

**Sieve Email Filtering: Delivering to Special-Use Mailboxes  
draft-bosch-sieve-special-use-02**

Abstract

The SPECIAL-USE capability of the IMAP protocol ([RFC 6154](#)) allows clients to identify special-use mailboxes; e.g., where draft or sent messages should be put. This simplifies client configuration. In contrast, the Sieve mail filtering language ([RFC 5228](#)) currently has no such capability. This memo defines a Sieve extension that fills this gap: it adds a test for checking whether a special-use attribute is assigned for a particular mailbox or any mailbox, and it adds the ability to file messages into an anonymous mailbox that has a particular special-use attribute assigned.

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Table of Contents

- [1.](#) Introduction . . . . . [2](#)
- [2.](#) Conventions Used in This Document . . . . . [3](#)
- [3.](#) Test "specialuse\_exists" . . . . . [3](#)
- [4.](#) ":specialuse" Argument to "fileinto" Command . . . . . [4](#)
  - [4.1.](#) Interaction with ":create" Argument to "fileinto" Command [5](#)
- [5.](#) Sieve Capability Strings . . . . . [5](#)
- [6.](#) Examples . . . . . [5](#)
- [7.](#) Security Considerations . . . . . [6](#)
- [8.](#) IANA Considerations . . . . . [6](#)
- [9.](#) Acknowledgements . . . . . [7](#)
- [10.](#) References . . . . . [7](#)
  - [10.1.](#) Normative References . . . . . [7](#)
  - [10.2.](#) Informative References . . . . . [8](#)
- Author's Address . . . . . [8](#)

**[1.](#) Introduction**

Commonly, several mailboxes in an IMAP message store [[IMAP](#)] have a special use; e.g. it is where the user's draft messages are stored, where a copy of sent messages are kept, or it is where spam messages are filed automatically at delivery. The SPECIAL-USE capability [[SPECIAL-USE](#)] of the IMAP protocol defines mailbox attributes that identify these special mailboxes explicitly to the client. This way, client configuration is simplified significantly. Using the CREATE-SPECIAL-USE capability [[SPECIAL-USE](#)], IMAP clients can also configure these attributes dynamically based on user preference.

Unlike the IMAP protocol, the Sieve mail filtering language [[SIEVE](#)] currently cannot freely access these special-use mailbox attributes. Particularly, the Sieve interpreter cannot find an anonymous mailbox that has a particular special-use attribute assigned. This would be very useful for example to find the user's Spam mailbox at delivery.

In Sieve, limited access to the special-use attributes is provided using the "mboxmetadata" extension [[MAILBOX](#)], which allows testing for the presence of a special-use attribute in the "/private/specialuse" IMAP METADATA [[IMAP-METADATA](#)] entry of a mailbox. Still, not all implementers will be willing to add the complexity of the IMAP METADATA capability, just to provide access to special-use attributes to the Sieve interpreter.



#### **4. " :specialuse" Argument to "fileinto" Command**

Usage: fileinto [:specialuse <special-use-flag: string>]  
          <mailbox: string>

Normally, the "fileinto" command delivers the message in the mailbox specified using its positional mailbox argument. However, if the optional " :specialuse" argument is also specified, the "fileinto" command first checks whether a mailbox exists with the specified special-use flag assigned to it. If that is the case, that special-use mailbox is used for delivery instead. If there is no such mailbox or if the specified special-use flag is unknown to the implementation in general, the "fileinto" action proceeds as it would without the " :specialuse" argument.

Summarizing, if the " :specialuse" argument is specified, the fileinto command deals with two mailboxes that may or may not exist:

- o An anonymous special-use mailbox, which has at least the special-use flag specified with the " :specialuse" argument assigned to it.
- o The default mailbox named by the positional string argument of the "fileinto" command, which is used when the special-use mailbox is not found.

The special-use flag specified with the " :specialuse" argument MUST conform to the "use-attr" syntax described in [Section 6 of RFC6154 \[MAILBOX\]](#). Implementations SHOULD handle an invalid special-use flag in the same way as an invalid mailbox name is handled. The string parameter of the " :specialuse" argument is not a constant string, which means that variable substitutions are allowed when the "variables" extension [[VARIABLES](#)] is active. In that case, the syntax of the special-use flag is only verified at runtime.

If neither the special-use mailbox nor the default mailbox exists, the "fileinto" action MUST proceed exactly as it does in case the " :specialuse" is argument is absent and the mailbox named by its positional argument does not exist. The various options for handling this situation are described in [Section 4.1 of RFC5228 \[SIEVE\]](#).

