

SENDMAIL(1)

General Commands Manual

SENDMAIL(1)

NAME

sendmail - Postfix to Sendmail compatibility interface

SYNOPSIS

sendmail [option ...] [recipient ...]

mailq

sendmail -bp

newaliases

sendmail -l

DESCRIPTION

The Postfix **sendmail(1)** command implements the Postfix to Sendmail compatibility interface. For the sake of compatibility with existing applications, some Sendmail command-line options are recognized but silently ignored.

By default, Postfix **sendmail(1)** reads a message from standard input until EOF or until it reads a line with only a . character, and arranges for delivery. Postfix **sendmail(1)** relies on the **postdrop(1)** command to create a queue file in the maildrop directory.

Specific command aliases are provided for other common modes of operation:

mailq List the mail queue. Each entry shows the queue file ID, message size, arrival time, sender, and the recipients that still need to be delivered. If mail could not be delivered upon the last attempt, the reason for failure is shown. The queue ID string is followed by an optional status character:

* The message is in the active queue, i.e. the message is selected for delivery.

! The message is in the hold queue, i.e. no further delivery attempt will be made until the mail is taken off hold.

The message is forced to expire. See the `postsuper(1)` options `-e` or `-f`.

This mode of operation is implemented by executing the `postqueue(1)` command.

newaliases

Initialize the alias database. If no input file is specified

file(s) specified with the `alias_database` configuration parameter. If no alias database type is specified, the program uses the type specified with the `default_database_type` configuration parameter. This mode of operation is implemented by running the `postalias(1)` command.

Note: it may take a minute or so before an alias database update becomes visible. Use the "postfix reload" command to eliminate this delay.

These and other features can be selected by specifying the appropriate combination of command-line options. Some features are controlled by parameters in the `main.cf` configuration file.

The following options are recognized:

-Am (ignored)

-Ac (ignored)

Postfix sendmail uses the same configuration file regardless of whether or not a message is an initial submission.

-B body_type

The message body MIME type: 7BIT or 8BITMIME.

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-bd Go into daemon mode. This mode of operation is implemented by executing the "postfix start" command.

-bh (ignored)

-bH (ignored)

Postfix has no persistent host status database.

-bi Initialize alias database. See the newaliases command above.

-bl Go into daemon mode. To accept only local connections as with Sendmail's -bl option, specify "inet_interfaces = loopback" in the Postfix main.cf configuration file.

-bm Read mail from standard input and arrange for delivery. This is the default mode of operation.

-bp List the mail queue. See the mailq command above.

-bs Stand-alone SMTP server mode. Read SMTP commands from standard input, and write responses to standard output. In stand-alone SMTP server mode, mail relaying and other access controls are disabled by default. To enable them, run the process as the mail_owner user.

This mode of operation is implemented by running the `smtpd(8)` daemon.

-bv Do not collect or deliver a message. Instead, send an email report after verifying each recipient address. This is useful for testing address rewriting and routing configurations.

This feature is available in Postfix version 2.1 and later.

-C config_file

-C config_dir

The path name of the Postfix `main.cf` file, or of its parent directory. This information is ignored with Postfix versions before 2.3.

With Postfix version 3.2 and later, a non-default directory must be authorized in the default `main.cf` file, through the `alternate_config_directories` or `multi_instance_directories` parameters.

With all Postfix versions, you can specify a directory pathname with the `MAIL_CONFIG` environment variable to override the location of configuration files.

-F full_name

Set the sender full name. This overrides the NAME environment variable, and is used only with messages that have no From: message header.

-f sender

Set the envelope sender address. This is the address where delivery problems are sent to. With Postfix versions before 2.1, the Errors-To: message header overrides the error return address.

-G Gateway (relay) submission, as opposed to initial user submission. Either do not rewrite addresses at all, or update incomplete addresses with the domain information specified with rewrite_header_rewrite_domain.

This option is ignored before Postfix version 2.3.

-h hop_count (ignored)

Hop count limit. Use the hopcount_limit configuration parameter instead.

-I Initialize alias database. See the newaliases command above.

with only a . character as the end of input.

-L label (ignored)

The logging label. Use the `syslog_name` configuration parameter instead.

-m (ignored)

Backwards compatibility.

-N dsn (default: 'delay, failure')

Delivery status notification control. Specify either a comma-separated list with one or more of failure (send notification when delivery fails), delay (send notification when delivery is delayed), or success (send notification when the message is delivered); or specify never (don't send any notifications at all).

This feature is available in Postfix 2.3 and later.

-n (ignored)

Backwards compatibility.

-oAlias_database

Non-default alias database. Specify `pathname` or `type:pathname`.

