

# IPv4 - IPv6 multicast gateway

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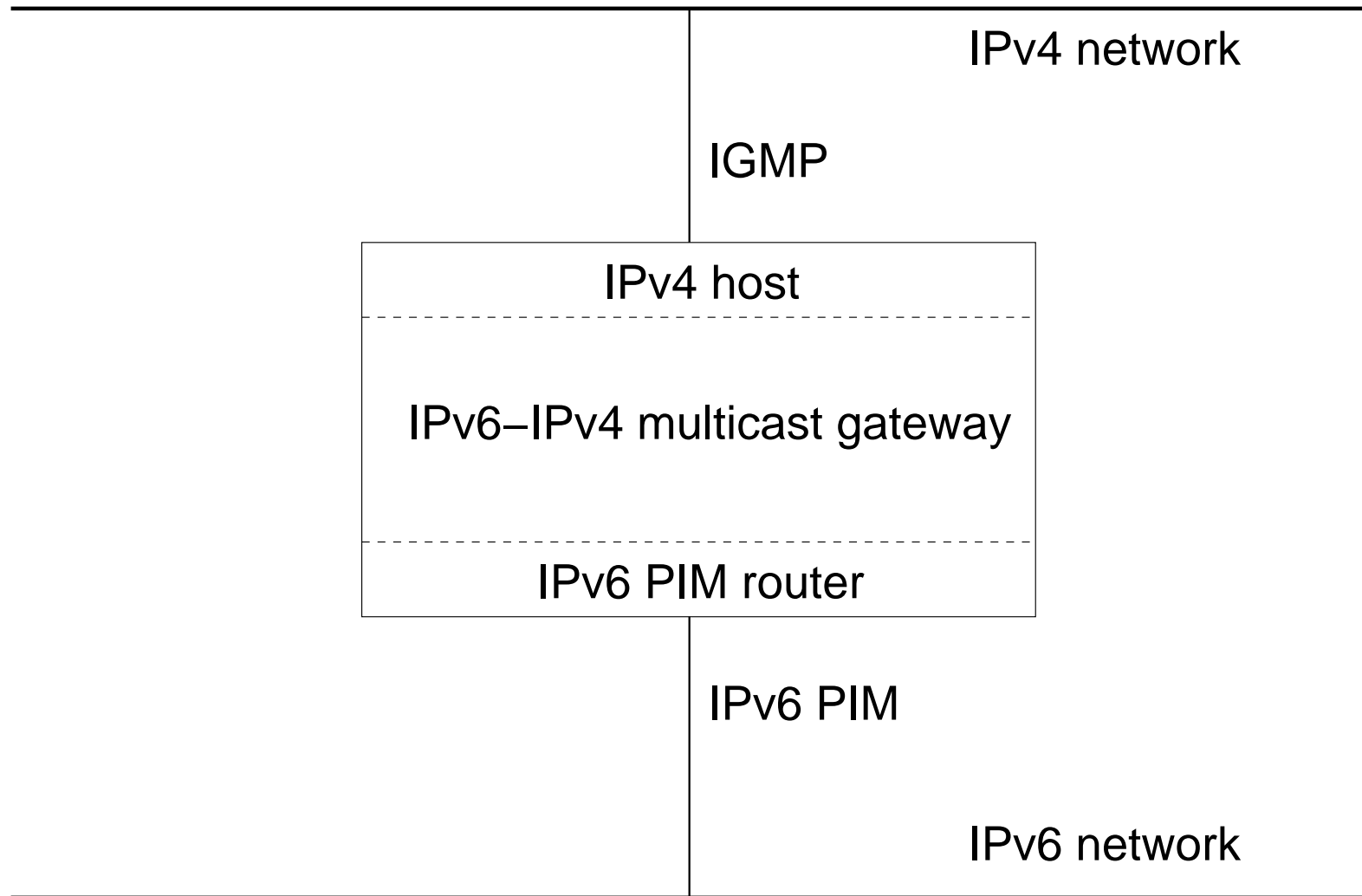
# Goals

- An IPv6 host should be able to receive data from any IPv4 multicast group
- An IPv6 host should be able to send data to any IPv4 multicast group
- The solution should be easy to deploy

# Current implementation

- A gateway can be deployed and used by an entire IPv6 PIM domain with no modifications to any other software
- IPv4 multicast space embedded into IPv6
  - Use a /96 IPv6–prefix. Last 32 bits, IPv4 address
- IPv4 and IPv6 multicast trees joined at gateway
  - Gateway is IPv4 leaf node
  - Gateway is IPv6 RP
- Allows videoconferencing with IPv4 and IPv6 participants
  - All can both send and receive

