NAME

virtual − Postfix virtual alias table format

SYNOPSIS

postmap /etc/postfix/virtual

postmap −q "*string***" /etc/postfix/virtual**

postmap −q − /etc/postfix/virtual <*inputfile*

DESCRIPTION

The optional **virtual**(5) alias table rewrites recipient addresses for all local, all virtual, and all remote mail destinations. This is unlike the **aliases**(5) table which is used only for **local**(8) delivery. Virtual aliasing is recursive, and is implemented by the Postfix **cleanup**(8) daemon before mail is queued.

The main applications of virtual aliasing are:

- To redirect mail for one address to one or more addresses.
- To implement virtual alias domains where all addresses are aliased to addresses in other domains.

  Virtual alias domains are not to be confused with the virtual mailbox domains that are implemented with the Postfix **virtual**(8) mail delivery agent. With virtual mailbox domains, each recipient address can have its own mailbox.

Virtual aliasing is applied only to recipient envelope addresses, and does not affect message headers. Use **canonical**(5) mapping to rewrite header and envelope addresses in general.

Normally, the **virtual**(5) alias table is specified as a text file that serves as input to the **postmap**(1) command. The result, an indexed file in **dbm** or **db** format, is used for fast searching by the mail system. Execute the command "**postmap /etc/postfix/virtual**" to rebuild an indexed file after changing the corresponding text file.

When the table is provided via other means such as NIS, LDAP or SQL, the same lookups are done as for ordinary indexed files.

Alternatively, the table can be provided as a regular−expression map where patterns are given as regular expressions, or lookups can be directed to TCP−based server. In those case, the lookups are done in a slightly different way as described below under "REGULAR EXPRESSION TABLES" or "TCP−BASED TABLES".

CASE FOLDING

The search string is folded to lowercase before database lookup. As of Postfix 2.3, the search string is not case folded with database types such as regexp: or pcre: whose lookup fields can match both upper and lower case.

TABLE FORMAT

The input format for the **postmap**(1) command is as follows:

pattern address, address, ...
: When *pattern* matches a mail address, replace it by the corresponding *address*.

blank lines and comments
: Empty lines and whitespace−only lines are ignored, as are lines whose first non−whitespace character is a ‘#’.

multi−line text
: A logical line starts with non−whitespace text. A line that starts with whitespace continues a logical line.

TABLE SEARCH ORDER

With lookups from indexed files such as DB or DBM, or from networked tables such as NIS, LDAP or SQL, patterns are tried in the order as listed below:

user@domain address, address, ...
Redirect mail for *user@domain* to *address*. This form has the highest precedence.

user address, address, ...
Redirect mail for *user@site* to *address* when *site* is equal to $**myorigin**, when *site* is listed in $**mydestination**, or when it is listed in $**inet_interfaces** or $**proxy_interfaces**.

This functionality overlaps with functionality of the local *aliases*(5) database. The difference is that **virtual**(5) mapping can be applied to non−local addresses.

@domain address, address, ...
Redirect mail for other users in *domain* to *address*. This form has the lowest precedence.

Note: *@domain* is a wild−card. With this form, the Postfix SMTP server accepts mail for any recipient in *domain*, regardless of whether that recipient exists. This may turn your mail system into a backscatter source: Postfix first accepts mail for non−existent recipients and then tries to return that mail as "undeliverable" to the often forged sender address.

RESULT ADDRESS REWRITING

The lookup result is subject to address rewriting:

- When the result has the form *@otherdomain*, the result becomes the same *user* in *otherdomain*. This works only for the first address in a multi−address lookup result.
- When "**append_at_myorigin=yes**", append "**@$myorigin**" to addresses without "@domain".
- When "**append_dot_mydomain=yes**", append "**.$mydomain**" to addresses without ".domain".

ADDRESS EXTENSION

When a mail address localpart contains the optional recipient delimiter (e.g., *user+foo@domain*), the lookup order becomes: *user+foo@domain*, *user@domain*, *user+foo*, *user*, and *@domain*.

The **propagate_unmatched_extensions** parameter controls whether an unmatched address extension (*+foo*) is propagated to the result of table lookup.

VIRTUAL ALIAS DOMAINS

Besides virtual aliases, the virtual alias table can also be used to implement virtual alias domains. With a virtual alias domain, all recipient addresses are aliased to addresses in other domains.

