

**Subject: Appeal against the non-consensus determination on proposal
AF PUB-2019-GEN-006-DRAFT02 (RPKI ROAs for Unallocated and
Unassigned AFRINIC Address Space – Draft 2).**

Dear Appeal Committee,

I'm appealing against the declaration of non-consensus made by the PDWG co-chairs during the open mic session of the AFRINIC32 on-line meeting, on 17th September 2020

(<https://www.youtube.com/watch?v=F7EJploR38c&t=3h29m48s>), confirmed in the mailing list on 21st September
(<https://lists.afrinic.net/pipermail/rpd/2020/011372.html>).

I consider that the valid formal announcement of the decision is the one on the RPD list, as it is the one that contains in a complete, clear and readable format, the chairs reasoning for their decision. In this summary, the co-chairs indicated:

“7. RPKI ROAs for Unallocated and Unassigned AFRINIC Address Space

The proposal instructs AFRINIC to create ROAs for all unallocated and unassigned address space under its control. This will enable networks performing RPKI-based BGP Origin Validation to easily reject all the bogus announcements covering resources managed by AFRINIC. However, there are many oppositions such as:

- a. Allowing resource holders to create AS0/ ROA will lead to an increase of even more invalid prefixes in the routing table.
- b. Revocation time of AS0 state, and the time for new allocation doesn't match.
- c. Other RIRs don't have a similar the policy therefore, it can not be effective
- d. This will become a uniform policy if it is not globally implemented, which causes additional stress.
- e. Validity period: if members decide to implement it, is it not better to recover the space if it is kept unused for too long?
- f. How do we revoke the ROA? How long does it take to revoke it (chain/ refreshing)?
- g. What happens if AFRINIC accidentally issues a ROA for an address in error?
- h. It also might affect the neighbours and involves monitoring of unallocated spaces.
- i. Possibility of it being used against a member who is yet to pay dues.

Suggestions were made to improve the policy such as

- a) The automatic creation of AS0 ROAs should be limited to space that has never been allocated by an RIR or part of a legacy allocation.

- b) AFRINIC should require the explicit consent of the previous holder to issue ASO ROAs in respect of re-claimed, returned, etc, space.
- c) Any ROAs issued under this policy should be issued and published in a way that makes it operationally easy for a relying party to ignore them (probably by issuing under a separate TA).
- d) The proposal should include the clause “as used in APNIC as to dues not paid on time.”

Chairs Decision: No consensus”

Date of the appeal: 1/10/2020

Date of the decision made by the Chair(s): 17/9/2020

Reference to the chair(s) decision:

<https://lists.afrinic.net/pipermail/rpd/2020/011372.html>

Evidence of a failed attempt to resolve the disagreement through discussion

The following links to emails in the RPD list archive, show how several community members, in addition to the author, have clarified the aspects that the chairs considered as valid-objections for declaring non-consensus in this proposal, both before and after the decision. Note that for brevity, only the first email (in chronological order) of each contributor is being listed, as several of them continued the discussion afterwards:

Jordi Palet (<https://lists.afrinic.net/pipermail/rpd/2020/011250.html>)
Mukhangu Noah Maina (<https://lists.afrinic.net/pipermail/rpd/2020/011237.html>)
Nishal Goburdhan (<https://lists.afrinic.net/pipermail/rpd/2020/011240.html>)
Fernando Frediani (<https://lists.afrinic.net/pipermail/rpd/2020/011245.html>)
Darwin Costa (<https://lists.afrinic.net/pipermail/rpd/2020/011248.html>)
Mark Elkins (<https://lists.afrinic.net/pipermail/rpd/2020/011260.html>)
Patrick Okui (<https://lists.afrinic.net/pipermail/rpd/2020/011273.html>)
Jaco Kroon (<https://lists.afrinic.net/pipermail/rpd/2020/011296.html>)

All them will be copied in the appeal submission, in order to seek their support for the appeal.

Detailed description of the grounds for appeal

My understanding is that there are both, generic issues in the overall consensus determination done by the co-chairs, and specific issues regarding this proposal.

All the aspects cited in the following lines have been extensively discussed in the list after the chair(s) decision. Many of them were already clarified an

identified by the author and other community members as non-valid objections during the previous discussion and during the meeting.

1. Generic issues in the consensus determination.

Despite the good faith of the co-chairs, they haven't properly followed the PDP, and indeed it has been violated in several aspects. Good intentions can never be accepted as an excuse if that means not strictly following the PDP, as there is no way to have a clear border line of what is acceptable and what not.

