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## (54) METHOD, APPARATUS, DEVICE, AND SYSTEM FOR TRANSMITTING NETWORK LAYER REACHABILITY INFORMATION, AND MEDIUM

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#### (57)**ABSTRACT**

This application discloses a method, an apparatus, a device, and a system for transmitting network layer reachability information, and a medium, and pertains to the communication field. The method includes: obtaining a border gateway protocol BGP message, where the BGP message includes first NLRI that is for advertising a first route, the first NLRI includes a first field set and first indication information, the first field set carries necessary routing information of the first route, and the first indication information indicates that the first NLRI does not include a first field in a second field set, where each field in the second field set carries optional routing information of the first route, and the second field set does not include the first indication information; and sending the BGP message to a second communication apparatus. This application can improve route transmission efficiency.

Route type field (1 byte)

Length field (1 byte)

Specific routing information field

Meanings:

MAC: Media access control

> IP: Internet protocol

Multi-protocol label switching MPLS:

Route identifier field (8 bytes)

Ethernet segment identifier field (10 bytes)

Ethernet tag identifier field (4 bytes)

MAC address length field (1 byte)

MAC address field (6 bytes)

IP address length field (1 byte)

First MPLS label field (3 bytes)