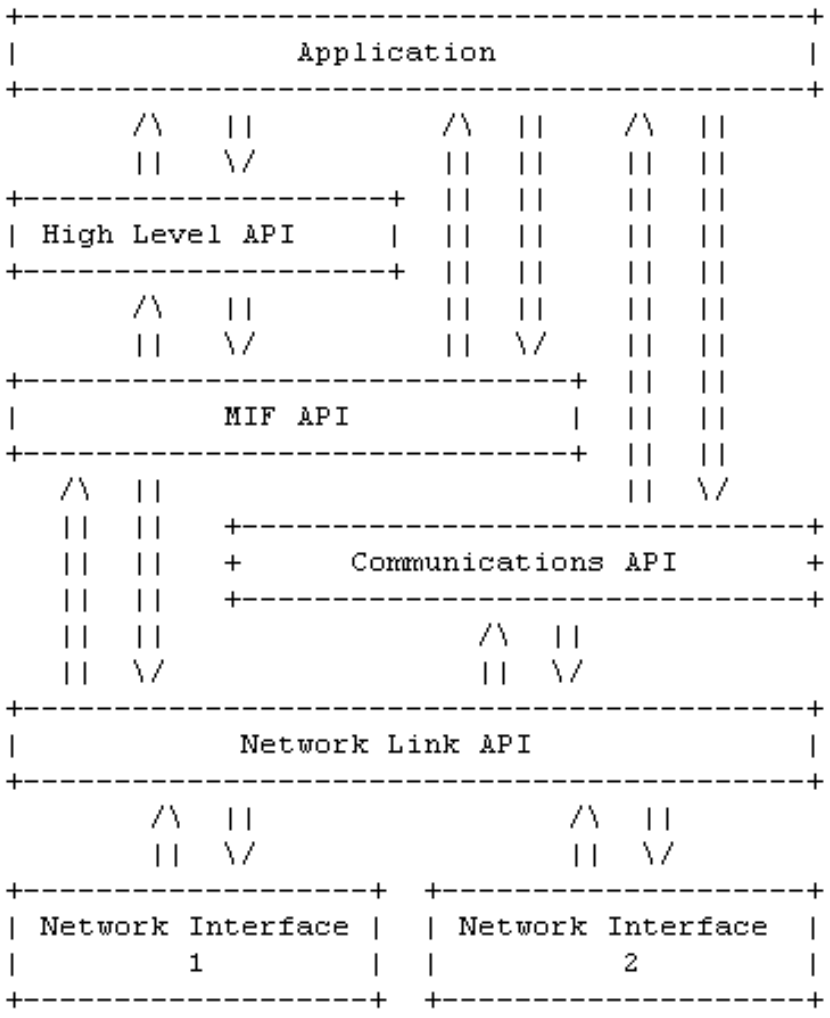
MIF API

draft-ietf-mif-api-extension-03

Basic Concept of MIF API

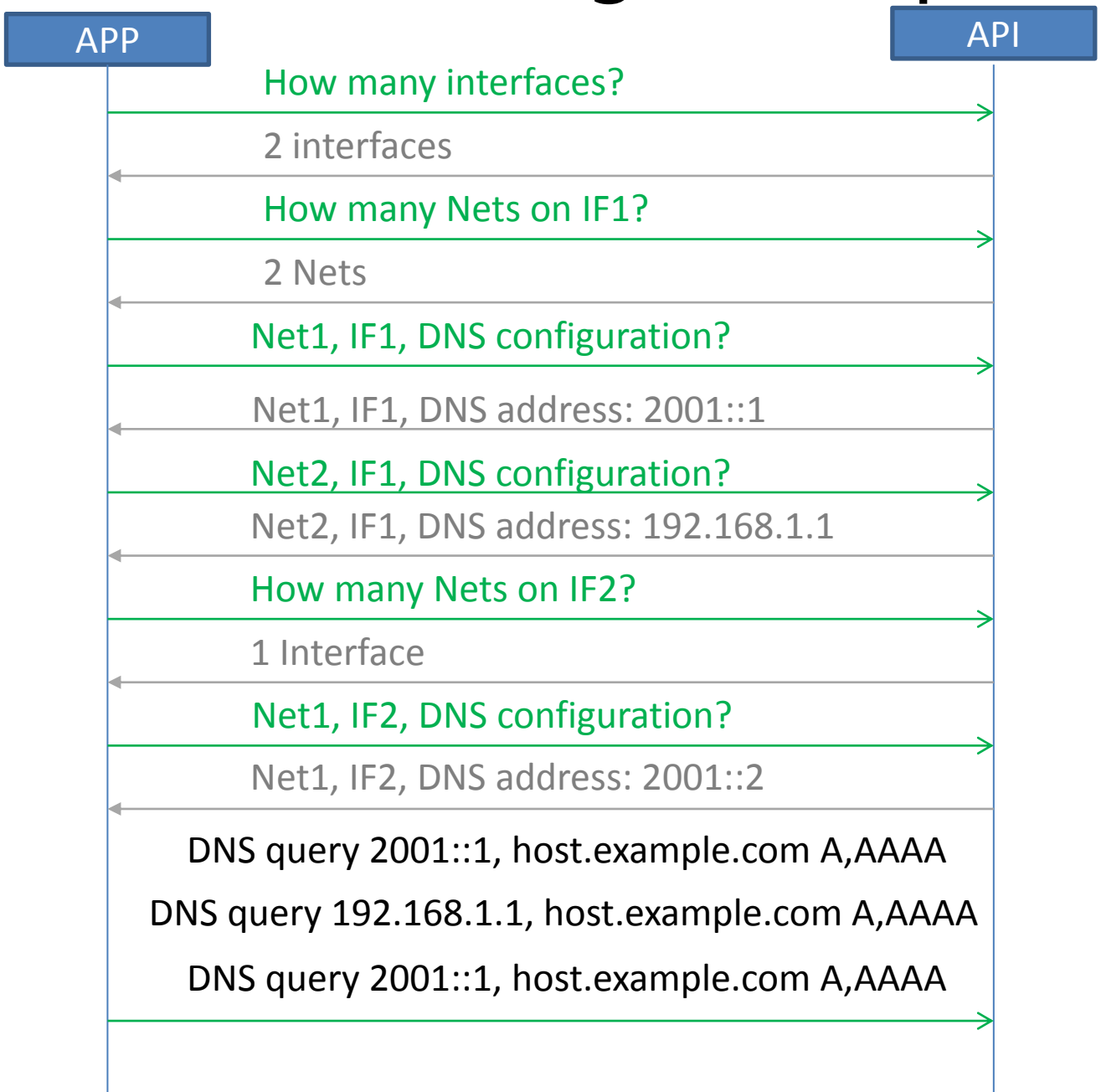


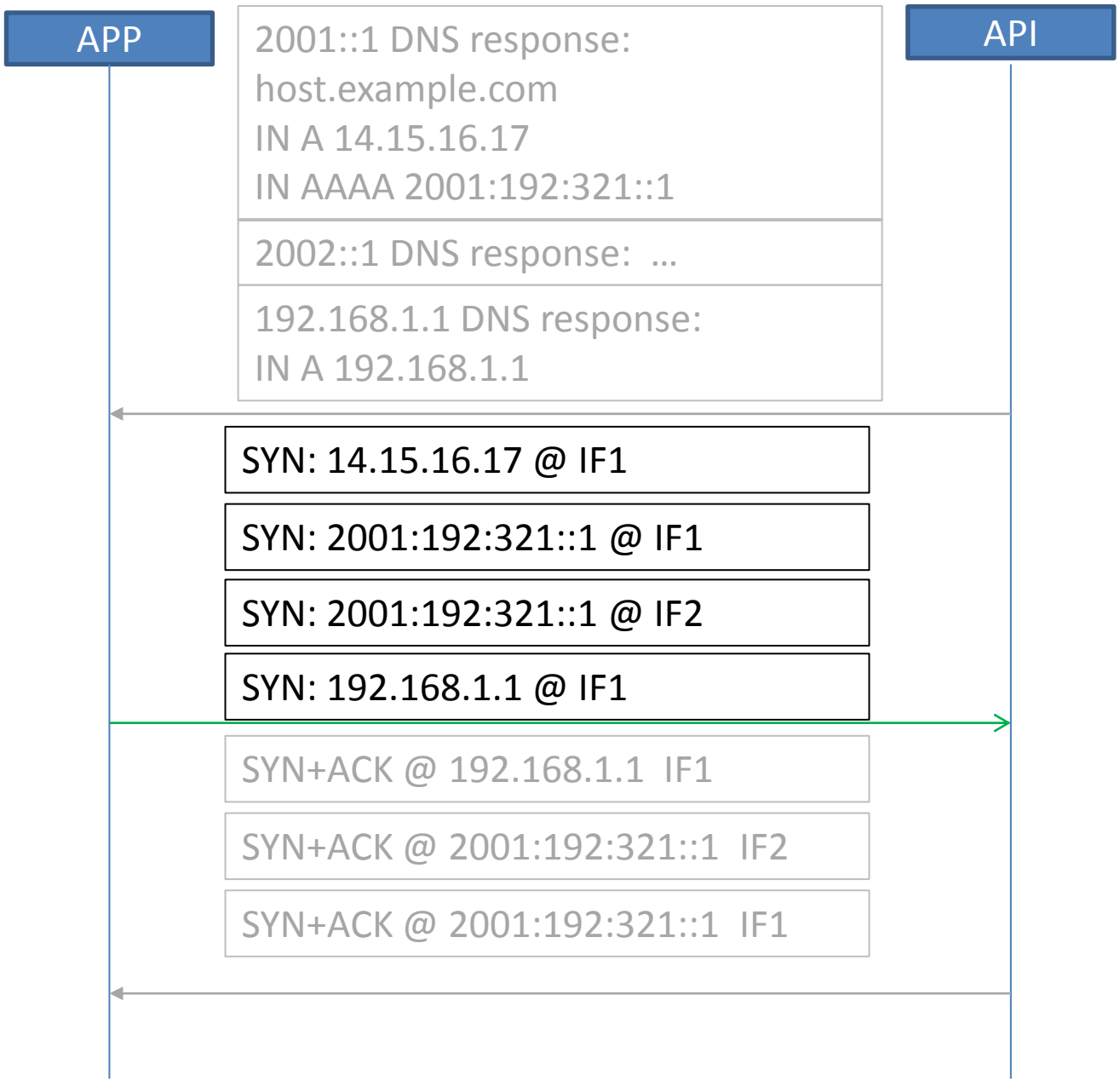
- Application
- High Level API:
  - general-purpose high-level API
- MIF API:
  - used by higher-level APIs
  - it is permissible for applications to use the MIF API when it is deemed necessary
- Communication API
  - E.g. POSIX socket API and a variety of other related APIs
- Network Link API
  - the software that is responsible for actually managing whatever network links are present on a node, whether these are physical links or tunnels.

Communication Model

- POST MESSAGE call
  - Post message, then returns
- CHECK MESSAGE call
