

# Intro into Networking for HPC

*Thursday 18 April 2024 09:00 (1 hour)*

The lecture will provide a brief overview of networking for high-performance computing. The content is divided into four sections:

Networking 101. This section delves into the foundational aspects of networking, covering the TCP/IP stack. The Datacenter. This segment offers a succinct walkthrough of a datacenter, explaining the role of a switch, highlighting the two prevalent topologies (dragonfly and fat-trees), and discussing routing and oversubscription.

Achieving High Bandwidth and Low Latency. Here, we'll introduce RDMA and RoCE. This part will finish with a discussion on the need for multi path protocols in the datacenter.

Current Research. This section will touch upon emerging technologies such as Falcon, EQDS and the targets of the UltraEthernet Consortium.

## Attended school

## Number of exercise hours

## Number of lecture hours

**Presenter:** BADOIU, Vlad-Andrei (University Politehnica of Bucharest)