

2020-December-8: Minutes NRO EC Teleconference

Minutes

Date: Tuesday, 8 December 2020, 11 am UTC.

Attendees

Executive Council:

Oscar Robles (OR)	LACNIC	Chair
John Curran	ARIN	Vice-Chair
Paul Wilson (PW)	APNIC	Treasurer
Eddy Kayihura (EK)	AFRINIC	
Hans Petter Holen (HPH)	RIPE NCC	

Observers:

Subramanian Moonesamy (SM)	AFRINIC
Pablo Hinojosa (PH)	APNIC
Carlos Martinez (CM)	LACNIC
Eduardo Jiménez (EJ)	LACNIC
Chris Buckridge (CB)	RIPE NCC
Athina Fragkouli(AF)	RIPE NCC

Secretariat:

German Valdez (GV)	NRO Secretariat
Laureana Pavón	Minutes

Agenda

1. Welcome^[11:11]_[SEP:SEP]
2. Agenda Review
3. Session with Legal Team
4. NRO MoU 2020
5. Timeline NRO strategic planning Process | Timeline version 0.5
6. IETF Endowment
7. SSAC work on routing security
8. Emergency Back End Registry Operator
9. Coordination Groups Reports/Consultations
 1. CCG | 2021 Work Plan
 2. Secretariat
 1. 2021 Preparation
10. Open Actions Review
11. Minutes Review
 1. 2020-November-17: Minutes NRO EC Teleconference- DRAFT (Pending, AFRINIC, APNIC, ARIN, LACNIC, RIPE NCC)
 2. 2020-October-13: Minutes NRO EC Teleconference- DRAFT (Pending, ARIN, LACNIC)
 3. 2020-September-22: Minutes NRO EC Teleconference- DRAFT (Pending, ARIN)
12. Next Meetings
 1. Tuesday 19 January 2021 (NRO EC to re- confirm availability)
 2. Tuesday 16 February 2021
 3. Tuesday 17 March 2021
13. AOB
14. Adjourn

Resolutions

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New Action Items

The following action Items were assigned during this meeting:

New Action Item 20201208-1: OR and PW to send a note to the SSAC requesting a point of contact/liaison role for Geoff Houston for their project on routing security, allowing him to share relevant information directly between the NRO and the SSAC.

Minutes

1. Welcome

OR welcomed everybody and opened the NRO EC meeting at 11:01 AM UTC

2. Agenda Review

No items were added to the agenda at this point.

3. Session with Legal Team

OR introduced the topic saying that the legal team had asked for input on the NRO MoU structure, motivations and anything else the EC could share with them. He then invited questions from the legal team.

AF said they hadn't had time to discuss this among the legal team, that they wanted to hear more from the EC regarding this document. She said the latest draft included many changes compared to the current version, e.g. changes in the structure and additions.

AF asked two questions: 1) what is the purpose of this new MoU? and 2) what is the definition of Internet Number Registry System in the context of the MoU?

Regarding the first question, AF said that in a previous call they had talked about having an agreement that would gather all the commitments between the RIRs. She wondered if these commitments would be part of the NRO structure, i.e. whether the document would still be NRO-focused or commitment-focused. She then said that the document sometimes refers to the NRO and others to the RIRs and asked whether there was a purpose or meaning for this.

PW said that, originally, they had been discussing a new document (the Joint Project Agreement) which involved some agreed commitments among the RIRs about their global commitment to the Internet Registry System. He said that various documents had been put together at different times which included different sets of terminology, etc. Now that a new proposed agreement was under consideration, it was a good opportunity to put what the NRO is and the NRO's core agreements and commitments in the form of a revised MoU. In his opinion, inconsistencies in terminology are probably accidental due to the fact that documentation was put together by several people.

OR added that the commitments were introduced to provide a structure and to clarify some of the NRO's commitments in the MoU; that the change in structure was simply to provide a more structured way of drafting the document; that the MoU was focused on the NRO structure, as the original document; and that most of the paragraphs were related to the NRO because that was the

original purpose. He added that any inconsistencies in terminology were not on purpose and that the EC would appreciate if the legal team would identify any inconsistencies that the EC might miss.

