

Service Oriented Internet Protocol

(not just Service Oriented Internet)

**Sheng Jiang
Guangpeng Li
Brian Carpenter**

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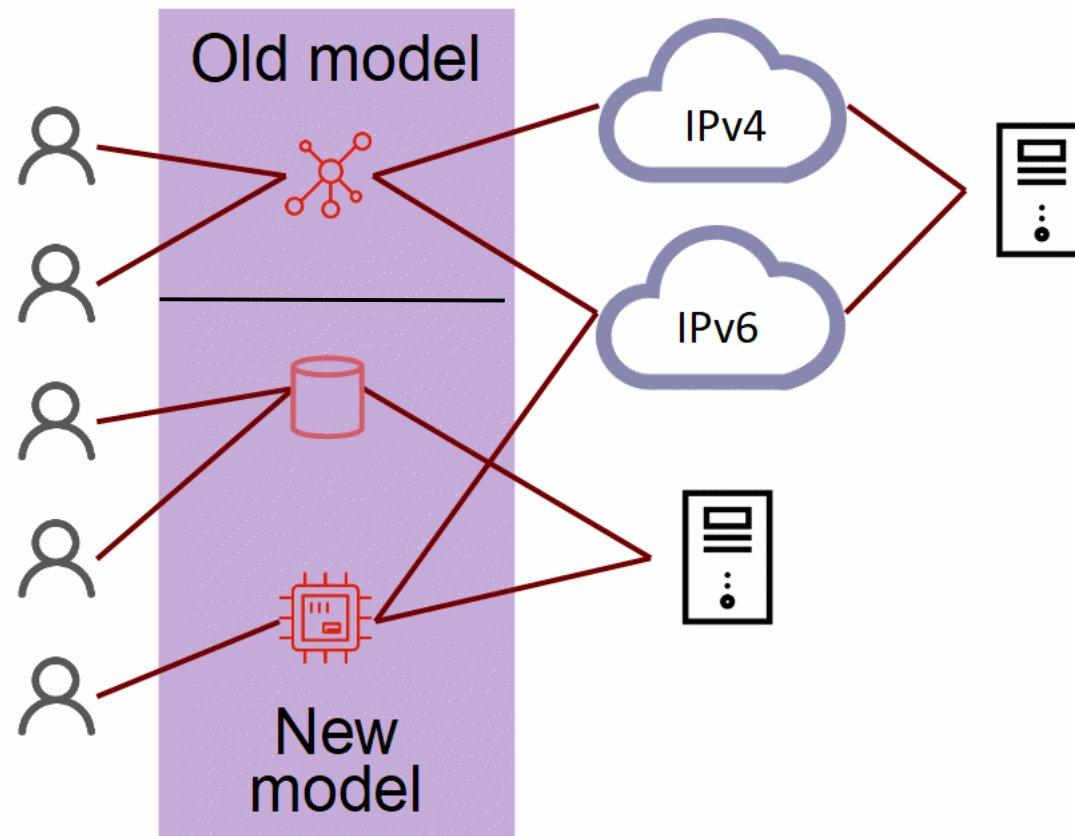
New Environment

- End to end IP service is no longer a safe assumption
 - There will usually be middleboxes
- Users want specific services, not IP addresses or DNS names
- ISPs and enterprises want to provide some services & redirect to others
 - Numerous methods of service-oriented networking are emerging

