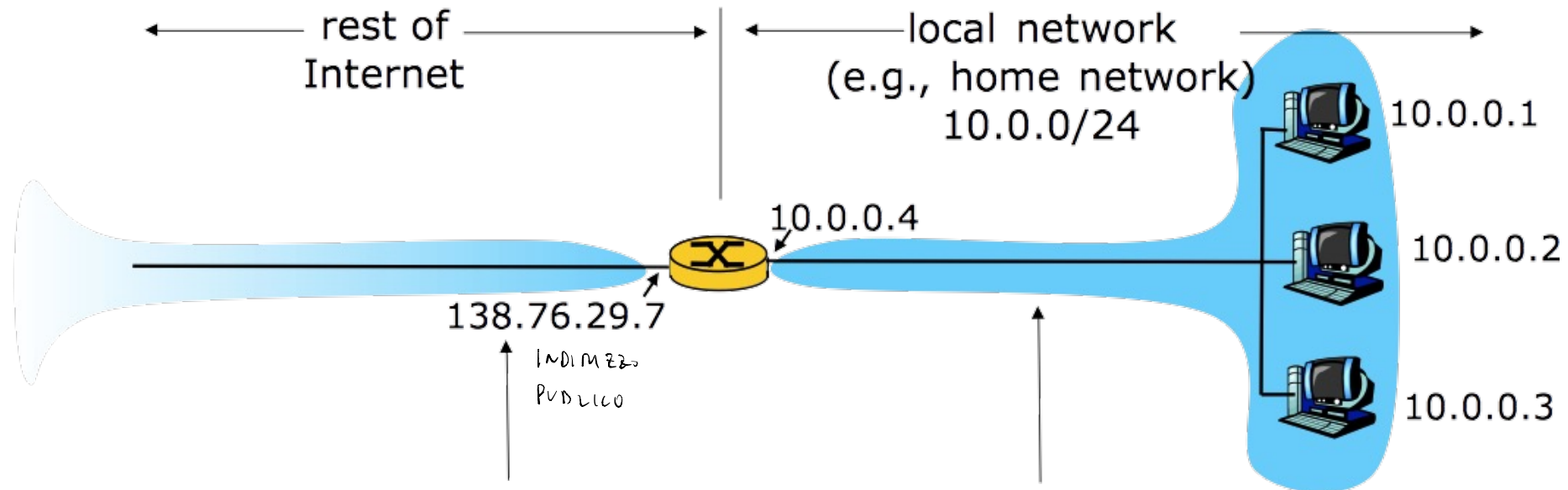


# NAT: Network Address Translation

- Local network uses just one IP address as far as outside world is concerned



*All* datagrams *leaving* local network have **same** single source NAT IP address: 138.76.29.7, different source port numbers

Datagrams with source or destination in this network have 10.0.0/24 address for source, destination (as usual)

# NAT: Network Address Translation

- Implementation: NAT router must:
  - **outgoing datagrams**: replace (source IP address, port #) of every outgoing datagram to (NAT IP address, new port #)
    - . . . remote clients/servers will respond using (NAT IP address, new port #) as destination addr.
  - **remember**: in NAT translation table, every (source IP address, port #) to (NAT IP address, new port #) translation pair
  - **incoming datagrams**: replace (NAT IP address, new port #) in dest fields of every incoming datagram with corresponding (source IP address, port #) stored in NAT table

