euro-IX

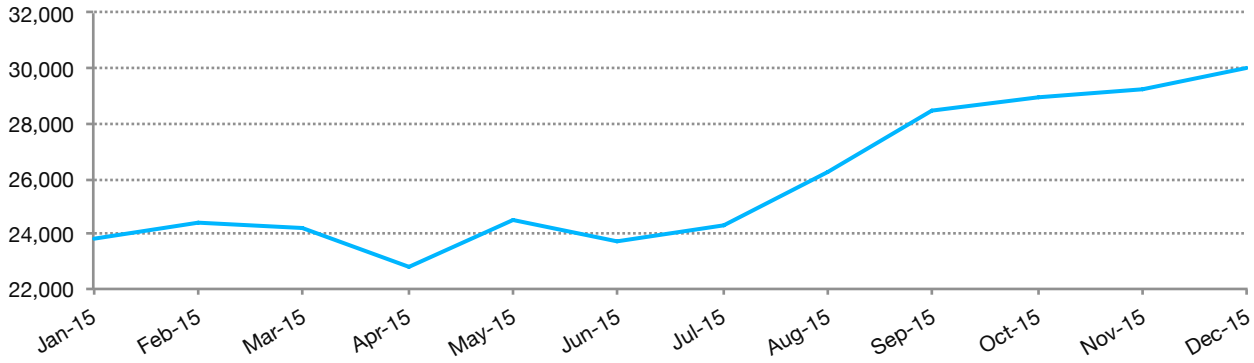
IXPs Traffic Statistics

2015 summary

Contents

Global Traffic Statistics in 2015

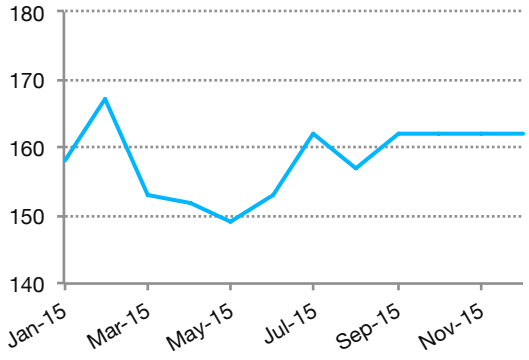
> Total aggregated traffic growth worldwide (in Gbps)



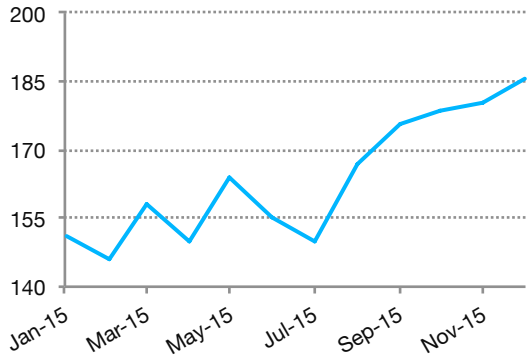
The total aggregated peak traffic has increased with 26% over the past 12 months, going from 23,842 Gbps in January to 30,050 Gbps in December. The traffic peak was stable in the first three months, then showed a small drop in April and June. This was followed by a fast increase until September and a steady incline thereafter.

Note: these numbers are based on data collected each month over public peering LAN (some automatically, some manually). The number of IXPs collected from varied from one month to the other depending on the data available. This number increased from 158 in January to 167 in February, then decreased to 162 in December (see chart below). On average, Euro-IX collected data from 158 IXPs throughout the year.

