

FTP64: making FTP work through IPv6 → IPv4 translators

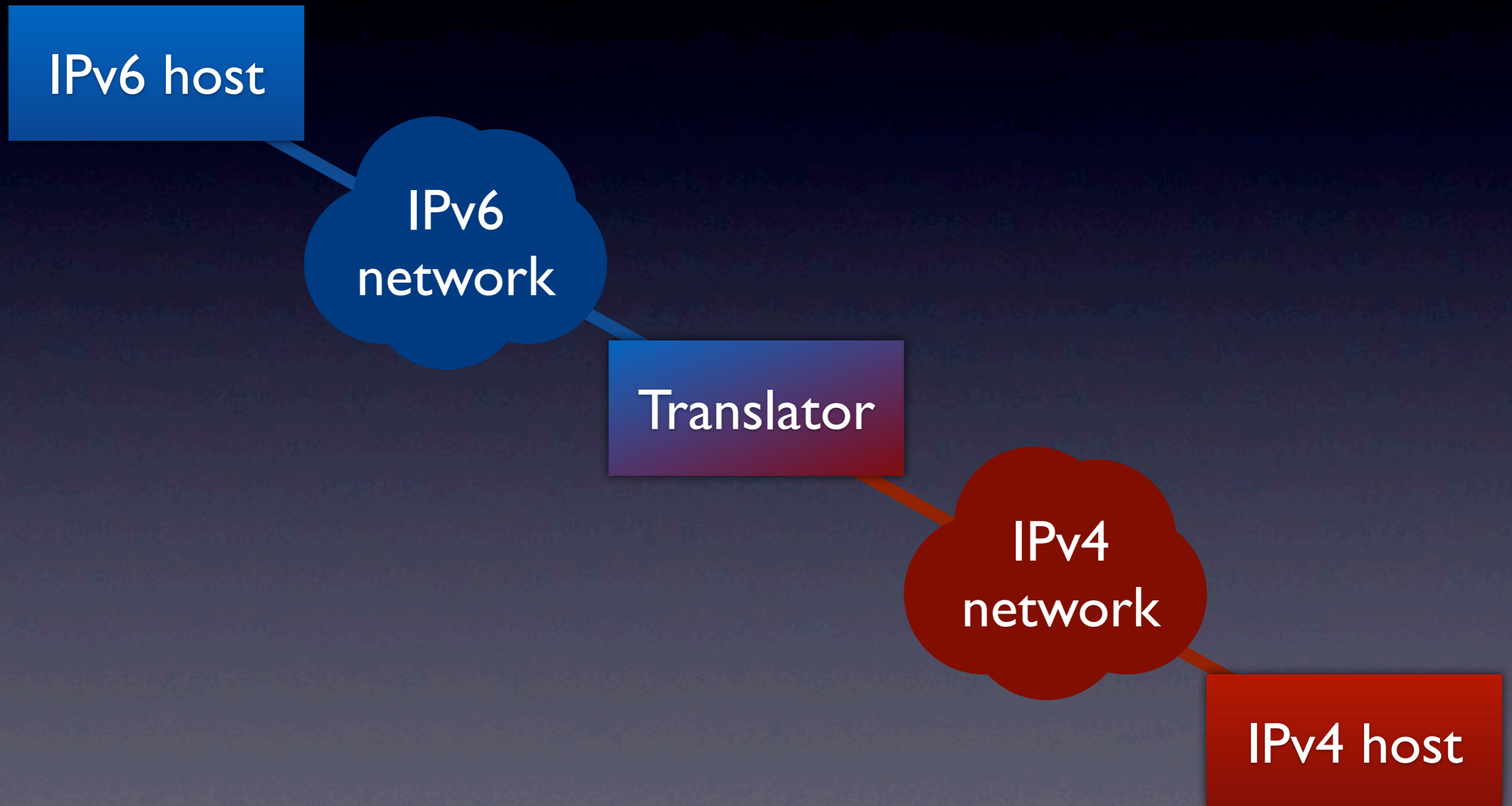
draft-van-beijnum-behave-ftp64-05

IETF-75, Stockholm, july 2009

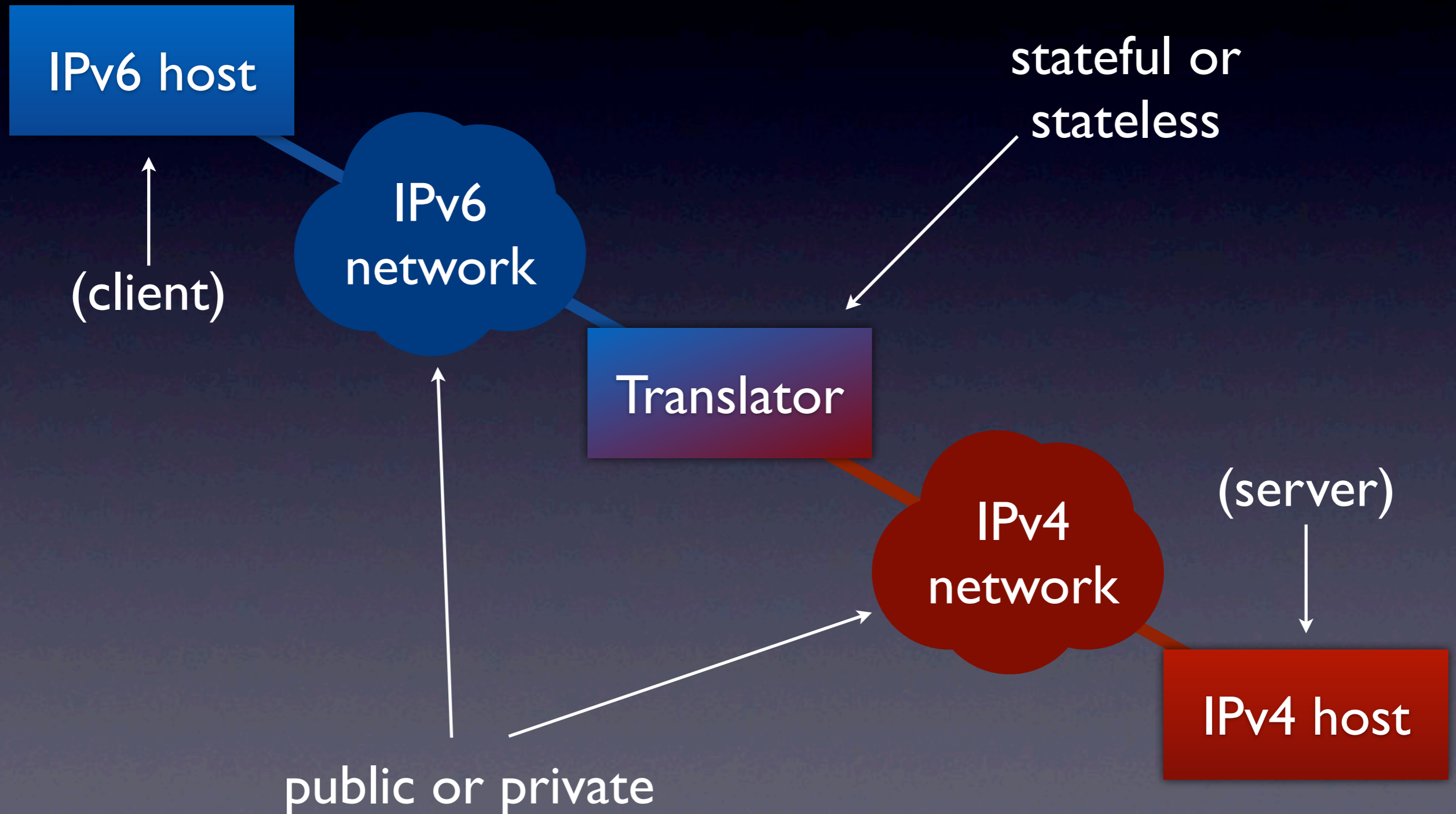
apps area & behave working group meetings

Ijitsch van Beijnum

IPv6 → IPv4 translation



IPv6 → IPv4 translation



FTP and IPv6

- RFC 959 (1985):
 - passive mode (PASV): v4 address+port
 - active mode (PORT): v4 address+port
- RFC 2428 (1998):
 - passive mode (EPSV): only a port
 - active mode (EPRT): address family, address, port

Installed base

- 2491 IPv4 servers tested by Dan Wing:
 - 63% do EPSV successfully
 - 6% time out setting up data connection
- IPv6 clients (not extensively surveyed):
 - all support EPSV
 - except Windows command line client

Possible solutions

1. Update servers to support EPSV
 2. Update clients to fall back on PASV
 3. Implement application layer gateway in the translator
- The draft *mandates* 1 and 2 and *describes* 3.

Server requirements

- MUST:
 - support EPSV
 - ability to switch off EPSV/EPRT
 - report whether EPSV available in FEAT
 - only use control channel address in PASV

Client requirements

- MUST support EPSV
- Recommended that after EPSV failure (5xx or timeout) retry with PASV
 - assume that address in 227 response is control channel remote address
- MUST NOT use arguments with EPSV

ALG

- EPSV → PASV is easy
- EPRT → PORT is harder with a stateful translator → could be left unimplemented
- Bother with stateful port 20 handling?
 - not too hard, but still in use?
- Don't try to translate three-way FTP
- Go into transparent mode after AUTH

Questions?