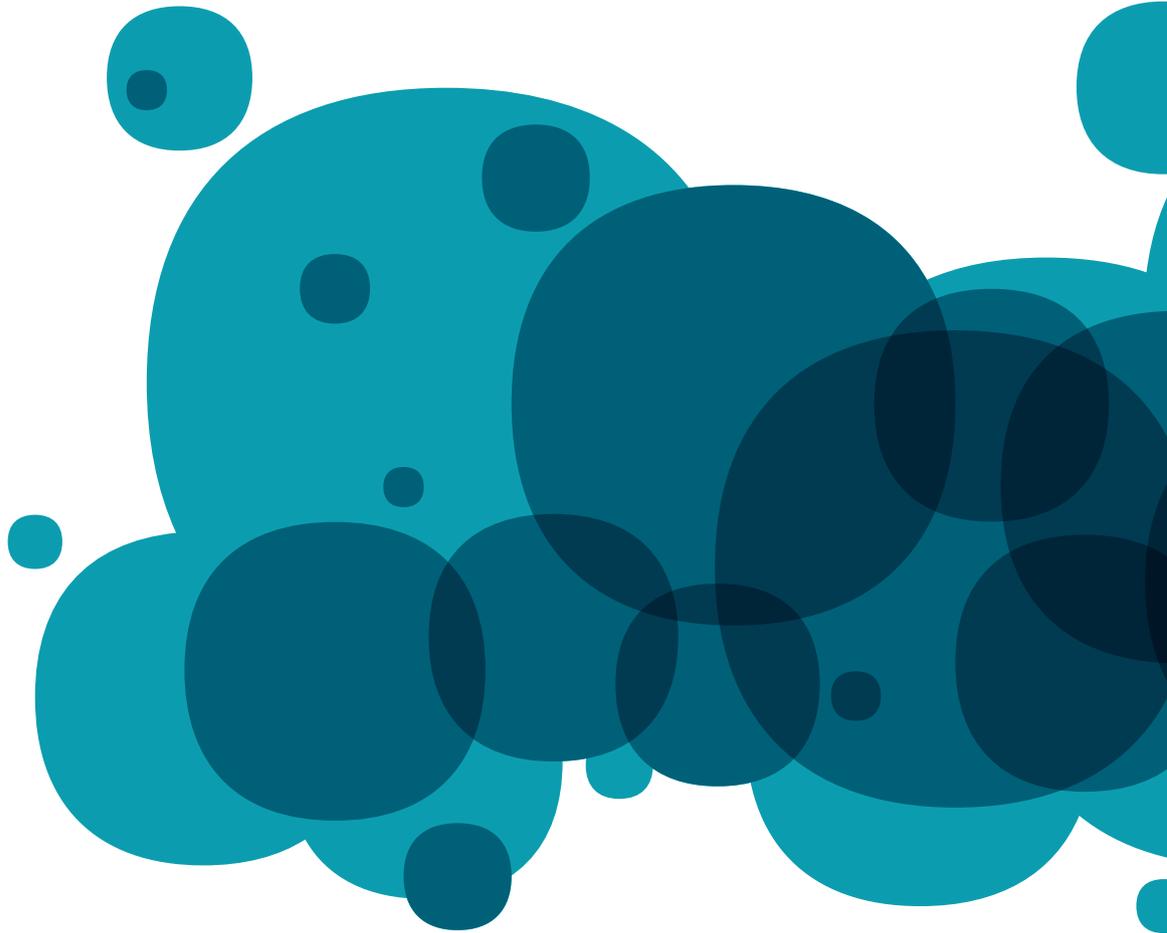


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ANNUAL  
REPORT  
2014





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# THE YEAR OF THE LACNIC TEAM

This year, an important chapter has been written in the rich history of LACNIC and its community.

2014 was a year full of challenges –some of them unforeseen– and these challenges have allowed us to become consolidated as an organization with a stable operation and a strong, solid and responsible team. The organization's work plans and strategic long-term vision have been key in this achievement.

2014 was also the year when IPv4 was finally exhausted, an historic event that occurred without fanfare and in fulfillment of the Latin America and Caribbean Internet community's decisions regarding IPv4 address management. LACNIC and the regional community had been working towards this moment for years.

IPv4 exhaustion signaled the end of the experimental Internet as we know it. Since we began operating in 2002, we have delivered 183 million IPv4 addresses throughout the region, a record number of resources that has allowed Latin American and Caribbean organizations and businesses to provide Internet connectivity to five out of ten Latin Americans. Now the challenge is to connect the other half of the population – perhaps the most important half.

Sustaining this growth requires urgently moving to IP protocol version 6 (IPv6). Only this technology will allow us to guarantee the true development of the Information Society and equal access for those who have not yet been able to connect to the Internet.

Major organizations worldwide are already deploying IPv6 on their networks. Those organizations that continue working with IPv4 will be left behind.

In this sense, we must admit a certain degree of concern, as many operators and companies have not yet taken the steps needed to properly address IPv6 deployment.

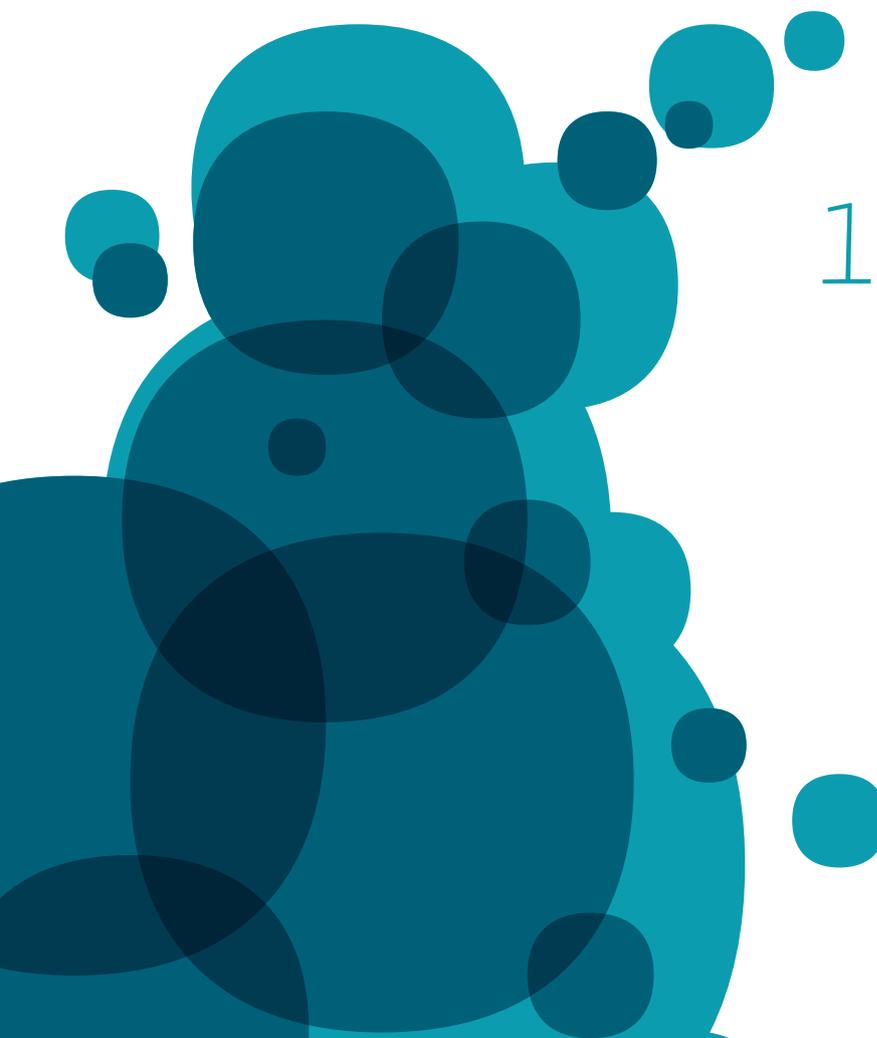
Our message has been clear: now more than ever, IPv6 deployment has acquired a sense of urgency, becoming unavoidable and pressing if connectivity providers are to meet the demands of their customers and new users.

The road traveled during 2014 has also led us to become actively involved in the transition of the IANA functions stewardship from the United States government to the Internet community. The Internet community –and the LACNIC community in particular– have developed a process of intense discussions through which innovative contributions were received, thus promoting a transition to an open and participatory multistakeholder model, a key aspect that underpins the Internet's success.

As if all of the above were not enough, this year Raúl Echeberría, our Executive Director, left the position he had held for 12 years. Under his leadership, LACNIC reached unimaginable heights in terms of success and recognition, achieved major institutional growth and consolidation, and brought a Latin American and Caribbean voice to the Information Society.

The organization's performance during the second semester served to prove that the LACNIC team was prepared to weather the changes and continue along the path of success. The organization's origins, our vision of development, and our conviction regarding the way forward ensure that, together, we will continue to build an Internet for and by the region.

**Oscar Messano**  
LACNIC President



# 1. LACNIC



## 1.1 WHAT IS LACNIC?

LACNIC, the Latin American and Caribbean Internet Address Registry, is an international non-government organization established in Uruguay in 2002. It is responsible for assigning and managing Internet numbering resources (IPv4, IPv6), Autonomous System Numbers, Reverse Resolution and other resources for the region of Latin America and the Caribbean. It is one of five existing Regional Internet Registries.

LACNIC contributes to Internet development throughout the region by means of an active cooperation policy, by promoting and defending the regional community's interests, and by helping create conditions that will allow the Internet to become an effective instrument for social inclusion and economic development in benefit of all Latin American and Caribbean countries and citizens.

## VISION AND MISSION

LACNIC's vision: To lead the creation of synergies and initiatives for the construction of an open, stable and secure Internet at the service of the economic, social and cultural development of Latin America and the Caribbean.

The organization's mission is the constant search for excellence in the management of Internet numbering resources for Latin America and the Caribbean, based on a culture of continuous innovation and adding value for our community by:

- Continued strengthening of a secure, stable, open, and growing Internet.
- Promoting and enriching a multistakeholder, participatory and bottom-up Internet governance model.
- Developing, promoting and adopting new technologies and standards.
- Building relationships and cooperating with other organizations.
- Developing regional capabilities through forums, training activities and cooperation projects.
- Maintaining reliable information that will be a regional source of reference on Internet-related issues.
- Timely responding to the expectations of our community within a changing environment.
- Participating in international forums to contribute with a regional perspective.

# LACNIC'S BOARD OF DIRECTORS

LACNIC is managed and run by a Board made up by seven Directors elected by LACNIC members, more than 4000 network operators providing services in 33 Latin American and Caribbean territories.

LACNIC's Board of Directors is representative of the organization's members, as Directors are elected by their direct vote.

During 2014, LACNIC's Board of Directors was made up as follows:

NAME	POSITION	COUNTRY	TERM ENDS IN
Oscar Messano	President	AR	12 / 2014
Oscar Robles	Vice President	MX	12 / 2014
Hartmut Glaser	Treasurer	BR	12 / 2015
Alejandro Guzmán	Deputy Treasurer	CO	12 / 2015
Rafael Ibarra	Secretary	SV	12 / 2015
Javier Salazar	Deputy Secretary	MX	12 / 2016
Wardner Maia	Member	BR	12 / 2016
Raúl Echeberría	CEO	UY	Resigned in 06 / 2014
Ernesto Majó	Acting CEO	UY	From 07-12 / 2014

## FISCAL COMMISSION

The Fiscal Commission is LACNIC's control organ. It is charged with supervising that all accounting and administrative standards are met and overseeing compliance with LACNIC's legal and statutory framework.

NAME	COUNTRY
Cassio Jordão Motta Vecchiatti	BR
Adriana Ibarra	MX
Gabriel Adonaylo	AR

## ELECTORAL COMMISSION

The Electoral Commission organizes and supervises elections to ensure their transparency. It is responsible for analyzing and deciding on any problems that might arise during an election, as well as for verifying vote counts and announcing final results.

