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IANA Registry for Sieve Actions

Abstract

The Sieve Email Filtering Language (RFC 5228) is a popular email filtering language used upon final mail delivery. This document creates a registry for Sieve actions to help developers and Sieve extension writers track interactions between different extensions.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 7841.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at https://www.rfc-editor.org/info/rfc9122.

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The Sieve Email Filtering Language [RFC5228] is a popular email filtering language used upon final mail delivery. The popularity of Sieve resulted in a myriad of Sieve extensions that can interact with each other in wonderful and complex ways. Currently, there is no easy way to find out all actions defined by Sieve extensions published in RFCs, which makes it quite difficult for Sieve extension writers and Sieve implementation developers to foresee interactions between Sieve actions.

This document creates a registry for Sieve [RFC5228] actions in order to help developers and Sieve extension writers track interactions between different extensions.

2. IANA Considerations

2.1. Sieve Actions Registration Template and Procedure

IANA has created the "Sieve Actions" registry (see Section 2.9 of [RFC5228] for details on Sieve actions). Registration of actions specified in both RFCs and vendor-specific documentation is allowed and encouraged. The registration template contains the following:

Name: Name of the action
Description: Short description
References: One or more documents describing the action and any significant updates to its definition (this field is required for actions described in RFCs and is optional otherwise)
Capabilities: Name of one or more Sieve capabilities associated with the Sieve action being registered
Action Interactions: Interactions with other Sieve actions (as described in Section 2.10.1 of [RFC5228]), if any
Cancels Implicit Keep? Flag specifying whether the action cancels the implicit keep (see Section 2.10.2 of [RFC5228])
Can Use With IMAP Events? Whether or not this action can be used with IMAP events in Sieve [RFC6785]
Comments: Optional comment or comments

The registration procedure is Expert Review [RFC8126]. The designated expert only checks that the name of the action being registered matches documentation, the description field is accurate, the correct documents are referenced, and the list of relevant documents is as complete as possible. The designated expert can't reject a registration because of a personal dislike for the document defining an action and should always err on the side of approving the registration, even if documentation is not complete.

The same registration procedure is used to add a new reference or to change the description field of an existing registration.

2.2. Initial Sieve Action Registry

The following registrations are used to initialize the "Sieve

Actions" registry. Note that when the relevant "Action Interactions" entry is marked "N/A", it means that there is no restriction on use of the corresponding action with any other action; however, implementors still need to read the one or more corresponding specifications to determine if there are any surprising behaviors. Also note that the "Comments" field of the IANA registration template is omitted from these registrations, as none of them currently have any comments.

Name: addheader
Description: Add a header field to the existing message header
References: [RFC5293]
Capabilities: "editheader"
Action Interactions: All subsequent tests and actions apply to the altered message
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: addflag
Description: Add IMAP flags to a list of IMAP flags that would be set on the message if it gets delivered to a mailbox
References: [RFC5232] [RFC5229]
Capabilities: "imap4flags", "variables"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: convert
Description: Convert body parts from one MIME type to another
References: [RFC6558]
Capabilities: "convert"
Action Interactions: All subsequent tests and actions apply to the altered message
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: deleteheader
Description: Remove a header field from the existing message header
References: [RFC5293]
Capabilities: "editheader"
Action Interactions: All subsequent tests and actions apply to the altered message
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: discard
Description: Silently throw away the message
References: [RFC5228]
Capabilities: N/A
Action Interactions: N/A
Cancels Implicit Keep? Yes
Can Use with IMAP Events? Yes

Name: enclose
Description: Enclose a message as an attachment to a new message
References: [RFC5703]

Capabilities: "enclose"
Action Interactions: All subsequent tests and actions except
   "redirect" apply to the altered message
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: ereject
Description: Refuse delivery of the message
References: [RFC5429]
Capabilities: "ereject"
Action Interactions: This action is incompatible with the "vacation"
   action. Typically is not permitted with actions that cause mail
   delivery, such as "keep", "fileinto", and "redirect"
Cancels Implicit Keep? Yes
Can Use with IMAP Events? No

