



## **Final Network Services Report**

September 15, 2017

**Event:** IEEE 802 Wireless Groups Interim Session  
**Venue:** Hilton Waikoloa Village  
**Dates:** September 11-15, 2017

### **SUMMARY**

Linespeed Events, LLC is providing comprehensive wired and wireless network services in 14 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 28 IEEE 802.11 a/g/n/ac compliant access points is currently providing Wi-Fi connectivity to 500 unique devices (laptops, tablets, smartphones, smartwatches, etc.) at this session (Figure 1.)

IEEE 802W has contracted with HWV to provide a symmetrical 100Mb/s Internet circuit and a /29 CIDR block of public routable IPv4 address space for this event.

Linespeed provisioned the network with redundant routers configured to failover in case of an outage.

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

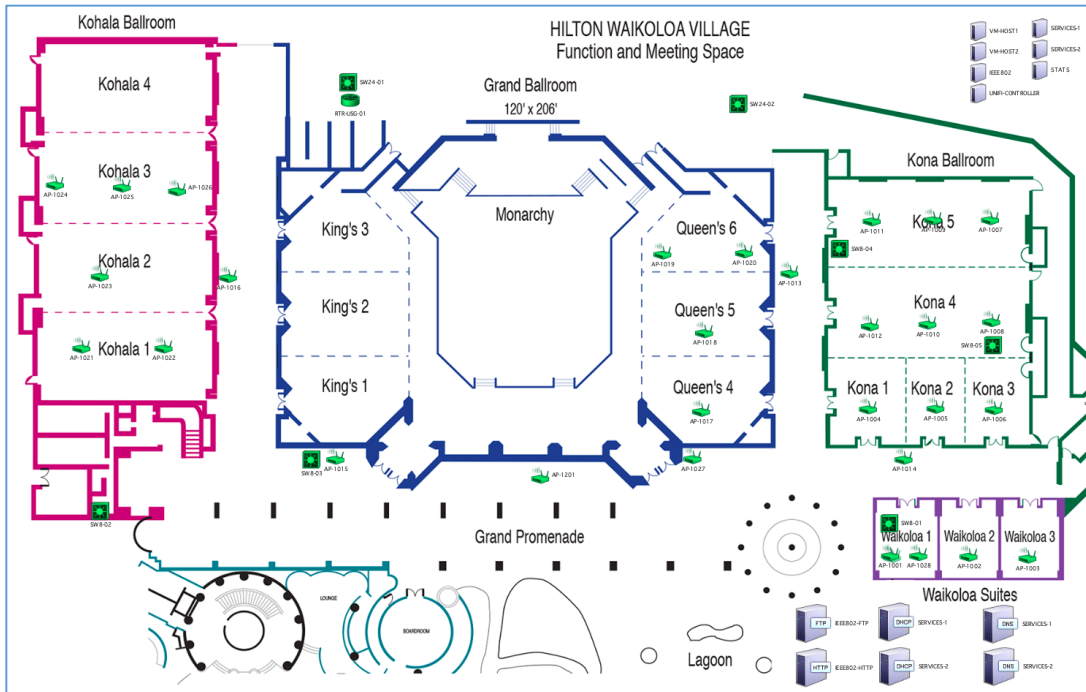


Figure 1. Twenty-eight access points were deployed throughout the meeting space.

## FINAL STATISTICS

- Total Internet data inbound: 664.44 GB
- Total Internet data outbound: 167.79 GB
- Inbound Internet bandwidth utilization
  - Peak: 78.53 Mb/s
  - 95th Percentile: 42.33 Mb/s
- Outbound Internet bandwidth utilization
  - Peak: 32.68 Mb/s
  - 95th Percentile: 11.61 Mb/s
- Maximum wireless network associations: 500 unique devices

