

Episode 11

The Vendor Series: MATRIXX

Guest: Marc Price, CTO

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Speaker 0 00:00:00 I'm Danielle Royston and this is Telco in 20

I've been talking a lot about the hyperscalers. In fact, we've interviewed Azure twice, but I want to shift gears a bit and start to talk about the software vendors. They have a special place in my heart.

Two years ago, there were no conversations about the cloud and telco. Nobody used the term cloud native. Everyone told me I shouldn't even talk about the public cloud, but now the term cloud native has increased in telco media by close to 350% in the past four years. I'm a little bit proud of the fact that all of my soap box has had an impact on the industry. And telcos are starting to move to the public cloud.

When I was CEO of Optiva, I changed the course of the company and pivoted our products to move to the public cloud. And one of our biggest competitors was a Silicon Valley startup MATRIXX . MATRIXX was one of the few vendors talking about the cloud, even as far back as 2018, but we all have slightly different ideas about where, when and how to get to the cloud. So I wanted to have MATRIXX on the podcast to talk shop, talk cloud and see what they're up to.

So let's take 20.

Marc Price is with me today and he is CTO of MATRIXX . Welcome, Mark.

Thank you very much.

Awesome. I'm psyched to talk to MATRIXX. I used to be the CEO of Optiva, which was a competitor of MATRIXX, and so, you know, sworn enemies. And so I don't really know you guys very well. And so I guess, to educate our audience, what does MATRIXX do?

Speaker 1 00:01:45 Yeah, well, great question. And it is great to be here, Danielle. So MATRIXX is a software company. We've been around for 10 years and our goal is to help service providers to monetize their services. We're a Silicon Valley based company. We believe in a true subscription or SaaS-based model. So we've got a great product we brought to market. We think it's the most fully featured rich product available to be able to configure it without any code whatsoever. Uh, that's sort of the new trendy thing with the low-code, no-code model. It's something that we've embraced for a long time. We're really focused now on 5G because we think that 5G is a game changer for service providers. And it's a great time to evaluate your

business plans and put something configurable in place to be agile and move where the markets are going.

Speaker 0 00:02:32 Yeah. You know, I know you're a big proponent of 5G, I guess, from the software vendors perspective. What excites you most about 5G?

Speaker 1 00:02:40 Yeah. Well, 5G is going to be amazing. It isn't yet. We have people already ready to just dismiss it and move on to 6G.

Speaker 0 00:02:46 I saw a 6G article, I think yesterday,

Speaker 1 00:02:49 This is a 10-year journey. We're just out of the gate. So I have been involved in the standards for a long time. So I've seen a bit from behind the scenes. So what 5G is about, it's the first generation of technology. That's going to look at the future and say the future is about connected things, not just about the smartphones in our pockets. If we're going to get things like, let's say, autonomous vehicles, a myriad of appliances and various different security devices and so on, that need to connect the network. It isn't designed for that right now. It just breaks. It's too costly. It doesn't support the density of devices and it definitely doesn't support the ultra-low latency devices, which is how we get to the really cool stuff. Like mixed reality, augmented reality. That's a really hard problem to solve. And it's forced telecom to look at this carefully and say, my gosh, this is a lot like the way cloud works. So for me, that's the exciting part, how do you want to monetize all these cool, exciting new services? And can you do it with what you got in your legacy system? Or are you going to need something new that's designed to really support those new business models?

Speaker 0 00:03:58 When I first came into the telecom industry, I really didn't see a lot of people talking about cloud, but MATRIXX described yourselves as being cloud native. I don't know that this is super well defined. It means different things to different people. I know I sort of use it in a different way than other people do. So when MATRIXX says we're cloud native, what does that mean for you?

Speaker 1 00:04:17 It is such a great question. And you're so right. Cloud native is absolutely one of those buzzwords. Now. I think everybody needs it.

Speaker 0 00:04:23 No one had it on anything and now everyone has it on everything.

