



Messaging Anti-Abuse Working Group (MAAWG)

Email Metrics Program: The Network Operators' Perspective

Report #2 - 1st Quarter 2006
(Issued June 2006)

Introduction

This is the second report generated by the Messaging Anti-Abuse Working Group (MAAWG) to define the scope of the problem of abusive email. The MAAWG Email Metrics Report is intended as a guide to understanding the industry's efforts in obstructing abusive emails before they reach users and in identifying related trends over time. This is a voluntary industry program that seeks to provide unbiased data from the network operators' perspective.

With this quarter's results, we have been able to more than double our reporting base to over 350 million mailboxes as a result of new participating members. With additional network operators and service providers now reporting, we have updated the numbers of the first report covering the last quarter of 2005 based on the data provided by the new participants. The Email Metrics Program now covers a substantial share of consumer inboxes on a global scale.

MAAWG issued its first metrics report in March 2006 with statistics from the last quarter of 2005. This second report covers the period from January 1, 2006 through March 31, 2006 with updated statistics for the last quarter of 2005. The quarterly results have not been compiled over a statistically relevant period of time to credibly identify specific trends.

MAAWG is particularly suited to the task of measuring abusive email levels because its members include major Internet Service Providers (ISP) and network operators worldwide with other associated industry vendors. MAAWG is the largest global trade association focusing on this problem.

MAAWG

Messaging Anti-Abuse Working Group

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The 1st Quarter 2006 Results

As with the first report, participating ISP and network operator member companies of MAAWG voluntarily submitted confidential data about their network operations for the first quarter of 2006.

Reported Metrics	Report #1 Q4 2005*	Report #2 Q1 2006
Number of Mailboxes Represented	350.277 Million	389.674 Million
Number of Dropped Connections & Blocked/Tagged Inbound Email	342.070 Billion	370.158 Billion
Number of Unaltered Delivered Email	82.281 Billion	90.584 Billion

Selected Ratios	Report #1 Q4 2005*	Report #2 Q1 2006
Dropped Connections & Blocked/Tagged Inbound Emails per Mailbox	977	950
Dropped Connections & Blocked/Tagged Inbound Emails per Unaltered Delivered Email	4.16 or 80.61% abusive email	4.09 or 80.34% abusive email

* The data for 4Q2005 has been updated to reflect the reporting of new participants.

What is Measured?

- **Number of Mailboxes Represented** - This is the total current customer mailbox count at the end of the quarter. This metric is reported in million of mailboxes.
- **Number of Dropped Connections & Blocked/Tagged Inbound Emails** – The Number of Dropped Connections is the total connections dropped by using RBLs (Real Time Blacklists) and other devices. The sum of three months of dropped connections is in billions. The Number of Blocked or Tagged Inbound Emails is the total number of emails blocked or tagged using ASAV (Anti-Spam/Anti-Viral) framework, MTAs (Mail Transfer Agents) and other recipient or message based rules, but does not include MUAs (Mail User Agents). The sum of three months of dropped connections and blocked or tagged inbound emails is reported in billions. In this report, one dropped connection is equivalent to one blocked or tagged inbound email.
- **Number of Unaltered Delivered Emails** - This is the total number of emails that were not blocked or tagged by the network operator’s anti-abuse efforts and have been delivered to customers. The sum of three months of delivered emails is reported in billions.

Explanatory Notes:

- **Abusive Emails:** The one thing this report does not attempt to define is “spam.” Even though a great deal of time and energy has been devoted to clarifying this term, there is no universally accepted definition. The precise definition of spam differs slightly from jurisdiction to jurisdiction in accordance with local laws. For example, in Europe and Canada, spam is based on an “opt-in” approach, whereas the United States has adopted an “opt out” approach. Nevertheless, most would agree that “spam” can be defined as electronic communications that likely are not wanted or expected by the recipient.

What is more, in working to reduce spam, the industry has become increasingly focused on the behavior of the sender instead of only looking at the form or content of a message. In this report, therefore, we measure “abusive email,” which we believe to be a more accurate term. Abusive emails are communications that seek to exploit the end user.

- **False Positives:** Given the massive volumes of email that transverse the networks everyday, one of the challenges facing ISPs and network operators is how to differentiate between abusive, unwanted emails and legitimate messages sent to a large number of recipients. A “false positive” is the term generally used to describe legitimate messages that have been blocked or tagged by a spam filter or other mechanisms intended to stop abusive email. The issues that arise in the context of accurately defining and accounting for false positives are similar to those associated with defining spam. Therefore, this report does not attempt to account for any “false positives,” leaving that assessment to others.
- **ISP & Network Operator Data:** As noted above, this aggregated data has been obtained exclusively from ISPs and network operators who are members of MAAWG. It does not include information generated separately by anti-abuse solution providers or vendors.
- **Minimum Number of Mailboxes:** This email metrics program is based on a minimum threshold of 100 million mailboxes as we believe this number is statistically significant.
- **Dropped Connections:** A dropped connection occurs before the number of recipients or emails is known. It is therefore impossible to determine how many abusive emails per dropped connection were prevented from entering the network. Moreover, when a connection is prohibited, i.e. “null routed,” there is no connection to count and so these are not factored in the number of reported dropped connections. As a result, a substantial volume of abusive emails are never likely to be counted. However, it is a conservative estimate to say that each dropped connection corresponds to at least one abusive email. This metric, although imprecise in and of itself, gives a sense of the magnitude of abusive emails that are not even penetrating the operator’s network.

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