

LISP Deployment Draft -01

`draft-ietf-lisp-deployment-01.txt`

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- **Dif's from -00**
 - Added Section on Proxy-ITRs
 - Added Section on Migration Mechanisms
 - Route Servers & Proxy-ITRs for EID route origination

Proxy-ITR Requirements

- Keep Interworking Independent of any given mapping system
 - They should use map-resolver/map-server interface
- Provide for consistent origin of EID-routes in accordance with existing Internet best practices
 - The design should not break SIDR, or AS-Path filtering on provider routers
- Allow for policy between P-ITR operators to be reflected in the announcement of EID-Routes into the DFZ, without requiring a central arbitration AS
- Provide for troubleshooting when encapsulation failure prevents communication

Proxy-ITR Requirements

- Permit origination changes to be reflected in large number of Proxy ITRs
 - Every Pitr deployed shouldn't have to be modified when the origin of one EID prefix is changed
- Allow for Proxy-ITR only transit providers to exist
 - The design should not preclude providers who want to offer Proxy ITRs but not mapping services
- Keep the design simple as possible, change as little as necessary
 - Use existing tools and protocols, don't change the way SP's work or expect changes to the LISP protocol or mapping system to support this

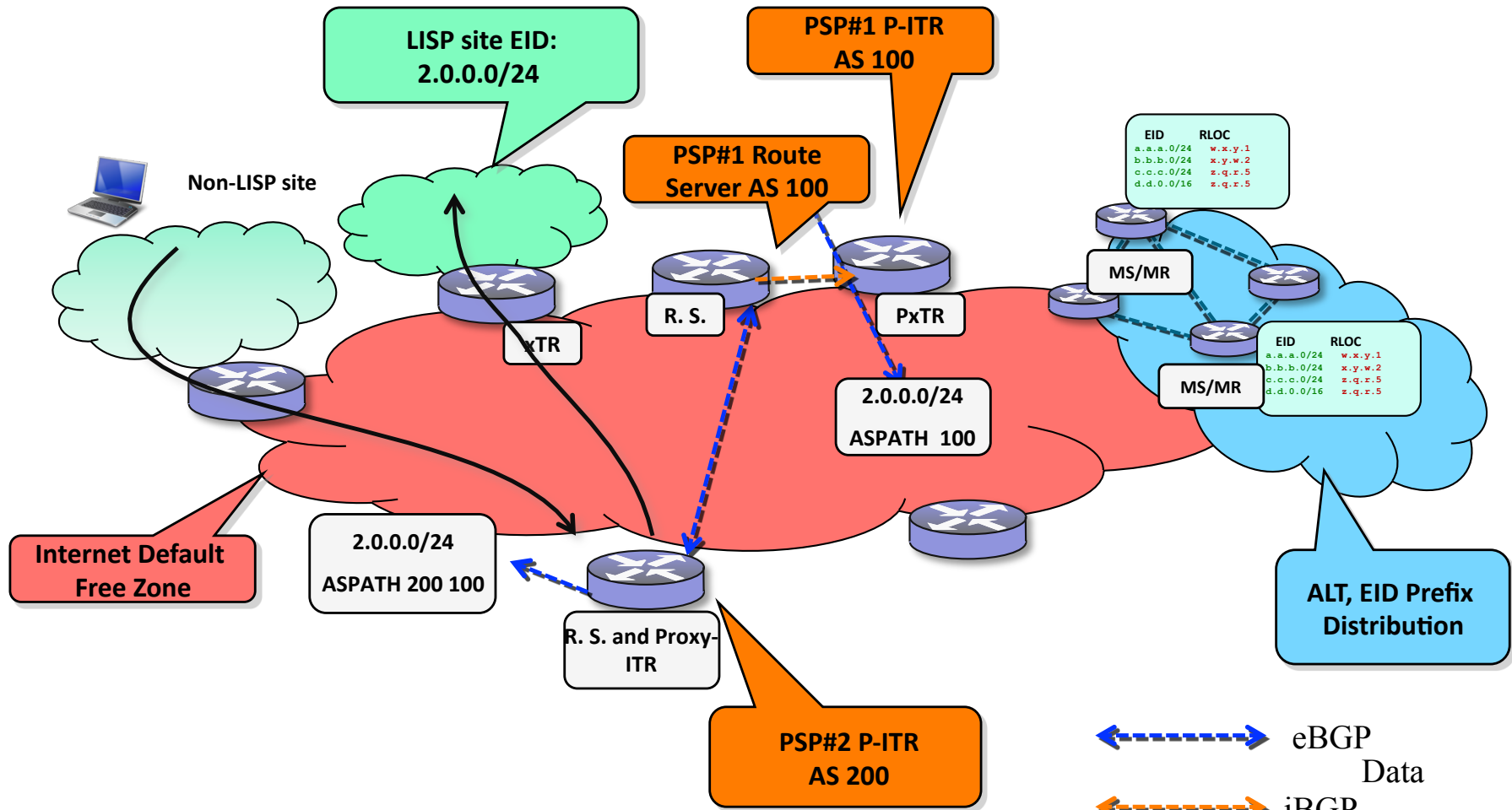
Proxy-ITR Route Origination

- **EID Route Server** is a router that either propagates routes learned from other EID Route Servers, or it originates EID Routes. The EID-Routes that it originates are those that it is authoritative for. It propagates these routes to Proxy-ITRs within the AS of the EID-Route-Server.
- **EID-Route** is a prefix originated via the Route Server of the mapping service provider, it the Mapping Service Provider, or Proxy Service Provider, may aggregate it if it has multiple customers inside a single netblock (like we do with 153.16.0.0/16 today)
 - This prefix is propagated to other PITRs both within the MSP and to other Pitr operators it peers with

Proxy-ITR Route Origination

- A EID Route Server distributes routes to other domain's servers via Multi-Hop eBGP to connect to other Autonomous Systems/PITR operators. This keeps the origin-AS of a given EID-Route consistent.
 - This means SIDR techniques could be applied to this technique
- An EID Route Server may be colocated with a map-server, or a Proxy ITR, but they act independently

Use BGP route servers to propagate EID-Routes to remote Proxy ITRs



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Slide 7

► Data

Proxy ITR Route Origination

- Decoupling EID origination and propagation provides the following benefits
 - It can accurately reflect business relationships between the P-ITR operators due to explicit peering (which aids in troubleshooting as well)
 - It further decouples Proxy-ITRs from the ALT, using the MR and MS infrastructure just like site ITRs (less things attached to the ALT makes it easier to replace)
 - It only requires minor changes to PITR implementation, and none to existing Mapping systems.