Name: extracttext
Description: Store text of a MIME part into a variable
References: [RFC5703] [RFC5229]
Capabilities: "extracttext", "variables"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: fileinto
Description: Deliver the message into the specified mailbox
References: [RFC5228] [RFC3894] [RFC5232] [RFC5490] [RFC9042]
   [RFC8579]
Capabilities: "fileinto", "copy", "imap4flags", "mailbox",
   "mailboxid", "special-use"
Action Interactions: Use of :copy suppresses cancellation of
   implicit keep
Cancels Implicit Keep? Yes
Can Use with IMAP Events? Yes

Name: keep
Description: File the message into the user's main mailbox
References: [RFC5228] [RFC5232]
Capabilities: "imap4flags"
Action Interactions: N/A
Cancels Implicit Keep? Yes
Can Use with IMAP Events? Yes

Name: notify
Description: Send a notification to a user
References: [RFC5435] [RFC8580]
Capabilities: "enotify", "fcc"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: redirect
Description: Send (forward) the message to another user
References: [RFC5228] [RFC3894] [RFC6009] [RFC6134]
Capabilities: "copy", "redirect-dsn", "redirect-deliverby",
   "extlists"

Action Interactions: Use of :copy suppresses cancellation of
   implicit keep
Cancels Implicit Keep? Yes
Can Use with IMAP Events? Yes

Name: reject
Description: Refuse delivery of the message
References: [RFC5429]
Capabilities: "reject"
Action Interactions: This action is incompatible with the "vacation"
   action. Typically is not permitted with actions that cause mail
   delivery, such as "keep", "fileinto", and "redirect"
Cancels Implicit Keep? Yes
Can Use with IMAP Events? No

Name: removeflag
Description: Remove IMAP flags from a list of IMAP flags that would
   be set on the message if it gets delivered to a mailbox
References: [RFC5232] [RFC5229]
Capabilities: "imap4flags", "variables"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: replace
Description: Replace a MIME part
References: [RFC5703]
Capabilities: "replace"
Action Interactions: All subsequent tests and actions except
   "redirect" apply to the altered message
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: set
Description: Store a value in a variable
References: [RFC5229]
Capabilities: "variables"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: setflag
Description: Set IMAP system flags or keywords that would be set on
   the message if it gets delivered to a mailbox
References: [RFC5232] [RFC5229]
Capabilities: "imap4flags", "variables"
Action Interactions: N/A
Cancels Implicit Keep? No
Can Use with IMAP Events? Yes

Name: vacation
Description: Implement a vacation autoresponder
References: [RFC5230] [RFC6131] [RFC8580]
Capabilities: "vacation", "vacation-seconds", "fcc"
Action Interactions: This action is incompatible with "reject" and
   "ereject" actions

Cancels Implicit Keep? No
Can Use with IMAP Events? No

3. Security Considerations

The sole purpose of this document is to create the "Sieve Actions" registry; therefore, it doesn't create new security considerations for Sieve implementations.

The new registry should help Sieve extension writers and Sieve implementors track interactions between different Sieve actions; therefore, it might improve the quality of specifications and implementations, including security aspects.

For security considerations related to particular actions, see the one or more RFCs referenced for the action in question in the "Sieve Actions" registry (Section 2.2).

4. References

4.1. Normative References

[RFC5228] Guenther, P., Ed. and T. Showalter, Ed., "Sieve: An Email Filtering Language", RFC 5228, DOI 10.17487/RFC5228, January 2008, <https://www.rfc-editor.org/info/rfc5228>.

[RFC6785] Leiba, B., "Support for Internet Message Access Protocol (IMAP) Events in Sieve", RFC 6785, DOI 10.17487/RFC6785, November 2012, <https://www.rfc-editor.org/info/rfc6785>.

4.2. Informative References

[RFC3894] Degener, J., "Sieve Extension: Copying Without Side Effects", RFC 3894, DOI 10.17487/RFC3894, October 2004, <https://www.rfc-editor.org/info/rfc3894>.

