



A QUARTELY NEWSLETTER OF THE AFRICAN NETWORK INFORMATION CENTRE

Africa needs a common framework for Internet governance



Prime Minister of Senegal (centre) Rt. Hon Mahammed Dionne makes the keynote address at the AlS'18 opening ceremony in Dakar. With him on the podium are Dr. Nii Quaynor, AfNOG Convener; Mary Tiew, Higher Education Minister of Senegal; Abdou Karim Sall, Director General of ARTP and Abibu Ntahigiye, then Chairman of AFRINIC.

frica needs to address the disparities that exist between individual countries in terms of internet governance in order to adequately achieve the ICT goals set out in Agenda 2063.

Speaking at the opening ceremony of the Africa Internet Summit (AIS) 2018 in Dakar, the Prime Minister of the Republic of Senegal Rt. Hon. Mohammed Dionne called on all stakeholders to work towards digital inclusion and digitization of economies in the continent so as to reap from the immense potential the internet has for Africa.

The premier commended AIS as the flagship event that brings together the networks and communities that are responsible for Internet governance and coordination in Africa. "The Senegalese government considers the internet as a catalyst of growth. In our country, ICTs contributes 2 per cent to the GDP. But with the 2016-2025 Senegal Digital Strategy, we want to bring this share in GDP to 10 per cent by 2025," He said.

According to the Prime Minister, the Summit came at the right time to help build the capacity of digital economy actors.

He further noted that the Senegalese government deploying is optical fibre throughout the country and encouraging the adoption of the principle of infrastructure sharing between different digital operators.

Also present during the ceremony was the Director General of the Regulatory Authority for Telecommunications and Post of Senegal (ARTP) Mr. Abdou Karim Sall.

In his speech Mr. Sall noted that ARTP has done tremendous work to expand internet access in Senegal. According to Mr. Sall, over 9 million Senegalese use the internet, representing a penetration rate of 62.9 per cent.

AIS 2018 was hosted by ARTP and the Ministry of Telecommunications, Post and the Digital Economy of Senegal. Also present was the Minister for Higher Education Mary Teuw Niane.



New Fees Proposal for AFRINIC Members



new resources fees structure could be in the offing after AFRINIC invited comments to the new fees proposals. The initiative is geared towards ensuring that AFRINIC has a sustainable fees model that ensures better management of resources as well as addressing the future of allocations.

Towards this end a Fee Review Committee was set up in January 2017 to consider changes to AFRINIC's fee structure. The committee has submitted its report and recommendations to the board, the Annual General Members Meeting and the mailing lists for review and comments.

The comments period is open until 25th July 2018.

The Fee Review Committee's report can be viewed <u>here</u>.

A calculator that shows both existing and proposed fees is available at <u>here</u>.

Study challenges policy makers to make Africa's content local

nternet policy makers have been urged to identify ways of facilitating local markets for content hosting, access and distribution.

While making a presentation at a panel discussion at the Africa Internet Summit 2018, AFRINIC's Josiah Chavula through a study on Latency and content hosting revealed how bulk of Africa's content news was hosted outside the continent.

The discussions showed how in some cases, it is faster to reach European or North American networks than those in other regions of Africa, indicating most African countries heavily rely on foreign services, both to host, to access, and to distribute local content.

The discussions focused on the different factors affecting the performance of the Internet across the continent, including throughput, latency, and content hosting.

The study, which was jointly conducted by Josiah, Enrico Calandro, Sarah Kinden both from Research ICT Africa and Martin Levy from Cloudflare revealed the presence of latency clusters, where some countries have



Josiah Chavula from AFRINIC presenting during a panel discussion on Latency, throughput and content hosting at AIS'18 in Dakar Senegal

built up low delay interconnectivity among themselves.

Among the recommendations from the study included incentivising investments on data centres and local exchange points to stimulate economies of scale for the local web hosting market.

The panel was composed of Enrico Calandro, Josiah Chavula, Sarah Kinden, Martin Levy and Michuki Mwangi from ISOC.



Progress at AFRINIC-28 as 3 proposals move to last call



Barry Boubakar from WACREN makes his submissions during the policy discussion at the AFRINIC-28 Meeting in Dakar, Senegal

hree out of seven policy proposals that were up for discussion at the AFRINIC-28 Public Policy Meeting in Dakar proceeded to last call.

This was revealed to the AFRINIC community by the Policy Development Co-Chairs Dewole Ajao and Sami Salih who steered the discussions.

The first proposal was the 'IPv6 Policy and References Update Version 1' that aimed to provide important updates and make it easier to understand how Local Internet Registries (LIRs) can assign IPv6 addresses to their users.

The second was the 'IPv6 PI Update' that seeks to address the realities of IPv4 exhaustion and accommodate the possibility to obtain IPv6 Provider Independent (PI) assignment even if the requesting party has no IPv4 PI space.

The final proposal that proceeded to last call is 'IPv6 Initial Allocation Update Version 1' that seeks to ensure alignment of initial and subsequent IPv6 allocation policies. It also aligns itself with the possible allocation of bigger address block. Please see the table with all the policies that were up for discussion at AFRINIC-28.

