

Comments on Proposed Amendments to the Communications and Multimedia Act 1998

Submitted to the Malaysian Communications and Multimedia Commission (MCMC)

10 July 2026

The Internet Society¹ welcomes the opportunity to comment on MCMC's consultation regarding proposed amendments to the Communications and Multimedia Act 1998, and in particular the provisions relating to a statutory authority for the management of electronic addressing.

We recognize MCMC's stated goal of transparent and sustainable administration of Internet number resources in Malaysia, and we share that goal. We offer the following comments to help inform the commission's deliberations, drawing on the current model of regional Internet registries (RIRs) for managing IP addresses and autonomous system (AS) numbers.

The Internet Society supports the RIR model that the global technical community and Internet number resource community have developed and refined since 1992. We believe this model—regionally scaled, developed through open policy processes, and increasingly subject to rigorous, harmonized compliance standards—remains the most effective and sustainable way to manage a shared global resource on which Malaysia's networks depend for interoperability with the rest of the Internet, and for the benefit of Malaysia's digital economy.

We highlight in particular how the current model has fostered unparalleled economic opportunity and prosperity in Malaysia, continues to support global cyber resilience, reduces compliance obligations, and provides meaningful benefits to network operators and everyone who participates in the global digital economy.

The Current Model Brings Economic Opportunity and Prosperity

The open multistakeholder model, including the RIR system, has fostered a global digital economy that one industry analyst firm, Forrester,² estimated will approach USD \$16.5 trillion

¹ Founded in 1992 by Internet pioneers, the Internet Society is a global non-profit organization working to ensure the Internet is for everyone. Through its community of members, special interest groups, and 130+ chapters worldwide, the organization defends and promotes Internet policies, standards, and protocols that keep the Internet open, globally connected, and secure.

² <https://www.forrester.com/report/global-digital-economy-forecast-2023-to-2028/RES181192>



(RM69 trillion) by 2028. In 2025, the 10th edition of the *e-Economy SEA* report³ noted that Malaysia's digital economy grew to USD \$39 billion (RM161 billion) in 2025, and was the fastest-growing (19% year-over-year), ahead of Indonesia, Thailand, Vietnam, and Singapore. That same article noted the billions of ringgit now flowing into Malaysia for AI data centers and other infrastructure.

The Department of Statistics Malaysia indicated in November 2025⁴ that information and communication technologies (ICT) and e-commerce accounted for 23.4% of the Malaysian economy. That same announcement highlighted that Malaysia was ranked first in the *Open Data Inventory (ODIN) 2024/25* report⁵ released by Open Data Watch (ODW), surpassing 198 other countries.

Our current Internet Society country report for Malaysia⁶ notes that over 98% of the population has Internet access. We note over 40 data centers and four active Internet exchange points (IXPs)—and a highly resilient infrastructure scoring 71% on our Internet Resilience Index. With IPv6 available to 64% of users, Malaysia is second only to India in the region, and one of the leaders in IPv6 deployment globally.

This economic success and strong technical infrastructure of Malaysia have taken place within a stable global framework of technical coordination through the multistakeholder approach to Internet governance. This model—built on transparency, accountability, inclusiveness, and open participation—underpins every major body in the Internet's technical governance, including the Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Engineering Task Force (IETF), the Number Resource Organization (NRO), and each of the five RIRs. This multistakeholder model was reaffirmed by the United Nations General Assembly in 2025 (resolution 80/173, 17 December 2025) at the conclusion of its 20-year review of the World Summit on the Information Society (WSIS).

The multistakeholder model of Internet governance works for the economic benefit of Malaysia's citizens, network operators, and digital businesses of all forms. Any proposals to change this model, for instance to a national Internet registry (NIR) system, might significantly undermine the continued growth and economic success of Malaysia's digital economy.

³ <https://techwireasia.com/2025/11/malaysia-digital-economy-leads-sea-growth-2025/>

⁴ https://www.dosm.gov.my/uploads/release-content/file_20260327194100.pdf

⁵ <https://odin.opendatawatch.com/rankings>

⁶ <https://pulse.internetsociety.org/en/reports/my/>



Internet Registries Benefit from Economies of Scale, Which Benefits Network Operators

The costs of operating an Internet registry—secure registry systems, Resource Public Key Infrastructure (RPKI) infrastructure, databases, compliance functions, and skilled technical staff—are largely fixed, while its revenues scale with the volume of resources under management and the number of members served. The RIR model spreads those fixed costs across the entire Asia-Pacific membership, which is what keeps fees affordable for individual network operators. For Malaysia, a national registry serving some 34 million people, with a correspondingly modest number of domestic network operators, would bear substantially the same fixed cost base while recovering it from a far smaller pool.⁷

Additionally, an NIR must pay APNIC fees based on the resources it holds,⁸ so fees charged domestically would need to cover both APNIC's charges and the NIR's own operating costs. The double-fee structure is ultimately a per-network levy on every Internet service provider (ISP), data center, university, and enterprise network in Malaysia. Connectivity is an intermediate input to nearly every service that depends on connectivity, so cost increases propagate to other services.

Network Layout Does Not Follow Geographical Boundaries.

IP addresses identify positions in the network's topology, or layout, and establishing an NIR would not gain control over how addresses are used in the routing system. If an NIR adopted policies confining its addresses to domestic use, the principal effect would be to constrain Malaysian providers' ability to grow across borders—precisely the regional expansion in data centers, cloud services, and connectivity on which Malaysia's digital economy ambitions depend.

