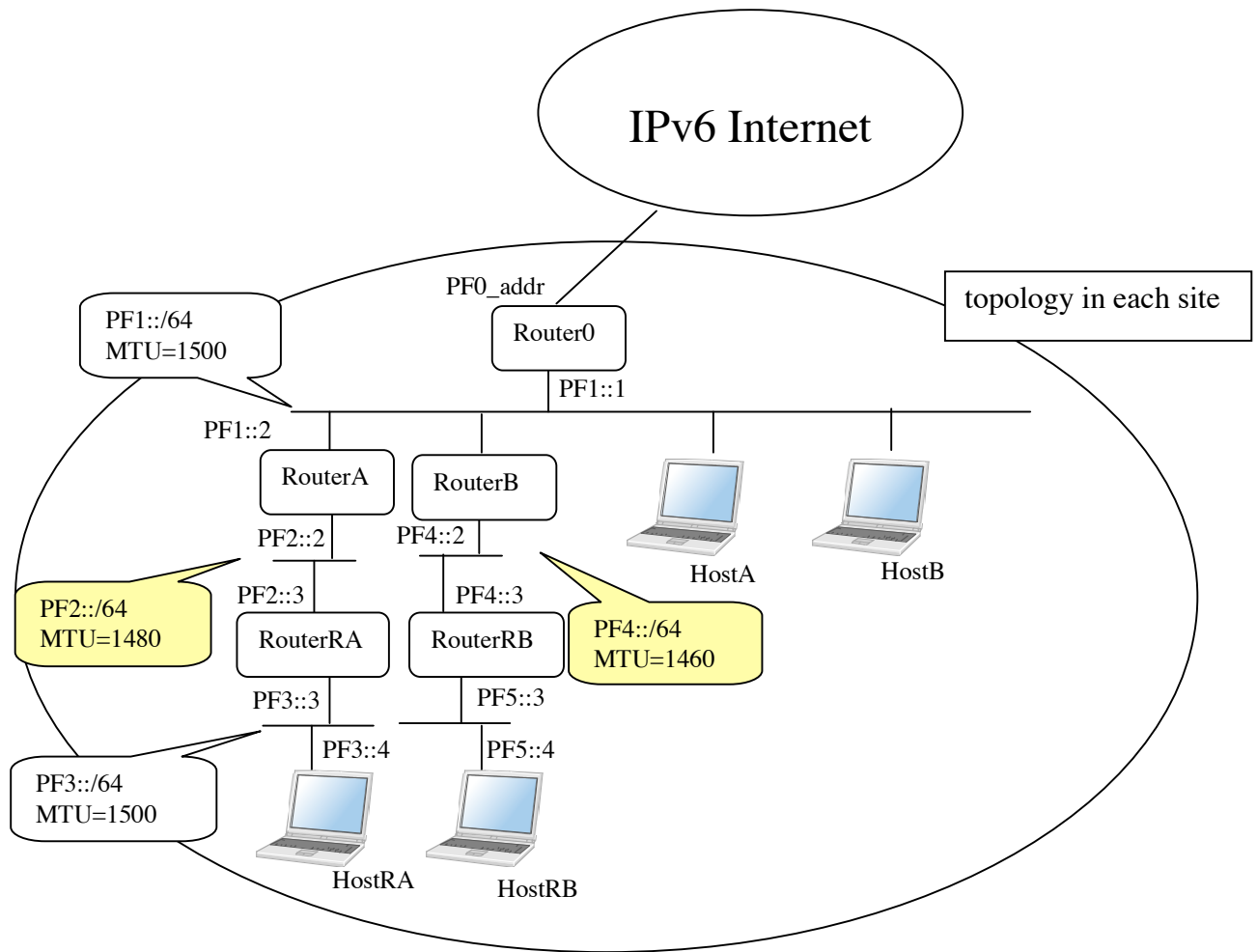


IPv6 Core Protocol Test Scenario for
1st Multi-sites Remote IPv6 Interoperability
Test Event (Plugtests)

Draft ver.01

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HostA,HostB=>Target Host
 RouterA,RouterB=>Target Router

HostRA,HostRB => Reference Host
 RouterRA,RouterRB=> Reference Router

Topology1

1) ICMPv6

a) Echo Request/Echo Reply

Use Topology1

Ping from Host[A|B] to Host[A|B] in same or other sites.

