

Telco in 20 | Episode 39
Hacking Cloud Costs
Released April 19, 2022

Danielle Royston 00:00:00 I'm Danielle Royston, and this is Telco in 20.

Did you know that last year AWS made over 2,000 announcements about its products & services? That's more than five per day. A constant stream of product updates, pricing changes and recommendations related to both. It's impossible to keep up with it! Which ones should you pay attention to? Which changes should you apply to your instances to be more cost-efficient? These tricks or hacks are valuable insights on how to optimize your cloud environment in cloud spend. But it's a full-time job. Fortunately, there's help out there! A whole cottage industry has popped up to work with companies to do this very thing. And so today, we're talking with cloud-spend hacker extraordinaire, Michael Kearns. His company, Virtasant, helps businesses save millions and millions of dollars by optimizing their cloud spend. I can't wait to talk to him about how to hack cloud costs. So, let's take 20.

Michael Kearns is CEO of Virtasant. Michael, welcome to Telco in 20.

Michael Kearns 00:01:20 Thanks, DR. I'm happy to be here.

DR 00:01:22 I'm super pumped. I actually authentically love this topic: hacking cloud costs. But I wanted to talk about something that we have in common, which is we're both a little bit obsessed with hacking our personal performance. If there's a new gadget that's going to improve my life... I think I, right now I have like three wearables on, so, right now I'm a beta user of Levels, which gives me access to a continuous glucose monitor, and so it's really changing the way I approach food and think about food and exercise and things like that. And so to start off, do you have any favorite life hacks right now that you're using?

Michael Kearns 00:01:54 Probably for me, it's getting deeper into understanding my own biology and kind of how everything I do interplays with that. Whether it kinda negatively affects it or doesn't optimize it. There was one where I literally filled 30 tubes of blood, which took forever and was not great.

DR 00:02:12 Did they give you a cookie afterwards?

Michael Kearns 00:02:13 No, they didn't actually, which was kind of disappointing, but it was early COVID so they were like, get the hell outta here as soon as possible.

DR 00:02:19 No treats.

Michael Kearns 00:02:20

Yeah, no treats, just get outta here. And then I think probably the one I'm most excited about is full-body MRIs, where they basically just take slices of your entire body. It's like a hundred slices or 200, whatever it is. And obviously you can see tumors and things like that, but you can see your heart, all your organs, impact things with your joints. So all sorts of stuff that maybe you

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don't even know are ailing you. And so a lot of this stuff now is more around, kind of the same way we treat software, which is, the earlier you find a problem, the cheaper and easier it is to correct. But also these iterations of: get data, take action, measure the result. If it's good, keep going and maybe go faster. If it's not working, stop doing it and apply the same principles to yourself.

DR 00:03:02 Well, let's talk about the clock. So thinking about the cloud cost, it's such a different way of managing this thing that used to be pretty stable and predictable, 'cause you would buy your data center assets years in advance and refresh them a lot later and it was really easy to control: access to the environment, new spend and things like that. But with cloud that control kind of goes away cause it's really easy for people to spin up instances and then the costs are very variable. And so we looked it up, AWS made something like 2,080 announcements on products and pricing changes and recommendations last year. And so, what do you think about keeping up with all of that change that's happening in the cloud as you're running sizable instance environments?

Michael Kearns 00:03:46 I always say the best thing about the public cloud is that it's unbelievably easy to spin things up and leverage new products and services. The worst thing about the cloud is that it's tremendously easy to spin things up and use new products and services. And I think what's amazing about the public cloud is the pace of innovation and the value potential that's being delivered to organizations is just beyond comprehension. But you still need an organization to keep track of what's going on, how they're using it, and make sure they're using it in an optimal way. And I think the reality is the pace of change has far outstripped organizations' ability to keep up because they're still leveraging old systems that, as you said, between when I think I need computing power to when I have it resident in a data center. used to be years.

Michael Kearns 00:04:35 And so this idea of my footprint could look dramatically different in six months. Organizations aren't equipped to think that way. And so one of the logical byproducts of that situation is a ton of waste. And that's a lot of what we focus on and it's not because there's anything wrong with what the public cloud providers are doing. It's just, the system is moving so fast and everyone has to move so fast that organizational systems just can't keep up yet and so we help people get the visibility they need to make good decisions and not slow down the cadence of innovation. coz that's the last thing you want to do is say, stop building great stuff for your company so that we can make sure it's optimally efficient.

