

Virtual Tunnels

Written by Rick Kirchhof, NG5V - Last Updated Tuesday, 21 June 2011 07:39

New work by WB5AOH has made available virtual tunnels between remote groups of HSMM-MESH™ networks. This process use VTUN within Linux. The results were first released in public at Hamcom 2011.

Below is an image showing the mesh in several areas of Texas. They are remotely linked via the virtual tunnels. At center, the tunnel host in Austin, TX ties all remote segments together. Members of the tunnel may come and go as may tunnel endpoints. All are handled dynamically by OLSR. Labeled clockwise from 9 o'clock, AE5IB, Kip has two components in Plano, TX. Next is a KD5MFW component in the Austin Red Cross Chapter, tying in the W5KA club computers and roof antenna. Next is a lone WB5AOH component followed by the cluster from WA5VBP, John in Victoria, TX. John presented his VOIP developments at HAMCOM 2011. Next is the diamond notation of the 172.xx gateway available to all mesh members. At the 3 and 4 o'clock positions are twin links to a WX5 component being developed for a future NWS site. It is cross linked to the KD5MFW owned tunnel endpoint at the WB5AOH ham station. This cluster includes a bike mobile node. Last, at 7 o'clock we find the main KD5MFW tunnel to a group of nodes at his Round Rock, TX QTH.

The central host node is standard mesh hardware and is holding up fine under the tunnel traffic. We had periods of connectivity (not shown here) at HAMCOM 2011 but they were heavily constrained by the massive number of local Wi-Fi users who decimated the wan bandwidth. Late Saturday afternoon, many of the attendees had left and the tunnels popped back in, exposing advertised services on each of the remote mesh nodes.

Watch for more on virtual tunnels as the work moves from beta toward stable release code.

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