
HELSINKI – RSSAC Public Session
Monday, June 27, 2016 – 10:45 to 11:30 EEST
ICANN56 | Helsinki, Finland

UNIDENTIFIED MALE: It is 10:45. This is the RSSAC Public Session in Helsinki Hall.

BRAD VERD: We're just waiting for our official star time. All right. Let's get going.

I'm Brad Verd, co-Chair of the RSSAC Committee. To my left here is Tripti. We're going to give you bunch of updates today but I'm going to give it to Tripti first who will start off and then I'll jump in later.

TRIPTI SINHA: Good morning. I'm Tripti Sinha, co-Chair of RSSAC and I'll start with a very quick and brief overview of RSSAC and our activities. I'll start with the overview, turn it over to Duane who will give you an update on some current work that we're doing with regard to metrics, and then over to Brad who will give you an update on workshops that the RSSAC conducts. And then I'll conclude with some other current work that's happening and then any questions that you may have.

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So, the RSSAC is essentially an Advisory Committee that was assembled some years ago to advise the RSSAC Board. We have a very well-defined scope and it is essentially to advise the ICANN community and the Board on matters regarding the operation, administration, security, and the integrity of the Internet's Root Service System. So it's a very tightly and well defined scope. Moving on.

It's comprised of members of all the 12 operators who operate the different root servers and we have primary representatives as well as alternates and liaisons. I like to pause here and those of you who are members of RSSAC in the audience, if you could please stand and identify yourselves. Okay. So these are members of RSSAC. Thank you very much.

The RSSAC also looks at an extension of itself. This body that we rely on to do lots of work and these are the volunteer organizations, they're subject matter experts on DNS-related items and they are appointed by the RSSAC.

This membership group, the Caucus, consists of currently 74 technical experts and 47%, roughly half of them are not from the root server operator organizations and they submit a public statement of interest and they do get credit for the work they do in the documents that are published.

The purpose is to bring together this community of experts who have broad expertise and broad spectrum of skillsets and there's transparency on who does what and we try to bring various degrees of opinions and skills to the table. We define work. There deadlines associated with the work, we scope it and there's a deliverable.

We welcome memberships so please send an e-mail to rssac-membership@icann.org and submit a statement of interest and your background and the Membership Committee will look into it, will consider your membership to the Caucus.

Our next meeting will be at the ITF meeting in Berlin on the 17th of July and this was decided at the Yokohama meeting when the ITF met there, that we would like to meet at every alternate ITF meeting. The next one is in Berlin.

We've done two recent works that we'd like to talk about. Duane is going go into details on RSSAC's 002 and this is measurement document that talks about metrics that the operators look at.

We also run what's called workshops and this is highly concentrated time when we look at topics that delve into and do a deeper dive, typically of an evolutionary nature. We have two such workshops and we just published our report on the second workshop. It was released on the 22nd of June, just a few days ago.

I'm going to turn it over to Duane Wessels who'll give you an update on RSSAC 002 version.

DUANE WESSELS:

Thanks, Tripti. So, yeah. This is the third revision of RSSAC 002 which describes measurements that each of our operators should make and publish. This helps meet one of the requirements of the service expectations. It provides important data for the ongoing expansion of the root zone.

A lot of these updates in version 3 were based on experience that people had gained in implementing the measurements on their own services and there's also some clarifications in the document regarding its scope.

This is the list of measurements defined by RSSAC 002. This list has basically not changed since version 1, so it's these six metrics. And if you go to the next slide, I'll describe what some of the changes are.

One of those metrics was to calculate latency and distribution of the root zone and previously that is something that each root server was asked to do and it was agreed that didn't perhaps – oh I'm sorry, I'm confusing things here. The latency calculation is still something that every letter is doing but the method of that calculation has been changed to a strict 95th percentile.

Previously it was something a little bit more confusing so that's the change there.

The zone size is also something that previously every operator was doing and going forward now, this is something that will be reported only by the Root Zone Maintainer. It was decided that it make sense for only the Root Zone Maintainer to do that.

A lot of the changes had to do with clarifying that when measurements are taken on responses that it should only be responses from the server. It turns out that root servers from time to time receive DNS responses sent to them which really should not be happening but for whatever reason that does happen. So that clarification was made for a couple of the metrics. We clarified some of the reasons for including responses in the traffic volume metric and also explained why it may be the case that response volumes maybe a little bit different than query volumes in certain situations.

Since we changed the meaning of some these metrics, we now felt that necessary to add a version number to the YAML documents that are output from our RSSAC 002 so that the consumer of the data can tell which version of the spec it was based on.

And lastly, we added sort of a naming scheme that would allow operators to include their own custom metrics should they so choose.

