



### MANRS Steering Committee Meeting #11

25 January 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	-
Andrew Gallo - Vice-Chair	GWU	Network Operator
Musa Stephen Honlue	AFRINIC	Network Operator
Olaf Kolkman	Internet Society	-
Flavio Luciani	NAMEX	IXP
Kevin Meynell - Secretary	Internet Society	-
Warrick Mitchell - Chair	AARNet	Network Operator
Arnold Nipper	DE-CIX	IXP
Andrei Robachevsky	Internet Society	-
Arturo Sevrin	Google	CDN/Cloud Provider
Max Stucchi	Internet Society	-
Tony Tauber	Comcast	Network Operator

Apologies were received from:

Nick Hilliard	INEX	IXP
Aftab Siddiqui	Internet Society	-

### 1. Welcome & Introductions

Warrick welcomed everyone to the meeting and wished them a Happy New Year.

### 2. Approval of Minutes

Nick had pointed out a couple of inaccuracies with the minutes from the last meeting on 22 November 2022. The corrections had been added and the minutes were therefore approved.

### 3. Actions from last meeting

7.8 Programmes Working Group to develop ROV discussion document.

*Ongoing – discussed during the agenda.*

- 8.7 Programmes Working Group to review MANRS Actions for Network Operators Implementation Guide.  
*ISOC has started to look at this.*
- 9.1 MANRS Secretariat to produce briefing document and fundraising outreach slide deck.  
*This has been drafted but needs some internal discussion before it can be disseminated further.*
- 9.2 Aftab Siddiqui to ask Team Cymru how they're calculating their bogons.  
*Ongoing.*
- 9.3 Aftab Siddiqui to send Comcast details of their RADB and ALTDB entries.  
*Ongoing.*
- 9.4 Kevin Meynell to circulate draft NRO Communique to MANRS Community.  
*Should have been marked done at last meeting.*
- 9.5 Warrick Mitchell to send NRO Communique to NRO Secretariat.  
*This had actually been sent by Aftab Siddiqui.*
- 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.  
*Had been discussed and would come back with some recommendations.*
- 10.1 MANRS Secretariat to discuss BCOP with Benno Overeinder.  
*Ongoing.*
- 10.2 MANRS Secretariat to draft statement on AS-SET cybersquatting.  
*Done – discussed during the agenda.*
- 10.3 Andrei Robachevsky to share MANRS+ working document with Steering Committee.  
*Done.*
- 10.4 Kevin Meynell to send out meeting details.  
*Done*

## 4. Internet2 Routing Update

Andrew reported that Internet2 had recently hired Steve Wallace (formerly Indiana University) as a Routing Security Architect and the recent Internet2 Technology Exchange had a strong focus on routing security, so hopefully that would result in more MANRS applications. He had also presented on the proposed MANRS programme for Research and Education networks and there had been some interest, although there were some questions on whether there was sufficient differentiation between RENs and general network operators.

NSF also runs a Campus Cyberinfrastructure (CC\*) grant programme and has highlighted MANRS as one of the actions that campuses can take. It's not mandatory to implement, but it does provide some acknowledgement and advertising for the initiative.

## 5. NRO Update

Andrew reported that he had participated in a panel with John Curran (CEO of ARIN) at Internet2 TechX and had discussed the bogon problem with him and John Sweeting (Registration Manager at ARIN). John Sweeting did understand where we're coming from with this, although couldn't suggest an immediate solution. However, formally highlighting this to the NRO and thereby raising our concerns with the RIRs at least publicises what MANRS is trying to do.

Tony said the bogon problem did not seem to be well understood in the Internet community, and currently only had niche impacts, although Warrick added that the APNIC historical callback of legacy resources was causing legitimate resources to be marked bogon and in some cases it was difficult for holders to prove ownership. Realistically it was going to be difficult to get all the RIRs to align on this issue, but we still need to ensure they are aware of the problems.

