IPv6 Deployment in Enterprise Networks

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Scenario

DMZ using public IPv4

Private network using RFC 1918 IPv4

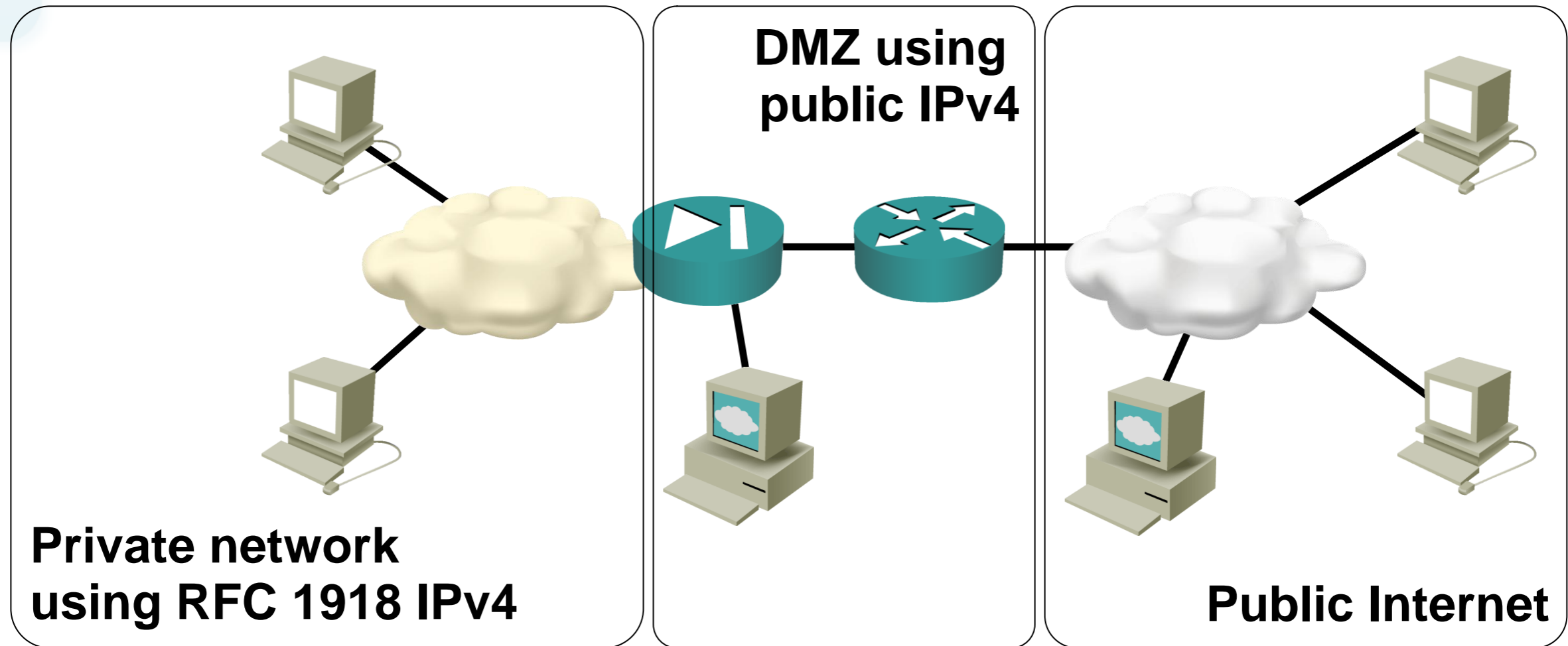**Public Internet**

- **Do I care about IPv6?**