> Number of IXPs collected from worldwide

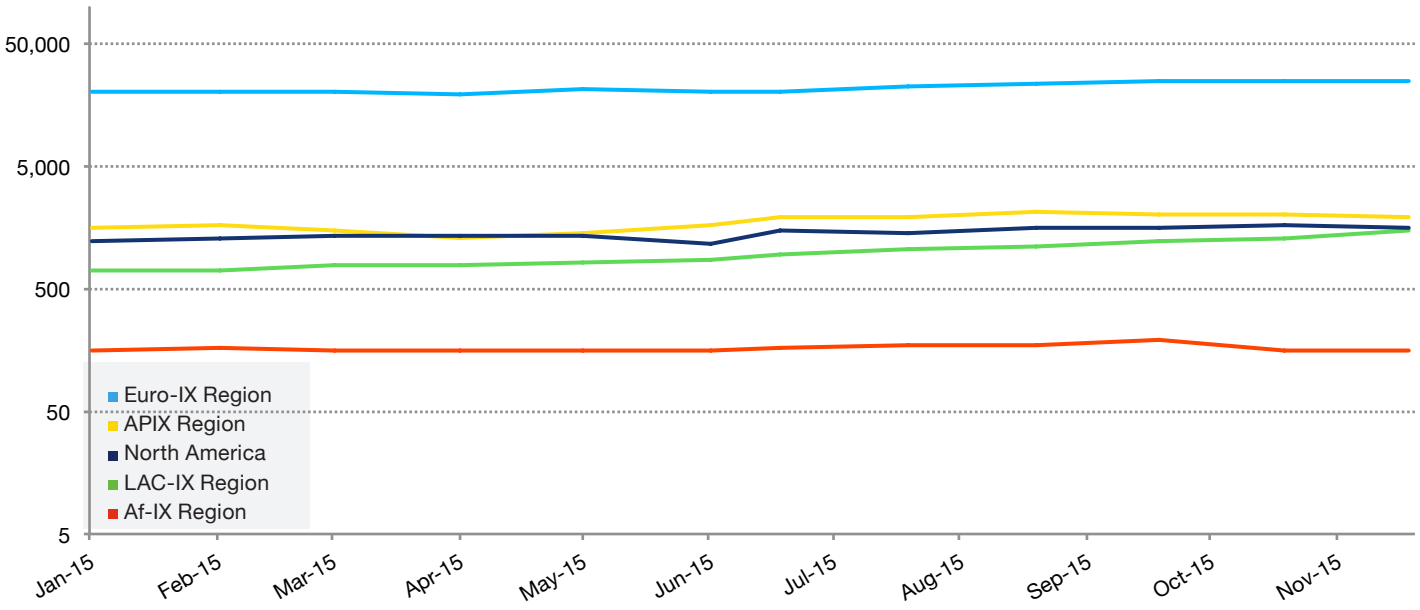


> Average peak traffic per IXP (in Gbps)



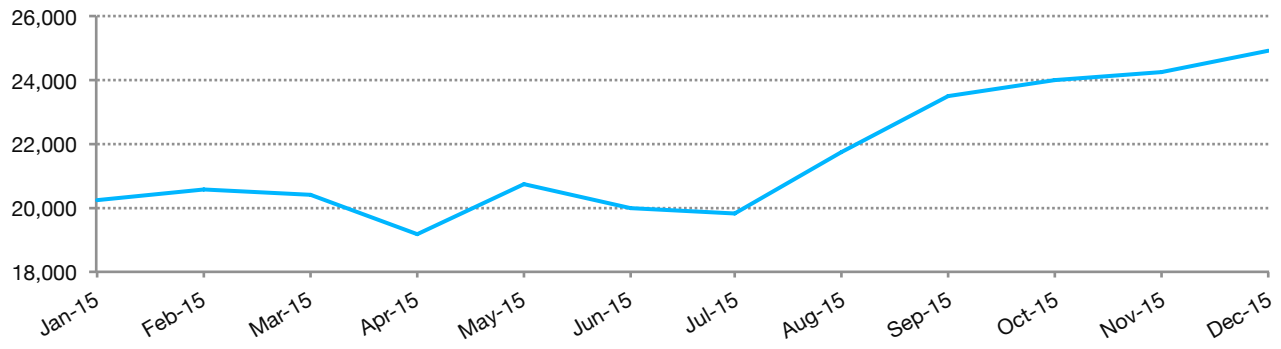
We had several peaks and troughs in early 2015, however after July, things got back to normal and traffic was seen growing up and to the right. It went from 151 Gbps in January to 185 Gbps in December (increase of 22.5% over the full year). The traffic peaks ranged from 2 Kbps to 3,869 Gbps in January and from 2 Mbps to 4,836 Gbps in December. The averages shown above are therefore not representative for most of the Exchanges and the IXP community remains very diverse.