NAME	COUNTRY
Guillermo Cicileo	AR
José Enrique Díaz Jolly	MX
Jorge Luis Legrá	CU





## 1.2 OUR MEMBERS

LACNIC members are grouped into different categories:

<http://goo.gl/Mpd8St> active A members, active B members, founding members, associate members, honorary members, and benefactor members.

In turn, Active A members are classified as Internet Service Providers or End Users.

Active B members are Internet related organizations that meet certain requirements and are either based in Latin America or the Caribbean or carry out their activities mainly in Latin America or the Caribbean.

Founding members are the organizations that founded LACNIC, while adhering members are those that support LACNIC's objectives, request their admittance, manage IP addresses outside the address space assigned to Latin America and the Caribbean, and are based outside the LAC region.

Honorary members are individuals, companies or organizations designated as such by decision of the Member Assembly in recognition of the activities they carry out in furtherance of LACNIC's objectives. Finally, benefactor members include any person or legal entity that makes a significant financial contribution to LACNIC.

Detailed information regarding membership categories and member rights and obligations is available in LACNIC's bylaws. <http://goo.gl/NEAa0>

FAQ Membership <http://goo.gl/8qeKvu>

## SATISFACTION SURVEY

In mid-2014, LACNIC ran a customer satisfaction survey to find out just how much its clients knew about the services offered by the organization and their opinion regarding each of these services.

Survey results showed high levels of satisfaction among LACNIC members with regards to the organization's work and services. According to the study conducted by Merco Plus Latinoamerica, LACNIC customers were not only willing to recommend its services, but they also replied that they were "very open to recommending the company and providing good references."

Members rated Internet resource assignment (IPv4, IPv6 and ASN) highly. The study's conclusions highlighted that "this aspect is quite relevant, considering that this is LACNIC's best-known service and the one most used by its members."

As to their communication with the organization, customers highlighted how easy it was (69%) and their satisfaction with the organization's response times (61%). Nine out of ten of those who were in communication with the organization valued the ease of communication, as well as the friendliness, technical expertise, and clarity of LACNIC staff.

LACNIC's website receives many visits: almost all our customers (97%) have visited our website and expressed high levels of satisfaction (82%). Customers who expressed their satisfaction with the website also mentioned aspects such as its user-friendliness, usefulness, clarity, and the fact that posted information is always up to date.

## 1.3 THE LACNIC TEAM

For the third consecutive year, Great Place to Work® ranked LACNIC among the best companies to work for in the category of up to 150 employees.

LACNIC's commitment to the open and collaborative construction of an excellent working environment is the reason why LACNIC was recognized in this prestigious ranking.

Within the framework of this activity, Ernesto Majó, the organization's Acting Executive Director, highlighted the fact that "LACNIC is a unique place, a place we've built day after day as a team, based on each member's commitment and effort."

Félix Fernández, LACNIC's Human Resources Manager, added that this recognition showcases the work and professionalism demonstrated daily by each person who is a part of the organization. "We are very happy because it is the employees themselves who feel this way," he said.

This study is conducted annually by Great Place to Work® in over 45 countries worldwide. In 2014, it ranked LACNIC among the best companies to work for in Uruguay.



# 1.4 LACNIC IN 2014

## Series of Visits to Operators

During the first months of 2014, different LACNIC teams visited 11 countries and met with more than 100 members as well as government officials and businessmen in different Latin American and Caribbean countries. The purpose of these meetings was to provide relevant informing on the imminent exhaustion of the regional IPv4 address stock and the technological changes that must be implemented in relation to IPv6 so that the Internet can continue to grow. <http://goo.gl/Rbn5zg>

## IPv4 Exhaustion

In May, the region entered the IPv4 exhaustion stage, as only 8.3 million available IPv4 addresses remained in LACNIC's address pool. This triggered a global policy by the IANA, the organization that oversees the global assignment of IP addresses in accordance with the five Regional Internet Registries. <http://goo.gl/6XYsyV>

For more information on the phases of IPv4 exhaustion in LACNIC's service region, go to: <http://goo.gl/BRNHQv>

## An Historic Moment

In what Raúl Echeverría, LACNIC's CEO at the time, considered to be "an historic moment," LACNIC's stock of IPv4 addresses (4,194,302 addresses) was officially exhausted in the month of June, thus triggering more restrictive allocation policies.

## FRIDA Awards

Five initiatives that have contributed to the development of the Information Society in Latin America and the Caribbean were selected as the winners of LACNIC's FRIDA Awards. <http://goo.gl/V2u3Mh>

## FRIDA Start-Up

FRIDA selected four regional ICT projects to receive funding under the new 2014 FRIDA Start-Up program, each of which received up to USD 14,000. These start-up funds will allow expanding the impact and scope of existing research projects through partnerships with other research groups within the region.

## Digital Inclusion

FRIDA, an initiative that promotes digital inclusion throughout the region, also awarded grants to six of the research projects submitted during the 2014 call for proposals. Grant recipients received a total of over USD 120 thousand. <http://goo.gl/v13XqT>

## Haiti on the Move

During its second year of activities, Ayitic provided training to more than 150 Haitian information and communications technology students and professionals. Ayitic "Internet for Development" is a LACNIC initiative supported by the Organisation Internationale de la Francophonie, NSRC, the Internet Society, Google and ICANN. <http://goo.gl/DA6cH8>

## LACIGF: A Model to Be Followed

More than 150 representatives from 21 different Latin American and Caribbean countries participated in the seventh Regional Preparatory Meeting for the Internet Governance Forum (LACIGF) held this year in El Salvador on 16-18 July. <http://goo.gl/l6bU2a>

## World Internet Day

On Thursday, May 22, 2014, the da Vinci Foundation and LACNIC invited information technology professionals, entrepreneurs and enthusiasts to celebrate World Internet Day at Casa de Internet. The activity was held within the framework of the local Hackers & Founders monthly meetings. <http://vimeo.com/96530345>

## Broadband Connectivity

During the 2014 JIAP meeting, one of the most relevant technology events to be held in Uruguay, Oscar Messano, President of LACNIC's Board of Directors, spoke about the challenge of balancing profitability and developing connectivity to ensure access to broadband. <http://goo.gl/3lsJl9>

## Montevideo Valley

On 8 November, LACNIC participated in Montevideo Valley, an initiative aimed at bringing together the community of Uruguayan entrepreneurs and professionals involved in information technology (IT).

## Lifetime Achievement Award

During the LACNIC 21 event held in Cancun, Mexico, Ermanno Pietrosemoli was presented with the 2014 Lifetime Achievement Award in recognition of his extensive contribution to connectivity and Internet development in Latin America and the Caribbean. This Award was introduced in 2009 to honor those individuals who have permanently and significantly contributed to the development of the Internet and the Information Society in the region of Latin America and the Caribbean. <http://goo.gl/wEcYbG>

## Leaving a Mark

On 30 June, Raúl Echeberría resigned his position as LACNIC's Executive Director, a position he had held for 12 years. Echeberría was part of the original group of pioneers that began working on the creation of LACNIC in 1998. In July 2000, he formally joined LACNIC's Interim Board of directors, which he chaired until 12 November, 2002, when he was appointed the organization's Executive Director. <http://goo.gl/hpOywN>

## From Mexico to Chile

Cancun and Santiago received the LACNIC community in the months of May and October, respectively, to discuss key issues relating to the region's Internet. More than 400 experts and professionals representing private companies, organizations, governments, and Latin American and Caribbean universities participated in each of these meetings. <http://goo.gl/TCECsD>

## LACNIC Member Survey

According to a study conducted by Merco Plus Latin America, LACNIC members are highly satisfied with the work and services provided by the organization responsible for managing internet numbering resources for Latin America and the Caribbean. <http://goo.gl/QS4uJB>

## Netmundial

On 23-24 April, LACNIC participated in the NetMundial summit, which was held in Sao Paulo and represents a milestone in the history of Internet Governance. Drafted through a participatory and open negotiation process, the final documents establish the principles that Internet Governance must observe and point out issues that must be solved as part of the transition of historic roles to the community. <http://goo.gl/j2P8OS>

## IANA Functions Stewardship Transition

The outcome of the process conducted among the LACNIC community was original input that would be used to consolidate a single proposal for the transition of stewardship of the IANA functions as they relate to Internet number resource management. Jorge Villa, Esteban Lescano and Rafael Ibarra were the community representatives responsible for leading this process. <http://goo.gl/paXIQo>

## Incident Response

LACNIC launched a computer security incident response coordination center for its community. This Warning, Advice and Reporting Point (WARP) will provide information and support to help its members manage computer security incidents, as well as access to privileged information regarding latent security threats in Latin America and the Caribbean. <http://goo.gl/uvOFJ3>

## One of the Best

For the third consecutive year, Great Place to Work® ranked LACNIC among the top ten companies to work for in the category of up to 150 employees. <http://goo.gl/QcgTJp>





## 2. THE LACNIC COMMUNITY



## 2.1 THE LACNIC COMMUNITY

The LACNIC community fully embodies the multistakeholder model and open, bottom-up processes, prime examples of which include the numbers community's Policy Development Process (PDP) and the dialogue on Internet development within our region.

The LACNIC community is open to all those who wish to participate. Regardless of their affiliation, anyone can participate in the processes and discussions that occur on the mailing lists, during our meetings, and as part of the policy development process.

LACNIC promotes the inclusion of the entire community in its activities, ensuring that the necessary services, communication channels and other support mechanisms are available at all times.

The LACNIC community encompasses a diverse geographical area that includes territories in North America, Central America, South America and the Caribbean. Community members from all these different regions participate in various capacities within LACNIC and share their interests and concerns regarding the realities of Internet development in the places where they live.

As such, the LACNIC community celebrates unity in diversity, as it works towards the inclusive development of an open, stable and secure Internet through dialogues and approaches that prioritize, inter alia, openness, democracy, transparency, fairness and respect.



## 2.2 2014 EVENTS

Each year LACNIC holds two events, typically in May and October, plus a meeting specifically designed for the Caribbean. In 2014, the following events were held: LACNIC 21 "Building the Future of the Internet: Security, Transparency and Participation", LACNIC in the Caribbean 6 and LACNIC 22.

### LACNIC 21

<http://eventos.lacnic.net/lacnic21>

LACNIC 21 was held in Cancun, Mexico, on 4-9 May and welcomed the Annual Member Assembly as well as the Public Policy Forum. As usual, other regional Internet organizations co-located their own activities, including LACTLD's annual assembly and policy workshop as well as LAC-IX.

Technical training and dissemination activities also featured prominently, among them six technical tutorials, the IPv6 Forum (FLIP6), the Network Security Forum (LACSEC), the Regional Interconnection Forum, the Peering Forum, the Network Operators' Forum (LACNOG), and the Women and ICT Luncheon, among others.

Unusual yet very noteworthy was the fact that, for the first time, the IETF, the IAB and the IESG held their annual retreats during LACNIC 21. This opportunity allowed sharing experiences among two key components of the open, participatory and bottom-up Internet model – the standards development community (IETF) and the Internet registry community, in this case for region of Latin America and the Caribbean.

Finally, a panel presented information on the transition of stewardship of the IANA functions to the community, following the decision by the NTIA (National Telecommunications Information Agency, a US government agency) to promote this process. The panel included members of the highest level, such as Jari Arkko (IETF Chair), Elise Gerich (ICANN VP of IANA), Raul Echeberría (LACNIC Executive Director), and Carolina Aguerre (LACTLD Director General), and was moderated by Oscar Robles (Director General of NIC.MX).





## CARIBBEAN 6 - CARIBNOG 8

<http://www.lacnic.net/web/eventos/caribbean6>

Between 29 September and 3 October, 2014, LACNIC organized its sixth meeting specifically aimed at the Caribbean community and the first to be held in conjunction with the Caribbean Network Operators Group (CaribNOG) meeting. The event was held in Willemstad, Curacao, and the program included a broad variety of topics, among them the challenges posed by cybersecurity, IPv6 for corporate networks, peering, datacenters and infrastructure, cloud computing, and DNSSEC.