⁷ To illustrate the business case, we make a back of the envelope calculation: from [public data sources](#) we can collect all network operators that are currently registered in Malaysia. For all of the 533 different address holders from MY (the customers of a future NIR) we use the APNIC [registration data](#) to assess how many addresses have been allocated. From this and [the APNIC charging scheme](#) we can calculate the total revenue generated. This is roughly AU\$1.5 million from Malaysian address holders. At the same time, the [APNIC annual report](#) indicates that running the registry service (without additional overhead) costs AU\$12 million. Even though the 12 million is an upper bound for the Malaysian context, it is not likely that a secure and resilient operation would be able to operate at a price point where Malaysian network operators collectively would pay less than what they pay to APNIC now. There is a risk that the operation would need to be subsidized or that the address holders would need to pay more.

⁸ <https://blog.apnic.net/2022/07/13/the-nir-structure-annual-fees-and-voting-entitlement%EF%BF%BC/>



Meanwhile, foreign networks operating in Malaysia will continue to use their own addresses; attempting to restrict this through regulation or licensing would deter the investment such measures might aim to attract.

While it is likely that domestic operators would acquire their addresses from a new NIR, foreign operators that deploy within the country may want to fit their infrastructure in existing network topologies. Those foreign network operators will not need to interact with the Malaysian NIR, exacerbating the economies of scale issues mentioned above.

Global Security Threats Require Collaborative Solutions

Evaluations of operational costs for potential proposals need to include consideration of not just the systems in use today, but also the plans for evolution of the global systems.

Across the Internet's multistakeholder governance and technical communities, work is being done to secure all the many aspects of the Internet's infrastructure. Within Internet number resources, the primary mechanism for securing the systems has been the deployment of RPKI. As shown at the bottom of our Internet Society Pulse technologies page,⁹ we are now at the stage where RPKI validation (94%) and coverage (63%) have crossed significant deployment thresholds and are a critical part of global cybersecurity.

Under the current model, these critical technical functions on which Malaysia's networks depend to validate and route traffic—RPKI, registry databases, and reverse DNS—are operated by APNIC with regional redundancy and specialist staffing, at no separate cost to Malaysia.

An NIR serving these security functions from domestic infrastructure concentrates them: a determined adversary wanting to degrade specifically Malaysian networks would gain a single, jurisdictionally confined target whose failure would break route validation and registration services for the whole country, seriously impacting the digital economy. Keeping this functionality at a regional level spreads the attack surface across all countries and removes the centralized attack point.

As noted in the *Number Resources Organization (NRO) Strategy Document 2026-2028*,¹⁰ the NRO, consisting of the five RIRs, is planning to further improve the strength and resilience of the RPKI system, notably through deployment of a forthcoming IETF standard, Autonomous System Provider Authorization (ASPA).¹¹ These steps will greatly increase the security of the

⁹ <https://pulse.internetsociety.org/en/technologies/>

¹⁰ <https://www.nro.net/nro-strategy-document-2026-2028/>

¹¹ <https://datatracker.ietf.org/doc/draft-ietf-sidrops-aspa-profile/>



Internet's numbering resources, but they will add more complexity and additional stringent technical requirements for all entities involved in the Internet number resource system.

Operating a Registry Now Carries Substantially Greater Technical and Compliance Obligations

The requirements for operating any Internet registry, regional or national, have become considerably more demanding than when the NIR model was first developed. The first NIRs were created in the very early 1990s when the Internet technical community was still experimenting with how to allocate Internet number resources. After the RIR system was created in 1992¹² and APNIC was established in 1993, a few more NIRs were established up until 2012, but all of those NIRs have had to continue to evolve alongside APNIC and gradually increase their ability to comply with their technical and policy obligations.

Registries today are expected to support RPKI so that routing announcements can be cryptographically validated, maintain accurate and publicly accessible registration data—whether through their own Whois services or one operated on their behalf—and coordinate closely with the global routing and DNS system to avoid fragmenting reachability for the networks they serve.

We would note that these obligations are set to increase even further in the years ahead. ICANN's ongoing review of Internet Coordination Policy 2 (ICP-2)—the framework governing recognition of RIRs—will produce a new RIR Governance Document introducing periodic compliance audits and a formal process for addressing non-compliance, including derecognition. Under this framework, an RIR is accountable for the compliance of any NIR operating within its region, meaning that non-compliance by an NIR directly translates into non-compliance risk for the RIR itself.

This materially raises the level of technical capacity, funding, and sustained institutional commitment that any national registry would need to maintain indefinitely.

Summary

The Internet Society supports the regional Internet registry model that the global technical community and Internet number resource community have developed and refined since 1992. We believe this model—regionally scaled, developed through open policy processes, and increasingly subject to rigorous, harmonized compliance standards—remains the most effective

¹² <https://www.rfc-editor.org/info/rfc1366/>



and sustainable way to manage the shared global resources on which Malaysia's digital economy depends.

We would welcome the opportunity to discuss this submission further with the commission, particularly to understand the motivations for establishing a law that would enable Malaysia to operate an NIR and to suggest potential alternative approaches. We encourage MCMC to engage directly with APNIC, the regional Internet registry for the Asia-Pacific, as it considers the path forward.

Please do not hesitate to contact Adrian Wan at wan@isoc.org for any further information on this submission. Thank you.

Yours faithfully,

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