LINESPEED

Final Network Services Report
November 18, 2023

Event: IEEE 802 Plenary Session
Venue: Marriott Marquis Queens Park Bangkok
Dates: November 14-18, 2023

SUMMARY

Linespeed Events, LLC is providing comprehensive wired and wireless network services in 19 meeting rooms, ballroom foyer and offices in the Marriott Marquis Queens Park Bangkok Hotel (MMQP). 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 four intermediate distribution frames (IDFs). Linespeed's wireless local area network (WLAN), comprised of 30 IEEE 802.11 a/g/n/ac/ax compliant WiFi 6 access points is currently providing Wi-Fi connectivity to 894 unique devices (laptops, tablets, smartphones, smartwatches, etc.) at this session (Figure 1.)

MMQP provided IEEE 802 with a symmetrical 1Gb/s Internet circuit provisioned for 750Mb/s and a /29 CIDR block of public routable IPv4 address space for this event.

Linespeed tested all Cat5 copper lines interconnecting the IDF and meeting room ports prior to deploying network hardware. The wired infrastructure in the hotel meeting space is in generally poor condition. Many meeting rooms were devoid of usable data ports due to failed pins, crossed pairs, shorts, broken connections, missing jacks, unlabeled jacks and cable lengths exceeding ANSI/TIA/EIA 568-B Telecommunications Cabling Standards. As a result, Linespeed had to daisy chain wired connections over a span of up to 5 switches to provide connectivity to some meeting rooms. This created undesirable single points of failure, which could potentially impact large portions of the network. The hotel has been apprised of the situation and is responding in a cooperative manner to remedy the issues.

Bandwidth utilization graphs for the week and a 24 hour period are represented in Figures 2-3.
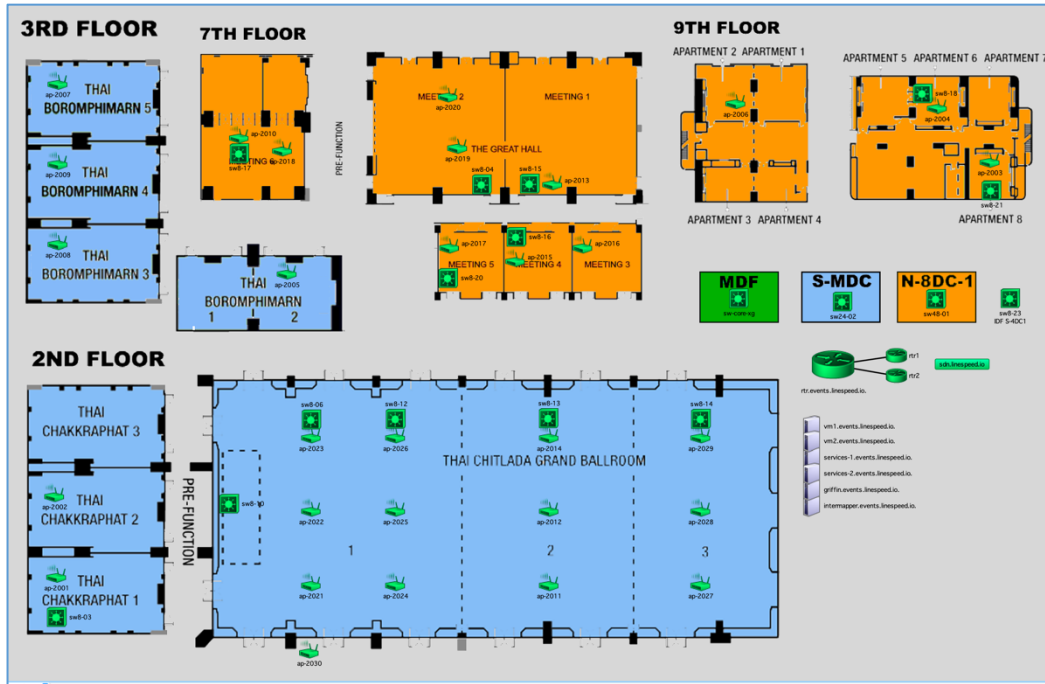
WLAN DEPLOYMENT

Figure 1. Thirty access points were deployed throughout the meeting space.