Ping packet size is 64 octets.

From \ To	HostA(1)	HostB(1)	HostA(2)	HostB(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

() means Site ID.

e.g.) HostA(1) = HostA in Site-1.

b) Error Message (Destination Unreachable)

Use Topology1

Port Unreachable)

Send UDP echo from Host[A|B] to Host[A|B] in same or other sites.

From \ To	HostA(1)	HostB(1)	HostA(2)	HostB(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

Address Unreach)

Ping from Host [A|B] to other host which has same prefix behind the target Router. The destination address does not exist

*Destination Host does not exist. (e. g. PF2::1)

Send ping from each target hosts to virtual (not-existing) host via target router.

From \ To	Host Under RouterA(1)	Host Under RouterB(1)	Host Under RouterA(2)	Host Under RouterB(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

c) Error Message (Time exceed)

Use Topology1

Traceroute from Host [A|B] to Host [RA|RB] attached to different link. Target is Sending host and intermediate routers.

Send ping from each target hosts to reference host via target router.

From \ To	HostRA(1) RouterA(1)	HostRB(1) RouterB(1)	HostRA(2) RouterA(2)	HostRB(2) RouterB(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

d) Error Message (Packet Too Big)

Should be performed as PMTU Discovery test

2) PMTU Discovery

Receiving ICMP Error Message (Packet Too Big).