Regarding the purpose of the structure, AF asked whether the MoU was still going to be NRO-focused and asked whether the legal team should feel free to make changes in the structure that made sense from a legal point of view.

OR replied affirmatively.

Regarding her second question, AF noted that the term Internet Number Registry System (INRS) hadn't been defined in the draft, so she had trouble understanding exactly what it referred to. She said that, while RFC 7020 defines this INRS, it refers to the whole hierarchy from the IANA to the RIRs, yet the draft focuses on the public registry and the RIRs, not on the whole system. Her question was whether they would stick to the term as it is defined in the RFC or if they were going to define it in the document.

JC said that the five RIRs provide one effective, unified registry running as five independent pieces, and this poses certain challenges, the first of which was determining whether the IANA was part of that. He added that, historically, the RIRs had operated separately from the IANA, with the IANA handling the issuance of numbers for global policy and then the RIRs handling the administration with the community.

JC continued by saying that one could either say that the Internet Number Registry System was just what the five RIRs do together or what they do together including their directions to the IANA and the IANA's role as the Internet route service operator. He concluded by saying that if legally they needed a tighter definition, that was also appropriate, but that INRS was a simple way of referencing what they do collectively.

PW agreed that while the definition of INRS is missing from the document, what the document does is to state that there IS an INRS, which the RIRs all serve and agree to support. He agreed that if we are to keep the term "INRS", then it should be defined.

AF then noted that in RIPE NCC they make a clear distinction between the database and the registry (i.e. the non-publicly available information they have about their resource holders), information they don't necessarily show in the database. She asked whether here they were only talking about the public whois or also about this information.

JC observed that, if a part of the RIR system fails, part of the information is absolutely in the interest of the community to preserve, maintain and transfer (e.g. who was issued resources, which resources have been issued). In reply to AF's question, he said that this could be information of public interest or proprietary business interest of the IRR.

AF asked if they might keep to the public information, JC agreed and said they could revisit this in the future. PW also agreed.

Seeing that there was no specific preference for the term, AF asked if it would be OK to use a different term (not INRS) to avoid confusion.

JC agreed.

To conclude, AF asked if there was a specific time frame the legal team should consider.

OR said they hadn't decided that time frame yet and that the EC would let the legal team know as soon as they had an answer to that question.

PW suggested that the EC could try to come back with an answer for the February meeting.

AF asked whether the EC would be expecting a final version from the legal team.

OR replied that they hadn't finalized the document, but that they wanted to have a first round of feedback from the legal team, adding that it would probably be more relevant to have a first review by the legal team of the structure, inconsistencies, anything that might create problems or loopholes, rather than the specific wording.

JC said the EC should put their work on hold and let the legal team do their work. Then the EC could use the legal team's feedback and combine it with their own work.

PW noted that they had also spoken about having a planning phase in the first half of 2021 and that this would be very useful input.

AF said the legal team would be back with their first comments and further questions in February.

OR then asked AF about the two open two action items for the legal team from their 22 September meeting.

AF replied that she planned to finalize Legal Team Action Item 20200921-2 by the end of the year. She said she didn't have any updates about the other open action item.

OR asked AF whether they needed any help of if it was simply a matter of time.

AF replied that the legal team needed to discuss this internally and would let OR know if they needed anything.

OR thanked the legal team.

4. NRO MoU 2020

OR said there had been no changes, so the topic was not discussed. He asked GV to move this item to the February meeting.

5. Timeline NRO strategic planning Process

OR said GV had shared a new version of this document according to which the exercise finalized by mid-2021. He added that it required the EC to make some decisions as soon as possible, as some of them were very time sensitive.

EK observed that the timeline starts in November and includes some activities past 20 December. In his opinion, they would need to go in a more realistic direction, as those activities might not be attended properly in December and January.

