

# Forwarding on Gates: A clean-slate Future Internet Approach within the G-Lab project

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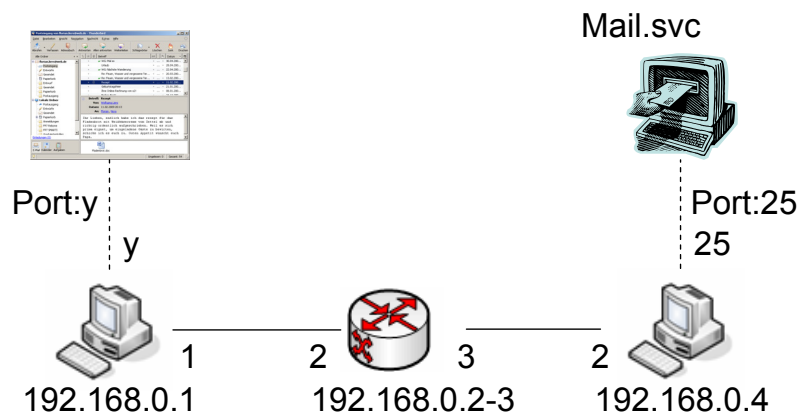
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## Design goals

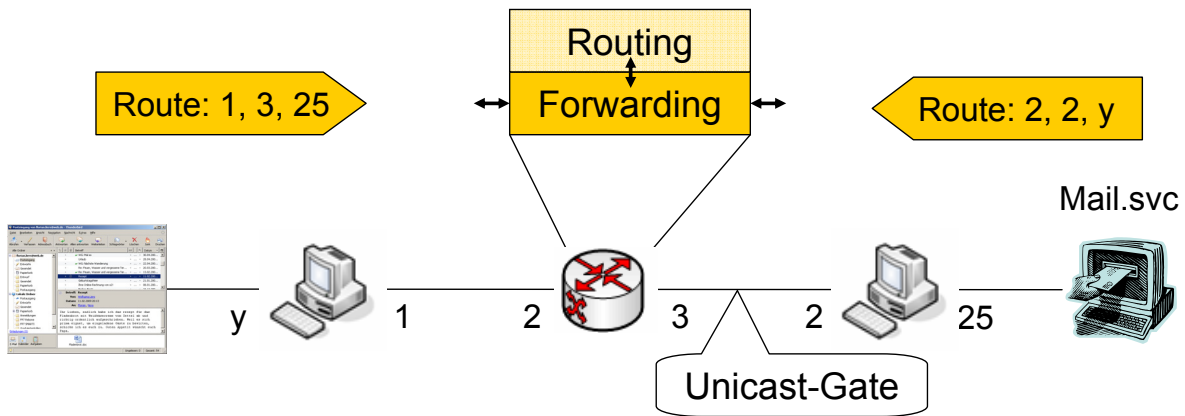
- Management
  - Complexity reduction
    - Feature-Interaction
    - Universal communication / signaling
  - Automated
    - Reduce human interventions
- Services
  - QoS
  - Flexibility
    - Prepare for the unknown future
  - Dynamic function chaining
- Security
  - Built-in authentication

## Edge-based



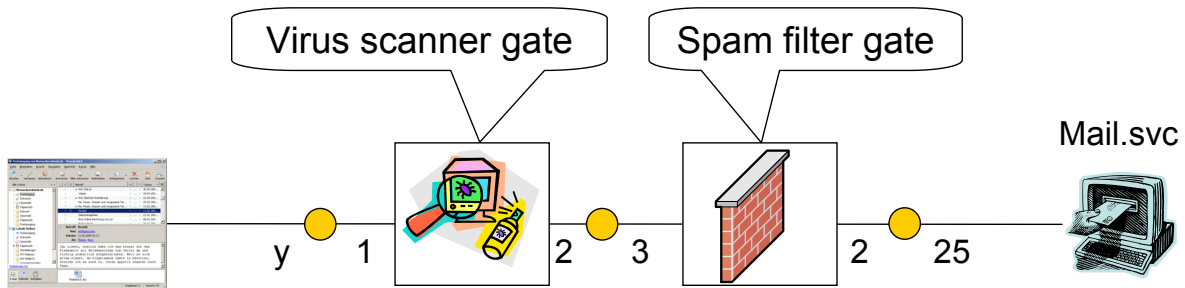
➡ From “nodes” to “edges”

