

Delivering First Class Communications with WebRTC

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Discussion Transcript

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Patte Johnson: Welcome to our Webtorials podcast. I'm Patte Johnson, and I'm pleased that you are listening today. Jim Donovan, director of product management for Oracle, will be speaking with Larry Hettick, our Webtorials analyst. The topic of the discussion is WebRTC. Welcome Jim and Larry. I will hand this over to both of you.

Larry Hettick: Thank you, Patte. Let's go ahead and get right into the questions. Jim, for those in our audience who are not familiar with WebRTC, can you please provide us a short summary of what the technology is all about?

Jim Donovan: Sure, Larry. Think of WebRTC as a new technology and set of standards for adding real-time communication and collaboration experiences to not only web pages but also native mobile applications as well as a whole host of other devices, including set top boxes, telehealth kiosks and a number of other interesting new and innovative platforms. So you'll find that WebRTC is growing quite popular in terms of there are over a billion WebRTC-capable endpoints in the market today. And if you have a chance to review Webtorials recent survey and their [WebRTC State-of-the Market report](#),

you'll find that over 40% of the respondents are using or are planning to use WebRTC in the next 12 months.

Larry Hettick: What are some of the use cases for WebRTC in a service provider environment?

Jim Donovan: You're starting to see WebRTC technology powering a number of new and innovative collaboration applications, or even as a media stack within existing applications. One of the things about WebRTC is the fact that it's plug-in free. So some of the pain associated with downloading thick clients on different types of devices essentially goes away when you're running a WebRTC based application within a browser.

Larry Hettick: Interesting, so how might an enterprise user use WebRTC?

Jim Donovan: You're starting to see the enterprise use WebRTC in the context of Unified Communications as kind of a complement to what they might be doing with thick client functionality provided by one of the existing unified communications vendors. And then you're also starting to see new communication experiences show up in existing business applications. So if you're looking at CRM or ERP applications where you want to have some form of communication experience, whether it's voice or video or co-browsing, you're seeing WebRTC powering a lot of the new and innovative features in those types of business applications.

Larry Hettick: One of the things that we found in our [Webtorials State-of-the-Market report](#) on WebRTC is a real high interest for contact centers. Can you talk a little bit about how WebRTC might be used for a contact center?

Jim Donovan: Certainly. So a big role for WebRTC in the contact center is really about enhancing customer experience. We've all seen the Amazon Mayday commercials. And while they don't explicitly talk about WebRTC technology, a number of the customer experience benefits associated with the Mayday experience really is coming through the use of WebRTC technology. So it goes well beyond just the traditional voice and video. It's also a technology that can help power co-browsing and the whole multichannel aspect of helping contact centers engage their customers. Another dimension is agent mobility in terms of how WebRTC, given its flexibility in terms of how it can be used in browsers and mobile applications, gives you some additional flexibility on the agent desktop side as well.

Larry Hettick: So those are some great use cases for WebRTC. What might you suggest are some of the challenges associated with deploying WebRTC today?

- Jim Donovan: Oracle is fortunate to have thousands of enterprise, contact center and service provider customers. And if you look across that very diverse customer landscape, we do see some commonality in the challenges of working with WebRTC, because we've been working in this area for a couple of years at this point with WebRTC and some of its preceding web-based RTC technology choices. I would kind of put the challenges in three major categories. In terms of reliability; how do you ensure WebRTC provides the same sort of reliability that people might be used to in traditional PSTN today; interoperability, when you look at all the different browser types and mobile devices and backends that WebRTC solutions might need to plug into; and then security in terms of we've done a very good job of securing PSTN and voice over IP applications over the years and then you have to make sure when you introduce a new technology to power communication experiences that you're not taking any steps backwards with regards to communication security.
- Larry Hettick: Can you talk kind of at a high level about what Oracle's role is and how you're involved in WebRTC?
- Jim Donovan: Certainly. We see our role or our mission when it comes to WebRTC as both a provider of solutions to help service providers, enterprises and contact centers leverage WebRTC technology as part of new service offerings. And certainly in a contact center we talk about how we can help contact centers leverage the technology for multichannel use cases. But, you know, certainly Oracle is also a provider of business applications. And we have a role and responsibility to ensure that these business applications that are looking to add new communication experiences to them that we want to help our customers take those business applications and leverage WebRTC as a means of making them more rich from a feature and a collaboration perspective.
- Larry Hettick: And that's good for your role generally as a company. Can you talk a little bit about your specific WebRTC solution?
- Jim Donovan: Certainly. We released a platform last year known as the Oracle WebRTC Session Controller. The platform is designed to enable reliable, interoperable and secure enterprise and service provider WebRTC deployments. It helped transform contact center, unified communications and communication service applications. So for all the work that Oracle has done over the years with all of these customer segments—service providers, enterprises and contact centers—we want to be the solution provider that helps our customers leverage WebRTC technology and derive all the benefits that have been spoken of when it comes to the power of WebRTC in the context of transforming communication experiences.