-O option=value (ignored)

Set the named option to value. Use the equivalent configuration parameter in main.cf instead.

-o7 (ignored)

-o8 (ignored)

To send 8-bit or binary content, use an appropriate MIME encapsulation and specify the appropriate -B command-line option.

-oi When reading a message from standard input, don't treat a line with only a . character as the end of input.

-om (ignored)

The sender is never eliminated from alias etc. expansions.

-o x value (ignored)

Set option x to value. Use the equivalent configuration parameter in main.cf instead.

-r sender

Set the envelope sender address. This is the address where delivery problems are sent to. With Postfix versions before 2.1,

dress.

-R return

Delivery status notification control. Specify "hdrs" to return only the header when a message bounces, "full" to return a full copy (the default behavior).

The -R option specifies an upper bound; Postfix will return only the header, when a full copy would exceed the `bounce_size_limit` setting.

This option is ignored before Postfix version 2.10.

-q Attempt to deliver all queued mail. This is implemented by executing the `postqueue(1)` command.

Warning: flushing undeliverable mail frequently will result in poor delivery performance of all other mail.

-qinterval (ignored)

The interval between queue runs. Use the `queue_run_delay` configuration parameter instead.

-qlqueueid

This option is implemented by executing the `postqueue(1)` command, and is available with Postfix version 2.4 and later.

-qRsite

Schedule immediate delivery of all mail that is queued for the named site. This option accepts only site names that are eligible for the "fast flush" service, and is implemented by executing the `postqueue(1)` command. See `flush(8)` for more information about the "fast flush" service.

-qSsite

This command is not implemented. Use the slower "`sendmail -q`" command instead.

-t Extract recipients from message headers. These are added to any recipients specified on the command line.

With Postfix versions prior to 2.1, this option requires that no recipient addresses are specified on the command line.

-U (ignored)

Initial user submission.

-V envid

DSN.

This feature is available in Postfix 2.3 and later.

-XV (Postfix 2.2 and earlier: -V)

Variable Envelope Return Path. Given an envelope sender address of the form `owner-listname@origin`, each recipient `user@domain` receives mail with a personalized envelope sender address.

By default, the personalized envelope sender address is `owner-listname+user=domain@origin`. The default + and = characters are configurable with the `default_verp_delimiters` configuration parameter.

-XVxy (Postfix 2.2 and earlier: -Vxy)

As `-XV`, but uses `x` and `y` as the VERP delimiter characters, instead of the characters specified with the `default_verp_delimiters` configuration parameter.

-v Send an email report of the first delivery attempt (Postfix versions 2.1 and later). Mail delivery always happens in the background. When multiple `-v` options are given, enable verbose logging for debugging purposes.

Log mailer traffic. Use the `debug_peer_list` and `debug_peer_level` configuration parameters instead.

SECURITY

By design, this program is not set-user (or group) id. It is prepared to handle message content from untrusted, possibly remote, users.

However, like most Postfix programs, this program does not enforce a security policy on its command-line arguments. Instead, it relies on the UNIX system to enforce access policies based on the effective user and group IDs of the process. Concretely, this means that running Postfix commands as root (from `sudo` or equivalent) on behalf of a non-root user is likely to create privilege escalation opportunities.

If an application runs any Postfix programs on behalf of users that do not have normal shell access to Postfix commands, then that application **MUST** restrict user-specified command-line arguments to avoid privilege escalation.

? Filter all command-line arguments, for example arguments that contain a pathname or that specify a database access method. These pathname checks must reject user-controlled symlinks or hardlinks to sensitive files, and must not be vulnerable to TOC? TOU race attacks.

- ? **Disable command options processing for all command arguments that contain user-specified data. For example, the Postfix sendmail(1) command line MUST be structured as follows:**

```
/path/to/sendmail system-arguments -- user-arguments
```

Here, the "--" disables command option processing for all user-arguments that follow.

Without the "--", a malicious user could enable Postfix sendmail(1) command options, by specifying an email address that starts with "-".

DIAGNOSTICS

Problems are logged to syslogd(8) or postlogd(8), and to the standard error stream.

ENVIRONMENT

MAIL_CONFIG

Directory with Postfix configuration files.

MAIL_VERBOSE (value does not matter)

Enable verbose logging for debugging purposes.

Enable debugging with an external command, as specified with the `debugger_command` configuration parameter.

NAME The sender full name. This is used only with messages that have no `From:` message header. See also the `-F` option above.

CONFIGURATION PARAMETERS

The following `main.cf` parameters are especially relevant to this program. The text below provides only a parameter summary. See `postconf(5)` for more details including examples.

