

Podcast: Seize Opportunities for Modern IT Operations



Greg Ferro, Tech Analyst and Network Architect at Packet Pushers,
Johna Till Johnson, CEO at Nemertes Research, and
Chris Menier, President of Vitria VIA AIOps

ALL EYES ON THE CUSTOMER EXPERIENCE

Greg: Tell us about VIA AIOps and how it fits into the strategy of enterprise IT.

Chris: We are trying to prevent the consumer from calling up their service provider and telling them that things are broken. We don't want the consumers, the customers, the users of the services, and the applications to be the canaries in the coal mine.

We're consuming services on our mobile phones, our internet and phone service. We're processing a transaction at a point of sale. We're end users of these services. We don't want to be the canaries that are telling the provider of a problem.

Johna: Not only would the service desk of a mobile phone operator be interested in your technology, but potentially also at a large IT organization that is delivering IT services. If I have 90,000 desktops that I'm responsible for, I will want to know quickly which ones are likely to break before the person who's using them discovers that we've had an issue.

So, from a strategic perspective you're saying to the CTO of a large enterprise, "Hey, if you're offering your IT solutions as services, this is a way to get ahead of the problems that your employees and/or potential customers, depending on what services you're offering are going to experience."

Chris: And to get ahead of it without just simply scaling your service desk. We cannot scale the service desk fast enough to get ahead of this. We need to use technology to do so.

Large enterprises have an application that's connecting a client and a host, and that's connecting over a complex network that's running on virtual infrastructure that's underpinned by physical infrastructure. Those things are coming together to create a scale and complexity that humans just can't keep up with.

We just don't open a ticket. We intercept all the noise before it hits the ticketing system because the ticketing system drives work. And we're trying to reduce that work.

Greg: Loading a ticket to a ticketing system is scut work, it's not valuable work, right? Solving a user problem or accelerating business performance, that's valuable work. So, there's a difference between toil and useful work.

Johna: I'm understanding that, in the old way, if user Johna has a problem, she needs to go figure it out. In the new way, user Johna is about to experience a problem, and here are the five steps you need to take to ensure that she doesn't experience it. Is that accurate?

Chris: That's right. And in the five steps to take, once trust is built up, we're also going to take those steps for you as well. We're not an orchestrator, but we want to provide those next best actions. Usually, a person is in the middle at first. "Here's one of five things you can take, or here is the recommended action press the big red button." But as you build up trust over time and you see more of these plays over time, then you let the automation take place. And we're prescribing that and sending it directly, to an orchestrator, to some automation framework.

Greg: What you're saying reminds me of a leadership technique that's called 'the I intend to.' The idea is instead of a leader doing everything and micromanaging everyone on the team, the team members come up and say, "Captain, I intend to do X, Y, Z because here's the problem." And so here the smart ticket says, "I intend to do X, Y, Z."

Chris: That's right.

Greg: You stated earlier that you are consuming telemetry. Are you saying there's enough telemetry in the systems that we have today to be able to drive this? I don't need to go and enable telemetries or buy new products or get special wing-wings to trap information that's customized for your platform. You are just using existing telemetry?

Chris: VIA can pick up data directly from devices, gNMI, MDT, Traps, syslog, whatever it might be. We can leverage investments that enterprises have already made to consolidate some of that information. If you made an investment that you think you're already pulling off some great counters and you want to just feed us that data, fantastic. We can take that, or we can capture directly from the end device.

Greg: You're saying you'll leverage ThousandEyes or Netscout? Or if you are using something like Datadog or AppDynamics for performance, if you are using some sort of telemetry, some sort of streaming telemetry solution based around RabbitMQ or Amazon Kinesis, you've got integrations that will go and pull that telemetry or engage with those VIA APIs or whatever. Even SNMP I noticed.

So, you sit above the existing infrastructure. You're bringing it all together or unifying it. Is that one way of thinking about it?

