draft-ietf-v6ops-ipv6inixp

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What is it?

- A guide for IPv6 deployment in Internet Exchange Points.
- Current version is version 03.
- Several reviewers since version 02: Bernard Tuy, Alain Aina, Mawatari Masataka, Fernándo Gont, Martin Pels & Nick Hillard.

Changes since version 01:

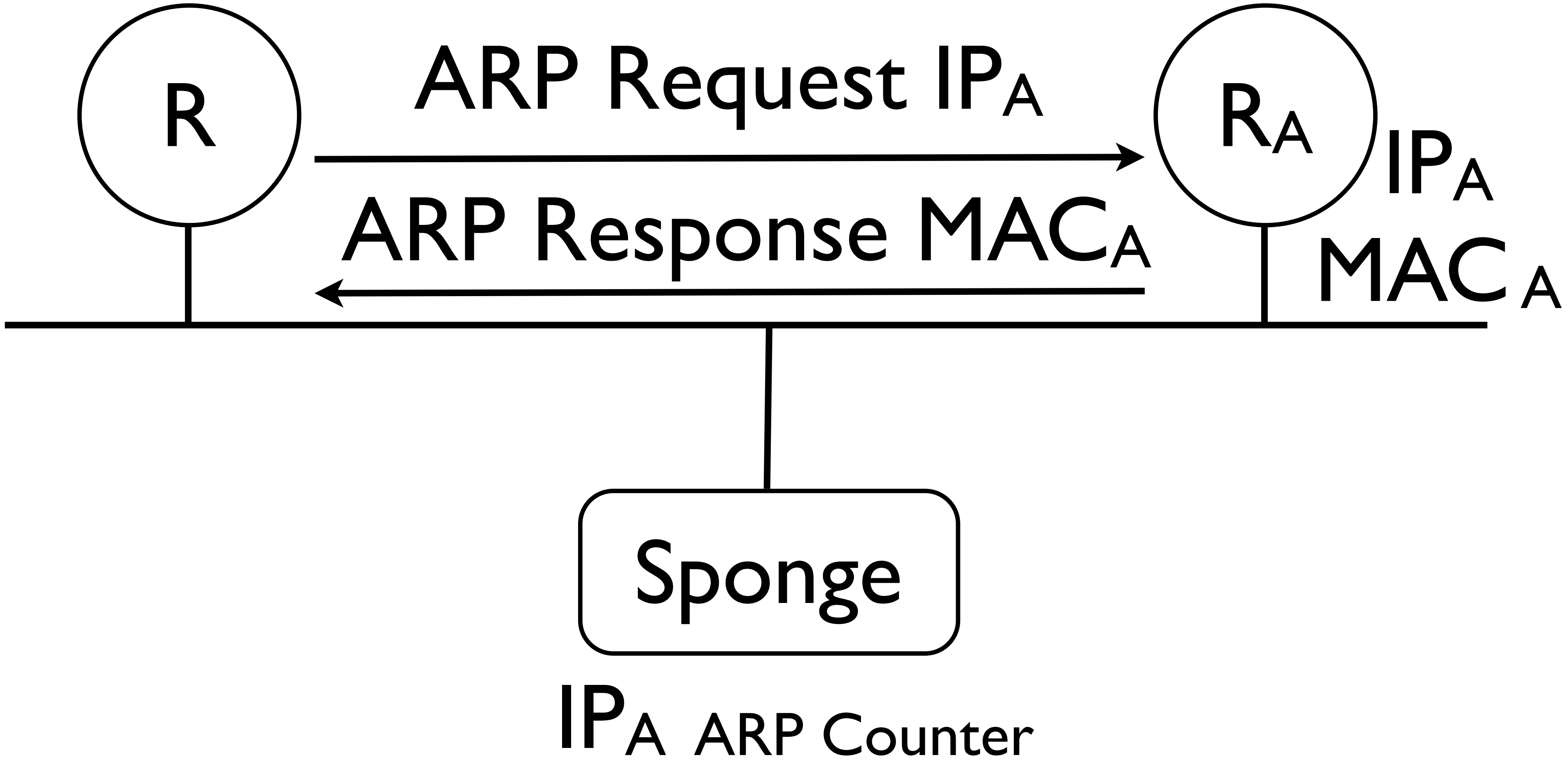
- Editorial changes.
- Routing policies reflects that two separate / 48 could be used.
- Explanation about ULA.
- Discussion on addressing plan and solicited-node multicast group as per AMS-IX report (see next).
- Added reference to RA-Guard draft.

The problem of the ARP Sponge.

