



## **IEEE 802 Plenary Session**

Estrel Hotel  
Berlin, DE

## **Mid-Session Network Services Report**

March 11<sup>th</sup>, 2015

### **Summary**

Verilan, Inc. is providing comprehensive network services for the IEEE 802 March 2015 Plenary session at the Estrel Hotel in Berlin, DE.

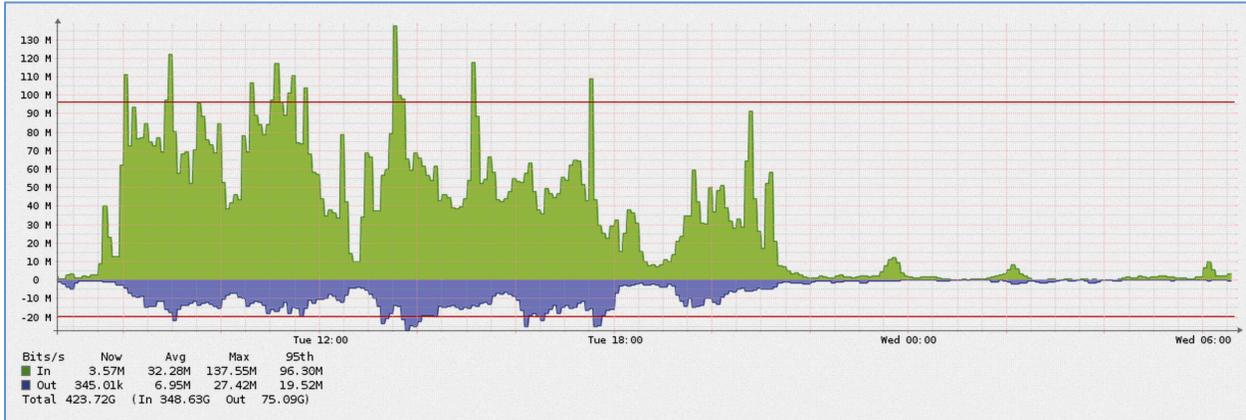
We are pleased to report that after a full infrastructure deployment, the network is now fully operational and supporting in excess of 1400 unique wireless devices including, laptops, tablets, smartphones, at al.

The Verilan Network Help Desk, located in the Grand Lobby Foyer of Wing 3, is providing support for all attendees during all scheduled meeting hours. All Help Desk client support requests have been addressed and fully resolved by the Verilan staff.

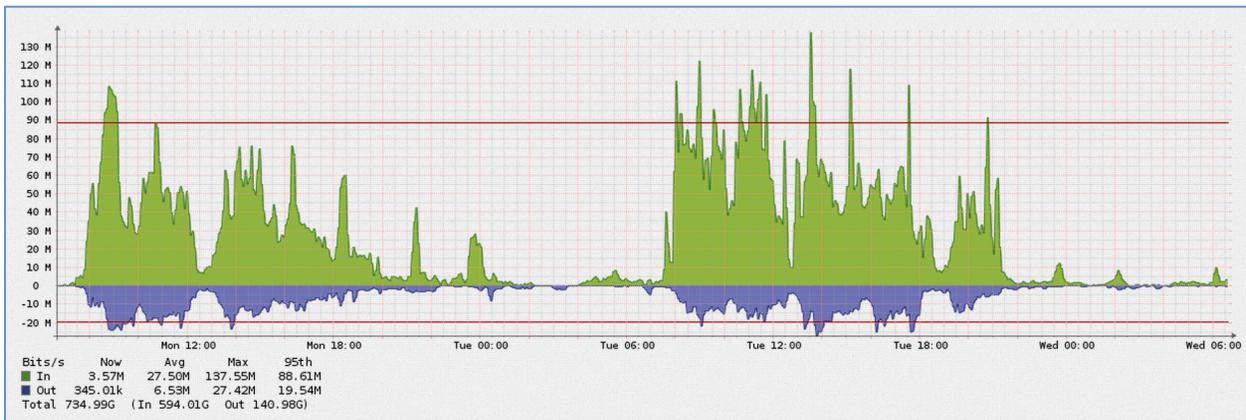
The Estrel hotel meeting space and conference center is provisioned with a 1-Gigabit fiber Internet circuit, capped at 600Mbps. IEEE 802 contracted 100Mbps of high speed Internet service (HSIA) for this plenary session. The Estrel hotel generously provided us access to the full 600Mbps of available bandwidth.

Comprehensive LAN and WLAN infrastructure including managed layer 3 switches were configured and deployed in the MDF, IDFs and 29 meeting rooms located in three wings of the hotel and the Estrel Conference Center. A total of seven IDFs were interconnected to the MDF via copper and OM1 optical links.

