EPISODE 1339

[INTRODUCTION]

[00:00:00] JM: An application network is a way to connect applications, data and devices through APIs that expose some or all of their assets and data to the network. That network allows other consumers from other parts of the business to come in and discover and use those assets. The company Tetrate provides the tools necessary for a highly efficient application aware network. Tetrate helps connect and manage applications across clusters, clouds and data centers. It supports integrating traditional workloads into your cloud native application infrastructure, defining access control, and editing rights for teams on shared infrastructure, as well as out of the box conformance with NIST standards for microservices security. In this episode, we talk to Varun Talwar, co-founder of Tetrate.

[INTERVIEW]

[00:00:52] JM: Varun, welcome back.

[00:00:54] VT: Thank you, Jeff. Good to be back.

[00:00:56] JM: I believe this is our third show together. Is that right?

[00:01:00] VT: I think that's right.

[00:01:02] JM: First one, you were one of the earliest members of Istio at Google. Second one, you started Tetrate, which is a productization of Istio. Now, it seems like you are kind of in the midst of product market fit. Is that accurate?

[00:01:19] VT: That is correct. Actually, this reminds me Jeff, I think this might be our fourth one. The very first one was on gRPC, even before Istio.

[00:01:28] JM: Oh, no way. Oh my god. Can I ask you? So, I made a small investment, a company called Buff, which is a company productizing protocol buffers. Why did it take so long for that to be a protocol buffer company?

[00:01:44] VT: Hard to figure out monetization. I think.

[00:01:48] JM: Is it? I mean, can't you just solve that problem for people? Nobody knows how to use protocol buffers? Can't you just give them a wiziwig thing for protocol buffers?

[00:01:58] VT: I mean, yeah. You can make some small tools and services and education company out of it. But nothing, I don't know how you make a big company out of that.

[00:02:11] JM: I think you just – are you sure you were on for – I'm looking right now, gRPC.

[00:02:18] VT: It was way back.

[00:02:18] JM: Are you sure you weren't on a different podcast? So, unless your name used to be Sandeep Dinesh.

[00:02:25] VT: No.

[00:02:30] JM: Were you on SE Radio? Software Engineering Radio, maybe?

[00:02:35] VT: Maybe. Because I remember doing one for gRPC.

[00:02:41] JM: gRPC, is that just like extra sauce on top of protocol buffers? I don't even remember what gRPC is.

[00:02:45] VT: Oh, yeah. Protobuf is just the schema, right? So, gRPC is the actual method. You put the actual RPC methods there. And then it's code gen into different libraries. So, gRPC actually supported nine languages. You can generate code in like a whole bunch of libraries, from Python to Ruby to Java to Node to so on, including actually mobile libraries, like Android and iOS. So, you could take them all the way to mobile. Actually, not many people realize that

it's one of those hidden things that's basically percolating everywhere. Everybody I talk to now is like, in some form, or fashion using gRPC APIs, which is great.

[00:03:30] JM: What was your trajectory as an engineer going from – so you were the gRPC team at Google?

[00:03:35] VT: Yeah. So, I'm actually, I've always been a product person, not like a very hands on engineer. So, I was a PM on gRPC, getting it to community and adoption, and that strategy. And then, Istio, I was also the PM on it with Louis. I think that's where we did our last, one of our podcasts.

[00:04:00] JM: Oh, yeah. I love that guy. I love Louie. He's so smart. He's so razor sharp. I saw a talk he gave it at QCon. probably three or four years ago. I think it was about Istio. It was really good. It was a really good talk. It was about it was about like edge networking or something.

[00:04:17] VT: Yeah, he's very good. So, these were the initial people. Anyway, so my role was more a product person both on gRPC and Istio as well as like, now, that trade is a little bit different, but it's like the whole company.

[00:04:35] JM: Okay, well, let's just fast forward. Maybe we can revisit the past a little bit later, but currently you're working at Tetrate. Tetrate, I would argue is the leading independent provider of Istio related solutions. Why do I need an Istio?

