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IGMPv3 and MLDv2 Survey  
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## Abstract

The PIM WG intends to progress IGMPv3 and MLDv2 from Proposed Standards to Internet Standards. This document describes the motivation, procedures and questions proposed for a survey of operators, vendors and implementors of IGMPv3 and MLDv2. The objective of the survey is to collate information to help the PIM WG progress these protocols to Internet Standards.

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IGMPv3 and MLDv2 Survey

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## [1.](#) Introduction

Internet Group Management Protocol Version 3 (IGMPv3) [[RFC3376](#)] and Multicast Listener Discovery Version 2 (MLDv2) for IPv6 [[RFC3810](#)] are

currently Proposed Standards. Given the fact that multiple independent implementations of these protocols exist and they have been successfully and widely used operationally, the PIM WG is keen to progress these protocols to Internet Standards. In order to facilitate this effort, it is critical to establish if there are

features specified in [[RFC3376](#)] and [[RFC3810](#)] that have not been widely used and also to determine any interoperability issues that have arisen from using the protocols.

Following approach taken for PIM-SM, documented in [[RFC7063](#)], the PIM WG has decided that conducting a comprehensive survey on implementations and deployment of IGMPv3 and MLDv2 will provide valuable information to facilitate their progression to Internet Standard.

This document describes the procedures proposed for conducting the survey and introduces the proposed questions.

## [2.](#) Procedures Followed

### [2.1.](#) Methodology

The PIM WG Chairs will officially kick off the survey and distribute the questionnaire and pertinent information through appropriate forums, aiming to ensure the survey reaches as wide an audience as possible.

### [2.2.](#) Intended Recipients of Questionnaire

1. Network operators
2. Router vendors
3. Switch vendors
4. Host implementors

### [2.3.](#) Processing of Responses

Responses received will remain confidential. Only the aggregated results will be published and so it will be impossible to identify

the contributions by individual operators, vendors or implementors. Furthermore, an option to submit the completed questionnaire anonymously will be available.

### [3. Questionnaire](#)

#### [3.1. Questionnaire for Vendors or Host Implementors](#)

Name:

Affiliation/Organization:

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Contact Email:

Do you wish to keep your name and affiliation confidential?: Y/N

##### [3.1.1. Implementation Status](#)

Which of the following have you implemented? And for how long has it been implemented?

1. IGMPv1 [[RFC1112](#)] implemented?: Y/N, since:
2. IGMPv2 [[RFC2236](#)] implemented?: Y/N, since:
3. IGMPv3 [[RFC3376](#)] implemented?: Y/N, since:
4. Lightweight IGMPv3 [[RFC5790](#)] Implemented: Y/N, since:
5. MLDv1 [[RFC2710](#)] implemented?: Y/N, since:
6. MLDv2 [[RFC3810](#)] implemented?: Y/N, since:
7. Lightweight MLDv2 [[RFC5790](#)] implemented?: Y/N, since:

##### [3.1.2. Implementation Specifics](#)

1. Which IGMPv3 features have you implemented?
2. Which MLDv2 features have you implemented?

3. Have you carried out IGMPv3 or MLDv2 interoperability tests with other implementations? (What issues arose during these tests?) (How could the standards have help minimize these issues?)

### 3.1.3. Implementation Perspectives

1. What feature(s) has been deliberately omitted from IGMPv3 or MLDv2 implementations? (Because you think it is sub-optimal or potentially has significant disadvantages/issues?) (Because of insufficient demand/use cases?)
2. Which ambiguities or inconsistencies in [RFC 3376](#) or [RFC 3810](#) made the implementation challenging?
3. What suggestions would you make to the PIM WG as it seeks to progress IGMPv3 and MLDv2 to Internet Standard?

## 3.2. Questionnaire for Network Operators

Name:

Affiliation/Organization:

Contact Email:

Do you wish to keep your name and affiliation confidential?:

### 3.2.1. Deployment Status

Which of the following are currently deployed in your network? And for how long has it been deployed?

1. IGMPv1 [[RFC1112](#)] deployed?: Y/N, since:
2. IGMPv2 [[RFC2236](#)] deployed?: Y/N, since:
3. IGMPv3 [[RFC3376](#)] deployed?: Y/N, since:
4. Lightweight IGMPv3 [[RFC5790](#)] Implemented: Y/N, since:

5. MLDv1 [[RFC2710](#)] deployed?: Y/N, since:
6. MLDv2 [[RFC3810](#)] deployed?: Y/N, since:
7. Lightweight MLDv2 [[RFC5790](#)] deployed?: Y/N, since:

#### [3.2.2.](#) Deployment Specifics

1. Which IGMPv3 features are in use? (Is Exclude mode with source list in use?)
2. Which MLDv2 features are in use? (Is Exclude mode with source list in use?)
3. Does your network rely on the fallback mechanism between different IGMP versions? (Between which IGMP versions?) (What is your experience with this fallback mechanism?)
4. Are you using equipment with different (multi-vendor) implementations for your deployment? (Have you encountered any inter-operability or backward-compatibility issues amongst differing implementations?) (What are your concerns about these issues?)

#### [3.2.3.](#) Deployment Perspectives

1. What have you found to be the strengths of IGMPv3 or MLDv2?
2. What have you found to be the weaknesses of IGMPv3 or MLDv2?
3. What suggestions would you make to the PIM WG as it seeks to progress IGMPv3 and MLDv2 to Internet Standard?

#### [4.](#) Acknowledgments

The authors would like to thank Stig and Mike for valuable review and feedback.

#### [5.](#) References

### [5.1.](#) Normative References

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### [5.2.](#) Informative References

- [RFC7063] Zheng, L., Zhang, Z., and R. Parekh, "Survey Report on Protocol Independent Multicast - Sparse Mode (PIM-SM) Implementations and Deployments", [RFC 7063](#), December 2013.

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