

# Thoughts on IPv6 Transition for mobile nodes

Carl Williams

Hesham Soliman

Henrik Levkowitz

# Transition Perspective

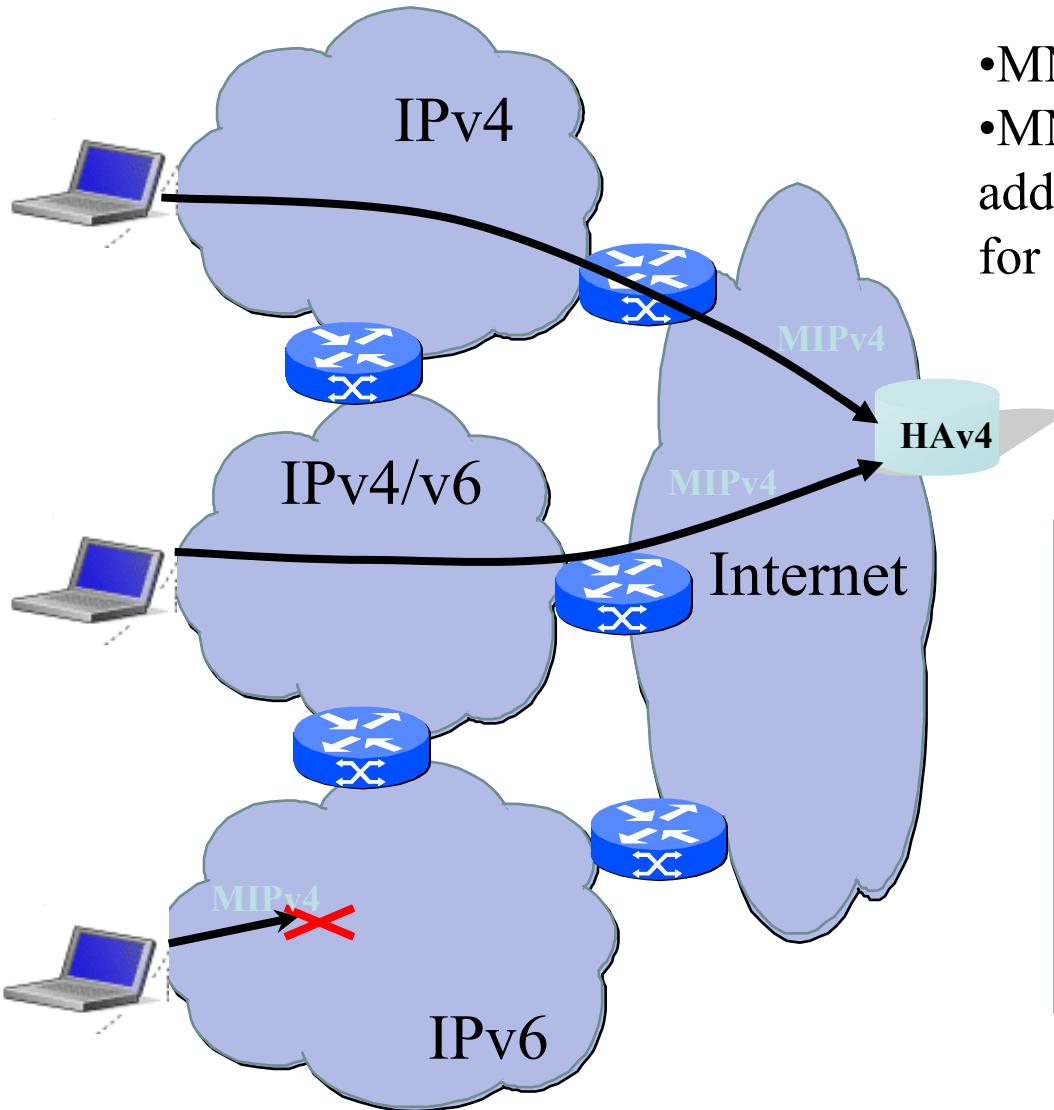
Looking at the problem domain from a Transition Perspective

1. Present Mobile IPv4 users: Transition path to Mobile IPv6
  2. Mobile IPv6 user: Support for IPv4 seamless roaming
- IPv6 transition has focused on stationary node deployments.
  - Mobile operators are looking to deploy IPv6 and may provide IP layer mobility for roaming.
  - Mobile IPv4 and Mobile IPv6 are NOT protocol independent.
  - IPv6 feature is to provide global Mobile IPv6 roaming – but there is no guarantee of ubiquitous IPv6 access networks.

# Transition issues to be addressed

- Transition Implications in choosing an approach
  - Transition methods are to be temporary not permanent
  - Mobile IPv4 and Mobile IPv6 are different protocols and different features.
- Management complexity
- Practical inter-protocol workings
- Security
- Performance
- Others?