- **Where shall I focus my efforts?**

Facts of Life

- **IPv6 is here, get used to it.**

- **You'll get stuck on migration details.**

- **Start small, but start now.**
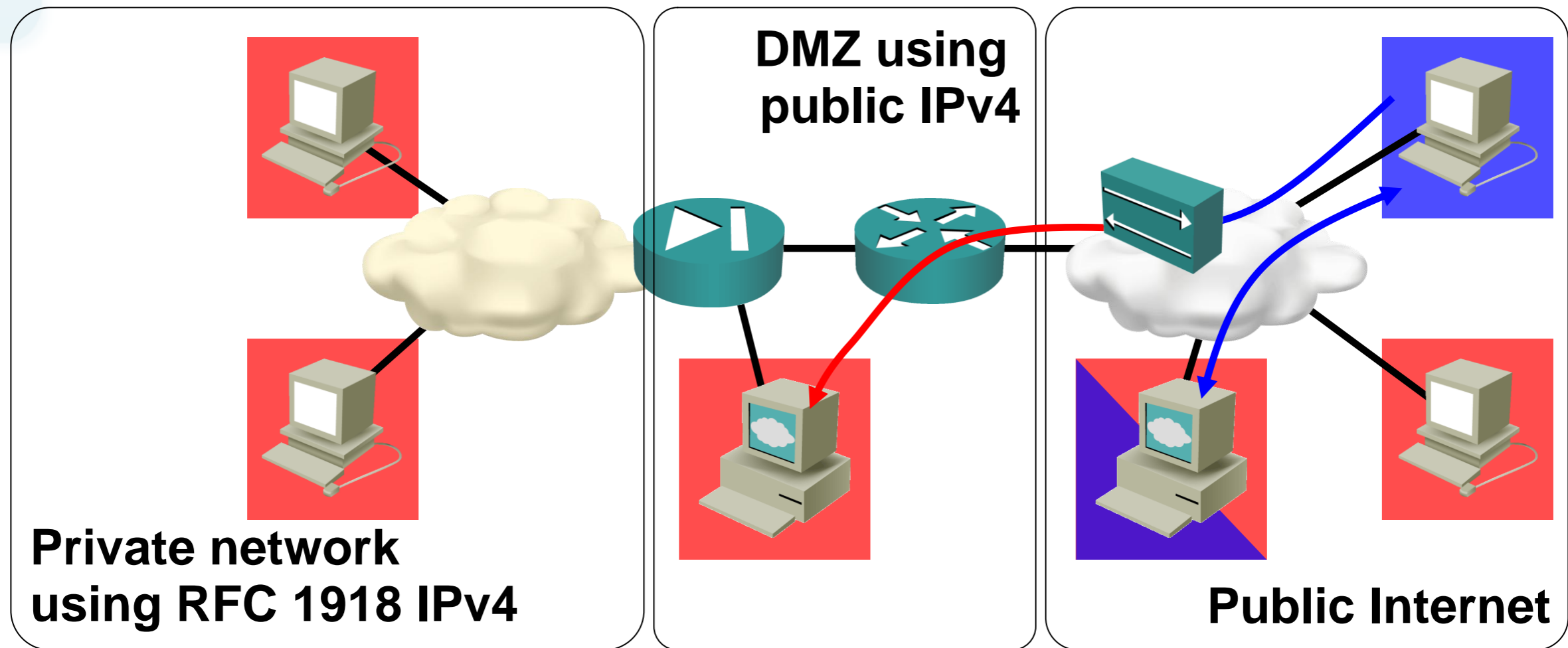
Facts of Life (NAT)