Larry Hettick: Great, and now that you've actually deployed your solution I want to offer up a few challenges that we've found may need to be addressed in deploying WebRTC. In particular I'd like to ask you how do you at Oracle address the issue of reliability?

Jim Donovan: Sure. We've all heard the five-nines of reliability in terms of that kind of being the gold standard for PSTN. And there have been a number of things that have been done with voice over IP over the years to try to approach that level of high availability in various service offerings. So Oracle has taken a number of innovative approaches to ensure that WebRTC-based communication experiences can reach that same level of gold standard. And one of the more innovative examples is the work we're doing in rehydration and session continuity.

What that really means is that when you think about working in a browser environment, and we all like to multitask and one day you may be on the tab that has your communication application open. The next time you might be on a tab where you're doing some shopping, for example, and you tend to hop around. And maybe something happens with the browser and you have to restart it. Or maybe you're moving from your desktop in your office and you're hopping in your car and you want to have that conference call carried along. So you really have to ensure that the session continuity is in place so that in the event that you're hopping around with browser tabs or the browser crashes or you're transitioning between devices, that you can maintain that session state.

And this is really what rehydration's all about so rehydration ensures that when you return to that communication session it's there. It's not hung up. It's essentially placed on hold so that you can return to it from whatever device or browser tab you may be coming into. So that's a very important basic feature in enhancing reliability.

Certainly everything we do, given our DNA, everything's about stateful high availability. For those of us in the audience that have worked with Oracle products in the past, you recognize the importance of having stateful signaling and media fail over capabilities. So the same level of fault tolerance and high availability that we've provided our customers over the years in the context of voice over IP support we're looking to carry forward in terms of what we're doing with WebRTC.

Larry Hettick: You and I have been around for quite a while in this business and we know that interoperability is always a challenge. Can you speak a little bit about how you at Oracle address interoperability challenges?

Jim Donovan: That's a great point because interoperability has a number of different dimensions. And let's first look at the web side of interoperability. WebRTC, like all good sets of standards, are subject to interpretation. And in the case of WebRTC, you have Chrome and Firefox taking certain approaches and Microsoft's heading in a different direction. I think there's still some uncertainty about the direction that Apple Safari has taken. So in order for us to deliver communication experience solutions to our customers we have to take that pain away from them.

If you look at what Oracle is doing in our software development kit for our WebRTC solution, we make it possible to take any type of browser and any type of mobile device type and ensure that it can work in a WebRTC application environment. We take that pain point away for our customers. And then certainly on the backend system side of things, because we recognize that in some scenarios it might be a web to web, you know, when one WebRTC application talks to another WebRTC application, but when you look at the billions of dollars of telecom infrastructure investment that have been made over the past few decades, that infrastructure is not going away. You have to ensure that the new world, that these WebRTC applications, work very well with the existing SIP and other types of protocols that are used in the backend systems today. Our SDK is really intended to handle the diversity on the browser and mobile endpoint type, and then our WebRTC session controller infrastructure platform is really intended to ensure that all these new and innovative WebRTC applications can talk to whatever might exist on the backend system environment.

Larry Hettick: Excellent, so another issue that always pops up with any new technology, particularly for collaboration, is security. Can you talk about how you solved the security challenges?