OR said that the first version was more realistic (the one provided for the November meeting), as it was more in line with the way the EC makes decisions and it considered the holidays.

OR said the only way to combine both was to reduce the time allocated for the strategic planning process, something that wasn't very convenient, as the idea was to have a process that included the committees, consultation with other stakeholders, and having a f2f EC meeting.

PW said that time had been passing and that perhaps the mid-year time frame was not realistic, adding that they could aim to finish by the end of the third term of 2021, September, for example.

OR said they would be working on a new version considering that the EC was ok with moving the finalization date into the third quarter.

GV offered to work on a third version, a compromise between the two prior versions, aiming to finalize the process in September. He informed the EC that, for the purpose of the budget, they had assumed that the work of the consultant would be 3-4 months, that he'd had a conference with the CFOs to prepare the budget for 2021, and that 75.000 US dollars was the figure most had agreed on, but that it needed to be refined depending on the expectations of the project.

OR reminded everyone that they needed to include this in the 2021 budget so, even if they didn't agree with the third version, they needed to agree on the cost and accept the budget before the next EC meeting (even if they later make some changes to the timeline).

6. IETF Endowment

OR asked JC to present the topic.

JC said there had been an announcement by ISOC and the IETF on an agreement for ISOC to provide the IETF with additional funding with a donor match program to support the IETF Endowment and contribute to IETF's long-term financial stability.

JC said that, at this point, he simply wanted to bring this to the EC's attention. He noted that some RIRs (e.g. ARIN) had contributed to the IETF Endowment in the past and had said that they'd make additional contributions if more organizations also contributed.

HPH observed that RIPE NCC had also made a contribution and spread it over a number of years.

HPH then commented that this might be an idea for the RIR's support to the IGF in the coming years, perhaps next year they could match donations so as to inspire others to donate to the IGF.

7. SSAC work on routing security

PW explained that this was about the possibility that had been raised in relation with SSAC's work on routing security, that Geoff Huston (GH), as a member of SSAC could help us by providing a bridge with the SSAC on this topic. PW said he'd asked the SSAC chair about this and that it seemed to be a possibility and added that this would require a formal approach from the NRO.

PW said that, in his opinion, it would be positive to formally ask GH to help the NRO in that role.

OR asked what the relevance of having a person in this role would be.

PW replied that the SSAC's work was regarded as pretty confidential and if they didn't have a recognized channel, someone in a liaison role, they might not be able to rely on having any input into that work, adding that this was an opportunity for the NRO to be a bit more engaged and exposed to it.

As a practical matter, JC said they could formally have GH as liaison so if he believes the work is something the RIRs might be interested in, he might bring it to the NRO.

HPH also supported suggesting that GH should have this role, not a generic role, but simply for this particular project. He noted that the softer thing they could do was to provide them with a point of contact for the project, but that having a liaison would make things much easier.

OR asked PW whether there was a chance to establish some sort of reporting committed by GH to let the NRO know at least what's going on with this project.

PW said he could ask GH to do that.

OR suggested naming GH as point of contact (a better term than liaison) for this specific project

All agreed.

New Action Item 20201208-1: OR and PW to send a note to the SSAC requesting a point of contact/liaison role for Geoff Houston for their project on routing security, allowing him to share relevant information directly between the NRO and the SSAC.

8. Emergency Back End Registry Operator

OR presented the topic, saying that the whole idea was that if one system fails there should be a chance for the rest of the RIRs to back up that operation and keep the global registry system working. This was the work the NRO had asked the ECG to define and see how it would be possible to keep the global registry working.

