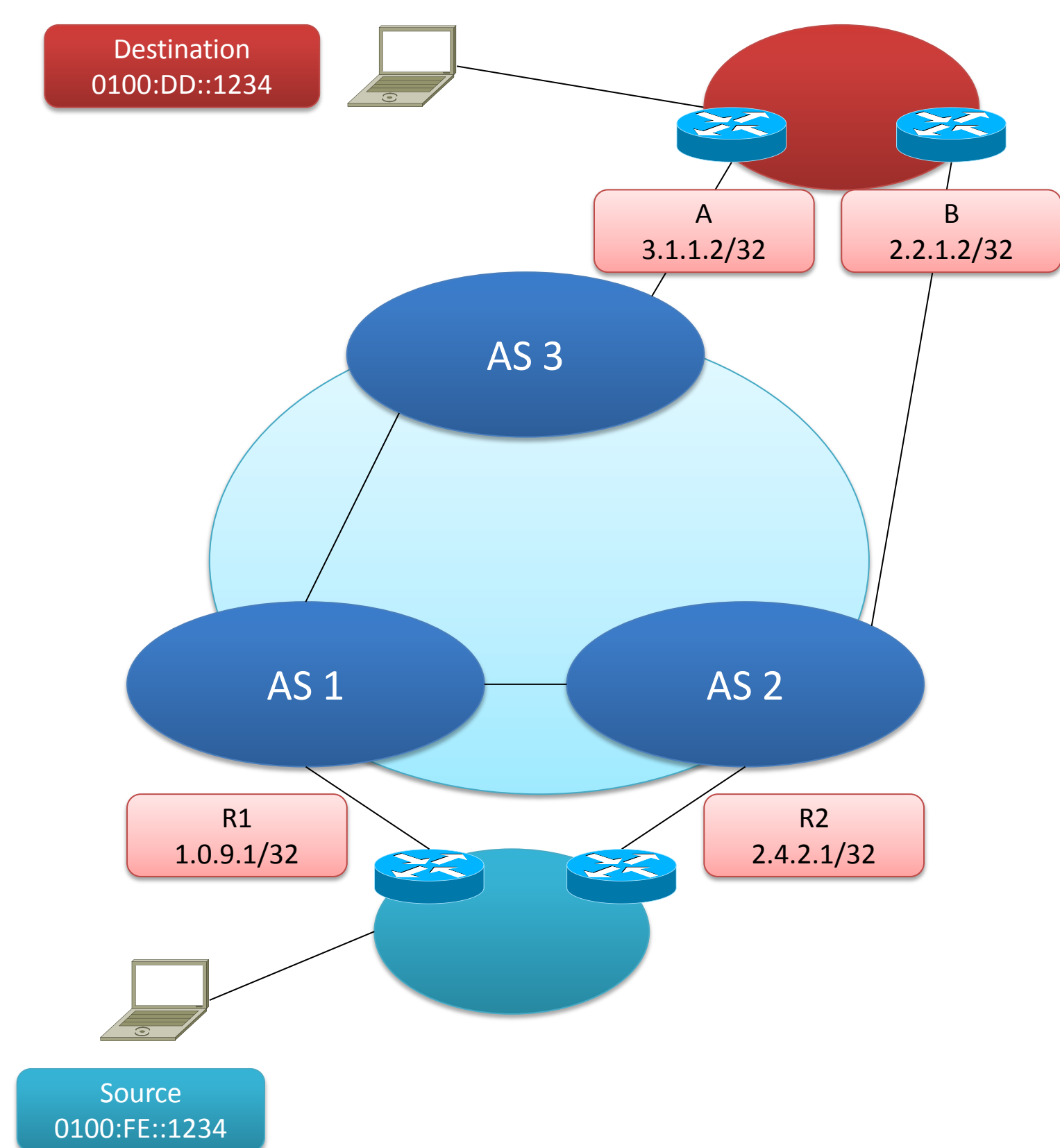


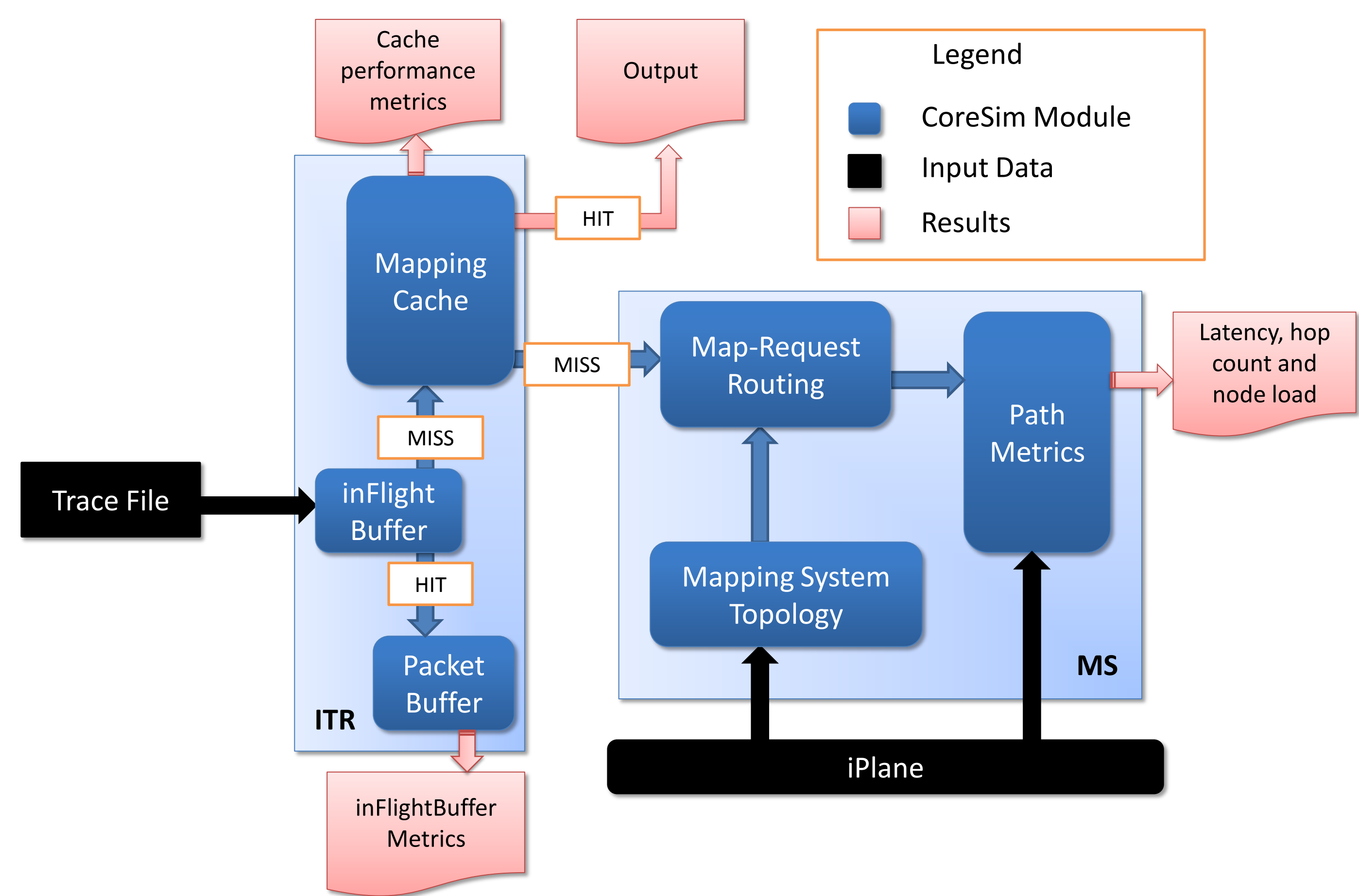
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Example LISP Scenario



- LISP separates the current addressing namespace into Routing LOCators (RLOCs) and Endpoint IDentifiers (EIDs)
- RLOCs used mainly in transit networks
- EIDs used in edge networks
- A mapping system is introduced for EID-to-RLOC lookups

