IMRS Infrastructure (Kenya)

Good practice: Strengthening technical coordination through an ICANN Managed Root Server cluster

Relevant DFI commitment: Protect and strengthen the multistakeholder system of Internet governance, including the development, deployment, and management of its main technical protocols and other related standards and protocols.
Type of the initiative: Institution
Stakeholder Group: Government
Launch/adoption: 2017 - Now

Goals

Kenya's initiative to host an **ICANN-Managed Root Server (IMRS) Cluster** aims to strengthen the country's internet infrastructure, enhance technical coordination, and improve internet reliability and security. This effort reflects Kenya's commitment to ensuring a stable, efficient, and resilient digital ecosystem that supports the growing demands of its digital economy and the broader regional internet infrastructure.

The key goals of this initiative are to improve Domain Name System (DNS) resolution times, reduce latency for internet users, and safeguard critical internet services against cyber threats and disruptions. By localising root server infrastructure, Kenya aims to bolster its capacity to manage and secure its internet ecosystem while reducing dependency on external servers. Additionally, this initiative aligns with Kenya's strategic objective of positioning itself as a regional hub for Internet governance and innovation, fostering regional collaboration and capacity-building in Internet infrastructure management.

Description

The deployment of an **ICANN-Managed Root Server (IMRS) Cluster** in Kenya is a significant step toward advancing the country's internet governance framework and technical resilience. This infrastructure provides a localised DNS root service, ensuring efficient and secure management of internet queries while improving overall user experience.

Key aspects of the initiative include:
1. **Improved DNS Efficiency and Performance**: The IMRS cluster significantly reduces latency for DNS queries, ensuring faster access to online resources. This improvement benefits Kenya's internet users by enhancing the speed and reliability of their online activities, from business operations to education and public services.
2. **Enhanced Cybersecurity**: Hosting the IMRS cluster within Kenya strengthens the country's defences against potential cyber threats targeting the DNS infrastructure. The localised management of DNS services ensures greater control and mitigates vulnerabilities that arise from external dependencies.
3. **Capacity Building and Regional Leadership**: The initiative fosters local expertise in DNS management by providing training and knowledge transfer opportunities to Kenyan engineers and IT professionals. It also positions Kenya as a leader in internet governance within the region, setting a model for other African nations to enhance their digital infrastructure.

4. **Support for the Digital Economy**: The IMRS cluster aligns with Kenya's broader digital transformation goals by ensuring robust internet infrastructure to support e-commerce, digital innovation, and other economic activities reliant on reliable internet services.