

Managing Massive Data in Hybrid Clouds

SUMMARY KEYWORDS

riverbed, observability, public sector, trust, technology, cloud, craig, network, security posture, identify, Alluvia, people, monitoring, federal, architecture, philosopher, talking, river, visibility, today

Welcome to the federal tech podcast. My name is John Gilroy and I'll be your moderator. Today in the studio we have Craig McCullough, senior vice president public sector at riverbed technology. And I said studio because they fell back on my old pre COVID patterns cake cuz I've known you for a long time. And hey, I remember him in the studio. But we're doing this in the Zoom calls. We do most of our interview series. Craig, how are you?

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I'm good. Thank you, John. And it's good to be back with you. In our in our virtual studio. How about?

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Well, I've done 950 interviews, I've talked to her but many times, we have a real bright gentleman there named Marlon McFate if everyone listening this was as smart as Marlon, we'd have no cloud problems at all. But we got Craig in here and he's gonna help us a little bit understand how to manage a cloud especially from the federal perspective. So Greg, maybe you can give it all a quick background on you and maybe a little nutshell on riverbed been a long time. It's been around 20 years.

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Sure, yeah. And, and I will say that Marlon is a great guy, he is the CTO for federal for public sector here at riverbed. And I really do enjoy working with Marlin. I joined riverbed a little over six months ago, came over to run the public sector team, I've been in the industry for about 20 years. You know, one of the things about riverbed that really attracted me to the company, was the direction that that they are taking the company and the technology, especially over the last year, and with the introduction of of lluvia, which I'm sure we'll talk about at some point. That just seems to be a real game changer to me. As far as network, understanding, comprehensive understanding and network monitoring, across the entire IT infrastructure for for any IT group, or public sector entity, I think riverbed is really going to be able to bring a new, a new game, changing technology to that to that sphere.

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So I went to the riverbed put us late this morning, and I strolled through your last six months of tweets, and I found the longest hashtag ever, maybe you get an award for this hashtag digital experience monitoring. So that's that really kind of I guess that little hashtag sums up this discussion today for our gummies. No. So if you're working in an agency, and you're in the multi cloud, hybrid cardio legacy systems, you go to you about



ready to go crazy every day at work. And so maybe hashtag digital experience monitoring might help. Is that true?

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Yeah, I mean, that's, that's one piece of how you might define what riverbed does, but it's, it's a lot more than just digital experience monitoring or management. From a riverbed perspective, you know, we approached the market, looking to give full network visibility to our to our clients. And what that really means is, it's a comprehensive understanding, and a full transparency of everything and everyone on your network at any given time. I think the end goal for for what riverbed, riverbed brings to the to the market is to just allow our clients to have full situational awareness so that they can proactively identify any issues, and then identify those issues or threats and close them out in as real time as possible. I would say that that probably is the overarching mission goal for riverbed with our public sector customers.

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So what precipitated this interview was a new website, new product released after 20 years, you're merging things together. So tell us about this new product and how it can help my listeners please