- **Everyone uses 4-to-4 NAT. It's bad.**

- **Slow migration to IPv6 requires more NAT.**

- **6-to-4 NAT stinks.**

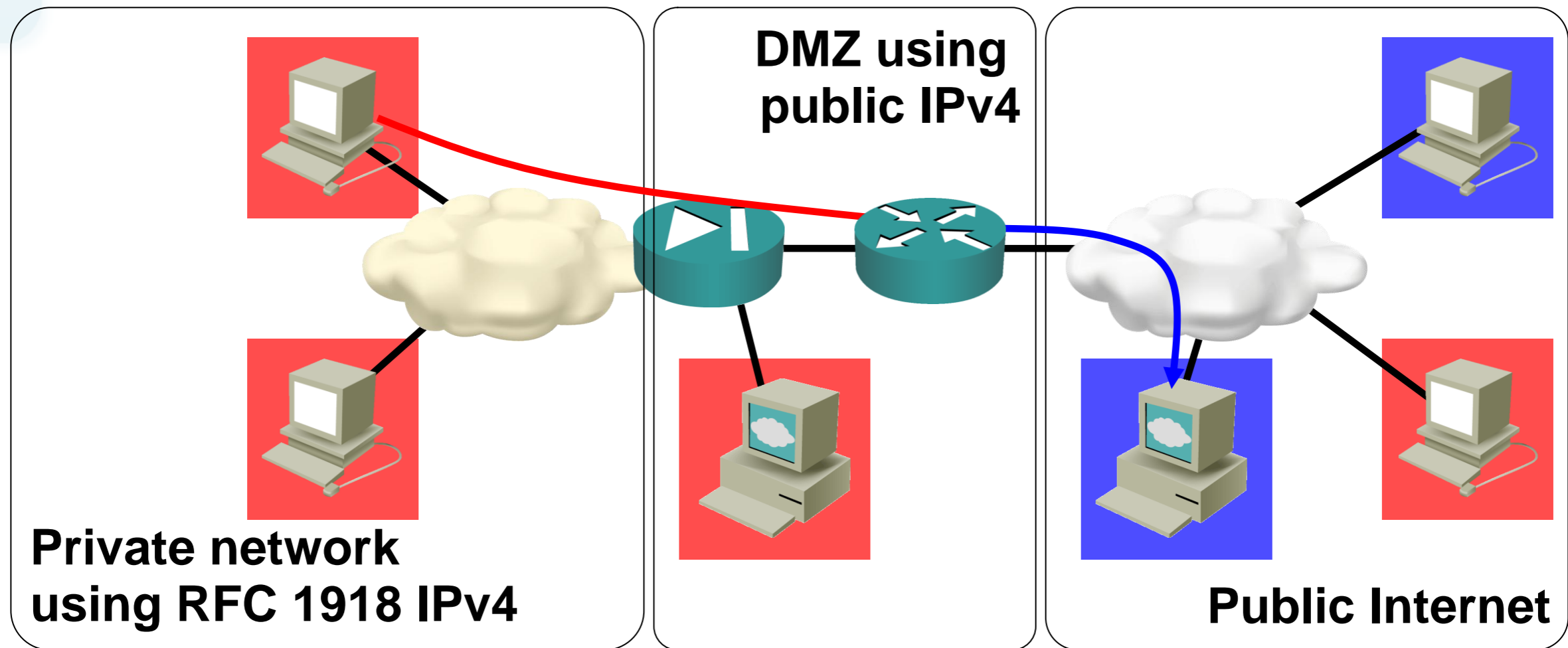- **4-to-6 NAT is horrendous.**

