



MANRS Steering Committee Meeting #12

22 March 2023

Kevin Meynell, Version 1.0

Attendees

<u>Name</u>	<u>Organisation</u>	<u>Sector</u>
Melchior Aelmans	Juniper Networks	Vendor
Kevin Chege	Internet Society	-
Nick Hilliard	INEX	IXP
Megan Kruse	Internet Society	-
Flavio Luciani	NAMEX	IXP
Kevin Meynell – Acting Chair/Secretary	Internet Society	-
Arnold Nipper	DE-CIX	IXP
Ryan Polk	Internet Society	-
Andrei Robachevsky	Internet Society	-
Arturo Sevrin	Google	CDN/Cloud Provider
Max Stucchi	Internet Society	-
Tony Tauber	Comcast	Network Operator

Apologies were received from:

Andrew Gallo - Vice-Chair	GWU	Network Operator
Musa Stephen Honlue	AFRINIC	Network Operator
Warrick Mitchell - Chair	AARNet	Network Operator
Aftab Siddiqui	Internet Society	-

1. Welcome & Introductions

Kevin M welcomed everyone to the meeting as neither Andrew Gallo nor Warrick Mitchell were able to attend.

2. Approval of Minutes

The minutes from the last meeting on 25 January 2023 were approved.

3. Actions from last meeting

- 7.8 Programmes Working Group to develop ROV discussion document.
Ongoing – awaiting outcome of Action 9.8
- 8.7 Programmes Working Group to review MANRS Actions for Network Operators Implementation Guide.
Ongoing – awaiting outcome of Action 9.9
- 9.1 MANRS Secretariat to produce briefing document and fundraising outreach slide deck.
Partially done – an internal document has been developed for discussion within ISOC.
- 9.2 Aftab Siddiqui to ask Team Cymru how they're calculating their bogons.
Superseded.
- 9.3 Aftab Siddiqui to send Comcast details of their RADB and ALTDB entries.
Superseded.
- 9.8 Warrick Mitchell to develop ROV discussion points.
Ongoing.
- 9.9 Warrick Mitchell and Melchior Aelmans to discuss issues with the Network Operator Implementation Guide to determine how to proceed.
Ongoing – had discussed this but need to follow-up.
- 10.1 MANRS Secretariat to discuss BCOP with Benno Overeinder.
Superseded – conversation moved to NRO RCSG.
- 11.1 Programmes Working Group to make AS-SET recommendations.
Ongoing – was discussed at the last meeting.
- 11.2 MANRS Secretariat to publish Action 2, 3, 4IRR and 4RPKI readiness scores on the MANRS website.
Ongoing – this is currently being worked on by the Observatory development team and should be completed by June 2023.
- 11.3 Andrei Robachevsky to circulate details of proposed improvements to MANRS programmes to Steering Committee mailing list.
Done – discussed during the agenda.
- 11.3 Kevin Meynell to send out meeting details.
Done.

4. Mentors & Ambassadors Programme

Megan reported that MANRS would shortly be launching the fourth year of its Mentors & Ambassadors programme. Applications would open on 4 April 2023 and would be open for 15 days.

She mentioned that the name of the programme had been changed from the former Ambassadors & Fellows to better align with other similar programmes run by ISOC. Mentors

are the former Ambassadors and will more experienced individuals who can formulate and guide the direction of the programme. Ambassadors are the former Fellows who are upcoming individuals in the routing security community who can promote MANRS in their own regions. Both Mentors and Ambassadors would again be selected to work on training, research and policy issues.

As the programme had been moved under the ISOC Foundation for administration and funding reasons, its duration would be slightly shorter this year: running from 1 June until 1 December 2023. The ISOC Foundation would also be handling the application process and new system called Fluxx was being used (the APNIC system was previously used), but as few people generally applied two years in a row, this would hopefully not create too many difficulties.

