



# ICAO

*International Civil Aviation Organization*

**The Twelfth Meeting of the Common aeRonautical  
Virtual Private Network Operations Group (CRV  
OG/12)**

*Denarau Island, Fiji, 23-26 January 2024*

## Agenda Item 3: CRV OG Reference documents

- CRV OG Operations Manual
- CRV Implementation Plan
- Outcomes of Ad-hoc expert Strategy, Design, Transition and, Operations Groups

## **CRV NEW SERVICE IMPLEMENTATION PROCESS**

(Presented by USA/FAA)

### **SUMMARY**

This paper presents the process for members who have CRV service in operation and plan to add more connections/services to another new or existing CRV user. The purpose is to incorporate this process into CRV Operations Manual.

## **1. INTRODUCTION**

1.1 CRV has been in operation since 2019 and after almost five years in operation, more users with new connections have emerged.

1.2 The CRV Ad-Hoc Group has requested that the FAA share its experience in implementing new services to other CRV users that have become available through CRV membership.

## **2. DISCUSSION**

2.1 The FAA has completed implementing new services with Indonesia and Papua New Guinea and documented its process as shown in Attachment A.

2.2 It is recommended that users coordinate with PCCW Global technical staff during testing and cutover of new service.

## **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and review the process for implementing new services in CRV for AMHS and VoIP services and incorporate them in the CRV OG Operations Manual;
- c) develop process for new system connection in CRV; and
- d) discuss any relevant matter as appropriate.

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CRV OG/12  
Attachment A to WP/13

CRV Implementing new service for existing CRV users or between existing users and new users.

**AMHS service:**

1. Develop a bi-lateral Memorandum of Understanding (MoU) or Letter of Agreement (LoA)
2. Both users coordinate with PCCW Global to establish a GRE tunnel (if none exists)
3. Ensure bandwidth is sufficient (64kbps)
4. Provide PCCW Global with each user's AMHS IP address subnet(s), to be advertised through the GRE tunnel (private IPv4 addresses have been assigned by ICAO to each ANSP)
5. Ensure a connection between Customer Edge (CE) routers (e.g., ping test)
6. Ensure connection between AMHS test applications (e.g., MTA connection test)
7. Perform AMHS testing (refer to AMHS ICD and EUR test procedures for more information)
8. Establish a connection between AMHS operational applications using configurations developed in test and reroute traffic to new connection (ensuring a potential fallback plan).
9. Accept the new service if the AMHS service has performed satisfactorily for 24 hours
10. PCCW should update respective SEPs
11. Inform ICAO, ACSICG and CRV OG of new routing to be recorded in various documents (e.g., Telecommunication Infrastructure Routing, etc.)
12. Report new AMHS routing to Air Traffic Service Message Handling System Addressing Center (AMC)

*Note: Steps 5, 6, 8, 10 require PCCW Global online support personnel*

**VoIP service:**

1. Develop a bi-lateral Memorandum of Understanding (MoU) or Letter of Agreement (LoA)
2. Both users coordinate with PCCW Global to establish GRE tunnel (if none exists)
3. Ensure bandwidth is sufficient (112 kbps per channel without compression)
4. Coordinate with PCCW Global of each user's VoIP IP address subnet(s)
5. Coordinate with PCCW Global for each user's respective VoIP dial plan
6. Either implement your own VoIP to legacy voice signal conversion or PCCW Global to provide this service
7. Ensure a connection between Customer Edge (CE) routers (e.g., ping test)
8. Perform VoIP application-application testing
9. Accept the new voice service if it has performed satisfactorily for 24 hours
10. PCCW should update respective SEPs
11. Inform ICAO, ACSICG and CRV OG of new routing to be recorded in various documents (e.g., Telecommunication Infrastructure Routing, etc.)

*Note: Steps 5, 6, 7, 8 require PCCW Global online support personnel*

**New System Connection:**

1. To be developed during CRV OG/12 meeting