Deployment Phase 1: Dual-stack

DMZ using public IPv4

Private network using RFC 1918 IPv4

Public Internet
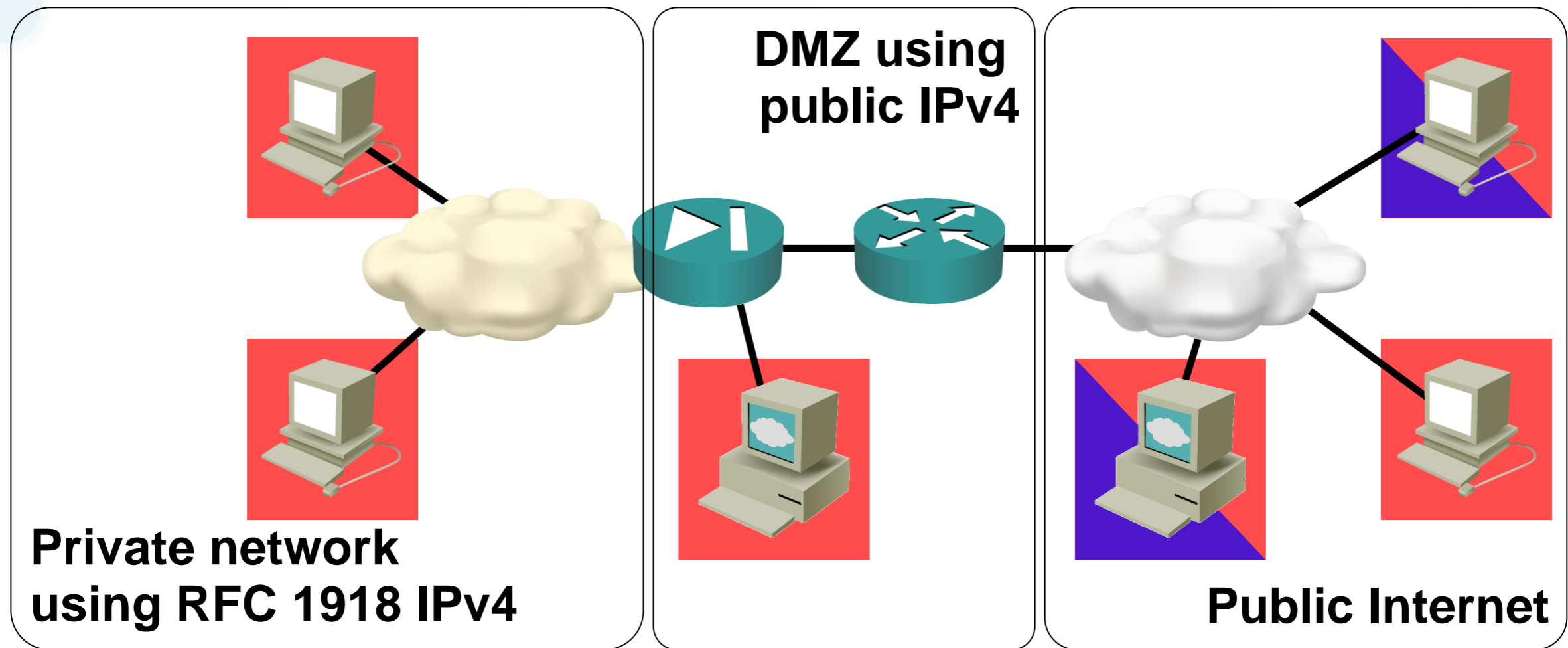
- **Some public servers are reachable over IPv6**

