more like we think the four or five big things. Did you use AI for that? Surprisingly, we actually, yes, we use, we use, we use Google search.

We ask Google what the phrase. Okay, so you did use ai. That’s right. Look at that, anyway, so we’re gonna go back through those big themes and actually remind everybody what they were and whether we, whether we’ve got ‘em right or not. Yeah. It’s drum roll, isn’t it? The moment. Drum drum roll. And also joining in this is, is, is one of our admits.

Steve Webb. Steve, do you wanna say quick? Hello? [00:28:00] Yeah. Hi everyone on the pod. Steven Webb, chief Technology Officer at Capgemini in the UK. Nice to see you. Nice to see you. And I was hoping Tracy was gonna join back. See, she’s made a run for it. She’s run off. She’s literally made a run for it, just to the exact moment where we’re gonna introduce her.

It’s funny. So we, anyway, hopefully she’ll be here. Hopefully she’s back. Hopefully she’ll be back. It’s, it’s live. Dave, this is the excitement of live, isn’t it? It is, it is. It is live. We’re on the edge’s edge. Our professionalism is really showing through. Um, right. So, Rob, kick us off. So, Theme one, it was ai, but importantly, AI and productivity and what we would see about the mech suit for the human to help ‘em out.

So duet AI everywhere. And most importantly, and to your great delight, David, yes, the workspaces improvement around G Suite and, doing all the heavy lifting for you. I, I really welcome that personally. So there was that, and we’ve, we’ve, we’ve, we’ve seen it actually develop a performance, the individual performance, just everything.

The connectors all around it. Yeah, it’s all about making it easier to do things. [00:29:00] Which is good, and, and I mean there’s just a general, a general gist in that right? About just embedded AI becoming just, just the norm. Just the norm in tool sets. I think the, the interesting one for me on that one is the, is the, is the race, I guess with Microsoft as well on obviously what’s being paid, um, you know, announced over the conference versus obviously what Microsoft are doing on, on copilot.

So, um, I guess a bit of kudos there to, to Google on, on obviously getting some of this stuff out in, in general release first. ‘cause obviously there’s, this coonality isn’t there between obviously what, what, what, what Microsoft and, and Google are doing. But I think, yeah,

excellent to see obviously, that yeah, this in the hands of what, 10 million users I believe so, yeah, I, I'm excited about, I'm excited about it.

And, and I think you were, he, you were, you were saying in, in our conversation there, the notion of, of. Literally being able to have your software co-author for you, suarize documentation for you. We were talking on [00:30:00] an earlier show that one of the things that we do is we already auto generate transcripts from, for, for each show that we do but then we can automate the creation of blog off the back of that, which is just like amazing, right? So you literally do a conversation and then it will, you will be multiple documents. And, and I think that, you know, we really focused about productivity, but what we are also seeing with our customers, and I'm sure it's be relevant, relevant for the audience, right?

If I'm an enterprise and I have a company, like how can it be helpful for me? And I think creating those, imagine those magic moments that we see in workspace and productivity. How can I create it for my customers? I think that's a good point. I like that magic moments where you realize what the AI can actually do for you.

There's a little bit of happiness that goes, oh, look what it did. The suary of the 30 deep email that you just don't have a clue what's going on. Yeah. Yeah. The, the next theme was around realtime data. It's obviously a, a close pairing with AI and there's been big improvements in handling data, especially training models with private data sets and things like that.

Yes, so that was quite good to [00:31:00] see. A lot of enterprises will be very pleased, um, and they're one in the same, the main way. And also at the same time, a lot of announcements about optimized infrastructure. Yes, so we had your new engine release, which allows us to do AI mod models, ible. So the partnership with Nvidia allowing you to get hold of the horsepower you need under the cover.

And that, Google Nvidia, um, partnership I'm sure will be very successful. Yeah, we, I haven't talked a lot about it, but really what's we've been investing in is creating the entire stack to be optimized. Yeah. And it's from simple things, you know, of course having the , GPUs and we also announced DPOs.

Yes, available, um, within the infrastructure, but what kind of storage services do we need and how do we do a multi-node inference or multi-node, sorry. So, which means networking? , there's a lot of things that are re related that really help you to achieve better performance. Lower cost and, for those workloads.

And, and it's getting the [00:32:00] basics right and making sure they're consistent and performance so that you can trust the platform. So I'm using the platform beneath me and it's working well, and I know it's gonna have the horsepower it needs the BtoB story that you had, that it just worked. Yeah. Right. And, and, and also there is a sustainability upside, I think, to, to, to processing power in that way yes. So I'm not the expert Sure, for that, I just know that we are using, for example, a spec, a special, like for example, a. Cooling liquid instead of just water, which is, better for the environment. And that's general speaking. That's an area that Google is investing a lot in. We had a really cool movie of our data centers and our TPUs.

