LINESPEED

Network Services Report

January 17, 2025

Event: IEEE 802 Wireless Groups Interim Session
Venue: Kobe Conference Centre
Dates: January 13-17, 2025

SUMMARY

Linespeed Events, LLC is providing comprehensive wired and wireless network services in 10 meeting rooms, 3 foyers and 2 offices in the Kobe Conference Centre (KCC). Linespeed deployed redundant routers configured to failover in case of equipment failure. Linespeed is also providing a local document server synchronized in near real time with mentor.ieee.org.

The local area network (LAN) supporting the meeting space is comprised of a main distribution frame (MDF) and two intermediate distribution frames (IDF). Linespeed's wireless local area network (WLAN), comprised of 29 IEEE 802.11 a/g/n/ac/ax compliant WiFi 6e access points (Figure 1.) provided Wi-Fi connectivity to laptops, tablets, smartphones, smartwatches, etc. at this session. Due to the advent of MAC randomization, the Linespeed network saw 2243 unique MAC addresses connected to the network during the week. A peak of 875 wireless devices were simultaneous connected to the network during the AM2 meetings on Wednesday.

NTT in coordination with KCC provided IEEE 802W with a symmetrical 1Gb/s Internet circuit and a /29 CIDR block of public routable IPv4 address space for this event. The circuit was unexpectedly rate limited to 300Mb/s by NTT. This precipitated performance issues at the beginning of the week when the circuit became saturated with traffic. Hiroshi Mano worked successfully with NTT to remove the rate limit late Tuesday morning, thereby eliminating the performance issues experienced by the attendees.
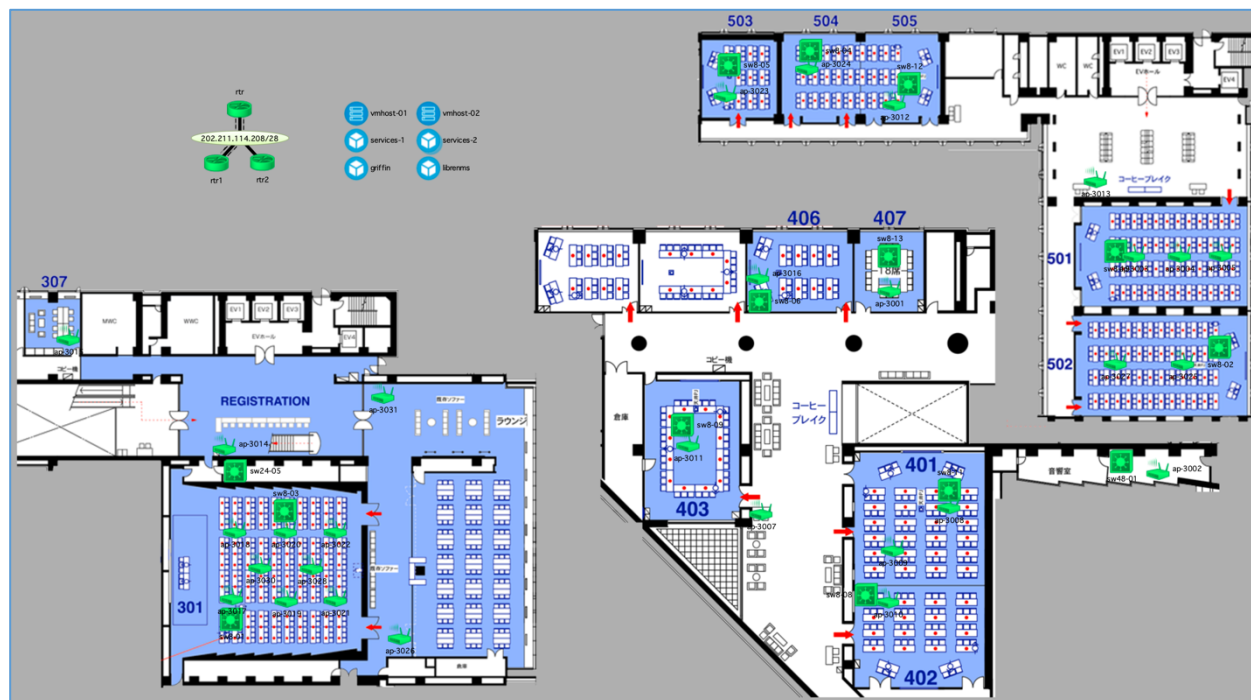
Linespeed tested all Cat5/Cat6 copper lines interconnecting the IDFs and meeting room ports prior to deploying network hardware.