DR 00:05:14 Yeah, I know. We talked to a telco that moved 2000 workloads over. Pretty sizable. Actually one of the bigger telcos I was in the world and their finance team actually was like... Whoa! What's going on? Finance wants to shut it down. but engineering wants to keep the innovation going and striking that balance. And so the finance team actually went out and bought a tool for engineering to look for ways to save money and how to shut down instances.

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And there's a lot of stuff out there: there's tools. there's consultants. I like you because I think you guys are different. So why don't you describe how Virtasant is different than buying some of the tools out there or maybe even working with some of the consultants that are out there.

Michael Kearns 00:05:55 Sure. As you know, our heritage comes from software product development. And so a lot of our tools and techniques and automation came from us solving our own problems at scale. What we learned doing that is, it's not a software problem. It's not a consulting, or services, or people problem on its own. It's a holistic problem. So you know, software that just tells you, you're spending too much money, go do something about it. Without context it's actually – it's noise, not signal.

DR 00:06:24 Yeah. It's not useful.

Michael Kearns 00:06:26 No, and everything moves so fast. Just having a bunch of people come in and try to assess your spend. By the time they've put it all in their spreadsheets and come to a conclusion, your footprint has changed and the recommendations are already out-of-date. And so, we've taken the approach of first, it's engineering-centric because at the end of the day, the purpose of the cloud is to allow organizations to leverage software to drive value. And so, at its core it's to serve an engineering team, but it's gotta be done efficiently. So it's engineering at its core, it leverages automation, so we can constantly see what's happening in a cloud footprint and get real-time insights into what's going on and make quick decisions. It's action-oriented. So, we help people both understand what's important. So, focus on the signal, not the noise, but also give detailed, “Okay, here's exactly what's happening. Here's exactly what you should do.” But it's also in the context of the organization, because if I'm a legacy retailer trying to compete with a new digital-first retailer on product function, speed is most important to me. If I'm in a commodity business, cost is more important to me. If people's lives are at stake, stability is most important to me. So, how I look at a cloud footprint and what recommendations we make depend on the context. And so we apply the context.

DR 00:07:47 And it depends on the workload within the organization as well. Even though you're at the company-level retail organization, maybe this workload doesn't need massive speed, but other ones do because it's mission-critical and right in the heart of the business.

Michael Kearns 00:08:01 Absolutely. And so we take all of that stuff into account and I would say the space as a whole really started as almost a finance focus, which is finance is holy cow. Cloud spend is tripling every year. We gotta do something about it. We take a... I would say engineering first, but holistic. And I think that's a very different buffering than anyone else has in the market.

DR 00:08:23 Right? And so yours is not a bunch of consultants with spreadsheets looking at things and making recommendations. Yours is software. And so is it, “Hey, why don't you give

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me your AWS credentials and you attach your software”, like, do people freak out? How does it work and how do you connect your systems to start to make recommendations and take action?

Michael Kearns 00:08:41 So essentially what we do is the big cloud providers have standard data sets around spend and usage. So the fault is, let us ingest that data. So no application data, no customer data just spend and usage data from the standard sources, plus any third party. So Datadog or Prometheus plus any kind of custom data sources organizations have. Sometimes they have different metrics or aggregated metrics or custom pricing or whatever it is. So all that stuff gets ingested into a platform that has hundreds of algorithms that look at different spend patterns. And then what we do though is, we take that with engineering expertise and essentially look at both, kind of, okay, what are the specific recommendations, like resize this compute instance from A to B, but also what are the signals we see that, okay, there's an issue over here and we either need more information or more context or whatever it is. And then we have engineers who work with the client lines to say, okay, in this area, you've got a bunch of sporadic compute. You should consolidate that or look at a lot of scaling groups or whatever it is and have those broader recommendations. So it's a combination of basically software and cloud engineering expertise deployed together in the context of the org to give them basically a result. And our whole model is results-based. So all of our pricing, all of our charging is on results. Not on licenses, not on hours, not on anything else, but results.

DR 00:10:00 Yeah, and so I was just about to ask you that, how do you guys get paid? Is it like typical consulting where it's time and materials and you send them a bill, or it's a function of how much you save them?

