Cisco Expo 2008

Techtorial Day
SP techtorial

Multicast Source Discovery Protocol

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Enable Your Network
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Agenda

- **Multicast Source Discovery Protocol**
  - Interdomain
  - Intradomain – Auto-RP

Multicast Source Discovery Protocol

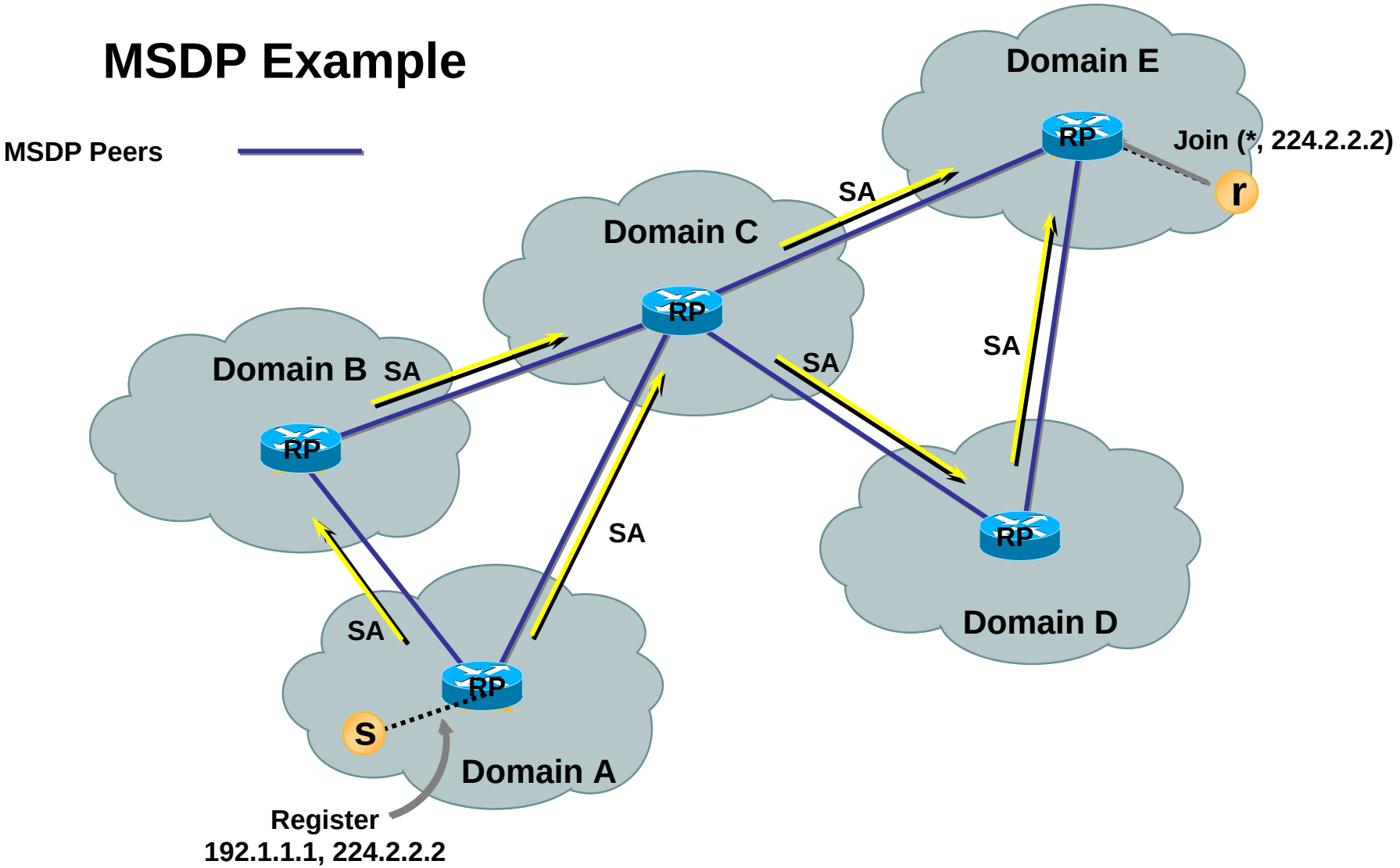
MSDP

- Multicast Source Signaling across numeorus ISP PIM-SM domains
- Leaving ISP PIM domains independent/autonomous