FINAL STATISTICS (as of 9AM 11/16/22)

- Total Internet data: 2.32 TB
- Total Internet data inbound: 1.93 TB
- Total Internet data outbound: 0.391 TB
- Inbound Internet bandwidth utilization
  - Peak: 235.97 Mb/s
  - 95th Percentile: 128.95 Mb/s
- Outbound Internet bandwidth utilization
  - Peak: 74.35 Mb/s
  - 95th Percentile: 23.25 Mb/s
- Wireless network associations: 894 unique devices
  - WiFi 6 – 414
  - WiFi 5 – 401
  - WiFi 4 – 79
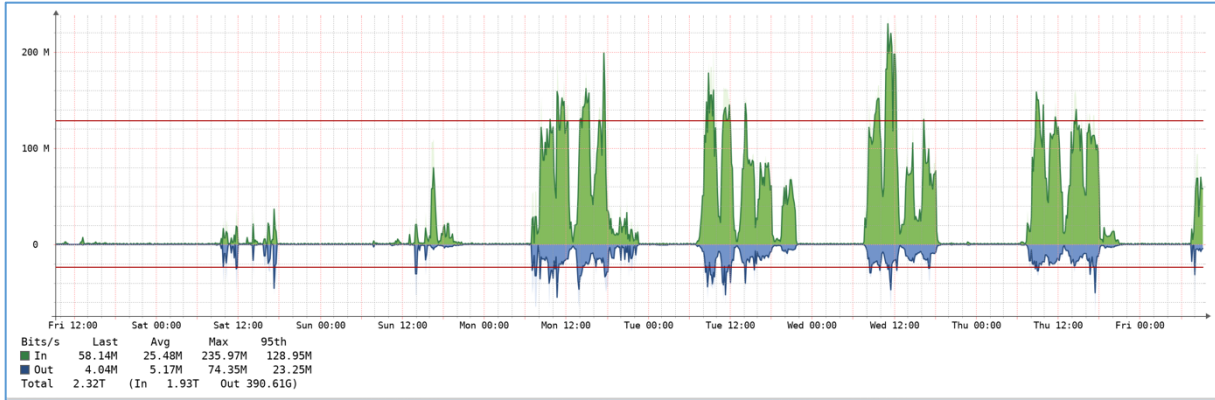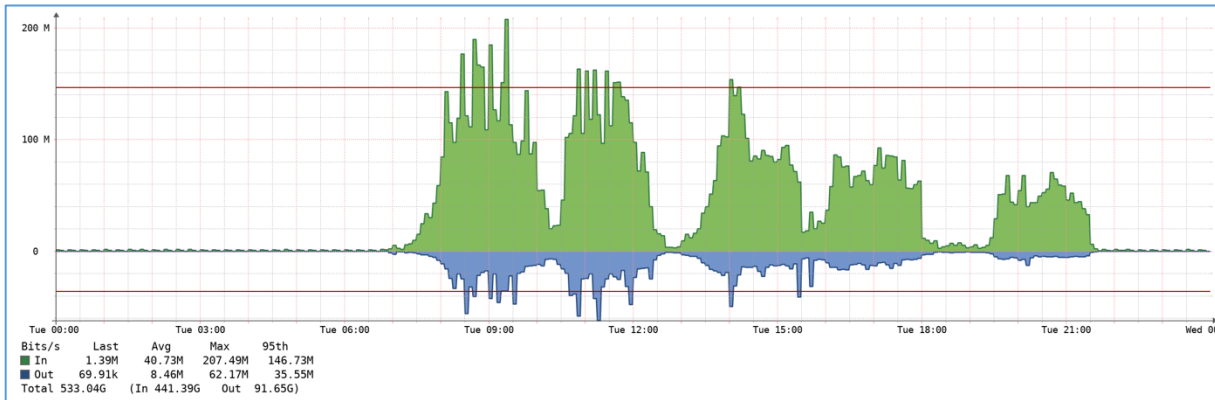- Wired network clients: 47 unique devices

BANDWIDTH UTILIZATION

Figure 2. External Bandwidth: one week.

Figure 3. External Bandwidth: 24 hours.