More than one mailbox can have a particular special-use flag assigned. In that case, the mailbox that is chosen for delivery is implementation-defined. However, implementations MUST ensure that this choice is made consistently, so that the same mailbox is used every time.

If delivery to the special-use mailbox fails for reasons not relating to its existence, the Sieve interpreter MUST NOT subsequently attempt

delivery in the indicated default mailbox as a fall-back. Instead, it MUST proceed exactly as it does in case the ":specialuse" argument is absent and delivery to the mailbox named by its positional argument fails. This prevents the situation where messages are unexpectedly spread over two mailboxes in case transient or intermittent delivery failures occur.

#### **4.1. Interaction with ":create" Argument to "fileinto" Command**

The "mailbox" extension [[MAILBOX](#)] adds the optional ":create" argument to the "fileinto" command. If the optional ":create" argument is specified with "fileinto", it instructs the Sieve interpreter to create the specified mailbox if needed, before attempting to deliver the message into the specified mailbox.

When combined with the ":specialuse" argument, the ":create" argument instructs the Sieve interpreter to create the specified default mailbox if needed. This need arises when both the special-use and the default mailbox are not found.

If the server implementation supports the CREATE-SPECIAL-USE capability [[SPECIAL-USE](#)] for IMAP, i.e. it allows assigning special-use flags to new mailboxes, it SHOULD assign the special-use flag specified with the ":specialuse" argument to the newly created mailbox.

### **5. Sieve Capability Strings**

A Sieve implementation that defines the "specialuse\_exists" test and the ":specialuse" argument for the "fileinto" command will advertise the capability string "special-use".

### **6. Examples**

The following example saves the message in the mailbox where messages deemed to be junk mail are held. This mailbox is identified using the "\\Junk" special-use attribute. If no mailbox has this attribute assigned, the message is filed into the mailbox named "Spam".

```
require "fileinto";
require "special-use";

fileinto :specialuse "\\Junk" "Spam";
```

The following very similar example handles the case in which neither a "\\Junk" special-use mailbox nor the "Spam" mailbox exist. In that case, a mailbox called "Spam" is created, and the message is stored

there. Additionally, the "\Junk" special-use attribute may be assigned to it.

```
require "fileinto";
require "special-use";
require "mailbox";

fileinto :specialuse "\\Junk" :create "Spam";
```

The following example is used in a Sieve script that is triggered from an IMAP event, rather than at message delivery [[IMAPSIEVE](#)]. This Sieve script redirects messages to an automated recipient that processes junk mail, if those messages are copied or moved into a mailbox that has the "\Junk" special-use attribute assigned.

```
require "imapsieve";
require "special-use";
require "environment";
require "variables";

if environment :contains "imap.mailbox" "*" {
    set "mailbox" "${1}";
}

if allof(
    environment "imap.cause" "COPY",
    specialuse_exists "${mailbox}" "\\Junk") {
    redirect "spam-report@example.org";
}
```

## **7. Security Considerations**

Security considerations are discussed in [[SIEVE](#)] and [[SPECIAL-USE](#)]. It is believed that this extension does not introduce any additional security concerns.

## **8. 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: special-use  
Description: adds a test for checking whether an IMAP special-use attribute is assigned for a particular mailbox or any mailbox, and it adds the ability to file messages into an anonymous mailbox that has a particular IMAP special-use attribute assigned.  
RFC number: this RFC  
Contact address: Sieve mailing list <sieve@ietf.org>

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

## **9. Acknowledgements**

Thanks to Barry Leiba, Alexey Melnikov, Ken Murchison, and Ned Freed for reviews and suggestions.

## **10. References**

### **10.1. Normative References**

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#### [MAILBOX]

Melnikov, A., "The Sieve Mail-Filtering Language -- Extensions for Checking Mailbox Status and Accessing Mailbox Metadata", [RFC 5490](#), March 2009.

#### [SIEVE]

Guenther, P. and T. Showalter, "Sieve: An Email Filtering Language", [RFC 5228](#), January 2008.

#### [SPECIAL-USE]

Leiba, B. and J. Nicolson, "IMAP LIST Extension for Special-Use Mailboxes", [RFC 6154](#), DOI 10.17487/RFC6154, March 2011, <<http://www.rfc-editor.org/info/rfc6154>>.

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