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FAA IWXXM Implementation Status

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Webinar on the implementation of the ICAO Meteorological Information Exchange Model (IWXXM), 27 to 29 October 2020

FAA CRV CONFIGURATION

- Common aeRonautical Virtual Private Network (CRV) is an MPLS based network that provides Internet Protocol (IP) service end-to-end between ANSPs
- CRV is capable to provide primary and backup connections as well as increasing bandwidth
- CRV provider is the only provider responsible for the service between ANSPs. Thus, failure detection and correction are performed in a timely manner

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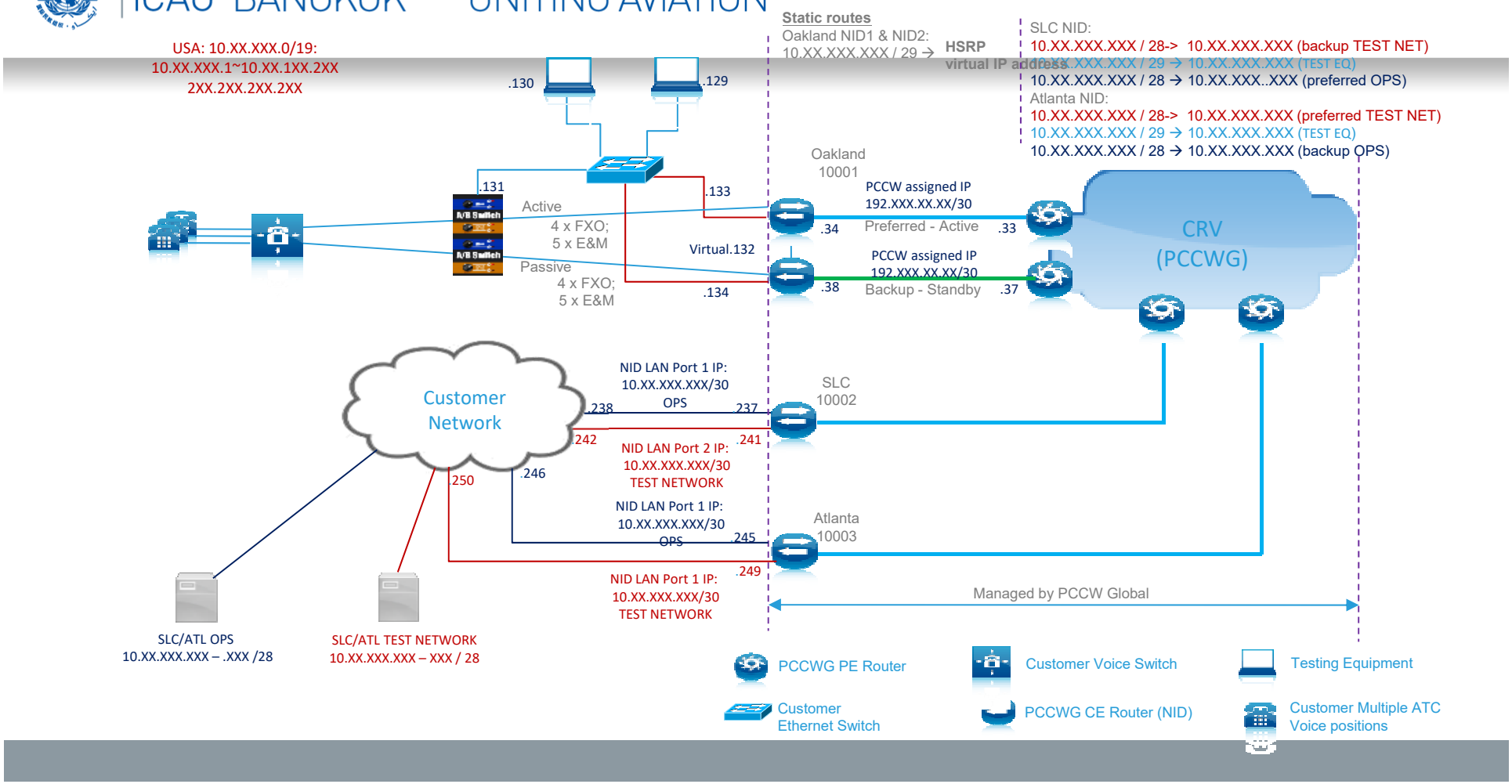
High Level Solution Diagram for the USA (20-Sept-2018)