Two external reviewers were being sought to help evaluate the applications. A small honorarium was available for this, although some employers did not allow these to be accepted and there was the option to donate this to a cause of a reviewer's choosing. The evaluation period was 20-28 April 2023 and it would probably amount to 2-3 hours of work depending on the number of applications received.

Melchior and Tony volunteered to be external reviewers.

Action 12.1 – Melchior Aelmans and Tony Tauber to review MANRS Mentors & Ambassadors applications.

5. Bogon Developments

Kevin provided an update on the communique that had been sent to the NRO. They had now responded saying that the RIR CEOs will ask Registration Services Managers to coordinate this through the NRO RSCG and contact MANRS for more detailed information and scope of their requested work regarding the classification and state of unallocated address space in the RIRs.

The RSCG will next be meeting at ARIN 51 on 16 April 2023 and MANRS had been asked to participate in order to further explain the issues so these could be addressed. The aim would be to produce a resolution as to the next steps.

Due to the short time and limited travel budget it was unlikely anyone from MANRS would be able to attend in person, but will try to participate virtually. A report on the outcome of the meeting will be reported at the next Steering Committee meeting.

Action 12.2 – Aftab Siddiqui to report on outcome of RSCG meeting.

Aftab is also working on a technical solution to try to identify the administrative bogons by comparing what resources were previously valid assignments against what are now marked bogons. He could perhaps share more information about this at the next Steering Committee meeting.

Action 12.3 – Aftab Siddiqui to share information about technical solution to identify administrative bogons.

6. US Government Developments

Ryan reported on the recent developments within the US Government who were starting to take more interest in routing security.

Last year the FCC had issued a Notice of Inquiry on Routing Security to which MANRS and other interested parties had submitted responses, and these in general had been positive about the impact of MANRS and the importance of industry self-regulation. Nevertheless, it is likely the FCC Nol will be followed by a Notice of Rulemaking, and there are also rumours of Congressional bills in the making, so MANRS was closely following the developments.

Another development is that the US Government was taking more interest in its own routing security, so MANRS had also sent in an extra comment to the FCC Nol focusing on the state of routing security in US Government Departments using data from the MANRS Observatory. For example, RPKI adoption at 0.5% of all prefixes was extremely low by global and even US standards.

To this end, MANRS had recently set-up a meeting with a number of US Government departments and agencies at which Kevin M had outlined the routing security issues and presented the data for the US Government. One caveat is that MANRS doesn't have a definitive listing of USG ASNs and more than 80% of these are registered with the US Department of Defense. Many of these will also be legacy space for which it's difficult to create ROAs, although it's still clear there is room for a great deal of improvement and it's a positive development that this is now on the radar.

7. MANRS Looking Ahead

Kevin outlined various fundraising ideas as ISOC is a US Chapter 501(c)3 organisation that needs to demonstrate public support for its activities by raising a greater percentage of non-PIR (.org) revenue. There is not a specific figure for MANRS, but if the community demonstrates that supports the MANRS initiative than it will strengthen the case for developing new activities such as MANRS+, standards development, and engaging with government policymakers.

MANRS does not want to go down the route of charging participation or service fees as this will not only discourage adoption, but these cannot be counted towards the public support test. To this end, the following possibilities have been identified:

- Mentors & Ambassadors Programme - Sponsorship of 6-9 month opportunities to help specific communities. This has previously been sponsored by APNIC and Team Cymru.
- Training - Targeted workshops, materials, supporting specific programmes.
- Routing Security Summit - will be held mid-year, looking for sponsors.
- MANRS Observatory - possible sponsorship.

- MANRS Participants & Partners – asking these organisations to take out ISOC Organization Memberships.

