



ICAO

International Civil Aviation Organization

Ninth Meeting of the Common aeRonautical Virtual Private Network Operations Group (CRV OG/9)

Video Teleconference, 25 – 27 January 2022

Agenda Item 10: Review the progress on the next step for using the rest of CRV Pioneer State Contribution to the ICAO Managed Service Agreement (MSA)

ESTIMATE OF WORK FOR SAFETY ASSESSMENT AND SECURITY ASSESSMENT

(Presented by Airways New Zealand)

SUMMARY

This paper presents an estimate of work for a safety assessment or security assessment of the CRV network.

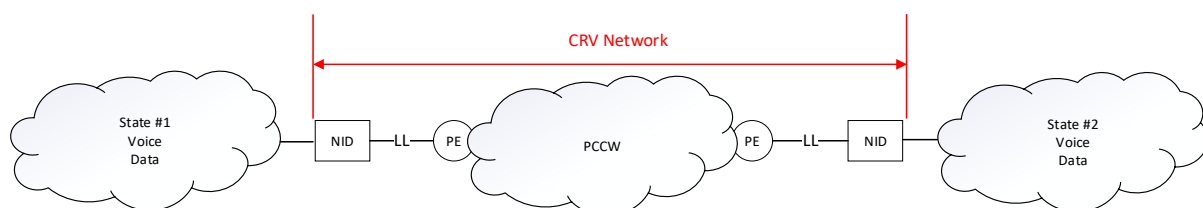
1. INTRODUCTION

- 1.1 The decision of CRV OG/6 - Using the Rest of CRV Pioneer State Contribution to the ICAO Managed Service Agreement (MSA) money for a safety assessment/security assessment.

2. DISCUSSION

- 2.1 If we decide to carry out a Safety or Security Assessment of the CRV network, we will need to determine what we are wanting to have assessed, how this would be assessed and who would carry out this assessment.

Are we concerned about the CRV network, the CRV users security, the applications or a combination of these?



From the diagram above we can see that the CRV network comprises of PCCW's Global MPLS network, PE's in various Points of Presence (POPs), States telecommunication providers local loop and the CRV NID.

The NIDs connect either to the States network or directly to the States system, be it a Voice switch, AMHS etc. Voice and Data connections are considered Applications.

Each State is responsible for the security and protect of their connection and applications that use the CRV network as per The Operations Manual, 5.1 Service Catalog Management, 5.1.1 Requirements, e. Security:

Security is the responsibility of each of the ANSPs. Basic security is provided by PCCW utilising Route Filtering and GRE tunnels between ANSP sites.

2.2 The possible assessments are Physical Inventory, Overall Security Review, Visibility and Management Audit, Performance Analysis and Quantitative Data.

2.3 These assessments are usually carried out by some form of consultancy that has experience in carrying out these assessments. Examples are Nokia Bell Labs, Price Waterhouse Cooper (PWC), Aura, Moore Global.

2.4 How the assessment is carried out depends on the outcome we are after. Assessments are normally carried out as follows:

- a) Intrusive – a device or someone is allowed access to the network/application.
- b) Onsite interviews and over the shoulder configuration review.
- c) Offsite assessment based on provided information, usually configurations, design documents and drawings.
- d) A combination of i, ii or iii.
- e) A combination of i, ii or iii as well as Policy, Process and Procedures

2.5 The pricing of the assessments does vary quite significantly.

A simple intrusion assessment would cost approximately USD13000 but a comprehensive intrusion assessment could cost USD45000.

An assessment onsite conducting interviews and reviewing configurations, or the offsite version of this would cost between USD65000 and USD170000

The most comprehensive assessment, e) above, would start at USD300000.

2.6 The options for an assessment could then look as follows:

- a) Intrusive – a device or someone is allowed access to the network/application.

This will require either PCCW or a member of CRV or PCCW and a member of CRV or two members of CRV to agree to a device or someone with access to test the security of the network.

If this is done with members of the CRV, it would involve the device or someone with access to be installed inside that members network on the same segment as the voice or data application or the creation of a new segment. Another option would be the device to be connected directly the PCCW NID resulting in an outage.

If it only involved PCCW, the CRV OG could create a term of reference and request PCCW to contract a consultant to carry the intrusion test. CRV OG would need to fund this.

- b) Onsite interviews and over the shoulder configuration review.

The Assessment Consultant would need to visit PCCW and one or CRV users' sites to interview, review documentation and understand the configurations.

No intrusion testing would be required.

- c) Offsite assessment based on provided information, usually configurations, design documents and drawings.

PCCW and CRV users would need to submit documents for review be available to answer subsequent questions.

No intrusion testing would be required.

- d) A combination of i, ii or iii.

This will require either PCCW or a member of CRV or PCCW and a member of CRV or two members of CRV to agree to a device or someone with access to test the security of the network.

If this is done with members of the CRV, it would involve the device or someone with access to be installed inside that members network on the same segment as the voice or data application or the creation of a new segment. Another option would be the device to be connected directly the PCCW NID resulting in an outage.

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PCCW and CRV users would need to submit documents for review be available to answer subsequent questions.

- e) A combination of i, ii or iii as well as Policy, Process and Procedures

This is the most comprehensive assessment.

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If this is done with members of the CRV, it would involve the device or someone with access to be installed inside that members network on the same segment as the voice or data application or the creation of a new segment. Another option would be the device to be connected directly the PCCW NID resulting in an outage.

If it only involved PCCW, the CRV OG could create a term of reference and request PCCW to contract a consultant to carry the intrusion test. CRV OG would need to fund this.

PCCW and CRV users would need to submit documents for review be available to answer subsequent questions.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate
