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 7: States CRV Implementation and operations experience sharing

UPDATE ON FIJI'S CRV NETWORK UPGRADE
(Presented by Fiji/Fiji Airports)

SUMMARY

This paper presents update on Fiji's CRV network upgrade from Package C+ to CRV Package B+ for voice and AMHS services

1. **INTRODUCTION**

1.1   Fiji will be upgrading its CRV network from CRV Package C+ to Package B+ to support voice and AMHS services to Australia, New Zealand & USA.

1.2   In the process of upgrading from Package C+ to B+, PCCWG has configured Fiji CRV connection using Package C & Package D to operate the current services, Fiji plans to complete its upgrade to CRV package B+ in the 2nd Quarter of 2022

2. **DISCUSSION**

2.1   Fiji has signed and implemented CRV Package C+ with PCCWG in 2019 operating voice and AMHS services with Australia, New Zealand & USA

2.2   In April, 2020, Fiji has requested PCCWG to downgrade the CRV SLA to Package D using internet to reduce our operational cost due to impact of COVID-19 pandemic on our revenue. We noted that flight movement in the Nadi FIR drops for more than 80% for 6 months before it started to pick in November, 2020. .

2.3   The diagram below depicts the CRV Package C+ and the downgraded CRV Package D for the Fiji CRV Connection.

Fiji High Level CRV Diagram
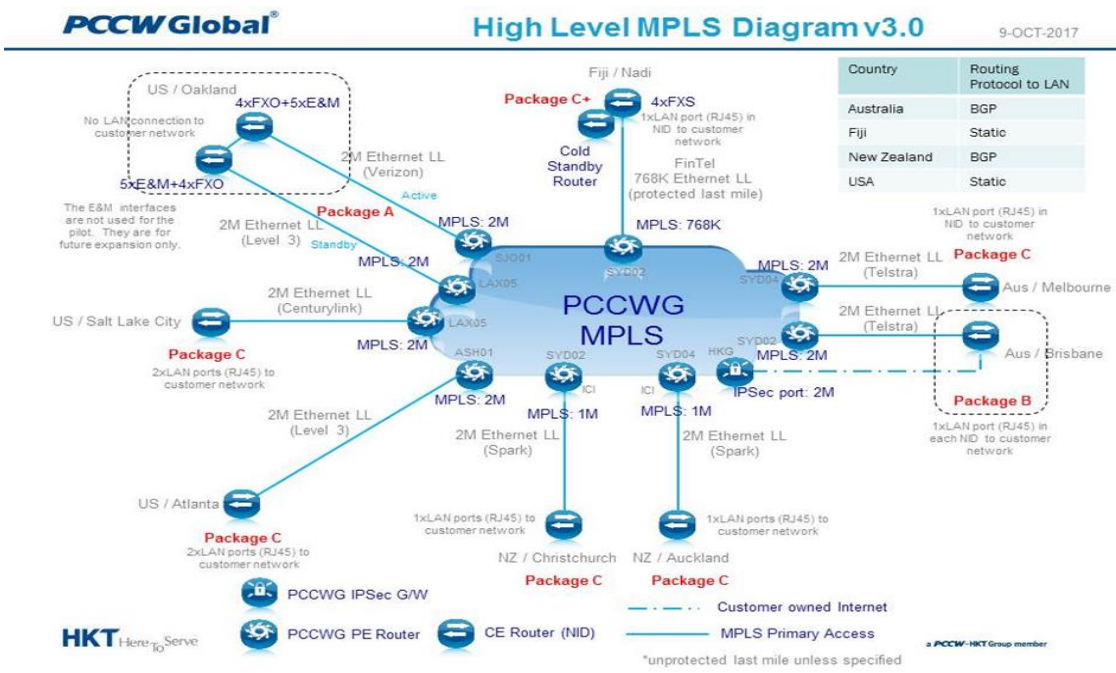
CRV SLA Package C+ High Level Diagram
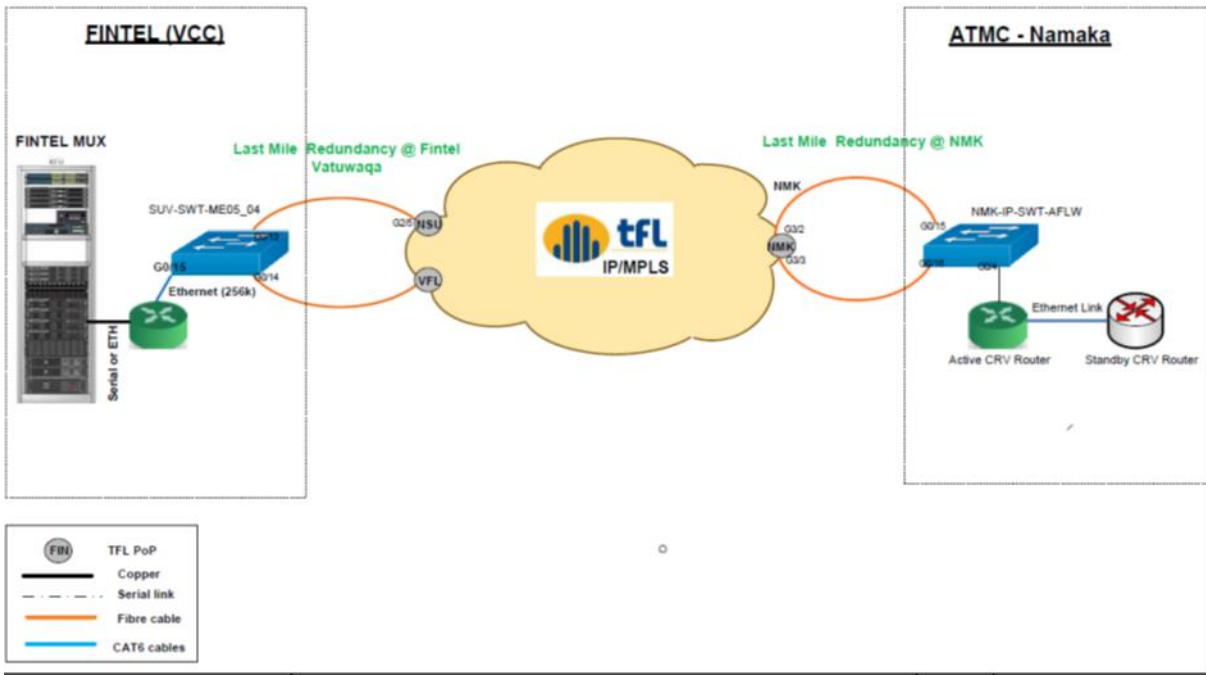
**CRV SLA Package D High Level Diagram**
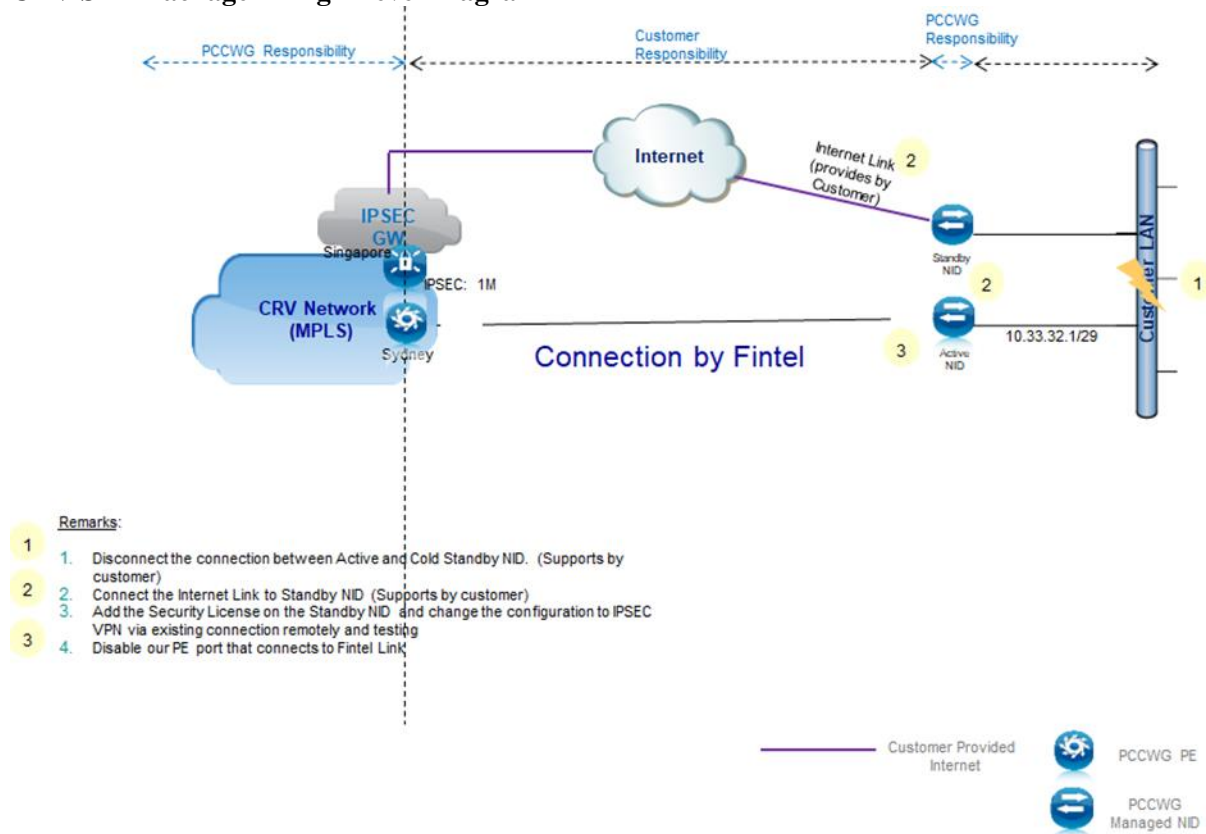
2.4 **CRV Package B+ Upgrade**

2.4.1 Given the successful performance of the CRV Package D during the downgrade of the CRV services and the condition agreed with PCCWG on the duration of operation , Fiji has restored the dedicated IPVPN link to CRV NID 1 that connect to the PCCWG POP in Sydney, Australia. Fiji has decided to keep CRV package D using secured public internet as the secondary CRV connection and is terminated to the PCCWG POP in Singapore to ensure redundancy on the last mile connection as well as the within the PCCWG POP.