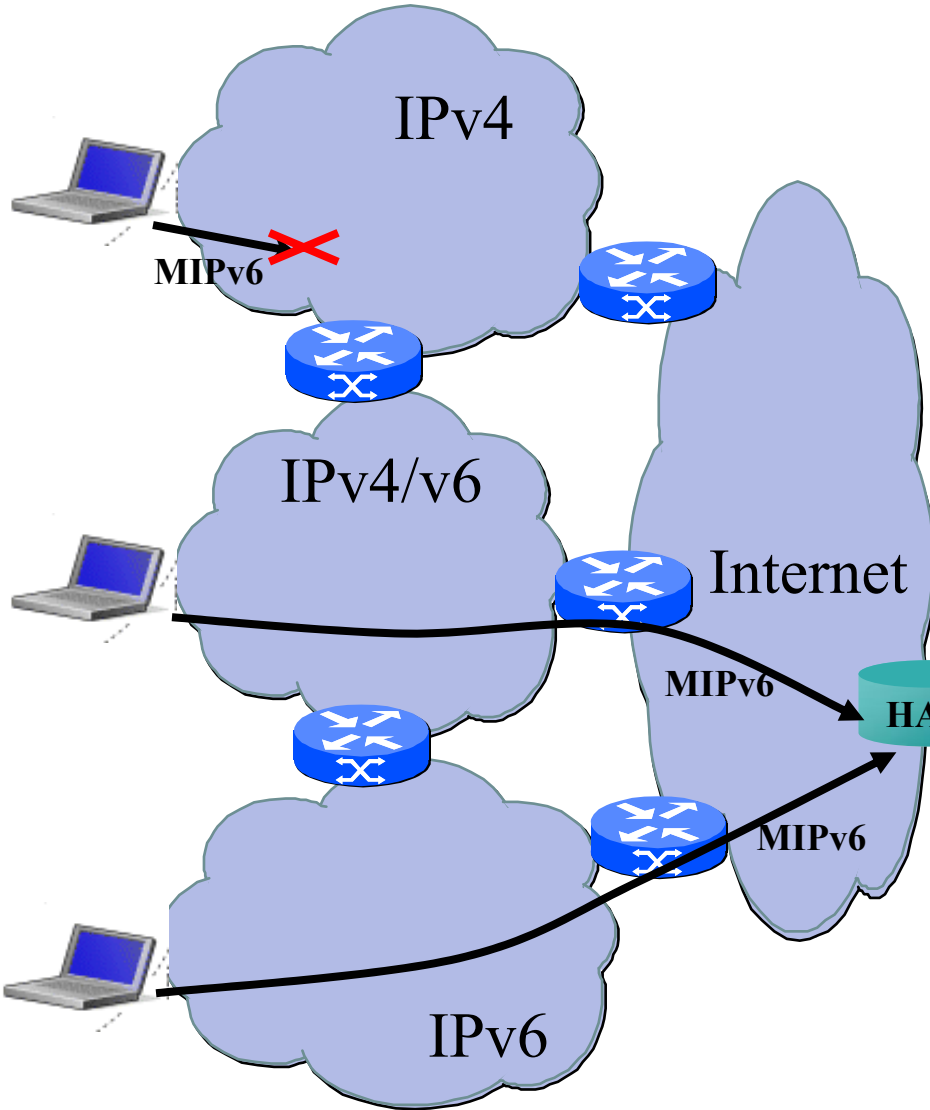
# MIPv4 MN - scenarios



- MN supports both MIPv4 only
- MN **CANNOT** use IPv6 home address. Therefore there is no mobility for connections using IPv6 addresses!

	IPv4 network	IPv6 network	DS network
MIPv4	✓	<del>✗</del>	✓

# MIPv6 MN - scenarios



- MN supports MIPv6 only
- MN **CANNOT** have an IPv4 home address. Therefore there is no mobility for connections using IPv4 addresses!

	IPv4 network	IPv6 network	DS network
MIPv6	<del>X</del>	✓	✓

# Proposal for moving forward

- Mobility Transition analysis document produced in short time period.
- Home for the work? BOF?
- Creation of a mailing list?

# Appendix

# Protocol combinations

	<b>Address</b>	<b>Client</b>	<b>Access</b>	<b>Description</b>
1.	IPv4	MIPv4	v4	Native MIPv4
2.	IPv6		v4	IPv6 in MIPv4
3.	IPv4	MIPv6	v4	IPv4 in MIPv6 over IPv4
4.	IPv6		v4	MIPv6 over IPv4
5.	IPv4	MIPv4	v6	MIPv4 over IPv6
6.	IPv6		v6	IPv6 in MIPv4 over IPv6
7.	IPv4	MIPv6	v6	IPv4 in MIPv6
8.	IPv6		v6	Native MIPv6