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yeah, That's That's a great question. So, you know, going back to when riverbed was founded, you know, it's interesting, if you consider the name itself riverbed, the founders, believe it or not, we're, we're, we're very proficient and big into fly fishing. And so riverbed was something that that played into the title, there are actually some of our, our offerings to the market in those early days or steelhead, appliances, steelhead being a particular type of fish by fishing. So fast forward now, you know, we've we've kind of made our foundation and our name on digital experience management and acceleration with those steelhead appliances. And now as as the market has grown, as the IT infrastructure has changed, we've gone from, you know, siloed, kind of data center structures 20 years ago into now we are in the cloud, and we're have the Internet of Things and user devices have you know, exponentially increased, especially when people are entering into a hybrid work model and working from home, all of the all of these things have given riverbed the opportunity to adapt and grow in a way that that we can become much more focused on awareness, full network visibility, and allowing our clients to identify issues no matter where they occur, whether they're, you know, in the data center at the edge in an application, it all comes down to that awareness. So summing all that up into the new product. And what we're what we're offering is alivio by riverbed, a Loomio. The name comes from the word alluvium, which is, is where that area where river beds would unite into maybe a larger, larger structure, a larger river, it's there where you would find a very nutrient rich environment. And so we basically just took in the, in the same way that, you know, the company was founded on the idea of, you know, the thoughts and words around fly fishing and riverbed, and we took that word alluvium, and added an ode to it. alivio. And then that O kind of represents to us the observability piece, which is, which is the big piece going forward. And you know, one thing that's interesting about that, and I'll go a little bit beyond the question you asked is that, you know, what I've seen with my clients and customers over the years is that there's there's a large technical debt in technology that's already been acquired. And so when it's possible to, to alleviate that technical debt, by not necessarily repurposing but capturing more value out of those products that you already own, that's a big benefit. And a lot of what riverbed riverbed brings to, to our clients is allowing them to leverage and recapture value of



equipment that they may have purchased previously from riverbed and expand it into our observability platform. So not only do we give them, you know, a new capability to have full transparency, and allow forensic network network visibility, but in many instances, we are able to do that and enhance that with equipment that they may have already purchased from from riverbed.

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Wow, it's taking that car in the garage and getting a whole lot more miles on it since already sitting there miserly. I went to your website riverbed.com, which is awful easy to remember, now, Olivia a little hard to spell A L L, UV IO. Once your website and I saw a phrase there, I think one of the blog posts was called illuminate federal projects. Wow, we like to put light on federal projects. So So I guess that's the that's the basic here. But if you have a federal project, like a transition to a cloud, what riverbed can assist a federal person doing is just see what's going on. And, and it sounds pretty simple. You know, you have a hybrid cloud, you got legacy systems, and you have this big project and you hit your goals, then you sit back and you smoke a cigar. And then you realize, you know, it takes maintenance, you have to see what's going on here. Because, you know, you may have had 1000 cloud services, and I have 10,000 cloud services and same number of staff. And so if you're in a situation where, you know, you take advantage of all these cloud services, you really don't have the staff to you can't add staff. So what you can do is maybe leverage tools that you have or looking at tools that will allow you to do more with fewer people watching this incredible cloud that's

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out there. Yeah, that's exactly right, John, and another way to look at it is, you know, you asked about or you mentioned you know, illumination, right, how does riverbed illuminate and I think that if you take the current environment of Have any IT architecture and how it is very decentralized. If you can introduce to that some type of operation center mindset, right, then that's going to more easily allow you to avoid gaps or silos. And effectively allow allow a person to maintain that overall observability throughout their entire IT environment. And I would say that that's, that's where that illumination thought comes into play, you know, if we can, if we can connect everything from a visibility perspective, from from the end user, to the device, to the application to the server, what have you, and provide monitoring and observability over over that entire umbrella, then when something happens, when there's either a threat or there's an issue, the mean time to resolution is, is decreased substantially, because no longer are you looking in individual silos or areas to identify the problem, you know, where that problem occurred, you know, if it occurred on application, you know, if it occurred on an end user device, you know, if an end user caused it, and and by that very fact, you spend less time investigating, because you've got the forensics there that can proactively tell you what happened or what is about to happen, and then solve for that in real time. And I think that that's where that illumination piece really comes into play. And that's, that's what alivio brings to the client. Two weeks ago, I

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was downtown DC at a big conference. And it was a big cloud service provider. And there was so many great topics and so many good things going on. But no one there was any little booth in the back or a special session on outages. It's like, oh, well, you don't exist. No, no, wait a minute, let's let's be real, you know, I mean, it's great. And, and, you know, my wife was raised in Oklahoma, and Oklahoma is a beautiful state. It's got open spaces house has hurricanes. I mean, it's correct. And then, you know, twisters come up, and it's a terrible



place to be in this time of year. And so if you look at cloud service providers as also outages and and, you know, we gotta admit that that I mean, I looked at the Uptime Institute report this morning, and they did a 2022 outage report. And they said, there's high outage rates remain an issue. And so how do you even know, if there's an outage? I mean, you have to monitored all the time, don't you?