COMPATIBILITY CONTROLS

Available with Postfix 2.9 and later:

`sendmail_fix_line_endings` (always)

Controls how the Postfix `sendmail` command converts email message line endings from `<CR><LF>` into UNIX format (`<LF>`).

TROUBLE SHOOTING CONTROLS

The `DEBUG_README` file gives examples of how to troubleshoot a Postfix system.

`debugger_command` (empty)

The external command to execute when a Postfix daemon program is

debug_peer_level (2)

The increment in verbose logging level when a nexthop destination, remote client or server name or network address matches a pattern given with the debug_peer_list parameter.

debug_peer_list (empty)

Optional list of nexthop destination, remote client or server name or network address patterns that, if matched, cause the verbose logging level to increase by the amount specified in \$debug_peer_level.

ACCESS CONTROLS

Available in Postfix version 2.2 and later:

authorized_flush_users (static:anyone)

List of users who are authorized to flush the queue.

authorized_mailq_users (static:anyone)

List of users who are authorized to view the queue.

authorized_submit_users (static:anyone)

List of users who are authorized to submit mail with the sendmail(1) command (and with the privileged postdrop(1) helper com?

RESOURCE AND RATE CONTROLS

bounce_size_limit (50000)

The maximal amount of original message text that is sent in a non-delivery notification.

fork_attempts (5)

The maximal number of attempts to fork() a child process.

fork_delay (1s)

The delay between attempts to fork() a child process.

hopcount_limit (50)

The maximal number of Received: message headers that is allowed in the primary message headers.

queue_run_delay (300s)

The time between deferred queue scans by the queue manager; prior to Postfix 2.4 the default value was 1000s.

FAST FLUSH CONTROLS

The ETRN_README file describes configuration and operation details for the Postfix "fast flush" service.

Optional list of destinations that are eligible for per-destination logfiles with mail that is queued to those destinations.

VERP CONTROLS

The `VERP_README` file describes configuration and operation details of Postfix support for variable envelope return path addresses.

`default_verp_delimiters` (+=)

The two default VERP delimiter characters.

`verp_delimiter_filter` (-=+)

The characters Postfix accepts as VERP delimiter characters on the Postfix `sendmail(1)` command line and in SMTP commands.

MISCELLANEOUS CONTROLS

`alias_database` (see 'postconf -d' output)

The alias databases for `local(8)` delivery that are updated with "newaliases" or with "sendmail -bi".

`command_directory` (see 'postconf -d' output)

The location of all postfix administrative commands.

`config_directory` (see 'postconf -d' output)

The default location of the Postfix `main.cf` and `master.cf` con?

daemon_directory (see 'postconf -d' output)

The directory with Postfix support programs and daemon programs.

default_database_type (see 'postconf -d' output)

The default database type for use in `newaliases(1)`, `postalias(1)` and `postmap(1)` commands.

delay_warning_time (0h)

The time after which the sender receives a copy of the message headers of mail that is still queued.

import_environment (see 'postconf -d' output)

The list of environment variables that a privileged Postfix process will import from a non-Postfix parent process, or `name=value` environment overrides.

mail_owner (postfix)

The UNIX system account that owns the Postfix queue and most Postfix daemon processes.

queue_directory (see 'postconf -d' output)

The location of the Postfix top-level queue directory.

Don't rewrite message headers from remote clients at all when this parameter is empty; otherwise, rewrite message headers and append the specified domain name to incomplete addresses.

syslog_facility (mail)

The syslog facility of Postfix logging.

syslog_name (see 'postconf -d' output)

A prefix that is prepended to the process name in syslog records, so that, for example, "smtpd" becomes "prefix/smtpd".

Postfix 3.2 and later:

alternate_config_directories (empty)

A list of non-default Postfix configuration directories that may be specified with "-c config_directory" on the command line (in the case of sendmail(1), with the "-C" option), or via the MAIL_CONFIG environment parameter.

multi_instance_directories (empty)

An optional list of non-default Postfix configuration directories; these directories belong to additional Postfix instances that share the Postfix executable files and documentation with the default Postfix instance, and that are started, stopped,

FILES

/var/spool/postfix, mail queue

/etc/postfix, configuration files

SEE ALSO

pickup(8), mail pickup daemon

qmgr(8), queue manager

smtpd(8), SMTP server

flush(8), fast flush service

postsuper(1), queue maintenance

postalias(1), create/update/query alias database

postdrop(1), mail posting utility

postfix(1), mail system control

postqueue(1), mail queue control

postlogd(8), Postfix logging

syslogd(8), system logging

README_FILES

Use "postconf readme_directory" or "postconf html_directory" to locate this information.

DEBUG_README, Postfix debugging howto

ETRN_README, Postfix ETRN howto

VERP_README, Postfix VERP howto

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