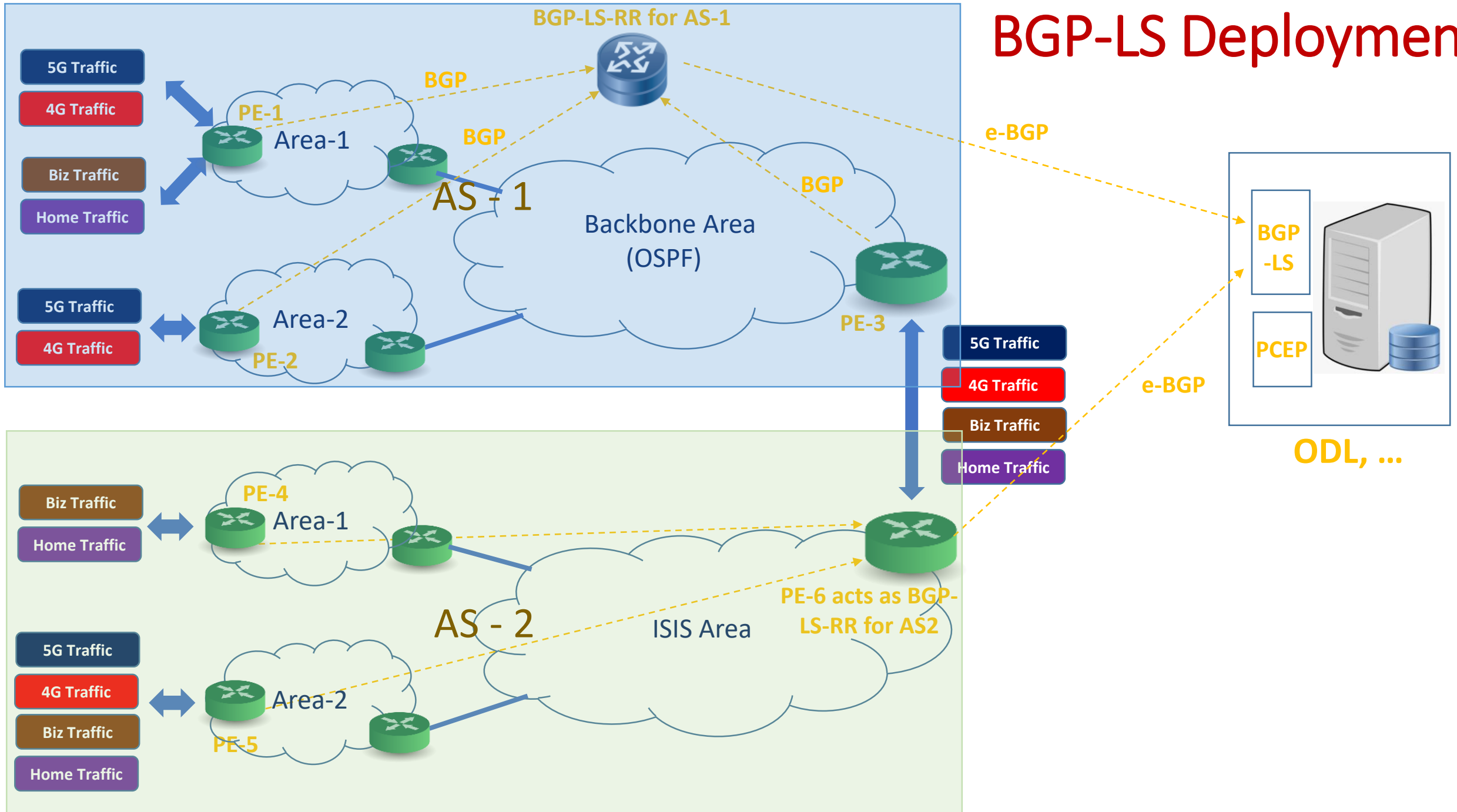


FRR BGP-LS Design

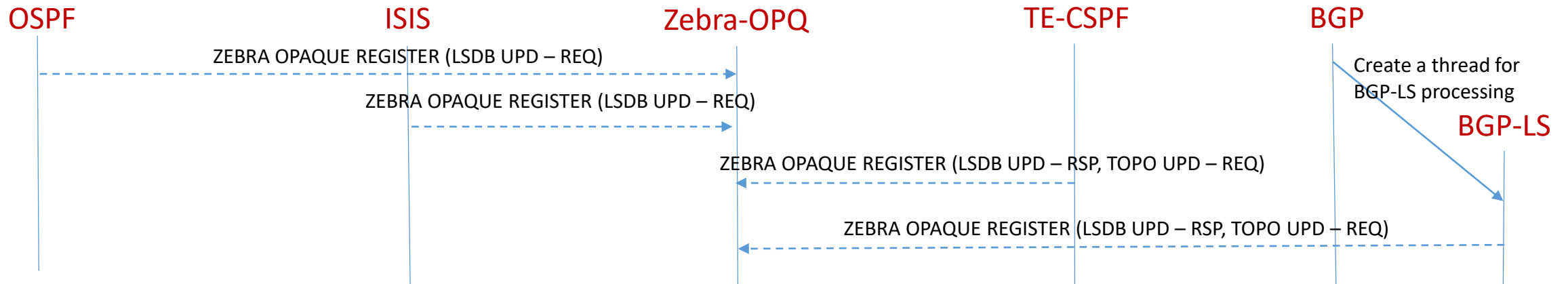
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BGP-LS Deployment