Chris: It is. Unifying, and normalizing. We take Syslogs from a different vendor and vendor OSS that may treat those differently, or traps that have mibs that have been modified, or ThousandEyes versus Datadog or Moogsoft.

We have a flexible ingestion framework, that will normalize those into two different types of data. One is an event, a discrete event that happens in isolation. We deduplicate them, noise-reduce them. And the second is detecting anomalies in time-series. And we don't care if they're 16-bit counters, 32-bit counters, if they're continuous counters, gauges, whatever. We have a flexible schema that normalizes them, an abstraction layer that allows

you to easily view them in a UI just like you would in the individual tools themselves. This framework is a means to an end; it's not the product. The product is the correlation, the unification, and the understanding of the interplay across that telemetry.

Greg: Sounds like you're able to plug into most of the common enterprise tools. A credibility question then, you've been doing this for a while, right? You're not a startup that came out two years ago. If that were true, you wouldn't have these many integrations.

Chris: The company was founded over 25 years ago. It's always had a model-driven computing framework. And that evolved into business process management, and business process automation, which gave us a ton of experience in workflow automation, complex event processing, and operational intelligence. We've gotten good at that connector space and that workflow space. And underpinning our AIOps application, is our VIA platform, and that's a low-code development environment.

Greg: You've claimed that you're going to transform operations. Transforming operations implies cost, speed, and flexibility. What do you think customers mainly get out of this transformation that you do?

Chris: In looking at the operations pipeline, in looking at AIOps, the single pane of glass has been this mythical unicorn. Based on my briefings with analysts, people are still asking, "What's the best vendor for my single pane of glass?" In my opinion, you're chasing the wrong problem there. If you're not trying to transform your operations, you're just slowly evolving. Let's get this single pane of glass, let's get a better dashboard, that's solving old-world problems. You cannot keep up with the speed of complexity that's entering the enterprise IT space by just having a bigger dashboard or something with more red dots in it.

We'd like to think of ourselves as the first pane of glass. This is where things have come together. We sit on top of that infrastructure; we're unifying the analytics and correlation piece in the operations flow. And often, what we're giving you is that fully triaged incident. The cloud folks want to have their view and the security folks want to have their view. You're going to need that for some lower-level triage and even some operational reporting and things. But when you're locked into that view, you don't understand the interplay. You don't know if something that's happening from the security side is impacting my cloud

infrastructure. We don't want multiple teams solving the same problem. Right? And so, the answer was, "Oh, if I go and create a dashboard with all of the views on it, then someone's going to visually line these things up." It doesn't work.

Johna: That's just pushing the complexity upwards.

Greg: You've got hybrid clouds, you've got off-prem clouds, and you've probably got a new cloud or an urgent cloud on your on-prem. You've got applications in containers. In VMs, you may even have some native bare metal. You can work across all of those to see what's happening. I guess the other side is accuracy. Which is, I'm getting it right the first time, but I'm also diagnosing it right the first time.

Chris: Yes. Accuracy increases for sure, but it's just a lot of unnecessary work that's being removed. And when you remove a lot of that unnecessary work, it allows me to get to that right answer more quickly.

Greg: Your platform is ingesting data from a range of different sources. You notice something's going wrong; how does that work? What's the workflow look like?

Chris: The first thing that we're doing is we're bringing in the fault and time series data from across these different domains and enriching that data in three different ways. We enrich it with inventory information, the make & model, what data centers is it sitting in, and so on. We enrich it with topology information, and that topology is going to be learned relationships or maybe you have that in a CMDB or an orchestrator. And then service relationships, what service is this supporting? Those three components allow us to correlate, noise reduce, and detect anomalies. We're very good at anomaly detection. We're not just doing your normal threshold crossing. We're correlating these pieces together and from that correlated group, we declare an incident. And we do this out of the box.

