



- Daniel Newman: Hey, everyone. Welcome back to The Six Five Summit. It's day one. We are in the Connected Intelligent Edge track. I'm Daniel Newman, one of the hosts here of the Six Five. Very excited for this next conversation. I'm going to have Gil Shneorson, SVP of the Edge business at Dell, joining me to talk a little bit about this market, this business, and what's going on at the edge. Gil, how you doing?
- Gil Shneorson: Very good, Daniel, how are you?
- Daniel Newman: Great. Thanks so much for making time.
- Gil Shneorson: Absolutely.
- Daniel Newman: It's always great to have these in person. Being able to sit down at The Six Five Summit is a huge event. You're in day one. We've got three days. More than 50 of your peers speaking about everything from chips to SaaS. But the edge is a red hot topic.
- Gil Shneorson: It is.
- Daniel Newman: With the proliferation of data, all the AI speak, cars, cities, telco, there's so many edges. Just love to start, Gil, just talk to me a little bit about how you're seeing the edge business changing and growing.
- Gil Shneorson: Well, we have data that is changing and growing. The question is why? I think a few things are happening. First of all, we have much more ability to capture data because we have more sensors and more technology that becomes more affordable. So we can. First thing is it happens because we can.
- Second, we have all of those innovations on the cloud part that allow us to do machine learning of many more models. We have a lot of software-defined technology that makes it easier. And lastly, there are business challenges. You either want to be more productive or you want to be, in the case of retail, better customer loyalty and actually bring people back after they've learned that they can do everything from home. And so you need a better experience.
- All of those things together becomes almost a perfect storm of why there is such a growth in the edge. And at the end of the day, and I think maybe when we talk about edge, it usually we would ask what is the edge?
- Daniel Newman: Yeah. Well, everybody kind of thinks differently. It's definitely not one of those things that everyone explains the same way.
- Gil Shneorson: True. If you are cloud, an edge is anything outside of a cloud. If you are a telco, maybe it's the edge of network. Our definition of edge is that on-premises, outside of a data center compute. And the reason people put it there is because they need to make real-time decisions. And so sometimes it's a problem with latency. You need low latency. Sometimes it's a problem with cost, moving data around just to make a decision. Sometimes it's a problem of security or compliance. So for all of those reasons, more and more computers shifting to the edge and that's what's forming this whole conversation, this whole market.



- Daniel Newman: So talk to me a little bit, Gil, about Dell's role. I've watched Dell, its story continue to evolve about the edge. I think you guys really have a play as a company in all the things you mentioned. When it comes to telco edge, you've got a play. When it comes to data center edge, you have a play. The enterprise kind of corporate edge, you have a play. And of course Dell being a devices company, I know you didn't really talk about that, but there's a pretty significant edge of devices.
- Gil Shneorson: Did you notice I didn't.
- Daniel Newman: I did.
- Gil Shneorson: On purpose.
- Daniel Newman: Yeah. Tell me about that.
- Gil Shneorson: I kind of did, but that's a great question. So first of all, we have been helping customers at the edge forever. Because if you think about it, we call it edge now, but there was IoT before that. People have been doing business and making decisions outside of a data center forever. But today or before what we're doing now, we would sell mostly compute. And because we are a very large tech company and we're the leading in every category, it's very likely that they would come to us and ask for a quote. So we sell a lot of compute.
- And then we also sell a lot of, for example, hyper-converged, specifically in edge cases. So we sell products like VxRail into stores, multiple store chains and other operations. The problem is that none of the existing products that we have, or others, meet all of the constraints of what's going on at the edge. So we might solve a management problem, but it's going to be too expensive. We might have a lower cost offer that doesn't have the characteristics that you actually need.
- So what we did two years ago when Michael and the ELT decided to take a harder look at how much value we can add, the first thing we did is we started talking to customers. The benefit of working for a company like Dell is you can talk to any customer around the world and they will tell you what the problems are and the challenges. And we figured out that the most pressing problem was the complexity and the management of all of those edge compute devices. And that's what led us to this vision of NativeEdge that we announced today. And so redefining the role of Dell, it is now providing the hardware operating environment, remote management and application orchestrations to any edge environment, at any scale.
- Daniel Newman: So let's talk about that for a minute. The NativeEdge, at your recent event, Dell Tech World, you guys came out and talked more about it and obviously it's coming. It's not something that's offering for everybody yet, but the offering is going to be, I think, made available later this year. Seems like there's a good response. Talk a little bit, what is NativeEdge? You kind of just hinted to it, but give me a little more about what it is. Give me a little bit more about when to expect it.
- Gil Shneorson: We announced it back in Dell Technologies World. We married basically two major concepts into one platform. The first one is what we call secure device onboarding. Think about a device that you order, hardware in that case. By the way, in multiple form factors to make it affordable or