2.4.2 It should be noted that PCCWG does not provide redundancy at the MPLS POP for single connection for CRV Package C and C+. This was confirmed with PCCWG when PCCWG has requested for plan outage to carry out maintenance work of their Sydney POP in early 2020. Fiji has to ask PCCWG to conduct a manual configuration of this single last mile connection that is terminated at the Sydney POP to another alternate POP to ensure the services is not affected. Fiji has to upgrade its CRV connection to ensure service reliability over the CRV network.

2.4.3 In September 2021, Fiji completed the restoration of the dedicated IPVPN connection for CRV NID using package C and connects to Sydney PCCWG POP. Since the voice services is still configured using analogue FXO/FXS interface between the CRV NID and the VCS, the propose upgrade to package B+ is not possible until we upgrade the voice services to operate over VoIP between the CRV NID and the VCS.

2.4.4 Meantime, Fiji has decided to operate the voice and AMHS services using Package C and Package D configuration with CRV NID 1 operating on CRV package C configuration as the primary connection and CRV NID 2 operating on CRV package D as the secondary connection. Any failure on the connection on CRV NID, the voice & AMHS local connection is manually

switchover from the primary to the secondary link and vice versa when the primary link is restored.

2,4.5 Fiji plans to upgrade the voice interface between the CRV NID and the VCS to VoIP and we plan to start initial testing in Q1 of 2022 that will include the configuration of automatic switchover of the voice & AMHS services between CRV NID 1 & CRV NID 2 though our local layer 3 network switches in implementing CRV package B+. We intend to migrated from static to BGP routing for our voice and AMHS services in the CRV network configuration when we implement CRV Package B+ and this plan for Q2 of 2022.

2.4.6 The diagram below depicts the propose upgrade of Fiji CRV network to Package B+.
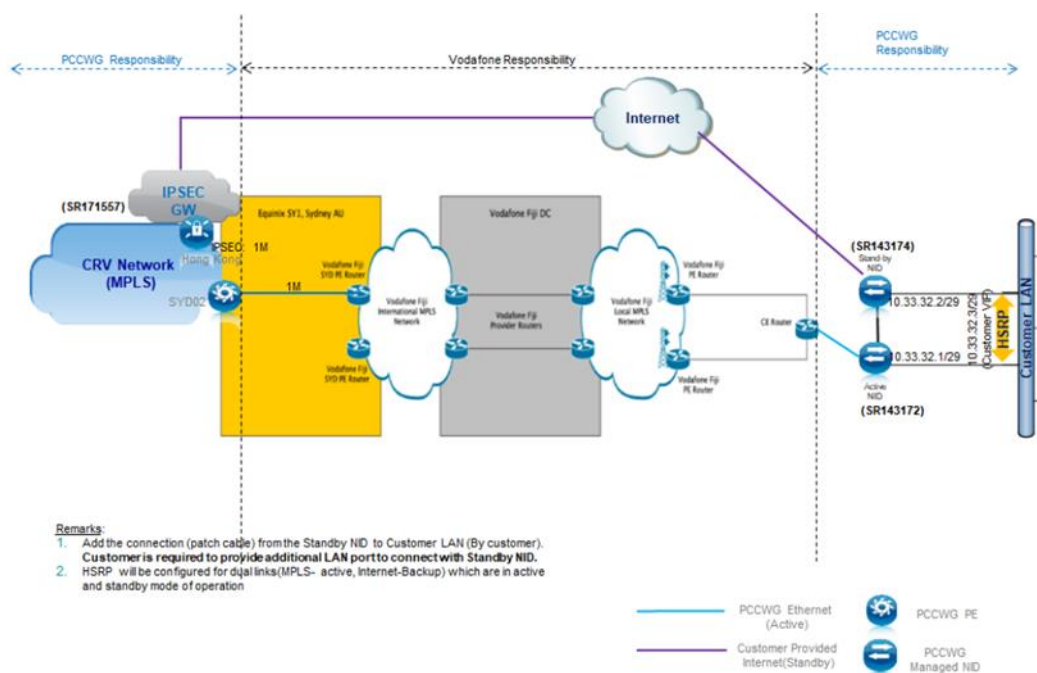
3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matter as appropriate

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