- 1.1. PDP section 3.3. states "The Policy Development Working Group has two Chairs to perform its administrative functions". This means the management of the PDWG, the PPM, the RPD list and determine consensus.
- 1.2. The determination of the rough consensus is made explicit by section 3.4.2., which states "The Chair(s) determine(s) whether rough consensus has been achieved during the Public Policy Meeting".
- 1.3. The PDP doesn't provide any authorization to allow the co-chairs to determine consensus by making it conditional or even suggesting the authors to change the proposal text in order to be able to confirm consensus and move it to the "Last Call". The section 3.4.3. states only "A final review of the draft policy is initiated by the Working Group Chair(s) by sending an announcement to the Resource Policy Discussion mailing list. The Last Call period shall be at least two weeks. The Working Group Chair(s) shall evaluate the feedback received during the Public Policy Meeting and during this period and decide whether consensus has been achieved".
- 1.4. There is no mention in the PDP of any possible change. It is understandable that editorial suggestions may be arranged, and this has been the practice for several years. The changes being suggested for one of the policies brought to the last call, have not been simple editorial changes but rather complex policy text changes that are yet to be discussed by the Working Group.
- 1.5. It is even less understandable that the opportunity to change text "in order to be able to declare consensus" is not provided in an indiscriminate and fair way to all the proposals. Could it be possible that all the proposals by just changing some points, could reach consensus in each PPM? Why then is it needed, following PDP section 3.4.1., that "The author(s) shall make the necessary changes to the draft policy according to the feedback received", so having new versions to accommodate the community inputs?
- 1.6. Suggestions from the chairs are always welcome, however, they should state that those are "suggestions", and clearly mark them as inputs from community members (chair-hat-off). And in that case, will be considered

by the authors, which will be free to address them. Chairs should also summarize the community discussion (chair-hat-on), in an objective and non-intrusive manner, as part of the rationale for the decision about the rough consensus, and more specifically stating what are the valid-objections that haven't been addressed neither by the authors nor the community.

1.7. Further to that, the chairs indicated on 22nd September (<https://lists.afrinic.net/pipermail/rpd/2020/011415.html>), that they acted in order to come with the "best solution" based on CPM section 3.2.3. (Fairness), however, the complete section 3.1 (Scope of the PDP), is towards the community, as re-stated in section 3.2. (Policy Development Principles), not in order to attribute special prerogatives to the co-chairs, and this can be observed because the co-chairs are only named after that section.

2. Specific issues regarding the proposal being appealed.

It should be noted that many aspects of this discussion seem to show a lack of understanding of RPKI, the relevant RFCs, how it works, and even how the RIRs and IANA work. In the discussion in the list, with the chair(s) and in the presentations in the PPM, the authors (and many other expert community members) have tried to explain once and again, all those points, but it is difficult to try to teach about a topic (specially with an 8 minutes presentation) at the same time than making a proposal. It is not the duty of the authors of any proposal to explain the RFCs, technologies or how the RIRs, IANA and Internet operate. Otherwise, the lack of knowledge could be used as a way to abuse the system and oppose to every proposal, so obviously, **can't be taken as a granted aspect against any proposal**.

Moreover, because this has been already implemented and it is working in APNIC, there is a practical experience that shows, in the reports provided, that **objective facts contradict each of the provided objections**.

2.1. "a. Allowing resource holders to create AS0/ ROA will lead to an increase of even more invalid prefixes in the routing table"

Following RFC6483, section 4 ("A ROA with a subject of AS 0 (AS 0 ROA) is an attestation by the holder of a prefix that the prefix described in the ROA, and any more specific prefix, should not be used in a routing context") resource holders, as part of the RPKI system already can and actually do this (example IXPs), in fact they do. This has been explained several times, including my presentation at the PPM. The proposal is just adding light about actual facts regarding this aspect, not changing anything, so it **can't be a valid objection for the policy proposal**.

2.2. "b. Revocation time of AS0 state, and the time for new allocation doesn't match"

This is not true, again a misunderstanding about how RPKI works. The authors and other several community experts have discussed this in the

list. If you get number resources from AFRINIC, normally you don't announce them in minutes, or hours, or even days. There is some work to do in your network, you need to do changes in systems and routers, and this takes hours, and normally you can't "touch" systems during the day, but only in "maintenance windows" in the night. That means that if AFRINIC revokes an AS0 certificate, it will be done in a few minutes during the day. So even if the worldwide caches take hours to see that, there is no negative impact.

In addition to that, this it can be improved thru implementation, as I already explained also in the list. The staff could tentatively release from the AS0 the resources that they plan to allocate once a week or every couple of days, etc. For example, when they are processing a request, and they are pending on final documentation, the RSA signature for new members, or the review with the member of the justified need. Many other examples can be provided about how to do it. The proposal doesn't go into any of those details, because the understanding is that those are too depth operational, and in fact the staff could decide an approach during the implementation, and based on experience improve it afterwards.

