Network Services Report – Verilan Event Services
802 Plenary
Orlando, Florida, USA
Nov 6-9, 2017

Mid-week Status, November 8, 2017 , 1:00pm

Verilan is providing network infrastructure services to the IEEE's November, 2017 802 plenary at the Orlando Gran Caribe in Orlando, Florida.

External Connectivity, Routers, Core Switching
The Gran Caribe provided 300-500Mbit of available download capacity and 300-500Mbit of available upload capacity via their ISP, Windspeed, during the conference.
We had 8 external IP's from Windspeed prepared for an 8-way failover across 8 ports on two different routers. We didn't need to failover at all during the week. We've increased proxy caching to prevent looking like a DNS attack to commercial web providers like Akamai.

Infrastructure, Internal Connectivity, Servers
Physical layer connectivity on the back-end was a mix of multimode fiber and Cat5.
There were five wiring closets to coordinate.
The most interesting were getting connectivity to the two registration desks, one of which is just hosting an access point for hallway coverage. There are a couple of interesting fiber cross-connects to get fiber from one side of the convention center to the other. Those connections also served the Governor's and Regent's Boardrooms.
Large ballrooms were served by a link-aggregated port channel from the core switch.

Servers are VMWare virtual machines running on a local VMWare host.
There are local full backups of the VMs, full backups on a secondary server, an external hard drive with a backup of the Vms and offsite access to another pre-conference backup.
Snapshots run periodically and synch data from the VMs during operation. Re-activation of a failed VM from a backup or snapshot is on the order of 5-10 minutes, with a potential loss of ~10-15 minutes of change data.

Access Points
Wireless 802.11ac access points were deployed throughout the Gran Caribe. There are 65 deployed access points.

Wired Cafe
Almost no one used the wired cafe.
Which is too bad, since they would have gotten a 300-500Mbit pipe almost entirely to themselves.
Most just used the connection area as desk space.

Help Desk

We ran the "Network Operations Center" from the network help desk during this conference, as we had for the previous plenary, from 8-5 daily. It meant that more Verilan personnel were present and visible and seemed to help get us better feedback about the network from attendees.

- We had about a dozen requests for various video converters that we resolved.
- We had one gentleman that was unable to connect to the network at all. It looked like his security or VPN software was preventing him from getting to the network. We wired a port for him in his meeting.
- We loaned out a laptop for a few days to an attendee with a broken one.
- We helped about 6 people clear their Chrome cache and get access to the attendance tool.

Outages/Issues

There have been no network outages so far during this week.

Network Usage

We have had 1520 unique MACs connect to the network over the week, that comes to more than 2 devices per person.

Usage peaked on Tuesday, November 7th, at a sustained rate of 160Mbit down for about 2 hours in the mid-day, but generally stayed in the 100Mbits of inbound traffice range for most of the daytime hours of the conference, tapering off to about 20Mbits in the late night and early morning hours.

Individual AP's saw an average of about 6Mbits download and 1Mbit upload at their peak usage times.