Service Oriented Internet Protocol
draft-jiang-service-oriented-ip

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Why?

- End to end IP service is no longer a safe assumption
  - There will usually be middleboxes
- Users want specific services, not IP addresses or URLs
- ISPs want to provide some services & redirect to others

What?

- Use the service type requested, not an IP address, to forward packets at the network edge
- Services are abstracted as Service Action Types (SAT) which are small integers
- Near the user, packets are routed by SAT not address
- Of course, IP reachability is one of the available services

How?

- Some SAT examples:
    1. IPv6 reachability
    2. IPv4 reachability
    3. Discovery
    4. Computation service
    5. Storage service
- Packet format derived from IPv6
    - But there's an SAT instead of a destination address
    - And other goodies that look like a layer violation

Where?

- There's toy code for both TLV and CBOR versions of SOIP at
  github.com/becarpenter/tlv/
- Side meeting discussion:

  Wednesday 08:30-09:45, Notre Dame
  (also discussing
  draft-jiang-asymmetric-ipv6)