

Using Sieve for Email Filtering

This document contains the following sections:

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- [Developing Sieve Scripts](#)
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For information related to this topic refer to:

- [Spam Filtering: Do's and Don'ts](#)
(<http://www.cmu.edu/computing/email/spam-filtering.html>)
- [Spam Filtering](#) (<http://www.cmu.edu/computing/doc/email/spam/index.html>)
- [Sieve Request For Comments \(RFS\)](#) (<http://rfc.sunsite.dk/rfc/rfc3028.html>)

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Introduction

Sieve is a language that can be used to create filters for electronic mail. Based on a series of matching rules that work from the message headers, Sieve scripts can discard mail, bounce it back to the sender with a rejection notice, redirect the message to another address or file mail into a specific folder. The Cyrus IMAP server enables server-side mail filtering. In contrast, client side filtering on the old AMS mail system (FLAMES) was triggered when the user launched the mail reading program. This made the concept of vacation mail infeasible. With server-side filtering, vacation mail is possible and your filtering rules are in effect regardless of which machine or mail reader you use.

Note: You can also install Sieve scripts online via the [Carnegie Mellon Web Portal \(https://my.cmu.edu/site/main\)](https://my.cmu.edu/site/main). Select the My Accounts tab and then select the Edit Sieve Scripts option from the left sidebar.

Technical Profile

What Sieve *is*

Sieve is a valuable, safe server-side system that facilitates the development of simple mail filters and GUI-based editors but restricts anything that is more complex. The language is not Turing-complete, and offers no way to write a loop or a function. Variables are not provided.

Sieve is not tied to any particular operating system or mail architecture. It requires the use of RFC822-compliant messages, but otherwise should work well with other systems that meet these criteria. Sieve is designed as a proposed Internet Standard. Click [here \(http://www.ietf.org/rfc/rfc3028.txt?number=3028\)](http://www.ietf.org/rfc/rfc3028.txt?number=3028) for detailed information on the Sieve RFC. Sieve design and development has followed [Internet Engineering Task Force \(IETF\) \(http://www.ietf.org/\)](http://www.ietf.org/) procedures as described in [RFC 2026 \(http://www.ietf.org/rfc/rfc2026.txt?number=2026\)](http://www.ietf.org/rfc/rfc2026.txt?number=2026).

We expect Sieve to be a popular tool the language is simple enough to allow many users to make use of it, but rich enough that it can be used productively. However, it is expected that GUI-based editors will be the preferred way of editing filters for most users.

What Sieve *is not*

Sieve is a specialized standard filtering syntax/language and is not intended to be a complete programming language.

- Sieve is not intended to be useful with filtering or processing anything other than RFC822 messages.
- Sieve is not intended as a replacement for the basis of a specific existing tool.
- Sieve does not provide the most sophisticated filtering syntax possible. However, it does provide fundamental basics common to all RFC822 messages to establish a basic standard syntax for interoperation. It also provides an extension mechanism to allow individual implementations to provide extended functionality within an open

standards framework. As such, Sieve is intended as a first-stage building block for mail filters and provides significant functionality for a large number of uses.

- Sieve is not a once-and-for-all solution for pressing problems addressed by filtering, such as anti-Spam efforts, although it can facilitate construction of such solutions.

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Developing Sieve Scripts

Included in this section are some examples of Sieve scripts. Multiple Sieve scripts can be used together so that only e-mail that passes each of the Sieve script criteria would appear in your INBOX. See example E.

Important Note: Sieve scripting is a programming language whose use is reserved for those familiar with programming code. Those who attempt to develop and use a Sieve script, should be familiar with basic scripting language and with Sieve specifically.

Example A: This Sieve script will reject a nuisance e-mail message that consistently includes "Circle" in the subject field. In this example, before implementing the script, a "Circle List" folder would be created. All e-mail that meets the criteria will be deposited into the "Circle List" folder.

Note: In this example, the following must appear as the first line of the script:
require ["fileinto"];

```
if header :contains "Subject" "[CIRCLE]" {fileinto "INBOX.Circle List";}
```

Example B: This Sieve script will reject a specific mail virus that consistently includes "A great Shockwave flash movie" in the subject field.

```
if header :contains "Subject" "A great Shockwave flash movie" {reject "Possible virus? Check your system!";}
```

Example C: This Sieve script will copy all e-mail sent from dial-up uu.net account into a junk folder. The script is effective even if mail is relayed through an international open mail relay. Before you enable the script, create a junk mail folder under your INBOX.

Note: In this example, the following must appear as the first line of the script:
require ["fileinto"];

```
if header :contains "Received" ".da.uu.net" {fileinto "INBOX.Junk";}
```

Example D: This Sieve script will reject junk e-mail where the "To" field includes "bigfoot.com". Typically, mail address to "bigfoot" is spam.

```
if header :contains "To" "@bigfoot.com" {reject "Please remove my name from your mailing list";}
```

Example E: This Sieve script will reject e-mail where the "To" field does not include your name or e-mail address. Typically, this type of mail is spam. Before you enable the script, create a junk mail folder under your INBOX.

Note: In this example, the following must appear as the first line of the script:
require ["fileinto"];

```
if anyof ( not address :all :contains ["To", "Cc", "Bcc"] "yourname@youraddress.com" ) {fileinto "INBOX.Junk";}
```

Note: Other useful Sieveshell commands are "get", "list", "delete", and "deactivate". Only one Sieve script may be active at any given time.

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Installing Sieve Scripts

Note: You can also install Sieve scripts online via the Carnegie Mellon Web Portal. Select the **COMPUTING > Manage Email > sieve scripts**.

Use Sieveshell to install your script on the Cyrus server.

```
%sieveshell cyrus.andrew.cmu.edu  
connecting to cyrus.andrew.cmu.edu  
>put XXX  
>activate XXX
```

where XXX = the script file name

Note: The Vacation mail feature available on the Computing tab of the [Carnegie Mellon Web Portal \(https://my.cmu.edu/\)](https://my.cmu.edu/) uses Sieve scripts. If you activate Vacation mail from the Carnegie Mellon Web Portal, you will lose other Sieve filtering. However, you can combine the two filters and turn them into a single Sieve script.

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