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Yeah, I mean, and that's, that's what that is really all about, you know, cloud service providers are becoming more and more just a daily part of life, for everybody, whether you're in public sector, whether your commercial, and I think that, you know, the key to having a robust and safe kind of IT architecture for your mission, or for your business is going to come down to, you know, essentially, the quick and effective identification of issues and threats. Without regard to where those threats are coming from, you need to you need to, as quickly pinpoint the location and reason, whether it's with the cloud service provider, whether it's with the end user, you know, and that has to be done in as near real time as possible. Because, you know, especially in public sector, you know, seconds or milliseconds count, right, especially to the mission. And so whether you're talking about a state and local government, whether you're talking about the federal government, when, when you when you can, when you do not have the ability, the observability, I'll say, to identify issues quickly, lives can be at stake, and they often are. And that's something that, you know, that's why I enjoy working with public sector. That's why I like bringing technology to public sector. That's why I've devoted my career to public sector. To me, that's a very personal thing. And I think that what riverbed brings to the table, from from our overall observed observability platform really answers the mail. In that respect.

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No, got to bring up this part of the problem. Part of the solution is human beings. Now a lot of my garvies Two thirds of my listeners are Garvey's they're suffering from audit fatigue, and they're suffering from human interaction. And what can happen is, a lot of times, there could be a problem in the system. And it may be just a hue believe I'll name it here, maybe a human failure to follow a procedure. And anyway, you can automate that or have a system do it. I mean, it's just a it's it's a better way of handling it. It's just it's too complex with all the different clouds and different services and what's going to happen and you put two and two together, you get five and things just happen. So I think this may be a way to model Resistance more effectively. Is that Is that where we're going to place itself?

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Yeah, absolutely. I would agree with that. And, you know, if you want to have kind of a punch line for that, what you could say is you really cannot protect what you can't see. Right. And, and what you're protecting is really the the data and the ability to meet the mission goals in public sector, and so with with riverbed, and alivio, you know, that's done by applying this overall observability platform where we are leveraging technology, and things that we've been capturing, you know, for the last 20 years where it, we've captured every packet, we've captured every flow every end user transaction, if you take that and apply it to that AI or machine learning, then you get into the realm of identifying and resolving and increasing productivity and protecting mission goals, almost in real time. And that is kind of the end goal, right? When When, when people talk about mission, mission goals in it, it's always coming down to seconds and milliseconds. And the faster we can, you know, find a mean time to resolution, the better.



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Well, Craig, I'm much older than you had been in this business a long time. I remember writing for The Washington Post. And back in the mid 90s, I used this big, big word, which is really impressive. Well, back then was called a megabyte. Wow, that was pretty impressive. And, and, and, and my editors had to make sure the zeros were correct. And the number and everything had to be perfect. And, and now, megabyte. Come on now we're talking about zettabytes. So the problem here is a little different than maybe even five years ago with the amount of information and the amount of sensors that are out there. And the remote workers. And it's just, it's just incredible, I think of situational awareness, I think of salaries and space, they have to have situational awareness. And that's more data to worry about. And so it seems that, with this appropriation of the increase in data here, we have to take a look at the solution does much differently than in the past.