When we deploy in a new enterprise, we're going to say, we have class A, class B, and class C. What you are going to do to start to get more value out of VIA, is label. Let's take a network example of ISIS adjacency changes and BGP adjacency changes and link flaps and link failures... "We've pulled those all into one thing" and said, "Something's happening, and all of these things are related." You give it a name. It's an isolated device from the network. Right?

You must apply your business policy to it to really start to get the value. We can learn those things. If you give us enough examples to

say, "Hey, when you saw something like this, a fiber cut, here's what you did. When you saw a thousand endpoints blocked from getting an IP from a DHCP server or something, this is what you did." We can learn it, or you can bootstrap it and teach it. But that's kind of how the process goes.

Artificial intelligence plus human intelligence is going to win every time. There are great stories about chess matches. The ones that always win chess tournaments are the Grand Masters with a little assistance from AI.

Greg: I want to come back to this question of quantifiable ROI. You're saying that if you could improve the CMDB, or if you could improve this, we believe that you'd be able to attach this sort of dollar value to it. Can you try and sum it up in a minute or two?

Chris: You're doing those A/B tests. When VIA has observability to the complete service versus it doesn't, what is my MTTR? What was my MTTR before versus what is my MTTR now? So, you get real quick quantifiable results from some A/B testing as you are implementing VIA across the whole service portfolio.

Johna: You are not attempting to turn that into an actual dollar value, which always fails. Because how do you know what the value of my time is and how you measure it effectively? You're saying, "Listen, we can give you time. We can give you time savings, we can give you headcount savings, we can give you agility savings, and you guys can go figure out what that means dollar-wise." It's do more with less. Take your existing infrastructure, take your existing environment, take your existing people, and empower them to do more and better.

Chris: You're right in the do more with less. We're not saying, "Oh great, I'm going to fire 100 people." That's not what's happening. Those 100 people are doing higher-value work.

Greg: I guess the other question is scaling it. How big does this need to get, or is there a sweet spot for size? What would you tell customers about that sort of scaling issue?

Chris: We built this from the start looking at the hyperscalers, and global service providers, so we're talking about tens of millions if not hundreds of millions of events, and we're talking about thousands and thousands of different metrics that we're ingesting daily because we must be able to linearly scale. We've built this from the ground

up on a massive scale and we've proven it in some of the largest, most complex networks in the world.

Greg: So, this is a whole business function. You need to think about putting VIA AIOps over the top of all your existing tool sets, across all your IT functions, on-prem, off-prem, applications, hardware, infrastructure, software, whatever it is. Because you also integrate with things like Git and Jenkins, right?

Johna: Yeah, so it's not just infrastructure, but it's also development. This is for very large complex enterprises, whether they're service providers or hyperscalers, or end-user enterprises that also have a reasonable amount of investment in the instrumentation and telemetry piece because your solution delivers greater value the more inputs it gets fed with.

Chris: Absolutely. The more visibility we have, the more value you're going to have. We're going to make that investment choice look smart when we're integrating it with all the other data sets.

Johna: Transform your technical debt into an investment, because even if it's a tool that's archaic and obsolete, if it's providing information and you can use that information, now you're making the person that bought it look like a genius.

Chris: That's right. Absolutely.

Greg: Thanks very much to Chris Menier and Johna Till-Johnson for joining us today. If you want to find out more about Vitria, go to [Vitria.com](https://vitria.com). There's a monthly newsletter where maybe you can start to get inside the head of the VIA product. And they've got some white papers particularly, look at the one called Service Assurance, where it talks about solving problems instead of triaging noise. I love the word triaging because that's a real-life drowning in problems and things like that.

About VIA AIOps

VIA AIOps delivers the Full-Stack observability capabilities needed to transform operations and markedly lower cost. VIA's real-time analytics, artificial intelligence, and machine learning provide the intelligent automation required to achieve a new service assurance operating model and a new way of working. This new operational model significantly reduces cost, enables a superior customer experience, and provides augmented intelligence to support a leaner, more efficient and effective operational staff.