[00:04:52] VT: Simple. So, there are two ways to answer that question. One is a very, technology values and those things, and the other is business value. The technology value is fairly simple, which is like everyone's running in Kubernetes, these days. You start to have deploy more and more services. You start to deploy them more rapidly. And you realize, I need to understand my performance of how these services are doing at an L seven layer. And you realize, Oh, that's not out of the box in Kubernetes. I need something, you then start to realize. I have so much cross service communication and data going back and forth. It's everybody's now starting to do more and more clusters, you start crossing cluster boundaries, and network boundaries, and then like, "Oh, shoot, this is not encrypted." And then you say, "Okay, what

does it take to actually do it? It's like, that's a lot of work. So, I need something." And then a lot of people know in Kubernetes, like Q-Proxies is not the best thing in the world, in terms of like traffic routing.

So, the more important services you start to deploy on Kubernetes, like I need to really control how traffic release happens, or application delivery happens, rather than application deployment. I can deploy with all the automation, but how do I actually release it, which with canaries, and those kinds of strategies. That's another reason why people pick it up.

At the end of the day, on the business side, it boils down to agility, like not having each of your developer's code up for it. It boils down to security isolation, because of what I said, like authentication, authorization between services. It boils down to business continuity, which is like do routing in a way that if one cluster one region, something is down, I don't have downtimes. So, at a business level, it gets to that.

[00:07:02] JM: There was an equivalent to Istio within Google before Istio, right?

[00:07:07] VT: That is right. The name was One Platform. One Platform was the team. So, the equivalent gRPC was called Stubby. The equivalent to Istio was – closest to equivalent I would say is something called One Platform. Wherein, essentially, when a new team in Google comes up, what they decide is, we will make it One Platform service. And what that means is, I will define what are the parameters I need for that service in terms of authentication, quota, and load balancing. I define like what I want for it, and I submit it somewhere in one place. Someone reviews it and that's it.

After that, I don't think about all those parameters and it just happens. So, that's what's kind of the team from where – that team owned all of the APIs for start or Google apis.com, would all flow through an architecture like Istio, which was initially a monolith apiary proxy, like one big thing. Over seven years, it became this distributed proxy model, which came to be known as One Platform, and Istio came from that.

[00:08:36] JM: How does the internal One Platform thing compared to Istio?

[00:08:42] VT: So, it's similar, but there are two or three key differences. One is, it was using a homegrown proxy, like a homegrown sort of data plane, which was at the time, like a whole bunch of extensions and customizations on NGINX. The second thing is it was using a lot of the backends that Google had like, and that part is similar to Istio which is like we have a big quarter service, we have a big rate limiting service, and you basically can have, leverage those. So, out in the world, people don't have those like just readily available. We get a lot of questions on like how to do that.

The third piece, which is sort of the flip, which is there in Istio, but wasn't really a focus in one platform, because it was covered in the infrastructure sort of plane in Google, is this whole identity and encryption. Google had this project called LOAS, low overhead authentication scheme, which was this notion of every workload has running up, coming up on a machine has has a unique identity.

So, that's a new concept for most people outside these internet companies. I was sort of brought forward by Istio, and is actually one of the biggest reasons people want to adopt Istio. End to end encryption is hard, especially if you have more number of services, especially if you have distributed services. It is a really, really long and hard process.

[00:10:24] JM: So, you're ultimately like a zero-trust company?

[00:10:28] VT: Yeah, we are enabling zero trust. In fact, a lot of the marketing messaging has started to go towards that. Zero trust is a very big umbrella. So, we are definitely a big part of zero trust, when it comes to application traffic. We are actually the leading company in zero trust, in some sense. We have actually been driving with NIST. NIST is like the birthplace of all security in the US. And globally, I would argue, and we've been doing zero trust conferences with NIST and Tetrate for last two years. Some people have taken notice, some haven't yet. More are noticing now. We get a lot of people now, by the way, “Hey, we saw this and we want to talk to you about zero trust.” That happens all the time in Tetrate. So yes, it is. We are very much the key killer for zero trust.

[00:11:22] JM: Just to be clear, where I think is interesting about Istio is it's basically representative of a dividend that you get when the world standardizes on a distributed systems

infrastructure layer, which is Kubernetes. You can't really have Istio without Kubernetes. You can, you could do Istio across like VMs, but it's a terrible experience, I assume. It's not nearly as good as if you're just standardizing on Kubernetes infrastructure.