Co-locating the LACNIC and CaribNOG meetings provided a unique opportunity to take advantage of the synergies between the two organizations, as well as to facilitate training activities and promote dialogue on issues that are specific to the Caribbean Internet community.

## LACNIC22 - LACNOG'14

<http://eventos.lacnic.net/lacnic22>

LACNIC 22 was held in Santiago, Chile, during the month of October, along with LACNOG 2014, the annual meeting of the Latin American and Caribbean Network Operators Group.

Among other topics, the LACNIC 22 program addressed the challenges to cybersecurity, the IANA functions stewardship transition, and strengthening regional Internet infrastructure.

Two panels were a key part of the program. The first was a panel aimed at providing information on the global IANA functions oversight transition. The second panel was led by the three community-appointed representatives who were driving the process and served to consult with the community.

Throughout 2014, more than 900 participants from 42 different countries both within and outside the Latin American and Caribbean region attended LACNIC events.

These meetings were possible thanks to the selfless contribution of the many individuals willing to share their time and knowledge, as well as to the numerous companies that generously sponsored the events.



**lacnic 22 lacnog'14**  
27/31 octubre 2014 santiago, chile

## 2.3 FINANCIAL ASSISTANCE PROGRAM

LACNIC's financial assistance program was created to support members of the Latin American and Caribbean Internet community interested in participating in the organization's events. The program was implemented in 2005 and annually supports more than 100 individuals from around the region.

Participants receiving financial assistance have the chance to learn, interact with their industry colleagues, and participate in the organization's key activities such as the Public Policy Forum and the Annual Member Assembly.

This year LACNIC helped 63 members of the community participate in the organization's various events: LACNIC 21 (Cancun, Mexico), LACNIC Caribbean 6 (Willemstad, Curacao), and LACNIC 22-LACNOG 2014 (Santiago, Chile). It also helped finance the participation of 82 members who attended both LACNIC 21 and LACNIC 22.

Within the framework of LACIGF, together with the other sponsoring organizations (APC, the Internet Society, ICANN, Google, CGI.br/NIC.br, Telefónica, LACTLD, Conexión El Salvador), LACNIC implemented a sponsorship program that allowed supporting the participation of 32 individuals to the Regional Preparatory Meeting for the Seventh Internet Governance Forum (16-19 July, San Salvador, El Salvador) and the Internet Governance Forum (2-5 November, Istanbul, Turkey).

More information:

<http://www.lacnic.net/web/lacnic/programa-de-becas>  
[becas@lacnic.net](mailto:becas@lacnic.net)



## 2.4 TRAINING CENTER

In 2014 LACNIC deployed its experts to provide training on various topics such as IPv6, IXPs, security, and RPKI in cities throughout the region such as, among many others, Caracas, San Salvador, Managua, Asuncion, Tegucigalpa, Buenos Aires, San Jose, Lima, Santiago and Port of Spain.

2014 was also the year in which LACNIC's Training Center took the first steps towards implementing and optimizing its Virtual Campus and generating e-learning content. This has made it possible to reach a broader, more diverse and more geographically distributed audience than we were able to reach in the past solely through our in-person training activities.

As regards e-learning, two online Project Formulation workshops were held within the framework of the FRIDA Grants Program. More than 200 individuals applied to attend these virtual workshops, the purpose of which was to provide participants with elements and support so that they could better formulate the projects that would later be submitted in response to the 2014 FRIDA Program's call for projects.

Other lines of work undertaken in 2014 include:

- Developing content for the IPv6 and CERTIPv6 courses that will be launched in the first quarter of 2015
- Creating the online evaluation for aspiring CERTIPv6 technology certifiers
- Creating video tutorials on LACNIC's networking system, reverse resolution, requesting resources, and other topics.

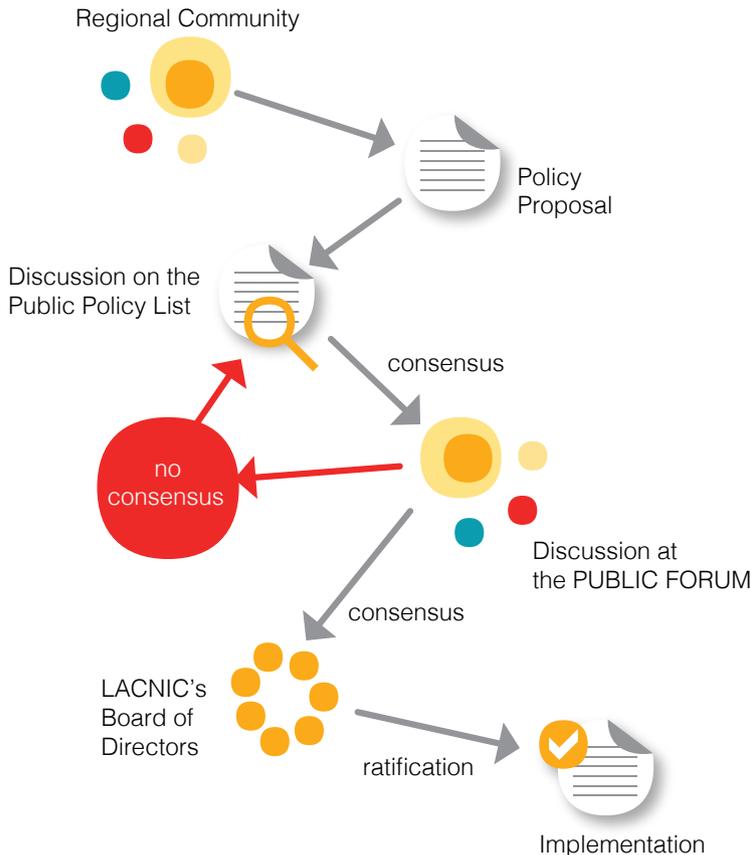
(These video tutorials are available at <http://goo.gl/k41oh3>)

## 2.5 POLICY DEVELOPMENT PROCESS

LACNIC operates based on a self-regulation model according to which the rules (policies) that govern Internet resource administration are developed by the regional community through a public, participative and transparent process that is open to anyone who wishes to participate and built on consensus.

Open participation of all stakeholder groups ensures that these policies are in line with regional interests, thus safeguarding the community as a whole. Before being presented at the forums in order to seek consensus, all proposals are submitted and discussed on the policy mailing list <http://goo.gl/pQmtYw>

In 2014, the regional community discussed seven proposals at the LACNIC 21 (Cancun, Mexico) and LACNIC 22 (Santiago, Chile) forums. The following table shows a summary and current status of each of these proposals.



TITLE	PUBLISHED ON THE MAILING LIST	LACNIC 21	LACNIC 22	STATUS OF THE PROPOSAL
LAC-2012-01v3 Eliminate the use of the term 'dial-up'	4/9/2012	No consensus was reached. The proposal will be sent back to the list for further discussion.	Abandoned by the author	Abandoned
LAC-2012-08v3 Inter-RIR IPv4 Address Transfers	23/4/2013	No consensus was reached. The proposal will be sent back to the list for further discussion.	Abandoned by the author	Abandoned
LAC-2013-01 Publishing information on reassigned IP address blocks via FTP	11/6/2013	No consensus was reached. The proposal will be sent back to the list for further discussion.	Abandoned by the author	Abandoned
LAC-2013-04 Management of Returned Internet Resources	30/10/2013	Approved		Implemented Ratified by the Board of Directors on October 3rd, 2014
LAC-2014-01 Creation of an IPv4 reserve exclusively for IPv6 deployment	27/1/2014	Consensus was reached	Abandoned by the author	Not ratified by the Board of Directors on October 3rd, 2014 Abandoned
LAC-2014-02 Modification to the text describing ASN distribution requirements	20/8/2014		Consenso alcanzado	Last call for comments
LAC-2014-03 Update to the Policy Development Process	5/9/2014		No consensus was reached. The proposal will be sent back to the list for further discussion.	Open discussion



## 2.6 TECHNICAL FORUMS

The technical forums supported by LACNIC seek to articulate initiatives and achieve Internet development and stability throughout the region. These include the Network Operators Forum (LACNOG), CSIRT meetings, the Regional IPv6 Forum (FLIP6), the Regional Interconnection Forum (NAPLA), the Network Security Forum (LACSEC), and the Spring-IETF Working Group meetings.

In 2014, these forums met during both LACNIC events (LACNIC 21-Cancun and LACNIC 22 - Santiago) and have become meeting places for sharing knowledge and experiences, thus further strengthening the region's Internet community.

### LACNOG

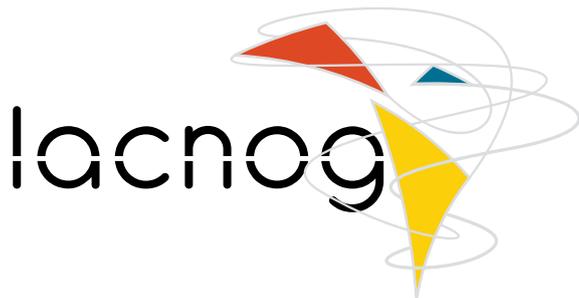
LACNIC has always actively supported the consolidation of the Latin American and Caribbean network operators group, LACNOG.

The sharing of experiences and information that usually occurs through the mailing list is strengthened at the group's annual meeting, which is co-located with LACNIC's second meeting each year.

The fifth edition of this technical forum that continues to grow and gain the support of major international operators was held this past October.

Some of the most important issues included in the regional technical community's agenda include, among others, security, routing, IPv6, network management, datacenter operation and infrastructure.

Interview with Ricardo Patara - LACNOG Chair: <http://goo.gl/DBJx76>



### IETF

Several times this year LACNIC set up remote hubs to help disseminate the activities and functions of the IETF Spring Working Group.

The IETF Spring Working Group is responsible for defining procedures that will allow a node to define an explicit route for a packet using only the information attached to the packet and without the need for holding information at transit routers.

A meeting worth highlighting is the one held on 17 October during which an introduction to the Spring Working Group was presented and the group's working plan, goals and functions were explained. Likewise, on 13 November, during the IETF 91 meeting, Cisco Systems Engineer Hernán Contreras remotely gave a brief introduction to the work of the IETF and explained the purpose of the SPRING meeting. <http://goo.gl/47hQta>

### CSIRT Meetings

In 2014, regional Computer Security Incident Response Team (CSIRT) meetings were held within the framework of the May and October events (Cancun, Santiago), in preparation for the sixth and seventh global CSIRT meeting.

These spaces are committed to the consolidation of knowledge among new and existing security incident response teams, promoting the exchange of information and experiences to help strengthen regional capabilities for preventing and mitigating the impact of computer security incidents.

Meeting participants discussed the challenges faced by CSIRTs in the LAC region and those specifically affecting the Caribbean. Attendees were invited to present their "team updates" and comment on the challenges they were facing at the moment.

LACNIC understands that these meetings are particularly important, as they allow teams from different countries to meet and share in an environment of trust that will later allow them to cooperate efficiently during an incident management process.

## FIRST TC

The second 2014 FIRST Technical Colloquium was co-located with LACNIC's October event held in Santiago. FIRST technical colloquia and symposia provide a forum for member teams and other guests to share their expertise and knowledge of vulnerabilities, incidents, tools, and any other aspect affecting the performance of security incident response teams. <http://goo.gl/BbTyRy>

This activity is an example of how the synergies among different organizations promote training opportunities and knowledge for the regional Internet community.

In addition, during this meeting LACNIC's warning, advice and reporting point (WARP), a team that coordinates and facilitates computer security incident handling, was presented.

<http://goo.gl/Scntu>

## LACSEC

LACSEC is the Latin American and Caribbean network security event. Its ninth edition was moderated by Fernando Gont (Argentina) and took place within the framework of LACNIC's annual event held in Cancun, Mexico, with the aim of bringing together major Latin American and Caribbean network security experts.