The conclusion is that there is no such "matching", neither "unmatching", so this **can't be taken as a valid objection for the proposal**.

2.3. "c. Other RIRs don't have a similar the policy therefore, it can not be effective"

All the policies have different discussions in different RIRs at different times. This policy is already available (reached consensus and implemented) in APNIC and LACNIC (reached consensus, being implemented). There is work being done in ARIN and RIPE (the first proposal was not accepted), not yet public. So, this is untrue if you look at all the RIRs.

The effectivity of a policy is not only related to how many RIRs implement it. In this case, any RIR having this policy is actually stronger than the other RIRs not having it, in terms of routing security. It shows the commitment of that RIR about the RPKI usage with all its possibilities. It facilitates the operators in the region and outside the region to identify in a simpler and automated way, what prefixes should not be in the routing tables and consequently allow them in an opt-in basis, to discard them. So, it is in the other way around, any RIR with this policy could be said that it is more "effective" (even if it is not probably the right wording for this topic) than the others. We should rather say that "a RIR with this policy is offering a more secure view of their routing information".

In addition to that, there are policies in AFRINIC which aren't available in other RIRs. That, clearly, doesn't make them invalid (or in other words, this is an invalid objection – is good that all RIRs do the same, but is not

always the case, or not at the same time), clearly this shows that this **can't be taken as a valid objection against this policy proposal**.

2.4. “d. This will become a uniform policy if it is not globally implemented, which causes additional stress”

This is almost a duplicate of the previous one. Absolutely not. We can add that the way we suggest the staff, and they confirmed, with an independent TAL protects, as intended by the proposal, the resources of the RIR implementing it, not creating any issues in what is done in other RIRs to any operator, so it **can't be taken as a valid objection against this policy proposal**.

It is difficult to understand what it means “additional stress” in this context, but clearly, it will be in the other way around. As more RIRs implement it, less manual work in terms of filtering, is needed to be done by operators, if they opt to use the AS0 ROA service from the RIRs that have implemented it. So, it is not correct and thus, **not a valid objection**.

If the question is about if this policy should be a Global Policy, the response has also been provided in the discussion. Ideally, a Global Policy will be only able to protect the IANA unallocated resources, but not the resources that IANA already allocated to each RIR. In fact, I'm already working (when time permits it will be made public) in a Global Policy for that, but this is irrelevant versus having a policy at every RIR (or a few of them), so again, objectively **not a valid objection**.

2.5. “e. Validity period: if members decide to implement it, is it not better to recover the space if it is kept unused for too long?”

This doesn't make sense, at least not as worded. This is not about recovering space, no relation. It is the unused space hold by AFRINIC, regardless of if it was never allocated/assigned, returned by members, or recovered by AFRINIC. Once more, **not a valid objection**.

2.6. “f. How do we revoke the ROA? How long does it take to revoke it (chain/ refreshing)?”

This looks the same as 2.2 above. It doesn't matter in practice, if it takes minutes or hours or even days. Community and staff provided some facts about this, just to cite a couple of them:

<https://lists.afrinic.net/pipermail/rpd/2020/011335.html>
<https://lists.afrinic.net/pipermail/rpd/2020/011348.html>

2.7. “g. What happens if AFRINIC accidentally issues a ROA for an address in error?”

What happens if AFRINIC accidentally issues a ROA without an address already allocated to members?

Exactly the same if the existing RPKI fails, and that's why there are monitoring systems in place and as reported by the staff impact

analysis, this proposal will ensure that the monitoring is improved, so it is actually helping on the right direction, not in the other way around.

Further to that, because the systems of operators have caches, it is all depending (for the existing TAL and for the new one implemented with this proposal) on how much time it takes to AFRINIC to resolve the error and the specific configuration of the operators and if they actually drop invalid prefixes or they only create alerts, trigger some processes, etc. Note that RPKI doesn't force the operators to drop the prefixes even if they are using RPKI, there are different ways to take advantage of this.

This proposal doesn't change that, it is provided as an opt-in service and consequently it is **not a valid objection**.

2.8. “h. It also might affect the neighbours and involves monitoring of unallocated spaces”

It is not clear if neighbours here is referring to BGP peering ones.

The same monitoring that right now is done AFRINIC for unallocated/unassigned spaces could be improved with this proposal. AFRINIC already, today, needs to make sure that they get alerts if unallocated/unassigned space appears in the routing tables, because that may imply that a member may be violating the RSA, bylaws, policies, etc.

Exactly the same as for operators connected to Internet with BGP. The proposal allows them, as an opt-in service, to improve if they wish, the automation of all that, and to use the service in the way they decide. The proposal is not forcing operators any specific usage for the service, it is entirely at their own decision/discretion.

