

WORLD TELECOMMUNICATION STANDARDIZATION
ASSEMBLY
New Delhi, 15-24 October 2024

**Resolution 77 – Enhancing the standardization
work in the ITU Telecommunication
Standardization Sector for software-defined
networking**



FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, and information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

RESOLUTION 77 (Rev. New Delhi, 2024)

Enhancing the standardization work in the ITU Telecommunication Standardization Sector for software-defined networking

(Dubai, 2012; Hammamet, 2016; New Delhi, 2024)

The World Telecommunication Standardization Assembly (New Delhi, 2024),

considering

- a)* that, with the development and trend towards maturity of software-defined networking (SDN) technologies, many organizations are involved in SDN standardization, including those developing related open-source solutions;
- b)* the fact that SDN is profoundly changing the telecommunication and information and communication technology (ICT) industry's landscape, and brings multiple benefits to the telecommunication/ICT industry;
- c)* the rapidly growing interest of a significant number of ITU members in the application of SDN in the telecommunication/ICT industry;
- d)* that the SDN orchestrator provides the important bond between a wide range of technologies that enable cloud-based network and telecommunication services, at the same time recognizing the work of other organizations,

noting

- a)* that ITU-T should play an important role in the development of deployable SDN standards in collaboration with other standards-development organizations (SDOs);
- b)* that an SDN standards ecosystem should be well coordinated, with ITU-T at its centre;
- c)* that network softwarization is defined in Recommendation ITU-T Y.3100, and that SDN is an example of network softwarization technology,

recognizing

- a)* that ITU-T has unmatched advantages when it comes to requirements and architecture standards;
- b)* that a solid foundation is required to continue developing and enhancing SDN requirements and architecture standards, so that the whole set of standards may be built through an industry-wide synergy;
- c)* that Resolution 90 (Hammamet, 2016) of the World Telecommunication Standardization Assembly addresses open source,

resolves to instruct the study groups of the ITU Telecommunication Standardization Sector

- 1 to continue and enhance collaboration and cooperation with different SDOs, industry forums and open-source software projects on SDN, as appropriate, taking into account the outcome of Telecommunication Standardization Advisory Group work on open source;
- 2 to continue to expand and accelerate the work on SDN standardization, in particular carrier SDN, taking into consideration *noting c)* of this resolution;
- 3 to develop implementation guidelines for relevant ITU-T SDN Recommendations, including those that are beneficial to developing countries¹;
- 4 to consider the potential implications of the SDN orchestrator layer for ITU-T operation supporting system (OSS)-related work,

instructs the Telecommunication Standardization Advisory Group

to examine the matter, to consider the input of study groups, to continue coordination and collaboration on technical issues, and to take the necessary actions, as appropriate, with a view to deciding on the necessary SDN standardization activities in ITU-T,

instructs the Director of the Telecommunication Standardization Bureau

- 1 to provide the necessary assistance with a view to expediting such efforts, in particular using any opportunity within the allocated budget to exchange opinions with the telecommunication/ICT industry, including through the meetings of chief technology officers or chief executive, financial or other officers under Resolution 68 (Rev. New Delhi, 2024) of this assembly, and in particular to promote participation of the industry in SDN standardization work in ITU-T;
- 2 to conduct workshops, with other relevant organizations, for capacity building on SDN, so that the gap in technology adoption in developing countries may be bridged at the early stages of implementation of SDN networks; to organize SDN workshops with open-source solution representation to share the progress in SDN standards and real experiences; and to promote SDN networks, including in developing countries in collaboration with the Telecommunication Development Bureau,

invites Member States, Sector Members, Associates and Academia

to submit contributions for developing SDN standardization in ITU-T.

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