

RESOLUTION 180 (REV. BUSAN, 2014)

Facilitating the transition from IPv4 to IPv6

The Plenipotentiary Conference of the International Telecommunication Union (Busan, 2014),

considering

- a)* Resolution 64 (Rev. Dubai, 2012) of the World Telecommunication Standardization Assembly, on IP address allocation and facilitating the transition to and deployment of IPv6;
- b)* Opinion 3 (Geneva, 2013) of the World Telecommunication/Information and Communication Technology (ICT) Policy Forum (WTPF), on capacity building for the deployment of IPv6;
- c)* Opinion 4 (Geneva, 2013) of WTPF, in support of IPv6 adoption and transition from IPv4;
- d)* Resolution 63 (Rev. Dubai, 2014) of the World Telecommunication Development Conference, on IP address allocation and encouraging the deployment of IPv6 in the developing countries¹;
- e)* Resolution 101 (Rev. Busan, 2014) of this conference, on Internet Protocol-based networks;
- f)* Resolution 102 (Rev. Busan, 2014) of this conference, on ITU's role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses;
- g)* the results of the ITU IPv6 Group, which were endorsed by the 2012 session of the ITU Council,

considering further

- a)* that the Internet has become a leading factor in social and economic development and a vital tool for communication and technological innovation, creating a major paradigm shift in the telecommunication and information technology sector;
- b)* that, in view of the imminent exhaustion of IPv4 addresses and in order to ensure the stability, growth and development of the Internet, every effort should be made to encourage and facilitate the transition to IPv6;

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

c) that many developing countries are experiencing some technical challenges today in the IPv4 to IPv6 transition process,

recalling

that the WSIS+10 High-Level Event (Geneva, 2014), in its Statement on the Implementation of WSIS Outcomes and the WSIS Vision Beyond 2015, determined that one of the priority areas to be addressed by the Post-2015 Development Agenda must be: "Encouraging the full deployment of IPv6 to ensure the long-term sustainability of the addressing space, including in light of future developments in the Internet of Things",

noting

- a) the progress towards adoption of IPv6 that has been made over the last few years;
- b) the ongoing coordination between ITU and relevant organizations on IPv6 capacity building in order to respond to the needs of Member States and Sector Members,

recognizing

- a) that Internet Protocol (IP) addresses are fundamental resources needed for the development of IP-based telecommunication/ICT networks and for the world economy and prosperity;
- b) that IPv6 deployment gives an opportunity for the development of information and communication technologies (ICT), and that its early adoption is the best way to avoid the scarcity of addresses and the consequences that exhaustion of IPv4 addresses may entail, including high costs;
- c) that governments play an important part as catalyst for the transition to IPv6;
- d) that accelerating the transition from IPv4 and deployment of IPv6 addresses is necessary in order to respond to global needs in this regard;
- e) that the involvement of all stakeholders is crucial for a successful transition from IPv4 to IPv6;
- f) that technical experts are providing expert assistance for IPv6 transition, and progress has been made;
- g) that there are countries that still need expert technical assistance in making this transition,

resolves

- 1 to explore ways and means for greater collaboration and coordination between ITU and relevant organizations² involved in the development of IP-based networks and the future Internet, through cooperation agreements, as appropriate, in order to increase the role of ITU in Internet governance so as to ensure maximum benefits to the global community;
- 2 to step up the exchange of experiences and information with all stakeholders regarding the adoption of IPv6, with the aim of creating opportunities for collaborative efforts, and to ensure that feedback exists to enrich efforts to support the transition to IPv6;
- 3 to collaborate closely with the relevant international recognized partners, including the Internet community (e.g. regional Internet registries (RIRs), the Internet Engineering Task Force (IETF) and others), in order to encourage the deployment of IPv6 by raising awareness and through capacity building;
- 4 to support those Member States which, in accordance with the existing allocation policies, require assistance in the management and allocation of IPv6 resources, pursuant to relevant resolutions;
- 5 to continue the studies of IP address allocation, both for IPv4 addresses and for IPv6 addresses, in cooperation with other relevant stakeholders, based on their respective roles,

instructs the Director of the Telecommunication Development Bureau, in coordination with the Director of the Telecommunication Standardization Bureau

- 1 to undertake and facilitate activities under *resolves* above in order that the relevant study groups of the ITU Telecommunication Standardization Sector (ITU-T) and of the Telecommunication Development Sector (ITU-D) can carry out the work;
- 2 while assisting those Member States that require support in the management and allocation of IPv6 resources, to monitor the current allocation mechanisms (including the equitable distribution of addresses) for ITU Member States or Sector Members, and to identify and point out any underlying flaws in the current allocation mechanisms;
- 3 to communicate proposals for changes to existing policies, if identified under the studies above, in accordance with the existing policy development process;
- 4 to develop statistics on progress made with the transition, based on information that may be compiled regionally through collaboration with regional organizations;

² including, but not limited to, the Internet Corporation for Assigned Names and Numbers (ICANN), the regional Internet registries (RIRs), the Internet Engineering Task Force (IETF), the Internet Society (ISOC) and the World Wide Web Consortium (W3C), on the basis of reciprocity.

5 to collect and disseminate best practices on coordination efforts undertaken by governments at the national level in order to facilitate transition to IPv6,

invites Member States

1 to continue to promote specific initiatives at the national level, which foster interaction with governmental, private and academic entities and civil society for the purposes of the information exchange necessary for the deployment of IPv6 in their respective countries;

2 to encourage, with support from the ITU regional offices, the regional Internet registries (RIRs) and other regional organizations in coordinating research, dissemination and training actions with participation by governments, industry and the academic community in order to facilitate the deployment of IPv6 within the countries and in the region, and to coordinate initiatives between regions to promote its deployment worldwide;

3 to develop national policies to promote the technological update of systems in order to ensure that the public services provided utilizing the IP protocol and the communications infrastructure and relevant applications of the Member States are compatible with IPv6;

4 to encourage manufacturers to supply to the market customer premises equipment (CPE) that supports IPv6 in addition to IPv4;

5 to raise awareness among information service providers on the importance of making their services available over IPv6,

instructs the Secretary-General

to submit to the Council and disseminate, as appropriate, (a) progress report(s) to the ITU membership and the Internet community, on the implementation of this resolution.