



DNS-AWARE MAILMAN

Supplemental Documentation

Version 8.0
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Department of Veterans Affairs
VHA OI System Design & Development (SD&D)
Information Infrastructure Service (IIS)

Revision History

Documentation Revisions

The following table displays the revision history for this document. Revisions to the documentation are based on patches and new versions released to the field.

Date	Revision	Description	Author
05/01/02	1.0	Initial DNS-Aware MailMan V. 8.0 software supplemental documentation creation.	Thom Blom, Oakland OIFO
06/19/02	1.1	Revised document based on comments from developer review.	Thom Blom, Oakland OIFO
07/23/02	1.2	Final version. Revised document based on comments from final developer review.	Thom Blom, Oakland OIFO

Patch Revisions

Because this is a new release of *VISTA* MailMan, there are no patches at this time. For a complete list of patches released with this software in the future, please refer to the Patch Module on FORUM.

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- IIS Program Director—Larry Weldon
- IIS DNS-Aware MailMan Project Manager—Jean Sheppard
- Lead Developer—Gary Beuschel
- Software Quality Assurance (SQA) and Software Tester—Gurbir Singh
- Technical Writer—Thom Blom

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Orientation

Manual Organization

This supplemental documentation to the DNS-Aware MailMan V. 8.0 is organized into three major sections based on the following functional divisions for inclusion into the *VISTA* MailMan V. 8.0 documentation at a later date:

1. User Manual Information
2. Programmer Manual Information
3. Technical Manual Information

How to Use this Manual

Throughout this manual, advice and instructions are offered regarding the use of the DNS-Aware MailMan V. 8.0 and the functionality it provides for Veterans Health Information Systems and Technology Architecture (*VISTA*) and commercial off-the-shelf (COTS) software products.

This manual uses several methods to highlight different aspects of the material:

- Various symbols are used throughout the documentation to alert the reader to special information. The following table gives a description of each of these symbols:

Symbol	Description
	Used to inform the reader of general information including references to additional reading material
	Used to caution the reader to take special notice of critical information

Table 1: Documentation symbol descriptions

- Descriptive text is presented in a proportional font (as represented by this font).
- "Snapshots" of computer online displays (i.e., roll-and-scroll screen captures/dialogs) and computer source code are shown in a *non*-proportional font and enclosed within a box.
 - User's responses to online prompts will be boldface type.
 - The "<Enter>" found within these snapshots indicate that the user should press the Enter or Return key on their keyboard.
 - Author's comments are displayed in italics or as "callout" boxes.



Callout boxes refer to labels or descriptions usually enclosed within a box, which point to specific areas of a displayed image.

- All uppercase is reserved for the representation of M code, variable names, or the formal name of options, field and file names, and security keys (e.g., the XUPROGMODE key).

How to Obtain Technical Information Online

Exported file, routine, and global documentation can be generated through the use of Kernel, MailMan, and VA FileMan utilities.



Methods of obtaining specific technical information online will be indicated where applicable under the appropriate topic. Please refer to Chapter 3, "Technical Manual Information," in this manual for further information.

Help at Prompts

VISTA MailMan has online help and commonly used system default prompts. Users are strongly encouraged to enter question marks at any response prompt. At the end of the help display, you are immediately returned to the point from which you started. This is an easy way to learn about any aspect of MailMan.

To retrieve online documentation in the form of Help in VISTA MailMan:

- Enter a single question mark ("?") at a field/prompt to obtain a brief description. If a field is a pointer, entering one question mark ("?") displays the HELP PROMPT field contents and a list of choices, if the list is short. If the list is long, the user will be asked if the entire list should be displayed. A YES response will invoke the display. The display can be given a starting point by prefacing the starting point with an up-arrow ("^") as a response. For example, ^M would start an alphabetic listing at the letter M instead of the letter A while ^127 would start any listing at the 127th entry.
- Enter two question marks ("??") at a field/prompt for a more detailed description. Also, if a field is a pointer, entering two question marks displays the HELP PROMPT field contents and the list of choices.
- Enter three question marks ("???") at a field/prompt to invoke any additional Help text that may be stored in Help Frames.

Obtaining Data Dictionary Listings

Technical information about files and the fields in files is stored in data dictionaries. You can use the List File Attributes option on the Data Dictionary Utilities submenu in VA FileMan to print formatted data dictionaries.



For details about obtaining data dictionaries and about the formats available, please refer to the "List File Attributes" chapter in the "File Management" section of the "VA FileMan Advanced User Manual."

Assumptions About the Reader

This manual is written with the assumption that the reader is familiar with the following:

- *VISTA* computing environment
- VA FileMan data structures and terminology
- Microsoft Windows
- M programming language

It provides an overall explanation of the use, maintenance, and implementation of the DNS-Aware MailMan V. 8.0 software and the changes contained in Version 8.0. However, no attempt is made to explain how the overall *VISTA* programming system is integrated and maintained. Such methods and procedures are documented elsewhere. We suggest you look at the various VA home pages on the World Wide Web (WWW) for a general orientation to *VISTA*. For example, go to the Veterans Health Administration (VHA) Office of Information (OI) System Design & Development (SD&D) Home Page at the following web address:

<http://vista.med.va.gov/>

Reference Materials

Readers who wish to learn more about *VISTA* MailMan should consult the following:

- "MailMan Getting Started Manual"
- "MailMan User Manual"
- "MailMan Programmer Manual"
- "MailMan Technical Manual"
- "MailMan Installation Guide"
- "MailMan Release Notes"
- *VISTA* MailMan Home Page at the following web address:

<http://vista.med.va.gov/mailman/index.html>

This site contains other information and provides links to additional documentation.

The *VISTA* MailMan documentation is made available online, on paper, and in Adobe Acrobat Portable Document Format (PDF). The PDF documents *must* be read using the Adobe Acrobat Reader (i.e., ACROREAD.EXE), which is freely distributed by Adobe Systems Incorporated at the following web address:

<http://www.adobe.com/>



For more information on the use of the Adobe Acrobat Reader, please refer to the "Adobe Acrobat Quick Guide" at the following web address:

<http://vista.med.va.gov/iis/acrobat/index.html>



DISCLAIMER: The appearance of external hyperlink references in this manual does not constitute endorsement by the Department of Veterans Health Administration (VHA) of this Web site or the information, products, or services contained therein. The VHA does not exercise any editorial control over the information you may find at these locations. Such links are provided and are consistent with the stated purpose of this VHA Intranet Service.

Chapter 1— User Manual Information

Introduction

This supplemental documentation is intended for use in conjunction with the Domain Name Service (DNS)-Aware MailMan Version 8.0 software. It outlines the details of DNS-Aware MailMan V. 8.0 and gives guidelines on how MailMan uses DNS within *VISTA*.

This is the User Manual section of this supplemental documentation for the DNS-Aware MailMan V. 8.0 software. This information will be incorporated into the "MailMan Technical Manual" at a later date.