Client-side Need

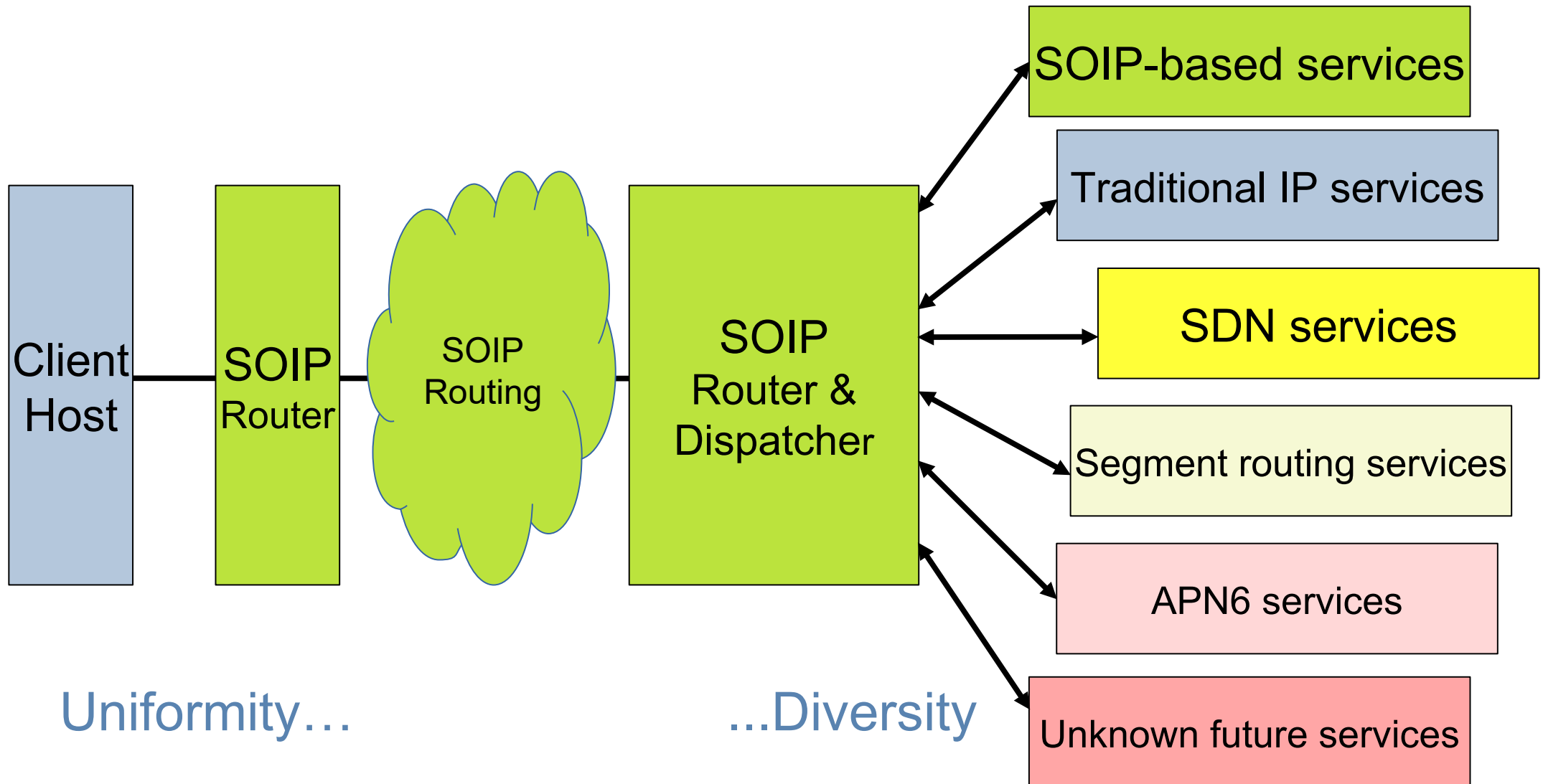
- Hide complexity and change from user
- Also, hide complexity and change from client software as far as possible
 - Avoid need for frequent client-side software updates
 - Avoid users having to learn new tricks for every new service

Service Oriented IP Overview



The focus is on reaching the desired service, not an IP address.

Service Oriented IP Model



Basic idea

- Use the service type requested, not an IP address, to forward packets at the network edge
- Services are abstracted as Service Action Types (SAT)
- Near the user, packets are routed by SAT not by IP address
- A SOIP "dispatcher" proxies sessions to traditional and new services and applications
 - Of course, IP reachability is one of the available services

Potential Service Action Types

- IPv4 connectivity
- IPv6 connectivity
- Discovery Service
- Multicast Service
- Storage Service
- Computation Service
- Application Deployment

Implementation Thoughts:

Not quite an IPv6 packet

- SOIP would coexist and interwork with IPv6
- A SOIP router/dispatcher is also an IPv6 router
- A SOIP client is also an IPv6 host
- Only standard IPv6 (and IPv4) packets enter and leave a SOIP domain
- Yes, the concept is an intentional layer violation

Discussion + next steps

- Comments? Questions?
- Are people interested in this idea?

