Improving the regional Internet performance enabling growth and development

Nico Scheper
Challenges

• The South America & Caribbean Internet access point is Miami
• About 3000 km one-way
• Long distance transport and latency anywhere around 40 - 100 ms
• Shorten the latency to single digits 1- 9 ms
Infrastructure

- Bringing the content closer, lower latency and response time from 40 – 100 ms to 1 – 9 ms.
- Improve customer experience
- Multiple submarine cables (7) connecting to the US and the region
- Two datacenters and a Internet Exchange
- ISP’s, CDN’s, IPT providers
How did it start?
Timeline

- 2005 – 2011 Mobilizing change, innovation, partnerships, CAR-IX
- Started running traffic in July 2011 during the CANTO 27th Annual meeting in Suriname
- 2011 – 2016:
  - UTS, C&W, Digicel, Telbo, TRES, Scarlet, SSCS, Flamingo TV, ECP, Blue Nap Americas
  - Google, Akamai, Netflix, Facebook, CloudFlare
  - International industry stakeholders. Lacnic, Lac-ix, Lac-peering forum, Caribbean peering forum, Caribnog, SLS.
  - AMS-IX international industry presence and strength
Governance structure

• Public private initiative between the Minister Transport and Communications, the Regulator BT&P, and the founding members UTS, Digicel, Telbo, Scarlet and EOCG.
• Strategic partnership with the Amsterdam Internet Exchange
• Non profit
• Governed by its own members.
• Maximum transparency through the website cw.ams-ix.net incl customer portal my-ams-ix.net
Stats

Bits per second

- Input
- Peak 5 Minute Output
- Output

Peak In: 12.717 Gb/s  Peak Out: 12.719 Gb/s
Average In: 5.526 Gb/s  Average Out: 5.524 Gb/s
Current In: 8.206 Gb/s  Current Out: 8.206 Gb/s

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# Results

<table>
<thead>
<tr>
<th>AMS-IX Car traffic Gbps</th>
<th>2007</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td></td>
<td></td>
<td>1.5</td>
<td>2</td>
<td>3.5</td>
<td>5</td>
<td>12.5</td>
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</table>

<table>
<thead>
<tr>
<th>Average download Mbps</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6</td>
<td>1.6</td>
<td>7.5</td>
<td>14</td>
<td>16</td>
<td>17.5</td>
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<table>
<thead>
<tr>
<th>Internet penetration % HH</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Now</th>
</tr>
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<tbody>
<tr>
<td>51%</td>
<td>65%</td>
<td>69%</td>
<td>76%</td>
<td>79%</td>
<td>80%</td>
<td>80%</td>
<td>80+%</td>
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<tbody>
<tr>
<td>100Mb</td>
<td>100Mb</td>
<td>1GE</td>
<td>1GE</td>
<td>10GE</td>
<td>10GE</td>
<td>10GE</td>
<td>10GE</td>
<td>10GE (100GE)</td>
</tr>
</tbody>
</table>
Growth and development

• Improving end user experience
• Increase the user online time; bandwidth- and content demand
• More and more online services:
  • Banking services, tax filling and payments, insurance companies, custom office, education, other government services, media, social media, events, apps
  • (Free) WiFi service in public transport busses and down town tourists trafficking area.
Next steps

• strengthening the present Caribbean region model
• building out together with industry stakeholders
• More content locally/regionally
• Further improving user experience
• Enabling further growth and development
AMS-IX Caribbean

Improving user experience
enabling growth and development

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