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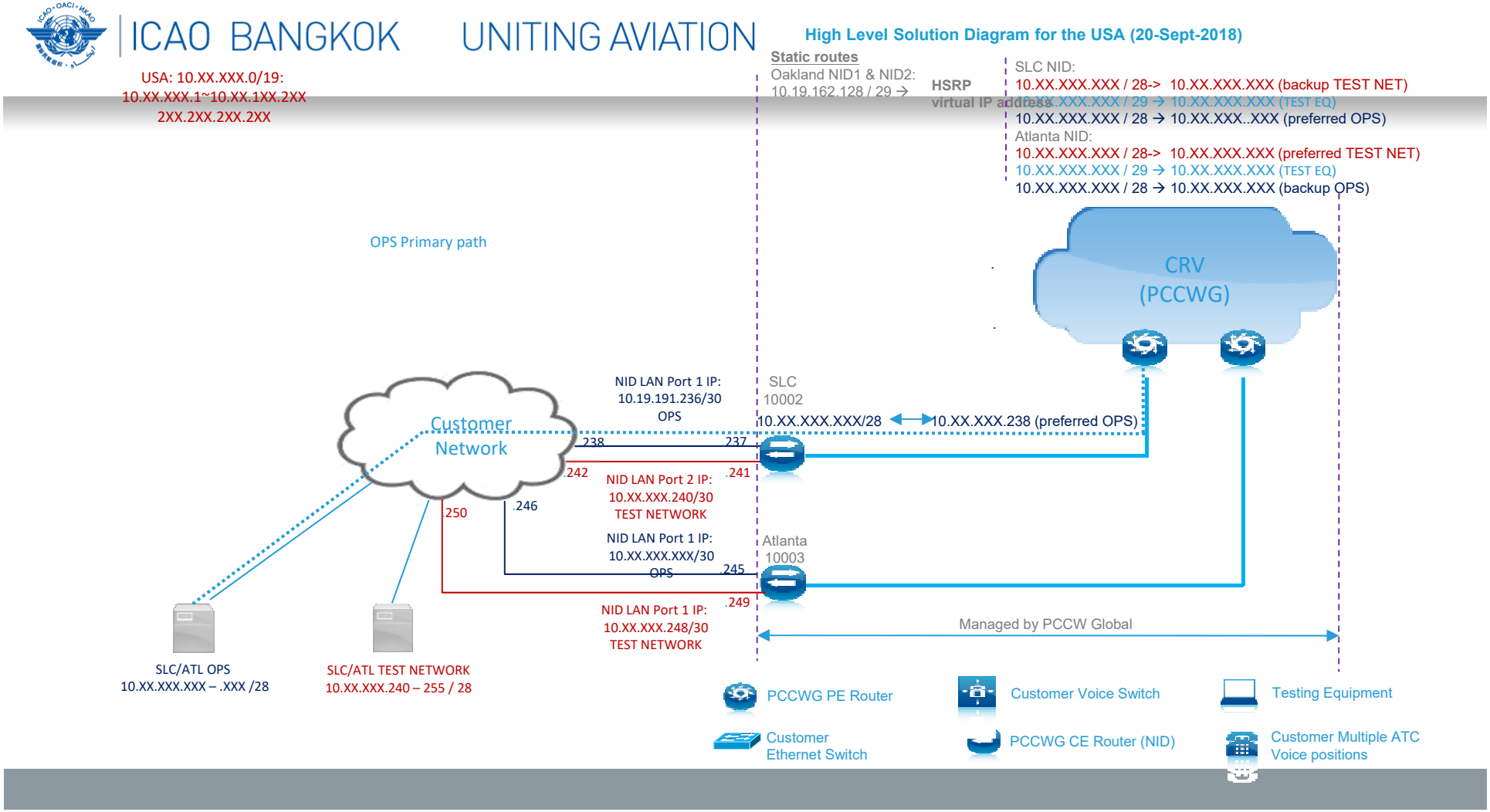
High Level Solution Diagram for the USA (20-Sept-2018)



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High Level Solution Diagram for the USA (20-Sept-2018)

