

IANA Allocations for Mobile Ad Hoc Network (MANET) Protocols

Status of This Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

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Abstract

This document enumerates several common IANA allocations for use by Mobile Ad hoc NETWORK (MANET) protocols. The following well-known numbers are required: a UDP port number, an IP protocol number, and a link-local multicast group address.

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1. Introduction

This document enumerates several common IANA allocations for use by one or more protocols that conform to [RFC5444]. The following well-known numbers are required: a UDP port number, an IP protocol number, and a link-local multicast group address. All interoperable protocols running on these well-known IANA allocations MUST conform to [RFC5444]. [RFC5444] provides a common format that enables one or more protocols to share the IANA allocations defined in this document unambiguously.

2. Conventions Used in This Document

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. UDP Port Number

MANET routers require a well-known UDP port number [IANA] to send and receive MANET routing protocol packets. The title of this UDP port is "manet". The value of this UDP port is 269.

4. IP Protocol Number

MANET routers require a well-known IP protocol number [IANA] to send and receive MANET routing protocol packets. The title of this IP protocol number is "manet". The value of this IP protocol number is 138.

5. Link-Local Multicast Group for MANET Routers

MANET routers require a well-known, link-local multicast address [RFC4291] to send and receive MANET routing protocol packets. The name of the multicast address to reach link-local (LL) MANET routers is "LL-MANET-Routers".

For IPv4, a well-known, link-local scope multicast address is required. The address for LL-MANET-Routers is 224.0.0.109.

For IPv6, a well-known, link-local scope multicast address is required. The address for LL-MANET-Routers is FF02:0:0:0:0:0:0:6D.

6. IANA Considerations

This document enumerates several common IANA allocations for use by one or more protocols that conform to [RFC5444]. Specifically, the following well-known numbers have been assigned: a UDP port (Section 3), an IP protocol number (Section 4), and a link-local multicast group address (Section 5).

Action 1:

IANA has made the following assignments in the "PORT NUMBERS" registry:

sub-registry "WELL KNOWN PORT NUMBERS"

| Keyword | Decimal | Description | References |
|---------|---------|-----------------|------------|
| manet | 269/udp | MANET Protocols | [RFC5498] |

Action 2:

IANA has made the following assignments in the "PROTOCOL NUMBERS" registry:

sub-registry "WELL KNOWN PORT NUMBERS"

| Keyword | Decimal | Description | References |
|---------|---------|-----------------|------------|
| manet | 138 | MANET Protocols | [RFC5498] |

Action 3:

IANA has made the following assignments in the "Internet Multicast Addresses" registry:

sub-registry "224.0.0.0 - 224.0.0.255 (224.0.0/24) Local Network Control Block"

224.0.0.109 LL-MANET-Routers [RFC5498]

Action 4:

IANA has made the following assignments in the "INTERNET PROTOCOL VERSION 6 MULTICAST ADDRESSES" registry:

sub-registry "Fixed Scope Multicast Addresses"

sub-sub-registry "Link-Local Scope"

FF02:0:0:0:0:0:0:6D LL-MANET-Routers [RFC5498]

7. Security Considerations

This document specifies only well-known numbers for protocols that conform to [RFC5444], and it does not specify the protocols that carry the information across the network. Each protocol using these well-known numbers may have its own set of security issues, but those issues are not affected by using the IANA allocations specified herein.

The security issues associated with possibly operating multiple cooperating protocols using the same IANA assignments (e.g., UDP port) MUST be addressed in each protocol's specification.

8. Acknowledgements

Fred Templin, Bill Fenner, Alexandru Petrescu, Sam Weiler, Ross Callon, and Lars Eggert provided valuable input to this document.

9. References

9.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.
- [RFC4291] Hinden, R. and S. Deering, "IP Version 6 Addressing Architecture", RFC 4291, February 2006.
- [RFC5444] Clausen, T., Dearlove, C., Dean, J., and C. Adjih, "Generalized Mobile Ad Hoc Network (MANET) Packet/Message Format", RFC 5444, February 2009.

9.2. Informative References

- [IANA] <http://www.iana.org/>

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