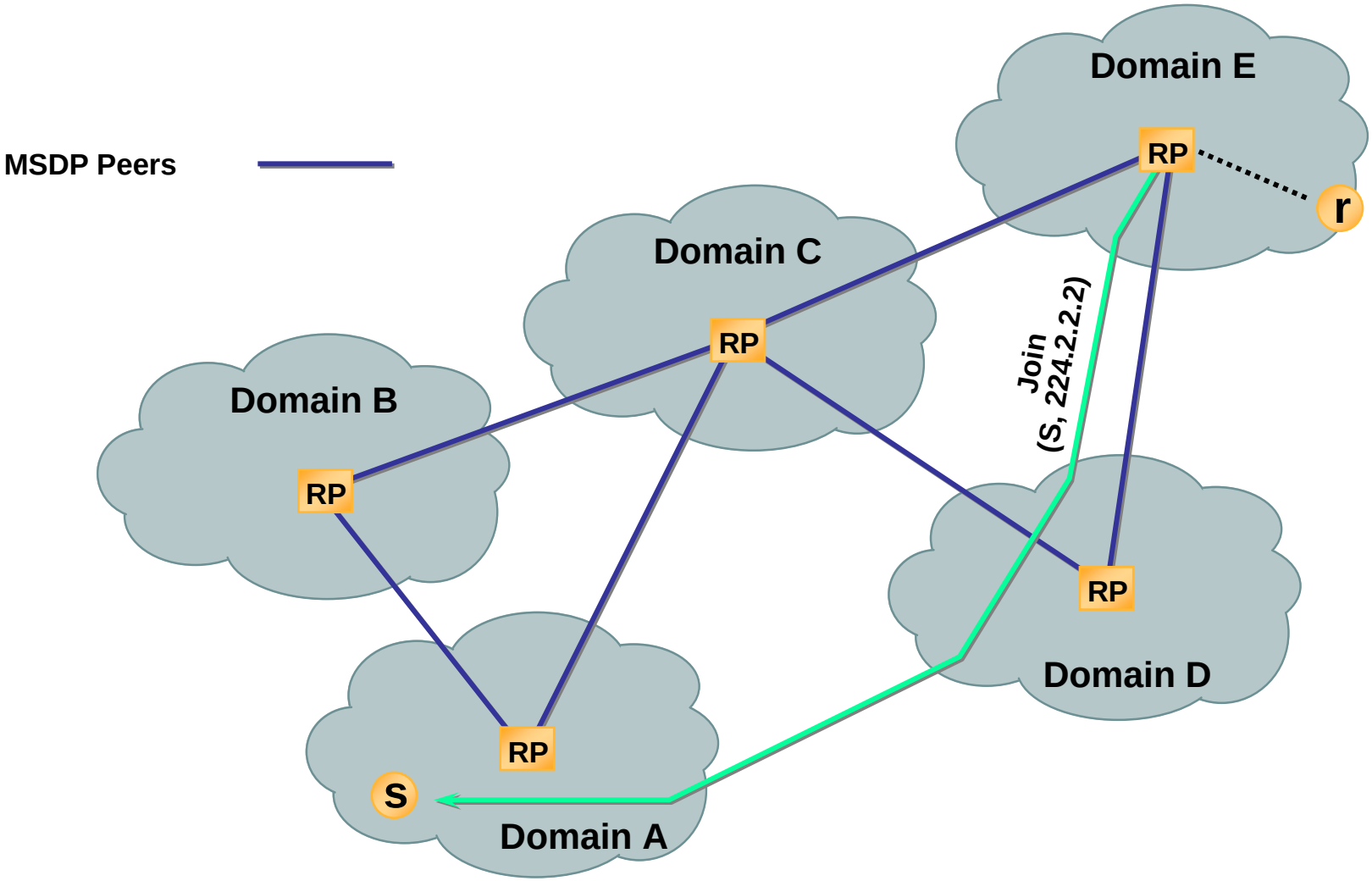
- PIM-SM ASM only
  - RP's knows about all sources in their domain
  - Sources cause a "PIM Register" to the RP
  - Tell RP's in other domains of it's sources via MSDP SA (Source Active) messages
  - RP's know about receivers in a domain
    - Receivers cause a "(*, G) Join" to the RP
    - RP can join the source tree in the peer domain via normal PIM (S, G) joins
  - MSDP required for interdomain ASM source discovery