[00:11:55] VT: So, yes, without making it a sales pitch, but I would say in Tetrate, we have made VM a first-class experience and it is – according to me, it was one of those core tenets of even starting Tetrate that something like Istio is needed in all computes, not just Kubernetes. What percentage of world's production workloads run Kubernetes today? I would say less than 10%. Maybe even that is a very aggressive estimate.

Don't you need zero trust and all the like other – or don't you need like L7 observability in all the other things? You absolutely do. So, making workloads running on EC2, and auto scaling EC2 groups, is actually should be a first-class thing onto a mesh. And that's something we actively provide in some of our solutions.

[00:13:02] JM: So, let me ask you this, when Istio first came out, I was pretty good friends with the Linkerd folks, and I still am. The the project that started off as the initial the initial messaging was sort of like a network proxy thing. And then they followed along with the service mesh narrative. And then when Istio came out, the Linkerd folks sort of said, "Hey, look, this is kind of unfair, because Google is tipping the scales of the CNCF and showing favoritism towards Istio." Even though Linkerd – I think Linkerd was a core CNCF project, right?

So, Linkerd was there, Istio comes out and basically steals the market through marketing. It was sort of unfair, because it was evidence that Google can tip the scales of the CNCF and basically when any kind of marketing competition that they want to. They can outspend everybody, they can do anything they want. It doesn't matter that Linkerd was arguably better technology, true or false?

[00:14:09] VT: So even today, Istio is not a CNCF project. I don't know how many people know that. That's fact as of even today.

[00:14:19] JM: Well, okay, come on. So maybe like, officially, it's not a CNCF project. But that makes it all the more convincing.

[00:14:27] VT: Yeah. So, what is absolutely true is that Google has a bigger marketing machinery. That is obviously true. I think in Istio's case, it was Google and the ecosystem that came together with it. So, the Red Hat, IBM, Pivotal, everybody basically jumped on that right from the beginning. When you get – it's like the ecosystem is always greater than any one player and even though – so two things happened, I think there, in your question. One is there was this expectation that Istio would come to CNCF and hence, CNCF was helping sort of promote, and they themselves are a good marketing machinery. Second is was the ecosystem effect that when you have all these giants who all have decent reach, it spread way faster than what one company, one render point could do for one Linkerd, or even CNCF with Linkerd could do alone.

I think to even to date, sometimes I think like Istio still got marketing visibility way sooner than it was – technical maturity was there. But well, now we are way behind that now. It's very mature and so on. But that definitely did happen.

[00:16:00] JM: Give me more color on that. Is it okay that Google was able to basically, by fiat, win the service mesh wars?

[00:16:11] VT: Ultimately, what wins is what people believe is right for them and what gets adopted more widely. You can look at and even go back to Kubernetes. Like we had Mesos, which runs some of the largest container workloads even today. We had Nomad from Hashi, a few years, I think it was about – it was already there or came out a few years after. So, it isn't that like Mesos wasn't good tech, it was awesome tech. But now in 2021, you know who the winner is.

So, yes, there is definitely – there's a combination of factors here. There is there is marketing. There is trust, and that people associate with certain brands. There is trust that people associate that there have been continued investment in that, no matter what, so I can bet my infrastructure on it. And of course, there is good – you have to have a good tech and product and technology that's usable. So that's a given, otherwise, that's like baseline.

I think even in Istio's case, it definitely had like feature richness. I mean, even today, you look at any comparison, like Istio most other options on on feature richness of what you need, right? So definitely the product technology and feature richness is there. In fact, we know, I know a lot of people who end up choosing Istio for like, "Hey, the other guys don't have like, what I need."

[00:18:00] JM: But that comes after the marketing dominance comes, right? The first battle to win is the network effects.

[00:18:12] VT: Yeah, so in Istio's case, it was one – sort of both were running in parallel, and there were not enough alternative options. Even now, there aren't, which takes the marketing effect and the technology speed and feature richness is just not there, in other options out there. Even though, I mean, to William and Oliver's credit and **[inaudible 00:18:40]** credit, they were the ones who actually came up with the term service mesh. I remember, I think the very early on, the positioning was like RPC proxy or something, like way before when the term was not yet coined.