The intended audience of this document is all key stakeholders. The primary stakeholder is the *VISTA* Information Infrastructure Service (IIS). Additional stakeholders include all VA facilities that utilize *VISTA* MailMan, System Design & Development (SD&D), and Veterans Health Information Systems and Technology Architecture (*VISTA*) sites, Information Resource Management (IRM), National *VISTA* Support (NVS), and *VISTA* Data Systems and Integration (VDSI).

Purpose

The purpose of this project is to expand *VISTA*'s MailMan software to include Domain Name Service (DNS) functionality.

In the current environment, IP addresses within the VA are in constant flux. For example, as sites continue migrating to 10.x addressing, many addresses are changing. Static mappings in *VISTA* files have made IP changes difficult since the changes had to be manually implemented at each site. *VISTA* has a tool that can resolve domain names to IP addresses via DNS.

The DNS is an Internet standard (RFC 1034), a well-established method for mapping computer names to Internet Protocol (IP) addresses. The national VHA DNS system is already in place, providing name resolution support for services such as web browsers. It is supported and maintained by the national VHA OI DNS Administrators.

Advantages of DNS:

- DNS removes the need to change static mappings by hand.
- Sites only need to update one DNS Server to get the change out to other sites, because a change in the DNS will automatically be communicated to all DNS Servers.
- DNS handles address changes effortlessly. Updates to IP address mappings can be made much more easily.
- DNS provides quick universal access to changed and new addresses.
- DNS offers dynamic translation of domain names to IP addresses.



For more information on DNS, please refer to the "National DNS Support in *VISTA*" document at the following web address:

<http://vista.med.va.gov/iis/docs/dns/DNSandVista.htm>

Scope

The scope of this project is to make *VISTA* MailMan Domain Name Service (DNS)-aware. The DNS-Aware MailMan V. 8.0 software will enhance support and save person-hours as follows:

- DNS-Aware MailMan V. 8.0 creates automatic replication of IP address changes to every *VISTA* MailMan system as a result of only one central database edit (i.e., performs DNS lookups). This architecture is currently used to update both Intranet and Internet addresses throughout the world within a matter of hours.
- The DNS-Aware MailMan V. 8.0 enhancement will save person-hours for the IRM staff at every VA site, since they will no longer have to manually maintain the IP address in the DOMAIN file (#4.2).

Chapter 2— Programmer Manual Information

This is the Programmer Manual section of this supplemental documentation for the DNS-Aware MailMan Version 8.0 software. This information will be incorporated into the "MailMan Programmer Manual" at a later date.

The intended audience for this chapter is the *VISTA* application software developers. However, it can also be helpful to others in Information Resource Management (IRM), National *VISTA* Support (NVS), and *VISTA* Data Systems and Integration (VDSI).

This chapter briefly discusses the API related to the DNS functionality newly available with MailMan V. 8.0. It does not include a list or description of any other APIs available with MailMan V. 8.0.



For a complete list and description of all MailMan V. 8.0 APIs, please refer to the "MailMan Programmer Manual."

DNS-Aware Application Programmer Interfaces (API)

DNS-Aware functionality available with MailMan V. 8.0 software uses the Kernel DNS Lookup API (MAIL^XLFNSLK) provided in Kernel Patch XU*8*142. This M-based Kernel API calls a DNS to convert the domain name into an IP address. The IP address of the DNS is in the DNS IP field (#51) in the KERNEL SYSTEM PARAMETERS file (#8989.3). This call is a Supported IA.



For more information on this Kernel API, please refer to the MAIL^XLFNSLK Home Page at the following web address:

<http://vista.med.va.gov/kernel/apis/mail^xlfnslk.htm>



For information on how to obtain a list of Integration Agreements (IAs) related to MailMan and Kernel, please refer to the "Integration Agreements (IA)" topic in the "External Relations" topic in Chapter 3, "Technical Manual Information," in this manual.

Chapter 3— Technical Manual Information

This is the Technical Manual section of this supplemental documentation for the DNS-Aware MailMan Version 8.0 software. This supplemental documentation highlights certain aspects of the technical information relating to MailMan V. 8.0. This information will be incorporated into the "MailMan Technical Manual" at a later date.

The intended audience for this chapter is Information Resource Management (IRM). However, it can also be helpful to others in System Design & Development (SD&D), the Program Office, National VISTA Support (NVS), and VISTA Data Systems and Integration (VDSI).

Implementation and Maintenance

The DNS-Aware MailMan V. 8.0 software is a VISTA Kernel Installation and Distribution System (KIDS) software release. This version of MailMan replaces any previous version of VISTA's MailMan software loaded on your system.

Implementation

Installation Instructions

DNS-Aware MailMan V. 8.0 software should be installed with users off the system. The installation time should not take more than a few minutes.



For specific installation instructions for the DNS-Aware MailMan V. 8.0, please refer to the KIDS build (i.e., XM8.KID) available in the ANONYMOUS directories.



For specific software requirements and the minimum VISTA software packages and patches that are required with the DNS-Aware MailMan V. 8.0 software, please refer to the "Software Requirements" topic under the "External Relations" topic that follows in this chapter.

Post Installation Instructions

IRM personnel at all sites should invoke VA FileMan using D Q^DI to review/modify the following field in the MAILMAN SITE PARAMETERS file (#4.3):

- **DNS AWARE (#8.22)**—IRM should set this field to Yes to make MailMan DNS-Aware. MailMan will use the IP addresses in the domain scripts, but if they fail or don't exist, MailMan will use DNS to ascertain other IP addresses to try. MailMan will replace failed script IP address with the successful DNS IP address.

Recommendations for Routine Mapping

Routine mapping is at the discretion of the systems manager. The RTHIST routines provide a method for each site to determine the extent to which certain routines are utilized.

DSM Sites: If your site maps routines, then rebuild your map set. As of MailMan V. 8.0, Many routines have become obsolete and should be removed from the map set. The following is the *recommended* list of routines to map, should your site choose to map routines:

Minimum List	Additional List
XM XMC1 XMJ* XMR XMS	XMC1A,XMC1B XMK* XML XMR1,XMR2,XMR3* XMS1,XMS2,XMS3 XMT* XMVVITAE XMXADDR* XMXSEC* XMXUTIL*

Table 2: Routine mapping recommendations for MailMan V. 8.0

Controlled Procedures

All files, fields, and routines in this package are considered to perform controlled procedures and *cannot* be modified.

Menu Structure

MailMan is accessed from three sets of menus:

- **XMMGR**—The Manage Mailman menu includes options and utilities that are useful for system management. The options for maintaining the local mail system are also contained here.



For more information on the XMMGR menu options, please refer to the "MailMan Management Options" that follows in this chapter.

- **XMNET**—The Network Management Menu includes options that are used for managing the network side of MailMan. While the local system requires only some initial setup, the network side must be periodically monitored. The options for displaying the queues in various fashions on the XMNET menu are useful for this purpose. The network sometimes needs to be flushed; options for polling and queuing are provided for this purpose. Sometimes, non-delivery of network mail requires investigation; the options for testing a network device and playing scripts are useful in these instances.