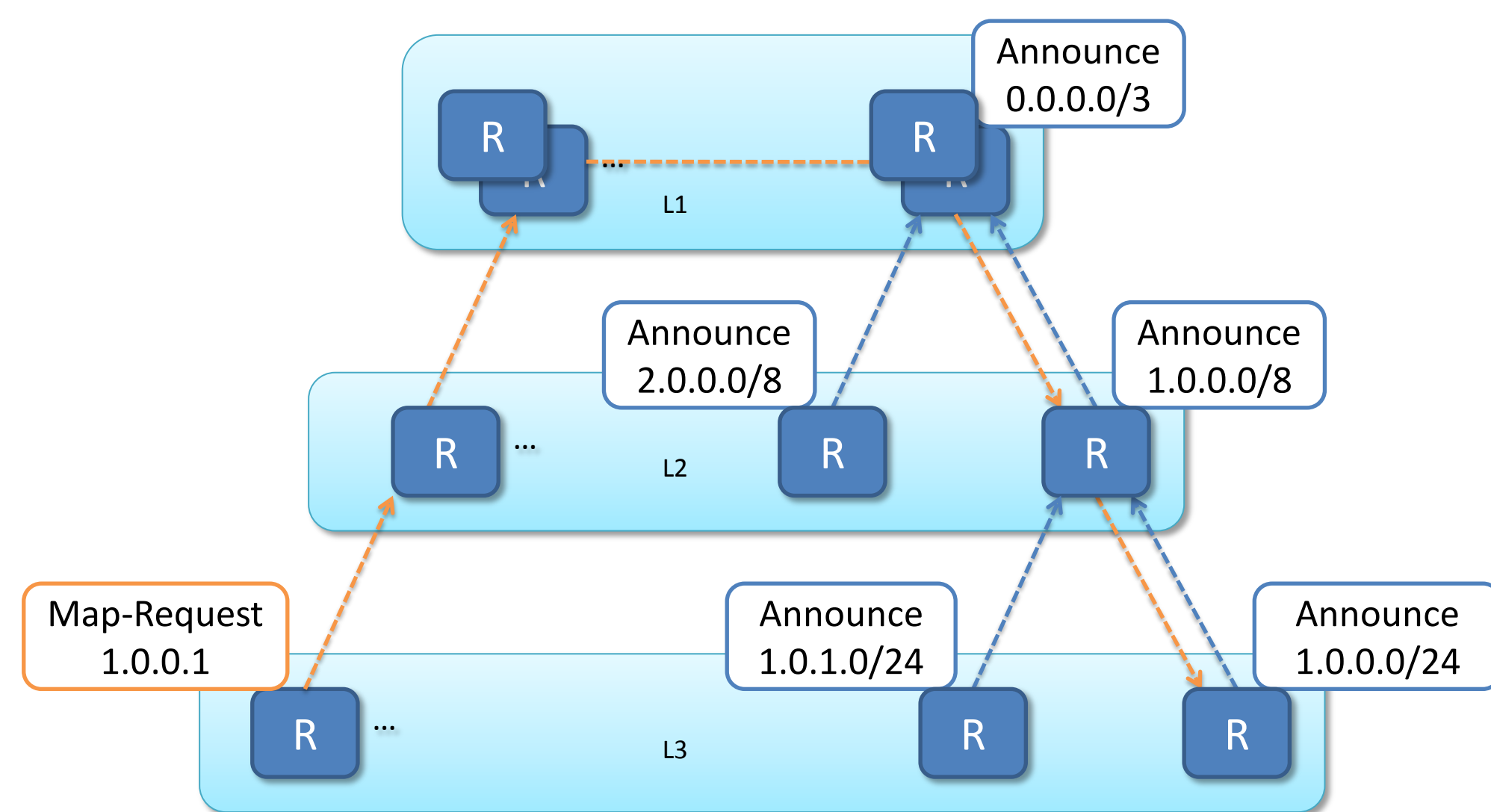
CoreSim Block Diagram



- **Trace file** has one packet/line, with the fields: `<ts_64> <dst_ip> <proto> <size>`
- **Output files** are post-processed for aggregate statistics