Um, If you haven't saw it, you should. Is it online? It's online. It's, yeah. I think Google data centers are, for geeks like me. It's like going to Disneyland. I, I'll, I'll, I'll tell you something. I remember the first time I actually saw an enterprise sound way back in the day and there was a little moment where I went, oh, this is the actual thing that does that.

Yeah. And there's always that urge, like, what will [00:33:00] happen if I was just touch it

gently, it's not gonna break. Yeah. Um, there is deep joy in that sort of thing. Um. The next was we predicted multi-cloud improvements. Yeah, yeah, yeah. And we weren't disappointed. There's lots of integration and connectors and the ability to connect Google Cloud to other clouds, do it easily.

Low latency, that's very important. I'll tell you, the most boring thing in it is IP address management. But if you get it wrong, that's gonna be the Bain of your life. So making anything like that easy makes it ops people a lot, lot happier. Well, well we were wondering as well, 'cause you know, in the early days of multi-cloud, um, there was that.

, you know, the fool's gold of let's build all of the platforms to parity and hey, we'll swap workloads around and you know, we will be, if it's cheaper one afternoon on here, we'll move it here. And it's just never, it's one parity. Platforms never seem to work, in my opinion. And two, nobody's ever switched a workload.

Really. So what's your view on that then? So first of all, I, I agree with your point about that. You [00:34:00] don't wanna optimize for the lower coon din. Yeah, yeah, exactly. I mean, it just doesn't make sense. No, it makes no sense. If you wanna do digital transformation and innovate. That's right. That's right. Um, what we do see is that like probably for those use cases that you need to provide flexibility.

Like for example, with moving data and the reality is that we are. Most customers are already multi-cloud because of acquisitions, because the teams go and do whatever they want with the credit card. Yeah, yeah, yeah, yeah. Classic. Um, for different reasons. So what we do see customers that they're trying, to give flexibility to developers, so use multi-cloud for different use cases and really opt into where they see strength of one cloud or another.and I think that we'll be seeing more on the security side because I think that there are some places where customers are not willing to compromise anything, period. Yeah. Do you mean things like sovereign cloud, things like that? , I think sovereign cloud is, is a great example and that's [00:35:00] probably more on the extreme, but just, you know, you wanna provide flexibility but you're not gonna compromise where your data resides.

You don't, not gonna compromise fixing vulnerabilities and applying policies. Um, right. So, theme four was democratization. And I think we've seen a bit about that. We've talked about the three generations of it, and now you can put technology in the hands of the business or getting much closer to the business, which is great because the platform's abstracting for you, which is good.

And it, it does feel like it's business ready to go and use this stuff to make things that are exciting. Yeah. We talk a a lot about the atomization of it organizations and, and, and getting the. Technology is as raw and as close to the, close to the business unit as possible. And I love it. I think, you know, we talked before about how to create an incentive for the organization to go that way.

Yeah. And I think that for me personally, one of the things that always motivates me is to know that [00:36:00] my work has an impact. And now, you know, working in it, working in tech, like you can see the impact and you really can. And that's the thing. Well I think it became, it. It. It became really crystal clear at the, in the early days of the pandemic, right, where yes, organizations that might have taken, you know, I, I worked on one of these back in the day where we were deploying IP telephony over like a 24 month period or something, excruciating.

And then of course, within a 48 hour period you had whole enterprises shifting wholesale into, into, into digital platforms and, and digital workloads. And it seems to me that that has

woken up. Decision makers and businesses to think, one, actually maybe the technology has legitimately changed this time.

You know, after a lot of false starts during client server in particular, and then secondly, we can actually do it quickly. Brilliant. You know, do you, do you recognize that like in the businesses you are talking to, that you might be talking to different stakeholders all of a sudden might not just be the [00:37:00] CIO's team?

It might be, you know, the, like the chief executives team, so for sure, like, you know, in the early days of the pandemic, Like, and many of our customers that have already modernized They was like, that was an easy transition for us. Right, right. And it wasn't an easy transition. Like a lot, for example, on the retail space, you know, though that really invested in their e-coerce and their online presence, we're able to just simply move, to that.

I agree with you that now it's just becoming, um, like a table stake. Yeah. And the final one, was security, so baked in at the foundation, right in the architecture, especially when you're thinking about AI models using the data correctly and all the social things you need to make sure you are considering when you're doing that.

Um, and also there was a nice bit around AI with security, threat detection as well. So, you know, my theme, the dashboard is dead, don't bother anymore. Let the AI sort it out for you. Saw that there with security response, [00:38:00] , which was, um, quite cool to see. So yeah, we did see quite a bit on security.

