AFRINIC: Recent developments, impacts and risks

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General notes.

- I will focus on LIRs (resource members that again issue resources in smaller chunks to other entities, typically ISPs or hosting providers). Mostly the costs for end-sites are the same on the open market as for LIRs, however, AFRINIC fees are significantly lower for end-site members compared to those for LIRs.
- Africa in the context means the African region, not just the mainland (https://afrinic.net/service-region).

Recent AFRINIC History

- 12 Sept 2023 - Mr Virasami got appointed by the courts as Official Receiver.
- … lots of waiting
- 25 November 2024 (https://btw.media/internet-governance/supreme-court-ruling-on-afrinic-new-members-no-rights-elections-by-june-2025/) - The courts acknowledges Mr Virasami undertaking "as regards to the membership that will remain status quo and any entity who has become a member of AfriNIC without your consent from 19th of September 2023 till today, will not have the voting rights." and commitment to hold elections by end of June 2025.
- 12 February 2025 - Mr. Gowtamsingh Dabee takes over from Mr Virasami with election deadline of 25th of April 2025.
- Official communication is that arrangements are ongoing, but no official no formal confirmation of election date or process.
- Rumours are that a date has been set for end of June, and will be in-person only voting (by-laws specifically allow e-voting).

Results of "status quo" membership

- Used to uphold the stance of no new resource members.
- Used to uphold the stance of no new IP resources.
- Reportedly (but I have no definitive evidence) some members have managed to obtain resources by having lawyers write to the Official Receiver (Mr Virasami).
- When Mr Dabee took over there was a short burst where it was "business as usual".
- Currently there are members (new & existing) that have paid for resource allocations after they were approved, but are now being denied access to these resources.
- New applications are back to being approved, but not invoiced and thus not processed, as was the status quo under Mr Virasami.

Impact on existing resource members

- Unable to obtain additional resources from Afrinic:
    - IPv4 prefixes
    - IPv6 prefixes
    - Autonomous system (AS) numbers
- This means that African service providers are unable to expand their existing operations. Numerous examples have been brought to my attention.
- Expansion is only possible by either buying or leasing resources:
    - Best price seen recently for buying on open market: $25'000 for a /22 (1024 IP addresses, compared to $1750 assignment fee with AFRINIC, and excludes and RIR related transfer fees).
    - Best confirmed lease price, $450 per month ($5400) for a /22. Rumoured "as good as $300/month" ($3600 per year).
    - Valuations from 2021 in court papers puts the valuation on a /24 (256 IP addresses) at $10'000 (/22 is 4 /24s, thus $40'000) so above pricing is excellent.
    - For comparison: AFRINIC membership fees for an LIR is $1400 minimum per year, yearly cost goes down when normalized to "per /22" (Eg, $2200 for /20 or equivalent).
- Forced into complicated and error-prone NAT solutions.

Impact on "new" resource members

- Unable to join AFRINIC as Resource Members at all.
- Unable to obtain ANY (IPv4, IPv6 and ASNs) resources at all.
- Need to obtain ASNs via other RIRs (and their LIRs). Fairly cost effective (£75 per year).
- Can get IPv6 via same route (/44 at £75 per year Provider Independent, £14 per year per year for Provider Assigned). LIR will struggle with less than a /32.
- Having some IPv4 is beneficial for use even in IPv6 only environments.
- Currently too much of the Internet is still IPv4 only for any operator to operate on IPv6 only.
- Really all from existing members, but effectively unable to enter the market at all.

Impact on Legacy resource holders

- Legacy resource holders obtained resources from pre-AFRINIC days, not bound by the RSA or by-laws.
- No significant impact except in the case where they're looking to obtain additional resources, at which point all previous applies.

AFRINIC principles (opinion/interpretation)

- AFRINIC issues resources based on need, last RIR to do this, but also last RIR with IPv4 address space available (less than a /8) - IPv6 this is a non-issue.
- Andrew Alston estimated that this should last well over a decade given the assignment policies and restrictions. I've seen estimations aiming towards 2038.
- Only available to African service providers for use **in** the African region.
- Only open to African based organisations.
- Co-operative environment!!
- Resource Members have the right to utilize resources for as long as they use them for the specific purpose which comes from a fixed set. Just as AFRINIC is only a custodian of the resources from IANA/ICANN/NRO: You never actually OWN the resources, but you have right of use (which can be revoked should you violate the Registration Service Agreement (RSA) and/or By-Laws). This is challenged in court currently.

Risks? (My predictions, to a degree)

- If AFRINIC fails:
    - "Free market" will gobble up remaining IPv4 resources to the highest bidder in a matter of days. This will only serve to escalate the price of obtaining IPv4 resources putting it even further out of reach for African service providers, especially new entrants
    - With lack of resources (due to excessive cost), rather than being able to rely on IP Transit ("own" resources via one or more "upstream" networks) startups and existing providers will more and more be forced to rely on Direct Internet Access (DIA) where you're locked in to a single upstream provider.
    - Cost of doing business for ISPs will go up drastically, using the very small case of an ISP with a single /22 this annual cost will go from ~$1400 per year to over $5400 (excluding registry fees or fees for other resources). As an ISP scale up the cost per address through Afrinic comes down quite dramatically, it's unlikely that the cost on leasing space will come down as dramatically.
    - This cost will be passed on to the consumer. Above pricing is $1.37 per IP per year, compared to $5.27. LIR at /20 (4096 addresses) is $2200/year or $0.54/address/year, at /16 (65536 addresses) is $12800 or $0.20/address/year. This economy of scale will go way.

Questions & Answers

Any questions?