Here is a table of the implementation status so far. We have data from 10 of the 13 letters so far and three of them still coming soon. So if you're interested in this data, you can go to the root-servers.org webpage and down at the bottom you see an area where each Root Server Operator is listed. And if you click on their letter and then look for the box that's highlighted there in red, there would be a button that says "RSSAC" and clicking on that will take you their metric's page.

BRAD VERD: Duane.

DUANE WESSELS: Yeah.

BRAD VERD: Really quick. Just to clarify, it's root-servers.org. It's not to send you to a different place. The webpage is root-servers.org.

DUANE WESSELS: Sorry. Yeah. Okay. Well I need to go to another meeting. Can we take questions on this now if anyone has questions so that I can skip out?

BRAD VERD: Are there any questions around the update to 002 version 3 and metrics? No? Thank you, Duane.

DUANE WESSELS: Thanks.

BRAD VERD: All right. Workshop. So as Tripti stated, we occasionally like to lock everybody in a room together, all the RSSAC, the formal committee and we don't let them out until we get a number of agenda items done. We just completed back in May our second workshop and I'm going to run through what transpired and what some of the action items or actions that we are taking from that workshop.

I will add that this is a workshop report. This is not formal advice that was given to the Board. This is just a report of the discussions that took place in the workshop between the RSSAC Committee members, so just to make that very clear.

Workshop 2 we had back in May and we got everybody together and locked them in a room for a couple of days. We had a very full agenda. Most of it was based on output from our Workshop 1 that happened last year. Again, both Workshop 1 and Workshop 2 reports are on the RSSAC webpage so feel free to go there to get the details from 1 and 2.

Obviously, we formed a planning committee, worked up the agenda. One of the things we did learn from this workshop is that two days isn't enough so I think we're expanding the future workshops to three.

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Here are the topics that we broke. We broke them up into three buckets: architecture, evolution, and reinventing RSSAC. I'll cover each one of these in a bit of detail here.

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Architecture – we had a number of different questions that fell in this category. First and foremost is the DNS Root Servers and how reliable it's been over the years and the question has been raised, does the failure of any single operator pose any threat to the system as a whole?

We, the formal committee, worked up a – we identified a work party. Work is currently underway on this document. Again, the

workshop report is not the formal advice to the Board. Any of the output would be.

The formal committee again created this work party to start this document. It's well underway and it is going to be – if we were working on it – now, in the near future and it should be going to the Caucus shortly for review.

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Continuing in the architecture bucket – another question that has been raised that we want to talk through as a group is the benefits of adding or removing authoritative name servers from the root zone. The consensus in the room was that there was no technical need for more root zone authoritative name servers. And we did rephrase this as a different question that is being written up as a statement of work and being sent to the Caucus and that was more around latency from the client to the Root Zone Servers and what is acceptable latency?

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Again, you can see architecture filled a lot of our time in this workshop. This discussion was around the commitment of all the Root Server Operators. There is a statement that is nearing completion. We plan to have it published on Thursday in which all the operators commit to serving the IANA Root, and again

that should be coming out here very shortly and we can make this very formal.

All right, next bucket, the evolution. This one was around the technical metrics that define the expectations around a Root Server Operator. We formed, again, another work party out of the formal committee. Work is well underway on this document to find the technical expectations. I should say more detailed technical expectations, something that will fill in, really strengthen what is already in RSSAC 001 and we're raising the bar or defining what that bar should be out of this work party. So that is currently underway and we will be going to the Caucus shortly.

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The last topic around reinventing RSSAC. Historically, there's been a bit of confusion between RSSAC and root server operations. RSSAC – again, you saw in the beginning of this meeting – our scope is very narrow, it's very well defined and there's always a number of questions around root server operations which is really not in the role or the purview of RSSAC. But we thought it was important that RSSAC take on that gap that was missing between the ICANN Board and the community and the Root Server Operators.

So we've all agreed to be the window into root server operations, so if there are questions or concerns about the service, bring them to RSSAC and we will track down the right group or organization to answer it. If you have questions around specific letters and don't know how to reach them, please come to RSSAC. We will point you in the right direction and get you to the people you need to get answers to your questions.

But this was something that very vague in the past that hopefully by making this, by memorializing this and formalizing this that we can alleviate some that confusion going forward. All right.

TRIPTI SINHA:

Thank, Brad. So just a slide or two on the current work that the RSSAC is working on.

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This actually goes back to Workshop 1, so that was the first of the current two workshops that we've had and future ones that are coming in. We decided to look at just the history of the Root Server System. The RSSAC got together, put together some very good content that's come together as very nice document and it talks about the chronology of the system right back to how it organically grew to what it is today and it describes the history

of each of the different organizations and how they formed this collective group that offers this service. So the document is in its final stages and we should be publishing it soon.