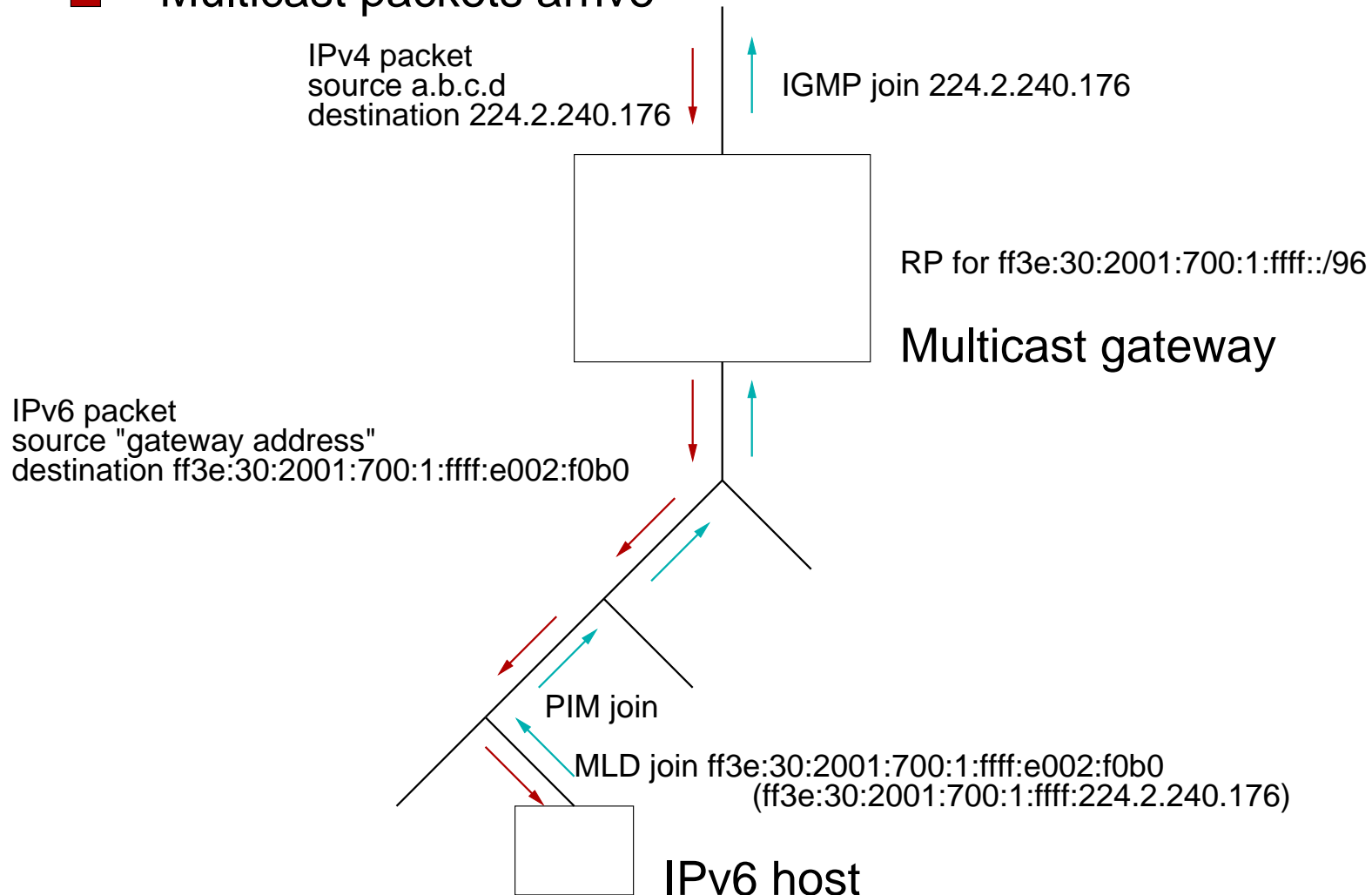
# How it works(1)



- In IPv4 the gateway is a multicast host using IGMP
- In IPv6 the gateway is a PIM router and RP for the /96 prefix