Bandwidth utilization graphs for the week, 72 hours, 48 hours and 24 hours are shown in Figures 2-5.

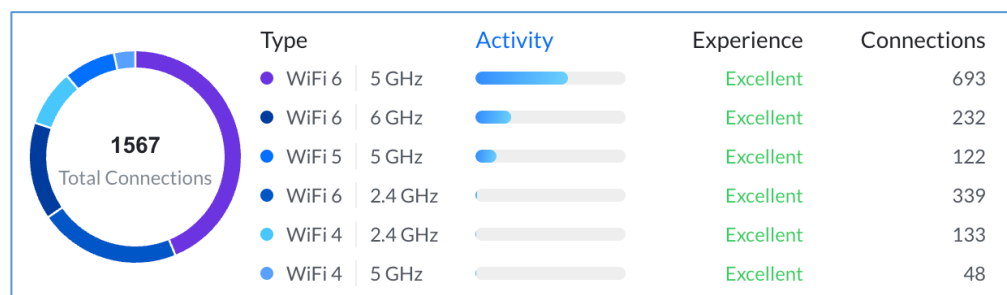No other problems or issues with the network were reported during the week.

WLAN DEPLOYMENT
Figure 1. Twenty-nine access points were deployed throughout the meeting space.

FINAL STATISTICS (as of 1PM 1/17/25)
- Total Internet data: 4.22 TB
- Total Internet data inbound: 3.50 TB
- Total Internet data outbound: 0.712 TB
- Inbound Internet bandwidth utilization
  - Peak: 663.22 Mb/s
  - 95th Percentile: 126.34 Mb/s
- Outbound Internet bandwidth utilization
  - Peak: 126.34 Mb/s
  - 95th Percentile: 44.43 Mb/s
- Maximum concurrent wireless network associations: 875 unique devices

Type		Activity	Experience	Connections
WiFi 6	5 GHz		Excellent	693
WiFi 6	6 GHz		Excellent	232
WiFi 5	5 GHz		Excellent	122
WiFi 6	2.4 GHz		Excellent	339
WiFi 4	2.4 GHz		Excellent	133
WiFi 4	5 GHz		Excellent	48

