

## **Sending automatic replies to emails in a per user configurable way**

There are situations where a user of a mail system wants to send an automatic reply to an e-mail, for example when the user is not available for some reason, such as a vacation, meetings, or sick leave. Not every user has the same preferences about when an e-mail should be automatically replied to. Some people want every mail to be answered, other people are far more conservative and only want a few mails to be replied to automatically.

Described is a system that can process e-mails and send automatic replies based on both system configuration and a per user configuration.

When the mail server software receives an e-mail it tries to determine if it should send an automatic reply or not. It does so by performing a number of checks, based on various characteristics of the e-mail, plus user preferences stored in a database. If it can be determined during a step that no automatic reply should be sent the system will not process the mail any further, but will stop and wait for the next mail to arrive.

The database with user preferences contains the following information:

- a personal preference for the threshold of a spam score. By default the system's value is used. This can be set by the user to have a more strict setting than the system's default.
- a blacklist of addresses no automatic reply should be sent to. This can for example be used to list the people who know that the user is not available (family, friends)
- a period to determine how often an automatic reply should be sent to an originating address (for example: always, once a week at maximum, once a month at maximum, only once, etc.)
- a personal message that should be included in the automatic reply. If not defined the system's default value is used.

The database can be updated via various means, such as a simple graphical user interface, a web interface, or by directly manipulating data in the database.

A list of possible checks are (but not limited to):

1. determine if the e-mail is spam. If it scores above a certain score as determined by a spam filter, it will not send an automatic reply.
2. determine if the e-mail is sent by mailinglist software. If the e-mail originates from a mailinglist, the system will not send an automatic reply.
3. determine if the e-mail is an error message as sent by a mail server. If it is an error message, the system will not send an automatic reply.
4. determine if the e-mail is sent by a (UNIX) system account. Examples are, but not limited to, root, nagios, svn, postmaster, nobody, www, www-data, apache, httpd, etcetera. If it is sent by a (UNIX) system account, the system will not send an automatic reply.
5. determine if the e-mail is an e-mail marketing mail by looking at specific characteristics in the e-mail header, such as mail headers that indicate a certain e-mail marketing program was used. If the mail was sent by a known e-mail marketing program, no automatic reply will be sent.

6. determine if the e-mail originates from a bug tracker, by looking at specific headers. If the mail was sent by a bug tracker, no automatic reply will be sent.
7. determine if the e-mail is an automatic reply itself, by looking at specific headers, as defined in RFC 3834. If the mail was an automatic reply, no automatic reply will be sent.
8. determine what the recipient of the e-mail is, then see if this username is listed in the headers of the e-mail. If the user can't be found in the declared recipients list (for example because the user was only included in a blind carbon copy, or the original e-mail address is an alias), no automatic reply will be sent.
9. perform a database lookup to see if an active autoresponder is defined for the user. If not, no automatic reply will be sent.
10. perform a database lookup to retrieve the personal spam level settings for the user. If the mail is above the threshold of the personal spam level settings, no automatic reply will be sent.
11. perform a database lookup to see if the sender is in a blacklist to whom no automatic replies should be sent. If the sender is in a blacklist, no automatic reply will be sent.
12. perform a database lookup to see if an automatic reply was already sent to the originating address within the period the user defined. If an automatic mail was already sent, no additional automatic reply will be sent.

After all steps have been taken and it is determined that an automatic reply needs to be sent the personal message (if available) is retrieved from the database, an automatic reply is constructed and sent. The information about when the message was sent and whom it was sent to is recorded in the database.

The user is sent a blind carbon copy (BCC) of the e-mail, so there is a history of what mails automatic replies were sent to, as well as to remind the user that an autoresponse system is activated for his/her account.