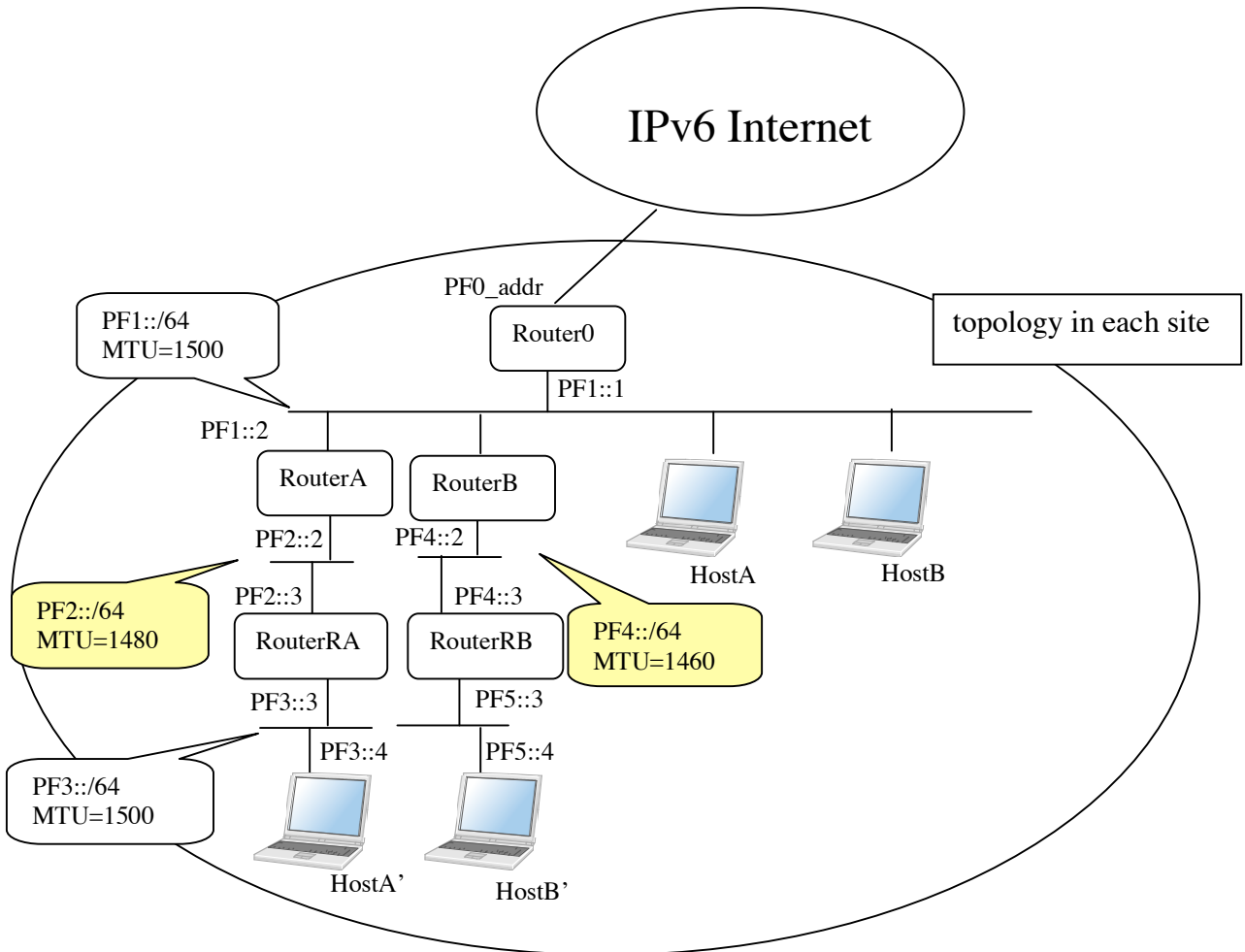
Use Topology 1

Send ping from each target hosts to reference host via target router.

From \ To	HostRA (1) RouterA (1)	HostRB (1) RouterB (1)	HostRA (2) RouterA (2)	HostRB (2) RouterB (2)
HostA (1)					
HostB (1)					
HostA (2)					
HostB (2)					
:					

3) Reassembling Fragment Header

Use Topology2



HostA,HostB=>Target Host
RouterA,RouterB=>Target Router

HostRA,HostRB => Reference Host
RouterRA,RouterRB=> Reference Router

Topology2

Operation:

In Site-1 move HostA to HostA' position. Then HostB in Site-1 and HostA and HostB in the other sites, send ping to moved hosts(Site-1's HostA').

The ICMP echo request size is 1500 octets(payload=1452 octets).

After confirming the ping to HostA', move HostA' to HostA, and move HostB to HostB'. Then HostA in Site-1 and HostA and HostB in the other sites send ping to moved hosts(Site-1's HostB').

When all nodes confirm the interoperability with HostB', move HostB' to HostB.

Then repeat same operation in the other sites(Site-2, Site-3....)

From \ To	HostA'(1)	HostB'(1)	HostA'(2)	HostB'(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

4) Routing Header

Use Topology1

a) Send ping from HostA to himself(HostA) via one Target Router.
 Confirming interoperability between Host and Router.
 ICMP echo request size is 64 Octets.

e. g.) ping from HostA(1)
 HostA(1)> ping6 RouterA(1) HostA(1)

From to \ Via	RouterA(1)	RouterB(1)	RouterA(2)	RouterB(2)
HostA(1)					
HostB(1)					
HostA(2)					
HostB(2)					
:					

b) Send ping from HostA to HostB via two Target Routers.
 Confirming interoperability between Routers.
 ICMP echo request size is 64 Octets.
 If some hosts can treat Routing header and forward the packets, list the host as a router.

e. g.) ping from HostA(1) to HostA(1) via RouterA(1) RouterB(1)
 HostA(1)> ping6 RouterA(1) RouterB(1) HostA(1)

Vial \ Via2	RouterA(1)	RouterB(1)	RouterA(2)	RouterB(2)
RouterA(1)					
RouterB(1)					
RouterA(2)					
RouterB(2)					
:					