

Note: Travel support is provided to enable you to attend RSSAC meetings and expand your knowledge base so that your technical expertise can contribute to output from the RSSAC Caucus.

Name: Paul N Muchene

Trip: IETF 106, Singapore

Trip Dates: 15th - 23rd November 2019

Report Date: 20th December 2019

1. Describe the purpose(s) and outcome(s) of the trip.

My attendance at the IETF was primarily to complete the initial work on the root resolver testbed. This entailed identifying bugs in the code and conducting tests to ensure that the software was working optimally. In conjunction with ICANN staff and RSSAC caucus member Paul Hoffman, we were able to achieve these goals during the week of IETF 106. The resolver testbed software is now ready and all that's remaining is conducting a range tests that would be of interest to the RSSAC.

2. Describe the details of your attendance and activities, including sessions attended, presentations given, documents you may be working on, or other specific contributions (DNS and RSS related sessions in particular).

11/17/2019 (15:30 – 17:00 local time): Attended the RSSAC meeting and raised a question on the justification for arriving at a formula used to calculate the minimal availability threshold for the root servers.

11/18/2019 (13:30 – 15:00 local time): Attended the ABCD (Application Behaviour Considering DNS) my first BOF in the IETF and commented on the fact that their proposed objectives were too broad: <https://youtu.be/J6315Ax51RE?t=4567>

11/19/2019 (17:10-18:40 local time): Participated in the Quantum Internet Proposed Research Group (qirg) session and raised a question on `draft-dahlberg-11-quantum-03` (The link layer service in a quantum internet) specifically on why the number field for entangled pairs was set to 16 bits. See the YouTube video here: <https://youtu.be/yJaiv1p0D2w?t=3258>

11/22/2019 (10:00 – 12:00 local time): At the DNS Private Exchange (dprive) working group session to garner on the status of doh (DNS over HTTPS) implementations. I attended as a silent observer as I've not been that active in this working group.

When not attending IETF working group sessions, I was busy working with Paul Hoffman on the root resolver testbed software.

3. Explain specific plans for follow-up activities in the RSSAC Caucus to enhance and continue the impact of the trip.

My work has already been cut out, I'd like to conduct a series of tests especially on the behaviour of resolvers during priming and re-priming while querying the root servers. After conducting various tests, I'd like share my test results on RSSAC caucus mailing list and hope they'll lead to a discussion on resolver software behaviour when subjected to certain conditions and parameters.