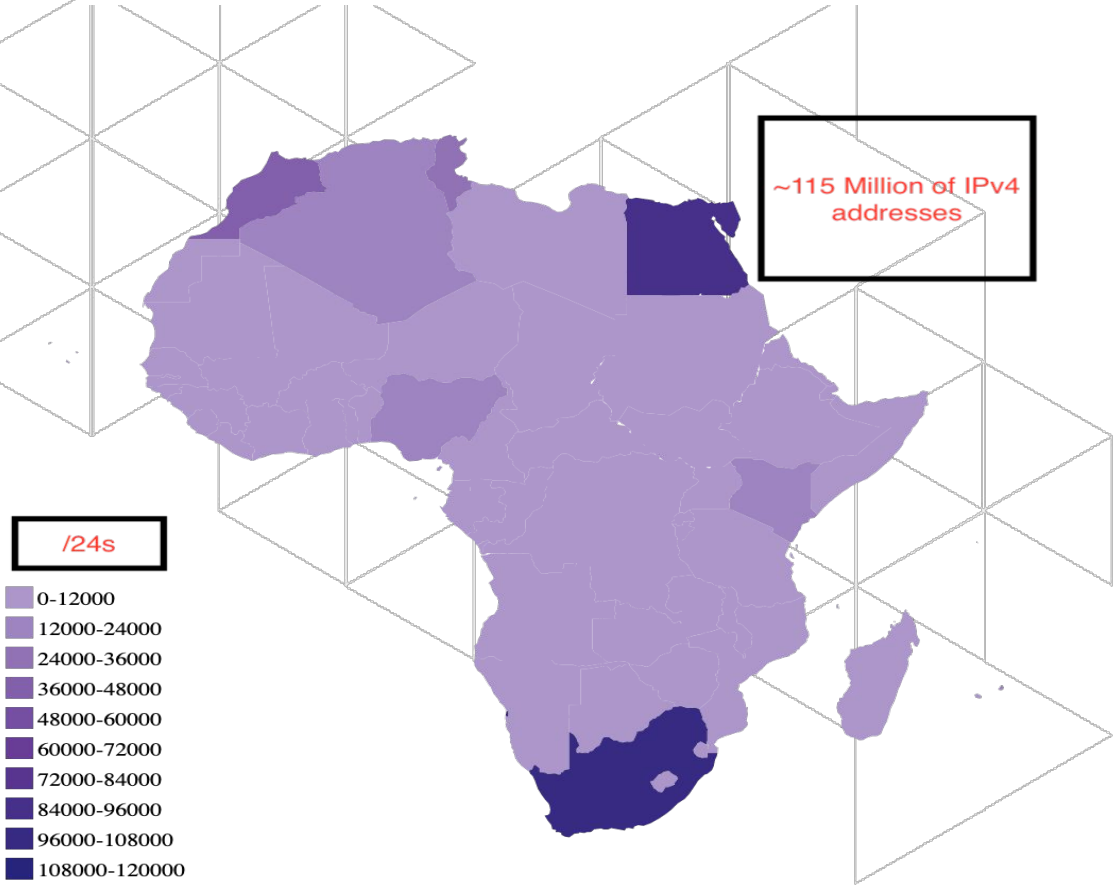


Internet Development in AFRICA

Do resource policies
matter?

Madhvi Gokool
AFRINIC
30 August 2022

Current Status of Internet Number Resources in AFRICA



 **Total policy reserved IPv4**

1,156,096

 **Total Available IPv4**


1,481,984

Current Status of Internet Number Resources in AFRICA



 Total ASN Allocated

2,199

 Total IPv6 issued (/32s)

9,846

Resource Policies

@August 2022

Resource requests under evaluation(not yet approved)

92 new resource member

74 additional IPv4 resource requests

Reason - Need supporting information to ensure compliance with existing implemented policies

Challenges faced by network operators

- What is a policy? What is the CPM?
- Why is AFRINIC asking for justification of IP addressing needs?
- I can only get a maximum of /22 (1024) IPv4 addresses in one request, but I need 20,000 IPv4 addresses
- I have existing allocations/assignments,
- Why did I receive a communication from AFRINIC that my organisation is not in compliance with policy XYZ?
- I am unable to create a domain object on the WHOIS Database



Let's delve in

Resource Policies

Resource Policies are the guidelines /rules that enable AFRINIC to manage or distribute IP Number Resources to network operators in its service region.

Developed using a bottom-up Policy Development Process

- Proposal from a member of the AFRINIC Community
- Consultation and Discussion within the Policy Development Working Group
- Consensus Determination
- Ratified by the AFRINIC Board of Directors
- Implemented by AFRINIC Staff

Resource Policies

- All implemented policies are documented in the Consolidated Policy Manual
- Any change to an implemented policy needs to go through the Policy Development Process
- Upon implementation, resource policies apply to :-
 - a) Organisation operating networks that are already Resource Members
 - b) Organisations that are planning to get public IP Resources to connect their users or customers to the Internet

Policies

AFRINIC Policy Development Process

Policies around services offered, e.g Reverse DNS



What does AFRINIC staff do?