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This is currently a Caucus work party that is looking at how we actually name the root service themselves and the entire system has evolved over time. So we're looking taking a step back and looking at what is appropriate and what should be the path going forward. That work is also very close to completion and a report should be published soon.

This was work that's been driven by a Caucus work party. This is an example of how we use the Caucus and the previous document that I talked about was driven by the RSSAC itself.

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I believe that brings us to the very last slide which still is points us to our information page which is our main page on the ICANN website and the first URL points to that. The second takes you to where our publications live. And if you'd like to join the RSSAC Caucus, please send an e-mail to the rrsac-membership@icann.org and submit a statement of interest and your background and it'll come into consideration.

I believe that is the last slide. With that I open the floor for questions.

BRAD VERD: Any questions?

UNIDENTIFIED MALE: [inaudible] from India. My question is – I am new to this meeting –there are 12 operator, 13 root servers, long back history. Is there any option to give the 13 operator to create and give the chance to 13 [A and G] run by the Verisign? So anyone can be given to any organization in anywhere in the world?

BRAD VERD: As I stated, the workshop that RSSAC held started to ask a number of these different questions and the output from Workshop 1 stated that there needs to be a defined process for identifying potential Root Server Operators, and there isn't one today, and that RSSAC should be part of the yet to be the determined process. Leading into that I think you have to define a bunch of steps getting up to it, which is some of those things that I covered of like defining how tall the bar is or how high the bar is for a potential Root Server Operator.

The other question that was asked about: do we need more delegations in the NSSET? That was another question that was asked and all of those are work is work and topics that I think need to be answered well in advance of any changes to the current delegation set.

So I think we're on the track, we're making progress but this is something that we want to be very diligent about, very safe, be to not disrupt those security and instability and resiliency of the Internet or the root and I think we're starting to ask those very tough questions and address them. To answer your questions specifically, we don't have an answer for you right now because like I said, we've got to answer all these other questions first.

UNIDENTIFIED MALE:

This [Davie] from Beijing Internet Institute. Firstly, I want to thank for all you effort and work to make the RSSAC and to be more transparent and more involvement, engagement for the people.

And secondly, I would also like to ask a question, maybe a difficult question that as you mentioned, the one slide said that there's no technical need for adding more assertive servers just as the former questions. I saw the process is that you, the group of people, I mean the operator setup workshop. The people in the room at this side, there is no technical need but there's not

broadened consensus. And if there is other more public sessions like this one and people can express really their comments on some issues like that, I think there will be more transparency and more [inaudible] for the community.

BRAD VERD:

I would add, actually I'd go one step further and say that rather than just providing comments which are always welcome, you can join the Caucus and be part of the work. That is coming up with these answers to these very tough questions. That would be my recommendation.

TRIPTI SINHA:

To add, from the workshop we came up with numerous statements of work which are going to be investigating these problems further. The report was just published and you should probably read that if you haven't already.

UNIDENTIFIED MALE:

Yes. Thank you. Additional notes, I'm already joined the Caucus and I pay much attention to the activities. So I hope that there are more activities and more discussions are public and involve more diversities, right?

TRIPTI SINHA: Absolutely. Yeah.

UNIDENTIFIED MALE: Thank you.

BRAD VERD: Suzanne, do you want to add...? Suzanne is a member of the RSSAC and I think she wants to add some commentary.

SUZANNE WOOLF: Yeah, if you don't mind. The thing that I would add in support of my colleagues here, I've served as RSSAC liaison to the ICANN Board and I've been in a bunch of roles in the community for a long time so I've seen this question evolving over a very long period of time now. And I think the important thing to recall about RSSAC and the RSSAC perspective is that RSSAC's remit is technical so that's why RSSAC is taking primarily a technical view on these components of answering this question.

In the larger sense, I believe that it's a community-wide set of questions. RSSAC can provide a technical perspective and operational perspective to answering it but I believe that part of what we're here is to say is that it's a larger set of questions that requires a wider community discussion that I think everyone should be prepared to be part of.

BRAD VERD: Thank you, Suzanne.

NING KONG: Hi! My name is Ning. I come from CNNIC. First I want to share one information. CNNIC maintain IFG our root mirror. Just one days ago, last Sunday in Beijing, we found that our mirror had been hacked by the DDoS and each mirror have been tagged – the volume is more than 10 gigabytes and the time lasted for two hours. So my first question in that for other mirror maintainers, do you have the same DDoS attack in the same time or not?

BRAD VERD: Again, these are very operational questions and not RSSAC-specific. This goes to the topic I talked about earlier that there's a lot of confusion between root operations and RSSAC and our remit here.