cost-effective to the workload. So you order a device from them, it could be a gateway or an OptiPlex industrial PC or a server. Secure device onboarding means that we digitally sign it in the factory and we drop-ship it to your location. All you need to do is power it on and connect it to network and that's it. Everything else is done remotely and configurable.

So right there and then, you think about the saving of the many, many steps of getting software on top of hardware into multiple locations. There's a very long process that people are going through the day. So concept number one, secure device onboarding, power on, plug into networking, and done.

Daniel Newman: What's the mechanism to make that so easy?

Gil Shneorson: That's actually a great question.

Daniel Newman: Thanks.

Gil Shneorson: This is innovation that started with Intel a few years back and they open sourced it. What it actually means, and I can go into a little detail, is this. When you manufacture a PC or server, you can put information on the TPA module, encrypted. What we do is we put a voucher there, a key, and then we post this voucher into what we call a rendezvous server. It's a service, and we send the public key to that customer. So this customer has a key that identifies this device one day showing up to them ahead of time. And so they claim it. When this device shows up, it's called some generic domain, it's downloaded, and it says actually where it belongs. It's done securely because that device can only go to that customer because of the connection we've made.

And from there on, it's connected to an orchestrator. We push updates and operating environment. And the other piece of the innovation, which is application orchestration. So piece number one, security device onboarding. Piece number two, application orchestration. And the stories there is that edge applications are not running at the edge alone. Edge applications are running in many places.

Let's talk about a point of sale. Point of sale is running at the store. There's probably some aggregation of data and management in a near-edge location, and there's probably some cloud monitoring application. So our ability to orchestrate services to edge devices, to data centers, and to cloud properties, and then make sure that we monitor and lifecycle a complete outcome of the application itself, that's the other part of it. So now you basically smash those two worlds together into one platform.

Think about if people are familiar with the concepts of DevOps. Let's say I have my own development in-house. I develop edge native applications because I have a specific use case. Now I can connect my DevOps pipeline to NativeEdge and distribute the same process I would do to a cloud, all the way to all of my edge devices. And so this is innovation that simply doesn't exist. And so we put it together. This was based on a lot of customer feedback, some of it probably stretching beyond what they could see right now in anticipation of what they might need. Those are the two pieces that make NativeEdge.



- Daniel Newman: Yeah. Well, thank you for giving a little bit the technical because it's not magic. I think that's the important thing is when they get the box, plug it in, there's work that has to be done to make it do what you're saying. And there's a lot of value in that chain by enabling it to be plugged in and quickly utilized.
- You'd mentioned talking to customers. This means that you're getting the kind of feedback that's driving the use cases. You mentioned, I think, a POS, point of sale use case. Are there a few other use cases that Dell really see as going to be the leading for NativeEdge?
- Gil Shneorson: Yes, many. So if you just look at numbers, the industrial or vertical market is the largest one that is utilizing edge technology. They are the most complex, the most diversified, the most in need, and probably the slowest to adapt because when you manufacture things, you don't want to slow down. You cannot pause a production line, and you are extremely cautious of what might happen. So while they have the biggest need and the biggest complexity, they are maybe slower.
- Retail is the next one. Retail is moving much faster now. We talked about it before. They're trying to bring people back to stores. So how do you provide an experience that is far better than buying online? Or this whole concept of omnipresence, how do you connect the purchase online to a great experience in store better than the other guy? And so in a big store today, you might have 20 or 30 different applications running, analyzing, making sure that you get the best experience. So retail is the second one.
- Now if you look at those two archetypes, you almost cover everything that you can see in other, like energy, oil and gas, power distribution, substation, and telecom even. So those are the leading, and from there we'll learn. The thing about innovation is that until you have a product in market, you don't actually know if you're right or wrong.
- Daniel Newman: No, you don't. But Dell does have the luxury of tens if not hundreds of thousands of customers.
- Gil Shneorson: Absolutely.
- Daniel Newman: Large enterprises, global footprint, and of course, a lot of personas, meaning you have personas that are very OT, personas that are very IT. And then even executive and strategy level.
- I've got to ask where AI fits into all this. The edge is going to have to be between ambient data, sensor data. It's going to be the biggest proliferator of an exponential data wave. And so all this, you've got to be thinking AI on top.
- Gil Shneorson: Absolutely. AI is an accelerator and kind of one of the super use cases for edge. So let's take a manufacturing environment. Today we have bought machines over many, many years, and as we talked about before, we don't change them. You can life-cycle a machine. When they say life-cycle, they mean keep it in place for 20, 25 years. So imagine a machine that came connected to a Windows 7 machine, and believe me, those are still out there, and is still running. Inside to it, there's other applications and other machines.
- So when you want to start making decision based on AI, what you need is consistent good data. So AI comes in and says, now we got to make decision because we can. And now we have to think about refreshing all of those things. So first of all, AI is a driver for technologies. The second part of it is that AI is just creating new use case altogether. So a lot of the edge business