Speaker 1 00:04:27 Yeah. Let me give you what our definition is. And I think it shouldn't be a question in people's minds. So six years ago, Google donated a container orchestration solution with a great name, Borg. This has become the most powerful force for cloud, but CICB is really important too – being able to support continuous integration, continuous deployment. So it means can you make iterative changes, deploy them and then roll them back if they don't work. Well, most telcos have never been able to do that. Right? Not even close. So what does cloud native mean? I think it's self-evident that if you take an existing application, that's not designed

for the cloud and you stick it in the cloud, you're going to be very lucky if it runs well, because it wasn't designed for that environment.

Speaker 1 00:05:25 So cloud native is, is really, you know, have you built your application so that it'll work well in the cloud? Have you built it so that you can upgrade it easily in the cloud? Have you built it so that it takes advantage of cloud resources efficiently and at a low cost? So this idea created what we've called the cloud native computing foundation. That's CNCF Linux, which is the home of open source for many different types of applications. So what a CNCF has done is put together a trail map, which says here are the 10 steps to become cloud native. And it's a variety of technical things, but it starts with containerization. It's embracing CICD. It's being able to be orchestrated, which means being able to use Kubernetes, it's all about adoption. So if you are using Kubernetes in the right way with the right application, then you're definitely not cloud native. And what you have is not a cloud native system, you have a cloud tourist, and that's what most folks have is they've deployed cloud tourists in the cloud, they're in the cloud, but they're standing out like a sore thumb. They're clearly out of place.

Speaker 0 00:06:31 Is that, like, the simplest definition of a cloud native? Does it need to be Kubernetes?

Speaker 1 00:06:35 In essence, it's mandatory that it used Kubernetes. There are other orchestrations solution but that argument has been won by Kubernetes. It's just overwhelmingly the choice for adaptation. So I would say if you're not using Kubernetes, nobody's going to be able to use your solution because you've gone down a different path. It's like beta and VHS. So the other thing is there are people that will say I shoved my solution into a cloud system and I can, uh, orchestrated with Kubernetes and it's working. And I, I stuck my elephant in my car and I got the door barely closed. That clearly isn't enough. So, so it does go on.

Speaker 0 00:07:08 So it's minimally that it runs on Kubernetes, but like for you, it's not so much about where it runs, but that you have some methodologies and approaches like a trail map where you can sit there and say, here's your journey. And that's what makes it cloud native. Not that it's necessarily running at a hyperscaler.

Speaker 1 00:07:24 Well, the beauty of, of cloud native is you've just designed your applications, right? And then what happens is you do have the flexibility to put this where you want. In fact, portability is one of the advantages you get with cloud native, but you're right. This'll run great in the public cloud, in the private cloud, even runs great on bare metal. There's advantages to getting to different platforms depending on people's needs, but there's every reason to make this cloud native. So you have those choices.

Speaker 0 00:07:51 What is the big benefit of this design? Why should software developers and application developers use this ?

Speaker 1 00:08:00 First? It starts with decreasing costs, not only to get a solution out the door, but then on an ongoing basis to maintain it with a truly cloud native solution. Secondly, it is about increasing revenue and this is certainly specific in some ways to MATRIX, but by taking a truly cloud native charging system, you have the flexibility to deploy your system where you need it, but also to integrate it to other systems that are being run where you need. So we can monetize cloud resources, telco resources, applications at the edge, applications from enterprises that are telecoms partners, enabling new B2B to X models. All of those things are much easier to get done with a truly cloud native solution. And then the last one is that removal of vendor lock-in. And so part of that is about a platform independence, but it's also about having open API so we can hook into different systems. And that's true for tools as well. Let's say, you want to swap out another monitoring tool, right? It's very hard to do in a legacy system and very easy to do in an open source or a cloud native system. So we're making it possible for operators to have choices.

Speaker 0 00:09:09 I hang out with those cool kids, the hyperscalers. And so when I talked to those guys, they have kind of a little bit of a different view of what they mean by cloud native. I think they mean, you know, native to their cloud, that it explicitly is using their services. And it's not just Kubernetes – it's more than that. Like if you were talking to AWS, in order to be called cloud native, they would say, you need to be using Lambda or S3 or like a cloud database, like Aurora. And so what should we call that?

