

## ABSTRACT

This application discloses a packet transmission method and apparatus, a node device, and a communication system, and relates to the field of communication technologies. The packet transmission method may be applied to a first node device in the communication system. The first node device includes a plurality of network ports. When sending a first packet, the first node device may determine a device-level port identifier of a target node device of the first packet, determine, based on the device-level port identifier of the target node device, a target egress port of the first packet from the plurality of network ports, and send the first packet through the target egress port of the first packet. The target egress port of the first packet is a network port with a path reachable to a device-level port of the target node device. In the foregoing process, the plurality of network ports participate in a path selection mechanism, so that multi-path communication can be implemented, bandwidth loads of the plurality of network ports can be balanced, communication efficiency can be improved, and communication performance can be improved.