is machine vision. Machine vision has been AI for the longest time. What we do is inferencing. We try to have a machine look at something and detect what it is.

So with NativeEdge, we facilitate the distribution of application and hardware, and we connect them together. On top of that, we can orchestrate services such as AI frameworks, and in the future, model distribution. So the leading use case in many cases is AI. What we are trying to do is not create specific AI value on top of NativeEdge because we need to partner, because this is other people's business and we need to make sure that we can add value. As you know, no company can do it on their own.

Daniel Newman: Absolutely.

Gil Shneorson: So we've got to find that line of where we stop and when we use others.

Daniel Newman: The partnership you made with Nvidia, the ability to train and maybe a model that can identify risks in a factory, or train a model that can use vision to identify vulnerabilities, security breaches, a lot of that with an edge manufacturing, oil and gas use cases, and safety concerns, things like that. AI should naturally be easy to train and implement. It sounds like you're building it to be flexible for that.

I'd love to end with just a question about the pivot within Dell. You as an executive, leading the edge business, you're definitely seeing that most of what you're doing here at NativeEdge is software. It's really software. So your company's well known for moving big volumes of PCs and big iron, but you're really seeing a transformational switch with your partners and ecosystem partners and moving to being a much more software-led company. How's that evolution taking place? How are you seeing the response from the ecosystem and of course from the customer?

Gil Shneorson: Well, I think most people don't know that most of our products includes a vast amount of software to begin with.

Daniel Newman: People do not realize that.

Gil Shneorson: I came from EMC into Dell. EMC had storage arrays. What is the storage array? It's a bunch of disc and a whole lot of software to manage everything else. So we have a lot of software developers.

The power of a company like Dell is that it can do both. And so if you look at the edge market today, there are many smaller companies that may try to do what we described with NativeEdge as software only. Actually, there are small companies, even larger companies trying. But the experience of delivering it on hardware in a known good state, everyone in the world powered on and connected to the network cannot be done unless you have both. And you can guarantee not only the deployment, but customer support. You can change the manufacturing process to allow for SDO to even exist.

So I don't think that it's hardware or software. I think Dell can provide an end-to-end service. It is true that facilitating and solving the complexity problem, especially because the complexity exists in multiple locations and you need to orchestrate them, it clearly is a software problem.



- Daniel Newman: Absolutely.
- Gil Shneorson: So we are investing a lot in software. In fact, we have made a few very small IP acquisitions to allow NativeEdge to move even faster. And that's what makes this a very intriguing place to be at Dell.
- Daniel Newman: Well, my viewpoint as an analyst is that the edge is going to be a battleground for business and for data that is going to be a massive differentiator in the haves and have-nots. And the way you orchestrate, the way you build, the way you develop to make it flexible, make it accessible, the network fabric has to be clear and of course secure is something that you mentioned. This is going to be the future. There will be exponentially more data.
- Gil Shneorson: I agree.
- Daniel Newman: At the edge and in the data center.
- Gil Shneorson: Absolutely agree.
- Daniel Newman: It makes a really good opportunity for you, Gil.
- Gil Shneorson: It makes a great opportunity for us to add value to our customers, for sure.
- Daniel Newman: Great answer, and that's a great way to wrap up this interview. I want to thank you so much for joining me here.
- Gil Shneorson: Thank you for having me. It was fun.
- Daniel Newman: Absolutely. All right, everybody, thanks so much for tuning into this day one session. Please stay with us for more.