

Expanded Address Allocation for Private Internets

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Abstract

This document updates [RFC 1918](#) and identifies additional IPv4 address space for use in private networks.

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Introduction

A number of organizations have expanded their autonomous private networks to the point of exhausting the address space identified in [RFC 1918](#), in addition to the publicly routed space that has been assigned to them. Given the policies for acquiring additional public space it is not reasonable for them to acquire such space for use in their private networks.

While it is tempting to tell them to just switch to IPv6, that is not realistic from application availability, and transition timeframe standpoint. They need additional IPv4 space to continue to grow during the transition period. That space should be formally allocated rather than simply taken on the assumption it will not be publicly allocated before they complete a transition to IPv6.

Private Address Space

The Internet Assigned Numbers Authority (IANA) has reserved the following blocks of the IPv4 address space for private internets:

x.0.0.0 /8
y.0.0.0 /8
z.0.0.0 /8

IANA Considerations

IANA should select additional IPv4 /8's for this purpose from those least likely to be allocated for public use. The prefix 1 /8 is a prime candidate as the author is aware of multiple networks that have historically used it for private use. Another candidate, 223 /8 was recently returned to IANA due to conflicts with [RFC 3330](#).

Security Considerations

While product marketing frequently confuses the use of private address space with security, there are no such claims being made or validated by this document.

References

- 1 Bradner, S., "The Internet Standards Process -- Revision 3", [BCP 9](#), [RFC 2026](#), October 1996.

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