## BANDWIDTH UTILIZATION

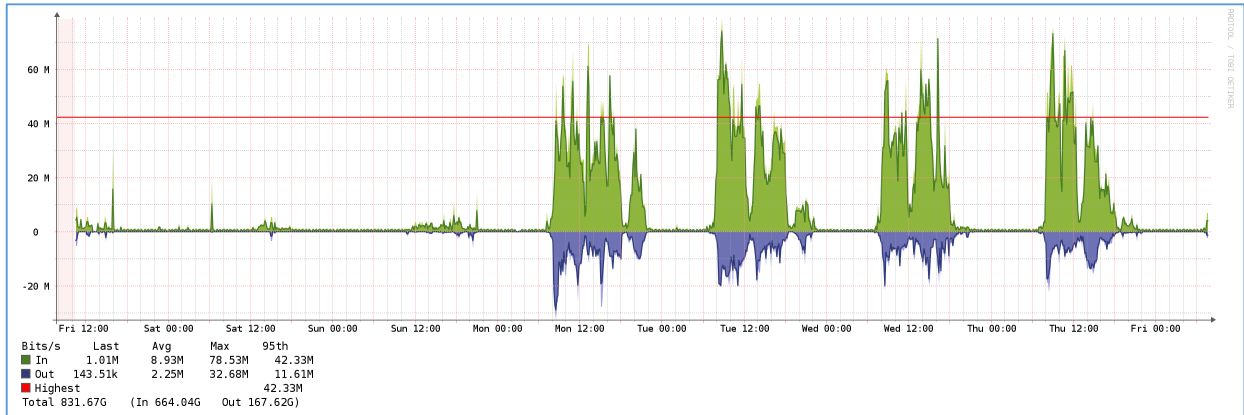


Figure 4. External Bandwidth: past week

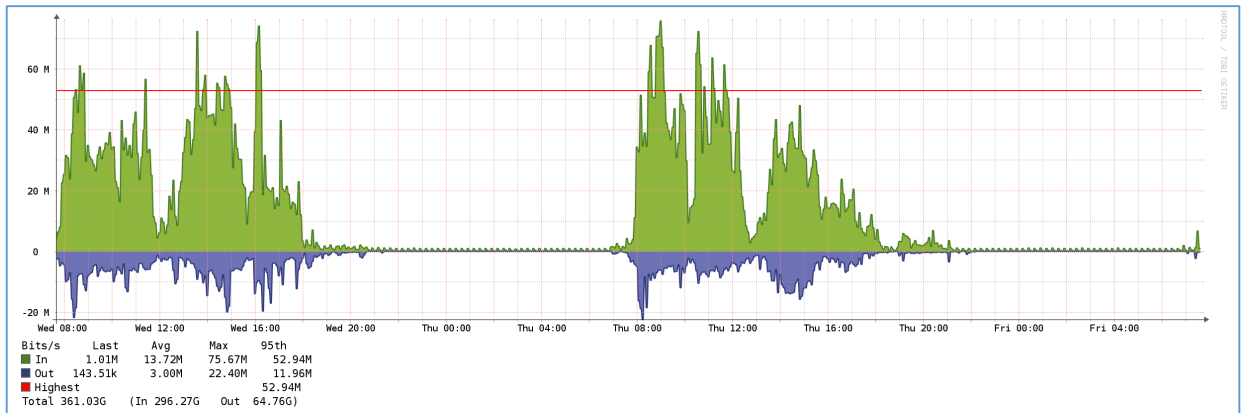


Figure 5. External Bandwidth: past 48 hours

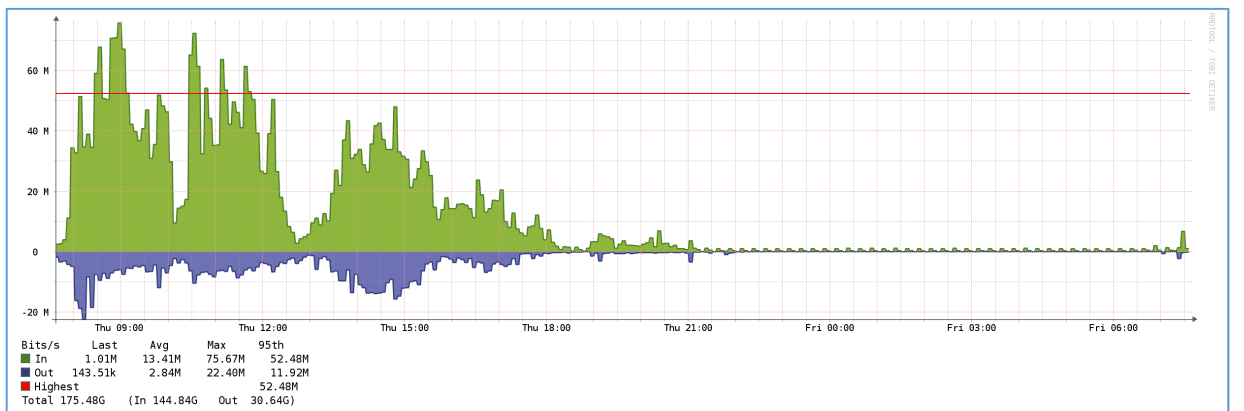


Figure 6. External Bandwidth: past 24 hours