As with every LACNIC forum, face-to-face activities are supplemented with online discussion lists. Anyone interested in participating can subscribe to the Network Security mailing list. <http://goo.gl/UycZUL>

## Peering Forum

This initiative provides network operators and other members of the industry with the opportunity to meet, network, share ideas and experiences, and discuss future Internet interconnection activities. It is supported by various organizations and companies such as LACNIC, the Internet Society, Google, Microsoft, Netflix and LAC-IX.

The Peering Forum held its second and third meetings within the framework of LACNIC's two annual events (LACNIC 21, Cancun; LACNIC 22- LACNOG 2014, Santiago).

## REGIONAL INTERCONNECTION

<http://interconexion.lacnic.net>

NAPLA, the Regional Interconnection Forum, is a discussion forum that includes an annual meeting held within the framework of LACNIC's main annual event. This year, it was held during the month of May in Cancun, Mexico.

This forum is a meeting place for Latin American and Caribbean Internet exchange point representatives and is currently chaired by Fabián Mejía (Ecuador).

Anyone interested in operational or technical issues relating to IXPs and regional traffic exchange can subscribe to the corresponding discussion list at <http://goo.gl/izOYt1>

## FLIP6

The Latin American IPv6 Forum (FLIP6) is a meeting place for the IPv6 community that seeks to promote IPv6 adoption in Latin America and the Caribbean and the exchange of experiences regarding the implementation of IPv6 services and applications throughout the region.

The twelfth edition of this forum met on Tuesday 6 May within the framework of LACNIC's annual event held in Cancun and was moderated by Alejandro Acosta (Venezuela).

Anyone interested in IPv6 deployment within the region can subscribe to the LAC IPv6 discussion list

<http://goo.gl/bO0wmy>

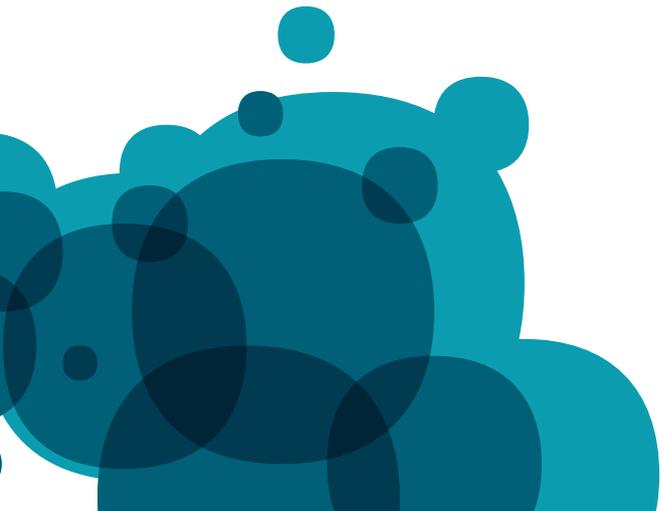
<http://portalipv6.lacnic.net/>

## BOF

A BoF (Birds of a Feather) session is a small, informal meeting where attendees come together based on specific, concrete topics and carry out discussions without any pre-planned agenda. Sessions of this type were included in LACNIC's May and October events (LACNIC 21, Cancun; LACNIC 22- LACNOG 2014, Santiago).

Four meetings were organized in 2014 – one for discussing BGP routing and IPv6, two for discussing DNS.

# 3. LACNIC AND INTERNET GOVERNANCE





## 3.1 FORUMS AND OTHER OPPORTUNITIES FOR PARTICIPATION

In 2014, LACNIC actively participated in relevant regional and international spaces. Highlights include the following:

### World Telecommunication Development Conference (WTDC)

The International Telecommunication Union's World Conference on Telecommunication Development (WTDC-14) took place in Dubai, United Arab Emirates, from 30 March to 10 April, 2014.

World Telecommunication Development Conferences (WTSs) offer members the chance to discuss the latest trends in telecommunications/ICT development and set the priorities for the ITU's Telecommunication Development Sector (ITU-D) for the period between two WTDCs.

Approximately 120 documents on topics such as broadband, climate change, Internet, IPv6 and cybersecurity were discussed. On the topic of IPv6, highlights included the amendment to Resolution 63, "IP address allocation and facilitating the transition to IPv6 in the developing countries," which was discussed among Member States.

### Inter-American Telecommunication Commission (CITEL)

CITEL is the Organization of American States' advisory body in matters relating to telecommunications and ICT. CITEL has two Permanent Consultative Committees. Permanent Consultative Committee I (PCC.I) is responsible for discussing ICT and Internet related issues. PCC.I has different rapporteurships, including the Rapporteurship on Internet: ecosystem and international connectivity.

Among others, documents containing information on IPv4 exhaustion were presented to this rapporteurship, as well as reports on the Regional Preparatory Meeting for the Internet Governance Forum (LACIGF).

LACNIC attended the meeting that took place in Lima (13-16 May), Asuncion (3-7 August) and Buenos Aires (13 September).

# ITU Plenipotentiary Conference

The ITU Plenipotentiary Conference is a major event where ITU Member States decide the future role of the ITU and thus determine the Union's ability to influence and affect the global development of information and communication technologies (ICTs).

The Plenipotentiary Conference is the supreme organ of the International Telecommunication Union. Held every four years, this Conference is where the ITU's general policy is established, its four-year strategic and financial plans are adopted, and the organization's senior officials, Council members and members of the Radio Regulations Board are elected.

This nineteenth edition of the Plenipotentiary Conference was held in the city of Busan, Republic of Korea, and was attended by forty-five countries. More than fifty resolutions were adopted, including twenty-one new resolutions relating to the global community's current and future ICT agenda.

## REGULATEL – BEREC Summit

On 21-22 July, the city of Buenos Aires hosted the summit of Latin American and European regulators (REGULATEL and BEREC). The summit's plenary meeting allowed LACNIC to present its activities before representatives from eleven different countries throughout the region.

Emerging issues that are part of the governance agenda (the transition of IANA functions stewardship) as well as topics of interest to the region were discussed, including IPv4, promoting IPv6 development, and the impact of NetMundial on the LACIGF agenda.



## 3.2 IANA FUNCTIONS STEWARDSHIP TRANSITION

One of 2014's major milestones was the announcement by the US government of its intention to transition their IANA functions stewardship role to the global community.

This announcement was made simultaneously with the release of a statement by a group of organizations representing the Internet technical community (I\*, a group of which LACNIC is part).

This transition is the logical consequence of the evolution that led to the creation of ICANN during the 90s and is something that Regional Internet Registries have been demanding for some time. This step was hastened by relevant events that occurred in 2013, among them the I\* Montevideo Statement and the then imminent organization of the NetMundial event promoted by the Brazilian government.

As a result of this announcement, the Internet community has begun a process of intense debate within the three specific areas affected by the IANA functions:

- Numbers (Internet addresses)
- Domain names
- Protocol parameters

As regards to LACNIC in particular, the organization has actively participated in the discussions of the global numbers community, as well in as a consultation process among its own regional community. Some highlights of the regional community's process are worth noting:

- Panel during LACNIC 21 in Cancun, Mexico
- Creation of the Internet Governance discussion list
- Publishing of a list of Information Resources
- Appointment of community representatives to lead the consultation
- Panel during LACNIC 22 in Santiago, Chile
- Outcome of the consultation with the LACNIC Community
- Appointment of representatives to the CRISP Team for the global process

In 2015, the global process is expected to kick off with the work of the CRISP Team, the purpose of which is to submit a single consolidated proposal based on the proposals of the five regional communities to the Internet Coordination Group (ICG) (a group that will receive contributions from the three affected communities) and continue with the definition of a global process that will run its course until the month of October.

More information: <http://goo.gl/WgMYE2>

## 3.3 NETMUNDIAL

<http://netmundial.br>

The Global Multistakeholder Meeting on the Future of Internet Governance took place in Sao Paulo in April 2014. NetMundial, a joint initiative of the Brazilian Internet Steering Committee (CGI.br) and the /1Net Forum, brought together civil society, private sector, academia and technical community representatives for the purpose of establishing principles and outlining guidelines for Internet use and development worldwide.

The event was organized in different committees made up by various stakeholder groups, including ministerial representatives from twelve countries (Argentina, Brazil, France, Ghana, Germany, India, Indonesia, South Africa, South Korea, Tunisia, Turkey and the United States) and twelve members of the international community (International Telecommunication Union [ITU], the United Nations Department of Economic and Social Affairs [DESA] Affairs and the European Commission).

An aspect worth highlighting is the participation of Raúl Echeberría, then LACNIC's Executive Director, as Co-Chair of the Executive Committee, a body responsible for the meeting's agenda and format.

The Statement was agreed by consensus among the representatives of the various stakeholder groups, and was created by a Drafting Committee that met in view of the public. Though not all sectors are equally pleased with the Statement, its innovative nature and the presence of multiple high-level players made NetMundial the most important milestone in the budding history of Internet Governance.



## 3.4 LACNIC IN THE CARIBBEAN

LACNIC's Caribbean service region includes fourteen Caribbean territories which share historical and cultural ties. For example, the continental territories of Belize and Guyana are often associated with the English-speaking Caribbean due to the political, cultural and historical similarities they share with the islands. That said, LACNIC's Caribbean service region also includes Dutch-, French- and Spanish-speaking territories, a feature shared both by some of the region's smallest territories as well as by some much larger countries. For example, Saba, a Dutch-speaking territory, has 1991 inhabitants, while Cuba has approximately eleven million.

Since its inception, LACNIC has provided services and support to the Caribbean Internet community. In 2014, Kevon Swift joined the LACNIC team as External Relations Officer for the Caribbean with a view to strengthening the organization's work in this extraordinary part of our region.

### Caribbean IGF

The Tenth Caribbean IGF took place from 6 to 8 August, 2014, in Paradise Island (Bahamas) and included discussions on an Internet Governance framework for the Caribbean, the development of ccTLDs, new gTLDs and spam, among other topics.

LACNIC gave presentations on technical issues affecting Latin America and the Caribbean and the different ways in which members of the community can participate in the various Internet Governance forums. Interestingly, the IGF Caribbean predates the global IGF and remains at the forefront of Internet Governance discussions among Caribbean stakeholder groups.

### Annual CANTO Conference

CANTO's Thirtieth Annual Conference and Exhibition was held from 11 to 13 August, 2014, also in Paradise Island (Bahamas). CANTO is a key player serving the Caribbean Internet and telecommunications community as policy-maker and habitual organizer of forums aimed at sharing information and promoting discussions within the Caribbean telecommunications and ICT sectors.

LACNIC participated in this event as an exhibitor and also presented on IPv4 exhaustion and IPv6 deployment as a solution to this problem.



## 3.5 LACNIC IN CENTRAL AMERICA

Throughout 2014, LACNIC promoted the strengthening of Central America and increased its support to the region, particularly with the addition of César Díaz as External Relations Officer for Central America.

### LACNIC- COMTELCA Agreement

One of this year's achievements was the cooperation agreement signed between LACNIC and COMTELCA (the Regional Technical Telecommunications Commission for Central America) to implement joint research activities and provide services.

The agreement between LACNIC and COMTELCA seeks to develop e-learning capabilities for the use of information technologies, IPv6 deployment, the promotion of Internet Exchange Points (IXPs), and greater regional participation in Internet governance issues.

Seeking to enhance and promote Internet development in Central America, LACNIC participated in several spaces in which the Internet played a major role. Highlights included Internet Day, TICAL 2014, the Telecommunications Conference, and LACIGF.

### Internet Day

In support of Internet Day, El Salvador held its Internet Week from 12 to 19 May. This initiative provided the framework for LACNIC to talk with other Central American organizations involved in the topic and share with them its commitment and support for Internet-related activities.

### TICAL 2014

Held in Cancun, TICAL 2014 allowed LACNIC and RED Clara to identify the most relevant changes that had occurred at both regional and global level.