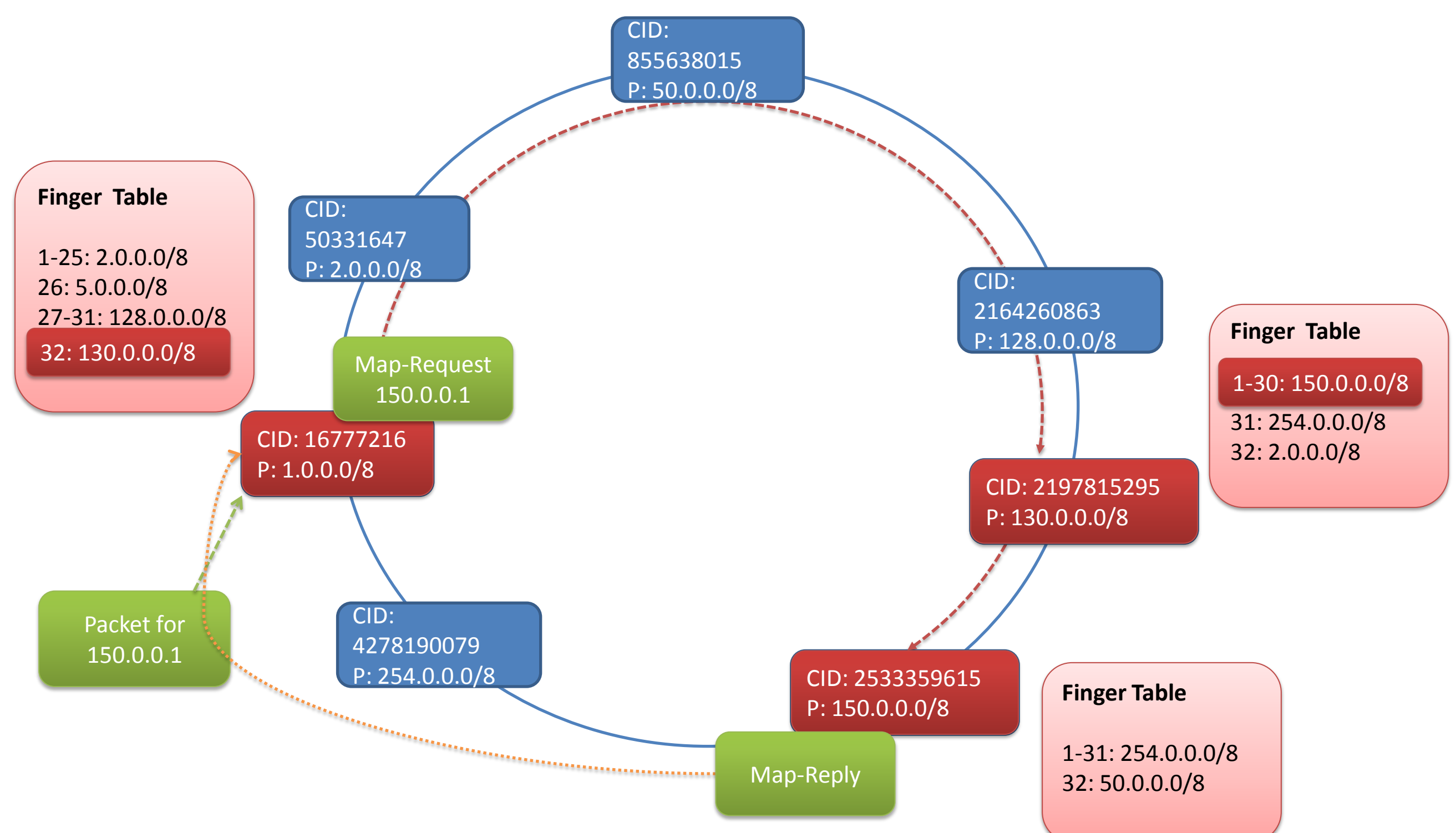
- **iPlane** provides the DFZ prefix list, AS connectivity and latency between arbitrary IPs (~65-80% coverage observed in practice by us)
- We only use non-overlapping prefixes → 112.233 after filtering

Our proposed LISP+ALT topology



- No description in the ALT draft and no consensus on the mailing list about how ALT should be deployed on global scale
- L1 – fully meshed root layer
- L2 – /8 aggregation layer (no peering)
- L3 – Map-Servers (based on current BGP prefix allocation)

LISP-DHT topology



- Modified Chord
- One logical node per prefix / several logical nodes per AS
- Iterative and recursive modes

Simulation results

- **Trace 1:** 24h egress traffic @ UCL border router, Louvain (03/23/2009)
- **Trace 2:** 4h egress traffic @ UPC border router, Barcelona (05/26/2009)
- 99.5% cache hit ratio
- Mapping: 0.5s median for ALT, 1s for DHT
- Uneven load distribution
- Median packet buffer occupancy:
 - ALT: 86 packets / 64 KB
 - DHT: 136 packets / 114 KB