So, they're definitely thought leaders there and Linkerd is an awesome project for the ease of use and simplicity. But when it gets to production infrastructure for your traffic, it is going to get – I want to say, it will be a little bit complex, if you want it to have all the firepower that you need. It will require the bells and whistles for it to get wider adoption. So, it's something that with maturity is going to happen. And frankly, Istio was like the most advanced with the loudest mouthpiece starting all the way from 2017. So, sort of trailblaze that –

[00:19:41] JM: Hold on, hold on. So, in 2017 you said the most advanced and the loudest wasn't only the loudest. It wasn't actually the most advanced when it came out. Like Linkerd was more advanced at first.

[00:19:54] VT: Actually, it wasn't.

[00:19:54] JM: I mean, it was debatable, because Linkerd actually worked. Istio is more of a reference implementation.

[00:20:01] VT: No, no. Istio's 0.1, which was in May of 2017 at GlueCon when we launched it, even in 0.1 and I wrote that blog post if you can still remember. It's somewhere there out there, it still had like MTLS and end to end encryption, which wasn't there at all in Linkerd even at that time and even for years to come. That was by far the most sought after by customers. So, it's absolutely not true that Istio was vaporware and it just won because of marketing. That's not true, at least in my mind. And yes, absolutely, marketing and ecosystem had a big play in sort of how it dominated mindshare and that is absolutely a benefit you get from getting large mouthpieces together to capture mindshare. No question there.

[00:21:00] JM: So I always heard, back in 2017, this thing was impossible to build, it was impossible to run, impossible to compile, impossible to manage, and then you had people like Monzo saying, "Hey, we're doing Linkerd in production. Nobody's doing Istio in production." That's what I remember about 2017.

[00:21:20] VT: Yeah, so the projection does sort of the journey that Istio's has gone through 2017 was like the beginning. It works in single cluster Kubernetes environment. I think up until '08 or '09 which was almost towards early '18, is when you started seeing like a bunch of production adoption. The adoption just took off from there. Once the – didn't have teething issues. Yeah, of course. Did it fix the teething issues? Yes, it did. Did adoption take off like crazy after that? Absolutely, it did. I think today, I mean, even in 2018, it was ahead of Linkerd and other options and adoption. And it has been since, like – you have to question – you have to think of it as a customer and say, "Okay, I hear all this, but I'm still going to use it." Why? There is there's a reason why people like end customer doesn't give a – doesn't care and love about the marketing noise like they want to adopt what is good for them. And why would they if it were not meeting their needs, or if it were like completely vaporware. And that's not true.

So, like every product comparison, there is like what is right for my use case? What am I looking for? And you make your choice. I think, if you just want Kubernetes, you just want a simple starting experience, I don't need too much of bells and whistles. People do end up choosing Linkerd. But again, you're making a very conscious choice. I'm going for a data plane, which is going to be – which is backed by one or two companies and I'm going to depend all my traffic on it. You're making that choice, which is fine.

Remember, a lot of the Istio adoption was also because of Envoy and Envoy already had an ecosystem around it. A huge pull for Envoy and community strength behind it. If you are running a company, let's say, where you have thousands of services that people depend on your business, and you're going to put something which something that takes on your traffic, like where would you make your bet? That's a decision that end users have to make today and there are tradeoffs, like any decision, but people are making their choices.

[00:24:11] JM: Agreed they definitely are. To me, it seems like basically, service mesh, as it was defined in 2017 was a winner take all market, and because it was defined by network effects. Because of that, it appears that Linkerd was basically forced to become more like a service observability company of some kind. They've kind of had to move into how do we repurpose our agent, which is fine. I really like what the Buoyant team is building. I think it's like very, very competitive. They basically have the best open source service observability, service machinery, developer experience, networking platform, you might say. When I look at, what you're doing a Tetrate, it's like, fantastic. It looks like very, very good enterprise software.

I think what Buoyant has done is also, looks very credible. I say this with all admiration. They look like more of a hipster developer company which is and it's very on brand for William. But it will say what disturbs me about this war is the same thing that the surgeon about the Kubernetes war which is effectively, it was not won because of superior technology, despite the fact that maybe the technology was superior. I don't think we know yet. This was won by marketing. The reason you know that is because nobody ever talks about HashiCorp Nomad. Do you know anything about HashiCorp Nomad?

[00:25:49] VT: Yeah, I mean, I know a little bit because I'm in the space, but I would agree most people don't.

[00:25:53] JM: How does HashiCorp Nomad compare to Kubernetes?

