LINESPEED

Final Network Services Report
November 15, 2019

Event: IEEE 802 Wireless Groups Interim Session
Venue: Hilton Waikoloa Village
Dates: November 11-15, 2019

SUMMARY

Linespeed Events, LLC is providing comprehensive wired and wireless network services in 20 meeting rooms, foyers and offices in the Hilton Waikoloa Village (HWV) Convention Center. 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 three intermediate distribution frames (IDFs). Linespeed's wireless local area network (WLAN), comprised of 41 IEEE 802.11 a/g/n/ac compliant access points is currently providing Wi-Fi connectivity to 1550 unique devices (laptops, tablets, smartphones, smartwatches, etc.) at this session (Figure 1.)

HWV provided IEEE 802 shared access to a symmetrical 1Gb/s Internet circuit and a /29 CIDR block of public routable IPv4 address space for this event.

Linespeed shipped redundant routers configured to failover in case of an outage, unfortunately both routers arrived DOA. The HWV IT department generously loaned the group a router to temporarily use while we waited for a replacement router shipped via FedEx Overnight Air. The replacement router arrived Monday afternoon and was re-configured and put into service at 11:00PM Monday night. Wired and wireless services were completely restored and fully operational before Tuesday.

Linespeed tested all Cat5 copper lines interconnecting IDFs and meeting room ports prior to deploying network hardware.

Bandwidth utilization graphs for the past week, 48 hours and 24 hours are shown in Figures 4-6.
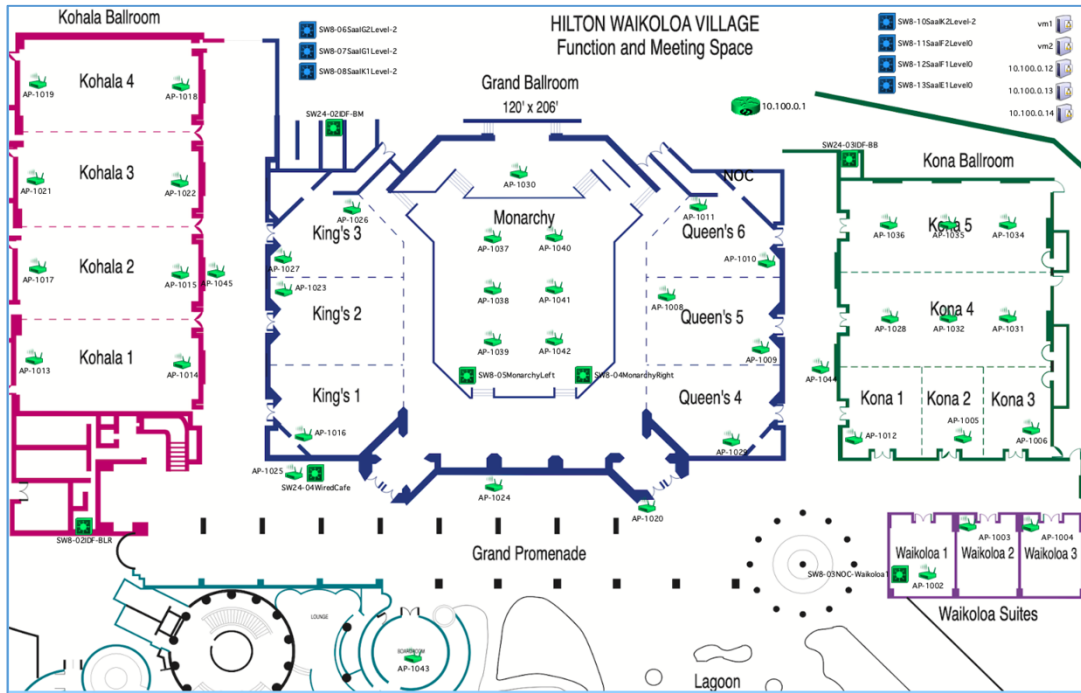
WLAN DEPLOYMENT

Figure 1. Forty-one access points were deployed throughout the meeting space.

