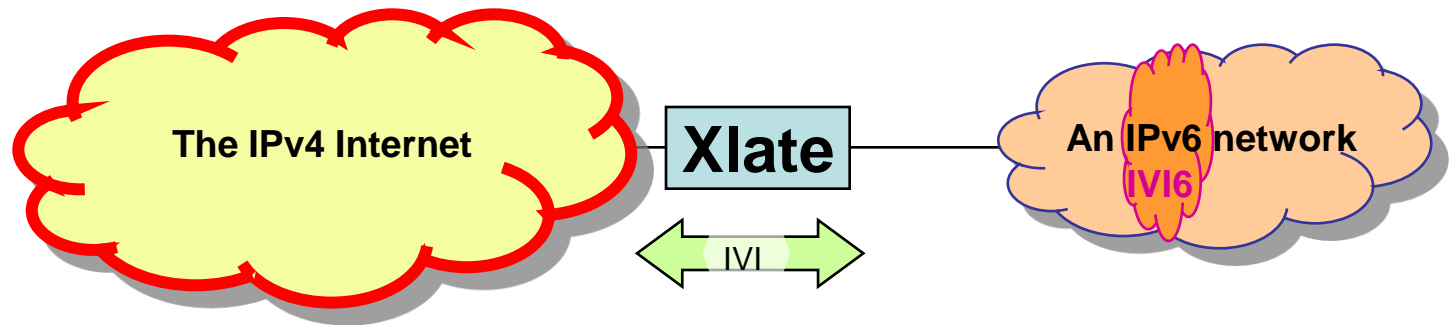


Xlate additional notes

2009-03-21

Xlate scenarios and address mapping



- We consider the “an IPv6 network connects to the IPv4 Internet” scenario.
- In order to perform the translation function, the Xlate needs to
 - **Represent the IPv4 addresses in IPv6 network**
 - Method: embed global IPv4 addresses in an IPv6 network’s prefix
 - Example: IPv4=0.0.0.0/0→IPv6=2001:da8:ff00::/40
 - **Represent the IPv6 addresses in IPv4 network**
 - Method: embed a subset of the ISP’s IPv4 addresses in an IPv6 network’s prefix
 - Example: IPv6=2001:da8:ffca:266c:0::/64→IPv4=202.38.108.0/24
- This method support both IPv6 initiated and IPv4 initiated communications

Xlate address format

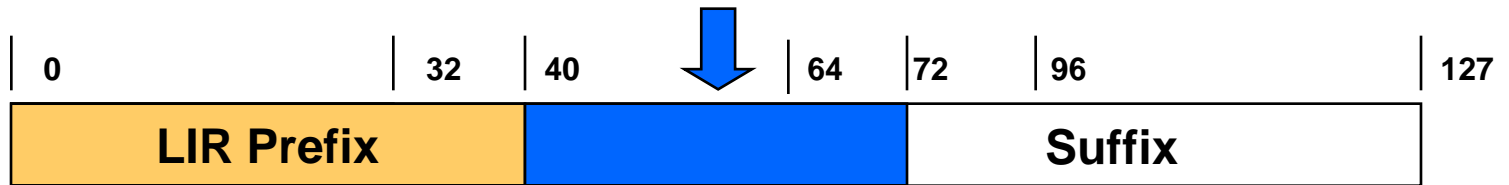
Represent the global IPv4 addresses in IPv6