[RFC5229] Homme, K., "Sieve Email Filtering: Variables Extension", RFC 5229, DOI 10.17487/RFC5229, January 2008, <https://www.rfc-editor.org/info/rfc5229>.

[RFC5230] Showalter, T. and N. Freed, Ed., "Sieve Email Filtering: Vacation Extension", RFC 5230, DOI 10.17487/RFC5230, January 2008, <https://www.rfc-editor.org/info/rfc5230>.

[RFC5232] Melnikov, A., "Sieve Email Filtering: Imap4flags Extension", RFC 5232, DOI 10.17487/RFC5232, January 2008, <https://www.rfc-editor.org/info/rfc5232>.

[RFC5293] Degener, J. and P. Guenther, "Sieve Email Filtering: Editheader Extension", RFC 5293, DOI 10.17487/RFC5293, August 2008, <https://www.rfc-editor.org/info/rfc5293>.

[RFC5429] Stone, A., Ed., "Sieve Email Filtering: Reject and Extended Reject Extensions", RFC 5429, DOI 10.17487/RFC5429, March 2009, <https://www.rfc-editor.org/info/rfc5429>.

[RFC5435] Melnikov, A., Ed., Leiba, B., Ed., Segmuller, W., and T. Martin, "Sieve Email Filtering: Extension for Notifications", RFC 5435, DOI 10.17487/RFC5435, January 2009, <https://www.rfc-editor.org/info/rfc5435>.

[RFC5490] Melnikov, A., "The Sieve Mail-Filtering Language -- Extensions for Checking Mailbox Status and Accessing Mailbox Metadata", RFC 5490, DOI 10.17487/RFC5490, March 2009, <https://www.rfc-editor.org/info/rfc5490>.

[RFC5703] Hansen, T. and C. Daboo, "Sieve Email Filtering: MIME Part Tests, Iteration, Extraction, Replacement, and Enclosure", RFC 5703, DOI 10.17487/RFC5703, October 2009, <https://www.rfc-editor.org/info/rfc5703>.

[RFC6009] Freed, N., "Sieve Email Filtering: Delivery Status Notifications and Deliver-By Extensions", RFC 6009, DOI 10.17487/RFC6009, October 2010, <https://www.rfc-editor.org/info/rfc6009>.

[RFC6131] George, R. and B. Leiba, "Sieve Vacation Extension: "Seconds" Parameter", RFC 6131, DOI 10.17487/RFC6131, July 2011, <https://www.rfc-editor.org/info/rfc6131>.

[RFC6134] Melnikov, A. and B. Leiba, "Sieve Extension: Externally Stored Lists", RFC 6134, DOI 10.17487/RFC6134, July 2011, <https://www.rfc-editor.org/info/rfc6134>.

[RFC6558] Melnikov, A., Leiba, B., and K. Li, "Sieve Extension for Converting Messages before Delivery", RFC 6558, DOI 10.17487/RFC6558, March 2012, <https://www.rfc-editor.org/info/rfc6558>.

[RFC8126] Cotton, M., Leiba, B., and T. Narten, "Guidelines for Writing an IANA Considerations Section in RFCs", BCP 26, RFC 8126, DOI 10.17487/RFC8126, June 2017, <https://www.rfc-editor.org/info/rfc8126>.

[RFC8579] Bosch, S., "Sieve Email Filtering: Delivering to Special-Use Mailboxes", RFC 8579, DOI 10.17487/RFC8579, May 2019, <https://www.rfc-editor.org/info/rfc8579>.

[RFC8580] Murchison, K. and B. Gondwana, "Sieve Extension: File Carbon Copy (FCC)", RFC 8580, DOI 10.17487/RFC8580, May 2019, <https://www.rfc-editor.org/info/rfc8580>.

[RFC9042] Gondwana, B., Ed., "Sieve Email Filtering: Delivery by MAILBOXID", RFC 9042, DOI 10.17487/RFC9042, June 2021, <https://www.rfc-editor.org/info/rfc9042>.

Appendix A. Acknowledgements

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