[00:25:57] VT: It's actually a decent product and I have seen the last six months or so at least a couple of write ups of end customers actually making a choice for Nomad rather than Kubernetes. There is that. I don't claim to have actually tried it. I only like read articles about it. So, I'm not deep into it. But your point is well taken, which is there is absolutely an influence of

marketing on adoption, an adoption curve. In these new technology areas, it's a virtuous cycle. Ten people adopt, and then the next 10 looks at who's adopting and then they adopt, and that sort of cycle grows. I mean, this is a proven thing in the world. It's not always the best technology is one part of what it takes to win, not the only thing.

[00:26:56] JM: By the way, this is not like a critique of you or critique of open source. It's basically an observation. I think it's about time we move our sophistication level around what open source is, to a better place. Because right now, open source has become connected to purity or virtue. In actuality, open source is super broad definition that we can't even agree on.

[00:27:23] VT: I agree. I agree. The view of open source from people building to an end user who's adopting and why they're adopting open source, as opposed to what 10 other commercial things they could adopt. I think there is not enough representation of end user views into what open source is, how it should evolve, and actually making them involved in the building process itself. It's not great that we have – we make it difficult for end users to be part of it.

To give you an example of the last one, like we see a lot of customers were like, “Oh, I have this problem and Kubernetes. What do you do?” I file a ticket to Red Hat. Even though what is to be done in the “open source” project, that's how you operate. I think I'm actually deliberately and very intentionally trying to break this wall of tech savvy, we will release the best open source technology to like, “I'm an investment bank, CIO, who wants something that is supported with the neck that I can choke.” That’s the reality. How do you merge the two worlds into something that becomes better? We are doing some small steps in that direction as a small company Tetrate can which is like, the way we engage is we would meet the end users part of the community, make them to be contributors, make them as self-serve, and self-reliant as we can, because it's better for them, better for us, better for community, it's better for all of us. But not every company and things like that. But if you take it better to like what's not working well in open source, then that's my observation.

[00:29:10] JM: What else isn't working well in open source?

[00:29:16] VT: How things are governed and driven in terms of direction. Again, it boils down to what the goals of the open source project are. So many people ask me like, whether should –

oh, should we open source this? Should we not open source this? Every month someone's asked me for that. It boils down to what is your goal? Are you trying to make a contributed community? Are you trying to get the widest end user adoption? What is your goal out of this? It all sort of boils down to that when you look at it from the creator standpoint, and I think people miss like, we will think like all these open sources and this will go, like everybody will adopt, because it's out there on GitHub. It doesn't happen.

So, you have to have a very, very intentional approach to what is my goal? Hence, what strategy I should take? Hence, where do I build community? How do I build community? How do I get end users involved? How do I define direction for it? How is direction even validated? There are so much nuances to that, that I don't think that's well understood by a large majority today. If you ask me, like, actually, for end users, open source is the least risky thing to do. Open source companies in general notion is that it's hard to monetize and things are free. I actually have a completely different sort of approach to that, which is open source is more valuable than commercial and closed source. People should be paying more than closed source for open project, because you're actually buying the creativity and work of thousands of people who don't directly work for you. You are de-risking significantly, because tomorrow, everything is visible to you, you can pick it up, take it on and run it yourself. It's all out there. So, it's more valuable than less. It's just that that realization is not there yet, in both end vendors and end users. I think some of the savvy ones have it, but not many.

[00:31:43] JM: Let's talk a little bit about go to market before we wrap up. So, we talked barely any about it really nuts and bolts engineering. My guess is that over the last – how long have you been doing Tetrate at this point? Four years, three years?

[00:31:58] VT: Three years.

[00:31:59] JM: Three years. Actually, let me just ask you like kind of as a founder, what's the hardest part been?

[00:32:05] VT: Hiring.

[00:32:08] JM: Hiring. Yeah. You should, not to plug myself/try to sell you stuff, you should try to hire through Software Engineering Daily.

[00:32:16] VT: Yeah, maybe we should. Maybe we should.

[00:32:18] JM: You seriously should. We reach a lot of engineers that like Kubernetes and you're probably one of the highest upside Kubernetes related companies that one could join. What are you like? The Cisco of the cloud native world or something? What's the best marketing messaging we can provide? Well, I don't know. You tell me. You're like the Linksys of software or something.

