

A Redundancy Mechanism for DS-Lite

draft-xu-v6ops-dslite-redundancy-00

@IETF94

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Why we need this solution?

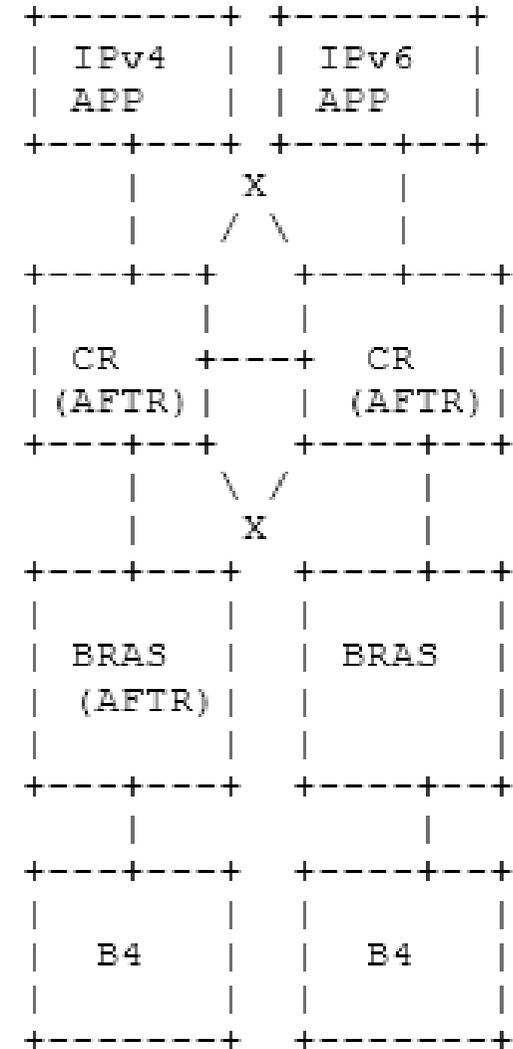
- In DS-Lite scenario, customers served by a single CGN function embedded in AFTR element may experience service degradation due to the presence of the single point of failure or loss of state information.
- Therefore, redundancy capabilities of the AFTR devices are strongly desired in order to deliver highly available services to customers.

Background

- Distribution mode
 - The CGN card is integrated into the free slot of the BRAS in a metro network
 - The service providers always integrated two CGN cards in the BRAS
- Centralization mode
 - a stand-alone AFTR device is deployed nearby the core router device at the exit of a metro network.
 - Service providers always deploy two stand-alone AFTR devices nearby the two core router device for the load distribution and redundancy purpose.

New Redundancy mechanism

- Make the centralization mode to backup for the distribution mode.
 - The routing is made prior selected to the AFTR card on the BRAS and then selected the AFTR stand-alone device near the core router through the Metric value configuration
 - This mechanism is based on the IPv6 anycast function



New requirements for the AFTR device

- How many distribution AFTR device could be covered by one centralization AFTR device?
- It should use FQDN to describe the AFTR in the DHCPv6 option
- The speed of the session creation for the centralized AFTR device could be calculated by a formula.
- If the distribution AFTR card breakdown, the AFTR device SHOULD ensure that the traffic will not direct to the other distribution AFTR card.

Comments?

Thank you