Michael Kearns 00:10:10 So our default pricing is a percentage of savings realized, meaning: how much did your bill actually go down based on the actions that were taken? And so, part of what we do is we have full visibility into, and it's fully traced, the analysis, the specific recommendations, the actions that were taken based on those recommendations, and then the results. And so, we look at that and report on that, and analyze that holistically. Essentially, the client can both view the results of the program at any given point in time, like real time. But then they can also see an audit of, in the last month we did these hundred things and this is exactly how your bill changed based on those actions. And then just a percentage of the realized savings.

DR 00:10:54 That's awesome. So it puts quality of the recommendations in there. Cuz if they're not quality recommendations, then they don't make the change and then they don't realize the savings and you guys don't get paid.

Michael Kearns 00:11:03 That's right. And kind of our model as a whole is outcome-based because we believe it's healthy to have pressure on outcomes. Cause at the end of the day, whether you're working with us or you get a plumber. You don't want a good plumber to do work for three hours. You want the leak fixed. And so, we like the pressure of focusing on the

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outcome, but it also aligns the client on it as well because it's crystal clear why we're here. We're not here to bill. We're here to drive an outcome. Yeah. And it, crystal clear to all of us what that outcome is.

DR 00:11:03 Exactly. Results-based.

Michael Kearns 00:11:33 And so we like it and we think it's better for everyone, including us. To focus on results and then only charge for results.

DR 00:11:38 And so what's the biggest mistake? I mean, you guys look at a bunch of different accounts and you see what people are doing. What do you think are the common mistakes that you see people do with their cloud environments?

Michael Kearns 00:11:49 I think the biggest mistake is not optimizing the migration for the public cloud. Because I think sometimes people view, like, "oh, I just wanna retire this data center." Or, "if I get enough in the cloud and I get a big enough discount, it's gonna be cheaper." I think when people look at it that way, and you know this because you've been through it, you're almost always disappointed. If you move something that was architected for a data center into a cloud, you're not gonna see value. You might be able to retire a data center and reduce fixed capital investments. You'll have a more liquid spend or more flexible spend, but you're not gonna see reduction or value. You see value when you actually optimize things for the public cloud. And it doesn't mean you have to rewrite everything or totally re-platform everything, but you can strategically, and this is when we work with clients, try to get them to do is look at it and say, okay, are there any things that I can do that are low risk and relatively easy now so that when it gets to the public cloud, it's dramatically more efficient? Like one is: move to native databases or swap out certain things for native services, because then you start to get the true power of the cloud and then commit to, then measuring the efficiency of it once you've migrated it and continuing to optimize it. Cause I think one thing we see is you lift and shift with the expectation that you're gonna optimize it over time, but then you never do either...

DR 00:13:07 Because you never get to it.

Michael Kearns 00:13:09 Yeah, and sometimes you can at least do some big things up front that won't make the migration take longer, won't make it cost more, but you'll be in a way better position on the other side, either to just keep it as it is or continuously optimize it. What we advocate is sometimes there is a great case for re-platforming, but it's like, pick a few big blocks, do those things ahead of migration. And then like with data, continually tune it after you move it with data. And that's how we approach it.

DR 00:13:38 I mean, it's tons of engineering that needs to be done. I mean a ton, but yeah. I mean you can either lift and shift it and then optimize it. Like you said in place or premove, get it ready and then move it. There's kind of two different strategies and I've used actually both, but

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I'm actually a fan of lifting and shifting and then changing there because it forces the organization to use the public cloud and learn about the public cloud. Sometimes when you do a pre-migration, it's a reason to slow down the migration. And I'm a little bit more grip off the Bandaid and start using it. But sometimes you can't really do that cuz how complicated the workload is. If it's highly integrated to other things, it's really hard to extricate a little part of it. So kind of different strategies.

Michael Kearns 00:14:18 We believe in the Wrangler pattern, which is essentially just piece by piece, like, Big Bang, like, change a bunch of stuff, especially in a large complex environment; never ever works. And so we're like, carve out strategic things ahead of time. We like to, and then continue that pattern once you're there. But continue it. I talk to companies all the time where they had this massive push to move a bunch of stuff to the cloud so they could turn off a data center, which is great. But now the costs are three X what they expected them to be.

DR 00:14:47 Yeah. You can do that. But then I call that the double bubble where you're like, you are overspending, but now you have to work really hard to bring it down. Yeah. But it creates a lot of pressure. What's the biggest objection you get from people to using your service?

