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IBM Podcast

WEN: Welcome to this IBM podcast series, the IBM WebSphere SOA appliances for optimizing your SOA. Today's podcast is a conversation with Steve Craggs from Lustratus Research Ltd. and Ben Wen on how to ledger SOA appliances, optimize scalability, security, and cost in an SOA project. I'm Ben Wen with IBM. Hello, Steve, welcome to this podcast and thanks for joining us.

CRAGGS: Hi, Ben, it's great to be here.

WEN: Great. Definitely appreciate you telling us about scalability, security and cost in SOA. I know that you've been working with customers over the several few years about SOA adoption and some of the experiences that you've gleaned by talking with these folks who are implementing and analyzing and designing SOA.

And I understand that you've put together a set of observations that you call, we call the Craggs SOA adoption paradox. So I was hoping that you could tell us a little bit some of the things that you've learned and some of the guidance that you provide your client and the practitioners as they go through the process of adopting SOA.

CRAGGS: Sure, Ben, yes, happy to. Good job we're talking about that, because that's what I prepared for. No, the adoption paradoxes that we've come up with, there's three of them. And really, it's all about things that we've learned talking to people as they take on SOA and as they deploy SOA.

I mean, we've been working on this for, oh, it must be 10 years now. And believe it or not, I wrote my first paper on what SOA was going to be back in 1996, even though it wasn't called SOA at that time. We've been working with customers for a long time on this.

I think there's three things that come out very clearly. There are three real imbalances or paradoxes or whatever you want to call them, and one of them is on scale. And really what that boils down to is that SOA needs scale to actually get the major benefits out of it, but on the other hand, there are characteristics in SOA that hate scale. So that's the first challenge that people often find they're facing.

The second is all around security. To get SOA adoption widespread and to really start driving the benefits, you need to have freedom. You need to have freedom for people to be using it, but on the other hand, SOA hates security

freedom. It really doesn't like it at all. So that's the next thing you have to deal with.

And then the third thing, of course, that has to be there is cost. I mean, cost is one of the things that everybody is focused on at the moment, reducing cost. And SOA does indeed reduce IT costs, but SOA can also increase IT cost. So once again, that's the third of these paradoxes, as we call them.

WEN: Interesting. So I think that that's a good set of areas that I'd love to get a little bit more concept around where you see implementers and designers can do in order to mitigate some of these concerns or, you know, in some ways turn them into competitive advantage as well, being aware that scale, security and cost are of course factors in any type of IT project, but in particular SOA adopting and use.

CRAGGS: Yes, I mean, I think this is being learned the hard way in a number of companies. You know, SOA is very popular, and although it's no longer quite the darling of the press that it used to be 3 or 4 years ago, I think it's actually moved on in maturity levels, and SOA is now something that's almost taken as [read]. People really, you know, companies think, well, of course, we're going to do SOA in some form, whereas, you know, before, they had to

be convinced.

So, I think there's a lot of experience out there now, but I think there's a very constant stream of people saying, gosh, I thought we might go better than this. And what's happening is they're running into these three paradoxes and they don't necessarily know how to handle them.

Now, the good news is that if you do take them on and understand what's going on here and you take measures to either mitigate or remove the things that are removing these paradoxes, then in fact, the way is drawing the sort of gains from SOA that you were already hoping for and to drive more and more growth through the use of SOA.

WEN: Absolutely. So, what do you think, let's go there these in order in terms of overall scale. What are some of the things that you see your customers, your clients, as well as other folks as we talk here in broader conversation, to handle scale, handle the ability to go to large amounts of volume in terms of traffic or to be able to handle bursting of traffic as there's [periodicity] to the way that people approach an SOA infrastructure, time, over months or weeks or days or hours? And what are some of the things that people could do to capture some of these concerns?

CRAGGS: Well, I think the first thing that we identify is that, I mean, obviously scale means lots of different things to different people. They think about volumes, as you've said, and [periodicity] and so on.

Often you find that the first issue that people start thinking about SOA is how do you get value from SOA? And the answer is, you know, people often say, well, I've created three services and I've put them in place and I don't seem to be getting any benefit. And the answer is well, yes, you put three services in place, what did you expect?

The real value comes from SOA when it can be spread, and really we're talking about spread interdepartmentally. It's all very well to say within a department, oh, well, we're going to go with SOA, we're going to create some SOA services and we'll share those across the department. And yes, I mean, you can get some benefits that way.