All resource requests are evaluated against the policies that have already been **implemented**

Compliance with these policies is sought And this is the PAIN Point of many network operators

Benefits of policies

- **Engages the AFRINIC community in developing these rules**

Transparent, Bottom-up and open

- **Enables AFRINIC to manage resources in a consistent manner**

Same resource policies are applicable to all Resource Members

Benefits of policies

Enables proactive management of internet number resources

Soft-landing policy to cater for exhaustion of IPv4 resources

Last /8 reached in 2017

Intra-RIR transfer policies that allows for IPv4 transfers between organisations within the AFRINIC service region

20 transfers since 2018

Reservations of 2 /16s of IPv4 and ASNs for Internet Exchange Points

36 IPv4 prefixes in 196.60.0.0/16 since 2016

51 IPv4 prefixes in 196.49.0.0/16 since 2013

Reservation of one /12 of IPv4 for future use , as yet unforeseen

Benefits of policies

Provides visibility regarding availability of Internet Number Resources & conditions to network operators planning to operate a network or those scaling their networks

- Limit to the IPv4 prefix size
- Any number of IPv4 requests can be submitted as long as AFRINIC has an available pool
- IPv6 prefix sizes and also ability to adjust initial allocation/assignment size
- ASN eligibility conditions

Policy Development Process

process that brings around the resource policies at AFRINIC

- Consultation and Discussion within the Policy Development Working Group

Mailing list - rpd@afnic.net

Open to the AFRINIC Community - which you are part of either in your individual capacity or as a registered contact of your organisation

All discussions are archived

<https://lists.afnic.net/pipermail/rpd/>

How to participate ?

- By subscribing to rpd mailing list - rpd@afnic.net
- Go through the policy proposals (they are published on the AFRINIC website)

We encourage the PDWG to go through these proposals and discuss them on the RPD mailing list using the following guidelines:-

- You mention the identifier of the proposal and/or the title in the subject of your emails to the list.
- Are the problem statement and the solution clear to you?
- Does the proposal solve a problem that you are experiencing? If yes, you can reach out to the community and share your situation.
- Are you in support of the proposal? If yes, why?
- Do you oppose the proposal? If yes, please state clearly the objective reasons.
- Can the proposal be enhanced by either removing ambiguous text or reinforcing the solutions?

Resource Policies

The PDWG Chairs determine whether there is rough consensus among the community during open public policy proposal discussions

- Determining consensus is a process
- Objective is to always aim for **rough consensus**, if not consensus
- Rough consensus is **not** built/determined through a VOTING mechanism
- Rather by ensuring that **all objections/concerns are adequately addressed**
- Look/seek consensus **throughout** the process (*for each contentious issue*)
- **No VOTING mechanism** applied at any point in time (*avoid "vote stuffing"*)
- 100 people for and 5 people against **might** not be rough consensus
*If a **minority** of participants have a **valid objection**, that objection must be dealt with before rough consensus can be declared*
- 5 people for and 100 people against **might** still be rough consensus
*As long as there are no **valid objections** that have not been addressed*

What have the network operators likely missed on the topic of resource policies?

Some statistics

Number of subscribers to rpd mailing list	1211
Number of resource members with staff subscribed	~100
Number of participants/posters in the rpd mailing list discussions since 2005	260
Number of participants/posters in the rpd mailing list with >50 posts per year	2021 - 7 2020 - 9 2019 - 3 2018 - 3

What have the network operators likely missed on the topic of resource policies?

- Opportunity to contribute to the development of the resource policies that apply to them when they use them (Resources are used by corporate organisations, end users, on equipment)
- Policies can be amended to fix a particular problem being faced by a network operator. The operator can propose the policies using the bottom-up principle and other operators facing the same problem join the discussion and contribute to refine the problem statement and solution.

who knows consensus can be reached !

- Policies are implemented and they have to comply .. non compliance is considered a breach of the RSA

What have the network operators likely missed on the topic of resource policies?

- Fail to properly manage their resources and become ineligible for additional resource requests.

Hence delays in being able to cater to growth in customer base

- Learning about the policies at the time of submitting resource requests
- Not understanding some of the error messages when they use the myafrinic member portal when managing their resources
- Not understanding non-compliance email notifications that are addressed to them

Policies that have reached consensus

Proposal Summary	ID	Status	Remarks
AFRINIC Number Resources Transfer Policy	AFPUB-2020-GEN-006-DRAFT03	Consensus	Awaiting Ratification by Board
RPKI ROAs for Unallocated and Unassigned AFRINIC Address Space	AFPUB-2019-GEN-006-DRAFT03	Ratified	Awaiting Implementation
Abuse Contact Policy Update	AFPUB-2018-GEN-001-DRAFT07	Consensus	Awaiting Ratification by Board
Policy Compliance Dashboard	AFPUB-2021-GEN-003-DRAFT02	Consensus	Awaiting Ratification by Board

Way forward

Are you interested to have a say in the resource policies development?

Do you now know where you can start your involvement?

Do you feel that the Consolidated Policy Manual sections as written cater for the evolution in the AFRINIC service region? If not, do they need harmonisation and updates?

If you need any assistance - Contact policy-liaison@afnic.net

Come and meet us at the AFRINIC Booth

Thank you.



[twitter.com/ afrinic](https://twitter.com/afrinic)



[flickr.com/ afrinic](https://www.flickr.com/photos/afrinic/)



[facebook.com/ afrinic](https://www.facebook.com/afrinic)



[linkedin.com/company/ afrinic](https://www.linkedin.com/company/afrinic)



[youtube.com/ afrinic media](https://www.youtube.com/channel/UCafrinic)



[www. afrinic .net](http://www.afrinic.net)