

QUESTION AND ANSWER

AIOps Done Right

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Mitch Ashley, CTO Research Principal at Techstrong Group interviews

Chris Menier, President of VIA AIOps about Service Assurance powered by AIOps.

Mitch: Service Assurance and AIOps, a great topic for discussion. Chris, tell us about yourself and the company.

Chris: I'm the president of VIA AIOps at Vitria and have been leading this effort for about the last five and a half years. I grew up in the analytics space and have 25 years of experience working for service providers, equipment providers, and analytics companies. I was early in the big data space before big data was really a term in the analytic acceleration of data warehousing. I led product marketing and became the group CTO at a company called Guavus, which was acquired by Thales, a large conglomerate. I dabble in analytics from a technology perspective and have some patents behind some of the work that we've done as well.

Mitch: Tell us a little bit more about Vitria and VIA AIOps specifically.

Chris: Vitria is a 25-year-old plus company that has always supported a model-driven computing paradigm and pointed that at the problem of the day. When companies were trying to get legacy infrastructure on the internet, get into eCommerce, and implement business process automation, Vitria had a very successful product offering called Business Wear, which is still deployed in companies around the world. With that success, we became very good at handling data -- big data technologies, high volume data, and messy data that came in out of order. We got good at bringing data in, normalizing it, and processing it for workflow.

When I joined the company, there was a problem in large, complex network environments, where the service delivery is dynamic. There were not just basic data volume problems, but faults with performance data, and a lot of changes that caused service disruption. We've pointed our technology at that and have success in some of the largest complex service delivery environments in the world.

Mitch: I have always had respect for network operations organizations. It feels like you must be a fighter pilot either watching everything that's going on in the cockpit or looking at the heads-up display to tell you what to do next and where you're headed. You've also got to have sensory data available to dig into, triage, and respond to issues. It's a data challenge, an automation challenge, and a process challenge. You can both respond human-wise and automate it and then we can apply things like AI to it. I'd love to hear your philosophy on this. You're bringing the data, the automation, the AI and the platform, and the approach to it as well. What do you think about solving this problem?

Chris: First, we keep the service experience in mind and more importantly the customer in mind. We see things through the lens of the customer, the consumer of the application, or the consumer of the service. If I'm a large enterprise, my end user might be my employee, and that employee needs to have VPN service so they can do their job and work from home. If I'm a communication service provider, it's the person on the other side of the smartphone who is the consumer of this.

First and foremost, we need to help our customers get ahead of those service disruption issues so the customers aren't calling into customer care saying, "I can't get on such and such." "I can't execute such and such." Our job is to get ahead of that. The problems that we see today are outpacing human scale. It no longer works to have fixed service delivery ecosystems. They're dynamic. It no longer works to have everything on a single screen and think, "Well, if I just take all of my element management and my telemetry systems, my APMs, the tools, and I put all their red dots on a single screen, I as a human am going to be able to consume and triage that."

It just doesn't work anymore. We take in that variety across the total ecosystem of fault and performance and change data. We enrich it with valuable information, such as the inventory, and basic information like the make and model of devices and topology. We learn the topological relationships through the data itself, and then finally the service dependencies. And when we have that rich data, that's where the AI comes into play, pulling it all together in a logical way, doing that correlation for you that a human just can't do.

Mitch: Often a network or operations person doesn't know what it means when something happens or happens in sequence or in relation to other events. And the time it would take a person to correlate that, connect the dots, and realize that it means X and that it's probably already happened, not foretelling a problem and the customer is unhappy. We're in such an environment where the volumes are high and the environment is changing. It isn't a rack of equipment all the time anymore. It's software talking to itself, doing everything in the seven-layer stack or inside the application stack.

Chris: With an application or service, there's a client and a host. And that client and host must communicate, and they communicate over a very complex network, sometimes the public internet or at least a private network. And that application or service is residing on some virtual infrastructure. And that virtual infrastructure is underpinned by physical infrastructure. And it's dynamically changing. Where is my microservice running and on what VM? My container was ejected and brought back to life. Now the whole service dependency and service topology has changed. Our job is to understand that in real-time so we can do those correlations and get down to understanding the impact of an incident itself.

And I'll give you a very simple example. In the network, one of the most frequent things that happens is link failures. You have an interface go down on some router or a switch. One of the most important things to know is what's on the other side and whether it is going to be service-impacting. Our ability to learn and understand and correlate immediately what's on the other side allows us to understand the service impact and what the priority should be. And then what are some automation routines we can apply to restore the service.

Mitch: I like your comment about microservices because, for network security, that's brought in a whole new dimension. The application isn't just surrounded by a bunch of software hardened and then a few interfaces in and out. Microservices and APIs are talking to themselves all over, inside containers or organized by orchestration like Kubernetes. It's sort of its own little network either within or across wherever all the pieces of that application live. That's a hard thing to get your head around because Kubernetes is spinning things up, clusters are growing, spinning up new microservices, instances of the same service. Humans can't follow it that quickly. It's just not possible.

Chris: No, it's not. We understand that institutional knowledge is important, but it only goes so far. AI plus HI, artificial intelligence plus human intelligence is going to be greater than artificial intelligence by itself. We allow that institutional knowledge to basically be injected into our process flow and our analytics to apply some best practices and some policies and some labeling of what's going on.

With VIA, we think about change as a first-class object or a first-class event in terms of operational troubleshooting, and operational support. One study indicated that 37% of service-impacting events were the result of change. Our job is to identify that change and then immediately identify any impact of that change. Sometimes change is good. We see KPIs increase, and we see faults go down, but a lot of times change will cause issues.

As we introduce more DevOps, more CI/CD life cycles, and more rapid, constant change, we open ourselves up to that change potentially negatively impacting the service and not always just positively impacting it.

Mitch: Where is AI playing in your product strategy looking forward? We're hearing a lot about generative AI and how many jobs that's going to take. I'm not prescribing to that, but I'm curious about AI and ML in your world, what increasing or expanding role do you see it taking?

Chris: We use AI and ML in this pipeline effect - every step along the way, as that data is coming in, being enriched, pulling out key information from log files, learning the topologies and dependencies of that, classifying, and categorizing them. We're able to do this in real-time at a massive scale across a pipeline. What we're going to see in our industry is not the evolution of some magic new algorithm. It's really going to be how that is being applied. It can be some basic AI or it can be the application of AI at scale through a pipeline, which will continue to evolve.

With AI at scale through a pipeline, you're going to get results like our customers are getting. They're cutting their MTTR down by 40% for outages and 80% for impairments. We have one of our large-scale cable companies that has pulled out over a hundred thousand technician visits that they're directly attributing to our solution. And that's not from some magic algorithm. That's from applying AI and machine learning across that pipeline in a scalable way.

Mitch: Where can folks go to find out more, check out the technology, and what you all do?

Chris: We have some great white papers and videos at vitria.com. If you come to our website, you'll be able to sign up for a demo with real data, real use cases, and white papers that I think will help you on your AIOps journey.

Mitch: There's a great demo on the Vitria AIOps page. Check that out, it's talking about optimizing service assurance.

**Interested to learn more?
Book your technical demo with a VIA AIOps expert.**

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About VIA AIOps

VIA AIOps delivers the process automation capabilities to shorten the incident lifecycle and improve the overall service experience. VIA's total ecosystem observability, internet-scale noise reduction, machine learning based anomaly detection, and cross silo correlation transforms and optimizes operational practices. The result is lower costs, superior customer experience, and augmented intelligence to support a more efficient and effective operational staff.