Jim Donovan: Yes, and that's a very important one for us because we recognize that when we're trying to work with our customers to introduce new and innovative WebRTC based applications, the security is always a challenge that one must take on with any new service or application. Security has a number of different dimensions. I mean certainly the authentication piece of it is very important because, for those of you that have worked with SIP based voice over IP applications in the past there are certain methods by which you authenticate an application or an endpoint in that environment. For customers that want to use the existing voice over IP or unified communications authentication methods, we can certainly accommodate that.

But when you think about web applications in general, we all use web applications that will let you authenticate using your Facebook credentials or your LinkedIn credentials or maybe if you're on a banking site that you want

to be able to log into that banking site and once you're logged in you shouldn't have to be authenticated again in some scenarios. We have to have a very flexible authentication mechanism that allows you to mediate between different types of authentication mechanisms. That's a big part of what we're doing when it comes to authentication in a security area.

And then certainly Oracle has a long heritage of working in the session border controller space. And certainly for those of you who are familiar with Oracle's purchase of Acme Packet last year, can certainly get that piece of it. When you think about Oracle's solution you want to think about having very advanced capabilities in the area of authentication and some of the web infrastructure side of things, but you also want to think of it as having a long heritage of session border controller work and where we have that capability embedded in our platform. So it's really the best of both worlds in terms of session border controller technology combined with some fairly advanced web handling capabilities from Oracle as well.

Larry Hettick: Now we've talked about reliability and interoperability and security. What are some of the other challenges you think exist today with WebRTC and how do you plan to address those?

Jim Donovan: Certainly the challenge of dealing with different browsers and mobile operating systems; that's not going to go away. Because while our SDK does mitigate that it does end up being a moving target because, the browser vendors will always be adding new functionality; the mobile operating systems will always be adding new functionality. When you start seeing WebRTC show up in set top box and other types of devices that's going to be another twist on things. So that's kind of a moving target and certainly Oracle's mission with our platform is to address those challenges as they come up.

Look at the data channel. Many people are familiar with WebRTC in the context of what it can do from a voice and video perspective. And some of the challenges of dealing with voice and video are not that different from dealing with those challenges in a SIP-based voice over IP or video over IP context. Data channel is an opportunity, but with all good opportunities, challenges come with them as well. So data channel is basically a bidirectional pipe between two endpoints. And you have security challenges in that context. You have challenges of what protocol do I want to carry over that data channel. So we are still learning a lot from our customers about what they want to do with that capability and it's really driving a lot of the R&D on our side from a forward looking perspective.

Larry Hettick: Good, and so one kind of closing question before we wrap it up today. Do you feel that WebRTC, as a technology, is ready for deployment? Is it ready today?

Jim Donovan: I do. From where I sit in Oracle, my team has been fortunate to be working with the technology for a number of years and watching how the standards evolved. And we've had some good success in deploying our solutions with some fairly well-known applications so far. And I think that the initial deployments were typically early adopter phase and I think the early adopters have paved the way for a large number of lab pilots over the course of 2014.

I think as we get into the second half of 2014 you're going to start to see additional deployments across the service provider enterprise and contact center landscape. And really when you think about it, as we said in the beginning, in terms of the [Webtorials survey](#) shows that over 40% of your respondents are starting to work with WebRTC or plan to do so in the next 12 months. That kind of backs up what I was saying earlier about 2014 and 2015 being the years of decent deployments of WebRTC. And certainly as we move into 2015 I think you'll see broader acceptance of WebRTC. I guess in some ways we'll be able to determine its true success when you think about people won't be talking about WebRTC; they'll be talking about the communication experiences they power. Because at the end of the day, WebRTC by itself is not a solution. It's a technology and it's really the mission of companies like Oracle to ensure that technology can be embedded in solutions to help our customers bring new communication experiences to a variety of enterprise, service provider and contact center use cases.

Larry Hettick: Great. Thank you, Jim, for being so both insightful and also offering so much information in a short amount of time. I really appreciate it. And with that, Patte, I'll turn it back to you.

Patte Johnson: Thank you both, Jim and Larry. This was a discussion filled with great information regarding WebRTC and Oracle's solutions. We do encourage our listeners to add [comments or questions](#) regarding this discussion at [Webtorials.com](#). Thanks for listening.

The discussion has been edited slightly for clarity and length.

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