               Sieve -- "editheader" extension
             <**draft-degener-sieve-editheader-02.txt**>

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Abstract

   This document defines two new actions for the "sieve"
   language that add and delete e-mail header fields.

1. Introduction

   Email headers are a flexible and easy to understand means
   of communication between email processors.
   This extension enables sieve scripts to interact with other
   components that consume or produce header fields by allowing
   the script to delete and add header fields.

2. **Conventions used.**

Conventions for notations are as in [SIEVE] section 1.1, including use of [KEYWORDS] and "Syntax:" label for the definition of action and tagged arguments syntax.

The term "header field" is used here as in [RFC-2822] to mean a logical line of an e-mail message header.

The capability string associated with extension defined in this document is "editheader".

3. **Action addheader**

Syntax:
    "addheader" [":last"] <name: string> <value: string>

The addheader action adds a header field to the existing message header. The name MUST be a valid 7-bit US-ASCII header field name as described by [RFC-2822] "field-name" nonterminal.

If the specified field value does not match the RFC 2822 "unstructured" nonterminal or exceeds a length limit set by the implementation, the implementation MUST either flag an error or encode the field using folding white space and the encodings described in RFC 2047 or RFC 2231 to be compliant with RFC 2822.

An implementation MAY impose a length limit onto the size of the encoded header field; such a limit MUST NOT be less than 998 characters, not including the terminating CRLF supplied by the implementation.

By default, the header field is inserted at the beginning of the existing header. If the optional flag ":last" is specified, it is appended at the end.

Example:
    /* Don't redirect if we already redirected */
    if not header :contains "X-Sieve-Filtered"
            ["<kim@job.tld>", "<kim@home.tld>"]
    {
            addheader "X-Sieve-Filtered" "<kim@job.tld>";
            redirect "kim@home.tld";
    }

4. **Action deleteheader**

Syntax:
    "deleteheader"

```
           [":index" <fieldno: number> [":last"]]
           [COMPARATOR] [MATCH-TYPE]
           <field-name: string>
           [<value-patterns: string-list>]
```

By default, the deleteheader action deletes all occurrences
of the named header field.

The field-name is mandatory and always matched as a
case-insensitive us-ascii string. The value-patterns,
if specified, are matched according to the match type and
comparator. If none are specified, all values match.

The field-name MUST be a valid 7-bit header field name as
described by the [RFC-2822] "field-name" nonterminal.

If :index <fieldno> is specified, the attempts to match
a value are limited to the header field <fieldno> (beginning
at 1, the first named header field). If :last is specified,
the count is backwards; 1 denotes the last named header field,
2 the second to last, and so on. The counting happens
before the <value-patterns> match, if any;

```
    deleteheader :index 2 :contains "Received" "via carrier-pidgeon"
```

deletes the second "Received:" header field if it contains
the string "via carrier-pidgeon" (not the second Received: field
that contains "via carrier-pidgeon").

5. Interaction with Other Sieve Extensions

Tests and actions such as "exist" or "header" that examine
header fields MUST examine the current state of a header as
modified by any actions that have taken place so far.

As an example, the "header" test in the following fragment will
always evaluate to true, regardless of whether the incoming
message contained an "X-Hello" header field or not:

```
    addheader "X-Hello" "World";
    if header :contains "X-Hello" "World"
    {
            fileinto "international";
    }
```

Actions that create messages in storage or in transport to
MTAs MUST store and send messages with the current set of
header fields.

For the purpose of weeding out duplicates, a message modified
by addheader or deleteheader MUST be considered the same as

the original message. For example, in an implementation that
obeys the constraint in [SIEVE] section 2.10.3 and does not deliver
the same message to a folder more than once, the following
code fragment

```
    keep;
    addheader "X-Flavor" "vanilla";
    keep;
```

MUST only file one message. It is up to the implementation
to pick which of the redundant "fileinto" or "keep" actions is
executed, and which ones are ignored.

The "implicit keep" is thought to be executed at the end of
the script, after the headers have been modified. (However,
a canceled "implicit keep" remains canceled.)

6. IANA Considerations

   The following template specifies the IANA registration of the Sieve
   extension specified in this document:

   To: iana@iana.org
   Subject: Registration of new Sieve extension

   Capability name: editheader
   Capability keyword: editheader
   Capability arguments: N/A
   Standards Track/IESG-approved experimental RFC number: this RFC
   Person and email address to contact for further information:

   Jutta Degener
   jutta@sendmail.com

   This information should be added to the list of sieve extensions
   given on http://www.iana.org/assignments/sieve-extensions.

7. Security Considerations

   Someone with write access to a user's script storage may use this
   extension to generate headers that a user would otherwise be
   shielded from (by a gateway MTA that removes them).

   A sieve filter that removes headers may unwisely destroy
   evidence about the path a header has taken.

   Any change in a message content may interfere with digital
   signature mechanisms that include the header in the signed
   material. Since normal message delivery adds "Received:"
   header fields to the beginning of a message, many such schemas

are impervious to headers prefixed to a message, and will
work with "addheader" unless :last is used.

Any decision mechanism in a user's filter that is based
on headers is vulnerable to header spoofing. For example,
if the user adds an APPROVED header or tag, a malicious sender
may add that tag or header themselves. One way to guard against
this is to delete or rename any such headers or stamps prior
to processing the message.

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10. Discussion

This section will be removed when this document leaves the
Internet-Draft stage.

This draft is intended as an extension to the Sieve mail filtering
language. Sieve extensions are discussed on the MTA Filters mailing
list at <ietf-mta-filters@imc.org>. Subscription requests can
be sent to <ietf-mta-filters-request@imc.org> (send an email
message with the word "subscribe" in the body).

More information on the mailing list along with a WWW archive of
back messages is available at <http://www.imc.org/ietf-mta-filters/>.

10.1 Changes from the previous version

Changed the duplicate restrictions from "messages with different
headers MUST be considered different" to their direct opposite,
"messages with different headers MUST be considered the same,"
as requested by workgroup members on the mailing list.

Expanded mention of header signature schemes to Security

Considerations.

Added IANA Considerations section.

Appendices

[Appendix A](). **References**

[RFC-2822] Resnick, P., "Internet Message Format", [RFC 2822](), April
          2001.

[SIEVE]   Showalter, T., "Sieve: A Mail Filtering Language", [RFC 3028](),
          January 2001.

[KEYWORDS] Bradner, S., "Key words for use in RFCs to Indicate
          Requirement Levels", [RFC 2119](), March 1997.

[Appendix B](). **Copyright Statement**