The global IPv4



IPv4=0.0.0.0/0

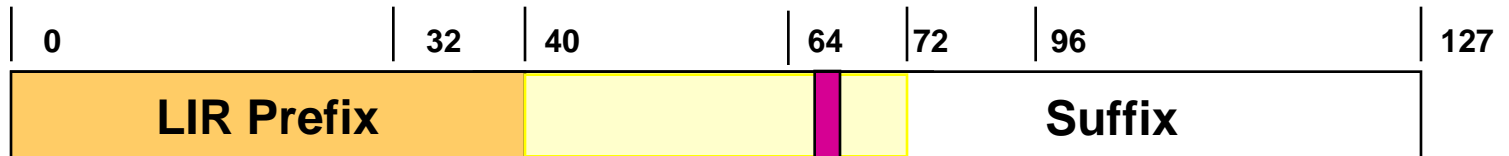
ISP's IPv6



IPv6=2001:da8:ff00::/40

Represent a subset of IPv6 addresses in IPv4

ISP's IPv6



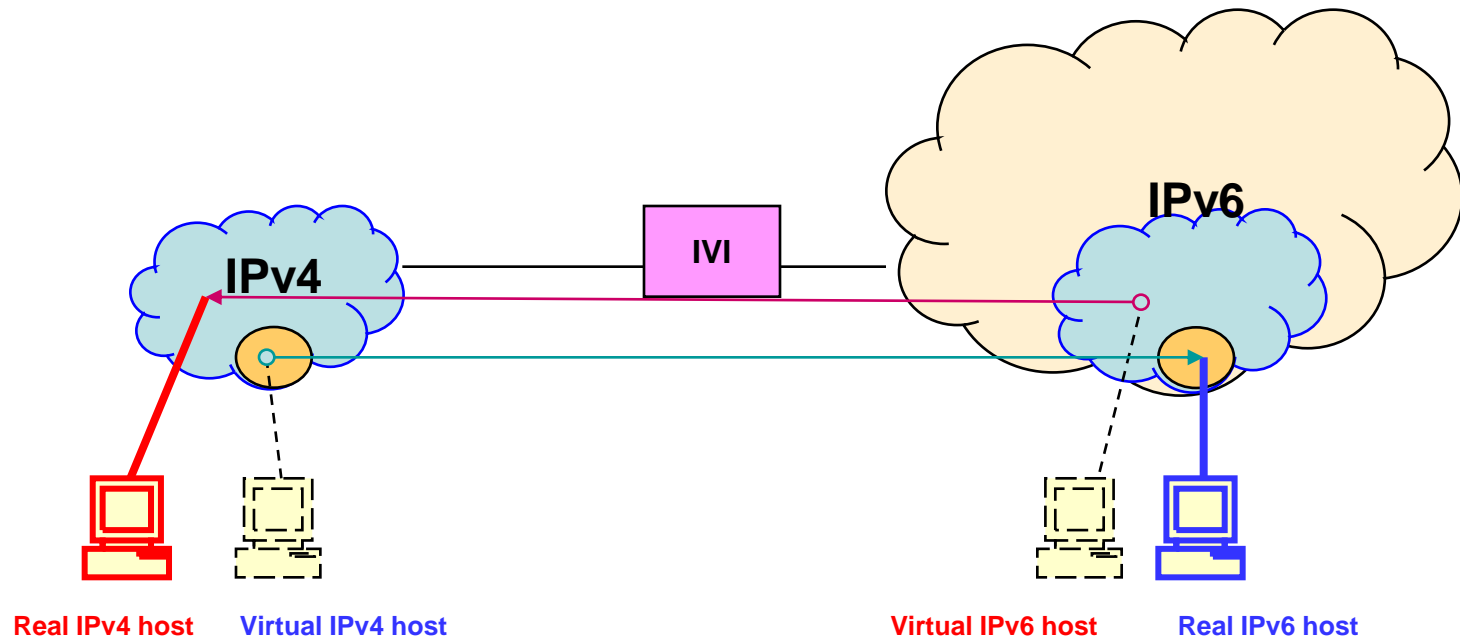
IPv6=2001:da8:ffca:266c:0::/64



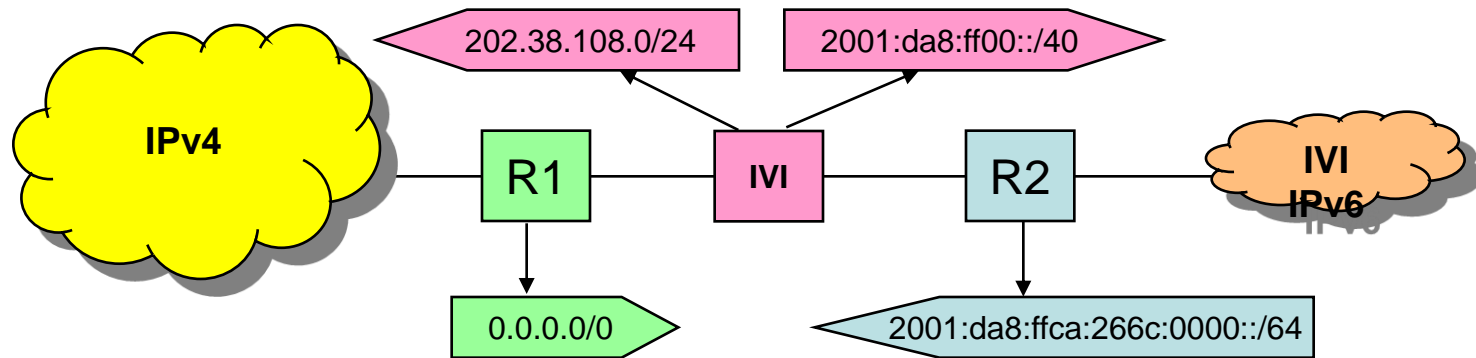
ISP's IPv4

IPv4=202.38.108.0/24

Stateless conceptual example



Stateless Xlate routing



Longest prefix match