

# A Flexible Abstraction for the Future Internet

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Integrated HW/SW Systems Group

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## Content

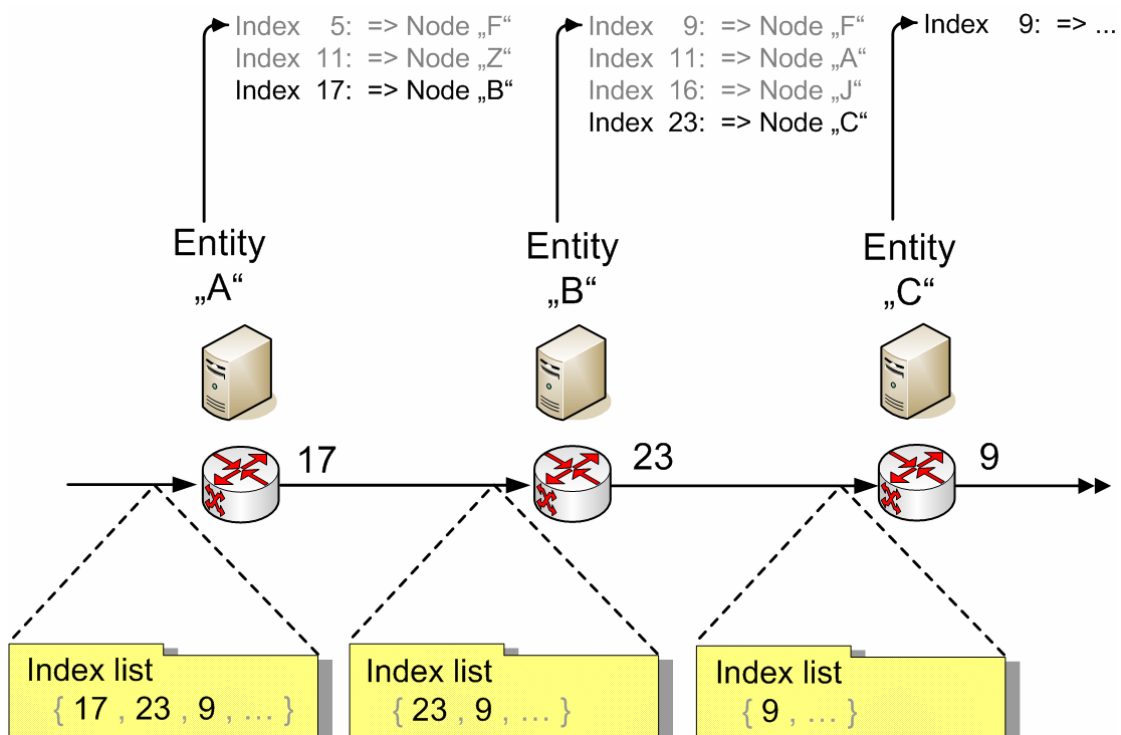
- Internet problems and motivation
- Forwarding-based architectures
- Virtualization idea
- Gates
- Present and future

# Internet Problems and Motivation

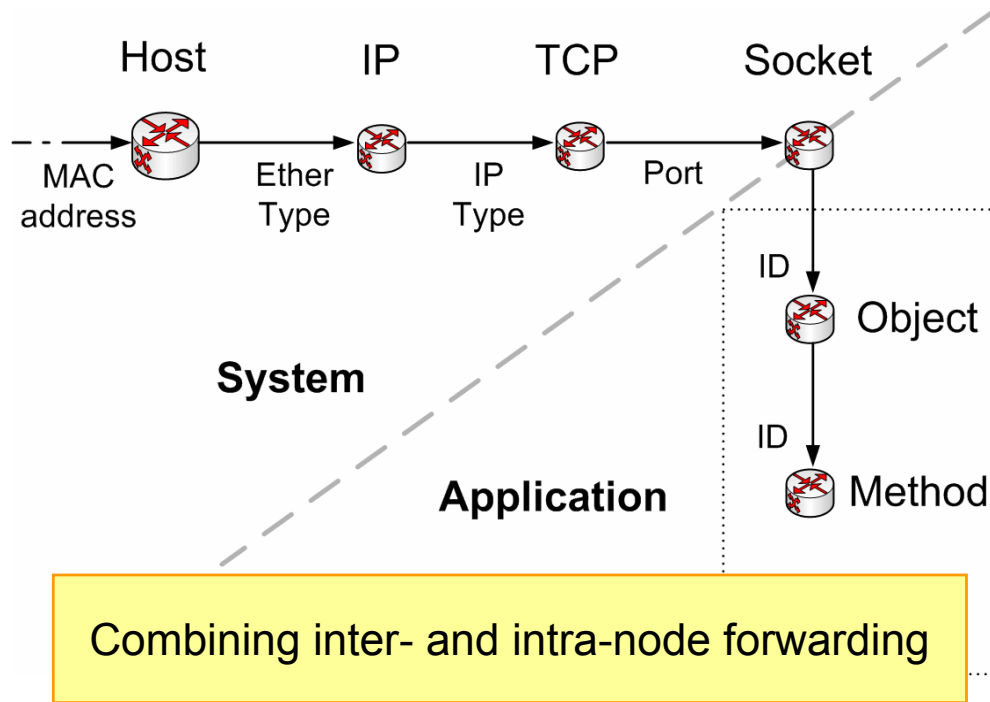
- End-to-end vs. Intelligent network
  - Flexibility
  - Scalability
  - Transparency
  
- Security
  
- Addressing and routing
  - Network management
  - Big routing tables
  - Slow routing decision



# Forwarding-based Architectures

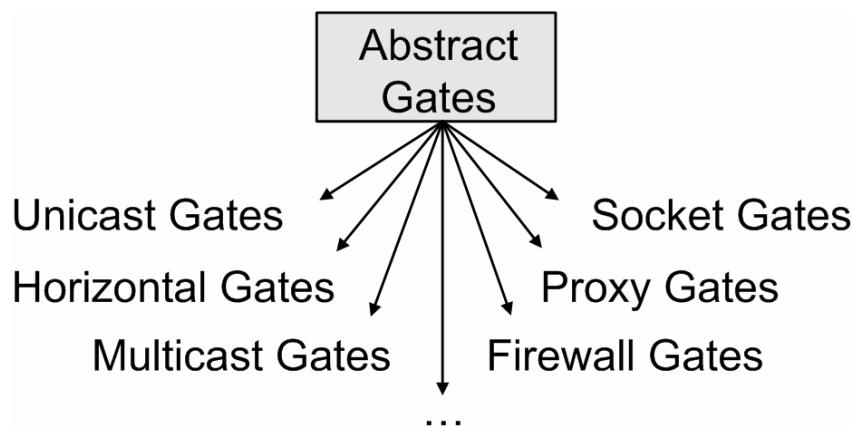


# Virtualization Idea



# Gates

- Façade for functionality
- Addressed by indices
- Use packets as input for processing



# Present and Future

- Currently:
  - Defined protocol header
  - Signaling for network setup
  - Forwarding plane
  - Simulator in Java
  
- Planned work:
  - Authentication service (incl. signaling)
  - Routing service (incl. signaling)
  - Simulation (ns2)
  - Implementation (Linux)
  - Publish draft