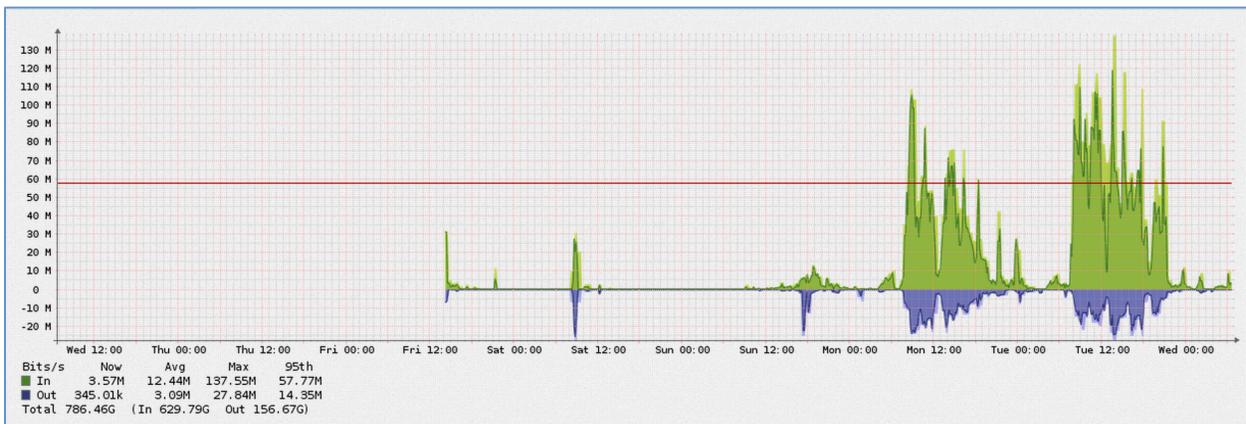
Peak inbound Internet bandwidth recorded during this session is currently 137.55Mbps. The 95<sup>th</sup> percentile bandwidth utilization over the past 24 hours is 96.30Mbps. The average throughput inbound data rate measured over the past 24 period is 32.50Mbps. The average throughput outbound data rate measured over the past 24 period is 7.04Mbps. Internet usage for the last 24 hour period is shown in Figure 1. Internet usage for the last 48 hour period is shown in Figure 2. Internet usage from Friday 3/6 to date is shown in Figure 3.