  - Check to see if there is a massage waiting from the High Level API, the MIF API, or the Communications API.
- GET MESSAGE call
  - Check to see if there is a message waiting.

MIF API Usage Example




APP
API
2001::1 DNS response:
host.example.com
IN A 14.15.16.17
IN AAAA 2001:192:321::1
2002::1 DNS response: …
192.168.1.1 DNS response:
IN A 192.168.1.1
SYN: 14.15.16.17 @ IF1
SYN: 2001:192:321::1 @ IF1
SYN: 2001:192:321::1 @ IF2
SYN: 192.168.1.1 @ IF1
SYN+ACK @ 192.168.1.1 IF1
SYN+ACK @ 2001:192:321::1 IF2
SYN+ACK @ 2001:192:321::1 IF1

Update From the Previous Version(01)

- Stop Announce Configuration Element
  - The Stop Announce Configuration Element message requests that MIF API stop announce configuration element.
- Stop Announcing Address
  - The Stop Announcing Address message requests the MIF API to stop announcing address.

- Interface is going away
  - This message is sent by the MIF API to the application that indicates the interface is going away. This may happen when the interface is still up but the system intend to take it down.
- Interface is going up
  - This message is sent by the MIF API to the application that indicates the interface is going up. This may happen when the interface is still down but the system intend to take it up.

Open Issues

- Two IPv6 providers on one interface use case
- Local Bonjour service use case
- Link-local IPv4/MDNS use case
- Security consideration section
- What about implementations?

- Q&A?