# Gates - Function abstraction



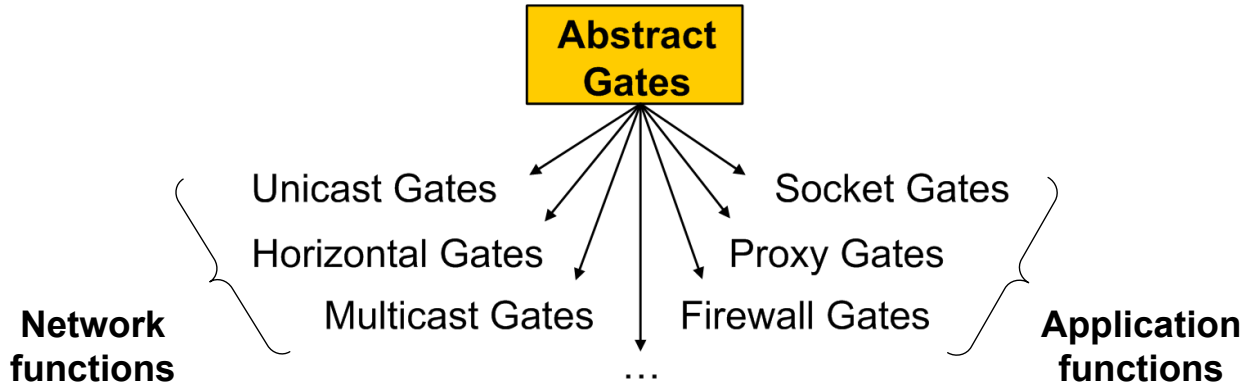
- ➔ Abstraction: „Gates“
- ➔ Routing service

# Gates - The future service view

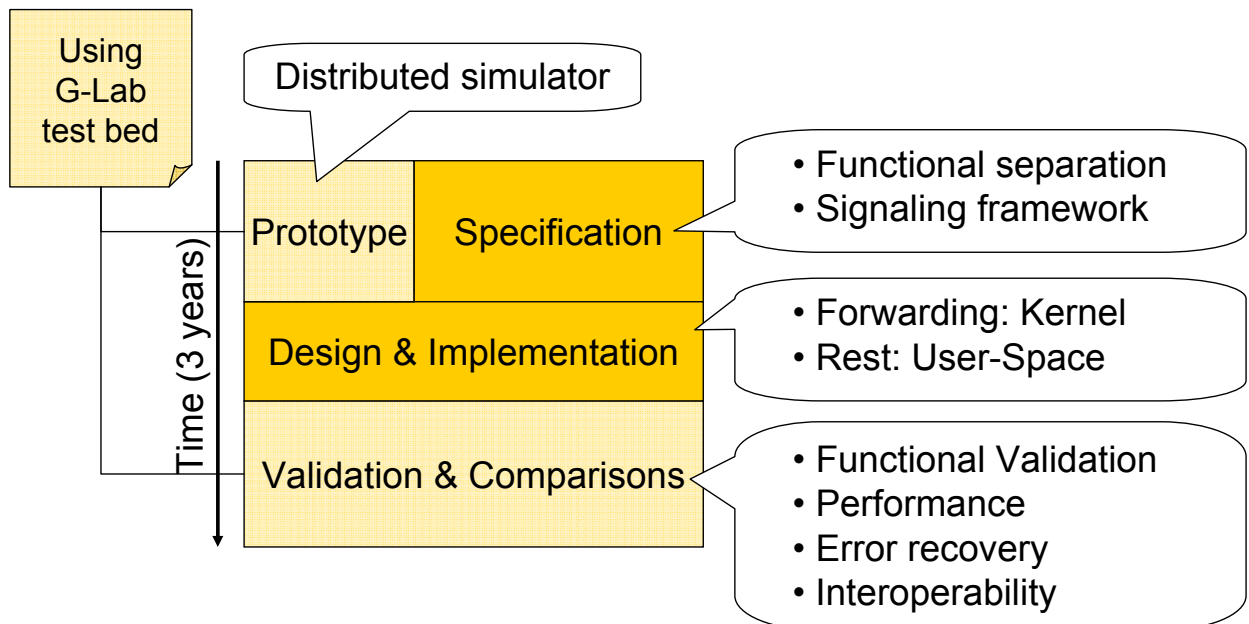


- ➔ Manageable objects
- ➔ “Service chain”


# Gates - Types for different functions



# Implementation for G-Lab



## Summary

- Inter-Network protocol
  - Replace IP
  - “Edge-based“
  - Encapsulate services => Gates  Cooperation with others
  - Routing as a service
- Implementation
  - Distributed simulation
  - Real world
    - Linux Kernel patch
    - Libraries & application