Virtual alias domains are not to be confused with the virtual mailbox domains that are implemented with the Postfix **virtual**(8) mail delivery agent. With virtual mailbox domains, each recipient address can have its own mailbox.

With a virtual alias domain, the virtual domain has its own user name space. Local (i.e. non−virtual) usernames are not visible in a virtual alias domain. In particular, local **aliases**(5) and local mailing lists are not visible as *localname@virtual−alias.domain*.

Support for a virtual alias domain looks like:

/etc/postfix/main.cf:
```
virtual_alias_maps = hash:/etc/postfix/virtual
```

Note: some systems use **dbm** databases instead of **hash**. See the output from "**postconf −m**" for available database types.

/etc/postfix/virtual:

virtual−alias.domain *anything* (right−hand content does not matter)
postmaster@virtual−alias.domain postmaster
user1@virtual−alias.domain *address1*
user2@virtual−alias.domain *address2, address3*

The *virtual−alias.domain anything* entry is required for a virtual alias domain. **Without this entry, mail is rejected with "relay access denied", or bounces with "mail loops back to myself".**

Do not specify virtual alias domain names in the **main.cf mydestination** or **relay_domains** configuration parameters.

With a virtual alias domain, the Postfix SMTP server accepts mail for *known−user@virtual−alias.domain*, and rejects mail for *unknown−user@virtual−alias.domain* as undeliverable.

Instead of specifying the virtual alias domain name via the **virtual_alias_maps** table, you may also specify it via the **main.cf virtual_alias_domains** configuration parameter. This latter parameter uses the same syntax as the **main.cf mydestination** configuration parameter.

REGULAR EXPRESSION TABLES

This section describes how the table lookups change when the table is given in the form of regular expressions. For a description of regular expression lookup table syntax, see **regexp_table**(5) or **pcre_table**(5).

Each pattern is a regular expression that is applied to the entire address being looked up. Thus, *user@domain* mail addresses are not broken up into their *user* and *@domain* constituent parts, nor is *user+foo* broken up into *user* and *foo*.

Patterns are applied in the order as specified in the table, until a pattern is found that matches the search string.

Results are the same as with indexed file lookups, with the additional feature that parenthesized substrings from the pattern can be interpolated as **$1**, **$2** and so on.

TCP-BASED TABLES

This section describes how the table lookups change when lookups are directed to a TCP−based server. For a description of the TCP client/server lookup protocol, see **tcp_table**(5). This feature is not available up to and including Postfix version 2.4.

Each lookup operation uses the entire address once. Thus, *user@domain* mail addresses are not broken up into their *user* and *@domain* constituent parts, nor is *user+foo* broken up into *user* and *foo*.

Results are the same as with indexed file lookups.

BUGS

The table format does not understand quoting conventions.

CONFIGURATION PARAMETERS

The following **main.cf** parameters are especially relevant to this topic. See the Postfix **main.cf** file for syntax details and for default values. Use the "**postfix reload**" command after a configuration change.

virtual_alias_maps
List of virtual aliasing tables.

virtual_alias_domains
List of virtual alias domains. This uses the same syntax as the **mydestination** parameter.

propagate_unmatched_extensions
A list of address rewriting or forwarding mechanisms that propagate an address extension from the original address to the result. Specify zero or more of **canonical**, **virtual**, **alias**, **forward**, **include**, or **generic**.

Other parameters of interest:

inet_interfaces
The network interface addresses that this system receives mail on. You need to stop and start Postfix when this parameter changes.

mydestination
List of domains that this mail system considers local.

myorigin
The domain that is appended to any address that does not have a domain.

owner_request_special
Give special treatment to **owner**−*xxx* and *xxx*−**request** addresses.

proxy_interfaces
Other interfaces that this machine receives mail on by way of a proxy agent or network address translator.

SEE ALSO

cleanup(8), canonicalize and enqueue mail
postmap(1), Postfix lookup table manager
postconf(5), configuration parameters
canonical(5), canonical address mapping

README FILES

Use "**postconf readme_directory**" or "**postconf html_directory**" to locate this information.
ADDRESS_REWRITING_README, address rewriting guide
DATABASE_README, Postfix lookup table overview
VIRTUAL_README, domain hosting guide

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