

## NAME

canonical – Postfix canonical table format

## SYNOPSIS

**postmap** /etc/postfix/canonical

**postmap** -q "string" /etc/postfix/canonical

**postmap** -q - /etc/postfix/canonical <inputfile

## DESCRIPTION

The optional **canonical**(5) table specifies an address mapping for local and non-local addresses. The mapping is used by the **cleanup**(8) daemon, before mail is stored into the queue. The address mapping is recursive.

Normally, the **canonical**(5) 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/canonical" 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 cases, the lookups are done in a slightly different way as described below under "REGULAR EXPRESSION TABLES" or "TCP-BASED TABLES".

By default the **canonical**(5) mapping affects both message header addresses (i.e. addresses that appear inside messages) and message envelope addresses (for example, the addresses that are used in SMTP protocol commands). This is controlled with the **canonical\_classes** parameter.

NOTE: Postfix versions 2.2 and later rewrite message headers from remote SMTP clients only if the client matches the **local\_header\_rewrite\_clients** parameter, or if the **remote\_header\_rewrite\_domain** configuration parameter specifies a non-empty value. To get the behavior before Postfix 2.2, specify "**local\_header\_rewrite\_clients** = static:all".

Typically, one would use the **canonical**(5) table to replace login names by *Firstname.Lastname*, or to clean up addresses produced by legacy mail systems.

The **canonical**(5) mapping is not to be confused with *virtual alias* support or with local aliasing. To change the destination but not the headers, use the **virtual**(5) or **aliases**(5) map instead.

## 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*

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*

Replace *user@domain* by *address*. This form has the highest precedence.

This is useful to clean up addresses produced by legacy mail systems. It can also be used to produce *Firstname.Lastname* style addresses, but see below for a simpler solution.

*user address*

Replace *user@site* by *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 form is useful for replacing login names by *Firstname.Lastname*.

*@domain address*

Replace other addresses in *domain* by *address*. This form has the lowest precedence.

Note: *@domain* is a wild-card. When this form is applied to recipient addresses, 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*.
- 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.

## 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. The text below provides only a parameter summary. See **postconf(5)** for more details including examples.

### **canonical\_classes**

What addresses are subject to canonical address mapping.

### **canonical\_maps**

List of canonical mapping tables.

### **recipient\_canonical\_maps**

Address mapping lookup table for envelope and header recipient addresses.

### **sender\_canonical\_maps**

Address mapping lookup table for envelope and header sender addresses.

### **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.

### **local\_header\_rewrite\_clients**

Rewrite message header addresses in mail from these clients and update incomplete addresses with the domain name in \$myorigin or \$mydomain; either don't rewrite message headers from other clients at all, or rewrite message headers and update incomplete addresses with the domain specified in the remote\_header\_rewrite\_domain parameter.

### **proxy\_interfaces**

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

### **masquerade\_classes**

List of address classes subject to masquerading: zero or more of **envelope\_sender**, **envelope\_recipient**, **header\_sender**, **header\_recipient**.

### **masquerade\_domains**

List of domains that hide their subdomain structure.

### **masquerade\_exceptions**

List of user names that are not subject to address masquerading.

### **mydestination**

List of domains that this mail system considers local.

**myorigin**

The domain that is appended to locally-posted mail.

**owner\_request\_special**

Give special treatment to **owner-xxx** and **xxx-request** addresses.

**remote\_header\_rewrite\_domain**

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.

**SEE ALSO**

cleanup(8), canonicalize and enqueue mail  
postmap(1), Postfix lookup table manager  
postconf(5), configuration parameters  
virtual(5), virtual aliasing

**README FILES**

Use "**postconf readme\_directory**" or "**postconf html\_directory**" to locate this information.  
DATABASE\_README, Postfix lookup table overview  
ADDRESS\_REWRITING\_README, address rewriting guide

**LICENSE**

The Secure Mailer license must be distributed with this software.

**AUTHOR(S)**

Wietse Venema  
IBM T.J. Watson Research  
P.O. Box 704  
Yorktown Heights, NY 10598, USA