

## RESOLUTION 63 (Rev. Kigali, 2022)

### **Internet Protocol address allocation and facilitating the transition to and deployment of Internet Protocol version 6 in the developing countries**

The World Telecommunication Development Conference (Kigali, 2022),

*recalling*

- a)* Resolutions 101 (Rev. Dubai, 2018), 102 (Rev. Dubai, 2018) and 180 (Rev. Dubai, 2018) of the Plenipotentiary Conference;
- b)* Resolution 63 (Rev. Buenos Aires, 2017) of the World Telecommunication Development Conference (WTDC);
- c)* Resolution 64 (Rev. Geneva, 2022) of the World Telecommunication Standardization Assembly;
- d)* Opinion 3 (Geneva, 2013) of the fifth World Telecommunication/Information and Communication Technology (ICT) Policy Forum (WTPF), on supporting capacity building for the deployment of Internet Protocol version 6 (IPv6);
- e)* Opinion 4 (Geneva, 2013) of WTPF, in support of IPv6 adoption and transition from IPv4;
- f)* the results of the ITU Council Working Group on the subject of the transition from IPv4 to IPv6;
- g)* the partial progress that has been made towards the adoption of IPv6 over the past few years;
- h)* that accelerating IPv6 deployment has become an issue of the utmost importance today for Member States and Sector Members and stakeholders in the Internet community, because of IPv4 address exhaustion,

*recognizing*

- a)* that Internet Protocol (IP) addresses are fundamental resources that are indispensable for the current development of IP-based telecommunication/ICT networks, which are important for the digital economy;

- b) that many countries believe that there are historical imbalances related to IPv4 allocation;
- c) that the fastest deployment of IPv6 addresses available to all countries is necessary in order to respond to global appeals and needs in this regard;
- d) that the deployment of IPv6 in all countries is needed to meet the growing demands for world connectivity;
- e) that deployment of IPv6 facilitates Internet of Things (IoT) solutions, which require a huge amount of IP addresses;
- f) that facing 5G, cloud services and industrial Internet bearer scenarios, IPv6 has developed rapidly in industry, technology and business innovation and achieved large-scale deployment in some countries;
- g) that there are a number of developing countries<sup>1</sup> that still need expert technical and managerial assistance for making this deployment effective, despite the progress made in some other countries;
- h) that the deployment of IPv6 solves the current problem of shortages in the numerical space of IPv4 addresses, enabling the allocation of publicly routable addresses on the Internet to each one of the devices;
- i) the importance of providing technical and managerial assistance from experts in IPv6 deployment to those Member States and Associates that request it,

*taking into account*

- a) that many developing countries are experiencing some challenges today in the IPv6 deployment process;
- b) that it is necessary to encourage the collaboration and cooperation of all relevant stakeholders in order to be able to carry out the deployment,

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<sup>1</sup> These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

*resolves*

to promote the exchange of experiences and information relating to the deployment of IPv6, with the aim of unifying joint efforts of all stakeholders and ensuring the contributions that enhance the Union's efforts to support this deployment,

*instructs the Director of the Telecommunication Development Bureau*

1 to continue the close cooperation and coordination with the Director of the Telecommunication Standardization Bureau in this regard, continue ongoing activities to facilitate IPv6 deployment among all members, and provide the necessary information on training and education activities;

2 to continue cooperating with relevant international and regional organizations, including the regional Internet registries (RIRs), on capacity building and the enhancement of technical skills for IPv6 deployment in order to respond to the needs of developing countries;

3 to submit an annual report to the ITU Council on the progress made in this regard, and report to the next WTDC;

4 to develop guidelines to enable, if necessary, adjustment of the organizational frameworks and policies necessary for deployment of IPv6,

*invites Member States*

1 to examine RIRs' updates of IP addresses registered within their respective territories for the purposes of evaluation, development and monitoring;

2 to continue to stimulate and encourage the IPv6 deployment, and particularly to encourage national initiatives and strengthen interaction with government and private-sector entities, RIRs, academia and civil-society organizations in order to exchange experiences, expertise and knowledge;

3 to encourage the training of technicians and administrators from governmental agencies and private-sector organizations in IPv6 deployment, with theory and labs that show how to deploy IPv6 on their networks;

4 to raise awareness among providers on the importance of making their services available over IPv6;

5 to encourage manufacturers to supply fully-featured customer premises equipment that supports IPv6 in addition to IPv4;

6 to foster cooperation among Internet service providers, service providers and other relevant stakeholders to accelerate IPv6 deployment;

7 to encourage service providers to activate IPv6 in the telecommunication/ICT equipment and networks and offer IPv6 service to the users;

8 to encourage governmental agencies and private-sector organizations to make their websites and services such as email available over IPv6.