During the meeting, it was proposed that academic networks and universities should position themselves as leaders on IPv6-related issues, promote computer security incident response teams, and disseminate information on Internet governance topics.





## Telecommunications Conference

During the second Telecommunications Conference held in Panama from 18 to 21 August, together with the Internet Society and ICANN, LACNIC organized and participated in a session where the key issues on the Internet Governance agenda, its milestones, progress and outlook for the region were discussed.

Different sectors involved in Central American Governance participated in the debates. Discussions also addressed the region's role in the initiatives undertaken by Costa Rica, the progress made in terms of net neutrality and other issues.

## LACIGF 7

The Seventh Regional Preparatory Meeting for the Internet Governance Forum was held from 16 to 18 July, 2014, at the Hotel Real Intercontinental in San Salvador, El Salvador.

The meeting was organized by a Program Committee made up by regional civil society, private sector, technical Internet community and government representatives. LACNIC acted as Technical Secretariat, while Conexión El Salvador was the local organizer of this 2014 meeting.

Once again, this latest edition set a new attendance record: more than 170 participants in the room, more than 2000 individuals watching the Spanish, Portuguese and English webcasts, and a significant impact on social networks (#lacigf7).

A novel aspect introduced in 2014 is the agreement signed between LACIGF and the eLAC Program to organize the eighth edition of the Forum together with the Program's Ministerial Conference, which will be held in Mexico City in August 2015.

The meeting is supported by organizations that contribute to a fund that makes these activities possible. In 2014, the following organizations contributed to this fund: Google, CGI.br, LACNIC, the Internet Society, ICANN, APC and Telefonica.

More information: <http://goo.gl/6bNvFN>

# LAC-i-ROADSHOW

The LAC i-RoadShow organized by ICANN in Guadalajara (Mexico) on October 1st provided the framework for LACNIC to make a presentation on the current status of IPv4 exhaustion and IPv6 deployment in the LAC region.

LAC i-RoadShows are designed to raise awareness across the region on key topics related to Domain Name System (DNS) critical infrastructure and Internet Governance.

The event was attended by university, government and private sector representatives and each sector had the chance to share their current IPv6 deployment status.

## 3.6 INTERACTION WITH OTHER RIRS

<http://www.nro.net/>

LACNIC has been part of the NRO (Number Resource Organization) since 2003. This organization is a coordinating body for the five Regional Internet Registries (RIRs) that exist worldwide: AFRINIC [www.afrinic.net](http://www.afrinic.net), APNIC [www.apnic.net](http://www.apnic.net), ARIN [www.arin.net](http://www.arin.net), LACNIC [www.lacnic.net](http://www.lacnic.net) and RIPE NCC [www.ripe.net](http://www.ripe.net).

This policy coordination space strengthens the role of the RIRs in the protection of unallocated address space, promotes and protects an open and participatory policy development process, and serves as a focal point for Internet community input into the RIR system.

NRO coordination is implemented through monthly conference calls and face-to-face meetings of RIR CEOs. It also includes spaces for technical coordination among the RIR's Engineering (ECG), Communications (CCG), Registry Services (RMCG) and External Relations (PACG) teams, each of which has its own working dynamics depending on their peculiarities.

In addition to the above, the CRISP Team was created in late 2014. This team consists of fifteen members, two appointees from each RIR region who are not RIR staff plus one RIR staff from each region, and its purpose is to produce a single numbers community proposal for the IANA Functions Stewardship Transition to be presented to the Internet Coordination Group (ICG) in January 2015.

<http://goo.gl/p6eTqt>



## 4. RESOURCE ADMINISTRATION

## 4.1 IPV4 EXHAUSTION

If we were to single out just one of the things that occurred in the life of LACNIC during 2014, this would certainly be IPv4 address exhaustion.

In June 2014 LACNIC's pool of available addresses reached the 4.1 million mark and the region entered the IPv4 exhaustion phase. This triggered "gradual exhaustion" (soft landing) policies for handling the continent's remaining Internet resources. In practice, this meant the depletion of IPv4 addresses for Latin American and Caribbean network operators.

It also triggered the policy for Transfer of IPv4 Blocks within the LACNIC Region (see 2.3.2.18) which authorizes and regulates the transfer of resources among different entities.

The statement LACNIC issued at the time expressed the organization's concern for the fact that the region's operators and governments were delaying the deployment of Internet Protocol version 6 (IPv6).

The fact that our region reached the point of IPv4 exhaustion also triggered the global IANA policy for post IPv4 exhaustion mechanisms, which regulates the allocation of the addresses returned to the IANA pool.

For more information on the IPv4 exhaustion phases in the LACNIC region, go to: <http://goo.gl/AU6mJY>



KEEP  
CALM  
and  
IPv6

## 4.2 REGISTRY SERVICES

IPv4 exhaustion in Latin America and the Caribbean turned 2014 into a historic year.

The major event happened on 10 June, 2014, when LACNIC assigned the last available IPv4 address block from its regular pool, thus triggering its soft landing policy.

As agreed by the region's Internet community, when only 4,194,302 addresses remained (the equivalent to a /10), LACNIC's IPv4 address pool would be considered officially exhausted and policies for gradual exhaustion (soft landing) and new members would kick in. In this new phase, IPv4 addresses can only be assigned in blocks of between 256 (/24) and 1024 (/22) and the organization receiving an assignment cannot submit a new request for a period of six months. The next phase will be triggered when LACNIC's pool of available addresses is down to a /11. At that time, only new members will be eligible to receive IPv4 addresses and those new members will only be able to submit a single request.

As to the number resources assigned within LACNIC's service region, 1,208 IPv6 assignments were made in 2014, which represents a 73.5% increase as compared to the previous year. At the close of 2014, a total of 3,417 IPv6 assignments had been made across the region. The number of members with IPv6 assignments was up to 74.61%.

On the other hand, 2014 saw a 33% decrease in the number of allocations as compared to the previous year: 74,634 /24s was assigned in 2014, as compared to 111,249 /24s assigned in 2013. This change in assignment trends is attributed to the exhaustion of the IPv4 protocol.

Finally, ASN allocation increased by 51.8% as compared to 2013, and the year ended year with a total 964 assigned ASNs.

To summarize, during 2014 the following resources were assigned in the LACNIC region:

IPv6 block assignments:

IPv4 block assignments: 1,622

/32 IPv6 block assignments: 1,363.2

IPv4 block assignments, expressed in /24s: 74,634

IPv4 addresses assigned in 2014: 19,106,304

Available IPv4 addresses (as at 31 December 2014): 7,114,240

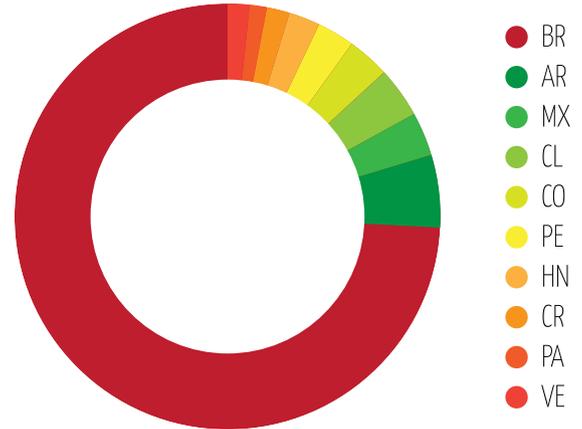
Percentage of members with IPv6 assignments: 74.61%

ASN assignments: 964

Number of Members: 4,285

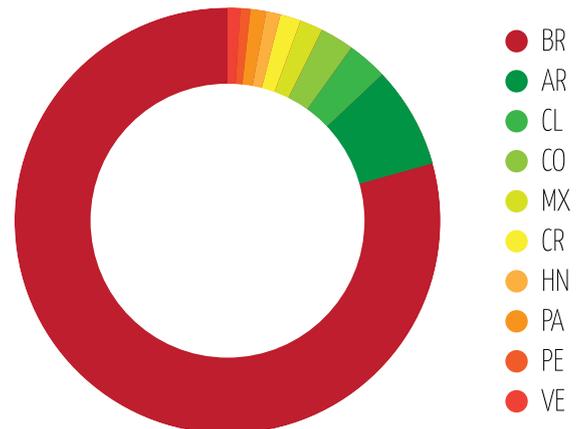
## Distribution of the IPv4 Address Assignments Performed in 2014 by Country

Brazil leads the list of countries that received the most IPv4 assignments in 2014 by a broad margin (72.58%), followed by Argentina (7.04%) and Mexico (3.21%).



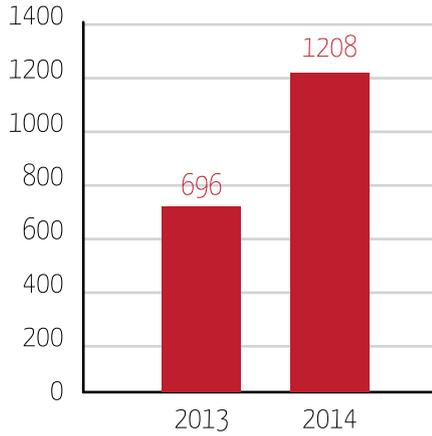
## Distribution of the IPv6 Address Assignments Performed in 2014 by Country

Brazil also ranks first in terms of the number of IPv6 assignments received in 2014 (78.44%), followed by Argentina (6.47%) and Chile (2.40%).



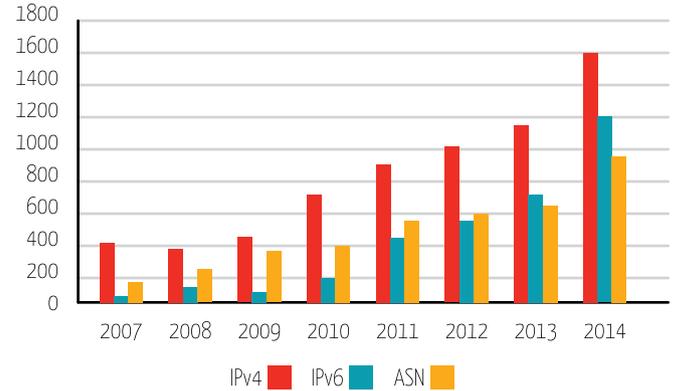
## Number of IPv6 assignments by year

IPv6 assignments continue to grow across our service region, where 1,208 IPv6 assignments were made in 2014. This represents a 73.5% increase as compared to the previous year.



The following table shows the evolution of IPv4, IPv6 and ASN assignments by year.

Compared to the previous year, in 2014 overall resource allocations grew as follows: ASN allocations grew by 51.8%, IPv4 address block assignments grew by 42.41%, and IPv6 address block assignments grew by 74.06%. As the graph shows, IPv4, IPv6, and ASN assignments have grown steadily over the past few years.

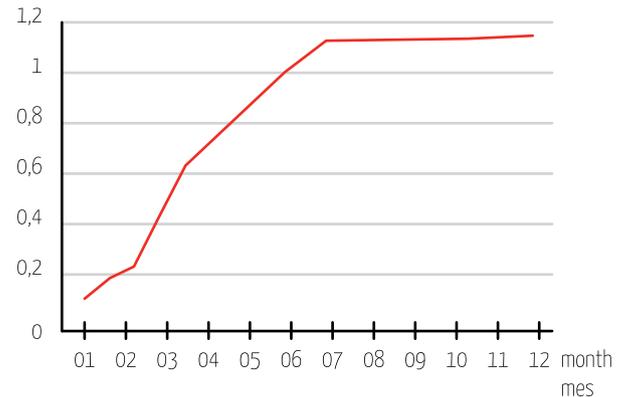
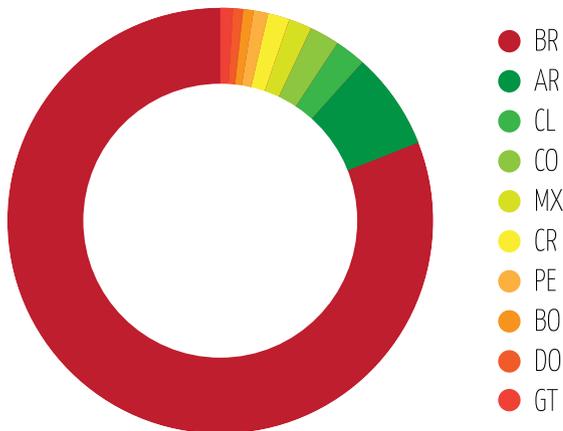


## Total ASNs Assigned in 2014

Once again, in 2014 Brazil and Argentina were the leaders in terms of ASN assignments. 81.22% of the region's ASNs were assigned in Brazil, a fact that highlights the remarkable growth of the Internet in that country. Argentina and Chile received 6.22% and 1.6% of the region's assignments, respectively.

