ARB/21A29/1

General questions

The inclusion of the topic of network functions virtualization (NFV) under Study Group 1 questions is designed to boost the activity of the ITU Telecommunication Development Sector (ITU-D) in respect of the adoption of new strategies and approaches to wired and wireless telecommunications, taking into account the obstacles facing developing countries, including the migration and transition to virtual network functions.

The desired transition in developing countries requires taking a general view of the technical, financial and political questions on the one hand, and paying attention to related questions of human resources and organization aspects in companies on the other hand.

The diversity of existing networks within telecommunication companies and the technical features of each region will push these companies to take proper steps appropriate to each part of the network transition; all of this requires preparedness at every level. This technology offers a new way of designing, rolling out and managing network services by detaching network features, such as network address translation (NAT), firewalls, intrusion detection devices, domain name system service (DNS), to name a few, from proprietary equipment to programme design.

Most telecommunication companies in the developed countries have started to implement NFV, betokening a significant change in the telecommunication sector toward this technology in the future.

Measure required

The World Telecommunication Development Conference (WTDC-17) is invited, when reviewing the tasks for Question 1/1 of Study Group 1, to include NFV under Study Group 1, Working Group 1, Question 1/1.

Issue for study

This contribution covers a study of NFV in the telecommunication sector, under Question 1, Study Group 1, on technical, regulatory and policy aspects of the transition from existing networks to broadband networks in the developing countries, including next generation networks and future networks, NFV, mobile telecommunication services, non-traditional services provided over the Internet (OTT) and implementation of IPv6.

Proposal

The Arab States Group proposes studying the following points and focusing on the needs of developing countries in this area in the form of Question 1 of Study Group 1:

– study of definitions and properties relating to NFV and its future trends, in collaboration with the relevant ITU-T study groups, specifically Study Group 13;

– needs of telecommunication companies for deploying the virtual infrastructure; shedding light on the principal benefits and challenges of this sort of infrastructure development;

– challenges faced by governments, telecommunication companies and regulators;

– provision of advice on choosing NFV infrastructure (data and services centre) for the various virtual network functions;

– studies on successful cases of NFV in developed countries;

– the impact of a telecommunication company’s internal organization and the human capacities and skills necessary for the transition;

– the formulation of guidelines on access to NFV: how to achieve adoption and transition.

Expected results

Pursuant to this study, the desired results shall consist in:

1 inclusion of the above points in the annual report;

2 inclusion of the following topics in the report and final recommendations of Question 1/1:

– analysis of the factors affecting the adoption of features of virtual network functions in telecommunication company environments;

– manual, guidelines, technical approaches and best practices on virtual network functions to facilitate infrastructure roll-out in developing countries.