Speaker 1 00:09:40 Yeah, so, so great question. In fact, MATRIX has a terrific partnership across all the cloud players actually, and we work very closely with them. I think they would agree with our definition. If you look at the platinum members who are, uh, essentially behind CNCF, it's the big cloud guys. So they understand, and they get what it means to be cloud native. On the other hand, the course wants you to embrace their proprietary specifics as well. And there's advantages of doing that. So if you use S3, I'd say that's AWS native, right? Or Aurora native or GCP native. If you're using specific tools that work well in their environments, but it starts with getting to be a cloud native application that's conforming with CICB. Then you decide which tools you're using. But if you're not able to even use those tools, then you're not even getting out of the game.

Speaker 0 00:10:32 So I am friends with this guy on Twitter, Corey Quinn, he calls himself the cloud economist and he wrote this blog called “multicloud is the worst practice.” And in it, he has this little commentary about when you're building workloads that can seamlessly run across any cloud provider or even your own data center with equal ease, that this was a bad idea. And he goes on to say that he thinks that cloud portability takes a lowest common denominator approach. And you're not leveraging the best of both worlds, you know, when you're building things to be cloud agnostic on any cloud. And if you're trying to avoid vendor lock-in, you're basically forcing this idea of adopting lowest, common denominator technology. And so what do you think about that?

Speaker 1 00:11:14 Yeah, I did hear your discussion with Corey and I loved it. It was great. Two different points though. So what I'm talking about is vendor lock-in for the applications

vendors and the tools vendors, not the platform vendors, necessarily. There are advantages to being able to make an investment in the right platform for you and not switching that on a dime. So all those points for Corey are a hundred percent right. What I'm talking about is when you deploy on AWS on Azure or in Google and in any of your environments, how do you decide who your charging vendor is? How do you decide who the vendors is going to be providing your network core? How do you decide who your billing vendor is? And do you want to be locked into those choices or do you want to have options in the future?

And then it's about tools, right? So what are you going to use as your monitoring platform? What are you going to use for logging? All the choices go beyond just simple platform choices. I don't know about you, but I think I'm, you know, a reasonably educated buyer and reasonably smart guy, but I know I would make choices that I would regret later. Future-proofing. Have some ability to move with more agility and less rigidity around initial choices because businesses grow. So I need the ability to swap in and swap out. And in our industry, in particular, in the charging space vendor lock-in has been a strategy. Because I'm a big vendor and I got ya, and you can't go anywhere. So you need that change request? That's a million dollars and 365 days. But that doesn't work in any other industry. And I think, again, we're entering an era with 5G where that will stifle innovation and we'll be stuck as connectivity players while other companies that are more agile and more nimble just run circles around us.

Speaker 0 00:13:03 Yeah. I mean, you can swing too far the other way, where your stuff is so microservice that they're just taking bits and pieces of your R and D and not enough of it to fund your business.

Speaker 1 00:13:15 Yeah, no, we have six platforms that we support. We have the type of software that is extremely responsive. It has to be very low latency and very high volume. So we can't just put it on anything. But six choices is a fair amount across AWS, Google, Microsoft, Redhat, VMware with their Kubernetes solution and bare metal Kubernetes, which is really the open source version of Kubernetes. Those six appear to be the main options that our customers are asking us for. And the great thing about cloud native again, is there aren't huge variances between those platforms. We just simply need to make sure that our solution performs great in each of the places that our customers want to run.

Speaker 0 00:14:01 I mean, you guys are like a hundred-ish million dollar company about the size of Optiva. I mean, with six different platforms, right? With people who know those platforms as well, you have to have a lot of overlap. And the other extreme, six dev teams that gets really kind of expensive.

Speaker 1 00:14:18 There is a lot of overlap and we are going back to the places wheremy team as CTO basically invest our time. But then we also, of course, invest in the standards. In fact, not only are we a member of Linux foundation networking and CNCF, but actually, I'm the co-chair for cloud native compliance and verification inside there, along with a gentleman from AT&T. So there's a lot of, you call it, overlap. I think that's probably the right word. There's a lot of commonality, let's say between the, uh, the code base and the advantages that we get from

working in those environments. There are very few application vendors that are actually pushing the envelope with respect to those parameters for very low latency and very high volumes like, like MATRIX is doing.