> Overview of the aggregated traffic statistics per region (in Gbps, logarithmic scale)



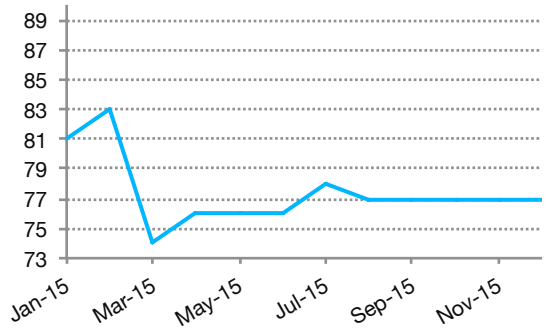
Euro-IX Region

> Total aggregated traffic growth in the Euro-IX region (in Gbps)

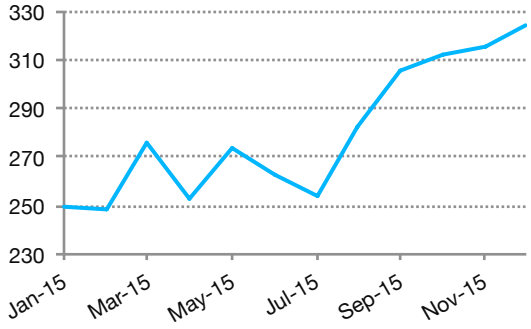


The total aggregated peak traffic in the Euro-IX region has increased with 23.3% over the past 12 months, going from 20,217 Gbps in January to 24,941 Gbps in December. The traffic was quite steady in the first half of the year (with a clear drop in April and July) before increasing again from August to December. These numbers are based on data collected from 77 IXPs on average throughout the year, over public peering LAN.

> Number of IXPs monitored in the Euro-IX region



> Average peak traffic per IXP (in Gbps)

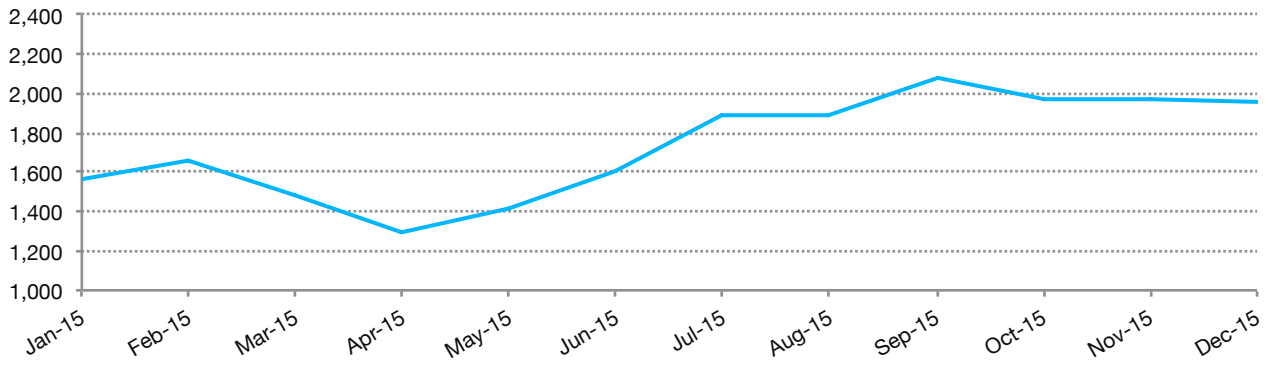


The number of IXPs monitored decreased from 81 to 76 in the first half of the year, before increasing to 77 in the second half. The average peak traffic per IXP increased with 29.6%, going from 250 Gbps to 324 Gbps. The traffic peaks in this region ranged from 48 Mbps to 3,869 Gbps in January and from 13 Mbps to 4,836 Gbps in December.

The 4 largest IXPs in term of traffic in this region but also worldwide are DE-CIX in Frankfurt, AMS-IX in Amsterdam, LINX in London and MSK-IX in Moscow, which are the only ones where the traffic peaks above 1 Tbps each month.

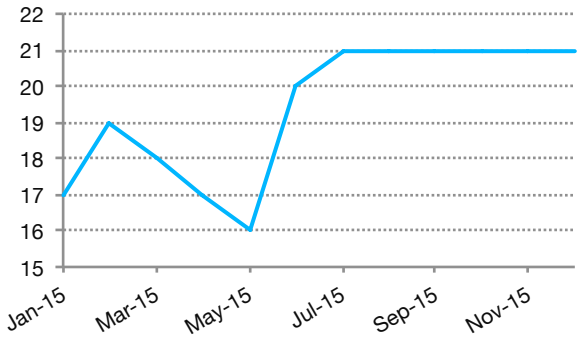
APIX Region

> Total aggregated traffic growth in the APIX region (in Gbps)

