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IANA Reserved IPv4 Prefix for Shared Transition Space

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Abstract

This document requests a reserved IANA IPv4 address allocation as Shared Transition Space to support the deployment of IPv4 address sharing technologies post IPv4 exhaustion

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1. Introduction

Many operators are currently implementing their IPv6 transition plans. During the transition, continued support for heritage IPv4-only devices will be required. In order to facilitate the deployment of transition technologies to support such heritage IPv4-only devices and services, Service Providers require IPv4 address space that is separate from the range of IPv4 addresses used by subscribers. This address space need not be unique to each provider, but should be outside of [RFC1918] space. This document requests that an IPv4 /10 be reserved as Shared Transition Space solely to facilitate deployment of IPv6 transition/ IPv4 coexistence technologies.

2. Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 *[RFC2119]*.

3. Applicability

The Internet community is rapidly consuming the remaining supply of unallocated IPv4 addresses. During the transition period to IPv6, it is imperative that Service Providers maintain IPv4 service for devices and networks that are currently incapable of upgrading to IPv6.
The applicability of and justification for Shared Transition Space is described in [I-D.bdgks-arin-shared-transition-space].

4. Shared Transition Space

This document proposes the assignment of a /10 as Shared Transition Space. Shared Transition Space is IPv4 address space reserved for Infrastructure provider use with the purpose of facilitating IPv6 transition and IPv4 coexistence deployment. The requested block SHOULD NOT be utilized for any purpose other than as "inside" addresses in a carrier NAT environment (e.g. between the CGN and customer CPE devices) or for other IPv4 to IPv6 transition infrastructure. Network equipment manufacturers MUST NOT use the assigned block in default or example device configurations.
Because Shared Transition addresses have no meaning outside of the Infrastructure Provider, routing information about shared transition space networks MUST NOT be propagated on interdomain links, and packets with shared transition source or destination addresses SHOULD NOT be forwarded across such links. Internet service providers SHOULD filter out routing information about shared transition space networks on ingress links.

5. Security Considerations

This memo does not define any protocol, and raises no security issues. Any addresses allocated as Shared Transition Space would not be routable on the Internet.

6. IANA Considerations

IANA is asked to record the allocation of an IPv4 /10 for use as Shared Transition Space.

7. References

[RFC1918]	Rekhter, Y., Moskowitz, R., Karrenberg, D., Groot, G. and E. Lear, "Address Allocation for Private Internets", BCP 5, RFC 1918, February 1996.
[RFC2119]	Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.
[I-D.bdgks-arin-shared-transition-space]	Barber, S, Delong, O, Grundemann, C, Kuarsingh, V and B Schliesser, "ARIN Draft Policy 2011-5: Shared Transition Space", Internet-Draft draft-bdgks-arin-shared-transition-space-00, July 2011.

Appendix A. Acknowledgements

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