Kevin thought the problem could be solved if the will was there, although there was possibly a valid argument about resources being transferred between different RIRs showing as bogon as the registrations were updated at different times by each RIRs. Presumably this could also be largely solved by agreeing by updating registrations at a common agreed time, but this was probably a relatively minor issue that would diminish as IPv4 assignments were consolidated and more networks moved to IPv6. However, he mentioned that Aftab Siddiqui was working on a technical solution to reduce the number of bogons that appeared in the MANRS Observatory.

*There was further discussion about sending the communique to the NRO, but in fact there was some confusion as this had already been agreed during the 9<sup>th</sup> Steering Committee meeting on 13 October 2022 (see Action 9.5) and it later transpired that Aftab Siddiqui had already sent it.*

## 6. AS-SET Cybersquatting Statement

There had been discussion about this problem at the last meeting, and it was agreed that a statement to the MANRS Community should be drafted that recognized the issues and that proposed some interim actions that could be taken to limit the problems. Aftab had then written a blog that was published on the [MANRS website](#), so the question was whether this was sufficient to satisfy Action 10.2

Andrei mentioned that specifying AS-SETs was an action of the CDN/Cloud Providers programme, but would need further discussion about whether it should become a requirement of the Network Operators programme. It remained the case that essentially anyone could create AS-SETs and add anything to them.

It was agreed that the blog was fine as it outlined the problem statement and interim improvements that could be made, but there should be further discussion around incorporating these improvements as requirements in the Network Operators programme.

Action 11.1 – Programmes Working Group to make AS-SET recommendations.

## 7. Publishing MANRS Readiness Scores

Kevin explained that when MANRS participants apply to join MANRS, they self-declare which actions they are conformant with. These are then checked against the MANRS Observatory, and provided they appear conformant, the application is approved and a check mark against each Action is displayed in the participant's entry on the [MANRS website](#).

The problem is that MANRS participants can become non-conformant over time, so the proposal is to display the actual readiness scores from the Observatory against each Action in order to improve the transparency and credibility of MANRS, to ensure participants are themselves aware of non-conformance issues, and to create a bit of peer pressure to fix problems.

The initial proposal is to publish the readiness scores for Actions 2, 3, 4IRR and 4RPKI as these are based quite reliable and largely public and uncontroversial measurements. Whilst the Action 1 scores still provide a good indication of conformance, they are reliant on BGPstream that tends to produce false negatives, GRIP that tends to produce false positives, and the CIDR report that includes the so-called administrative bogons. So it is felt publishing these scores at the moment will raise too many questions and unfairly affect the reputation of many operators.

So the main decisions to be made is whether the Steering Committee is in agreement with publishing the readiness scores. In addition, should current scores be published or should scores averaged over a specific period (3 months is suggested as this is the period used for conformance checks for Actions 1 and 2), and if so will this cause confusion with the current scores displayed in the Observatory. Finally, should the publishing of the scores be done on an opt-in or opt-out basis?

Melchior said he'd prefer to make publishing of the readiness scores mandatory, but also add notification of when a participant becomes non-conformant with a particular action so they are aware of this. Warrick, Andrew and Arturo agreed as they felt the ability to opt-out would reduce the effectiveness of MANRS as participants with poor scores could simply opt-out of publicly displaying them. Warrick also added that R&E networks openly discussed their scores as it was important to prove conformance.

Arnold also favoured mandatory publishing, and suggested that both current and averaged scores could be displayed on the MANRS website.

Tony was in favour of opt-out as in large complex networks sometimes the measurements were volative or misleading. Flavio and Musa also favoured opt-out(?)

Kevin suggested that another thing that needed to be done was to agree suitable thresholds so that even if participants were not always able to achieve 100% scores, some other high level of conformance would still be shown as acceptable.

Andrei added that an appeals process was also being developed that would allow participants to query their scores and provide feedback that could be taken into account.

In conclusion, it was agreed that the Action 2, 3, 4IRR and 4RPKI readiness scores could be published on the MANRS website. It was generally favoured, although not unanimous that displaying these scores should be a mandatory condition of being a MANRS Participant.