The Internet number community discussed seven individual policies with the following outcome.

Proposal	Outcome
IPv6 Policy & References Update	
AFPUB-2018-V6-001-DRAFT01	Last Call
Slides	
Internet Number Resources Review by AFRINIC	
AFPUB-2016-GEN-001-DRAFT06	More discussion needed
Slides	
IPv4 Soft Landing - bis	More discussion needed
AFPUB-2016-V4-001-DRAFT07	More discussion needed
Policy Development Process – bis	More discussion needed
AFPUB-2017-GEN-002-DRAFT03	
Clarification on IPv6 sub-assignments	More discussion needed
AFPUB-2018-V6-002-DRAFT01	
IPv6 PI Update	Last Call
AFPUB-2018-V6-004-DRAFT01 Slides	
IPv6 Initial Allocation Update	Last Call
AFPUB-2018-V6-003-DRAFT01 Slides	

More resources made available by clean-up exercise

recent AFRINIC cleanup exercise on the quarantined resources for the returned or reclaimed IPv4 address space has made available more number resources.

Following this exercise, 618,496 IPv4 addresses, 15 /32 IPv6 prefixes and 80 AS Numbers (ASN) were released into the available pool. As a procedure, AFRINIC deletes all related objects from the AFRINIC whois database for the returned or reclaimed IPv4 address space and keep it in quarantine for twelve months or as long as the space is globally routed.

The clean up exercise ensures that these resources are not visible in the global routing table nor have associated objects in other Internet Routing Registry (IRR) databases.

At the end of Phase 1 of the softlanding and until no more than a /11 of non-reserved space is available in the 102/8 block, AFRINIC will begin issuing these IPv4 resources to resource members who will be notified about such reclaimed resources.



IANA Numbering Services Operations get a clean bill of health

ANA Numbering Services Review Committee has released a 2017 Numbering services report. The report, which April-December 2017, covers indicates that the performance of the IANA Number Services Operations was within the Service Level Agreement and met the needs of Internet number community.

The Review Committee's evaluations observed that two IPv4 requests and two ASN requests were made and fulfilled accurately between March 2017 and December 2017. The Committee also reported that there was sufficient community outreach and community involvement in the review of the performance of the IANA Numbering Services during the period.

The Review Committee was established in October 2016 to advise the RIRs on the IANA Functions Operator's performance and adherence to identified service levels upon completion of the IANA Stewardship Transition process. The Review Committee must submit such a report to the NRO EC at least once every calendar year.

The committee comprises representatives from all five RIR regions. AFRINIC's representatives to the committee are Omo Oaiya, Noah Maina and Madhvi Gokool.



Omo Oaiya



Noah Maina



Madhvi Gokool

Over 100 applicants bid for FIRE Africa Grants



Awards Winners with SEED Alliance Partners at the Internet Governance Forum (IGF) 2016 in Guadalajara, Mexico.

total of 106 applicants from 18 different countries in Africa have applied for the 2018 FIRE Africa Grants Program. The applicants are all eying the five available slots that will see them get between \$10,000 and \$15,000 funding available for projects that support women empowerment in ICT and building community networks.

Selected projects will benefit from a series of institutional strengthening and capacity building activities aimed at providing the knowledge, tools and contacts needed to further advance successful initiatives.

The Fund for Internet Research and Education (FIRE) is a grants and awards program designed to encourage and support the development of innovative solutions to address Africa's education, information, infrastructure and communication needs. The program is currently supporting a total of 18 projects worth over \$300 000.

The programme only accepts projects from African-based public or private sector organizations, universities, or research and development institutions, and non-government organizations. Evaluation is conducted by a team of independent external jurors who are members of the AFRINIC community but not staff.

Internet statistics simplified with new platform



A screenshot of the WIDER portal that aims to provide Internet statistics in a friendly manner.

etwork service providers, policy makers, economists, data journalist and the Internet society at large will soon have a proficient utility analytics tool at their disposal.

Through a project dubbed WIDER (World Internet Data Explorer) it will now be easier to access Internet statistics within a click. WIDER is web portal for analysing data on Internet access, infrastructure, market share, performance and more. Such data will be crucial for analysing the Internet, its economy and impact on society.

The platform will also enable the general public to learn more about

the Internet in a specific country or region. The platform aims to facilitate data-driven collaboration across stakeholders in African countries and beyond.

WIDER is a joint project by AFRINIC, ISOC-ZA, Research ICT Africa and VANILLA.



AFRINIC Represented at Events. January - June 2018



WACREN 2018 Opening Ceremony

AFRINIC was represented at several events this year.

APRICOT 2018

APRICOT 2018 took place in Kathmandu Nepal from 19-28 February. AFRINIC participated at the Registration Services Coordination Group (RSCG) meeting where registration services members from the RIRs discussed on general RIR Registration services affairs such as WHOIS data accuracy and Identifier Technology Health Indicators at APRICOT 2018.

AFRINIC also presented its RIR Report and on the topic 'An insight into Africa's country-level latencies at the Peering Forum". This study gives some insight into the impact of cross-border infrastructure and logical interconnections in Africa by comparing Internet performance measurements between different countries.

