Configuration of DVMRP over a UDL

UDLR Working Group

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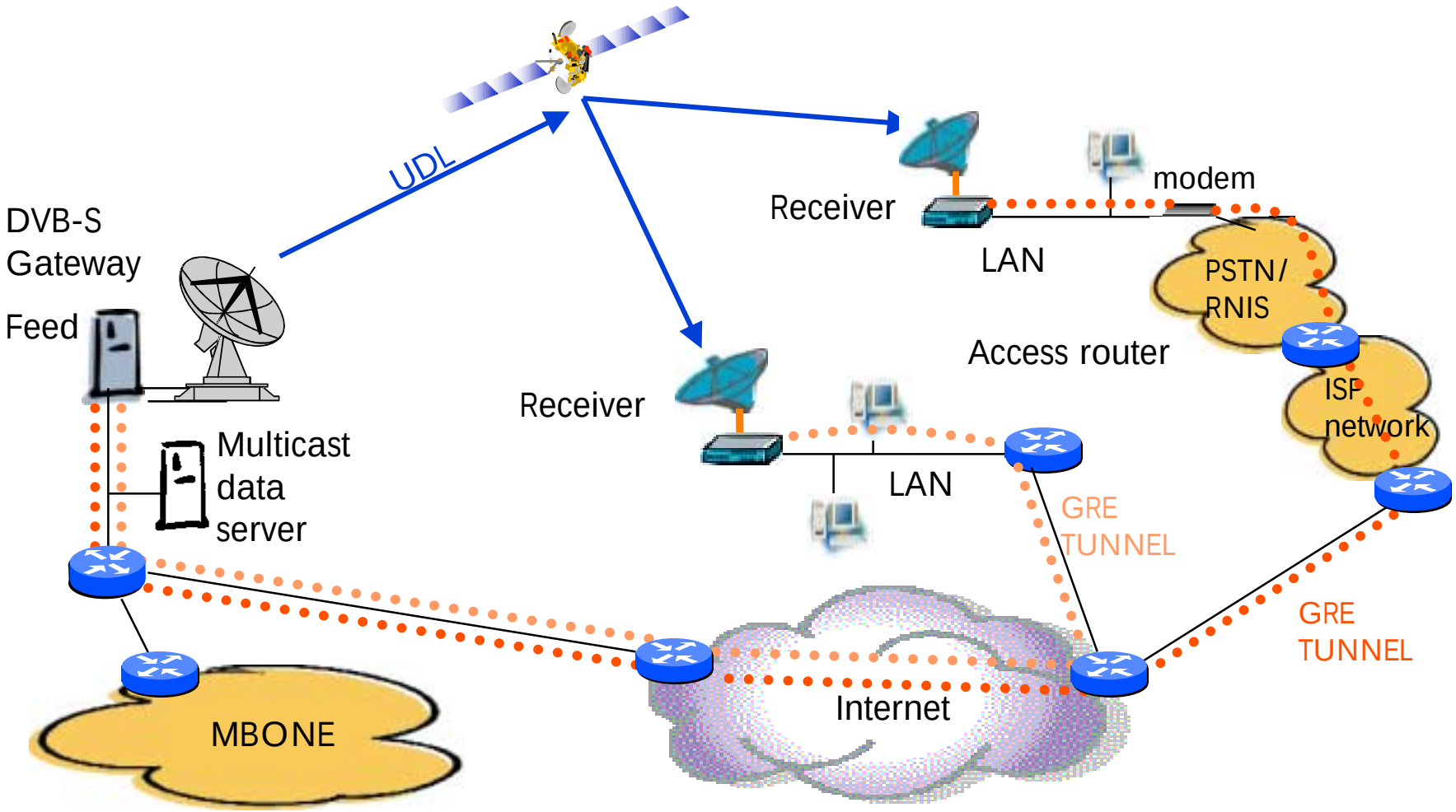
Sum-up

- To offer Multicast services on network with a UDL based on a satellite network : DVMRPv3 as routing protocol
  - → Feed and Receivers are DVMRPv3 routers
  - → A high number of receivers connected to the UDL
- To suggest an optimized configuration of DVMRP on Receiver
  - To reduce the number of DVMRP messages sent from Receivers to the Feed via the GRE tunnel
    - → "Active Receiver": a standard DVMRPv3 implementation
    - → "Passive Receiver": a NON standard DVMRP implementation
- I-D based on an experiment

Network architecture



Changes 02 ➜ 03

- Changes of Abstract and Introduction
  - To describe how DVMRPv3 works on a network with a UDL with a return link based on LLTM
  - To suggest a configuration of DVMRPv3 routers connected to the UDL more adapted and optimized
- Addition of a section “DVMRPv3 implementation“ (sect. 2.2)
  - DVMRPv3 mrouted 3.9b3 on FreeBSD 3.4-Release

Changes 02 ➜ 03

- Sect. 2.4 “Passive mode configuration on receivers”
  - To stress that a NEW parameter needs to be developed in the standard DVMRPv3 implementation
    - ➔switch_uni_bi <group IP address>
      - <group IP address>: not a multicast address related to a multicast group session
      - Example: switch_uni_bi 224.5.6.7
    - ➔UDL interface on receiver has be defined as unidirectional

      Example: Phyint dvb0 one_way

Changes 02 ➜ 03

- Wording of Sect. 2.4 “When and how to switch between active and passive mode”
  - WHEN to switch to active mode ?

    On the LAN interface of a passive receiver:

    - ➔ There is a subscriber to a multicast session not forwarded by the Feed over the UDL
    - ➔ A End-User wishes to participate to a multicast session (to send multicast data)
  - HOW to switch between modes ?
    - ➔ To active mode: upon reception of an IGMP join message to <group_IP_address> (“switch_uni_bi” address)
    - ➔ To passive mode: when there is no more member for this particular group on the LAN interface

Changes 02 ➜ 03

- Sect. 3 Domains of application
  - Section 3.1 Application using a RMT protocol
    - ➔ Detail about NACK: NACK are sent in multicast by the Receiver
      - The NACK is forwarded by the Feed over the UDL and to source
      - To prevent other Receivers on the UDL from sending the same NACK

Changes 02 ➜ 03

- Sect. 4 Other network architectures :

  Introduction: Why do we suggest 2 other network architectures ?

  - 1st architecture: An active receiver on the same LAN as the Feed
    - ➔ To propose a network with an active receiver under satellite owner's control
      - To be sure that at least one active receiver is on the UDL allowing a high number of receivers on the UDL to be in passive mode and to receive multicast sessions
  - 2nd architecture: Both Feed and Receivers have an access to the Mbone
    - ➔ To suggest a configuration to prevent active Receiver from sending multicast data via the GRE tunnel to the Feed and to the UDL
    - ➔ More optimized to use the Mbone

Next Steps

- Comments or questions ?
- Goal: to submit this I-D as an informational RFC
  - Is it ready ?
  - How to proceed ?