BGP-LS related Initialization

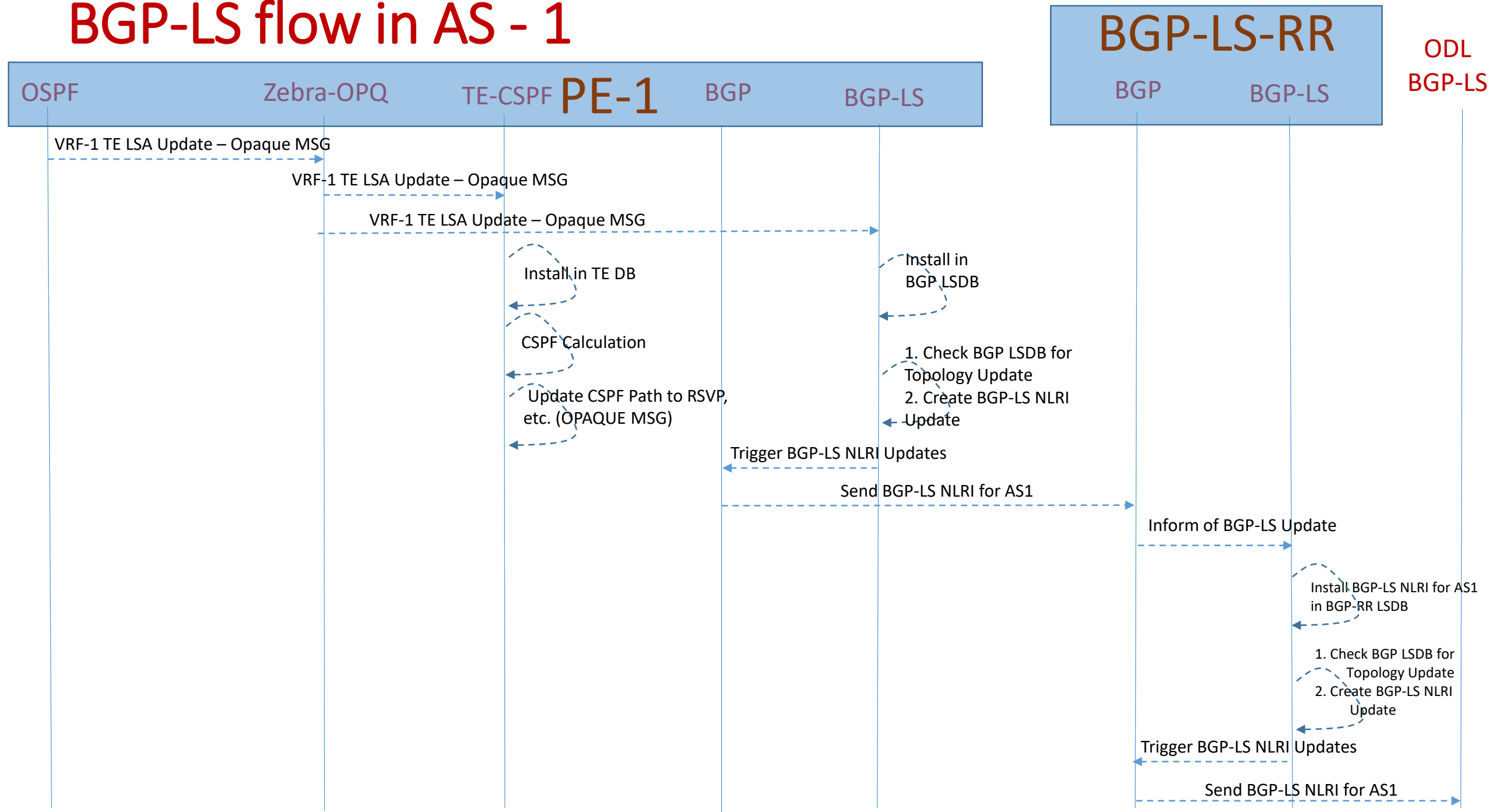


- Create a new thread in BGP for BGP-LS processing
 - New BGP-LSDB Table
 - Opaque LSA Processing
 - Creation of BGP-LS NLRI and trigger update to BGP peer
- As part of Traffic Engg. project, we assume a new thread for TE-CSPF (???) processing
- OPAQUE MSG registration contains a Message Type and whether its CONSUMER or PRODUCER
 - LSDB Update Message (Producer – IGP like OSPF, ISIS), (Consumer – TE-CSPF, BGP-LS)

BGP-LS Flow

- OSPF/ISIS process
 - Receive LSAs from neighbors
 - Send TE LSAs to TE-CSPF and BGP-LS thread using OPAQUE MSG Framework
- TE-CSPF Thread
 - Installed in TE DB
 - Parses the TE LSAs in each OPAQUE MSG and installs in the TE DB
 - TE-CSPF runs CSPF computation
 - CSPF Path sent to consumers like RSVP-TE (can use OPAQUE MSG)??
- BGP-LS Thread
 - Installed in BGP LSDB
 - Check BGP LSDB for Updates
 - Create BGP-LS NLRI Update Message
 - Inform BGP to trigger BGP-LS NLRI Update to peer

BGP-LS flow in AS - 1



BGP-LS flow in AS - 2