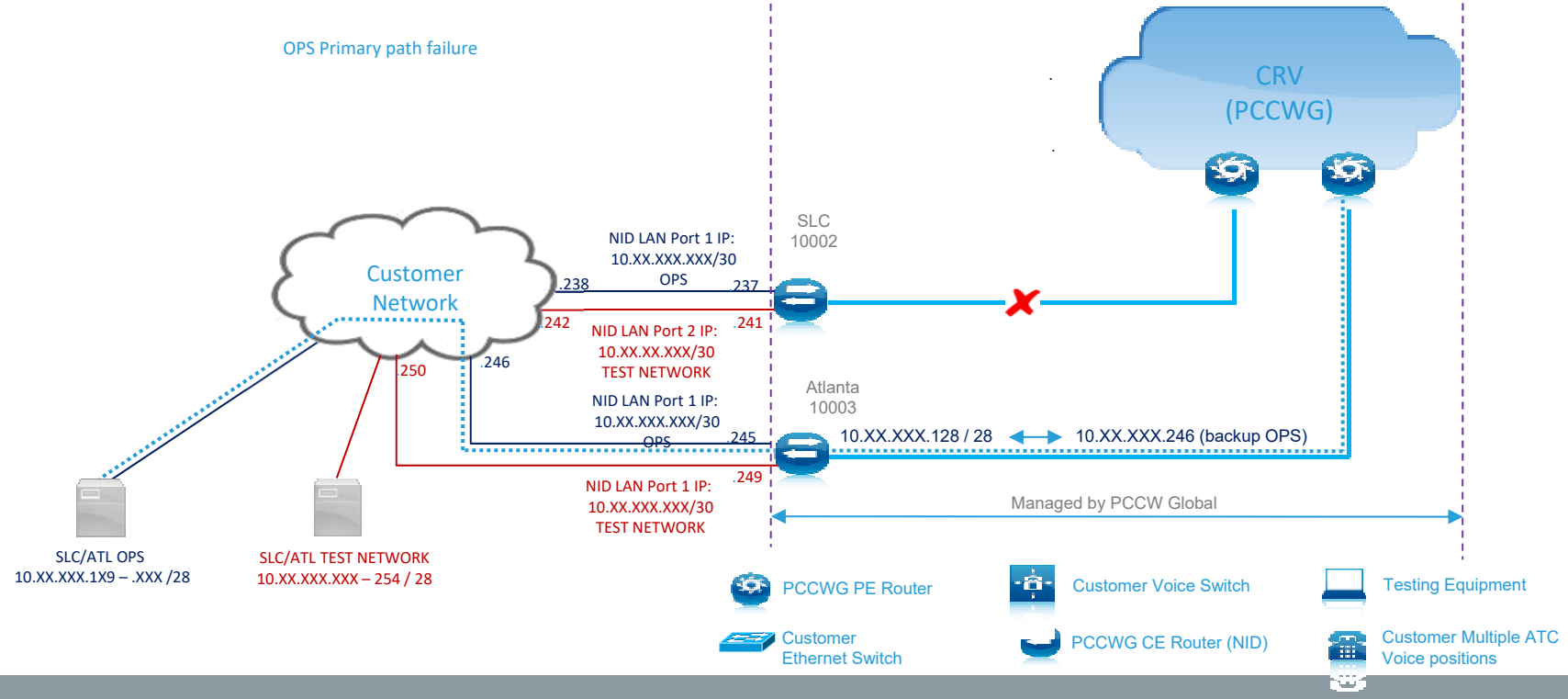
USA: 10.XX.XXX.0/19:
10.XX.XXX.1~10.XX.1XX.2XX
2XX.2XX.2XX.2XX

Static routes
Oakland NID1 & NID2:
10.19.162.128 / 29 →

HSRP
virtual IP address

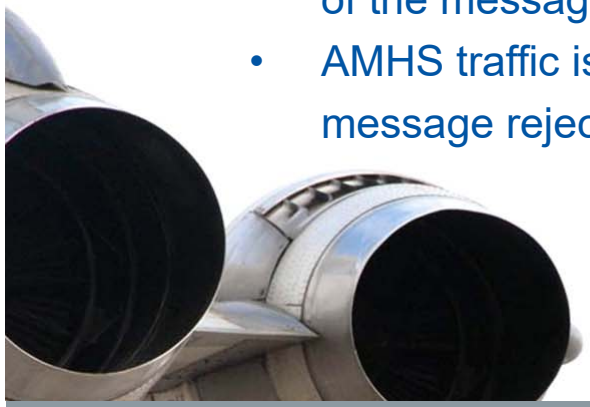
10.XX.XXX.XXX / 28-> 10.XX.XXX.XXX (backup TEST NET)
10.XX.XXX.XXX / 29 → 10.XX.XXX.XXX (TEST EQ)
10.XX.XXX.XXX / 28 → 10.XX.XXX..XXX (preferred OPS)
Atlanta NID:
10.XX.XXX.XXX / 28-> 10.XX.XXX.XXX (preferred TEST NET)
10.XX.XXX.XXX / 29 → 10.XX.XXX.XXX (TEST EQ)
10.XX.XXX.XXX / 28 → 10.XX.XXX.XXX (backup OPS