This proposal ensures that the service is improved so, hijacking of unused space is less prone to occur, that's the purpose of the proposal and RPKI, increase the routing security, without making it mandatory for any operator. Consequently, once more, this **can't be considered a valid objection**.

2.9. “i. Possibility of it being used against a member who is yet to pay dues”

According to AFRINIC bylaws and RSA, AFRINIC has the **obligation** to avoid members not paying to stop using the resources, so they are available to other members.

It will be unfair and discriminatory to other members not doing so, and that's the reason, even if we don't have this proposal, AFRINIC could at any time, following the bylaws and RSA, do whatever actions, including legal and technical ones, to make sure that unallocated, or unassigned, or returned, or recovered resources are not used. As part of those actions, AFRINIC could even ask in courts to stop routing those resources, even to other operators. It is AFRINIC duty, practically will probably not make sense in terms of the cost (unless a major hijacking

of AFRINIC resources occurs). Most probably just the cooperation among operators, without any legal requirement, will make that happen. So, this proposal doesn't change that in the sense of adding to AFRINIC any new prerogative because already have that right and duty regarding the responsible use of the resources only to the allocated/assigned parties and in compliance with the legal bindings.

To further explain this, if a member decides to stop paying, AFRINIC, following legal bindings, will follow a procedure to try to fix it, and if it doesn't succeed, will remove whois data (which in turn will cause the removal of route objects that depend on them), RDNS (which means the address space becomes in general unusable), etc.

Clearly, once more, this **can't be considered a valid objection, on the other way around is a fundamental AFRINIC's right and duty.**

The chair(s) have also included 4 suggestions to improve the proposal, which were also responded in the RPD discussion.

- 2.10. “a) The automatic creation of AS0 ROAs should be limited to space that has never been allocated by an RIR or part of a legacy allocation.”

This doesn't make any sense and has not been considered at all, in other RIRs discussions.

Legacy resources aren't under the control of any RIR, including AFRINIC, otherwise they are no longer legacy. The proposal clearly says “for which it is the current administrator”, so there is no doubt on this point.

Regarding the other part of the suggestion, that will mean that even if a member returns the space, the space will never be able to be included by AFRINIC in the AS0 ROAs, which clearly is against the bylaws, RSA, and the common sense: If I'm returning the space is because I follow my duties, and want to make sure that they are used by other members that need them.

Even if those points come as objections, which is not the case, the explanation justify why it will be **invalid objections**.

- 2.11. “b) AFRINIC should require the explicit consent of the previous holder to issue AS0 ROAs in respect of re-claimed, returned, etc, space”
Again, this doesn't make any sense and has not been considered, at all in other RIRs discussions.

As explained in 2.9 above, if a member is not following the established legal bindings, not just AFRINIC, but any membership organization, has the obligation, to ensure that the member is not cheating the other

members and it must take any actions they can to fulfill the recovery or whatever is needed to be fair to all the members and the services it provides.

The proposal doesn't state if AFRINIC should take some intermediate steps in cases of litigation, disagreements, etc. however, the legal documents and AFRINIC procedures already state that they should try to remediate the situation before the recovery, so it is clearly part of the existing process and will not only affect this proposal but all the CPM.

A member can just disappear (a bankruptcy), so if this is not done, the resources could never be recovered, while the legal documents, already state that to protect AFRINIC, the resources it administers, and the membership.

Even if a member returns the resources, but then stop replying to AFRINIC, this suggestion will make impossible to AFRINIC to reuse those resources, quarantine them for a while at the same time that they are included in the AS0 ROAs, and later on, allocate/assign them to other members.

So those suggestions, in case of becoming objections, **will be also invalid.**

- 2.12. “c) Any ROAs issued under this policy should be issued and published in a way that makes it operationally easy for a relying party to ignore them (probably by issuing under a separate TA)”

This is already explicit in the proposal and confirmed by the staff. Nevertheless, it is an operational decision, and could be changed over the time.

Because the complete RPKI is an opt-in service and the operators decide by their own, if they want to use it, and if they want to drop or not invalids and if they want to drop AS0 or not, the fact that it is a different TAL doesn't really change the situation it is matter of different configuration by the operators.

So, once more, if this suggestion becomes an objection, it **will be invalid.**

- 2.13. “d) The proposal should include the clause “as used in APNIC as to dues not paid on time”

I've tried to find, unsuccessfully, this information from APNIC. In any case, this seem related to 2.9 above, which already explains that AFRINIC can recover resources if members stop paying and they do only after retrying the recovery of the situation.

As such, once more, if this suggestion becomes an objection, it **will be invalid as well**.

Please confirm the reception of this appeal and that all the requirements are met.

I remain at your disposal for further clarifications which may help to resolve this appeal as soon as possible.

Thanks in advance for your work!

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