International Civil Aviation Organization

Thirteenth Meeting of the Common aeRonautical Virtual Private Network Operations Group (CRV OG/13)
Wellington, New Zealand, 05-08 March 2025

Agenda Item 4: CRV OG Reference documents
- CRV OG Operations Manual
- CRV Implementation Plan
- Outcomes of Ad-hoc expert Strategy, Design, Transition and, Operations Groups
- Outcomes of Joint CRV OG Ad-hoc Expert and SWIM TF TLs Meetings

OUTCOMES OF MEETING WITH PCCWG

(Presented by New Zealand)

SUMMARY

This paper presents a summary of the meeting with PCCWG after the ICAO Workshop for the preparation of new CRV requirements and specifications for future System Wide Information Management (SWIM)/other aviation services meeting in Guam

1. INTRODUCTION

1.1 During the ICAO Workshop for the preparation of new CRV requirements and specifications for future System Wide Information Management (SWIM)/other aviation services meeting in Guam 16 to 20 September 2024, several items were raised that required PCCWG's response.

1.2 Several emails were exchanged with PCCWG seeking clarification and discussion on these points.

1.3 It was obvious from the email exchange that a meeting with PCCWG was required and this was carried out via VTC on 5 December 2024 between PCCWG and the CRV OG Co-Chair (Asia).

2. DISCUSSION

2.1 The discussion followed the themes raised during the meeting in Guam as summarized here.

Meshed Network

This SWIM requirement is of concern for PCCWG due to the potential of having so many GRE tunnels in the network that it becomes difficult to maintain. It was reiterated that whilst a fully meshed network is a SWIM requirement, the discussion in Guam showed that this requirement is unlikely and that only eight States would require some form of full connectivity between each other starting late in 2025. PCCW agreed to continue supporting the SWIM implementation via the use of GRE tunnels as discussed.

Jitter

This is quoted as 250ms latency for data applications, and a change to the jitter SLA figure to 100ms for data applications was requested.
This was agreed by PCCWG.

Firewall

Continuing the exploration into firewalls being implemented in the network as a managed service. The discussion was based on the following assumptions:

a. The managed firewall service is for CRV network only.
b. State will provide Internet link for Firewall Management.
c. No NAT, antivirus or other particular security features.
d. Locations – NZ (Christchurch), Pakistan, Nepal, Hong Kong China and Singapore for budgetary quotations
e. Resilience requirement

The costs based on the above is shown in the following table.

Country	Address	Hardware replacement	MRC (USD) for a 1-year term
New Zealand	Te Whare Ao Rangi, 26 Sir William Pickering Drive, Burnside, Christchurch	8x5xNDB (Onsite)	1135
Hong Kong	Room 034, Air Traffic Control Building (ATCB), CAD HQ	7X24 (Onsite)	1080
Singapore	1 Aviation Drive, Singapore 499867	7X24 (Onsite)	1150
Pakistan	Director CNS Engineering, CNS Directorate, ANS Division, Headquarters Civil Aviation Authority, Terminal-1, JIAP, 17120, Karachi, Pakistan	8x5xNDB (Onsite)	1270
Nepal	AMHS Room, 1st Floor, Operation Building, Tribhuvan International Airport, Gauchar, Kathmandu, Nepal.	SDS international*	1280

*SDS International: This is an advanced hardware replacement. Upon identifying the hardware fault, Fortinet will ship out parts as soon as possible. There is no SLA for the actual delivery date which is subject to customs clearance. After the parts are delivered to the site, PCCWG will arrange an on-site engineer at 8x5xNDB for hardware replacement.

Included:
1 x FortiGate 61F
- Routing and ACL
- No anti-virus and NAT
- Remote support for troubleshooting
- Remote support for policy change and software/patch upgrade
- Extra charges for onsite support troubleshooting.

Relationships

PCCWG was advised that we took the opportunity to explain the relationship between the CRV OG and PCCWG to the SWIM Leaders. We discussed that PCCWG is the supplier of the network infrastructure to the CRV and the relationship and any changes for the network is managed by CRV OG. This then makes SWIM and other applications customers of the CRV, and they will need to maintain a relationship with the CRV OG for any suggestions on operating the network, network requirements, and any potential changes.

As a result of this, the CRV OG or representatives and PCCWG need to have regular meetings to discuss changes, issues, concerns, etc.

The format was discussed with thoughts on:

Sales
Consultant
Service Issues
Project Status
New Requirements

It was agreed that this would be a good idea, frequency was thought to be every two months.

Pseudo CRV**.**

We discussed testing and onboarding new services, not just the SWIM ones. Would it be possible to retain the Pseudo CRV? If so, what would that look like from a commercial arrangement?
Pricing is to be provided by PCCWG.

Cisco 8000 series router

The pricing provided to support legacy voice connections using the Cisco 8000 series and associated interface cards at USD1000/month was discussed as this could be unaffordable by those states that would require this. The extra cost was discussed and would not be available in Package D options.
A note will be added to the Operations Manual.

Network Visibility

Is it possible to provide now or develop an end-to-end view of the network from an SLA point of view and also a graphical view of the network from an NID point of view? Some CRV OG members have expressed a desire to have this.
Unfortunately, it is not possible to provide any further visibility than what is currently provided.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;
b) discuss various points raised in the paper; and
c) discuss any relevant matter as appropriate

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