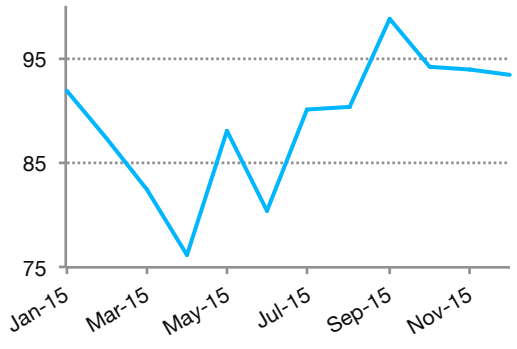


The total aggregated peak traffic in the APIX region has increased with 25,4% over the past 12 months, going from 1,563 Gbps in January to 1,961 Gbps in December. These numbers are based on data collected from 21 IXPs, over public peering LAN. This region showed a slight increase at the beginning of the year, before experiencing a slow decline in March and April. A steady increase then occured from May to September before stabalising until December.

> Number of IXPs monitored in the APIX region



> Average peak traffic per IXP (in Gbps)

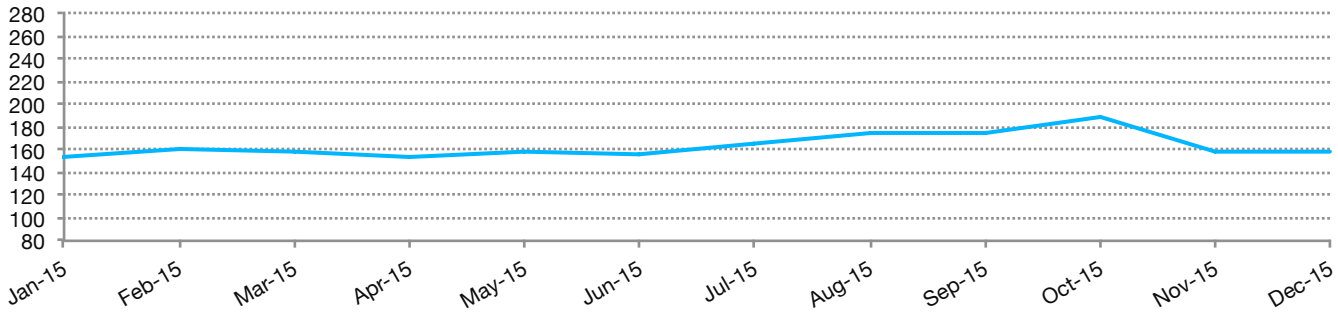


The number of IXPs we collected data from in this region has been very stable this year (17 to 21 IXPs). The average peak traffic per IXP increased by 1% in the APIX region in 2015, going from 92 Gbps to 93 Gbps.

The peaks ranged from 325 Mbps to 426 Gbps in January and from 64 Mbps to 536 Gbps in December. In terms of traffic, the leading IXPs in the Asia-Pacific region are HKIX in Hong-Kong, JPNAP in Tokyo, JPIX in Tokyo and KINX in Seoul. For these 4 IXPs, the traffic peaks above 100 Gbps each month.

Af-IX Region

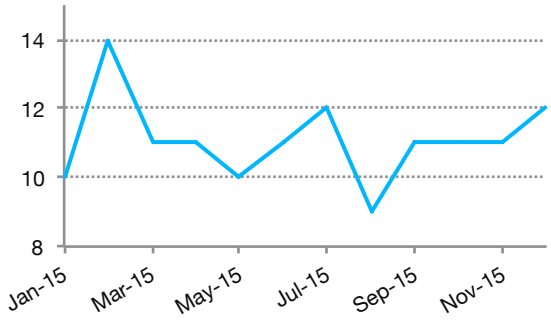
> Total aggregated traffic growth in the Af-IX region (in Gbps)



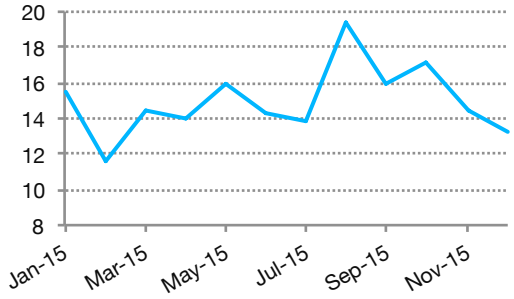
The total aggregated peak traffic in the Af-IX region has increased with 2.5% over the past 12 months, going from 155 Gbps in January to 159 Gbps in December. These numbers are based on data collected from 11 IXPs on average, over public peering LAN.

Unlike in the Euro-IX region, there was no decrease of traffic occurring mid year. The traffic has been growing steadily from January to September, fluctuating between 155 Gbps to 177 Gbps, with a 21% increase in October to 188 Gbps.

