Joint AFRALO-AfrICANN Meeting
ICANN 76 Community Forum

Wednesday, 15 March 2023 from 18:15 to 19:30 UTC (75 min)

Statement

TOPIC: Best practices for DNS operations in Africa

We, the African ICANN Community members participating in the ICANN 76 Community Forum in Cancún, Mexico and attending the joint AFRALO/AfrICANN Meeting on Wednesday, 15th March 2023, discussed "**Best Practices for DNS Operations in Africa"** as an important topic for AFRALO.

We recognize ICANN's role in strengthening the Domain Name System (DNS) infrastructure in Africa to ensure the region's Internet is secure, stable, and resilient. We thank ICANN for launching the first ICANN Managed Root Server (IMRS) cluster for Africa in Nairobi, Kenya last year which currently processes 40% of all IMRS DNS root queries on the continent[1]. Furthermore, ensuring "a robust Domain Name System (DNS) infrastructure in Africa[2]" is one of the three major areas of focus for the Coalition for Digital Africa, which ICANN launched during the Internet Governance Forum (IGF) 2022.

In this statement, we present our recommendations on the best approaches to ensuring a DNS infrastructure and ecosystem that works for Africa.

The best practices for DNS operations in Africa could include:

- Reinforcing the **use of Anycast**: Instead of relying on a single server, anycast routes traffic to the nearest server. This can help enhance DNS service stability in Africa, where internet infrastructure is frequently less developed than in other parts of the world.

---

[1] https://coalitionfordigitalafrica.africa/initiatives/icann_managed_root_server_imrs_clusters
[2] https://coalitionfordigitalafrica.africa/initiatives/icann_managed_root_server_imrs_clusters

- **Incentives to accelerate the implementation of DNSSEC (The Domain Name System Security Extensions (DNSSEC)):** DNSSEC enhances DNS security by digitally signing DNS records. This aids in the prevention of man-in-the-middle attacks and other forms of DNS spoofing. We urge ICANN to provide the necessary incentives to DNS operators to implement DNSSEC throughout the whole of Africa.
- **Partnering with local stakeholders:** This can help guarantee that DNS services are adapted to the region's specific needs. Collaboration with local Internet Service Providers (ISPs) can guarantee that DNS services are well-connected to the local internet infrastructure.
- **Strengthening Country Code Top Level Domain (ccTLD) Development in Africa:** This will build technical capacity in DNS operations to provide technical assistance and support as and when required.
- **Enhance local cooperation with CERTs (Computer Emergency Response Team):**[3] for better handling of DNS-related incidents in Africa.

Activities to support these best practices could include:

- Workshops and training sessions to educate local organizations and individuals on the benefits of Anycast, DNSSEC, and other DNS best practices.
- Creating alliances with local ISPs and relevant stakeholders to improve the region's DNS service dependability and security.
- Collaboration with local stakeholders to create and implement strategies for improving DNS services in Africa, such as increasing the number of DNS servers in the region and strengthening current server connectivity.
- Providing technical assistance and financial support to local stakeholders in implementing and maintaining best practices for DNS operations in Africa.
- Advocating for more generic Top Level Domains (gTLDs) in African languages and Internationalised Domain Names (IDNs) and new gTLD registries and registrars in the region.
- Developing and promoting policies that build trust to support DNS innovation, competitiveness and growth in Africa.
- Encouraging Information and Communication Technologies (ICT) experts and decision-makers to emphasize digital security risk management for economic and social activities.

We recognize that the best practices for DNS operations in Africa require multi-stakeholder collaboration and cooperation. As a key stakeholder, AFRALO will be advocating for, and working closely with ICANN and other key stakeholders to ensure the implementation of the best practices for DNS operations in the region.

---

[3] https://www.icann.org/en/system/files/files/dns-ncsirt-survey-results-22dec10-en.pdf