Updated Use of the Expires Message Header Field

Abstract

   This document allows broader use of the Expires message header field
   for mail messages. Message creators can then indicate when a message
   expires, while recipients would use this information to handle an
   expired message differently.

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1. Introduction

[RFC2156] defined a mapping of header fields between X.400 and
RFC822/MIME. One of the mapped fields is the "Expires" header field,
which provides a date and time at which a message is considered to
lose its validity.

Netnews articles [RFC5536] have an Expires header with a similar
slightly more strict syntax and similar meaning.

This document extends the use of the "Expires" header field to
Internet email in general, whether the message comes from an X.400
gateway or elsewhere.

The date and time of expiration can be used by the mailbox provider
or the MUA to indicate to the user that certain messages could be
de-emphasized or not shown to the user, to unclutter the user's
mailbox.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT",
"SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and
"OPTIONAL" in this document are to be interpreted as described in
BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all
capitals, as shown here.

A Message Creator is an agent that generates messages for delivery.
In [RFC5598] parlance, this is an Author or Originator.

A Message Reader is either an agent consuming a message or an agent
storing a message. In RFC 5589 parlance, this is a Message Store or
a Message User Agent.

2. Defining Expiration

[RFC2156] defined a field called "Expires", which replaced "Expiry-Date" introduced in [RFC1327]. It did not define this further, except to say that no automatic handling past that date can be expected. [RFC5536] defined "Expires" for Netnews as a date and time beyond which the poster deems the article to be no longer relevant and could usefully be removed but did not actually require such removal. The consensus definition used in this document is that beyond the stated expiration date, the message "loses its validity".

The header field's migration into email has been largely organic, with no formal semantic definition to date. No consensus exists to establish a more precise definition, in deference to existing implementations. Accordingly, no additional normative definition is provided here, nor is any requirement established for any particular handling by Message Readers.

3. Header Field definition

The header field definition remains the same as in [RFC2156] and [RFC4021]. It indicates the time at which a message loses its validity. Using the ABNF from [RFC5322], its syntax is:

expires = "Expires:" date-time CRLF

Example:

Expires: Wed, 1 Dec 2021 17:22:57 +0000

Message creators MUST NOT include more than one Expires header field in the message they send.

If there is more than one Expires header field then message readers SHOULD act as if no Expires header field is present.

Message Transfer Agents (MTAs) MUST NOT discard or reject a message based solely on the content of this header field, if present.

Automatic deletion of a message bearing an Expires field with a date and time in the past is NOT RECOMMENDED unless configured by the mailbox owner.

4. Advice to Message Creators

Message creators add the header field along with a relevant date and time when they know that the message loses its validity. This could apply to commercial newsletters that include time-limited offers, event announcements, social notifications, and periodic announcement messages.

5. Advice to Message Readers

Message readers, such as mailbox providers, web mail and MUAs could de-emphasize the display of expired messages or determine not do display them. They could allow users to control the actions to take for expired messages.

The information provided in the header field is intended to be used as a signal to provide an improved experience to the end-user. For instance, systems might allow automatic rules to clean up expired email from specific message creators or with defined characteristics, or to provide a mode to quickly handle all expired email.

6. Interoperability Considerations

As "Expires" has never been formally defined for Internet messages other than those translated from X.400, there may exist implementations that use this header field name in a way that does not comport with this specification. Though such implementations are not known to the IETF at this time, there is a possible risk of confusion.

There are some known problems with interpretation of email date-times in the future. The specifications for Internet message format are currently under revision and may or may not address this. Message Creators should make themselves aware of these issues if accuracy of expiration is a concern.

7. Security considerations

A message creator can put any date in an Expires header field, including dates in the distant past or future. Without further knowledge about the message creator, recipient systems and message readers cannot assume that the contents of the header are accurate or benign.

For example, a malicious message creator might send spam mail that includes a expiry date in the past, in the hope that recipients will not see or report the mail, and then adaptive spam filters would use it as non-spam training material. A creator might include a date in the immediate future in the hope that a recipient would see and act on a message, but could not find it later to complain about it. Or a creator might include a date in the distant future in the hope that the message would stay in a recipient's inbox and would be more likely to be read.

While the header field can be useful to determine how to display a message to a user, it is unlikely to be useful to determine whether or not the message is wanted or is fraudulent.

8. Acknowledgements

This document was informed by discussions with and/or contributions from Barry Leiba, Alexey Melnikov, Jonathan Loriaux, Charles Sauthier and Simon Bressier.

9. IANA Considerations

IANA is requested to update an existing entry in the [Permanent Message Headers Field Names registry](#)

Header field name: Expires

Applicable protocol: mail

Status: standard

Author/Change controller: IETF

Specification document: this document

10. Normative References

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11. Informative References

[RFC1327] Hardcastle-Kille, S., "Mapping between X.400(1988) / ISO 10021 and RFC 822", RFC 1327, DOI 10.17487/RFC1327, May 1992, <https://www.rfc-editor.org/info/rfc1327>.

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