That's all right. I'd call that out. I'd say that if you want to have an operational discussion with some of the root operators, I'm sure they'd be happy to have a discussion with you but probably we shouldn't do it here.

NING KONG: Okay. Yeah. I'm sorry. So my second question that, is there any other mailing list or platform that we can share such kind of operational information not within the RSSAC? Is there any other...?

BRAD VERD: Where we agreed to be the window into root operations if there are questions, I will say that there was an attack. The root operators are working on a statement and should have that out on their public webpage, root-servers.org, in the next couple of days with the details around what took place a couple of days ago.

NING KONG: Yeah. Okay. Thank you. And my last question. My last question is about that if I found some kind of new things maybe we should be researched, how can I raise the issue? For example, if I think maybe it make sense that we research maybe we can optimize the physical placement of the root mirror in [word], so how can I [raise] the issues? And is there some channel?

TRIPTI SINHA: Go ahead. First, are you a member of Caucus? If you're not, I highly encourage you to become a member of Caucus.

NING KONG: Okay, yeah.

TRIPTI SINHA: And then go ahead and forward your questions to us because the RSSAC is contained in the Caucus and we will take that under advisement.

BRAD VERD: I will add that, your question is already underway. The work is currently underway and being sent to the Caucus here very shortly.

I will add that, when you have questions or you wanted to research on something, one of the topics at the Caucus meeting that is being scheduled in Berlin next month is what are the things that RSSAC and the Caucus should be looking at and that'll be one of the topics that you bring up new ideas and we talk them through and identify work going forward. Again, going back to the Caucus, that is the conduit end.

NING KONG: So the Caucus meeting provide remote attend?

BRAD VERD: Yes.

NING KONG: Okay. Thank you.

UNIDENTIFIED MALE: [inaudible] from [NICC]. This is related to the measurement tool in the presentation. I observed three operators have not published their data they are collecting. Do we have some time frame by when they will be publishing those data?

TRIPTI SINHA: It was on the slide.

BRAD VERD: It was on the slide.

TRIPTI SINHA: Thank you for scrolling back. You see F and G – F is Q4 of 2016, G is Q3 and I is Q3.

UNIDENTIFIED MALE: Okay. Thank you.

TRIPTI SINHA: Yup.

WES HARDAKER: Hi! Wes Hardaker. Just for me, purely I'm a scientific kind of person, more data is good so if anybody wants to do an evaluation of any sort of numbers in the world, regardless of whether it's more root letter or whatever, nobody's going to turn down that information and the Caucus is sort of the right place to join and to become a part of it.

A couple of realizations though. One, members of the Caucus can propose work and one of the things that there has to be agreement among everybody that that work should be done, but anybody can propose work that's in the Caucus. But more importantly, remember that RSSAC is an advisory [pottery]. We do not produce. This is the way the world's going to work. We do not state new policy. All we do in RSSAC is advice the Board and advice the ICANN community. We don't make rules. We don't make regulations. All we do is produce technical stuff and that technical body of work is done inside the Caucus. So that's absolutely the right place for a lot of these questions to get answered.

UNIDENTIFIED MALE: Sorry. [Davie] again. I found that there are some missing parties that [inaudible] as RSSAC can also as a Caucus. The expert should demonstrate to [do] some technical fact, right? And also give some documents, some important information and to be public.

I found there's missing party that there's no policy developing part for them put there some topics. [Really there's not only] technical needs but there's also the need non-publicly. So is there any trained or any are working on for the policy developing right to the root server operation?

TRIPTI SINHA: So you're saying we're currently technically focused. Is there a possibility of us articulating policy?

UNIDENTIFIED MALE: Yeah.

TRIPTI SINHA: So you are correct. We are purely advisory in nature and advisory from a technical angle. We'll take that as input and see what we can do with it. But right now we are restricted to being an advisory body.

UNIDENTIFIED MALE: Yeah. I ask this question because we noticed that there are technical discussions on the root zone increment, right?

TRIPTI SINHA: Correct.

UNIDENTIFIED MALE: We need to add more TLDs for example, it's a very hot topic in [inaudible]. There's no technical need for that. Actually, for the [inaudible] but it's the policy requirement. Just as a background for my question. Thank you.

BRAD VERD: I think just going to add on a bit, I think any of the policy decisions that might be done in the future would rely on a good foundation, a good technical foundation which I think it is imperative upon us to make sure exists before policy is implemented and that is what we're trying to accomplish right now.

Any further questions?

TRIPTI SINHA: Well, thank you for attending. Feel free to reach out to Brad or to me or any member of RSSAC. I think you know who they are. Thank you very much.

BRAD VERD: Again, thank you.

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