Two Problems

1. Global IPv4 address depletion
2. Private IPv4 address depletion

"depletion" a.k.a. "completion"

Scenarios

- Focus work on most significant, and most solvable, scenarios
- Solving every possible design iteration is futile

Scenario Grouping

1. Reaching Global IPv4
2. Reaching IPv6 Only Servers
3. Reaching Privately addressed IPv4 Servers

1. Reaching Global IPv4

1a. 

Private IPv4

Private or SP IPv4

IPv4 Internet

1b. 

Private IPv4

IPv4 + port range

- Postpones IPv4 meltdown by continuing to encroach on port space

1. Reaching Global IPv4

1c.

Private IPv4

IPv6

IPv4 Internet

1d.

IPv6

- Uses IPv6 to target private as well as global address exhaustion

Scenario One Summary

- Each sub-case is about reaching the Global IPv4 Internet
- IPv6-only clients are out of scope
- NAT-PT could be used in some of these scenarios, but none absolutely require it
- Current work in Softwires and Behave WGs targeting this Scenario

1a.

Private IPv4

Private or SP IPv4

1b.

Private IPv4

IPv4 + port range

IPv4 Internet

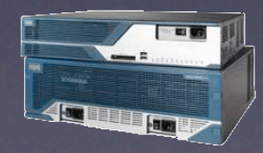
1c.

Private IPv4

IPv6

1d.

IPv6



2. IPv6-Only Servers

IPv4-Only Host

Dual Stack Internet

IPv6-Only Server

NAT46

3. Private IPv4-Only Servers

Dual Stack Internet

Private IPv4

Legacy IPv4-Only Servers

NAT64