Representing Asia Pacific's largest international Internet conference, Asia Pacific Regional Internet Conference on Operational Technologies (APRICOT) draws many of the world's best Internet engineers, operators, researchers, service providers, users and policy communities from over 50 countries to teach, present, and do their own human networking.

ICANN 61

AFRINIC participated at the ASO-AC and the NRO face-to-face Meetings at ICANN 61 in San Juan, Pueto Rico from 10 -15 March.

ICANN meetings are held three times each year in different regions of the globe to enable attendees from around the world to participate in person. One meeting each year is also the organization's annual general meeting, during which new Board members take their seats.

WACREN 2018

WACREN 2018 took place in Togo, Lomé. AFRINIC's participation was an opportunity to address how WACREN members can request for IP addresses, talk about IPv4 exhaustion and the fees schedule for the Academic and Research institutions members of Association of African Universities (AAU). AFRINIC highlighted these issues during a presentation.

WACREN organised its 4th Annual Conference on 15-16 March 2018. The conference was organized in a special context: the rollout of the WACREN network, with the promise of changing dramatically the IT landscape in higher education and research in the region. The theme of the conference was: "WACREN – Unleashing Potentials.

Global Peering Forum 13

This year the forum was held in Seattle in the USA from 10 -13 April. AFRINIC presented a study on 'An insight into Africa's country-level latencies" at Global Peering Forum 13. The Global Peering Forum (GPF) is a yearly networking event that promotes interconnection among networks, content, cloud, and digital media organizations and related entities.

IEEE INFOCOM 2018

The IEEE International Conference on Computer Communications was held in Honolulu, Hawaii from 15-19 April 2018. AFRINIC presented a study on "An insight into Africa's country-level latencies" where the paper won the "Best in-session presentation Award".

IEEE INFOCOM is a top ranked conference on networking in the research community. It is a major conference venue for researchers to present and exchange significant and innovative contributions and ideas in the field of networking and closely related areas. IEEE INFOCOM covers both theoretical and systems research. For INFOCOM 2018, the conference includes a main technical program, a number of workshops, a keynote speech, panels, a student poster session, and demo/poster sessions.

ARIN 41

AFRINIC presented its RIR report at ARIN 41 held in Miami, USA from 15 – 19 April.

ARIN holds biannual Public Policy and Members Meetings in the second and fourth quarters in various locations throughout the ARIN region. ARIN meetings provide an opportunity for the entire Internet community to engage in policy discussions, network with colleagues, and attend workshops and tutorials.

SALON OSIANE 2018

AFRINIC addressed the topic of Internet Number Resource Management as a strategic tool for digital growth in Africa at the Salon Osiane 2018 in Congo-Brazzaville from 16-20 April. AFRINIC also had a membership booth where delegates learnt more about AFRINIC activities. AFRINIC also met with its membership onsite and engaged prospective members to understand the various services offered by AFRINIC.

East Africa Com 2018

AFRINIC interacted with its members and engaged with prospective members in Kenya at East Africa Com 2018 held on 15 and 16 May.

East Africa Com is the premier strategic event for telecoms,

media, broadcasting, and technology leaders in Africa.

RIPE-76

RIPE 76 took place in Marseille, France from 14-18 May, 2018.

AFRINIC met with other RIR peers to discuss the setting up of a Customer Services Working Group as a platform for exchange of information and experiences for the Customer Services of the RIRs.

A RIPE Meeting is a five-day event where Internet Service Providers (ISPs), network operators and other interested parties gather to discuss issues of interest to the Internet community.

Africa DNS Forum

The sixth edition of the African DNS Forum took place on 3-5 July in Benin, Cotonou and preceded the celebration of 20 years of Internet Governance in Africa. AFRINIC participated in a panel discussion on the evolution of Internet Governance in Africa during the celebration of 20 years of Internet Governance in Africa, in Benin Cotonou. The anniversary was marked by a day-long event themed "An Efficient Governance of Internet in the Service of Africa Development.

We offer technical training on #IPv6 deployment and have trained over 3,000 engineers in 40 economies since 2010



AFRINIC ratifies "Lame Delegations in the AFRINIC reverse DNS" Policy

he AFRINIC Board has ratified the ''Lame Delegations in the AFRINIC reverse DNS'' policy that will enable AFRINIC to remove lame delegation records from 'domain' name objects in the AFRINIC database.

A DNS nameserver is considered lame if the server does not respond with an authoritative answer for the specific domain. As a result of this policy implementation, monthly tests will be run on all nameservers referenced within "domain" objects in the AFRINIC WHOIS Database.

AFRINIC will soon also have a webpage displaying lameless statistics with lame delegation reports and a public lameness checker tool. This policy was enforced on 28 March 2018 and will appear as article 10.7 of the Consolidated Policy Manual.



Amreesh Phokeer and Daniel Shaw from AFRINIC presenting the policy "Lame Delegations in the AFRINIC reverse DNS" to the community during the AFRINIC-26 Public Policy Meeting in Nairobi, Kenya.

AIS 2018 Pictorial

