A number of MANRS Participants are already ISOC Organization Members:

- Platinum (USD 100k) - Amazon, Comcast, Futurewei/Huawei & RIPE NCC
- Gold (USD 50k) – IJJ
- Silver (USD 25k) - APNIC, Charter Communications, DE-CIX, Google, Juniper & Verisign
- Bronze (USD 10k) - AConet, BT, Cisco, China Telecom, Cloudflare, GEANT, Internet2, NIC.br, Nokia, NORDUnet, NYSERNET, SUNET, SURFnet, SWITCH & Team Cymru
- Copper (USD 3.5k) - AFRINIC, AMSIX, CERNET, Clearcable Networks, LACNIC, LINX, NTT, Teraco & WIDE

What was also being considered was MANRS-specific memberships that could be linked to existing Organization Member benefits, but could also bring additional representation on the MANRS Steering Committee. This would need further internal discussion and approval within ISOC, but the views of the Steering Committee were also being sought on this.

The Steering Committee could also help by raising awareness of these sponsorship and membership opportunities, and pointing anyone interested in further supporting MANRS towards the MANRS team <secretariat@manrs.org>

8. MANRS Programme Developments

Andrei presented some suggested improvements to the MANRS Network Operator programme. Those marked in green can be implemented by the MANRS staff if the Steering Committee agrees, those marked in purple will require some development work and will need to be communicated to the Community, whilst those marked in red will require Community consultation.

Action 1: Prevent propagation of incorrect routing information

Joining requirements:

1. A network operator must provide a detailed description of the following:
2. If prefix filters are used, what are the mechanisms for generating them? If not, what kind of controls are used?
3. How frequently are these filters updated?
4. What is the mechanism for checking that a customer legitimately holds the ASN and IP blocks they intend to announce?
5. An ASN must be visible and announcing IP prefixes to the Internet's global routing system for a minimum of 3 months.
6. An ASN must not have, in the previous 3 months, announced an AS number and/or IP prefix they or their customers are not legitimately authorised to originate.

Recommendation: make questions 1-3 mandatory in the application form

Recommendation: make public comments mandatory (for all actions)

Action 3: Facilitate global operational communication and coordination

The MANRS Secretariat will check these contact details for completeness and send a contact verification e-mail to the MANRS representative(s). The network operator must reply to this communication within 72 hours in a manner that verifies the contact details are correct and demonstrates that communications are being actively read and responded to.

Recommendation: implement automatic periodic checks to be reflected in the readiness scores

Action 4: Facilitate routing information on a global scale

A network operator must have registered all AS numbers and IP prefixes they advertise to other networks in a RIR or RADB-mirrored IRR as aut-num and route/route6 objects.

OR

A network operator must have created valid Route Origination Authorizations (ROAs) for all IP prefixes or sets of prefixes they are legitimately authorised to originate. Legacy IP prefixes may be excluded from this requirement.

Recommendation: Change “OR” to “AND” (requires change management)

Recommendation: Require that route/route6 objects are registered in the RIR IRR hosting corresponding address blocks.

Recommendation: Exclude Legacy IP prefixes from calculating the readiness score.

Recommendation: Ensure consistency of the Action title (short title) throughout the website and the Observatory

Arturo suggested that IRR registration should be optional provided that RPKI was compulsory. He also asked whether there were the same issues with registering legacy resources in RIR IRRs (especially the ARIN IRR).

Tony replied that the legacy issues may be mitigated in the near future as ARIN was making changes to its Service Agreement to allow legacy addresses to be registered and to offer reduced fees for legacy resources if this was done before the end of 2023.

Andrei also discussed some process improvements that had originated from discussions with the Dutch government procurement agency (Logius), which was especially important for MANRS+ which was aiming to develop more enhanced requirements. This included the following suggestions:

- Implementing versioning and archiving.
- Introducing a formal development process with defined governance, document development, and voting.

- Providing an appeal process.
- Clarifying the patent policy.

Action 12.4 – Andrei Robachevsky to circulate MANRS Programme Developments document.

9. Next meetings

The next meeting is scheduled for Thursday, 4 May 2023 at 15.00-16.30 UTC.

The following meeting is scheduled for Wednesday, 15 June 2023 at 15.00-16.30 UTC.

Action 12.5 – Kevin Meynell to send out meeting details.

Open Actions

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- 12.3 Aftab Siddiqui to share information about technical solution to identify administrative bogons.
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