For more information on the XMNET menu options, please refer to the "Exported Options" topic in this chapter and the "MailMan Network Management Reference Guide."

- **XMUSER**—The MailMan Menu includes the commonly used functions of electronic mail. It also contains some very powerful tools for the individual using MailMan. The most commonly used functions are at the top of the hierarchical structure. Help features are contained in a separate submenu, as are the tools. XMUSER can be used independently and can be installed on menus of other packages for distribution.



For more information on the XMUSER menu options, please refer to the "Exported Options" topic in this chapter and the "MailMan Getting Started Manual" and the "MailMan User Manual."



In order to acquire a good idea of the various functions and their power, users should also consult the "MailMan Programmer Manual." In addition, online Help Frames are also available.

The Postmaster

The MailMan installation automatically creates a special user (DUZ=.5) called Postmaster and Postmaster mail baskets. Persons assigned to the management of MailMan and Network mail at a site must be entered in the MAILBOX file (#3.7) as surrogates of the Postmaster and given READ and WRITE access privileges.

Memory Constraints

There are no special memory constraints, other than sites having sufficient space to allow for normal global growth.

Special Operations

The DNS-Aware MailMan V. 8.0 software does not require any special operations other than the normal backup and recovery operations.

Maintenance

System Maintenance

Disk Space Management

What areas in MailMan can be investigated to improve disk space management?

1. The tools available to IRM to help manage disk space are located under the Disk Space Management menu option (i.e., XMMGR-DISK-SPACE-MANAGEMENT), which is located on the Manage Mailman menu (i.e., XMMGR), as shown below:

```
Select Manage Mailman Option: disk Space Management

    AI x-Ref Purge of Received Network Messages
    Ask users with many messages to do maintenance
    Clean out waste baskets
    IN Basket Purge
    Large Message Report
    Message statistics
    Purge a message
    Purge Messages by Origination Date
    Purge Unreferenced Messages
    Recover Messages into User's IN Basket ...
    Terminate mail user suggestions
    Terminate many mail users
    Terminate one mail user

Select Disk Space Management Option:
```

Figure 1: Disk Space Management menu options

Let's look at the tools and what they do.



For more information on the following options, please refer to the "Exported Options" topic in this chapter or the individual option descriptions in the OPTION file (#19).

- a. **AI x-Ref Purge of Received Network Messages option (i.e., XMMGR-PURGE-AI-XREF)**—The AI cross-reference exists to track messages received from remote sites. It is used to attach replies from remote sites to the correct local message. It prevents the receipt of duplicate messages from remote sites. There is one entry per message. This option should be scheduled to run once a year to reduce its size. Otherwise, it continues to grow.
- b. **Ask users with many messages to do maintenance option (i.e., XMMGR-DISK-MANY-MESSAGE-MAINT)**—This option looks for users with lots of messages in their mailbox and sends them a message suggesting that they might want to consider pruning some of them. Some users might not respond to the suggestion, but others might. This option should be scheduled to run every few months, if disk space is a problem.
- c. **Clean out waste baskets option (i.e., XMCLEAN)**—This option deletes messages from users' wastebaskets. This option should be scheduled to run every day, before the XMAUTOPURGE option.

- d. **IN Basket Purge option (i.e., XMMGR-IN-BASKET-PURGE)**—This option targets for later deletion, messages that haven't been read in a while. It targets messages in the "IN" basket or in all baskets, depending on how it's run. Users receive a message with a list of the messages that are targeted for deletion, and what they can do to avoid deletion. This option should be scheduled to run once a month, if disk space is a problem.
- e. **Large Message Report option (i.e., XMMGR-LARGE-MESSAGE-REPORT)**—This option reports on large (over a certain number of lines) messages. It does not say who owns them, just says that they exist. This option should be used on an as-needed basis, if disk space is a problem. Its effectiveness depends upon the zeal with which IRM uses the report to investigate and purge large unnecessary messages.
- f. **Message statistics option (i.e., XMSTAT)**—This option reports how many messages each user has in his mailbox. This option should be used on an as-needed basis, if disk space is a problem. Its effectiveness depends upon the zeal with which IRM uses the report to confront message hoarders and encourage them to prune their messages.
- g. **Purge a message option (i.e., XMMGR-PURGE-MESSAGE)**—This option purges one message. Can be used to purge offensive messages or large messages identified by the 'Large Message Report'. This option should be used on an as-needed basis.
- h. **Purge Messages by Origination Date option (i.e., XMPURGE-BY-DATE)**—This option purges messages older than a certain date. This option should be used on an as-needed basis, if disk space is a problem. This option is extremely effective in reducing the size of the MESSAGE file 3.9.
- i. **Purge Unreferenced Messages option (i.e., XMPURGE)**—This option purges messages that aren't in anyone's mailbox. This option may be run interactively, but it should not be scheduled.
- j. **Automatic Purge of MailMan Messages option (i.e., XMAUTOPURGE)**—This option purges messages that aren't in anyone's mailbox. (This option is not located on any menu.) This option should be scheduled to run every day, after option XMCLEAN finishes.
- k. **Terminate mail user suggestions option (i.e., XMMGR-TERMINATE-SUGGEST)**—This option reports on users who *perhaps* should have their mail access terminated. Users are included in the report if they were terminated but allowed to keep their mailbox, or haven't signed on in a while. This option should be run at least once a year. This report will probably turn up many users who should not have mailboxes. It is likely that these users have new messages. New messages are only deleted by the 'Purge Messages by Origination Date' option. The report page-breaks on Service/Section. If sites regularly ran this report and gave service/section heads the part of the report applicable to their service/section, it is expected that users (and their many messages) would be identified for deletion.
- l. **Terminate many mail users option (i.e., XMMGR-TERMINATE-MANY)**—This option goes through the MAILBOX global and removes any mailbox if the user:
 - Is not in the NEW PERSON file (#200).
 - Has no Access code and was not terminated.
 - Has no Access code and was terminated without mailbox retention.

- Has an Access code and primary menu, but no Verify code, AND:
 - Has never signed on, since being added before a cutoff date

OR

- Last signed on before a cutoff date.

However, if the user meets one of the last two conditions above, but has a forwarding address, the user's mailbox will not be removed. The fact will be noted on the report, and the user should be investigated further.

This option should be run once a year. It is expected that this option will find and delete users (and their messages) who should absolutely not be on the system. To avoid a nasty surprise, this option should be run in test mode first, to see which users would be terminated.