Action 11.2 – MANRS Secretariat to publish Action 2, 3, 4IRR and 4RPKI readiness scores on the MANRS website.

## 8. MANRS+ Developments

Andrei reported that a MANRS+ Working Group landing page had been put up on the MANRS website (see <https://www.manrs.org/about/manrs-working-group/>) with the charter, information about the objectives, and where documents would be published when ready. There is also a Google workspace where the draft documents were being worked on.

The Working Group is meeting every couple of weeks with different times to make it easier for members in different timezones to attend, but these meetings are not duplicates and activities progress from meeting-to-meeting.

A MANRS+ concept note has been developed that identified the use cases. The use cases include assurances of traffic security between enterprises and their connectivity providers, between enterprises and cloud providers with connectivity providers as an intermediary, and between connectivity peers.

From the use cases, a separate document has been developed that defines the requirements for each. In general though, the requirements include path security, DDoS attack protection, anti-spoofing protection, routing information and other MANRS Actions not reflected elsewhere.

These documents needed more input from relying parties though as the requirements needed to be relevant to the needs of these participants. The MANRS team is therefore reaching out enterprises – in particular in the financial and healthcare sectors – and a survey is also being considered to validate the requirements once they're firmed up. The plan would be to ask the MANRS Participants to help reach out to some of their clients.

## 9. Technical & Process Improvements to MANRS Programmes

Andrei reported that whilst MANRS+ was looking at new and enhanced actions, the MANRS team had also been reviewing the existing programmes and were looking to enhance and strengthen these as well.

### *Technical improvements*

- MANRS applications: required detailed descriptions applications of how Actions are implemented and ensure these are published.
- Make IRR *and* RPKI mandatory (needs community consultation and change management)
- Require that route/route6 objects are registered in the RIR IRR hosting corresponding address blocks. (needs community consultation)
- Implement contact response measurements

### *Process improvements*

- Versioning and archiving
- Process documentation – move towards standardization process
- Accessibility/openness – how and who can suggest and approve changes?

Olaf added that the Dutch government procurement agency (Logius) had a *comply or explain* list that included RPKI, but the MANRS team had been discussing MANRS and MANRS+ with them and had submitted a trial submission to understand how their processes could be adapted to normative rather than specification type standards. From this it became clear that the more MANRS appears to be an open standards producing process, the more likely it is to be accepted by government agencies and other entities such as the WTO. So this is something that MANRS needs to focus a bit more on.

Action 11.3 – Andrei Robachevsky to circulate details of proposed improvements to MANRS programmes to Steering Committee mailing list.

## 10. Next meetings

The next meeting was scheduled for Wednesday, 22 February 2023 at 15.00-16.30 UTC. *This was subsequently cancelled both the Chair and Vice-Chair were unable to attend.*

The following meeting was scheduled for Wednesday, 22 March 2023 at 15.00-16.30 UTC.

Action 11.4 – Kevin Meynell to send out meeting details.

## Open Actions

- 7.8 Programmes Working Group to develop ROV discussion document.
- 8.7 Programmes Working Group to review MANRS Actions for Network Operators Implementation Guide.
- 9.1 MANRS Secretariat to produce briefing document and fundraising outreach slide deck.
- 9.2 Aftab Siddiqui to ask Team Cymru how they're calculating their bogons.
- 9.3 Aftab Siddiqui to send Comcast details of their RADB and ALTDB entries.
- 9.8 Warrick Mitchell to develop ROV discussion points.
- 9.9 Warrick Mitchell and Melchior Aelmans to discuss issues with the Network Operator Implementation Guide to determine how to proceed.
- 10.1 MANRS Secretariat to discuss BCOP with Benno Overeinder.
- 11.1 Programmes Working Group to make AS-SET recommendations.
- 11.2 MANRS Secretariat to publish Action 2, 3, 4IRR and 4RPKI readiness scores on the MANRS website.
- 11.3 Andrei Robachevsky to circulate details of proposed improvements to MANRS programmes to Steering Committee mailing list.
- 11.3 Kevin Meynell to send out meeting details.