Network Operations
• **Wired Infrastructure**
  - Closed Captioning
  - Contests
  - DC TV
  - Goons
  - Media Server
  - openCTF
  - Press
  - rootz
  - SOMA FM
  - Speakers
  - Vendors
  - WiFi Monitoring
  - Workshops

• **DC TV**
  - for those people in their rooms

• **Wireless Infrastructure**
  - for the brave people
  - openCTF
The Network

• 10 gbps backbone
• 125-175 200 mbps internet uplink
• Wired
  – Firewall - FreeBSD
  – 2 x Core Cisco Switches
  – 16 x Edge Cisco Switches
  – Media Server
The Network (cont)

- Wireless
  - 7210 Aruba Controller
  - 61 Aruba Access Points (70, 105, 135, 225)

- DCTV
  - 10 raspberry pis
  - 5 channels in both Paris and Bally’s
  - Video Transcoding provided by SOK
  - Video Transient Server in the NOC
− HD Broadcast
− New Internet Streams (qwikcast.tv)

• CGC
• DC 101
• Closing Ceremonies
Timeline

2016

Sunday

- Lots of Planning
- Less planning than it should have been
- (and yes, we are volunteers)

- MDF/IDF connections
- Hotels Interconnect
- Internet UPLINK

Monday

- NOC Setup
- WiFi APs
- Patching
- DC TV headend install
- APs hanging start

Tuesday

- APs install done
- Patching
- Android 802.1x fun
- wifireg.defcon.org up!

Wednesday

- CGC Press Room
- Setup,
- patching mushroom
- Network Management Systems
- Network Monitoring
Timeline (cont)

- **CGC SUPPORT**
  - Thursday
    - 6AM: Tracks 1, 2 and 3 setup
    - Media Server Setup
    - DC TV Troubleshooting

- **Friday**
  - DC TV Fix

- **Saturday**
  - Teardown

- **Sunday**
  - Packing
  - Leaving Las Vegas

- **Monday**
Issues

- Bandwidth
- AP Coverage
- DC TV
  - bandwidth X streaming
  - resolution
  - switched from rtsp to rtmp
The Usual Stats

- 4.29 TB of internet traffic
  - Inbound: 3.13487072983
  - Outbound: 1.1607473418
- 4029 users registered on wifireg
- 1400 wireless users peak
- 35k unique DHCP leases
- 10k different mac addresses
- 10.29 TB of wireless traffic
- 1.76 TB media server traffic
# Top 10 Wireless Chipsets

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple, Inc.</td>
<td>5046</td>
</tr>
<tr>
<td>Intel Corporate</td>
<td>1073</td>
</tr>
<tr>
<td>SAMSUNG ELECTRO-MECHANICS(THAILAND)</td>
<td>900</td>
</tr>
<tr>
<td>Murata Manufacturing Co., Ltd.</td>
<td>771</td>
</tr>
<tr>
<td>LG Electronics (Mobile Communications)</td>
<td>476</td>
</tr>
<tr>
<td>Samsung Electronics Co., Ltd.</td>
<td>360</td>
</tr>
<tr>
<td>Hon Hai Precision Ind. Co., Ltd.</td>
<td>299</td>
</tr>
<tr>
<td>Motorola Mobility LLC, a Lenovo Company</td>
<td>282</td>
</tr>
<tr>
<td>HUAWEI TECHNOLOGIES CO., LTD.</td>
<td>165</td>
</tr>
<tr>
<td>None</td>
<td>153</td>
</tr>
</tbody>
</table>
effffn’s twelve

• Leads
  – @effffn
  – mac

• Infra/ Systems
  – #sparky
  – naifx
  – booger
  – commiebstrd

• DC TV
  – videoman
  – serif

• WiFi
  – planb
  – CRV

• N00bs
  – c7five
  – deadication
THANKS!

- DT
- Russ
- Charel
- Ceasars IT Staff
- Encore Staff
- Source of Knowledge
- The nice folks who always bring us snacks!
- YOU!

http://defconnetworking.org
@DEFCON_NOC
noc\at/defconnetworking.org