- m. **Terminate one mail user option (i.e., XMMGR-TERMINATE-ONE)**—This option manually terminates users suggested by the Terminate mail user suggestions option or otherwise. This option should be used on an as-needed basis.
 - n. **Check MailMan Files for Errors option (i.e., XMUT-CHKFIL)**—This option checks both the MAILBOX file (#3.7) and MESSAGE file (#3.9) for errors and fixes most errors that it finds. This option should be scheduled to run once a month, on a weekend, at a time when neither XMCLEAN nor XMAUTOPURGE are running.
2. From time-to-time, a National Online Information Sharing system (NOIS) will pop up on MailMan complaining about the number of messages in a server basket. Such NOIS are always referred to the *VISTA* software package that "owns" the server. The package that owns the server is responsible for deleting messages from its server basket, because there is no way for MailMan to know when a server message has been processed and is no longer needed. Anyone interested in checking whether a package is cleaning up after itself should assume the identity of the Postmaster, and list the contents of baskets beginning with "S." By looking at the dates and/or quantity of the messages, one should be able to tell whether the package owning the server is cleaning up after itself.
3. Are there other areas of MailMan that should be considered when trying to reduce the size of globals? Here are some ideas:
- a. Perform a VA FileMan search to identify mail groups that haven't been used in a while. (The DATE 'LAST REFERENCED' field can be used for this purpose.) Consider deleting them.
 - b. Messages belonging to SHARED,MAIL are never deleted by MailMan. All of the purges ignore them. It is probably a good idea to go through the messages belonging to SHARED,MAIL once a year to delete the ones which are no longer needed. However, this is easier said than done!

The following tables show mandatory and suggested system management tasks for proper maintenance of MailMan. These tasks increase utilization of software functionality and system response time. They also reduce the amount of disk space used and minimize system errors.

Mandatory Task Requirements

Task	Scheduled Time	Frequency
XMCLEAN	Off Hours	Daily
XMAUTOPURGE	One Hour After XMCLEAN	Daily
XMUT-CHKFIL	Off Hours	Monthly

Table 3: Mandatory maintenance task requirements table

XMAUTOPURGE is generally run after XMCLEAN (the "WASTE" basket cleaner) for automatic purging (see Table 3 above). It purges messages that are not pointed to by any message recipients or senders. The XMPURGE-BY-DATE option can also be run to purge messages that have an origination date older than the date used to initiate the process (see Table 4 below). Users are notified by a Postmaster bulletin of the proposed purging date, so that they can save important messages. These are the only options that actually KILL entries in the MESSAGE file (#3.9).

Suggested Task Requirements

Task	Scheduled Time	Frequency
XMPURGE-BY-DATE	Off Hours	According to Site Policy
XMMGR-LARGE-MESSAGE-REPORT	Off Hours	Monthly
XMMGR-DISK-MANY-MESSAGE-MAINT	Off Hours	Monthly
XMMGR-PURGE-AI-XREF	Off Hours	Quarterly
XMMGR-RESPONSE-TIME-COMPILER	Off Hours	Daily
XMMGR-RESPONSE-TIME-TOGGLER		Daily

Table 4: Suggested maintenance task requirements table

The Postmaster

Persons performing Postmaster management tasks should first sign on as themselves and then assume the Postmaster's identity.

- Mail Baskets**—The Postmaster has mail baskets and can send and receive messages like any other user. In addition to the "IN" and "WASTE" baskets, the "ARRIVING" basket is also automatically created for the Postmaster. All mail for a site automatically comes to the "ARRIVING" basket from which it is then routed to the individual recipients. The Postmaster can examine the header information of messages but *cannot* read the text of the message.

- **Network Transmission Failures**—Network transmission failures are reported to the Postmaster via bulletins to the Postmaster's "IN" basket. These bulletins should be purged once the problems have been resolved.
- **Domain Baskets**—The Postmaster has special Domain baskets (e.g., Birmingham, San Francisco, etc.), which are numbered greater than 1000 (1000 + IEN of the Domain in the DOMAIN file [#4.2]) and are used for the transmission of Network Mail. Network Mail to a site goes to the appropriate Domain basket (queue) prior to transmission. Occasionally, the Postmaster may need to stop networked message from going out. This is done by:
 1. Deleting the message number from the Postmaster's Domain basket. If a message is deleted from a basket, it is deleted from a queue.
 2. Using TaskMan to kill the job scheduled to transmit the message to the Domain.
- **Broadcast Messages**—The Postmaster also may need to broadcast messages to users. To do this:
 1. Send the message to the Postmaster.
 2. Assume the identity of the Postmaster.
 3. Copy the message into a new message and edit any information that is not appropriate for broadcasting.
 4. At the "Send to:" prompt, enter an asterisk ("*").



The XMSTAR security key gives users the ability to broadcast messages to all local mail users by entering an asterisk ("*") at the "Send to:" prompt.

The XMSTAR LIMITED security key gives users the ability to broadcast messages to a subset of local mail users by entering an asterisk ("*") at the "Send to:" prompt.

Bulletins

The DNS-Aware MailMan V. 8.0 generates the following Bulletins.

Bulletin	Description
XM BANNER MESSAGE	This bulletin is a notification message. It might be generated when a user changes his banner.
XM DATE PURGE WARNING	This bulletin is a warning message. It is broadcast to all users whenever the XMPURGE-BY-DATE option is used to purge messages older than a certain date.
XM DOMAIN ADDED	This bulletin is a notification message. It is sent to alert IRM of a new domain.
XM FILTER FWD ADDRESS DELETE	This bulletin is a notification message. It is sent when MailMan notices that a user has an invalid "forward to" address in one of the filters. The "forward to" address is deleted, and the user is notified.

Bulletin	Description
XM FWD ADDRESS CHANGE	This bulletin is a notification message. It is generated when a user's forwarding address changes. It should be sent to IRM or anyone with a need to know about a user's forwarding address.
XM FWD ADDRESS CHECK	This bulletin is a notification message. It is sent when a user's forwarding address changes. It is sent to the forwarding address. If it gets through, fine. If it doesn't, then the sender of the bulletin is notified. The sender is the Postmaster. Field #7.01 in the MAILMAN SITE PARAMETERS file (#4.3) controls whether the message is also sent to the Postmaster.
XM FWD ADDRESS DELETE	This bulletin is a notification message. It is sent when MailMan notices that a user has an invalid forwarding address. The forwarding address is deleted, and the user is notified.
XM GROUP EDIT NOTIFY	<p>This bulletin is a notification message. It is sent to a mail group's organizer and coordinator whenever someone other than themselves adds users to:</p> <ul style="list-style-type: none"> • A public mail group that doesn't allow users to self-enroll. • Any private mail group. <p>The purpose is to let them know of the change.</p>
XM GROUP ERROR	<p>This bulletin is an error message. It notifies selected users of problems with a mail group. For example, such problems may include:</p> <ul style="list-style-type: none"> • Group contains a circular reference to a group. • Local member should not be receiving mail (no access code). • Remote member has invalid or ambiguous or closed domain. • Distribution list domain is invalid or ambiguous or closed.
XM IN BASKET PURGE REQUEST	This bulletin is a notification message. It is sent by TEST^XMUPIN.
XM IN BASKET PURGE WARNING	This bulletin is a warning message sent by the XMMGR-IN-BASKET-PURGE option.
XM SEND ERR MSG	This bulletin is a notification message. It is sent to the message originator when a remote site rejects an entire message for whatever reason (e.g., too many lines).
XM SEND ERR RECIPIENT	This bulletin is an error message. The MailMan network processor issues this bulletin when the remote node rejects a message recipient. The rejection message of the remote node is included in the bulletin.

