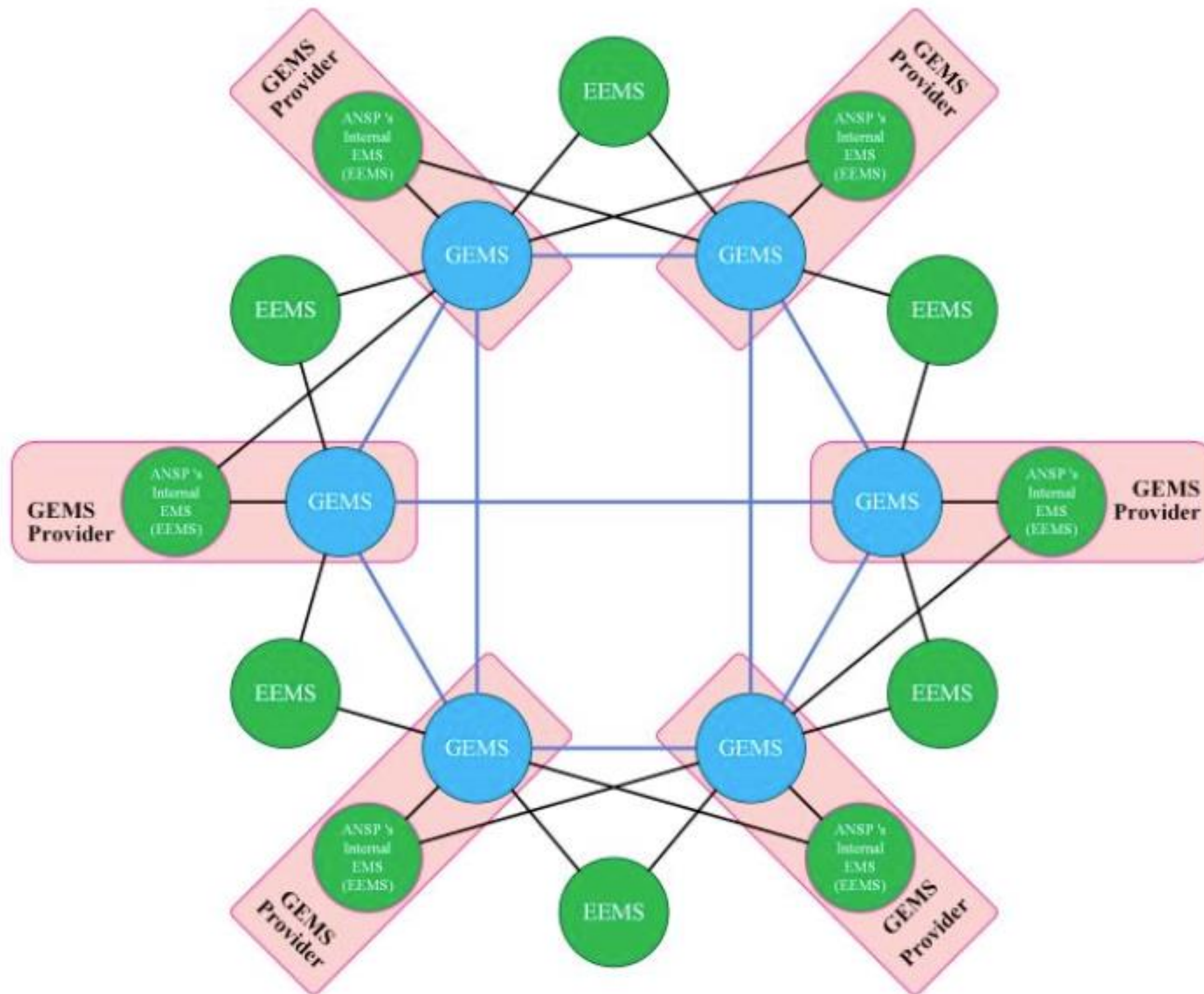


ICAO APAC CRV – SWIM Experts Workshop

Review of CRV II Specifications and APAC SWIM Architecture

Refined APAC SWIM Hierarchical Architecture



To develop a regional SWIM technical infrastructure prototype over [CRV](#) and the [Internet](#)