Deployment Phase 2: IPv6 Clients

DMZ using public IPv4

Private network using RFC 1918 IPv4

Public Internet

- **Some clients are using only IPv6: 6-to-4 NAT**

Deployment Phase 3: IPv6 Servers

DMZ using public IPv4

Private network using RFC 1918 IPv4

Public Internet

- **Some servers are reachable only over IPv6: 4-to-6 NAT**

Timeline Guestimate

Phase 1 Actions

Private network using RFC 1918 IPv4

DMZ using public IPv4

Public Internet
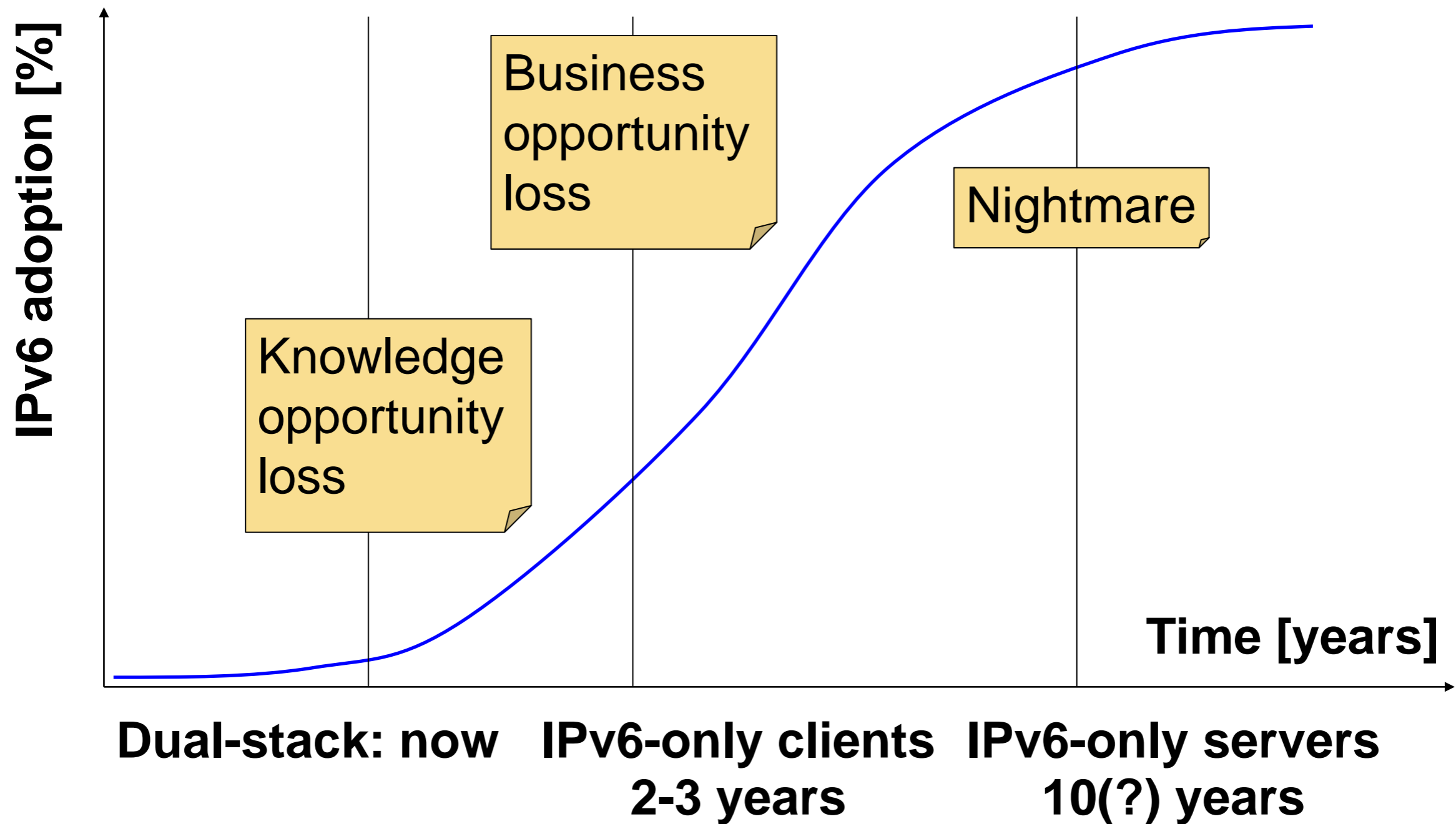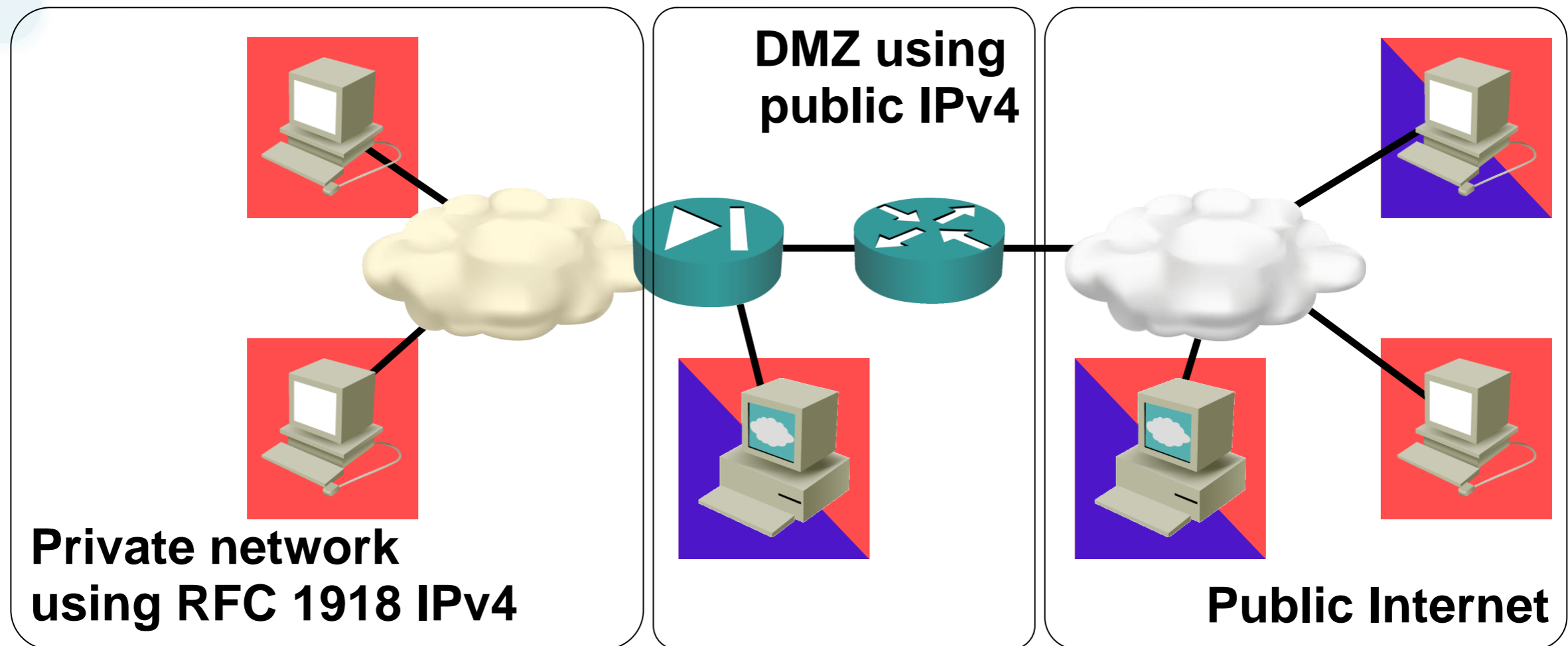
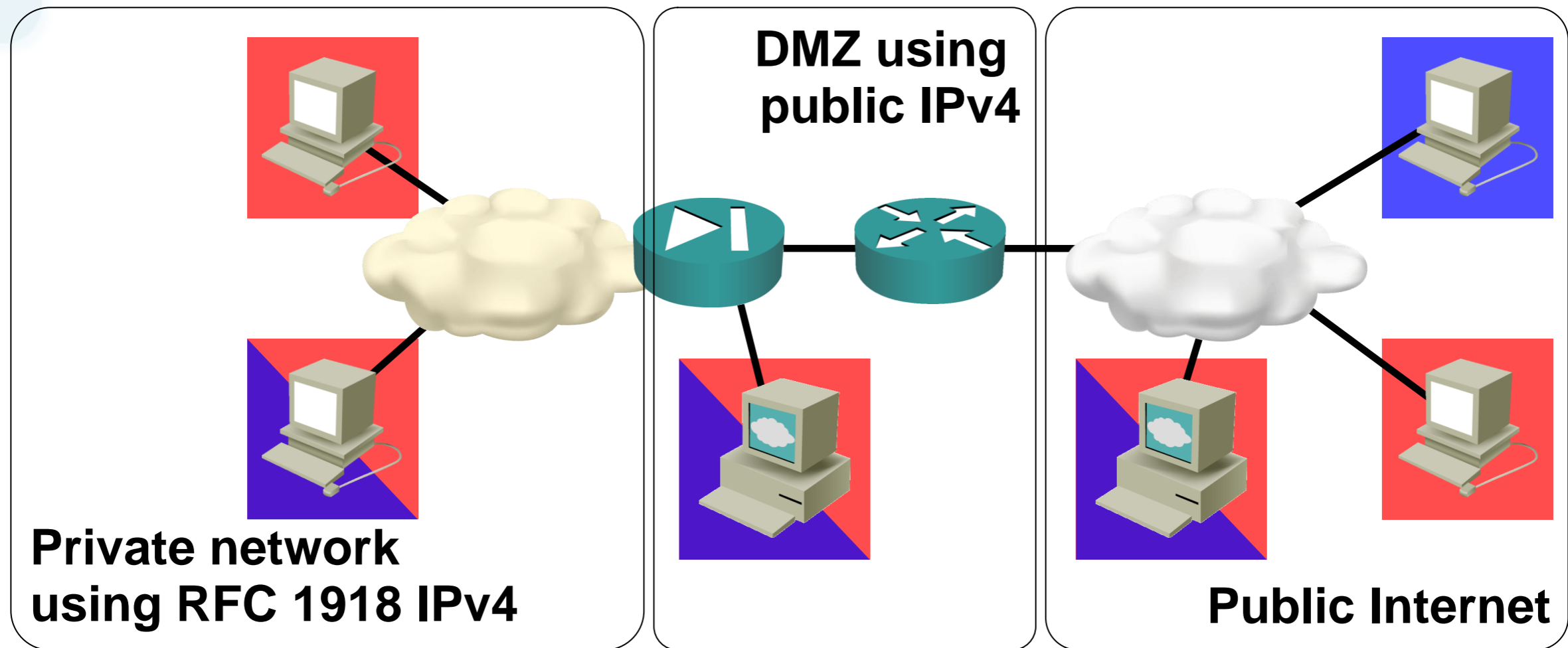## Ignore IPv6 or …