On behalf of the ECG, CM showed a presentation and provided the following update on their work:

- The ECG's work was the product of long discussions and they now have a basic proposal for a particular set of situations that the ECG considers viable to implement in a relatively short period of time (natural disasters, health emergencies).
- The scope of their work was to define a framework for providing operational backup services for the number resources of a RIR undergoing some form of contingency. In this first iteration, this scope was defined to cover short-term situations, considering read-only backups.
- The ECG has identified the most relevant services and two or three milestones that need to be completed in order to have a fully functional operational services backup plan. These services are WHOIS port 43 / RDAP, Reverse DNS, RPKI and IRR.
- The general concept is to provide a read only version of these services based on the last known-good information snapshot from the RIR in contingency. In some cases, these tools already exist, in others they need to be created.
- The idea would be for the five RIRs to keep versions of this and, if one of the goes into contingency, one of the other four can instantiate the service based on the last known-good information snapshot. This is not actually that difficult.
- WHOIS and IRR could be instantiated from sanitized snapshots that are already available or which the RIRs could easily create.
- In the case of Reverse DNS, RIRs provide secondary DNS service for the reverse zones of the other four.
- Considerations on RPKI: Validated ROAs could be exported and filed. Keeping this information read-only for a long time would do more harm than good, but for a short period of time (e.g. 30 days) it would work. Tools are available such as Krill, which is almost transparent and has practically no downtime.
- Considerations on DNSSEC: The best scenario would be to revert to unsigned snapshot zones.

After his brief presentation, CM said that the ECG was seeking the EC's approval of the general concept and, if the EC agrees, to continue working in this sense.

CM added that they had also discussed how one of the RIRs would trigger the operational backup service, whether it would be a call for help or some other type of decision.

He said if the EC was OK with the general concept, the ECG would include a significant package in the ECG plan to include a gap analysis and to prepare a more detailed project including, among other things, implementation efforts and what is needed to instantiate the various services.

HPH thanked CM for his presentation and noted that he was fully willing to support the work. However, he observed that the work had focused mostly on technical processes and that he would be interested in defining how to restart the business processes (starting over the process of doing registrations, operating according to different policies, etc.) and then continue with the technical processes.

HPH then mentioned that one aspect he did not support at all was turning off security in order to maintain the availability of the service, as the most important thing is security and they need to preserve it. He noted that if anything in the contingency plan involves turning off security, they should not consider it, just as RPKI, which they can't simply turn off because it would create an attack vector in itself.

CM took note of HPH's point on security and said he would take it back to the ECG to see what could be done to keep the zones signed. As for the business processes, the ECG actually decided that was really complicated and that a better plan was to address the low-hanging fruit first, then address the business side of the registry operation. He added that this was a decision that had been made early on but would have no issue with addressing other possibilities.

HPH noted that, in his opinion, if it's just a sort term technical backup, then he didn't really see the difference between this and the RIR in contingency signing another contract with another data center, as it would still require the organization to be able to operate it and execute the business processes.

HPH observed that the contingency plan should consider what to do if the organization is unable to execute their business processes or operate their systems, how to bring the services back online, as reestablishing an RIR could take months or even years.

OR then explained that this had been their decision, when they started with this idea, they had decided on focusing on a short-term emergency where they could help the RIR in contingency to keep operating in read-only mode but with no processes. He added that it is expected the RIR to have these backups itself, but the idea of this project is to have some level of backup if everything else fails.

OR said that in any case the decision was up to the RIRs and that, if they didn't believe this was relevant, they could change their request to the ECG.

HPH apologized and said he hadn't been there two years ago when the work had started so he was unaware of this. He added that RIPE NCC has copies in two datacenters in Amsterdam with backup copies and a third one in Sweden (which the engineering team has decided to dismantle), a plan A and a plan B and even a plan C. He said that while he appreciated the thought of trying to find low-hanging fruit, moving to another RIR would have the same complications and costs that were the reason why the engineering team decided to dismantle the third location.

PW said that they needed to consider the implications of maintaining security in the contingency plan, which might involve sharing keys or other measures that the ECG should look into. He said that there were definitely some business processes involved in running up an instance of an RIR's database, but that it was important to separate the immediate need for a read-only copy of an RIR's database and the eventual need for interactive data update and other services.