But the real benefits come when SOA rolls out beyond that, when it interdepartmental, or when it gets into your partners across the value chain. That's where you start really getting these benefits of being able to reuse services and the agility that you get by being able to build applications from these [parts].

And then there is that scalability, with all that it brings, and then of course, part of it is it's going to bring volume and performance, and part of it is you actually don't need to have people to set those things up. You're going to have to have the design skills available in the different locations, in the different departments to actually build what's required.

You're going to need the infrastructure there. You may well have multiple pieces of infrastructure. Getting all that to scale up and managing all of that across that, you know, widespread, across the enterprise and beyond, that's where you start facing up to problems.

WEN: Ah, I see. So scale large not only in terms of actual traffic but also scalability of the infrastructure, the architecture to include multiple endpoints, multiple components within a department. Maybe even broader than that department, and as you're saying, to include partners, which can provide more benefit through the use of these architectures.

CRAGGS: Absolutely. And also of course, don't forget the running between different disciplines as well, between whether it's the sales part of the organization, or whether it's the merchandising part of the organization, or the manufacturing part, whatever it happens to be.

All those things can benefit from the ability to share from each other, but of course it introduces new challenges. And you know, I think a lot of people have grown their SOAs, they started spreading them out between departments, they started using it in different locations.

And I mean, it's not that they can't do it; it's that it sort of dampens down the level of benefits because they have to keep thinking about, okay, how are we going to get the skills there and that sort of thing.

And you know, I personally think that this is one the areas where you can look at something, some sort of packaged solution, whether it be an appliance or whatever you want to call it, which can actually reduce the level of skills you need, which can put everything more in sort of a manufacturing sense, you know, just generating the SOA activity that you need with as little human involvement as possible.

And that's the sort of thing that you really need to be looking at to crack this. The key thing is that you've got to know this is a problem you're going to run into and start thinking about it before you hit it, because the danger is if you hit it first, then people start walking around muttering about, oh, we shouldn't have gone down

this SOA route. This was a mistake. So it's important to think about these things early and to work out what you're going to do about it.

WEN: That's a great point there in terms of handling some of the scalability concerns that may arise as one goes through the design phases of an architecture. So, package solutions and in particular appliances and other mechanisms that, like you're saying, reduce the overall sort of impact from management perspective to help mitigate these scale points.

CRAGGS: Absolutely. And the other angle, and you touched on this in your original question, the other angle of performance also plays into this. I find that companies often think about, well, okay, we can start spreading this, more and more people start using some of these services.

And then one of the problems is they run into bottleneck. They may have put a broker in place, for example, that's doing all of the clever stuff as people are driving services from different locations and using different data formats and things.

But in the end, there's often a problem with that. The ability to get end-to-end performance gets compromised. You know, you have these bottlenecks, and it affects the

whole benefit chain in a way.

And so the other thing that you really like in SOA terms is to have something that can help you smooth the load, putting, for instance, a situation where you've got a relatively underpowered server that's running all of the clever brokering thinking for all of the SOA...

...is obviously going to be a mistake, because it's going to be sitting there well overloaded and there will be people right across your SOA looking for good performance when they call the SOA service and wondering why it's taking so long.

So, you know, it's those types of things. It's managing not just the volume of activity you can cope with at the individual server level, but performance right across the end-to-end application. That's what you really want to optimize.

WEN: Terrific. So there are multiple components of scale. And I think maybe we can go into more detailed topics as we go through the rest of our series here. But by considering packaged solutions, considering appliances, considering different mechanisms early on to handle not only the scalability of the performance of a particular endpoint or a set of endpoints, or as you're alluding to

here, the message routing component...

But also the scalability of the use of the services, reuse of the service, within an enterprise, between departments of that enterprise, or even with large partners outside of that enterprise, some things to consider as early as possible or higher likelihood of success as customers not only adopt but also continue to adopt and grow from pilot or initial smaller department in these cases.

So, that's terrific. I know that we started our discussion here around scalability, security and cost in overall SOA, part of the Craggs SOA adoption paradoxes. One of the things that we'll want to continue on in our discussions here in our podcast series is to look at the next set of components, the security and the cost using SOA.

CRAGGS: Absolutely.

WEN: So with that, we're going to sign off here, our first of the series. So I want to say thank you again Steve Craggs from Lustratus Research Ltd. This is Ben Wen from IBM. Thank you very much.

CRAGGS: Thanks, Ben.

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