# How it works(2)

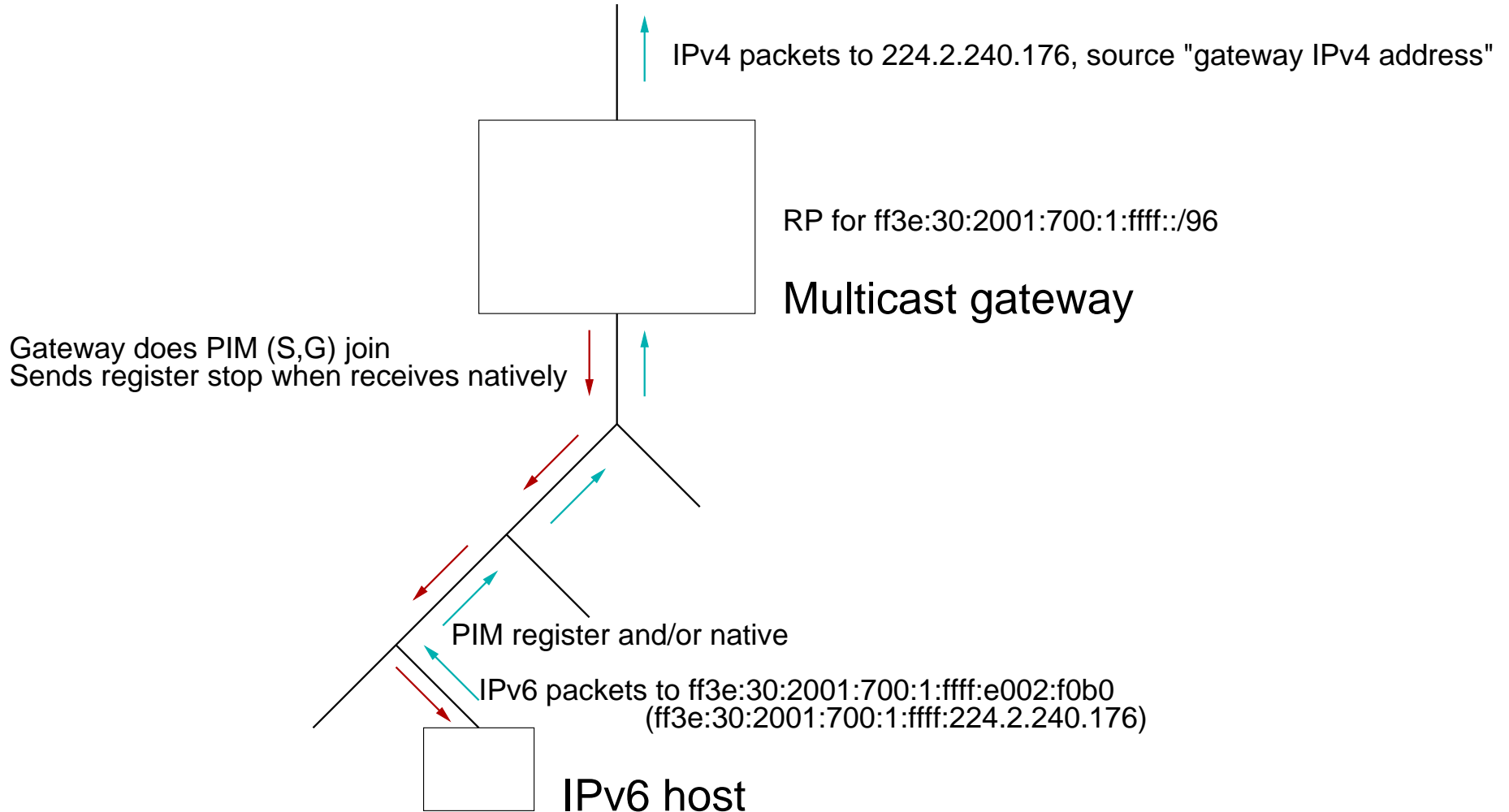
- Host joins a group
- Multicast packets arrive



- All IPv6 joins in PIM domain reaches gateway
- Gateway joins corresponding IPv4 group
- Gateway resends all IPv4 multicast for joined IPv6 groups

# How it works(3)

- Host sends multicast
- Gateway joins and receives all data natively  
Leaves when no data received for a while



- IPv6 host sends packets to a group
- Gateway joins the IPv6 group to receive data
- Gateway resends all IPv6 packets to the resp IPv4 groups

# SAP announcements

- An IPv6 user should see IPv4 announcements
- Joining an IPv4 group through IPv6 needs to be easy
- Separate tool joins IPv4 SAP group
- Rewrites addresses contained in SDP
- Resends to IPv6 SAP group

Places all over the world

Low bandwidth video (10-25 kb/s) with views from all over the world.

Contact Details

Format: H.261 Proto: RTP/A Addr: 224.2.172.238 Port: 51482 TTL: 127 Key:

Heard from 128.253.115.224 at 30 Jan 2003 14:49 CET

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zmcgw: Places all over the world

Low bandwidth video (10-25 kb/s) with views from all over the world.

Contact Details

Format: H.261 Proto: RTP/A Addr: ff3e:30:2001:700::1 Port: 51482 TTL: 127 Key:

Heard from 2001:700:1:0:290:27ff:fe50:6bfa at 30 Jan 2003 14:49 CET

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