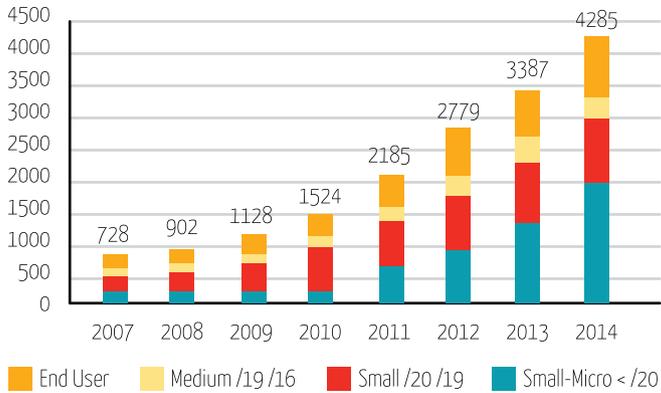
## Aggregated IPv4 /8s

2014 saw a notable decrease in IPv4 consumption. This year, 19,106,304 IPv4 addresses (the equivalent to 1.13 /8s) were assigned, compared to 28,246,528 IPv4 addresses assigned in 2013. This has to do with the fact that "soft landing" policies establishing major constraints on allocation size and frequency kicked in.

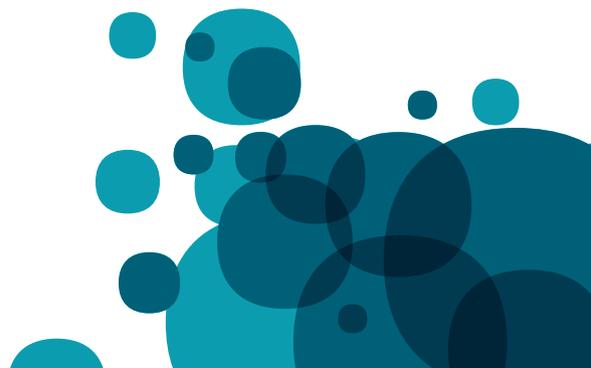
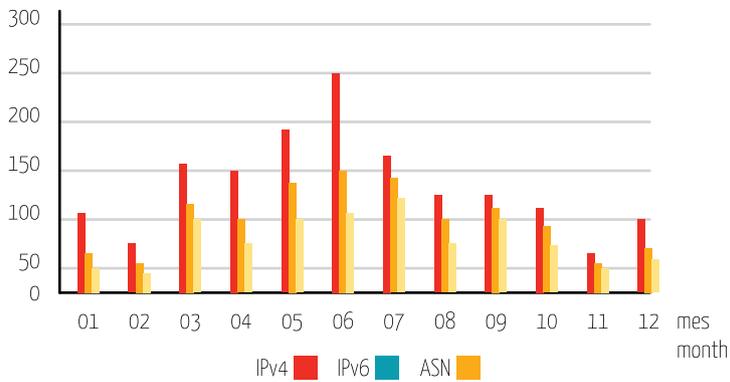


# Growth of LACNIC'S Membership Base in 2014

LACNIC's membership base continues to grow hand in hand with Internet growth in Latin America and the Caribbean. The following chart shows how LACNIC's membership base has evolved and significantly expanded since the organization was created and until 2014. At the end of 2014, LACNIC had 4,285 members, representing a 26.51% growth as compared to 2013. The Small/Micro category had the highest growth (46.3%), followed by the Small category which grew 23.8% over the previous year.



The following graph shows assignment trends during 2014. As we can see, the number of requests began to decline in July due to the activation of Phase 2 of the IPv4 exhaustion period.



## 4.3 SERIES OF VISITS TO OPERATORS

<http://goo.gl/HmCRRm>

From mid-February to late March, LACNIC conducted a series of visits and meetings with officials and businessmen in different Latin American and Caribbean countries. The purpose of this activity was to provide information on the imminent exhaustion of the regional IPv4 address stock and the technical changes that need to be implemented so that the Internet can continue to grow.

Within the framework of this activity, LACNIC experts visited government agencies and more than 100 Internet Service Providers in Venezuela, the Dominican Republic, Panama, Colombia, Ecuador, Peru, Trinidad and Tobago, Chile and Argentina to raise awareness on the imminent exhaustion of IPv4 and the need to deploy IPv6.

After these visits, several countries set up groups for promoting IPv6 deployment. Worth highlighting is the Venezuelan Initiative for IPv6 Adoption.

<http://www.ipv6.org.ve/>

*“Seven out of ten Internet organizations in the LACNIC service region have already received IPv6 addresses, the new technology that is replacing the IPv4 protocol.”*

*“According to LACNIC’s technical records, Brazil leads the ranking of countries with the most IPv6 assignments, followed by Argentina, Colombia, Mexico, Chile, Costa Rica and Ecuador.”*

*“Today, five out of ten Latin Americans have Internet access, a number that is expected to grow over the next 30 months. It is estimated that by 2015 there will be 100 million new Internet users in Latin America and the Caribbean, totaling 355 million users in the region.”*



## 4.4 WORKSHOPS

In line with the work started in 2004, LACNIC has continued to promote effective IPv6 deployment across the region. In addition to visits, LACNIC also organized multiple presentations, talks and technical training activities, as well as a workshop specifically designed for the IT industry's decision makers.

The IPv6 Workshop for Decision Makers held in Cancun during the LACNIC 21 event presented the basics of IPv6, the importance of this protocol for Internet development, and business cases showing that IPv6 is the best technical and commercial solution to the problem of address scarcity.

Below is a list of the in-person IPv6 workshops conducted in 2014, which were attended by a total of 760 participants.

- *Port of Spain, Trinidad and Tobago (1st May)*
- *CANTV, Venezuela (5 June)*
- *Nassau, Bahamas (7 August) – "Importance of IPv6"*
- *Venezuela (11 August) – "Internet for Social Development"*
- *Bogotá, Colombia (18 September) – "Why IPv6?"*
- *Caracas, Venezuela (22-23 September)*
- *University of Curaçao (9 October) – "Brief Introduction to IPv6"*
- *Nicaragua (7 November) – "IPv6 Workshop for Managers"*
- *National University of Engineering, Nicaragua (27-29 November)*
- *ITCA-FEPADE Specialized School of Engineering, El Salvador (2-4 December)*

## Internet Exchange Points

In 2014, LACNIC signed a cooperation agreement with the Internet Society to work on strengthening human capabilities for the region's Internet Exchange Points (IXPs). The agreement included both organizations' commitment to contribute financial and human resources for conducting technical workshops in Honduras, Costa Rica, Paraguay, Chile (Santiago and Cochabamba) and El Salvador.

The topics covered in these workshops included IPv6, BGP routing, RPKI, and best practices for the operation and creation of an IXP.

- *Costa Rica (2-3 July)*
- *Honduras (12-13 November)*
- *Asunción, Paraguay (23-24 November)*
- *El Salvador (3-4 December)*

## RPKI Workshops

Several RPKI workshops were held in 2014 aimed at disseminating information on this technology and promoting secure routing throughout the region. In addition to these workshops, resource certificates were created for LACNIC member organizations and support was provided for the creation of ROAs.

- *Buenos Aires, Argentina (3-4 August)*
- *Caracas, Venezuela (25-26 September)*
- *Bogotá, Colombia (29-30 September)*

## WALC

The Internet Network Technology Workshop for Latin America and the Caribbean was held in Manta, Ecuador, on 27-31 October. This workshop consisted of six modules addressing topics such as wireless networks, IPv6 deployment, and computer security. The purpose of these workshops is to help meet the LAC region's training needs in the field of ICTs.

## 4.5 IPv6 PORTAL

<http://portalipv6.lacnic.net/>

The IPv6 Portal is a LACNIC initiative that provides a central repository for the latest information on IPv6, news items, relevant interviews within the #LAC community, and IPv6 events or workshops in the region.

At the community's request in relation to certain topics of interest (interviews, news items, IPv6 success stories), the site's accessibility has been enhanced.





## 5. R+D

## 5.1 AMPARO PROJECT

The AMPARO project is a LACNIC initiative that seeks to strengthen computer security incident prevention and response capabilities in Latin America and the Caribbean.

Since 2013, this project has been seeking to provide training and strengthen areas related to DNS security and the deployment of DNSSEC, secure routing, network security, the consequences of IPv4 exhaustion on Internet security, as well as incident handling, among others topics.

On 10-12 November, a basic workshop on Information Security was presented in Tegucigalpa, Honduras, geared towards experts and professionals involved in areas such as risk management policies, guidelines for creating a CSIRT, different types of response teams, and individual roles within a CSIRT. Two practical activities on how to handle sensitive information and manage phishing incidents were also included.

<http://www.proyectoamparo.net/>

Twitter: @AMPARO\_LACNIC

Facebook: Proyecto\_AMPARO

## 5.2 WARP

(WARNING ADVICE AND REPORTING POINT)

<http://goo.gl/UbCvkJ>

In 2014, LACNIC rolled out a computer security incident response coordination center for its community.

LACNIC WARP coordinates and facilitates incident handling so that the members of the regional community can manage their computer security issues and have access to confidential information regarding latent threats in Latin America and the Caribbean.

During the last quarter, the team began coordinating the services needed to reinforce computer security incident response capabilities in the case of incidents involving Latin American and Caribbean Internet addresses. So far, LACNIC WARP has already analyzed XX incidents.

For more information: [info-warp@lacnic.net](mailto:info-warp@lacnic.net)

Twitter: @LACNIC\_Warp

## 5.3 TECHNICAL COORDINATION AMONG THE RIRS

Throughout 2014, LACNIC and the four other Regional Internet Registries (ARIN, RIPE NCC, APNIC, AFRINIC) worked hard to improve how various joint projects are developed and implemented. In order to facilitate this task, this year the NRO-ECG met three times.

Highlights of the work carried out during 2013 include:

- The work carried out within the framework of the IETF WEIRDS Group (WHOIS-based Extensible Internet Registration Data Service) created in 2012. This work focused on the creation of a successor to the former WHOIS protocol, namely, the Registration Data Access Protocol (RDAP).

The new service standardizes both how queries are submitted as well as the format in which responses are provided. It also addresses issues such as internationalization (for example, it allows the use of accented characters in Spanish and Portuguese) and allows queries containing special characters.

<http://goo.gl/WHSPs0>

- Continuity in the analysis of information contained in RPKI in order to generate proposals for improving the protocol as well as the infrastructure.

- LACNIC's participation in the RIPE Atlas <https://atlas.ripe.net/> project implemented by our colleagues at RIPE NCC. The project consists of an online measurement system based on the creation of a network of sensors distributed in various parts of the world. Continuing with this project, in 2014 the first anchor was installed in Casa de Internet's datacenter.

- In addition, this year a Memorandum of Understanding was signed with RIPE for 2015 that will allow installing K-root server copies in LACNIC's service region as part of a coordinated effort to improve Internet security, stability and resiliency in our region.