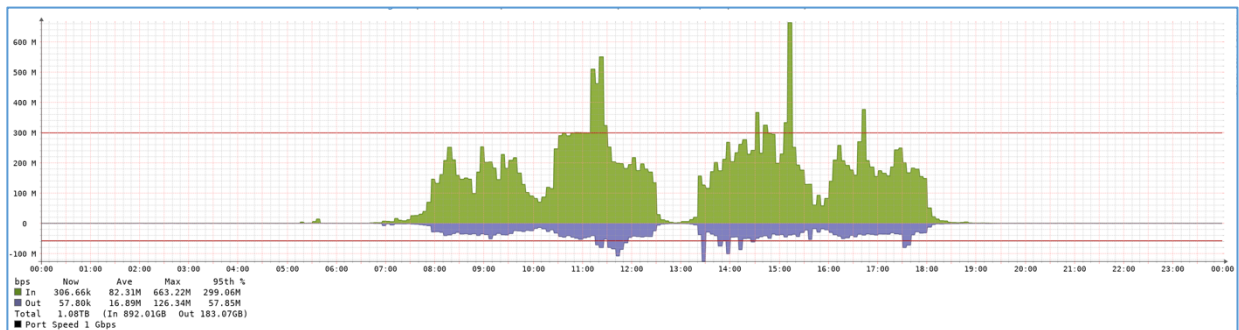**1567** Total Connections

BANDWIDTH UTILIZATION

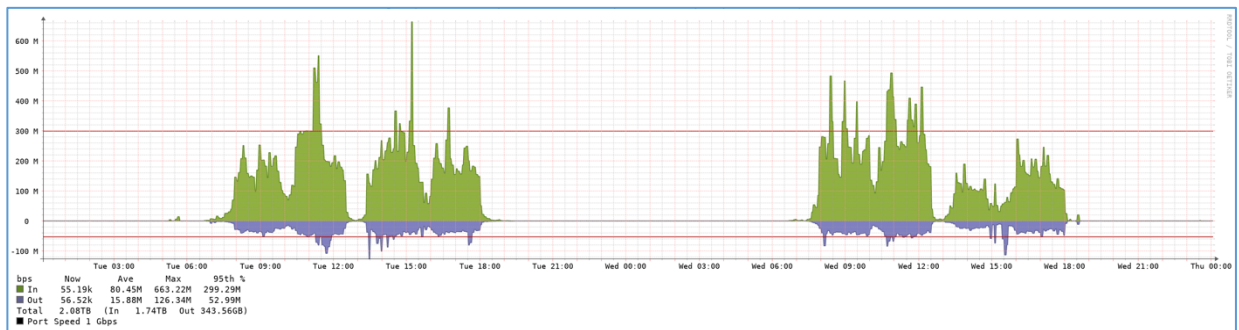Figure 2. External Bandwidth: past 24 hours.

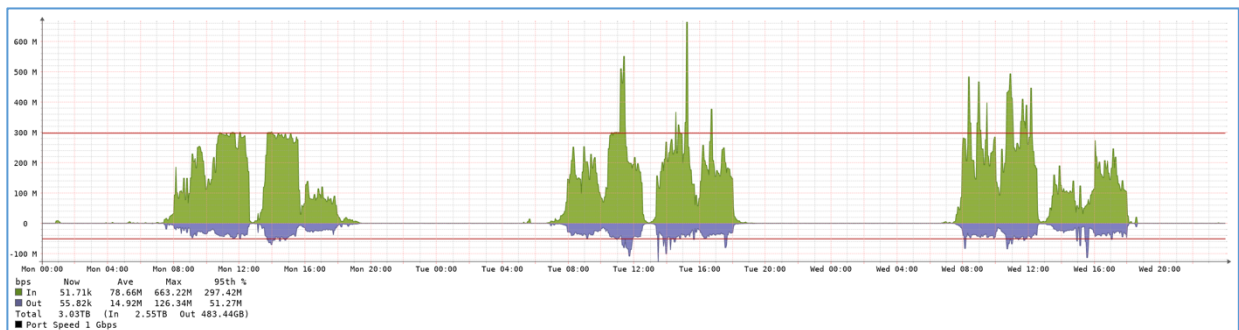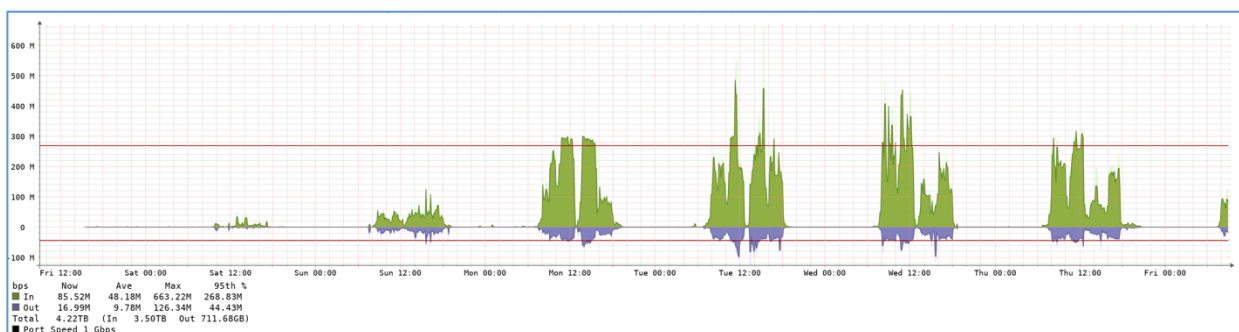Figure 3. External Bandwidth: past 48 hours.

Figure 4. External Bandwidth: past 72 hours.

Figure 5. External Bandwidth: past week.