Yeah. Yeah. That is cool. Again, for geeks. So like what's happening behind the scene there, is that right? We took one of the large language models and we trained them on specific data, and then, you know, things that would've required a lot of labor intense, work are now just happening by ai. Right, right.

Phenomenally. It's amazing. Yes. We, it's not, not around security, but we had, we also had this debate the other day, it might have even come up on a, one of our earlier shows, I think it was an earlier show where we talked about whether, um, like workflow applications in the age of AI and large language models become less relevant.

So I don't wanna jump jump on you with that, but what, what, have you ever thought about that? Like, because previously, you know, for dig, for digitizing a workflow, but if, if you, if you've got everything there and you've got natural language access to information, what's the workflow for?[00:39:00]

I haven't thought I, I will say that about more than 10 years ago, I don't know how long it was, we tried to use, with AI to improve workflow, to build a product, in that space because there is still a lot of knowledge and sometimes you need to, to make it more flexible. I think, you know, when you look at the call centers, it's already.

Changing that experience. Right? For sure. Yeah. So something that would've been maybe a different, so there will still be a workflow probably behind the scenes. The question is how we as people will interact with it, right? Yeah. Right, right. So that was the themes, if I missed anything massive, then , you could let me know.

But Steve, what do you miss? So I, I mean, the bits to me that stood out, I, I mean, I enjoyed, I enjoyed the, the, the first two keynotes. I thought they were fantastic. I dunno if you guys got along along to that. I think Thomas really faced into, I guess [00:40:00] some of the, certainly some of the challenges that I see, see in the market from some of our customers around data and IP leakage.

Um, so I think there was a, there was some good, good reassurance, reassurance there

around obviously, um, how Vertex handles that and, and, and how, and how that will work. Um, I particularly like the developer keynote as well. I don't know if you, if, if you attended that one, but the song at the, there was funny, a funny song at the beginning.

Yeah. Yes. So if you, yeah. Google that one other Yeah, they, they're awesome intended. Yeah. And maybe the one thing I will add, like you talked a lot about the tech, I think one of the things that I really like in this conference, right? I talked about the energy, but all the customers, again, Google Cloud came a long way.

And also the partners. Right. Yay. It's amazing. Yay. Um, so that's something that I hope you also saw. I did, I did think as well in the, um, the third party integration in, in Vertex AI was, was called as well. So obviously integrating Yes. Um, obviously the, the [00:41:00] wider range of large language models, but also then some of the plugins as well.

I think I saw Salesforce and, and a few others that are now available as well. So, Yeah. Very much a richness, for, for developers that's building out there. Yeah. Building out ecosystem. Exactly. Yeah. Yeah. Cool. Well thank you for that. Um, just to, just to sort of round up on the conference, one of the things that has caught me my eye is the tagline, the the New Way to Cloud.

Yes. And I've been asking you and a couple of your colleagues, like what your perspective is on that. 'cause you can read that in a number of different ways as well. I think it's, it's a really interesting, it's a really interesting set of words. What, how do you read it? What, what goes on in your head when you read that?

Um, as I said before, I'm always optimistic, and I think that the new way to cloud, speaks about probably, in my opinion, two things. One, we talked about before about the barrier to entry. Right? So the new way to cloud, it's, it's not just a big thing, it's not very risky. [00:42:00] And the second thing, you know, bringing that technology and the business strategy together.

This is not like a cost optimization exercise or something like that, right? There is value for everyone, every business in moving to the cloud. Um, so that's how I think about it. Well, what a great note to end on. So thank you again for your time today. I know conference schedules are crazy, even at the end of them as we are at the moment.and it's been great talking to you. Real privilege. Thank you very much. Thank you. Um, now we end every episode of this, show by asking our guests what they're excited about doing next. And that could be I just wanna get home to see my, my, partner's face again, or it might be, something in your professional life.

And, so, so hen what are you excited about doing next? So, of course, no judgment, right? No, no judgment. So our judgment, our conference is happening also at the end of the suer break, right? Right. I'm a mother of three, so I'm really, really looking forward to actually coming back to like normal, [00:43:00] regular routine.

Like doing, not doing much. Yeah. And your house hasn't been destroyed during the day. It's the amount of, the amount of washing up during the suer holidays is absolutely crazy. Crazy. Well look, brilliant to talk to you today. Thanks again for your time and , thank you for having me. You know, nearly at the end of the suer holidays nearly there nearly.

Cool. Thank you. So, a huge thanks for our guest, Chen thank you so much for being on the show, our sound and editing wizard, Ben, our producer, Marcel, and of course to all 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.

We will be back with Sjoukje to kick off season three of the show on September the 14th. So, that that's the new launch date. So we will see you in another reality very soon.[00:44:00]

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