Michael Kearns 00:15:00 We're good. We don't have a problem. Which obviously my thing is, then great! Then if you let us run our diagnostic, we'll have quantifiable proof that you nailed it. The reality is though there's so much complexity, especially in larger cloud footprints, most of the tooling out there doesn't help you really get it dialed in, but you also need a really strong program with everyone working as a team with really good visibility, really good accountability, leadership support, and the diagnostic capabilities, and the remediation capabilities. You need all of those things to be firing, to really drive efficiency. And I think since we're so early in this game of, now clouds at scale, how do you optimize it? Most organizations are still in the early days. So typically there's still plenty of work to do. And it's not because they're doing anything wrong. It's just, everything's changing so fast.

DR 00:15:55 Yeah. And like I said, there's 2,000 changes by AWS alone. If you're using multiple clouds, they're making all those changes, too. It's impossible to keep up with it.

But, how much savings do you think is out there in aggregate? When you look across all three big public clouds and the spend that's out there, Virtasant was in all of those accounts and helping them with all the things you can do. How much savings do you think is out there to go get?

Michael Kearns 00:16:20 We see consistently a range of 30 to 50 percent. And there's a lot of other research that suggests kind of the same range. And so, if you split the difference and you say 40% of roughly ... because there's lots of stuff that some of the cloud providers load

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into their cloud revenue ... but if cloud revenue is right now running at about \$200 billion for the big three, 40% of that is \$80 billion. And so we think there's a lot out there. And again, as people move more stuff to the cloud, that's only get bigger as the cloud providers continue to innovate, this isn't anything the cloud providers are doing wrong. It's just, they're doing so well at innovating and evolving the platforms that everyone's just running as hard as they can to keep up. There's inevitably gonna be inefficiency in that, and that's okay.

DR 00:17:10 Well I heard a rumor that AWS loves Amdocs because Amdocs is lifting and shifting their workloads into the public cloud. They're not optimized. They're not public cloud native like we were just talking about. And so they use tons of infrastructure and they're like, "Holy shit! Amdocs? Fuck yeah! Move all your shit over here." Right? These are big accounts and they're spending tons of money and I'm always advocating, that's not the way to do it, that's not cloud optimized. And so I think it's great that you have this point of view that maybe there's as much as 40% of those revenues that those guys are getting could be optimized away. And so I guess if I were to leave my listeners with anything, which is, you guys gotta call it Virtasant, you gotta figure out how to get those guys in so they can look at what you're doing. And it is a hard problem. It is not the same. It is a whole new ball of wax here in terms of how do you keep up with all the changes? How do you analyze your workloads? How do you make the changes in a way that don't disrupt your business, but optimize the spend. It's a hard problem and I think Michael, you're onto something super awesome.

Michael Kearns 00:18:16 We think so. And I think everyone in the public cloud space, including the platforms themselves, want every organization to see the maximum value and operate efficiently. And so you know who we're helping people do. And that just means as the value proposition of the public cloud gets better, more people will be on it.

DR 00:18:35 I think that's awesome. So Michael, thank you so much for coming on the podcast. I think that was a great conversation.

Michael Kearns 00:18:41 Yeah. Thank you. Enjoyed it!

DR 00:18:42 Yeah! Thanks! Stick around, because we're ending each podcast with a telco in 20 takeaway! I have 20 seconds to tell you something you need to know.

DR 00:18:54 Earlier we talked about how migrating applications to the public cloud forces new thinking around costs. This is part of the culture change that needs to happen if you're gonna take advantage of all that the public cloud has to offer. Your team is gonna have to build its cost-optimization chops. Finance needs to get used to fluctuating bills. Technologists have to start thinking about the bottom line. The two groups need to work together to project spend and manage budgets and understand how what they do affects the cloud environment, both technically and financially. And when it comes to managing those cloud bills, TelcoDR can help you figure it out. We, of course, love to work with Michael and the Virtasant team, but we also

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love tools like Cloud Fix, which deliver 10 to 20% savings on your AWS bill and takes just minutes to set up. Simply connect your account, review the suggestions, and apply the fixes. You get immediate and ongoing savings with just one click. It really is that easy. I promise it will take you longer to decide to use it than it will to find the savings. Wanna try it? I can set you up with Cloud Fix or Virtasant in a jiffy. Just gimme a call or WhatsApp me at 925-TelcoDR. If you love this podcast, share it with your colleagues and leave us a review. You can also follow me on Twitter @TelcoDR, and connect to me on LinkedIn. And don't forget to sign up for our totally awesome 50% open rate, email newsletter at TelcoDR.com

Later, nerds!