

DMARC
Internet-Draft
Intended status: Standards Track
Expires: January 28, 2021

D. Crocker
Brandenburg InternetWorking
July 27, 2020

Author Header Field
draft-crocker-dmarc-author-01

Abstract

Internet mail defines the From: field to indicate the author of the message's content and the Sender: field to indicate who initially handled the message. The Sender: field is optional, if it has the same information as the From: field. That is, when the Sender: field is absent, the From: field has conflated semantics, as both a handling identifier and a content creator identifier. This was not a problem, until development of stringent protections on use of the From: field. It has prompted Mediators, such as mailing lists, to modify the From: field, to circumvent mail rejection caused by those protections.

This affects end-to-end behavior of email, between the author and the final recipients, because mail from the same author is not treated the same, depending on what path it followed. In effect, the From: field has become dominated by its role as a handling identifier. The current specification augments the current use of the From: field, by specifying the Author: field, which identifies the original author of the message and is not subject to modification by Mediators.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on January 28, 2021.

Copyright Notice

Copyright (c) 2020 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

Table of Contents

1.	Introduction	2
2.	Author Header Field	4
3.	Discussion	4
4.	Security Considerations	4
5.	IANA Considerations	5
5.1.	Registration of the Author header field	5
6.	References	5
6.1.	Normative References	5
6.2.	Informative References	5
	Author's Address	5

[1.](#) Introduction

Internet mail conducts asynchronous communication from an author to one or more recipients, and is used for ongoing dialogue amongst them. Email has a long history of serving a wide range of human uses and styles, within that simple framework, and the mechanisms for making email robust and safe serve that sole purpose.

Internet mail defines the From: field to indicate the author of the message's content and the Sender: field to indicate who initially handled the message. [\[Mail-Fmt\]](#) The Sender: field is optional, if it has the same information as the From: field. That is, when the Sender: field is absent, the From: field has conflated semantics, as both a handling identifier and a content creator identifier. These fields were initially defined in [\[RFC733\]](#) and making the redundant Sender: field optional was a small, obvious optimization, in the days of slower communications, expensive storage and less powerful computers.

Crocker

Expires January 28, 2021

[Page 2]

The dual semantics was not a problem, until development of stringent protections on use of the From: field. It has prompted Mediators, such as mailing lists, to modify the From: field, to circumvent mail rejection caused by those protections. This affects end-to-end usability of email, between the author and the final recipients, because mail received from the same author is treated differently by the recipient's software, depending on what path the message followed.

By way of example, mail from "Example User <user@example.com>" which is sent directly to a recipient, will show the user's display name correctly and can correctly analyze and aggregate mail from that user, based on their email address. However if the user sends through a mailing list, and the mailing list conducts a common form of From: modification, needed to bypass enforcement of stringent authentication policies, then the received message might have a From: field along the lines of "Example User via Example List <listname@list.example.com>". The change inserts an operational address, for the Mediator, into the From: field, and distorts the field's display-name, as a means of recording the modification. The result is that the recipient's software will see the message as being from an entirely different author and will handle it separately. (Mediators might create a Reply-To: field, with the original From: field email address, but this does nothing to aid other processing done by the recipient's MUA based on what it believes is the author's address or original display-name.)

In effect, the From: field has become dominated by its role as a handling identifier. The current specification augments the current use of the From: field, by specifying the Author: field, which identifies the original author of the message and is not subject to modification by Mediators.

While it might be cleanest to move towards more reliable use of the Sender: field and then to target it as the focus of authentication concerns, enhancement of standards works best with incremental additions, rather than efforts at replacement. To that end, this specification provides a means of supplying author information that is not subject to modification by processes seeking to enforce stringent authentication.

Terminology and architectural details in this document are incorporated from [[Mail-Arch](#)].

Discussion of this draft is directed to the dmARC@ietf.org mailing list.

Crocker

Expires January 28, 2021

[Page 3]

2. Author Header Field

A new message header field is defined: Author:. It has the same syntax as From:. [[Mail-Fmt](#)] As with the original and primary intent for the From: header field, the Author: header field is to contain the email address and can contain the displayable human name of the author for the message content.

The ABNF for the field's syntax is:

```
author = "Author:" mailbox-list CRLF
```

This header field can be added as part of the original message create process, or it can be added later, to preserve the original author information from the From: field.

3. Discussion

The Author: header field, here, is intended for creation during message generation or during mediation. It is intended for use by recipient MUAs, as they typically use the From: field. In that regard, it would be reasonable for an MUA that would normally organize or display information based on the From: field to give the Author: header field priority.

The X-Original-From: header field is referenced in [[rfc5703](#)] but is not actually defined. Further, it is registered with IANA, but the registry cites [RFC5703](#) as the controlling source for the entry. Lastly, the field is solely intended for use by Mediators, to preserve information from a modified From:

Obviously any security-related processing of a message needs to distinguish From: from Author: and treat their information accordingly.

4. Security Considerations

Any header field containing identification information is a source of security and privacy concerns, especially one pertaining to content authorship. Generally, the handling of the Author: header field needs to receive scrutiny and care comparable to that given to the From: header field.

Given the semantics of this field, it is easy to believe that use of this field will create a new attack vector for tricking end-users. However, for all of the real and serious demonstration of users' being tricked by deceptive or false content in a message, there is no evidence that problematic content in a field providing information

Crocker

Expires January 28, 2021

[Page 4]

about message's author directly contributes to differential and problematic behavior by the end user.

5. IANA Considerations

5.1. Registration of the Author header field

Header field name: Author

Applicable protocol: mail

Status: provisional

Author/Change controller: *** ??? ***

Specification document(s): *** This document ***

6. References

6.1. Normative References

[IANA] M. Cotton, B. Leiba, and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", I-D [draft-leiba-cotton-iana-5226bis-11](#), 2017.

[Mail-Arch] Crocker, D., "Internet Mail Architecture", [RFC 5598](#), July 2009.

[Mail-Fmt] Resnick, P., Ed., "Internet Message Format", [RFC 5322](#), October 2008.

6.2. Informative References

[rfc5703] Hansen, T. and C. Daboo, "Sieve Email Filtering: MIME Part Tests, Iteration, Extraction, Replacement, and Enclosure", [RFC 5703](#), October 2009.

[RFC733] Crocker, D., Vittal, J., Pogram, K., and D. Henderson, "Standard for the Format of ARPA Network Text Messages", [RFC 733](#), November 1977.

Author's Address

Dave Crocker
Brandenburg InternetWorking

Email: dcrocker@bbiw.net