FINAL STATISTICS

- Total Internet data inbound: 2.128 TB
- Total Internet data outbound: 0.821 TB
- Inbound Internet bandwidth utilization
  - Peak: 218.20 Mb/s
  - 95th Percentile: 116.34 Mb/s
- Outbound Internet bandwidth utilization
  - Peak: 101.26 Mb/s
  - 95th Percentile: 39.10 Mb/s
- Maximum wireless network associations: 1550 unique devices
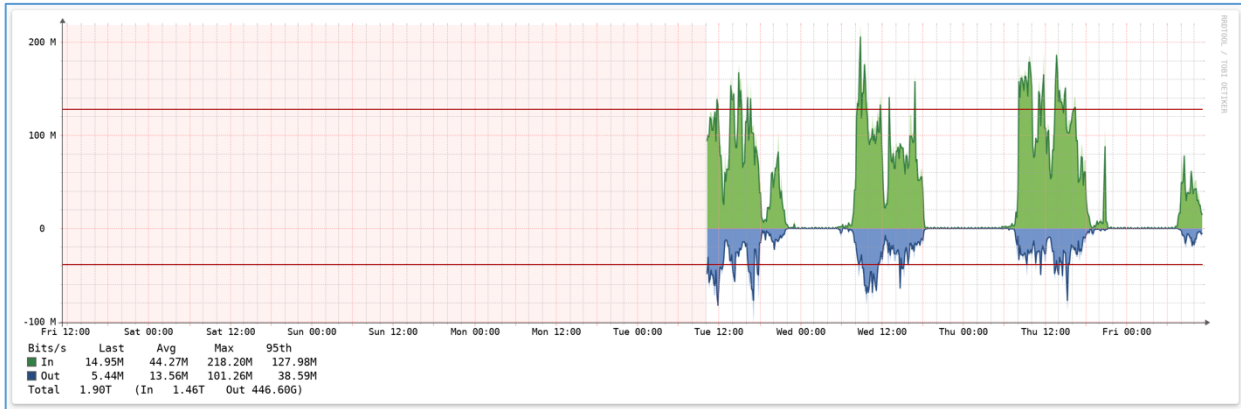
BANDWIDTH UTILIZATION

Figure 4. External Bandwidth: past week. Graph is incomplete due to the borrowed router (used at the beginning of the week) not logging traffic.
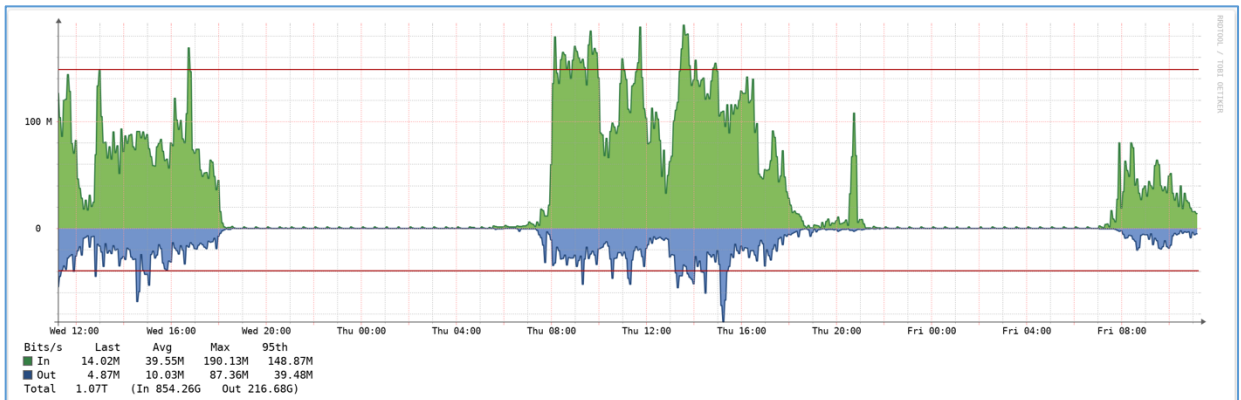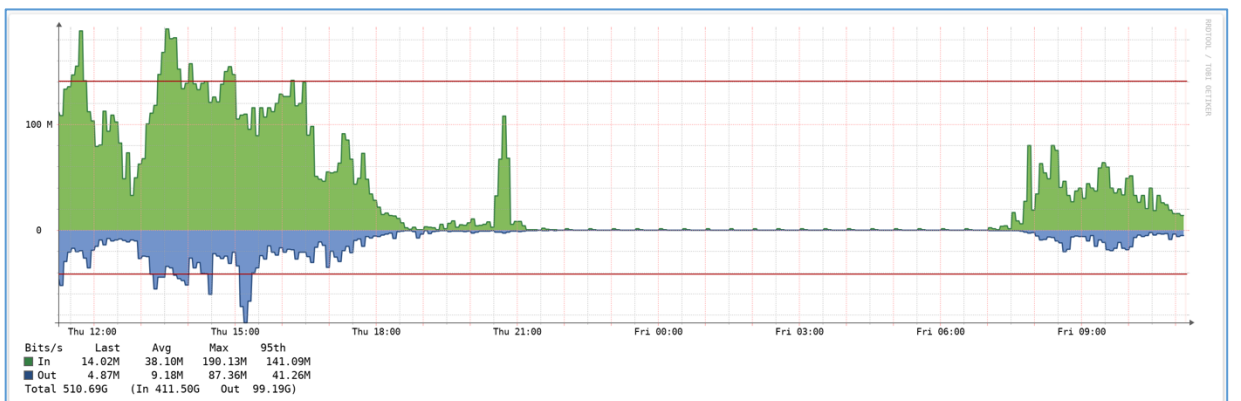

Figure 5. External Bandwidth: past 48 hours

Figure 6. External Bandwidth: past 24 hours