> Number of IXPs monitored in the Af-IX region



> Average peak traffic per IXP (in Gbps)

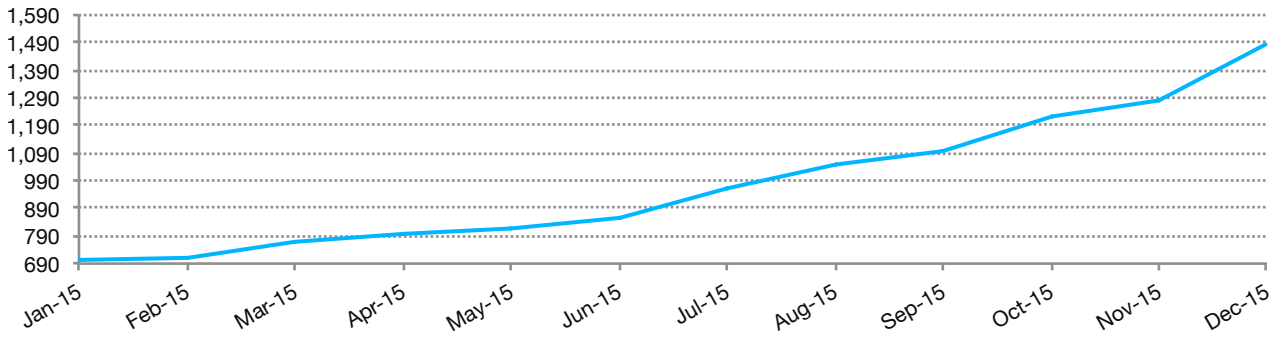


The average peak traffic per IXP decreased by 13% in the Af-IX region over 12 months, going from 15 Gbps to 13 Gbps. The traffic peaks ranged from 32 Mbps to 105 Gbps in January and from 3 Mbps to 72 Gbps in December.

The largest IXP in terms of traffic remains TunIX (Tunis) with a 2015 average peak of 105 Gbps. It is followed by NapAfrica (Johannesburg, Durban and Cape Town), which showed continued traffic growth in 2015 (increase of 107% and is now peaking above 60 Gbps; compared to a 450% increase in 2014 and peaking above 20 Gbps), and Jinx (Johannesburg) with a traffic peaking around 15 Gbps each month.

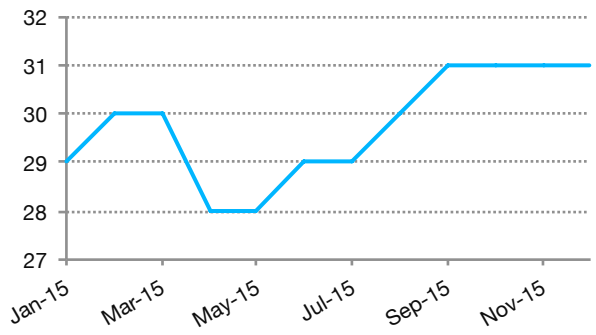
LAC-IX Region

> Total aggregated traffic growth in the LAC-IX region (in Gbps)

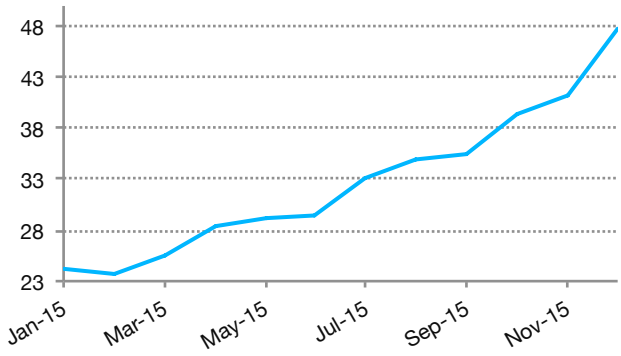


The total aggregated peak traffic in the LAC-IX region has increased with 110% over the past 12 months, going from 703 Gbps in January to 1,480 Gbps in December. The numbers are based on data collected from 29 to 31 IXPs, over public peering LAN.