Gateway EMS

Australia (tentative)

China

Fiji

Hong Kong China

India

Japan

Republic of Korea

Singapore

Thailand

USA

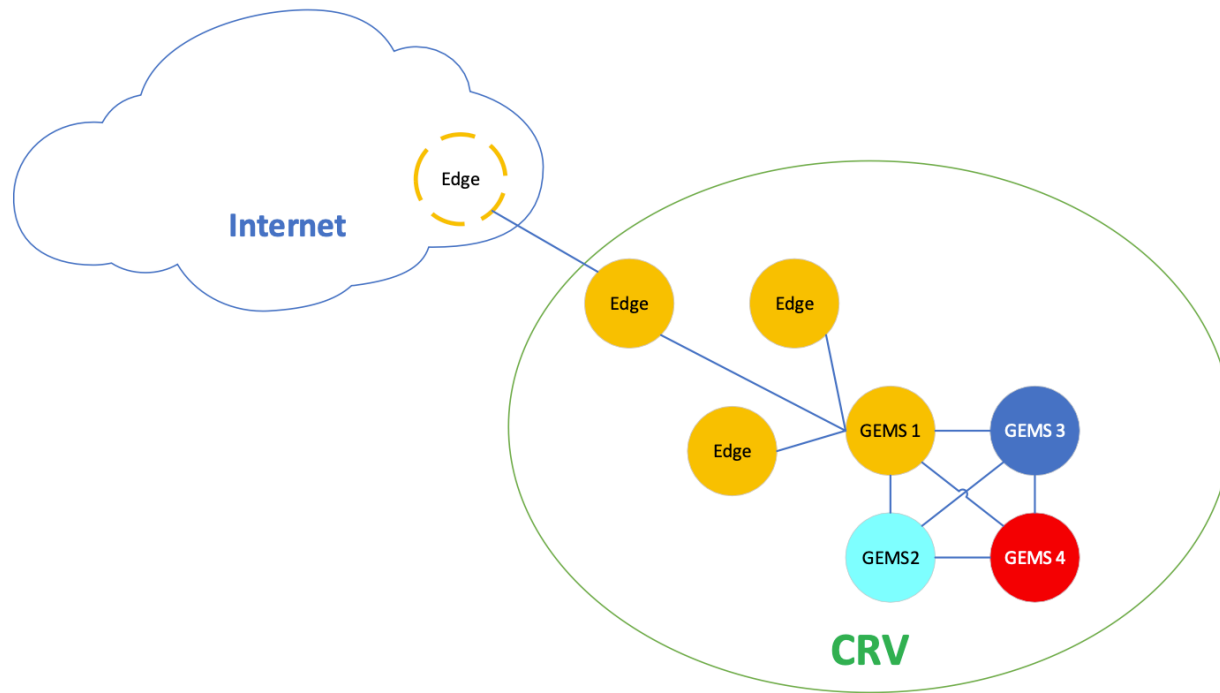
Refined APAC SWIM Hierarchical Architecture

- > To address issues presented in SWIM TF/9 – WP/10
- > Optimized connections & Avoiding a single point of failure
 - Between Gateway EMSs
 - ⇒ Not a full mesh
 - ⇒ Connect to at least 2-3 Gateway EMSs
 - Between Edge EMS and Gateway EMS
 - ⇒ Connect to at least 2 Gateway EMSs
- > Gateway EMS provider
 - Physically separate their internal EMS (Edge EMS) from Gateway EMS
- > To conduct SWIM TI test using residual bandwidth of operational CRV

Initial QoS Metrics for Gateway EMS

Metric	Recommended values
Availability	$\geq 99.0\%$ (downtime of 7.2 hours/month)
Latency	<ul style="list-style-type: none">Operational use cases: In the order of secondsPost-operational use cases: In the order of minutes
Throughput	<ul style="list-style-type: none">Dependence factors<ul style="list-style-type: none">> Number of Edge EMSs connecting to> Data size> Data update ratePossible measurement unit: KB/unit time or messages/unit time

Internet Connectivity in APAC SWIM Architecture



- > To support stakeholders who have no direct access to CRV
- > One or more Edge EMS connect to both CRV and the Internet

Significant Timeline