OPS Primary path failure

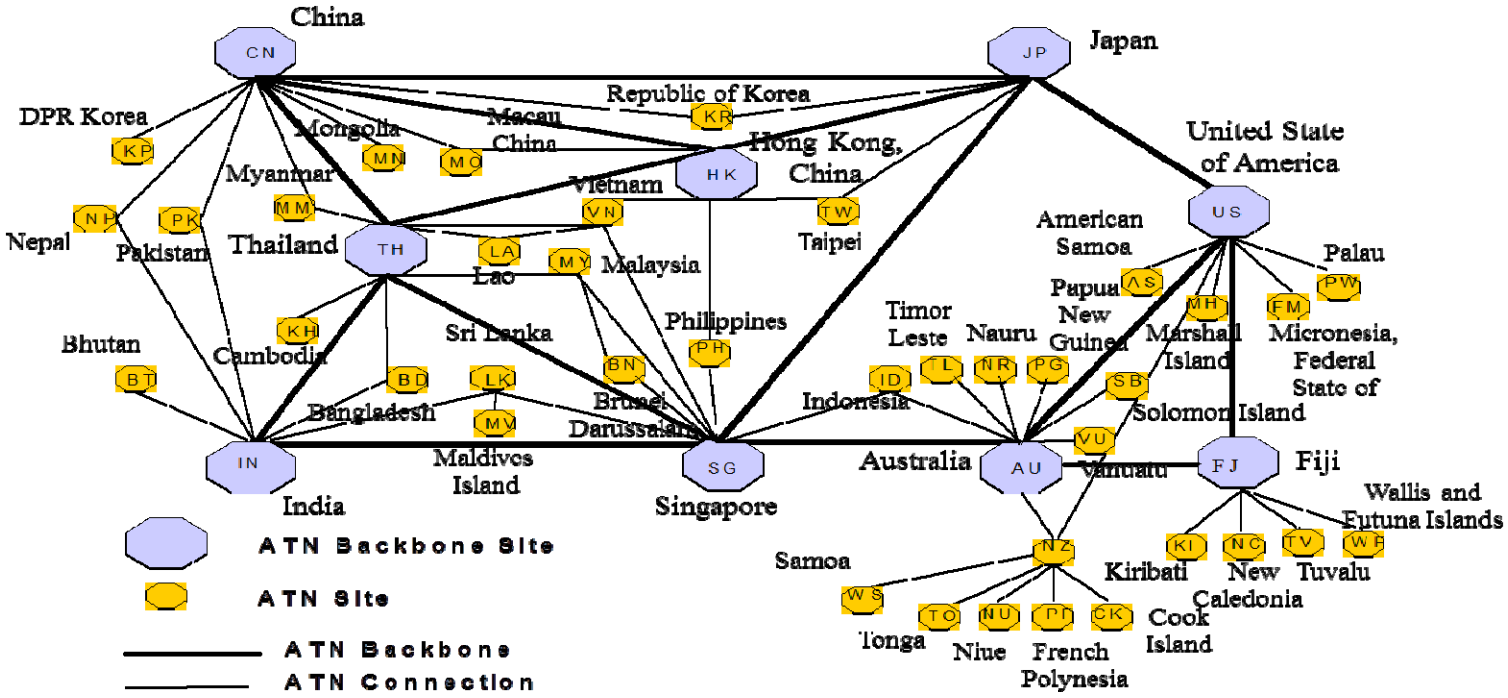


AMHS ROUTING

- Air Traffic Service Message Handling System (AMHS) is based on X.400 protocol
- AMHS traffic is routed by its AMHS address header
- AMHS routing is coordinated through regional arrangement and bi-lateral agreements to distribute the message to the end user
- There are primary routing and alternate routing paths to ensure distribution of the message in a timely manner
- AMHS traffic is monitored by each ANSP for message queuing, if any, or message rejection that requires alternate routing



AMHS ROUTING



AMHS SUPPORTS IWXXM

- AMHS with underlying IP CRV network can support IWXXM distribution
- AMHS will need to implement File Transfer Part Body (FTBP) to support IWXXM as an attachment
- It's recommended IWXXM distributor to coordinate with its respective AMHS owner to ensure AMHS bandwidth is sufficient

AMHS SUPPORTS IWXXM (cont'd)

- ANSPs sending IWXXM must also confirm that receiving ANSPs are able to receive and process FTBP with IWXXM
- Alternate/secondary routing will need to be re-examined to ensure alternates are FTBP-capable
  - Current secondary route AMHS systems may not support FTBP along entire route
  - Must be certain of no AMHS/AFTN gateways

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THANK YOU