[00:32:50] VT: Yeah. The most dumbed down one of someone who doesn't like – is not into all this at all, is like, Cisco was all about connecting machines. We're all about connecting services. So, I think people in application. So, then people understand that at the very – if you have to explain to a really young kid or something.

I mean, back to your question on challenge. I think hiring is not just a challenge on the engineering side, I think we do relatively okay there. But also, on the go to market and the non-engineering side. But across the board, I think, as a founder, it's all about getting the best people on the boat, and then putting them on to the right chairs. I think that is the biggest challenge.

[00:33:51] JM: How do you hire these days? Everybody who's so good, everybody's good can start a company. Everybody's good can start a company. Have you read that book, *The Alliance* by Reed Hoffman?

[00:34:02] VT: Yeah. I have read that, actually.

[00:34:03] JM: I love that book. That's like my favorite book about how to run a company. I think it's super smart.

[00:34:08] VT: That's kind of how hiring works in the real world, which is all through network. At least to some scale, it runs that way. And then you have the brand domino effect, and you get

the size that you'll get the pull. We are actually starting to see some of that already even though we are not that big yet. But when we were just starting, it was like, “Oh, like you have to work on each and every person to who are you and all of that.” Now, you get a lot of pool in of like people want to join, and as you grow, that pool increases. As you hire more good people, they know more good people. You have broader, bigger investor, advisor circle to tap on to.

So, that's kind of how over time, hiring gets simpler, but attracting talent is only one part of it. It's onboarding them, making them effective, keeping them motivated with growth. That the key part. We are a fully distributed company. I think you and I have talked about this before, but we are like in all over the world fully, like we take distributed systems seriously. We are totally distributed from the get go even pre COVID. We are in like, 13 countries, 15 locations. Our philosophy is like best talent is anywhere in the world. Anywhere you are in any part of the world, if you're good, you're passionate about this, you can come join Tetrate is the mantra, and it's phenomenally powerful if you can make the company coordination and processes work.

[00:35:57] JM: Are you going to QCon LA?

[00:35:59] VT: Yeah, I will.

[00:36:00] JM: Dude, we should do a show there. I'm going to bring some mics and stuff.

[00:36:04] VT: Okay. Yeah, I mean, I was actually surprised. It's like all in person and everything happening in October.

[00:36:10] JM: I can't wait. I can't wait. It's going to be so nice.

[00:36:15] VT: I mean, everyone's looking forward to it. Getting back in person. Part of me is like, I just hope it's all safe and nothing.

[00:36:25] JM: Do you know my favorite distributed systems paper is?

[00:36:28] VT: No idea.

[00:36:30] JM: Bayou. Did you ever Bayou? The Bayou paper?

[00:36:33] VT: Bayou.

[00:36:34] JM: So, Bayou basically looks at spreading information like you would spread a virus. It's kind of like, eventually consistent database information spreading. Yeah, I mean, that's kind of what we're doing in open source. It's kind of what we're doing with COVID. You just got to live that Bayou life.

[00:37:01] VT: That's interesting how we put this together. How do you spell that?

[00:37:05] JM: B-A-Y-O-U, like a swampy area.

[00:37:11] VT: I see. Yeah, managing up there. I see. It doesn't look like a recent thing.

[00:37:21] JM: It's pretty old. So, by the way, you'd study computer science, in college?

[00:37:26] VT: Yup.

[00:37:28] JM: Did you take any distributed systems courses?

[00:37:30] VT: Yes. Distributed systems and AI and compiler courses. I took like a whole bunch of these.

[00:37:38] JM: I've talked about this on the show several times. But I almost failed computer science because I could barely pass a distribute systems course. I had to basically cheat on all my assignments because I couldn't complete them. They were just too hard for me.

[00:37:53] VT: I remember –

[00:37:55] JM: I think I'm beyond the statute of limitations. I don't think they can revoke my degree anymore.

[00:38:03] VT: Oh, yeah. I remember my eggnog is like a big designer compiler project, which was like, at that time, a hard thing to finish and accomplish. But I don't know if you remember at that time, there was this language. Parallel programming was a thing at that time. I mean, it still is, I guess. We used to – there was a language called Silk for parallel programming, which we were – I did a course on that, which was super interesting. But yeah, let's just say I'm in a completely different seat now and thinking about how to grow the company, since you barely have enough time to go into technology depths. It's crazy, like what it takes to – you ask the question, like, "Why don't everybody start companies?" What it takes to scale and build a company is so multifaceted. People say it takes a village to raise kids. I say it takes a city to raise a company. So yeah, it's very interesting and challenging and exciting at the same time.

