IETF 89: London, UK
NOC Report
Network Overview

- 2 x 1 Gb/s link to BT
- Production network-
  - v4 31.130.128.0/18 & 31.133.224.0/20
  - 130.129.0.0/16
- IETF network extended to hotel guest rooms and common areas (ietf-hotel SSID and wired connections) via 1Gb/s copper link
External Traffic

Bits/s  Now  Avg  Max  95th
In     109.62M  52.00M  283.58M  151.75M
Out    21.36M   16.97M  122.98M  45.83M
Total  4.31T   (In 3.25T Out 1.06T)
External IPv6 Traffic

Graph showing External IPv6 Traffic with the following statistics:

- **Bits/s In**: Current: 16.86M, Average: 7.04M, Max: 54.19M
- **Bits/s Out**: Current: 2.29M, Average: 692.66k, Max: 7.47M
Guestroom MAC's Seen

![Graph showing MACs over time with data points for Tuesday and Wednesday.]

<table>
<thead>
<tr>
<th>MACs</th>
<th>Now</th>
<th>Avg</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>547</td>
<td>732</td>
<td>1011</td>
</tr>
</tbody>
</table>
Guestroom & Public Traffic

### Rtr-a

<table>
<thead>
<tr>
<th>Bits/s</th>
<th>Now</th>
<th>Avg</th>
<th>Max</th>
<th>95th</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td>6.77M</td>
<td>3.70M</td>
<td>50.40M</td>
<td>20.24M</td>
</tr>
<tr>
<td>Out</td>
<td>32.34M</td>
<td>30.35M</td>
<td>124.93M</td>
<td>71.68M</td>
</tr>
<tr>
<td>Total</td>
<td>2.13T</td>
<td>(In 231.29G</td>
<td>Out 1.90T)</td>
<td></td>
</tr>
</tbody>
</table>

### Rtr-b

<table>
<thead>
<tr>
<th>Bits/s</th>
<th>Now</th>
<th>Avg</th>
<th>Max</th>
<th>95th</th>
</tr>
</thead>
<tbody>
<tr>
<td>In</td>
<td>273.26k</td>
<td>6.05M</td>
<td>53.79M</td>
<td>23.17M</td>
</tr>
<tr>
<td>Out</td>
<td>3.37k</td>
<td>367.24k</td>
<td>12.39M</td>
<td>1.87M</td>
</tr>
<tr>
<td>Total</td>
<td>401.57G</td>
<td>(In 378.60G</td>
<td>Out 22.97G)</td>
<td></td>
</tr>
</tbody>
</table>
Wireless Associations

Aggregate 802.11 Associations (bora)

- a Clients: Current: 630 Average: 142 Maximum: 874
- b/g Clients: Current: 515 Average: 105 Maximum: 707
- Total Clients: Current: 1145 Average: 239 Maximum: 1523
Wireless Associations (cont.)

IETF89 Aggregate Active Wireless Mac Addresses by VLAN

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Current</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>b/g</td>
<td>Clients on Mgmt SSID</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>a</td>
<td>Clients on Mgmt SSID</td>
<td>3</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>b/g</td>
<td>Clients on IPv6-only SSID</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>a</td>
<td>Clients on IPv6-only SSID</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>b/g</td>
<td>Clients on Secure (.1x) SSID</td>
<td>7</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>a</td>
<td>Clients on Secure (.1x) SSID</td>
<td>3</td>
<td>9</td>
<td>35</td>
</tr>
<tr>
<td>a</td>
<td>Clients on a-only (.1x) SSID</td>
<td>9</td>
<td>14</td>
<td>64</td>
</tr>
<tr>
<td>b/g</td>
<td>Clients on eduroam SSID</td>
<td>6</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>a</td>
<td>Clients on eduroam SSID</td>
<td>3</td>
<td>8</td>
<td>43</td>
</tr>
<tr>
<td>b/g</td>
<td>Clients on open SSID</td>
<td>96</td>
<td>74</td>
<td>601</td>
</tr>
<tr>
<td>a</td>
<td>Clients on open SSID</td>
<td>47</td>
<td>62</td>
<td>468</td>
</tr>
<tr>
<td>a</td>
<td>Clients on open a-only SSID</td>
<td>21</td>
<td>29</td>
<td>206</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>200</td>
<td>183</td>
<td>1485</td>
</tr>
</tbody>
</table>
Issue Summaries

Issue: ietf-hotel WiFi connectivity issues
- Users reported anomalous issues including no connectivity and/or v6-only connectivity. This issue was traced to v4 DHCP pool exhaustion. The size of the v4 network was expanded to accommodate more client connections and this issue was resolved.
- Users reported intermittent v4 connectivity issues. It was discovered that the new guestroom and public subnet was only defined on one of the two DHCP servers correctly. The second DHCP server was updated, resolving this issue.
- Users reported lack of connectivity to the wireless VIP router address. This issue was traced to an inconsistency in the VRRP configuration on both routers. The VRRP configuration was updated on both routers and this issue was resolved.

Conference issues
- The network experienced the normal day-1 client distribution issues. Additional WAP’s were deployed and radio settings adjusted to compensate. No major outages have been experienced at the time of this writing.
A special thanks to...

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  - Connectivity
- Cisco
  - Gear contribution
- Juniper
  - Gear contribution
- OSC Radiator
  - Licensing

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