> Number of IXPs monitored in the LAC-IX region



> Average peak traffic per IXP (in Gbps)

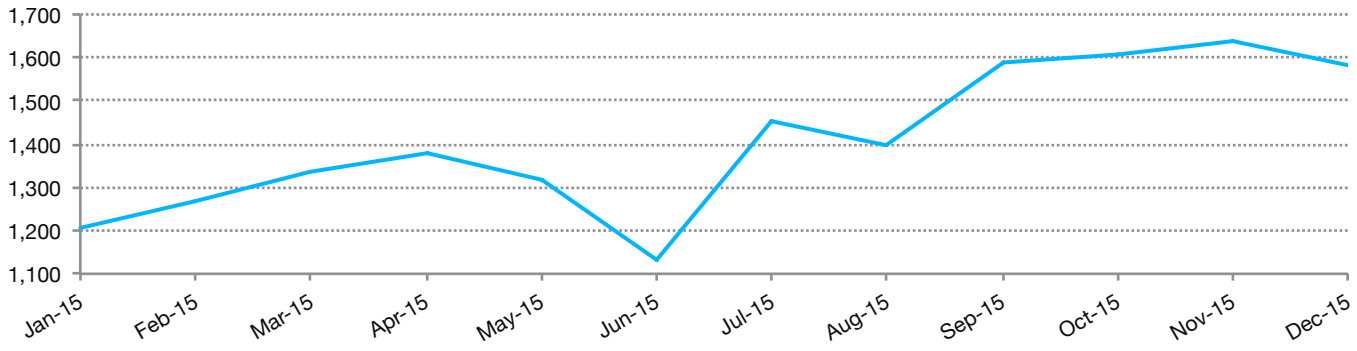


The average peak traffic per IXP increased with 100% in the LAC-IX region in 2015. It went from 24 Gbps to 48 Gbps. The peaks ranged from 2 Kbps to 578 Gbps in January and from 8 Mbps to 1,200 Gbps in December.

The largest IXP of this region remains PTT.br which operates in 25 locations in Brazil, including Sao Paulo where the traffic has grown with 107% this year and is now peaking above 1000 Gbps each month.

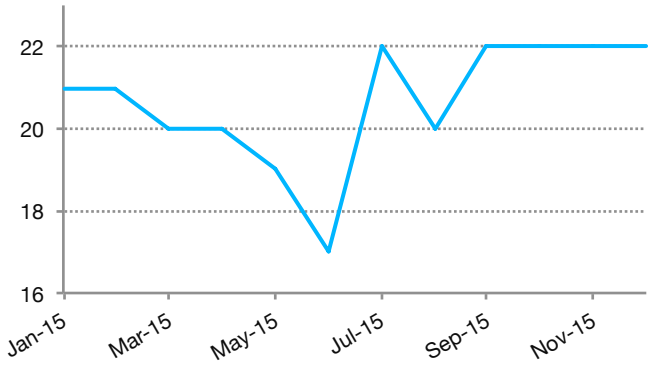
North America

> Total aggregated traffic growth in North America (in Gbps)

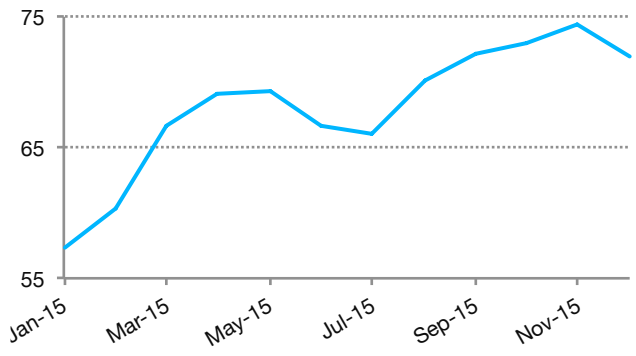


The total aggregated peak traffic in North America has increased with 26.3% over the past 12 months, going from 1,204 Gbps in January to 1,581 Gbps in December. There was a significant drop in June, followed by a small drop in August, and a stabilization after September. The numbers are based on data collected from 21 IXPs on average, over public peering LAN.

> Number of IXPs monitored North America



> Average peak traffic per IXP (in Gbps)



The number of IXPs we collect data from went from 21 in January, decreasing to 17 in June, picking up again to to 22 in December. The traffic peaks ranged from 2 Mbps to 350 Gbps in January and from 2 Mbps to 475 Gbps in December. The largest IXPs in this region remains SIX in Seattle, NYIIX in New York (both still showing traffic peaking above 300 Gbps each month), and Torix in Toronto with a monthly peak exceeding 100 Gbps, with a peak of 215,8 Gbps in November 2015.

The average peak traffic per IXP increased along with all the other regions with 26% in 2015 going from 57 Gbps in January to 72 Gbps in December.