[00:39:17] JM: How old are you, by the way?

[00:39:18] VT: I just turn 40.

[00:39:20] JM: You just turned 40. Okay, let me ask you, why didn't you start a company earlier?

[00:39:25] VT: Not enough courage, I think.

[00:39:27] JM: Because it's not really intellect. It's it is more about that courage.

[00:39:32] VT: Yeah, it's all about courage and your internal sort of confidence behind that idea which only comes from experience. You can have all the intellect at 25, but you won't have the confidence that I can I know all the aspects of a business and I know I can get into legal contracts. I can do biz dev. I can oversee financial statements. I can negotiate with investors. I can negotiate with partners. I can sell to customers. You won't have the confidence that I can do that at 25. So, you will basically go into I need help everywhere kind of zone.

[00:40:16] JM: Alright, well at QCon, I guess we can talk about like software and stuff.

[00:40:21] VT: Yeah. Yesterday we ended up talking a lot more about like other stuff but yeah, we can go into –

[00:40:25] JM: Dude, what is going on with his background. What is this? This is like the Tetrate bard and grill?

[00:40:31] VT: Yeah, this is like the –

[00:40:33] JM: Is that the eventual goal? Sort of like how Amazon finally has the physical bookstore? Are you just going to try to have Tetrate Bar and Grill eventually?

[00:40:43] VT: That's a good one, actually, for a distributed company to like one day we'll have this physical bar and grill. No, this is like, in today's times, the best way to do branding and marketing is Zoom backgrounds. And second, I think this is the first Starbucks in the US in Seattle. So, we're all in this, at I think someday, have this Tetrate cafes going. We have a bunch of Zoom backgrounds, which are about different styles of Tetrate cafes. I think cafes and bars is something that Tetrans like to do.

[00:41:21] JM: It's cool. I'll show you my most recent temporary background. By the way, do you trust Zoom? It seems kind of like sketchy, right? I mean, in all honesty. What's that?

[00:41:32] VT: Trust Zoom on what?

[00:41:35] JM: The whole thing where they were like spinning up servers and stuff.

[00:41:39] VT: I think they've fixed that.

[00:41:43] JM: It's voting machines.

[00:41:46] VT: Voting machines?

[00:41:47] JM: It's voting machines background. I'm going to interview a guy about voting machines. This doesn't work as a virtual background. What's going on here. Come one Zoom, get your image – what is this problem called? Occlusion detection or something? Get your bounding boxes right here.

[00:42:06] VT: Yeah, this doesn't look like well created image. What are you doing with voting machines?

[00:42:12] JM: Well, we're going to do a show about voting machines. Who introduced me about voting machines? Jonathan Ellis from DataStax introduced me to somebody about voting machines. Dude, I think I'm going to be creeped out when I do a show on voting machines. I went to DEFCON recently and I was brought to tears by a hacker and now I'm pretty sure voting machines are going to terrify me even further. But I have to start reporting on security because it's freaking me out man.

[00:42:37] VT: Maybe that's a topic we should speak about at QCon. There are so much –

[00:42:39] JM: I'm sure you must know a lot about this.

[00:42:41] VT: There are super interesting things happening there now and there is a real – it's like real top of mind for people to talk about. Especially, and I don't know if you've been following federal space, and Biden's executive order. It's top of mind, like fed world, like everywhere.

[00:43:05] JM: Is it? In the infrastructure bill? Is there a bunch of stuff about about cybersecurity?

[00:43:10] VT: Yeah, his executive order basically said that people should have a plan for zero trust by this date and like everyone is scrambling to put it in.

[00:43:18] JM: Anyway. I'll see you at QCon. I'm sure we both have stuff to do at this point.

[00:43:21] VT: Yeah, we both do. This is fun. Let's do a proper security one at QCon.

[00:43:23] JM: Listen, man. Great to see you. It's going to be great to see you at QCon. I can't wait.

[00:43:25] VT: Yup. Awesome. Good to talk to you too, always.

[END]

