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Sieve Extension: Copying Without Side Effects

Status of this Memo

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Abstract

The Sieve scripting language allows users to control handling and disposal of their incoming e-mail. By default, an e-mail message that is processed by a Sieve script is saved in the owner's "inbox". Actions such as "fileinto" and "redirect" cancel this default behavior.

This document defines a new keyword parameter, ":copy", to be used with the Sieve "fileinto" and "redirect" actions. Adding ":copy" to an action suppresses cancellation of the default "inbox" save. It allows users to add commands to an existing script without changing the meaning of the rest of the script.

1. Introduction

The Sieve scripting language [SIEVE] allows users to control handling and disposal of their incoming e-mail. Two frequently used Sieve commands are "fileinto" (saving into a local message store, such as an IMAP server) and "redirect" (forwarding to another e-mail address). Both of these cancel the Sieve default behavior of saving into the user's "inbox".

But some users have the notion of forwarding an extra copy of a message for safekeeping to another e-mail address, or of saving a copy in a folder - in addition to the regular message delivery, which shouldn't be affected by the copy.

If saving an extra copy is all the user wanted to do,

```
fileinto "unfiltered";
keep;
```

would do the job. The "keep" command does explicitly what the cancelled default behavior did. But the explicit "keep" is a poor substitute for the implicit "keep" when more processing follows:

```
fileinto "unfiltered";
keep;

if header "Subject" "MAKE MONEY FAST!!!"
{
        discard;
}
```

In this example, the "discard" is ineffective against the explicit "keep"; the discarded message still ends up in the user's inbox.

It is possible to generate Sieve code that perfectly expresses a user's wishes, but such code quickly grows unwieldy because it needs to keep track of the state that the implicit "keep" would have had without the "fileinto" or "redirect" command.

This extension tries to make life easier for user interface designers and script writers by allowing them to express the "copy" semantics directly.

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

3. ":copy" extension to the "fileinto" and "redirect" commands

Syntax:

```
     "fileinto" [":copy"] <folder: string>
     "redirect" [":copy"] <address: string>
```

If the optional ":copy" keyword is specified with "fileinto" or "redirect", the tagged command does not cancel the implicit "keep". Instead, it merely files or redirects a copy in addition to whatever else is happening to the message.

Example:

```
require ["copy", "fileinto"];
fileinto :copy "incoming";

# ... more processing follows ...
```

4. Security Considerations

The "copy" extension makes it easier to eavesdrop on a user's message stream without the user noticing. This was technically possible before if an attacker gained read/write access to a user's Sieve scripts, but now an attacker no longer needs to parse a script in order to modify it. Write access to Sieve scripts must be protected as strongly as read/write access to e-mail, for example by using secure directory protocols such as correctly parameterized LDAP over TLS [LDAP].

Organizations that wish to monitor their users' e-mail traffic must familiarize themselves with local data protection laws before creating stores of old e-mail traffic without control, or perhaps even knowledge, of the sender or intended recipients.

Organizations that legally use "redirect :copy" to eavesdrop on correspondence (for example, by keeping a log to answer questions about insider trading at a later time) can avoid future problems by setting users' privacy expectations correctly.

5. IANA Considerations

The following template specifies the IANA registration of the "copy" Sieve extension specified in this document.

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

Capability name: copy
Capability keyword: copy
Capability arguments: N/A
Standards Track: RFC 3894
Person and email address to contact for further information:

Jutta Degener
Sendmail, Inc.
6425 Christie Ave, 4th Floor
Emeryville, CA 94608

Email: jutta@sendmail.com

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

6. Acknowledgments

Thanks to Eric Allman, Ned Freed, Will Lee, Nigel Swinson, and Rand Wacker for corrections and comments.

7. References

7.1. Normative References

[KEYWORDS] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

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

7.2. Informative References

[LDAP] Wahl, M., Alvestrand, H., Hodges, J., and R. Morgan, "Authentication Methods for LDAP", RFC 2829, May 2000.

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