

Link Test -- Apex Peak to Beacon Hill



Friday November 15, 2019, Richard, KO000 and Tom, KB7HTA journeyed up to Apex as part of a team to test the feasibility of a link between Apex Peak and Beacon Hill, which is on North end of the Moapa Valley. The other members of the team Wayne (photo above), N7HWM and Steve, KJ6WCS, drove to a spot next to the I-15 near Beacon Hill, Northeast of Glendale, NV. On site, Wayne and Steve setup a tripod with an Ubiquiti Rocket M2 attached to a 90° sector antenna (16 dBi) and LVMesh power box. They attached a laptop computer to the LAN port of the POE powering the node and began looking for connections.



Meanwhile, Richard (photo above) and Tom installed an Ubiquiti Rocket M2 attached to a 24 dBi dish onto a tower and pointed it toward Beacon Hill. After running the Ethernet cable into the shack, attaching the POE and connecting the LAN cable to the network switch, the link test between the two nodes began.

Wayne and Steve tested the link from their location to Apex and into Las Vegas Valley, while Richard and Tom completed additional work on Apex Peak. The link was tested by connecting to various nodes in Las Vegas and downloading camera photos. Wayne described the link as functional, but slow. See the node status page below.

The screenshot shows a web browser window with the following content:

- Browser tabs: KB7HTA-LVMESH-RM2S90-N6 (multiple instances)
- Address bar: Not secure | localnode:8080/cgi-bin/status
- Navigation: Apps, Amateur Radio Eme..., Antennas (MiMa) ~, W7HEN - Henderso..., N7HWM-hAP-Tunn..., N7HWM-HARC-CP..., N7HWM-HARC-MS..., KB7HTA-LVMESH-R..., 6-80M Ultra-portab..., Las Vegas Mesh - O...
- Logo: AREDN
- Section Header: **KB7HTA-LVMESH-RM2S90-N6**
- Message: **Location Not Available**
Ubiquiti Rocket M2 with 90° Sector Antenna for deployment for emergencies or Events Node 6
- Navigation: [Help](#), [Refresh](#), [Mesh Status](#), [WiFi Scan](#), [Setup](#), [Select a theme](#)
- Network Information:
 - Wifi address: 10.64.206.59 / 8
 - LAN address: 10.6.113.217 / 20
 - WAN address: none
 - default gateway: none
 - SSID: AREDN-10-v3
 - Channel: -2
 - Bandwidth: 10 Mhz
- System Information:
 - Signal/Noise/Ratio: -6B / -95 / 27 dB
 - firmware version: 3.19.3.0
 - configuration: mesh
 - system time: Wed Jan 30 2019 14:56:14 UTC
 - uptime: 2:25
 - load average: 0.11, 0.12, 0.10
 - free space:
 - Flash = 1532 KB
 - /tmp = 20200 KB
 - memory = 26280 KB
 - OLSR Entries:
 - Total = 162
 - Nodes = 33
- Footer: Part of the AREDN™ Project. For more details please visit [http://aredn.com](#)

In summary, the team felt the test was a success, however the link between Apex Peak and Beacon Hill will require a node equipped with a dish (24 dBi) vs a sector antenna (16 dBi) used for the test. The increased gain of the dish will more than quadruple the signal between the two sites, which should provide a reliable and speedy link.