- **Deploy IPv6 in your DMZ infrastructure**
- **Dual-stack on non-critical servers**

Phase 2 Actions

DMZ using public IPv4

Private network using RFC 1918 IPv4

Public Internet

- **You are IPv6 ready in your DMZ (are you?)**
- **Design, test and deploy dual stack in your network**

Phase 3 Actions

DMZ using public IPv4

RFC 1918 IPv4
Public IPv6

Public Internet
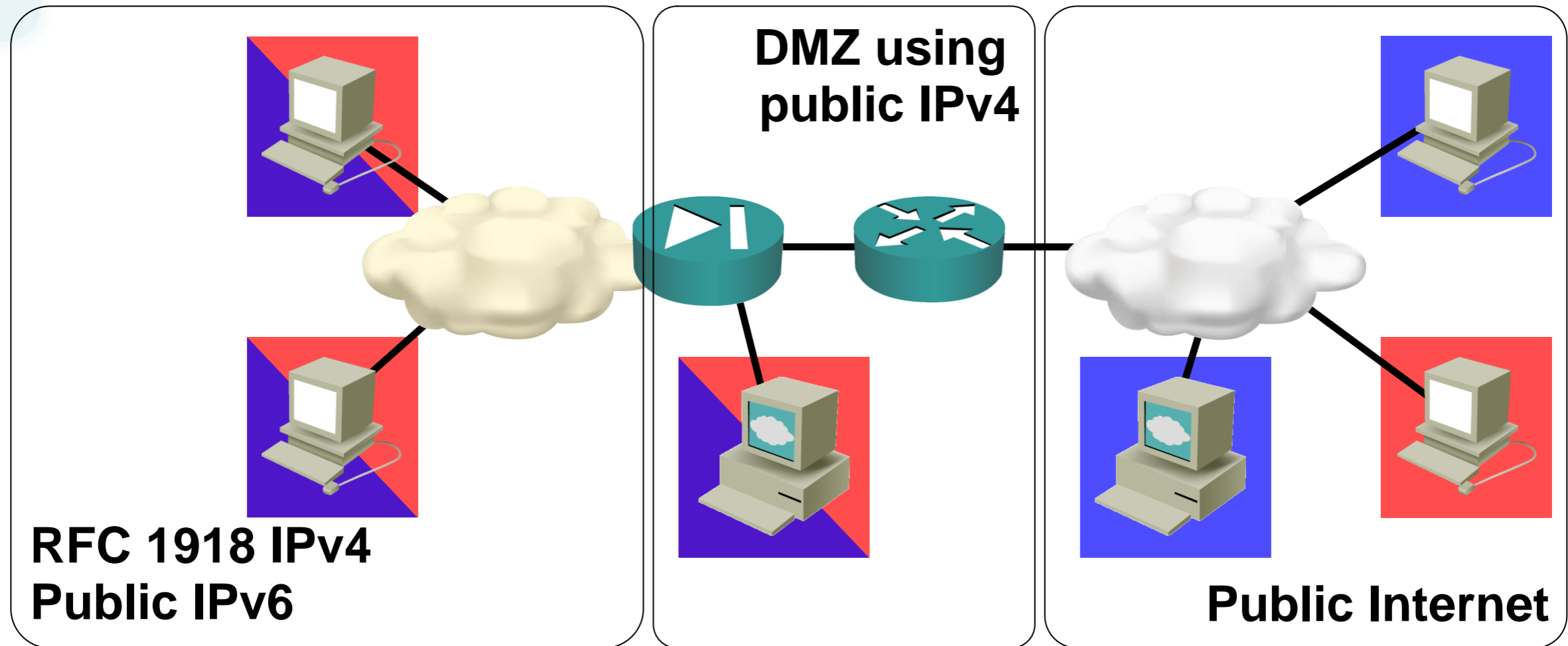
? **Relax and enjoy**

? **Frantic catch-up efforts**

? **Suffer the consequences of 4-to-6 NAT**

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Summary

- **IPv6 is here**

- **There's no rush (yet)**

- **Use your time wisely**