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A. Morton
AT&T Labs
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RFC 4148 and the IP Performance Metrics (IPPM) Registry of Metrics Are Obsolete

Abstract

This memo reclassifies RFC 4148, "IP Performance Metrics (IPPM) Metrics Registry", as Obsolete, and withdraws the IANA IPPM Metrics Registry itself from use because it is obsolete. The current registry structure has been found to be insufficiently detailed to uniquely identify IPPM metrics. Despite apparent efforts to find current or even future users, no one responded to the call for interest in the RFC 4148 registry during the second half of 2010.

Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

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Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <http://www.rfc-editor.org/info/rfc6248>.

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1. Introduction

The IP Performance Metrics (IPPM) framework [RFC2330] describes several ways to record options and metric parameter settings, in order to account for sources of measurement variability. For example, Section 13 of [RFC2330] describes the notion of "Type P" so that metrics can be specified in general, but the specifics (such as payload length in octets and protocol type) can replace P to disambiguate the results.

When the IPPM Metrics Registry [RFC4148] was designed, the variability of the "Type P" notion, and the variability possible with the many metric parameters (see Section 4.2 of [RFC2679]), were not fully appreciated. Further, some of the early metric definitions only indicate Poisson streams [RFC2330] (see the metrics in [RFC2679], [RFC2680], and [RFC3393]), but later work standardized the methods for Periodic Stream measurements [RFC3432], adding to the variability possible when characterizing a metric exactly.

It is not believed to be feasible or even useful to register every possible combination of Type P, metric parameters, and Stream parameters using the current structure of the IPPM Metrics Registry.

The IPPM Metrics Registry is believed to have very few users, if any. Evidence of this was provided by the fact that one registry entry was syntactically incorrect for months after [RFC5644] was published. The text "!=" was used for the metrics in that document instead of "::~=". It took eight months before someone offered that a parser found the error. Even the original registry author agrees that the current registry is not efficient, and has submitted a proposal to effectively create a new registry.

Despite apparent efforts to find current or even future users, no one responded to the call for interest in the RFC 4148 registry during the second half of 2010. Therefore, the IETF now declares the registry Obsolete without any further reservations.

When a registry is designated Obsolete, it simply prevents the IANA from registering new objects, in this case new metrics. So, even if a registry user was eventually found, they could continue to use the current registry, and its contents will continue to be available.

The most recently published memo that added metrics to the registry is [RFC6049]. This memo updates all previous memos that registered new metrics, including [RFC4737] and [RFC5560], so that the registry's Obsolete status will be evident.

2. Action to Reclassify RFC 4148 and the Corresponding IANA Registry as Obsolete

Due to the ambiguities between the current metrics registrations and the metrics used, and the apparent minimal adoption of the registry in practice, it is required that:

- o the IETF reclassify [RFC4148] as Obsolete.
- o the IANA withdraw the current IPPM Metrics Registry from further updates and note that it too is Obsolete.

It is assumed that parties who wish to establish a replacement registry function will work to specify such a registry.

3. Security Considerations

This memo and its recommendations have no known impact on the security of the Internet (especially if there is a zombie apocalypse on the day it is published; humans will have many more security issues to worry about stemming from the rise of the un-dead).

4. IANA Considerations

Metrics defined in the IETF have been typically registered in the IANA IPPM Metrics Registry as described in the initial version of the registry [RFC4148]. However, areas for improvement of this registry have been identified, and the registry structure has to be revisited when there is working group consensus to do so.

The current consensus is to designate the IPPM Metrics Registry, originally described in [RFC4148], as Obsolete.

The DESCRIPTION of the registry MIB has been modified as follows, and the first two sentences should be included on any IANA-maintained web page describing this registry or its contents:

DESCRIPTION

"With the approval and publication of RFC 6248, this module is designated Obsolete.

The registry will no longer be updated, and the current contents will be maintained as-is on the day that RFC 6248 was published.

The original Description text follows below:

This module defines a registry for IP Performance Metrics.

... "

5. Acknowledgements

Henk Uijterwaal suggested additional rationale for the recommendation in this memo.

6. References

6.1. Normative References

- [RFC4148] Stephan, E., "IP Performance Metrics (IPPM) Metrics Registry", BCP 108, RFC 4148, August 2005.

6.2. Informative References

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- [RFC3432] Raisanen, V., Grotefeld, G., and A. Morton, "Network performance measurement with periodic streams", RFC 3432, November 2002.
- [RFC4737] Morton, A., Ciavattone, L., Ramachandran, G., Shalunov, S., and J. Perser, "Packet Reordering Metrics", RFC 4737, November 2006.
- [RFC5560] Uijterwaal, H., "A One-Way Packet Duplication Metric", RFC 5560, May 2009.
- [RFC5644] Stephan, E., Liang, L., and A. Morton, "IP Performance Metrics (IPPM): Spatial and Multicast", RFC 5644, October 2009.
- [RFC6049] Morton, A. and E. Stephan, "Spatial Composition of Metrics", RFC 6049, January 2011.

Author's Address

Al Morton
AT&T Labs
200 Laurel Avenue South
Middletown, NJ 07748
USA

Phone: +1 732 420 1571
Fax: +1 732 368 1192
EMail: acmorton@att.com
URI: <http://home.comcast.net/~acmacm/>