- ARIN-LACNIC Exchange: In order to improve software developers' work and generate a set of best practices to simplify software migration, an agreement was reached for ARIN and LACNIC to develop guidelines on the subject. This work was possible thanks to the joint efforts of Andy Newton, Sofía Silva Berenguer and Gerardo Rada

# 5.5 LACNIC LABS

<http://labs.lacnic.net/site/>

LACNIC's technical team has continued to promote an innovative approach to encourage and hasten the adoption of technological advances and industry standards. Highlights of the work carried out in 2014 within the framework of the LACNIC Labs initiative include the following activities:

## Open Data

Open data is the philosophy that certain data should be freely available to everyone, without restrictions from copyright, patents or other mechanisms of control.

In 2014, LACNIC worked on drawing accurate statistics on the allocation of IPv4 and IPv6 resources, both regionally and by country.

## RDAP Protocol

<http://goo.gl/hicCXx>

A new service based on RDAP (Registration Data Access Protocol) was launched in 2014 to replace the existing WHOIS service. RDAP includes new features to query the registry database.

## IPv6 Traffic Measurements

New reports were created in 2014 that help maintain the information on IPv6 traffic within the LAC region up to date.

<http://goo.gl/ZBp1qX>

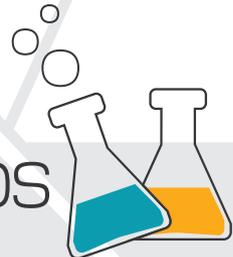
## Simón Project

<http://goo.gl/3rohBH>

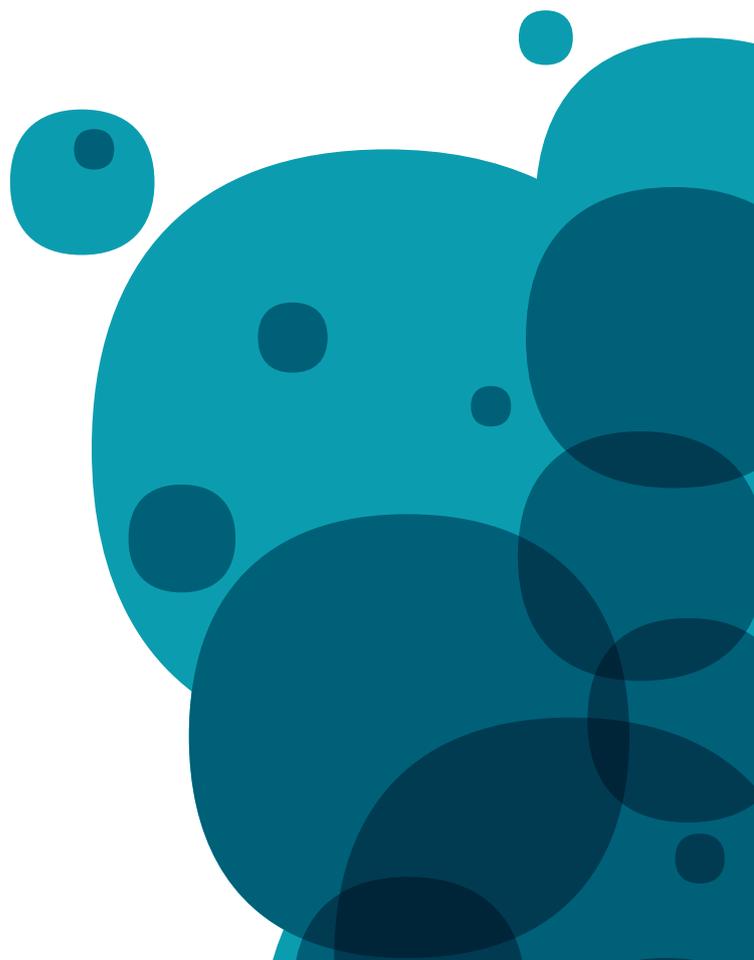
In 2014, LACNIC prepared a map showing latency measurements for Internet networks in Latin America and the Caribbean. The project is still in progress and will make available to the region a tool that automates data collection and allows having a complete, updated and representative IPv6 map of Latin America and the Caribbean. The tool will generate approximately 500 tests per day from 25 different countries.

Watch interview: <http://goo.gl/YtjgW5>

lacniclabs



# 6. INTERNET AND DEVELOPMENT





## 6.1 FRIDA PROGRAM

<http://programafrida.net/>

FRIDA is a LACNIC initiative that has been contributing to the development of the regional information society since 2004. This contribution consists of small grants for executing research projects (<http://programafrida.net/grants>) and the recognition of innovative initiatives in the use of ICTs for development (through the FRIDA Awards program <http://programafrida.net/awards>).

Since 2012, FRIDA has been part of the Seed Alliance.

## SEED ALLIANCE

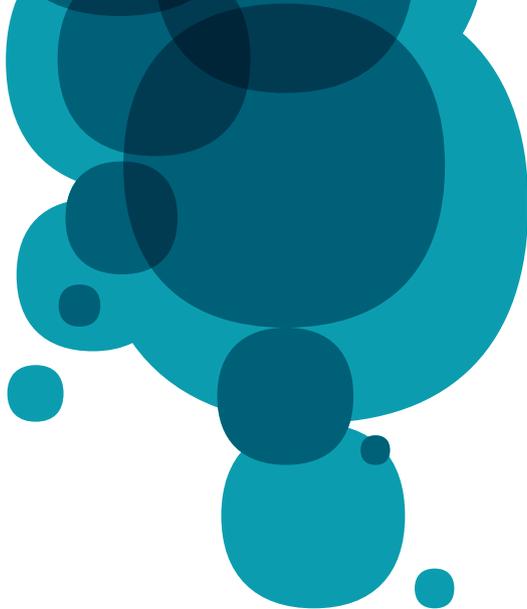
“Seed Alliance, Helping Ideas Grow”

[http://programafrida.net/seed\\_alliance](http://programafrida.net/seed_alliance) is the collaborative space created by three RIRs –APNIC (the Regional Internet Registry for the Asia-pacific region), AFRINIC (the African Regional Internet Registry) and LACNIC for their ISIF Asia <http://isif.asia/>, FIRE <http://www.fireafri-ca.org/> and FRIDA <http://programafrida.net/> initiatives, respectively– the purpose of which is to offer grants and present awards within their respective regions.

The Seed Alliance program had strong presence at the 2014 Internet Governance Forum, which was held in Istanbul, Turkey, during the month of October.

As part of their award, Seed Alliance winners participated at the IGF. They were able to take part in the discussions and network with each other as well as with other Forum attendees. The Seed Alliance Open Forum provided a chance to showcase the winning projects and receive input from the Internet community.





## 2014 FRIDA+ AWARDS

The 2014 FRIDA Awards+ recognized five important contributions made by ICT research or innovation initiatives for Latin America and the Caribbean.

The awards focused on four categories: access, freedoms, development, and innovation. A fifth award was presented to the “Most VOTED, Most CREATIVE” project.

After analyzing over 60 proposals, the five winning projects received a small cash prize (USD 3000) and travel and accommodation expenses for one of the project’s representatives to attend both the Regional Preparatory Meeting for the Internet Governance Forum (LACIGF) held in mid-July in the city of San Salvador, El Salvador, as well as the Internet Governance Forum (IGF) itself, which was held in September in Istanbul, Turkey.

More information: <http://programafrida.net/awards>  
If you have any questions, please contact:

## Winners of the 2014 FRIDA+ Awards:

### **Devices, Infrastructure, and Technologies. Accelerating and Expanding Access**

EDUS (Spanish acronym for Unified Digital Health Record)  
COSTA RICA. Initiative: Government.  
<http://programafrida.net/projects/projects/view/428>

### **Creating and Developing Skills and Content for Sustainable Human Development**

BRASIL 4D - Government services and information through interactive public DTV for low income population  
BRAZIL. Initiative: Government.  
<http://programafrida.net/projects/projects/view/466>

### **Mobile Internet for Social Inclusion, Growth, Political Participation, and Active Citizenship**

Linguoo  
REGIONAL. Initiative: Private Sector  
<http://programafrida.net/projects/projects/view/413>

### **Internet for Promoting, Guaranteeing and Exercising Human Rights and Fundamental Freedoms**

Flor de Ceibo  
URUGUAY. Initiative: Academic Sector.  
<http://programafrida.net/projects/projects/view/426>

### **+VOTED +CREATIVE Initiative**

Tiflolibros - Digital Library for the Blind - A network where the visually impaired can meet and share. Tiflolibros  
ARGENTINA. Initiative: Civil Society  
<http://programafrida.net/projects/projects/view/440>

# SMALL GRANTS

In 2014, FRIDA also provided financial support to research projects in the field of ICTs in the form of small grants. Under this program, each project is eligible to receive a non-reimbursable amount of up to USD 20,000 which must be used to execute a project with a duration of up to twelve months. Projects are selected as the result of open and competitive calls for proposals.

This edition was open to both ICT research projects as well as ICT development projects. In turn, each project could choose one of the specific topics listed in their selected category:

1. Devices, Infrastructure, and Technologies. Accelerating and Expanding Access
2. Creating and Developing Skills and Content for Sustainable Human Development
3. Mobile Internet for Social Inclusion, Growth, Political Participation, and Active Citizenship
4. Internet for Promoting, Guaranteeing and Exercising Human Rights and Fundamental Freedoms

More information: <http://programafrida.net/grants>

If you have any questions, please contact:  
[consultasubvenciones@lacnic.net](mailto:consultasubvenciones@lacnic.net)

## Initiatives selected for the 2014 FRIDA Small Grants program:

### **a- ICT Development Projects**

*Creating and Developing Skills and Content for Sustainable Human Development*

Community Action Networks. Asociación Conexión al Desarrollo Civil Society. El Salvador.

### **Devices, Infrastructure and Technologies. Accelerating and Expanding Access:**

*Project: Accelerating and Expanding SIVIPCAN version 4.0 in Nicaragua.*

Movicancer Foundation. Civil Society. Nicaragua.

*Project: Early Diagnosis of Autism through Eye-Tracking.*

Emily Fenichel Foundation. Civil Society. Argentina.

### **Mobile Internet for Social Inclusion, Growth, Political Participation, and Active Citizenship:**

*Project: Home TeleMAP.*

University of Antioquia. Academic Sector. Colombia.

### **b - Research Projects**

### **Creating and Developing Skills and Content for Sustainable Human Development:**

*Project: Using the Graphogame videogame for leveling pre-reading competences in vulnerable first-year students of Chile's Araucanía Region*

Araucani Aprende Foundation for Education. Civil Society. Chile.

### **Internet for Promoting, Guaranteeing and Exercising Human Rights and Fundamental Freedoms:**

*Project: Violence against Women and the Use of Information and Communication Technologies in Jamaica.*

Centre of Leadership and Governance. Academic Sector.



# 2014 FRIDA START-UP PROGRAM

Likewise, in 2014 FRIDA offered participants the opportunity of submitting an additional proposal for up-scaling a project

[http://programafrida.net/awards\\_rules](http://programafrida.net/awards_rules)

The FRIDA Start-Up program seeks to continue to promote and support innovative projects so that they can achieve greater impact beyond the scope of the original projects themselves.

## PROJECTS SELECTED FOR THE START-UP PROGRAM:

The following is a list of the winning projects:

### **Use of Remote Experimentation in Mobile Devices for Basic Education**

Universidade do Sul de Santa Catarina - Fundação de Amparo à Pesquisa e Extensão Universitária – FAPEU. Brazil.

