Current state of intra-regional connectivity in Latin America

Anahí Rebatta - TeleGeography
September, 2019
Presentation format

5th LACNOG-versary Edition
Today’s agenda

• Subsea landscape
  • What/who is driving subsea demand globally?
  • Why does content providers location matter?
  • How does it affect subsea routes?
• Latin America
  • How does Latin America connect?
  • Are we going away from the U.S. for connectivity?
  • Are there any new regional hubs?
  • How does connectivity affect regional prices?
Question # 1

In 2018, what was the route with the highest capacity?

1) U.S.-Latin America
2) Trans-Pacific
3) Trans-Atlantic
4) Europe-Asia
Question # 1

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4) Europe-Asia
How does it all connect?

Used inter-regional bandwidth, 2018

154 Tbps

U.S. & Canada

Europe

Asia

Middle East

Africa

Latin America

Oceania

Used Inter-Regional Bandwidth (Tbps)

40 20 10 5 <
What exactly is in those sub cables?

Used inter-regional bandwidth showing content provider share, 2018
Content providers’ share dominates in mature markets

Share of Used Bandwidth by Content Providers, 2014-2018

- Trans-Atlantic
- Intra-Asia
- Trans-Pacific
- Europe-Sub-Saharan Africa
- Europe-Asia
- U.S.-Latin America
- Europe-Middle East & Egypt
Where are content providers located?

Content Providers Data Centers – Current and Planned

- Amazon Web Service
- Facebook
- Google
- Microsoft

Future Current
Where are content providers investing?

Content Providers Submarine Cable Investments
So, how does this affect new subsea routes?

From Data Center ➔ Data Center

From Data Center ➔ End Users

• Inter-data center demand (DC to DC)
  • Emphasis on cost: favorable regulatory environments, affordable power, etc.
  • Surge in bandwidth on traditional routes, plus new landings in some smaller markets
  • Higher capacity routes

• Content distribution and cloud services (DC to end-user)
  • Emphasis on distribution of content to end user from DCs to major and secondary hubs
  • Capacity extending to secondary developed markets and major emerging markets
  • Smaller bandwidth requirements than inter-DC routes
Question # 2

By mid-2019, how fast did international internet capacity grow in Latin America?

1) 110%
2) 54%
3) 29%
4) 17%
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International internet bandwidth in Latin America

International Internet Bandwidth Growth, Latin America

- **International Internet Bandwidth**
- **Annual Growth**

Year | International Internet Bandwidth (Tbps) | Annual Growth |
--- | --- | --- |
2015 | 15 | 0% |
2016 | 20 | 15% |
2017 | 25 | 30% |
2018 | 30 | 45% |
2019 | 45 | 60% |
Latin America remains highly connected to the U.S.
Top routes continue to go north
Question # 3

By mid-2019, what was the highest capacity route in Latin America?

1) Los Angeles – Mexico City

2) Miami – Rio de Janeiro

3) Buenos Aires – São Paulo

4) Miami – São Paulo
Question # 3

By mid-2019, what was the highest capacity route in Latin America?

1) Los Angeles – Mexico City

2) Miami – Rio de Janeiro

3) Buenos Aires – São Paulo

4) Miami – São Paulo 👍
Miami is still the ‘internet hub’ for the region

Top International Internet Routes by City, 2019

- Miami - São Paulo
- Miami - Rio de Janeiro
- Buenos Aires - Miami
- Los Angeles - Mexico City
- Bogota - Miami
- Dallas - Mexico City
- Fortaleza - Miami
- New York - São Paulo
- Lima - Miami
- Buenos Aires - São Paulo
What about regional hubs?

Factors for new interconnection hubs:

- International bandwidth (subsea cable systems)
- Carrier-neutral DCs and IXs
- Friendly regulatory environment
- Competition-low prices for local connectivity
- Rich ecosystem-cables, content, ISPs, corporations
Top IP capacity cities in Latin America

International Internet Bandwidth, 2015 - 2019
Latin America IP routes
Question # 4

Between 2017 and 2019, what market saw the fastest IPT price erosion?

1) São Paulo

2) Bogotá

3) Santiago

4) Buenos Aires
Question # 4

Between 2017 and 2019, what market saw the fastest IPT price erosion?

1) São Paulo

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3) Santiago

4) Buenos Aires
Regional IPT prices

Weighted Median 10 GigE IPT Price Trends

- **Mexico City**
- **São Paulo**
- **Bogota**
- **Santiago**
- **Buenos Aires**
- **Panama City**

**Bandwidth per Month (USD)**

- **2017 Q3**
- **2018 Q3**
- **2019 Q3**
Question # 5

In 2019, the IRU price of a 10Gbps circuit on the Miami-São Paulo route is $241,000. What was the price of the same circuit on the same route in 2012?

1) $3,500,000

2) $2,000,000

3) $10,000,000

4) $6,350,000
Question # 5

In 2019, the IRU price of a 10Gbps circuit on the Miami-São Paulo route is $241,000. What was the price of the same circuit on the same route in 2012?

1) $3,500,000
2) $2,000,000
3) $10,000,000
4) $6,350,000
Transport prices vary by route

Weighted Median 10 Gbps Wavelength, 2019 Q3

<table>
<thead>
<tr>
<th>Route</th>
<th>Median Monthly Lease Price USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miami-São Paulo</td>
<td>$6,000</td>
</tr>
<tr>
<td>Buenos Aires-Miami</td>
<td>$9,000</td>
</tr>
<tr>
<td>Buenos Aires-São Paulo</td>
<td>$12,000</td>
</tr>
<tr>
<td>Bogota-Miami</td>
<td>$15,000</td>
</tr>
<tr>
<td>Lima-Miami</td>
<td>$18,000</td>
</tr>
</tbody>
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In summary

- Content providers are influencing new subsea cable builds
- Latin America remains highly connected to the U.S.
- Miami is still the main hub, but regional hubs are emerging
- Still geographic differences in prices
Everyone is a winner!

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