Speaker 0 00:15:09 Yeah, I know of one, actually two now, but, um, so let's switch to that, a little bit on architecture, more specifically, just databases. As I mentioned, it's a pretty expensive transaction, the writing to the database. If you'd go to AWS and ask them how you should architect an application like this, using their definition of, you know, sort of AWS native, I think they would say you should architect it differently. They would say, don't use a relational database and you should use a single table design with dynamoDB, for example. And so what do you think about that?

Speaker 1 00:15:46 Well, as I mentioned, all those players are partners of ours and they recognize that what we do is special and different and unique, and they don't have it in their stable. There's nothing in any of the cloud players stable today that supports high volume acid compliant, OLTP online transaction processing. There are, of course, other databases that are in the open source community and available from other vendors. But all of those were written essentially prior to this whole discussion on cloud native. And we think that they fall down because of the requirement to support asynchronous replication of data. For example, it just doesn't work when you get to the huge volumes of data that are needed to make those resilient.

Speaker 0 00:16:26 Well, I know of a charging startup that's trying, right. They're trying to use these newer databases. They're trying to build, you know, the fastest, most scalable charger in the world. That's 10X of anything that's out there on the market by not using relational database. And so it totally caught my eye because, you know, I used to be in the space. I was CEO of Optiva, and one of our main products was tied to Oracle. We were maxing out about 50,000 transactions per second. But when we got to those customers that you were talking about, the biggest in the world that have 200, 300, 400 million subscribers, we ended up scaling by deploying multiple stacks, right. Circle by circle. And so my big idea was to move from Oracle to a GCP spanner, right? And we moved our max processing from 50,000 transactions per second, up to 500,000.

So it was like 10X, and we were all super pumped. Jio those crazy guys out in India, set up a meeting with us. We had never spoken to them. They would never give you the time of day, but they asked us – they had a super big vision around IOT – if we could handle a billion devices. And my whole team was like, um, they want more. And, you know, Jio is really starting to think about 5G and some of the things that you talked about at the beginning of the podcast. And so since I've left Optiva, I met this team. They're not using relational database. Their goal is not transactions per se. I think it's like a million transactions per second. You know, I think they're going whole hog. I think they're, they're betting on AWS as the clear winner and building a charger. And so I guess the world will see if this will work. I don't know.

Speaker 1 00:18:12 It's crazy. It's a fun world because of all the changes that are occurring. We're fortunate in that we're orders of magnitude faster than anything else that we've seen. Part of the challenge, if we pull this back a little bit, is number one, databases have to be acid compliant if you're in the charging space. So if I'm big data, let's, let's say, I want to be able to tell you what keyword was Googled the most today. Right? And I do some statistical analysis on that. It doesn't really matter if I look at 99.7% of the data, 99.6% of the data, you know, I'm going to probably get pretty close to the same result as if I looked at exactly 100% of the data. It's based on eventual consistency, pretty close. If you're looking at real time, transactional data for charging, and you're looking at your bill, you better be right all the time. I'm looking at my phone and I want to know exactly how much money I've got. And if you lose a penny, I'm going to wonder, where did it go? You are one of the only asset compliance systems with the volume that we have. That's a hundred percent right. All the time because of the patents that we've taken .

Speaker 0 00:19:18 Spanner is acid complaint database as well. And it was only became commercially available. Literally the day I started Optiva, February 15th, 2016.

Speaker 1 00:19:28 It is a pretty good system. Yeah.

Speaker 0 00:19:31 That's pretty amazing. Yeah. So let's switch gears. Um, because I wrote an article and like reading about the crappy valuations that telco software get. And it was kind of funny because a lot of people from MATRXXX reached out and said, Oh my God, thank you for writing this article. You wrote like what we've been thinking. And it was awesome. And so a big part of it was how customization in telco really contribute to lowering the valuations because it means you're a services business, not a product or a SaaS business. I really think that the customization hurts not only the software product company, but also hurts our customers. And so I think this is one place where I really align with MATRXXX in terms of you really should try to minimize customizations. And so what are your thoughts on customizations?

