

Intro to datacenter networks

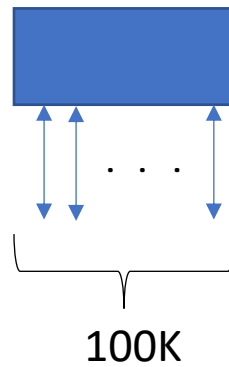
CSE 599N1

Autumn 2019

Challenge

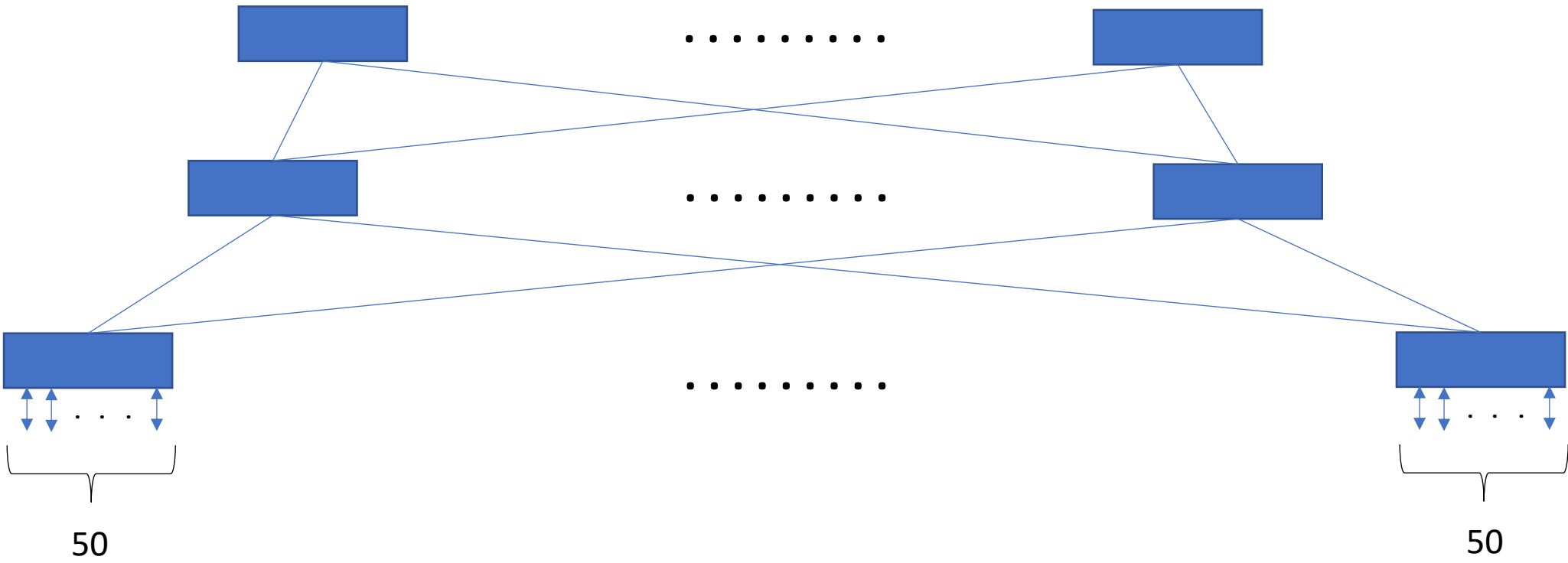
Need to connect hundreds of thousands of hosts