Bulletin	Description
XM SEND ERR REMOTE MSG ID	This bulletin is an error message. It is sent when a remote message ID node is not in a message (i.e., INCOMING MESSAGE ID field [#9] in the MESSAGE file [#3.9]). For example, while trying to send a response to a message that originated from a remote site, we noticed that the "remote message id" is missing from the original message. Without this ID, we can't tell the site to which message we are responding.
XM SEND ERR SERVER MSG	This bulletin is an error message. It is fired when a task tries to send a message to a server, but the message is not in the MESSAGE global.
XM SEND ERR TRANSMISSION	This bulletin is an error message. It is sent when MailMan is unable to transmit to a site after it has tried all of the available scripts.
XM SUPER SEARCH	<p>This bulletin is a notification message. Every time a super search is conducted, this bulletin is sent to alert those responsible for ensuring that the capability is <i>not</i> misused.</p> <p> For more information on the Super Search functionality, please refer to the XM SUPER SEARCH option in the "Options—Listed by Name" topic in this chapter.</p>
XM TOO MANY MESSAGES	This bulletin is a notification message. It is sent by the XMMGR-DISK-MANY-MESSAGE-MAINT option to ask users to terminate excess messages.
XMNEWUSER	This bulletin is a notification message. It is sent whenever a new user is added to the NEW PERSON file (#200). This bulletin is used by Kernel, <i>not</i> by MailMan.
XMRDACK	This bulletin is a notification message. It informs the sender of a message that a recipient has read the message. The sender of the message must have set the CONFIRMATION REQUESTED flag to ON when the message was created.
XMVALBAD	This bulletin is a notification message. It is fired whenever a remote MailMan domain attempts to establish a connection with this domain and the validation numbers do not properly match.
XM_TRANSMISSION_ERROR	This bulletin is an error message. It is fired off when the background delivery process detects an error. The message or response it is supposed to deliver does not exist. MailMan just moves on to the next message.

Table 5: Bulletins exported with the DNS-Aware MailMan V. 8.0 software

Management Features in MailMan V. 8.0

This topic describes the various maintenance requirements, technical solutions, and the following improvements introduced with MailMan V. 8.0.

This information is directed mainly at the site's Information Resource Management (IRM) personnel.

MailMan V. 8.0 is DNS-Aware

MailMan V. 8.0 is now DNS-Aware. It uses Kernel's MAIL^XLFNSLK API to retrieve IP addresses. Thus, it is no longer necessary to manually update the IP addresses in the DOMAIN file (#4.2). The IP address fields still remain in File #4.2 and MailMan continues to use them. However, if they don't work, MailMan uses the Kernel API to retrieve a list of valid IP addresses. When MailMan finds one that works, MailMan replaces the non-working IP address with the working one.

In order to activate DNS awareness, the new DNS AWARE field (#8.22) in the MAILMAN SITE PARAMETERS file (#4.3) must be set to Yes.

Also, routine ^XLFNSLK must exist, and the DNS IP field (#51) in the KERNEL SYSTEM PARAMETERS file (#8989.3) must be properly filled in with an IP address.

Transmission Scripts and TCP/IP Connections

For TCP/IP connections, MailMan can now build transmission scripts on the fly. For transmission scripts whose TYPE is "SMTP," "TCPCHAN," or null, if the transmission script has no records (in the TEXT field [#2], in the TRANSMISSION SCRIPT multiple) in the DOMAIN file (#4.2), MailMan creates the script if the following new fields in the MAILMAN SITE PARAMETERS file (#4.3) are filled in:

- TCP/IP COMMUNICATIONS PROTOCOL (#8.23)—MailMan uses this field to determine which protocol shall be used for TCP/IP. It points to the COMMUNICATIONS PROTOCOL file (#3.4).
- TCP/IP TRANSMISSION SCRIPT (#8.24)—MailMan uses this field to determine which script shall be used for TCP/IP. It points to the TRANSMISSION SCRIPT file (#4.6).

Transmission Priority Flexibility

Messages in transmit queues can now be designated as low priority, as well as high priority. If a message gets stuck in a transmit queue and is holding up the rest of the queue for whatever reason, MailMan will make that message a low priority message, so that all the other messages are transmitted ahead of it. The Postmaster can also make these priority changes. In the message queue, high-priority messages are now marked with "^", instead of "\$". Low priority messages are marked with "v". The Postmaster can now change the transmit priority at the message level (at the "Message action: Ignore//" prompt). As at the basket level, the command to use is "X".



In a user basket, the "X" at the message level is a command to unload a PackMan message or KIDS build. In a remote transmit queue, the "X" changes the transmit priority. The difference is the context, and writers of MailMan front-ends should take note!

Reformatted Date/Times

MailMan date/times are now in a standard format, produced by Kernel's \$\$FMTE^XLFDT(datetime,"2Z") API. This call is a Supported IA. For example:

Date/Time Data	MailMan V. 7.1 Date/Time Format (Old)	MailMan V. 8.0 Date/Time Format (New)
3020803.153204	03 Aug 02 15:32	08/03/02@15:32

Table 6: MailMan V. 8.0 New Date/Time format

This change is also carried through to all MailMan APIs that return date/time in MailMan format.



For more information on this Kernel API, please refer to the \$\$FMTE^XLFDT Home Page at the following web address:

<http://vista.med.va.gov/kernel/apis/x-fmte^xlfdt.htm>



For information on how to obtain a list of Integration Agreements (IAs) related to the MailMan and Kernel, please refer to the "Integration Agreements (IA)" topic in the "External Relations" topic in Chapter 3, "Technical Manual Information," in this manual.

Reformatted Remote Message IDs

MailMan remote message IDs now include the message date, to ensure that if you are told that a message is a duplicate of a previously received message, it really is. Sites will no longer have problems sending messages from a production account to a test account that was created by "mirroring" the production account. The remote message ID is now the message number followed by a period, followed by the 7-digit VA FileMan message creation date. For example:

MailMan V. 7.1 Remote Message ID (Old)	MailMan V. 8.0 Remote Message ID (New)
34561234@FORUM.VA.GOV	34561234.3020803@FORUM.VA.GOV

Table 7: MailMan V. 8.0 New Remote Message ID format

Enhanced Routines

The ^XMC*, ^XMR*, ^XMS* suite of routines, which are responsible for scheduling, transmitting to, and receiving messages from remote sites, have been completely overhauled to make them easier to understand and easier to maintain.

Improved Name Field Display

MailMan will no longer display user names by taking them directly from the .01 field of the NEW PERSON file (#200). The Name Standardization \$\$NAMEFMT^XLFFNAME API is used instead. Thus, the names of people whose last names, for example, contain periods, apostrophes, or spaces, are properly displayed. For example:

MailMan V. 7.1 Name Field Display (Old)	MailMan V. 8.0 Name Field Display (New)
STIVES	ST. IVES
OMALLEY	O'MALLEY
VANDYKE	VAN DYKE

Table 8: MailMan V. 8.0 New Name Field Display

Broadcast Messages with Responses

Messages with responses may no longer be forwarded to broadcast to all users. Such messages may have important information in the responses, and as we all know, responses are not auto-forwarded to remote sites for users with auto-forward addresses. Users who attempt to broadcast messages with responses will be encouraged to copy the message and its responses into a new message, which can be broadcast.