### **Learning Educational Robotics in Virtual Contexts**

Omar Dengo Foundation. Omar Dengo Foundation (Costa Rica) - Ministry of Education (Dominican Republic)

### **DatoDuro: A Mobile Application for Sending and Receiving Data and Crowdsourcing**

La Voz Pública Foundation, Argentina (chequeado.com) – El Faro, El Salvador (elfaro.net)

### **ICT for Improving Community Water Management in Rural Populations with High Levels of Poverty**

ONGAWA (Peru) - La Cuculmeca (Nicaragua) Foundation for Education and Communication (Nicaragua)





<http://www.ayitic.net>

## 6.2 AYITIC INTERNET FOR DEVELOPMENT

The second edition of LACNIC's flagship Haitian initiative—Ayitic, Internet for Development— took place on 11-15 August, 2014, in Port-au-Prince. Ayitic is a capacity building project specifically designed considering Haiti's particular needs in the aftermath of the devastating 2010 earthquake. In line with LACNIC' general vision for the region, in early 2013 the organization promoted a bottom-up process based on a public survey aimed at assessing Internet development in Haiti. This process allowed identifying certain key areas that required capacity building, among them:

- IP Telephony / VoIP
- Practical aspects of network and computer security
- Wireless networks and network management
- IPv6 deployment
- Internet services
- ICT management for development projects

The results of this second edition of Ayitic have been even more promising, as a 50% increase in participation was observed (150 participants), as well as an increase in the number of women participating in the workshop and a significant evolution of the topics and tracks included in the program. LACNIC will continue to improve Ayitic in 2015 through the creation of an institutional model to support the program and by building relationships with other organizations to further enrich this capacity building experience.

## 6.3 SUPPORT FOR EXTERNAL EVENTS

### JIAP 2014

LACNIC participated at the JIAP 2014 meeting, one of Uruguay's largest technology events which was held on 16-18 September at the Montevideo City Hall Conference Center and attended by over 3,500 participants.

As part of this activity, Gerardo Rada, Software Engineer at LACNIC, gave a presentation on CertiV6 – IPv6 Software Certification. Likewise, Oscar Messano, President of LACNIC's Board of Directors, gave a presentation on the challenge between profitability and developing connectivity in order to ensure broadband access.

Presentations are available on the JIAP 2014 website:  
<http://goo.gl/WCeSvM>

### WALC 2014

Just as in previous years, in 2014 LACNIC supported the ESLARED Foundation (the Latin American School of Networks) <http://www.eslared.org.ve/> in the organization of WALC 2014 <http://www.eslared.org.ve/walc2014/>

WALC 2014 took place on 27-31 October in the city of Manta, Ecuador. The purpose of the workshop was to help meet the LAC region's training needs in the field of ICTs.

One hundred and eighty Internet specialists from different Latin American and Caribbean countries participated in the 2014 edition, which comprised six modules on topics such as IPv6 networks, computer security and wireless sensor networks, among others.

WALC is an ESLARED initiative supported by the NSRC (Network Startup Resource Center), the Internet Society, Universidad de los Andes (Venezuela), the International Center for Theoretical Physics, and LACNIC, among others.

### Montevideo Valley

On 8 November, LACNIC participated in Montevideo Valley, an initiative that aims at bringing together the Uruguayan community of entrepreneurs and professionals involved in information technology (IT).

## 6.4 WOMEN AND IT

The participation and integration of women in LACNIC's different processes is an aspect that needs to be strengthened.

With this in mind, LACNIC created Women and IT, a space aimed at encouraging the participation of women in technical issues, promoting synergies among them, and stimulating greater involvement of LACNIC's female community in the organization's activities.

This space is provided at the various events organized each year by LACNIC. The fifth edition of these meetings took place during the LACNIC 21 event held in Cancun, Mexico. This time, Edna Samudio (Administrator of Panama's National Academic and Research Network, PANNet) shared her experiences and spoke about her early days in a male-dominated industry.

In addition, Alissa Cooper and Mary Barnes of the IETF encouraged women to assume leadership roles and provided some advice on how to do this. Participants also spoke about the Sisters group, a space provided by the IETF to promote networking among women participating in ICTs.



## 6.5 '14 LIFETIME ACHIEVEMENT AWARD

<http://www.lacnic.net/web/trayectoria/premio-2014>

The 2014 Lifetime Achievement Award was presented to Ermanno Pietrosemoli in a ceremony that took place during the LACNIC 21 event in Cancun, Mexico.

The Lifetime Achievement Award was established by the LACNIC Board in 2009 to honor those individuals who have made a significant, sustained contribution to the development of the Internet and the Information Society in the region of Latin America and the Caribbean. The award seeks to recognize those individuals whose achievements are relevant to the Internet community.

The reasons highlighted by the Lifetime Achievement Award Judging Panel for choosing to honor Ermanno Pietrosemoli include his active participation in building the Latin American Internet community through the immense amount of work he has carried out during more than 20 years of WALC workshops which have allowed training thousands of experts across the region Latin America and the Caribbean, as well as his outstanding achievements in the field of wireless network research, where he holds the record for long range data transmission and has published papers such as Wireless Networks for Latin American and Caribbean Development, which he co-authored with Liliana Chamorro in 2008.

In November 2008, the Internet Society (ISOC) presented Ermanno with the Jonathan B. Postel Award, which was awarded to the EsLaRed Foundation for its contribution to human resource training and Internet development in Latin America and the Caribbean.





## 7. ANNEXES

# Independent Audits' Report

To the Shareholders of Registro Regional de Direcciones IP para América Latina y Caribe (LACNIC).

## *Report on the Financial Statements*

We have audited the accompanying financial statements of the Registro Regional de Direcciones IP para América Latina y Caribe LACNIC (the Institution), which comprise the balance sheet as at December 31, 2014, the income statement, the statement of changes in equity, and statement of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory notes.

## *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with General Accepted Accounting Principles in Uruguay. This responsibility includes: designating, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

## *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Local Standards on Auditing established in Pronunciamiento 18 of Colegio de Contadores, Economistas y Administradores del Uruguay. Those Standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## *Opinion*

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Institution as at December 31, 2014 and of its financial performance and its cash flows for the year then ended in accordance with General Accepted Accounting Principles in Uruguay.

March 20, 2015

Cra. Victoria Buzetta  
N° CJPPU 66.795

**Registro Regional de Direcciones IP para América Latina y Caribe (LACNIC)**  
**STATEMENT OF FINANCIAL POSITION**  
**AS OF DECEMBER 31, 2014**  
(Expressed in US Dollar)

	<u>December 31, 2014</u>	<u>December 31, 2013</u>
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
CASH AND BANKS (Notes 2.5 and 2.9)		
Cash	2.549	2.949
Banks (Note 5)	513.984	321.695
	<u>516.533</u>	<u>324.644</u>
SHORT TERM INVESTMENTS (Note 2.5,2.11 and 6)		
Investments	2.387.866	1.587.940
Interest receivable	28.047	14.259
	<u>2.415.913</u>	<u>1.602.199</u>
ACCOUNTS RECEIVABLES (Nota 2.5 and 2.10)		
Trade Receivables	2.235.798	2.055.873
Deferred income	(428.686)	(441.594)
Allowance for doubtful accounts	(10.575)	(30.146)
	<u>1.796.537</u>	<u>1.584.133</u>
OTHERS RECEIVABLES		
Guaranty Deposits (Note 14)	-	8.954
Other receivables (Note 12)	164.712	164.937
	<u>164.712</u>	<u>173.891</u>
<b>TOTAL CURRENT ASSETS</b>	<u>4.893.695</u>	<u>3.684.867</u>
<b>NON CURRENT ASSETS</b>		
Fixed Assets (Note 2.12 and Annex I)		
Cost of acquisition	3.669.844	3.523.359
Accumulated amortization	(677.084)	(527.771)
	<u>2.992.760</u>	<u>2.995.588</u>
INTANGIBLES (Note 2.12 and Annex I)		
Cost of acquisition	250.938	235.117
Accumulated amortization	(218.569)	(175.814)
	<u>32.369</u>	<u>59.303</u>
<b>TOTAL NON CURRENT ASSETS</b>	<u>3.025.129</u>	<u>3.054.891</u>
<b>TOTAL ASSETS</b>	<u>7.918.824</u>	<u>6.739.758</u>

The notes and annexes to the financial statements are available, in Spanish and English, at the following link:

ES - <http://goo.gl/4en2OW>

EN - <http://goo.gl/l5cStv>

**Registro Regional de Direcciones IP para América Latina y Caribe (LACNIC)**  
**STATEMENT OF FINANCIAL POSITION**  
**AS OF DECEMBER 31, 2014**  
(Expressed in US Dollar)

	<u>December 31, 2014</u>	<u>December 31, 2013</u>
<b>LIABILITIES</b>		
<b>CURRENT LIABILITIES (Note 2.12)</b>		
<b>COMMERCIAL DEBTS</b>		
Account Payable	77.470	72.357
<b>FINANCIAL DEBTS</b>		
Bank loans (Note 8.1)	189.175	253.836
Leasing loans (Note 8.2)	12.255	-
	<u>201.430</u>	<u>253.836</u>
<b>OTHER DEBTS</b>		
Provisions for Employee Benefits	83.808	128.843
Benefits for Staff Retirement	26.655	12.838
Advanced Collections	350.490	235.511
Other Debt (Note 9)	233.319	-
	<u>694.272</u>	<u>377.192</u>
<b>TOTAL CURRENT LIABILITIES</b>	973.172	703.385
<b>NON CURRENT LIABILITIES</b>		
<b>NON CURRENT FINANCIAL DEBTS</b>		
Bank loans (Note 2.5 and 8.1)	-	188.550
Leasing loans (Note 2.5 and 8.2)	12.036	-
<b>TOTAL CURRENT LIABILITIES</b>	<u>12.036</u>	<u>188.550</u>
<b>TOTAL LIABILITIES</b>	985.208	891.935
<b>EQUITY</b>		
<b>RETAINED EARNINGS (Note 10)</b>		
Prior year's results	5.709.159	5.073.856
Net result of the year	1.224.457	773.967
	<u>6.933.616</u>	<u>5.847.823</u>
<b>TOTAL EQUITY</b>	6.933.616	5.847.823
<b>TOTAL LIABILITIES AND EQUITY</b>	<u>7.918.824</u>	<u>6.739.758</u>

The notes and annexes to the financial statements are available, in Spanish and English, at the following link:

ES - <http://goo.gl/4en2OW>

EN - <http://goo.gl/l5cStv>

**Registro Regional de Direcciones IP para América Latina y Caribe (LACNIC)**  
**INCOME STATEMENT**  
**FOR THE YEAR ENDED AS OF DECEMBER 31, 2014**  
(Expressed in US Dollar)

	<b>For the year ended as of December 31, 2014</b>	<b>For the year ended as of December 31, 2013</b>
<b>OPERATING REVENUES</b>		
Net Operating Revenues (Note 11)	6.284.487	5.644.688
	<u>6.284.487</u>	<u>5.644.688</u>
<b>SELLING AND ADMINISTRATIVE EXPENSES</b>		
Salaries and Contributions for Retirement	(1.635.971)	(1.647.505)
Travel and Staff Subsistence	(800.396)	(671.602)
Cooperation, Contribution and Memberships	(345.238)	(553.708)
Hired Services	(608.390)	(464.917)
Difussion costs	(444.181)	(384.263)
Travel and Fellows and Exhibitors Subsistence	(408.731)	(292.912)
Fixed Assets Depreciation (Annex I)	(196.714)	(209.775)
Maintenance	(173.178)	(168.065)
Communication Expenses	(144.023)	(159.476)
Training	(69.914)	(64.100)
Stationery and Other Office Supplies	(57.434)	(54.124)
Electric Power and Water	(35.844)	(42.234)
Doubtful Accounts	19.571	6.768
Other Expenses	(68.598)	(76.880)
	<u>(4.969.041)</u>	<u>(4.782.793)</u>
<b>FINANCIAL RESULTS</b>		
Interest Paid	(123.674)	(80.237)
Interest Income	119.084	112.016
Differences of Investment Valuation	(53.354)	(27.563)
Exchange Differences	(33.045)	(92.144)
	<u>(90.989)</u>	<u>(87.928)</u>
<b>NET INCOME OF THE YEAR</b>	<b><u>1.224.457</u></b>	<b><u>773.967</u></b>

The notes and annexes to the financial statements are available, in Spanish and English, at the following link:

ES - <http://goo.gl/4en2OW>

EN - <http://goo.gl/l5cStv>





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