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Yeah, I mean, that's absolutely true. And, and that kind of goes back to everything we've we've been discussing, you know, during this podcast, you know, in my opinion, and this is my opinion, it's the growth of data is inevitable. So when people get hung up on how much they're, you know, data has grown over the last two decades, or how much it will grow over the next decade. That that is an interesting conversation. But I think the conversation that that is more appropriate is how do we deal with that growth in data? How do we deal with that growth of what is the network, which will the definition of the network will change over time as well, while still offering the capability to quickly identify issues quickly identify threats, support, the unobtainable zero trust architecture, and continue to support mission goals. And I think that in a very simple, in very simple terms, the way you do that is to know what's happening across your network at all times, and where it's happening. And thereby identifying any issues, identifying any threats, and bringing as close to real time as possible, the resolution of those issues and threats. And that's what I think would be important, as far as you know, the growth of data over time, and how we handle it.

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I'm an old radio guy. So I can say, well, that's the phrase that pays and so zero trust the phrase mean, NIST just released another shot that you probably saw a couple days ago, new architecture for zero trust, it's just, we could probably do a whole podcast, not only in zero trust, but zero trust in the federal government, maybe just zero trust and NIST, I mean, there's just so much involved in that, it just, it gets to the point where you have to be frustrated with compliance with zero trust and with your system growing and multicloud. I mean, there's got to be a limit limit to growth. That's never a book from years ago, but there's got to be a limit to growth are a way to adapt that and, and I think riverheads got a tried and true story to tell in this area. So what about zero trust and compliance? Do you fit in with that whole argument? And is that just a checkbox? Or is that a part of your whole offering?

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Yeah, I mean, it definitely plays heavily into our offering. I mean, zero trust to me, and you said it, we could probably talk about this in an entire podcast and debate was Your trust is to me, zero trust is kind of an unobtainable goal that you're always reaching for. Right? It's like an overarching mission statement that as



long as you're, as you're moving towards zero trust and always trying to achieve zero trust, you're heading in the right direction, but what is zero trust changes over time based on technology based on information, you know, whatever. So how does riverbed and Loomio play into zero trust. Well, in very simple terms, but I think easy to understand you, you cannot achieve zero trust without knowing exactly what is on your network, you have to have observability across your entire IT ecosystem. If you can't see it, then you can't even begin to question whether it can be trusted. Right. And that's what riverbed and alivio bring to the zero trust discussion, we will make sure you know everything that's out there. And we will compliment you know, the zero trust, implement zero trust technology that you've put in the technology that you have put in to try and reach a zero trust model is riverbed the answer to zero trust, it is a it's a piece of the puzzle to get you to zero trust, but I can tell you that without riverbed and without a Loomio, you will not reach a level of zero trust architecture that you would otherwise have.

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Now, while you're explaining that I was taking notes, and I was thinking, maybe it's a parallel to being healthy. So if I went to the doctor today, and the doctor said, Well, your blood pressure is 119 over 80. Well, that's great. In a month, it could change it by a truck. I don't know. I mean, all you can do is say, Well, you know, my pulse is 53 My blood pressure is okay. I seem to have a reasonable weight. Other blood workup seems to be okay, for today. And I think that's what I think you get? Well, I mean, I get lulled into to you know, I mean, so I think people that make a successful transition to the cloud, maybe they set up a hybrid, maybe the project is good. And, and they it's just a human emotion to put your feet back and see everything's okay. But I think it's uh, you know, it's just like, what's good health? What's a good diet? Well, I want a good diet is any more Eastern? No. But what's good health, it's a, it's a changing, maybe it's a river. Maybe the river is flowing in front of you all the time. And the philosophers used to say you can never reverse because it's changing all the time. Maybe that's where river fits in is always constantly changing cloud here.

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Yeah, I think that that's probably a good analogy, you know. And to kind of piggyback off of that, you know, I think that, I think that looking at zero trust, as, as you said, like, analogy to health. You might have technology in place that allows you to call your network or your IT infrastructure healthy. But is it as healthy as it could be? Is it as protected as it could be? Is it ready to withstand something that you didn't anticipate, and then can you identify what's happening very quickly, to resolve it before it causes massive internal damage, that's the way I would look at alivio. And what it brings to the market, as far as zero trust is concerned, you cannot have full you cannot get as close to zero trust as you could, without full observability across your entire network. And that's that's what riverbed that brings to the market.