Speaker 1 00:20:21 Well, firstly, I am so glad that you have brought that to light. So our perspective is we have a true product. We put rich features into that product. Every year we stand behind that. So our price is justified because you're going to basically come back every year and say, you know what? I want to stick with you guys. I could move on if I wanted to, but I'm going to stick with you guys and pay a yearly fee. The same that I would to any company that brings me great software and continually provides me rich features that are relevant to my business. And what I'm definitely not going to do is stifle your business by selling you something which appears to be low cost. And then every time you needed to change, I'm going to nickel and dime you with change requests. I'm going to tell you that I can't get it done in the timeframe you need, and I'm going to hold you hostage with that business model.

Speaker 0 00:21:11 The vendors in our space give away the product for free because they know on the back end, they're going to get all the services. And they've literally built their businesses around them.

Speaker 1 00:21:19 It's especially the main business model in our space. And I think that has to change.

Speaker 0 00:21:23 It's a double-edged sword too, because the telcos think that they need to be able to customize and code and handle anything that their hearts' desire in order to get differentiation from their competitors. You might have to give up a little bit in order to get this, the CICD you talked about the agility, the ability to upgrade, uh, much more quickly, um, instead of getting everything that you asked for, um, it's actually a bad thing and it's slowing you down. It's making your business worse, not better.

Speaker 1 00:21:54 You're right. You're exactly right, because it's not a question of, are you stifling your competitors? Why are you locking them out? You're stifling yourself. So, you know, if you want business agility, you need something configurable.

Speaker 0 00:22:06 Think about people who are really doing cloud native CICD, right? Wherever they're running, it, it's really working the right way. And you're upgrading, um, quarterly, monthly, daily. You can roll out features. That's a different speed of business than people that in our space, very common, don't upgrade for three years.

Speaker 1 00:22:28 You're right. You're exactly right. It's, it's bringing that agility. And ultimately your differentiation to the market is going to be your business rules that you can deploy as quickly as you can think of them. And that's differentiation.

Speaker 0 00:22:40 There's just so much momentum. There's so much development. There's so much thought. And I think that's why the call native piece has really taken off and is starting to work.

Speaker 1 00:22:50 Right. It's a game changer. And what people see is that 5G is going to be different in the near term. Again, it's going to take a year or two to roll out this vision, but it essentially for these innovators means how do you monetize new services in ways that have never been done before? And people are recognizing you need a product to do it. And we hope that MATRIX is that product.

Speaker 0 00:23:14 That's awesome. Well, I think we covered a ton of ground. This was an awesome, awesome talk, Mark. I want to thank you for coming on and sharing your views and telling us what's going on with MATRIX So thank you.

Speaker 1 00:23:27 Such a pleasure. Yeah, really nice speaking with you. Awesome.

Speaker 0 00:23:30 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.

We just heard from Marc Price. His definition of cloud native is not so much about where it runs, but that it meets the cloud native definition as described by the cloud native computing

foundation, CNCF, and that it runs on Kubernetes. CNCF even has a trail map on how to get there, but I have a different definition for what it means to be cloud native. To me, being in a Kubernetes container is the tip of the iceberg. I strongly believe that to get the benefits that I talk about – cost savings, revenue enhancement, and operational efficiency – you have to use a hyperscaler and deeply integrate their tools into your applications. But you heard Mark, the language is confusing. We need to clarify it. I need to coin a new phrase.

Speaker 0 00:24:27 I want something snappy, something that will stick. So what should we call it? Cloud native plus plus? Public cloud native? What about BFC native? I'm serious. Help me brainstorm. DM me on Twitter, @TelcoDr. Or text me at nine two five telco Dr. And shoot me some of your best ideas over the next several months. I'm going to spend a lot of time talking to a lot of executives, making sure they know the trade-offs and the benefits of both approaches. And while you have your phone out to send me a message, don't forget to hit that subscribe button, share our podcast with your colleagues. And if you liked what you heard, leave us a review. Let's connect on LinkedIn and on Twitter at @telcoDr. And please sign up for our email newsletter at telcodr.com Later, Nerds!