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**IPv6 Test Address Space Reserved for Documentation, Examples and
Private Testing
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Abstract

To reduce the likelihood of conflict and confusion, an IPv6 prefix is reserved for use in private testing or as examples in other RFCs, documentation, and the like. Since site local addresses have special meaning in IPv6, these cannot be used in many example situations and are confusing. Instead, an IPv6 prefix is reserved in the range of the test address space.

1. Rationale

IPv6 introduces many types of addresses in its addressing architecture [RFC 2373](#)[[1](#)], like scoped addresses (link-local, site-local) and global addresses. It also introduces mechanisms for renumbering [RFC 2462](#)[[2](#)], [RFC 2894](#)[[5](#)]. Organisations might want to

make tests networks, using the different kinds of addresses and try renumbering. For example, one could have site-local as well as a global prefix and try to renumber to another global prefix while preserving its site-local addresses live. RFCs, vendor documentation, books and the like also give examples with addresses. Authors always have an issue of using: already allocated addresses, not currently allocated addresses or private (site-local) addresses in their examples. Using the configuration examples in a real environment can cause a problem. If the example uses site-local as global address example, then the actual mechanism for handling scoped addresses with site-local scoping can not be done. If allocated addresses are used, then this obviously can make address spoofing inadvertently if the environment is connected to the internet. Same could happen later for a non-currently allocated address space that becomes allocated. Similar, but different, discussion also applies to top level domain names and some have been reserved for the same purposes [RFC 2606](#)[4].

2. Assignment

The prefix 3ffe:ff00/24, out of the test address space RFC 2471[3]. currently used on the 6bone is reserved for any documentation or private testing purposes. The 6bone will never use that prefix.

3. IANA Considerations

IANA reserve 3ffe:ff00/24 address space out of the test address space so that no one will ever receive this allocation.

4. Security Considerations

This document encourages the use of test addresses in private testing and documentation so that less issues will arise from people that could instead use address space already allocated or to be allocated in the future. These could cause ip address spoofing. This proposal minimize such possible conflicts.

References

- [1] Hinden, R.M. and S.E. Deering, "IP Version 6 Addressing Architecture", [RFC 2373](#), July 1998.
- [2] Thomson, S. and T. Narten, "IPv6 Stateless Address Autoconfiguration", [RFC 2462](#), December 1998.
- [3] Hinden, R.M., Fink, R. and J. Postel, "IPv6 Testing Address Allocation", [RFC 2471](#), December 1998.

- [4] Eastlake, D. and A. Panitz, "Reserved Top Level DNS Names", [BCP 32](#), [RFC 2606](#), June 1999.
- [5] Crawford, M., "Router Renumbering for IPv6", [RFC 2894](#), August 2000.

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