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My, my daughter gave me the black swan book and a seems book over Christmas to reread, and I read it again. And, and I the final chapter is talking about being fragile, and how to be anti fragile. And that's exactly what he says is that if you don't have, if you're too much in a silo, you're gonna get hit by a truck. But if you have observability, then you're gonna walk across the street, and you're gonna be healthy. And so I'm trying to come up with events and unpredictable and predictable and black swan events. And some things is unintended consequences could happen to the cloud, but then it could be an event that comes up. And so how do you



protect yourself and, and he talks about many of the concepts I think we brought up today in this discussion about being aware of things, observing an environment and not being locked into one vendors. Evaluation of your security posture, and I think there's so much money going into cybersecurity companies now that I think people get blindsided. Oh, I'm gonna go to the ABC security guy, because he said, Well, it's got to do with the system first. And then I think it's can be almost a bolt on the side there. But people are throwing so much money into cybersecurity now and not thinking about the system. First. I think this is what this is what today's discussion is, look at the system first, and then we'll worry about it. And thanks, man.

24:33

Yeah, yeah, look at the system. First. Look at what you've already acquired. Look at the technology you have, and then how can you leverage that to enhance your security posture? And I think that's something that we discussed early on in the podcast, you know, that. I think what is of great value to the public sector clients that we have, is that we allow them to enhance their security posture. Sometimes with technology that they've already acquired from riverbed, and then when we bring eluvial onto the scene, we're giving them that overarching observability across their entire network. But we're doing it in a way that allows us to leverage technology that they've already acquired through cat, you know, every packet, every flow that we've captured every end user transaction, we're applying AI to it. You know, things like that anything we can do to increase the security posture in the easiest, fastest way possible. Is what riverbed is all about.

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Two weeks ago, I had your friend Jeff Reichard in the studio, and we talked about a great guy. Yeah. Okay. And so I'm gonna give him the same question. I'm gonna give you the same question, Sam. It's a philosopher question. So I don't know if you can handle it. It's kind of a bookish question, but he's

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more of a philosopher than me, but Well, we'll

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find out. This is a very serious high level philosopher. I'm gonna do teach at Georgetown, so I can quote, you know, these Latin guys and everything else. So it was a guy named Yogi Berra. He once said, The future ain't what it used to be. And so what about the future? What do you think's gonna happen the next four or five years as far as systems and zero trust and Yoda bite zettabytes? What's next? I mean, how, what do you think's gonna happen?

26:18

Yeah, I think, I think it'll be exciting to watch, whatever it is, you know, if, if history teaches us anything about the growth of technology over the last 20 years, it's that I probably am not the guy who's going to predict where technology goes over the next 20 years. But I'm excited for it for a number of reasons. I think that I think that when we harness technology, and, and are able to use it in a way that is beneficial and supportive, and good to the common to the common good. It can be a beautiful thing. And on the flip side, if we're not careful, and we're not mad monitoring and kind of watching for nefarious actors or unexpected events or what have you. It



can also be pretty devastating. So I think that, you know, technology will continue to grow. I think it'll grow in ways that we're probably not even comprehending right now. But I think as long as we have companies out there that are willing to apply new technology and new learnings to our world, I think that that we can ultimately use it for the greater good, right?

27:42

That's good to understand. I mean, a lot of my listeners know about riverbed. And I think this brings riverbeds technology to the forefront talking about this new product lluvia so my listeners can go to riverbed.com and learn more, and maybe grab Craig at the next conference he speaks at or something who knows people going face to face these days. It's just like before COVID I think

28:02

it is nice. That's great.

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You have been listening to the federal tech podcast with John Gilroy. I'd like to thank my guests Craig McCullough, senior vice president public sector at riverbed technology. Thank you

