

South America - a new interconnection frontier

by Erick W. Contag, COO GlobeNet

IP traffic, industry experts say, is growing fastest in Latin America and the growth is likely to continue. Local operators are seeking international bandwidth to provide the high-speed connectivity that content hungry users want and businesses need. Much of the international IP traffic increase is driven by the astonishing growth of local financial markets, such as the BM&F Bovespa. HD coverage of the World Cup and Olympic Games (Rio de Janeiro 2014 and 2016 respectively) will also increase traffic greatly.



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The rapidly expanding South American marketplace has experienced growth in recent years, led in part by widespread adoption of new technologies, telecommunications advancements, increased cooperation and partnership amongst service providers, along with the increasing activity by financial trading communities in this region, to name a few.

According to Cisco traffic forecasts, IP traffic is growing fastest in Latin America, followed closely by the Middle East and Africa. According to their expectations, traffic in Latin America will grow at a CAGR (*compound annual growth rate*) of 51 per cent between 2009 and 2014.

The drivers

Let's take a closer look at what end-user clients require and how they want it delivered. With the influx of new content globally and the voracious appetite by the end-user to consume the content, service providers are seeking new platforms and creating new service bundles to provide the content over a variety of devices and transmission mediums such as 3G and 4G wireless networks, smart-phones, ultra high-speed broadband, and digital TV.

We are also witnessing exponential demand growth for high capacity HDTV and 3DTV

Table 5: Global IP Traffic, 2009-2014

IP Traffic, 2009-2014	2009	2010	2011	2012	2013	2014	CAGR 2009-2014
By Type (PB per Month)							
Internet	10,860	14,000	21,500	32,200	48,700	67,700	50%
Managed IP	5,000	6,000	6,700	6,800	7,000	7,000	20%
Voice Data	81	300	600	1,100	2,100	3,000	100%
By Segment (PB per Month)							
Consumer	11,000	14,000	22,000	32,000	48,000	65,000	49%
Business	1,000	1,000	1,000	1,000	1,000	1,000	0%
By Geography (PB per Month)							
North America	6,100	7,000	10,000	13,000	18,000	25,000	50%
Western Europe	1,000	1,000	1,000	1,000	1,000	1,000	0%
Asia Pacific	3,000	3,000	3,000	3,000	3,000	3,000	0%
Japan	1,000	1,000	1,000	1,000	1,000	1,000	0%
Latin America	400	600	1,000	1,600	2,700	4,000	60%
Central Eastern Europe	400	400	400	400	400	400	0%
Middle East and Africa	100	100	100	100	100	1,000	40%
Total (PB per Month)							
Total IP Traffic	14,000	18,000	28,000	38,000	56,000	78,000	50%

Source: Cisco traffic forecasts, per DSL Prime

live video content. The recent World Cup held in South Africa was a small taste of what we can expect for the World Cup and Olympic Games to be held in Rio de Janeiro in 2014 and 2016 respectively, where we expect all events to be covered in HD. Service providers need to anticipate the demand for high-bandwidth terrestrial and submarine fibre-optic networks. Optical fibre content transport is ideally suited, reliable, fast and cost-effective to complement, but most likely to substitute, existing copper, satellite, and wireless solutions. At the edge, end-users will expect to watch games and replays on wireless HD devices for instant gratification.

In order to accomplish this, more and more carriers and content providers are partnering to create multi-service relationships to address the growing demand throughout the Americas for broadband access by households, as well as businesses demanding increased capacity and services. With the region experiencing commercial, social and technological integration, providers are embarking on projects that will further integrate networks and connect countries - increasing traffic, expanding capabilities, and uniting the people of the region. This is the interconnected world we live in today.

An example of this is that, as reported by ABI Research in 2010, Latin America will become one of the fastest growing mobile capital expenders with over ten per cent compound growth between 2009 and 2015. In response to customer needs - namely, wide-spread access to cellular services - mobile operators and carriers are increasing capital expenditures to improve and expand their networks. Operators are seeking to expand their data and IP networks to interconnect countries within the continent, and to upgrade their ability to operate submarine cable fiber networks between continents. These improvements, while increasing access and availability to the end-user, should also double capacity on existing routes, to the benefit of all.

The market opportunity

There is a large opportunity in South America for high quality IP to address the demand for global content, and to provide wireless services for both small and large businesses. Carriers that target residential users also experience growth as more and more households are adopting broadband access and services as prices become more affordable. Smartphones are growing at a very fast pace in Latin America; smartphone manufacturers such as RIM, for example, announced they are now manufacturing Blackberry devices in Brazil due to local market demand.

Another need to consider is due to the growing popularity of South American trading entities

such as the Brazilian-based BM&F Bovespa, one of the largest exchanges in the world in terms of market value, the second largest in the Americas, and the leading exchange in Latin America.



Generic Financial Exchange picture from iStockphoto

Today's trading entities require very low latency and redundant network connectivity to ensure that their financial transactions will be processed with speed and accuracy. Traders and exchanges also require global access so they can quickly move transactions from one exchange floor to the next, with the necessary speed, service availability, and precision required to remain competitive in the financial field.

International carriers which provide international capacity between North and South America over advanced fibre-optic cable system have seen a boom in recent years connecting carriers serving the financial industry, especially to and from Brazil. Traders, financial institutions and investment companies throughout South America rely on advanced networks to conduct trades faster and more efficiently to gain competitive advantages in serving their client bases. Carriers rely upon secure capacity to access other key trading cities throughout the Americas, for fast and direct connectivity.



GlobeNet network map

One connected world

So how are carriers and wholesale providers ensuring that capacity is reliable and available in these bandwidth-driven times? Perhaps the most important technological asset we have is the ability to interconnect. Today, more than

ever, service providers are partnering together to hand-off data seamlessly and to better manage the end-user's experience. In Brazil, subsea networks seamlessly interconnected with national terrestrial networks, to provide end-to-end, fiber-based services to local carriers.

Finally, as networks sprawl across the globe and back, the human experience - the relationships between us and the need to communicate - are still the very core of telecom - of our interconnectedness. Whether from one financial exchange to another or a streaming video of a sports event, there's a basic need for human connectivity - and we all expect superior quality with this experience. It's the relationships between carriers, the deployment of the latest network technologies and low latency routing, and the support that engineers and technical support teams give customers that ensure this high quality, human experience. ●



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