Message Line Restriction Override

Incoming PackMan and KIDS messages are no longer subject to the restriction of the NETWORK - MAX LINES RECEIVE field (#8.31) in the MAILMAN SITE PARAMETERS file (#4.3). However, other kinds of messages continue to be subject to that restriction.

Requeued Task Bug Fix

If a task transmitting messages to another site fails and has to be requeued, it really is requeued. Before, that wasn't true. Previously, the failing task queued up a new task to take its place, and then the failing task stopped.

MailMan Management Options

The Manage Mailman menu [XMMGR] contains options that allow the system manager to fully implement and manage the MailMan system by manipulating the BULLETIN (#3.6), MAILBOX (#3.7), MAIL GROUP (#3.8), and MESSAGE (#3.9) files.

The following options can be found on the Manage Mailman menu:

```
Select Systems Manager Menu Option: Manage Mailman

      Check MailMan Files for Errors                               [XMUT-CHKFIL]
      Create a Mailbox for a user                                 [XMMGR-NEW-MAIL-BOX]
      Disk Space Management ...                                  [XMMGR-DISK-SPACE-MANAGEMENT]
      Group/Distribution Management ...                          [XMMGR-GROUP-MAINTENANCE]
      Local Delivery Management ...                              [XMMGR-MESSAGE-DELIVERY-MGT]
      MailMan Site Parameters                                    [XMKSP]
      Network Management ...                                     [XMNET]
      New Features for Managing MailMan                         [XMMGR-HELP]
      Remote MailLink Directory Menu ...                        [XMMGR-DIRECTORY-MAIN]
      Super Search Message File                                 [XM SUPER SEARCH]

Select Manage Mailman Option:
```

Figure 2: Manage Mailman menu [XMMGR] options



The Network Management options reached from this menu are summarized in the "Exported Options" topic in this chapter and discussed in depth in the "MailMan Network Reference Manual."

Routines

This section provides information related to all executable XM* routines exported with the DNS-Aware MailMan V. 8.0. Do *not* delete any XM* routines.

 All routines have been modified or are new with the DNS-Aware MailMan V. 8.0 software.

All DNS-Aware MailMan V. 8.0 routines are prefixed with the namespace XM. DNS-Aware Mailman V. 8.0 is composed of and exports approximately 245 executable routines.

The second line of these routines looks like:

```
<tab>;;8.0;MailMan;;Jun 28, 2002
```

 Other routine information, such as the Routine Size Histogram, the Routine %Index, etc., can be generated through the use of Kernel Utilities.

Routine	Description
XM	MailMan Main Driver.
XMA	Read Mail Application Programmer Interface (API).
XMA0	Print Message APIs.
XMA03	Resequene Messages API.
XMA11	Edit Message "Information Only" API.
XMA11A	Send/Answer a Message API.
XMA1B	Save/Delete Message APIs.
XMA1C	Server Basket APIs.
XMA2	Create Message Stub API.
XMA21	Address Lookup APIs.
XMA21C	Input Transform (3.7, .3) Mail Name.
XMA2B	Send Binary Large Object (BLOB).
XMA2R	Reply to/Answer a Message API.
XMA3	Purge Unreferenced Messages (XMCLEAN, XMAUTOPURGE).
XMA30	XMA3 (continued).
XMA32	Purge Messages by Date.
XMA32A	XMA32 (continued).
XMA7	User Information.
XMAD2	Basket Lookup/Create API.
XMADGO	Start Background Message Delivery.

Routine	Description
XMAFTP	TCPIP-FTP Options.
XMAH	List Message Responses API.
XMAH1	Reply to a Message API.
XMAI2	Send a Message if too Many Messages.
XMAPBLOB	Display BLOBs.
XMAPHOST	Print to Message (P-MESSAGE).
XMASEC	Secure PackMan Message.
XMB	Send Bulletin APIs.
XMBBLOB	Add BLOBs to Bulletin.
XMBGRP	Mail Group APIs.
XMC	Network Programmer Options Menu.
XMC1	Script Interpreter.
XMC11	DECNET Communications Protocol Tools.
XMC1A	Script Interpreter (Look).
XMC1B	Script Interpreter (Open/Close). This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCB	Batch Message Transmission. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCD	Communications Diagnostics.
XMCDNT	NT Communications Diagnostics (shareware).
XMCE	Edit Scripts. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCP	Poll Domains. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCQ	Transmit Queue Status Report. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCQA	Transmit Queue Status Report (others). This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCQH	Transmit Queue History. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCSIZE	Message Statistics Tool (shareware).
XMCTLK	TalkMan.
XMCTRAP	Error Trap.
XMCU1	Encode/Decode String APIs.
XMCX	Play a Script/Queue Transmit Task. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMCXT	View Transcripts. This routine is new with the DNS-Aware MailMan V. 8.0 software.

Routine	Description
XMCXU	Select Domains/Scripts. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMD	Send/Forward/Add Text to a Message APIs.
XMDIR1	Load Veterans Affairs Central Office (VACO) Directories.
XMDIR1A	Load VACO Directories (WANG).
XMDIR1B	Load VACO Directories (Nationwide Office Automation for Veterans Affairs [NOAVA]).
XMDIRQST	Request Email Directory.
XMDIRRCV	Receive Email Directory.
XMDIRSND	Send Email Directory.
XMFAV	Fax.
XMHIG	Mail Group Information.
XMHIU	User Information.
XMJBL	List Contents of User's Mailbox.
XMJBM	Manage Mail in Mailbox.
XMJBM1	XMJBM (continued).
XMJBN	Access New Mail in Mailbox.
XMJBN1	XMJBN (continued).
XMJBU	Basket Utilities.
XMJDIR	MailMan's DIR.
XMJERR	Error Handling.
XMJMA	Interactive Answer.
XMJMBULL	Manual Bulletin.
XMJMC	Copy Message.
XMJMCODE	Message Encryption/Decryption.
XMJMD	Later Messages.
XMJMF	Find Messages Based on Criteria.
XMJMF1	XMJMF (continued).
XMJMF2	XMJMF (continued).
XMJMFA	Find Message: Subject Starts with.
XMJMFB	Find Message: Multiple Conditions.
XMJMFC	Find message in the MESSAGE file (#3.9).
XMJML	List Messages in Basket (can't read).
XMJMLN	List/Read New Messages.
XMJMLR	List/Read Messages in Basket.

