

MANET IANA Needs
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Abstract

This document enumerates IANA assignments for immediate use in MANET. Specifically, a UDP port, two link-local multicast group addresses (IPv4 & IPv6), and two site-local multicast group addresses (IPv4 & IPv6).

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1. Introduction

This document enumerates a port and several scoped multicast address assignments for MANET protocols.

2. UDP Port for MANET Protocols

To aggregate MANET routing protocol traffic it must be sent to the same IP destination address and the same port. Therefore, all interoperable MANET routing protocol traffic should be sent to the same UDP port. The title of this UDP port is "MANET". In order to be interoperable all packets sent to this port MUST conform to the packetbb specification [[I-D.ietf-manet-packetbb](#)].

UDP Port Assignment

| | |
|---------------|-------|
| +-----+-----+ | |
| Name | Value |
| +-----+-----+ | |
| MANET | TBD1 |
| +-----+-----+ | |

Table 1

3. Link-local Multicast Group for MANET Routers

MANET protocols need a link-local multicast address [[RFC4291](#)] to disseminate information.

The name of the multicast address to reach link-local (LL) MANET routers is "LL MANET Routers". MANET routers subscribe to this LL scoped multicast address and use it for LL transmissions of routing protocol packets.

For IPv4, a statically assigned, link-local scope multicast address is used. The address for LL MANET Routers is 224.0.0.TBD2 to appear in the [[IANAv4Multicast](#)] registry.

For IPv6, a statically assigned, link-local scope multicast address is used. The address for LL MANET Routers is FF02:0:0:0:0:0:0:TBD3 to appear in the [[IANAv6Multicast](#)] registry.

Link-local multicast address assignment

| Name | IPv4 | IPv6 |
|------------------|--------------|-----------------------|
| LL MANET Routers | 224.0.0.TBD2 | FF02:0:0:0:0:0:0:TBD3 |

Table 2

4. Site-local Scoped Multicast Groups for MANET Routers

MANET protocols need a scoped multicast address [[RFC4291](#)] to disseminate information more widely, greater than LL. This section names the multicast address, defines the scope, and clarifies router behavior.

The name of the multicast address to reach the MANET routers is "MANET Routers". MANET routers subscribe to these site-local scoped multicast addresses.

Site-local multicast address assignment

| Name | IPv4 | IPv6 |
|---------------|------------------------|-----------------------|
| MANET Routers | 239.255.255.(255-TBD4) | FF05:0:0:0:0:0:0:TBD5 |

Table 3

MANET routers that forward these scoped multicast addresses must use additional criteria as specified in [[RFC2365](#)] and [[RFC4007](#)].

4.1. Site-Local Multicast Group for IPv4

For IPv4, statically assigned, scope-relative multicast address (as defined by [[RFC2365](#)], [Section 9](#)) are used. The offset for the scope relative address for scoped MANET Routers is TBD4 to appear in [[IANAv4Multicast](#)] registry.

Different scopes are defined by [[RFC2365](#)]. The IPv4 Local Scope (239.255.0.0/16) is the minimal enclosing scope for administratively scoped multicast and not further divisible -- its exact extent is site dependent.

For the IPv4 Local Scope, applying the rules of [[RFC2365](#)] and using

the assigned offset of TDB4, the multicast address is therefore 239.255.255.(255-TBD4).

4.2. Site-local Scoped Multicast Group for IPv6

IPv6 has different address ranges for different multicast scopes that are implemented as a set of address prefixes for the different address ranges ([[RFC4291](#)]). A permanently assigned multicast address is used for site-local scoped MANET Routers multicast communication. See [[RFC4291](#)] and the [[IANAv6Multicast](#)] registry for IPv6 multicast assignments.

The permanent IPv6 multicast address for MANET Routers/IPv6 is FF05:0:0:0:0:0:0:TBD5.

5. IANA Considerations

A summary of the decided IANA assignments will appear here.

6. Security Considerations

There are no security considerations associated with this document.

7. Acknowledgements

Fred Templin provided valuable input to this document.

8. References

8.1. Normative References

- [RFC2365] Meyer, D., "Administratively Scoped IP Multicast", [BCP 23](#), [RFC 2365](#), July 1998.
- [RFC4007] Deering, S., Haberman, B., Jinmei, T., Nordmark, E., and B. Zill, "IPv6 Scoped Address Architecture", [RFC 4007](#), March 2005.
- [RFC4291] Hinden, R. and S. Deering, "IP Version 6 Addressing Architecture", [RFC 4291](#), February 2006.

8.2. Informative References

[I-D.ietf-manet-packetbb]

Clausen, T., "Generalized MANET Packet/Message Format",
[draft-ietf-manet-packetbb-02](#) (work in progress),
July 2006.

[IANAv4Multicast]

"IPv4 Multicast Address Assignments", <[http://http://
www.iana.org/assignments/multicast-addresses](http://http://www.iana.org/assignments/multicast-addresses)>.

[IANAv6Multicast]

"IPv6 Multicast Address Assignments", <[http://http://
www.iana.org/assignments/ipv6-multicast-addresses](http://http://www.iana.org/assignments/ipv6-multicast-addresses)>.

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