JC explained that each RIR is responsible for handling their own business continuity planning, which they are all doing; that this was not what they were discussing here. This use case considers an event that's completely adverse and could really impact the Internet, such as a flood that affects all the databases of an RIR or an RIR that is instructed by a government operator to shut down its operations. In this case, the other four RIRs should be able to continue to operate until that RIR figures out what to do. He added that the EC should approve the concept presented by CM.

JC observed that the triggering mechanism should be a decision by the NRO EC and that, for simplicity's sake this shouldn't slow down the work of the ECG.

HPH noted that this would not be a short-term use case but a long-term one, as it would probably take three months to three years to install the RIR in a different place and would require business planning. He then agreed that they should continue with the technical work.

EK said he supported the work and had liked the feedback of the other members of the EC, mainly on security. He said that it was also the first time he'd hear about this and supported the work, adding that they might later think of other use cases.

OR thanked CM for his presentation, adding that the NRO EC approved the general concept. He noted that they would need to work on the triggering mechanism, which should be up to the EC. He reminded CM that the EC preferred not turning off any security feature as part of this plan.

9. Coordination Groups Reports/Consultations

a) CCG 2021 Work Plan

GV explained that the coordination groups are meant to send their work plans for 2021 for the EC to review, adding that they could revisit this in January after all the plans have been submitted.

OR suggested inviting the leader of each group to be present to answer any questions they might have.

All agreed and GV said he would arrange it.

b) Secretariat

GV commented that he had had a meeting with the CFOs the week before and that he had started to work on the budget, the NRO expense report, and the review of the NRO formula. He explained that the variations in the formula had been very small and that the final numbers would be provided around January and that he would be sending this document hopefully for the January teleconference.

GV briefly went over the tasks the Secretariat performs at the end of the year (updates to the mailing lists, websites, point of contact with ICANN, etc.).

OR asked to explain the RO formula.

GV explained that the NRO formula is the percentages that each RIR is committed to contribute to NRO expenses, that they are based on the registration services' revenue, that the formula has been in place since 2013, and that the contribution is reviewed each year trying to maintain the initial balance they had agreed for the distribution of expenses.

HPH asked GV whether he anticipated any major changes in the budget, and GV replied that no significant changes were expected. GV added that this time travel was one 1/3 of the normal budget, and that the cost of the NRO strategic planning remains a question mark, as it depends on the consultant and the consultancy requirements.

HPH offered GV to meet for discussing the practical things. GV thanked him and agreed. OR also offered his help.

PW reminded the others that, considering that LP had been hired to assist GV, this might be a good time to see if GV could play a role in fielding the NRO EC Chair's correspondence, as one of the major burdens for the new Chair is that there is a lot of new correspondence and it is difficult to understand which can be ignored. He added that, while it would increase GV's workload, it might be more efficient if the Executive Secretary could handle the chair [at] nro email address.

HPH said he would discuss this with GV to see how this could be handled.

OR agreed.

OR asked GV if he would provide a finished budget for 2021, GV replied that it was not ready yet due to the uncertainty caused by the global health situation, but that he would provide a draft version soon.

OR are you consider travel for part of the year? GV the budget includes considerations under each item.

10. Open Actions Review

It was decided to work on the open action item review on the mailing list.

11. Minutes Review

- 2020-November-17: Minutes NRO EC Teleconference- DRAFT (Pending, AFRINIC, APNIC, ARIN, LACNIC, RIPE NCC)
- 2020-October-13: Minutes NRO EC Teleconference- DRAFT (Pending, ARIN, LACNIC)
- 2020-September-22: Minutes NRO EC Teleconference- DRAFT (Pending, ARIN)

12. Next Meetings

a) Tuesday 19 January 2021 (NRO EC to re- confirm availability)

All confirmed their availability and this date was confirmed.

b) Tuesday 16 February 2021

All confirmed their availability and this date was confirmed.

c) Tuesday 17 March 2021

The March meeting is to be confirmed next telecon.

13. AOB

JC asked for a round of applause for OR as this is his final meeting chairing the EC and he has done an excellent job.

14. Adjourn

There being no further topics to discuss, OR thanked all participants and adjourned the meeting at 13:01 UTC