Routine	Description
XMJMLR1	XMJMLR (continued).
XMJMOI	Options at Ignore Prompt.
XMJMOI1	XMJMOI (continued).
XMJMOIE	Edit Message that User has Sent to Self.
XMJMOR	Message Range Actions.
XMJMORX	Message Range Actions for ^TMP Message Lists.
XMJMORX1	XMJMORX (continued).
XMJMP	Print, Back Up Messages.
XMJMP1	XMJMP (continued).
XMJMP2	XMJMP (continued).
XMJMQ	Query Recipients (Q, QD, and QN).
XMJMQ1	XMJMQ (continued).
XMJMR	Interactive Reply.
XMJMR1	XMJMR (continued).
XMJMRO	Options at "reply" Transmit Prompt.
XMJMS	Interactive Send.
XMJMSA	Send Anonymous User Suggestion Message.
XMJMISO	Options at "send" Transmit Prompt.
XMJMT	Interactive Send to Whom.
XMKP	Address and Post Message.
XMKP1	XMKP (continued).
XMKPL	Manage the Local Mail Posting Process.
XMKPLQ	Post Local Messages to Correct Queues.
XMKPO	Post, Other Messages.
XMKPR	Post, Remote-network Messages. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMKPR1	XMKPR (continued). This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMKPRD	DNS Interface. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XML	MailMan Physical Link.
XML1CRC	Operating System (OS) Check Sum.
XML4CRC	Block Mode Protocol.
XML4CRC1	XML4CRC (continued).
XMLPC	Protocol for PC Platforms.
XMLSWP	Sliding Window Protocol.

Routine	Description
XMLSWP0	XMLSWP (continued).
XMLSWP2	XMLSWP (continued).
XMLTCP	TCP/IP to MailMan.
XMM1	Modem Control for VADIC 3451, MICROCOM PCS.
XMM2	Modem Control for CERMATEK INFO MATE 212A.
XMNTEG	XTSUMBLD KERNEL—Package Checksum Checker.
XMNTEG0	XMNTEG (continued).
XMP	PackMan.
XMP2	PackMan Print/Install/Summarize/Compare.
XMP2A	PackMan Install.
XMP3	PackMan Build Backup Message.
XMPC	PackMan Compare.
XMPG	PackMan Global List/Load.
XMPH	PackMan Load Routines/Print Message.
XMPSEC	PackMan Security.
XMR	Simple Mail Transfer Protocol (SMTP) Receiver (RFC 821).
XMR0BLOB	BLOB Receive.
XMR1	SMTP Receiver HELO/MAIL/RCPT (RFC 821).
XMR2	SMTP Receiver (non-standard).
XMR3	SMTP Receiver (RFC 822).
XMR3A	XMR3 (continued). This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMR4	SMTP Help. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMRENT	Message Network Header Information API.
XMRFTP	SMTP Receiver (RFC 821).
XMRFTPUX	SMTP Receiver (RFC 821).
XMRINETD	Process MSM-NT TCP Request.
XMRMSM	MSM TCP/IP Front End.
XMRONT	OpenM-NT TCP/IP INETD and Front End.
XMRPCTS	Steal TWIXs from PCTS Host [RCVR].
XMRPCTS0	Send TWIXs to PCTS Host [XMTR] 2.
XMRPCTS1	Simple PCTS Front End to MailMan.
XMRPCTSA	Steal TWIXs from PCTS Host [RCVR].
XMRPOP	POP3 Server (RFC 1939).
XMRTCP	SMTP Receiver.

Routine	Description
XMRTCPGO	Start XMRTCP.
XMRUCX	SMTP Receiver (RFC 821) for UCX.
XMS	SMTP Send.
XMS0BLOB	Send BLOBs (other body parts).
XMS1	SMTP Send (RFC 821).
XMS2	SMTP Send (non-standard).
XMS3	SMTP Send (RFC 822).
XMSFTP	TCP/IP-FTP Sender.
XMSFTPUX	TCP/IP-FTP Sender.
XMTDF	Filter Message: Multiple Conditions.
XMTDL	Deliver Local Mail to Mailbox.
XMTDL1	XMTDL (continued).
XMTDL2	XMTDL (continued).
XMTDO	Deliver Other (server, device).
XMTDR	Transmit Messages in a Queue. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMTDT	Deliver Later'd Messages and Delete Inactive Messages.
XMUCXPOP	POP3 Server for UCX (RFC 1939).
XMUDCHK	Validate DOMAIN file (#). This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMUDCHR	Christen Site. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMUDNC	Domain Name Change.
XMUDTOP	Top-Level Domain Names. This routine is new with the DNS-Aware MailMan V. 8.0 software.
XMUPIN	IN Basket Purge.
XMUT1	Recover Messages for a User.
XMUT1A	XMUT1 (continued).
XMUT2	Large Message Report.
XMUT4	Integrity Checker for the MAILBOX file (#3.7) and MESSAGE file (#3.9).
XMUT41	XMUT4 (continued).
XMUT4A	Integrity Checker for the MAILBOX file (#3.7).
XMUT4C	Integrity Checker for the MESSAGE file (#3.9).
XMUT5	Check Background Filer (local delivery queues).
XMUT5B	Gather Delivery Queue Data.
XMUT5C	Response Time Logger/Purge.

Routine	Description
XMUT5G	Validate Mail Group Members.
XMUT5Q	Delivery Queue Analysis.
XMUT5Q1	Delivery Queue Analysis (start/init).
XMUT5R1	Mail Statistics Report.
XMUT5R2	Daily Reports on Mail Deliveries.
XMUT6	Check Delivery Queue.
XMUT7	Send Message to Forwarding Address.
XMUTCOM1	XMUSRCNT.COM Count Users (shareware).
XMUTERM	Delete Mailbox/Delete Message.
XMUTERM1	XMUTERM (continued).
XMUTERM2	XMUTERM (continued).
XMUTPUR0	Purge "AI" Cross-reference.
XMVGROUP	Group Creation/Enrollment.
XMVGRP	Group Creation/Enrollment.
XMVSURR	Surrogate Management.
XMVVITA	Edit User's MailMan Variables.
XMVVITAE	Initialize User's MailMan Variables.
XXADDR	Address Checker.
XXADDR1	XXADDR (continued).
XXADDR2	XXADDR (continued).
XXADDR3	XXADDR (continued).
XXADDR4	XXADDRG (continued).
XXADDRD	Domain Name Lookup.
XXADDRG	Expand Group.
XXANSER	Answer a Message.
XXAPI	Message APIs.
XXAPIB	Mailbox and Mail Basket APIs.
XXAPIG	Mail Group APIs.
XXAPIU	Interactive User APIs.
XXBSKT	Basket APIs.
XXBULL	Send Bulletin.
XXEDIT	Edit Message that User has Sent to Self.
XXGRP	Group Creation/Enrollment.
XXGRP1	XXGRP (continued).