Cannot engineer a router with so many interfaces



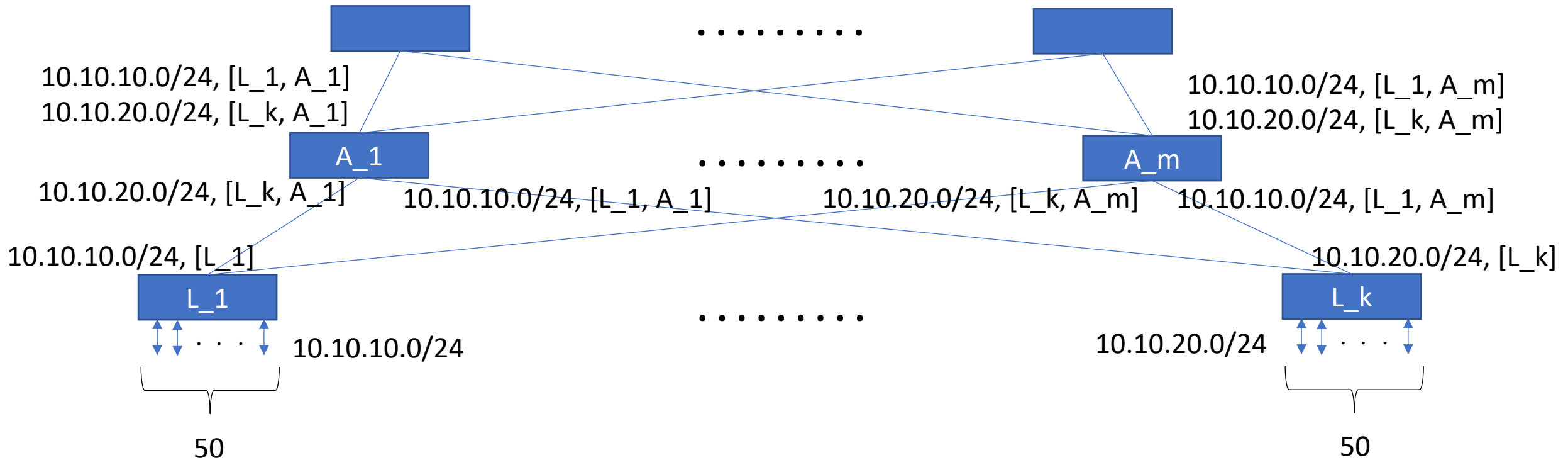
Topology

Build a topology with multiple layers



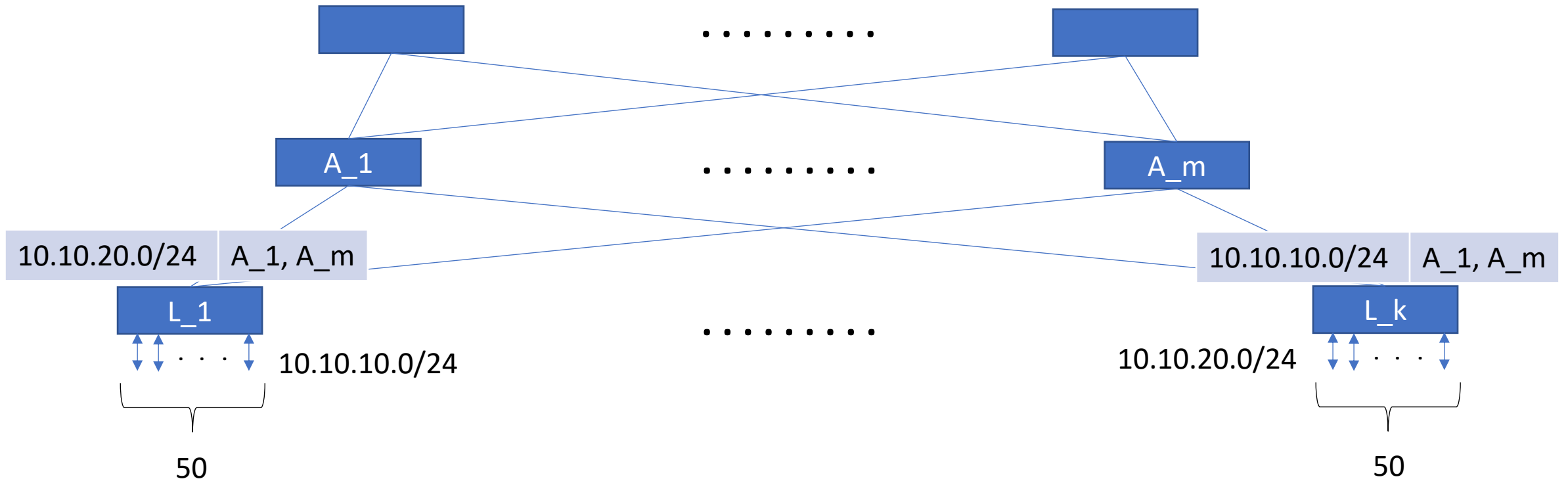
Routing

Border Gateway Protocol (BGP): A path vector protocol



Forwarding

Multi-path forwarding via ECMP



Finally, ACLs are layered on top