- Described at AMS-IX report sent to the list.
- Authors:Marco Wessel and Niels Sijm (Universiteit van Amsterdam).
- The ARP sponge are used in IXP for limiting the amount of ARP traffic on the LAN.
- Also helps monitoring participants traffic, particularly for badly configured BGP neighbors.

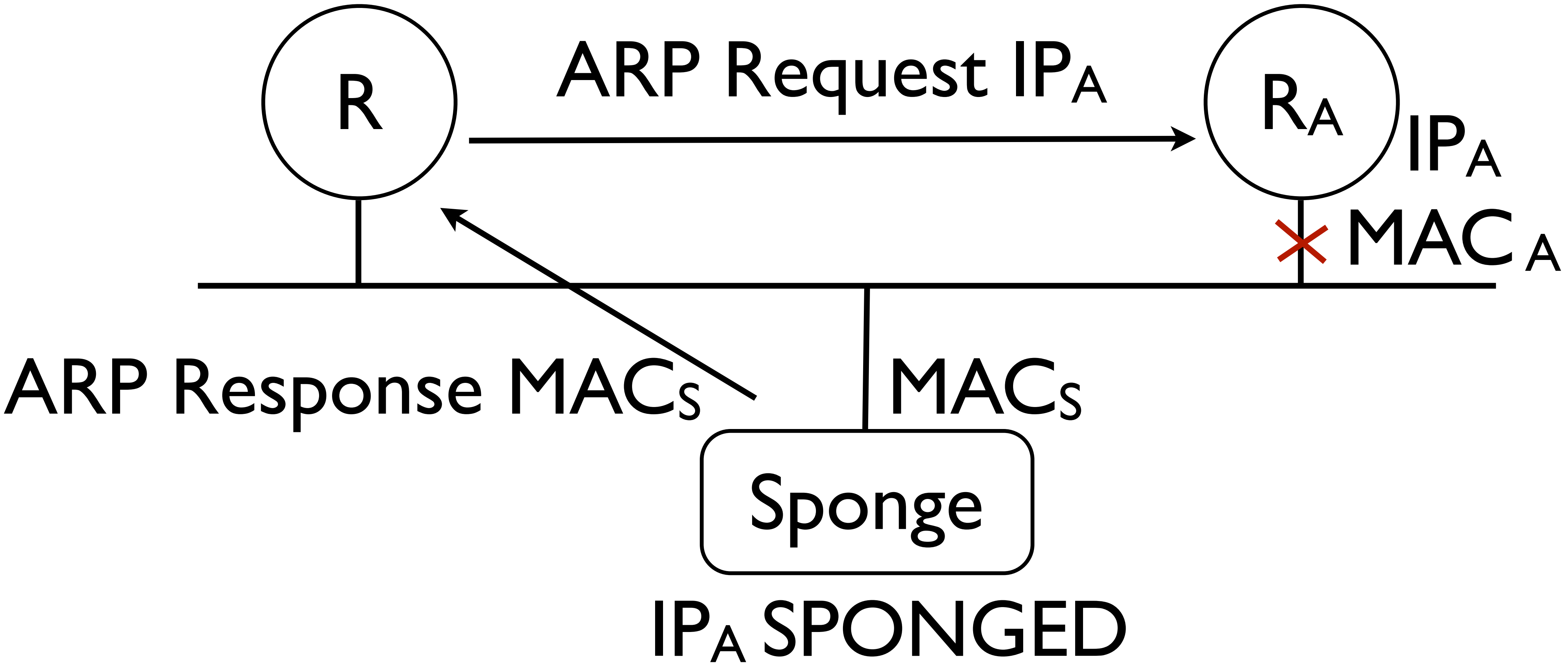
ARP Sponge:

Normal ARP Operation:



ARP Sponge:

- RA goes out of services, ARP traffic above threshold.
- Sponged ARP Operation:



ARP Sponge:

- When RA goes back on service: it sends a gratuitous ARP or ARP to other IPs.

- The sponge detects those broadcast packets and removes RA from its “sponged IP list”.

- Back to normal ARP operation.

- Thanks to ARP Sponge the IXP can detect badly configured BGP sessions, particularly old sessions to old participants that left the IXP.

IPv6 ICMP ND-Sponge.

- What if we would like to give participants the same service in IPv6?
- The problem is the size of the address space, we could en up with large amount of sponged addresses to track (used to be max 512 in IPv4).
- Infrastructure could be target of DoS attacks, just by pinging non-used addresses.
- One question raised was how are router's resources behaving with large amount of ND messages. Three vendors studied, some worried results.

To sum up

- Thanks for all the comments.
- All requested changes added to version 03.
- Some typos found for version 04, will issue shortly.