**Figure 1. Internet Usage: 24 hour period**



**Figure 2. Internet Usage: 48 hour period**



**Figure 3. Internet Usage: Friday 3/6 to date**

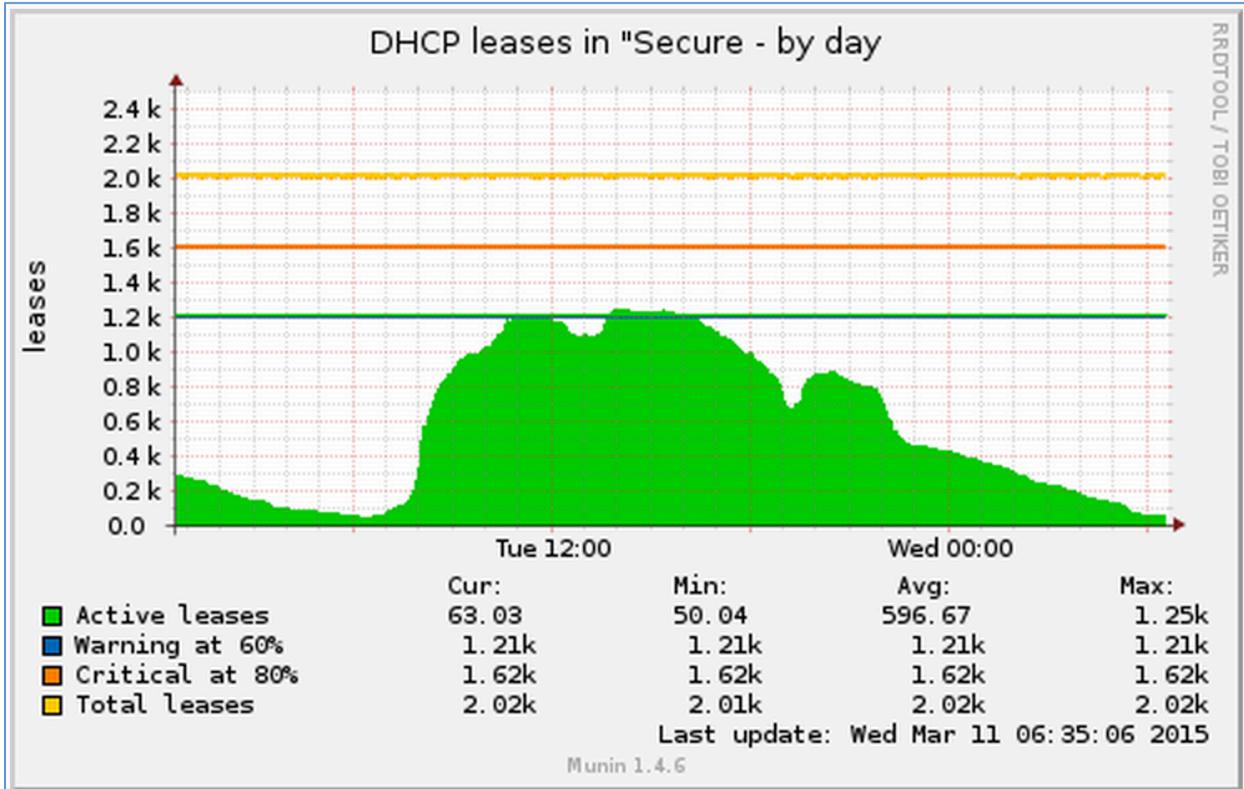


Figure 4. DHCP leases for SSID Verilan-secure.

## Network Issues

We are pleased to announce that has been a trouble free deployment with no network issues being reported.

## Network Deployment & Coverage

Verilan deployed a full Gigabit Ethernet LAN and a WLAN comprised of 52 enterprise grade tri-modal IEEE 802.11a/g/n wireless access points throughout the Estrel Hotel and Conference Center providing coverage for all IEEE 802 meeting spaces. Verilan is providing a Secure (WPA2-PSK) network for all registered attendees. The peak number of concurrent DHCP leases over the last 24 hours was 1250 as shown in Figure 4. The location of WAP deployments is shown in Figure 5.

Verilan also provided a separate wireless network, VLAN and address space to facilitate a MAC address randomization experiment for IEEE 802 Privacy EC, which has also been run at recent IETF and NANOG meetings.

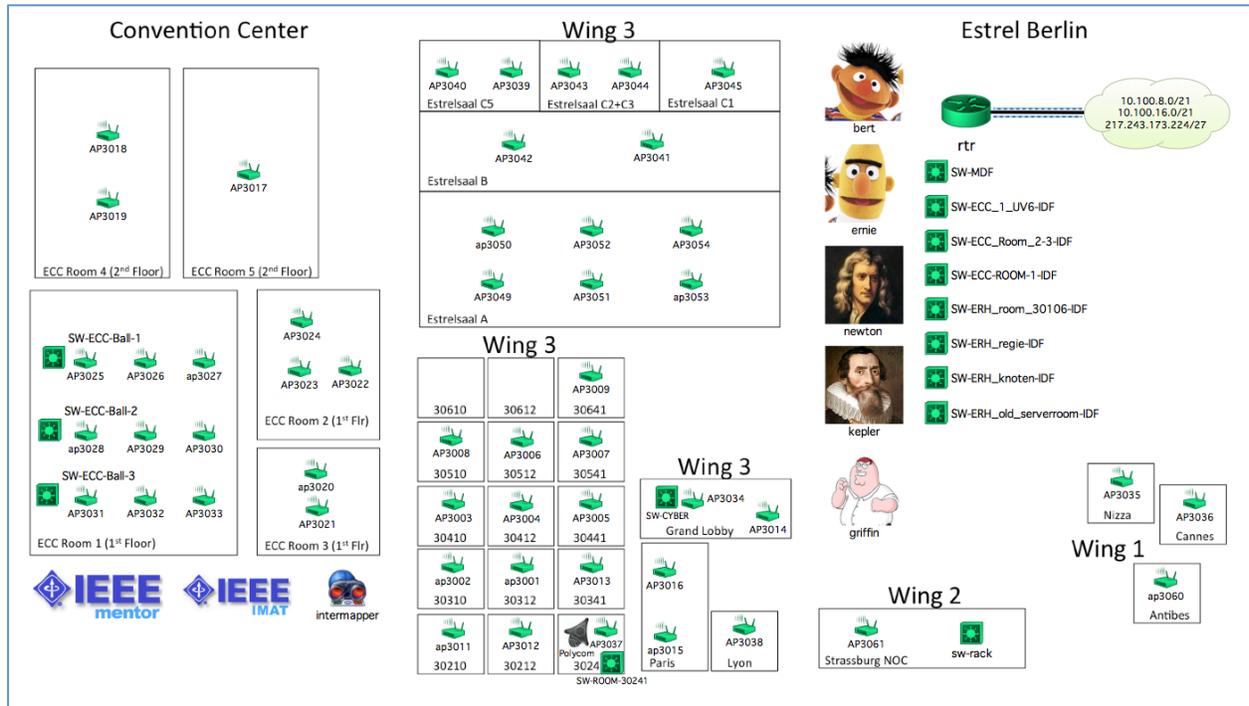


Figure 5. Wireless Access Point Deployment Plan