- IETF RFC 3618

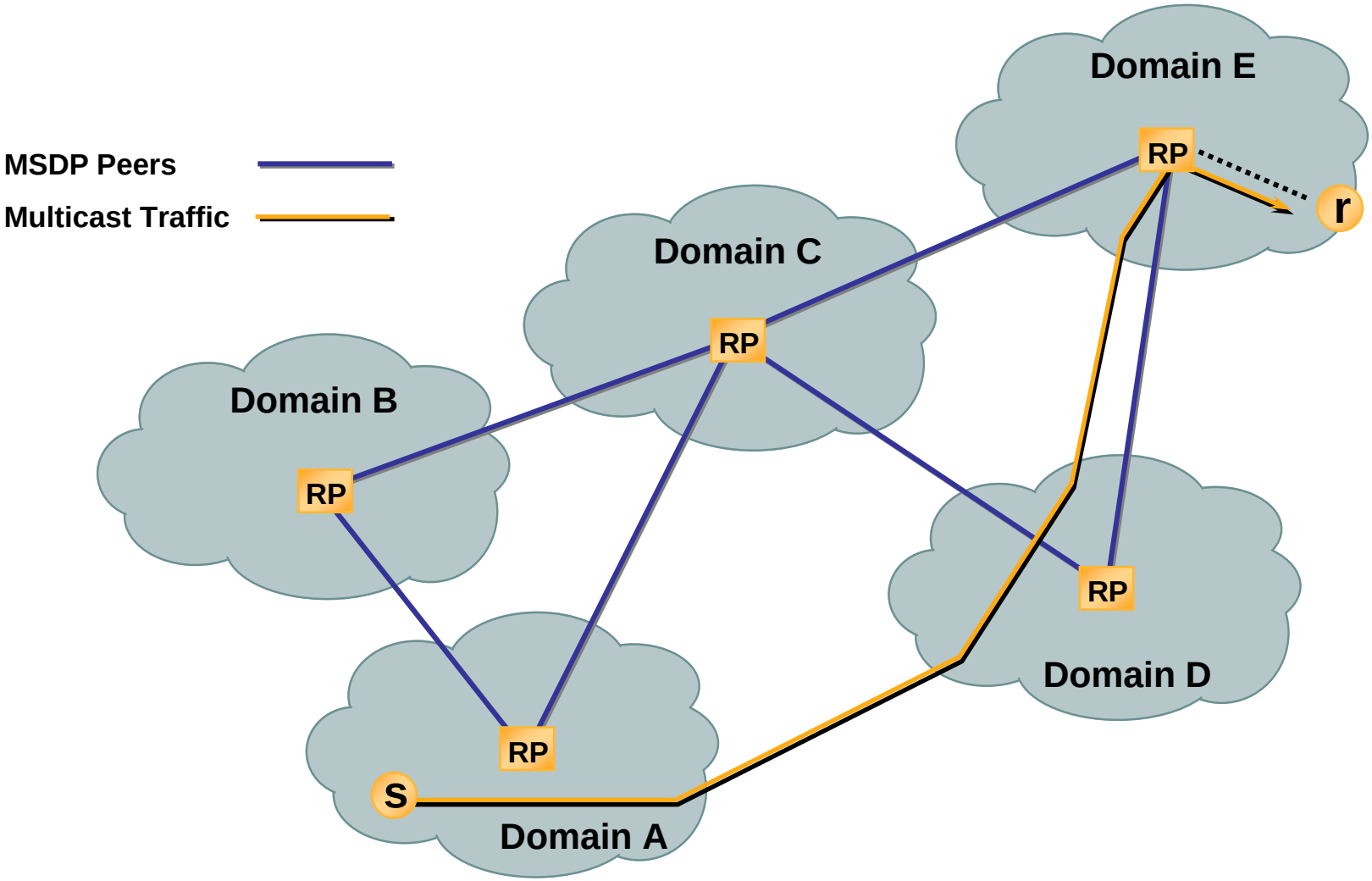
MSDP Overview



MSDP Overview



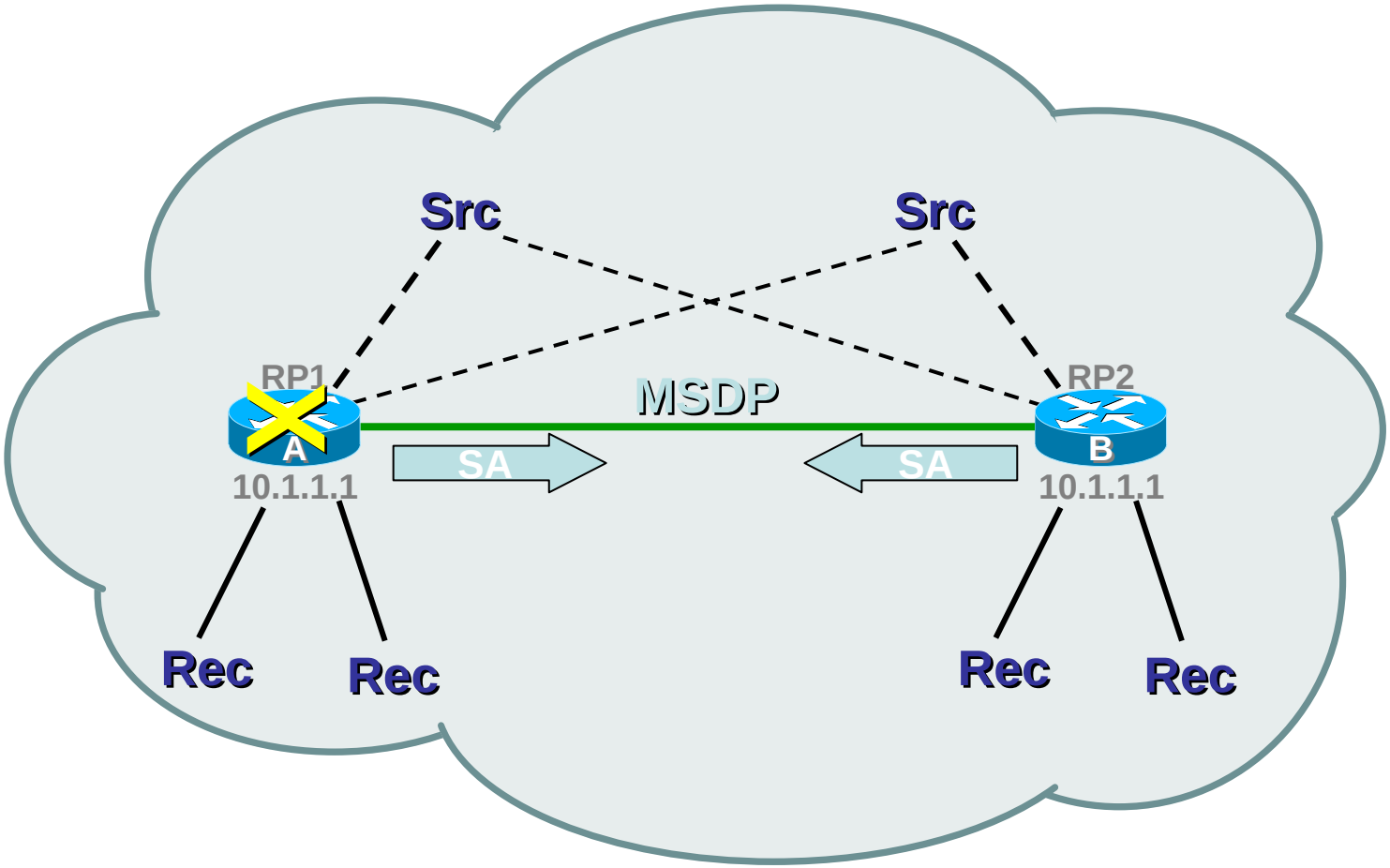
MSDP Overview



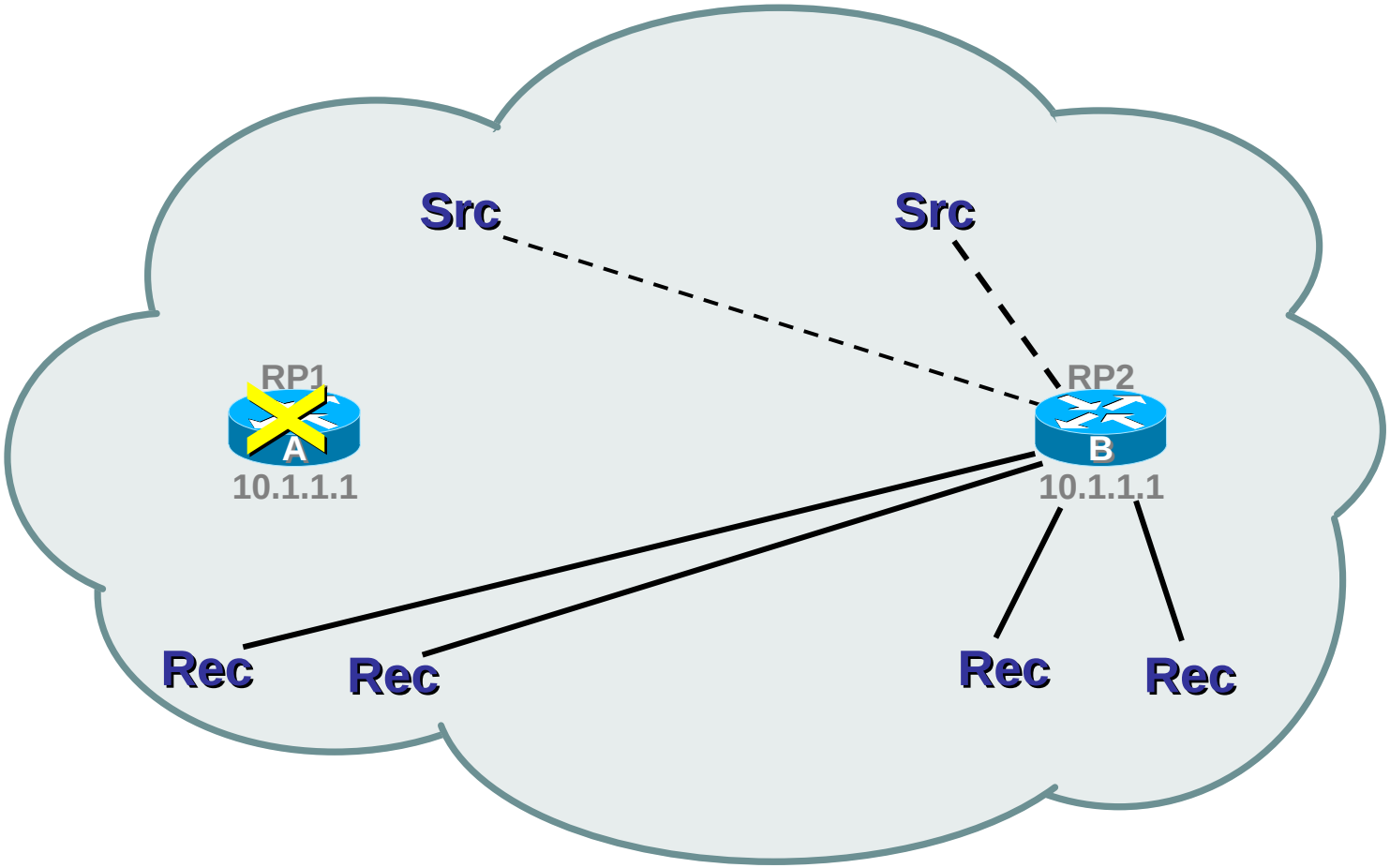
Anycast RP – Overview

- Redundant RP technique for PIM-SM ASM which uses MSDP for RP synchronization
- Uses single defined RP address
  - Two or more routers have same RP address
    - RP address defined as a Loopback Interface.
    - Loopback address advertised as a Host route.
  - Senders & Receivers Join/Register with closest RP
    - Closest RP determined from the unicast routing table.
    - Because RP is statically defined.
- MSDP session(s) run between all RPs
  - Informs RPs of sources in other parts of network
  - RPs join SPT to active sources as necessary

Anycast RP – Overview



Anycast RP – Overview

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