Routine	Description
XMLIST	List Message: Multiple Conditions.
XMLIST1	XMLIST (continued).
XMLIST2	XMLIST (continued).
XXMBOX	Mailbox APIs.
XXMSG	Message APIs.
XXMSG1	XXMSG (continued).
XXMSG2	XXMSG (continued).
XXPARM	Parameter Check.
XXPARM1	XXPARM (continued).
XXPARMB	Parameter Check for XXAPIB.
XXPRT	Print Messages.
XXREPLY	Reply to a Message.
XXSEC	Message Security and Restrictions.
XXSEC1	XXSEC (continued).
XXSEC2	XXSEC (continued).
XXSEC3	XXSEC (continued).
XXSEND	Send a Message.
XXTO	Address a Message.
XXUTIL	Message & Mailbox Utilities.
XXUTIL1	Date and String Utilities.
XXUTIL2	Message information.
XXUTIL3	List Addressees, Recipients, Message Network Header.
XXUTIL4	XXUTIL3 (continued).
XXYPRE	Pre- and Post- Initialization.

Table 9: List of routines exported with the DNS-Aware MailMan V. 8.0 software

File List

This section contains a list of all **VISTA** MailMan files and globals (data dictionaries) that are exported with the DNS-Aware MailMan V. 8.0 software. The list includes: file numbers, file names, global location, and file descriptions. DNS-Aware MailMan V. 8.0 software file numbers range from 3.4 to 4.6.



File security access is described in the "File Security" topic in the "Software Product Security" section that follows in this chapter.

Other pertinent file information, such as data dictionaries and relations with other files, can be generated online through the use of VA FileMan utilities.



All files, fields, and routines in MailMan are considered to perform controlled procedures and *cannot* be modified.

Globals

The following are MailMan namespaced globals:

- ^XMB
- ^XMBPOST
- ^XMBS
- ^XMBX
- ^XMD

MailMan also stores data in the following globals:

- ^DIC
- ^%ZISL

All of these globals are used to store the data contained in the files referenced below.

Journaling is highly recommended.

Your translation table must be set up properly in order to translate the **^XMB*** globals and the **^DIC** global in all UCIs.

Files

The following are the MailMan files:



None of the files listed below come with any data.

3.4 COMMUNICATIONS PROTOCOL ^DIC(3.4,

This file stores the definitions of all the communications protocols known to Kernel. A protocol has executable M code for sending, receiving, opening, and closing a link.



This file should only be edited by someone with intimate knowledge of Network MailMan.

3.6 BULLETIN ^XMB(3.6,

This file stores bulletins. Bulletins are "Super" messages. Each Bulletin has a text and a subject just like a normal message. However, embedded within the subject and/or the text can be variable fields that can be filled in with parameters. There is also a standard set of recipients in the form of a mail group that is associated with the bulletin.

MailMan processes bulletins either because of a special cross-reference type of VA FileMan or because of a direct call in a routine. The interface for the direct call is described in the documentation on programmer entry points. VA FileMan sets up code that will issue a bulletin automatically when the special cross-reference type is created. In either case, the parameters merged into the text and/or the subject normally make each bulletin instance unique.

3.7 MAILBOX ^XMB(3.7,

This file stores pointers to the MESSAGE file (#3.9)MESSAGE file (#3.9), according to users. Each MAILBOX file entry corresponds to a user. The Postmaster is a special user who controls the network communications queues. Each user is automatically given two baskets: "IN" and "WASTE." All incoming messages are delivered either to a user's "IN" basket or to another basket based on mail filters established by the user. When the user deletes messages, they are temporarily stored in the "WASTE" basket. Users can create new baskets and filter mail as they wish.



This file was modified with the DNS-Aware MailMan V. 8.0 software. The following fields were modified:

- FORWARDING ADDRESS (#2)—The bulletin cross-reference was changed.
- NETWORK PRIORITY TRANSMISSION (#6)—Expanded the SET OF CODES to add low priority and changed the cross-reference.

3.73 MESSAGES TO BE NEW AT A LATER DATE ^XMB(3.73,

This file stores pointers to the MESSAGE file (#3.9), pointing to messages to be new at a later date and time. The background filer processes entries in this file. The messages pointed at become new at the date and time requested.

3.8 MAIL GROUP ^XMB(3.8,

This file stores the names of all mail groups known to MailMan and their members.



This file was modified with the DNS-Aware MailMan V. 8.0 software. The following field was modified:

- NAME (#.01)—Added a trigger to populate the COORDINATOR field (#5.1).

3.816 DISTRIBUTION LIST ^XMB(3.816,

This file stores names of Distribution Lists. A Distribution List is interpreted as a name to which the message will be delivered at each of the associated Domains in the list. Each name is associated with one or more Domains. When a Distribution List is entered into a mail group, MailMan delivers a message to all the entities it has linked to it.

For example, a Distribution List whose name is G.SUPPORT and whose associated domains are FORUM.VA.GOV, ALTOONA.VA.GOV, and CIOFO-SF.VA.GOV will be sent (in addition to all other entities attached to the mail group) to:

- G.SUPPORT@FORUM.VA.GOV
- G.SUPPORT@ALTOONA.VA.GOV
- G.SUPPORT@CIOFO-SF.VA.GOV

3.9 MESSAGE ^XMB(3.9,

This file stores all MailMan messages.

4.2 DOMAIN ^DIC(4.2,

This file stores the names of all nodes to which *VISTA* MailMan messages can be routed (i.e., Domains). Each name in this file corresponds to the right side of a MailMan address following the at-sign ("@").

Domains can have synonyms, allowing users to name sites with one name, while MailMan uses the more formal Domain naming conventions.

This file also controls whether messages are queued for immediate transmission and into what queue they are dropped.

4.2997 REMOTE USER DIRECTORY ^XMD(4.2997,

This files stores users with known off-system electronic mail addresses.

4.2998 MESSAGE DELIVERY STATS ^XMBX(4.2998,

This file stores statistics about local message deliveries, response time, and numbers of active user processes.

4.2999 MESSAGE STATISTICS ^XMBS(4.2999,

This file stores non-static information about network mail transmissions.



This file was modified with the DNS-Aware MailMan V. 8.0 software. The following fields were modified:

- NAME (#.01)—Changed the title and description.
- MESSAGE IN TRANSIT (#2)—Changed to a pointer and changed the help prompt.
- MESSAGES RECEIVED (#103)—Corrected the spelling of "included".
- CHARACTERS SENT (#104)—Increased the length of this field.
- CHARACTERS RECEIVED (#105)—Increased the length of this field.
- LINES SENT (#106)—Increased the length of this field.
- LINES RECEIVED (#107)—Increased the length of this field.

The following fields were added:

- DIRECTION (#8)—This field is used to report whether, at any given time, we are sending messages to, or receiving messages from, the site.
- XMIT IP ADDRESSES TRIED (#48)—This is a list of IP addresses, separated by commas, which have already been used in attempting to connect with the site.
- XMIT AUDIT IP ADDRESS (#60,3)—This is the IP address used for this attempt.

4.3 MAILMAN SITE PARAMETERS ^XMB(1,

This file stores the site parameters for this installation of *VISTA* MailMan. It has only one entry—the Domain name of the installation site. The system manager defines some parameters during the installation process. These include: TIME ZONE, UCI ASSOCIATION TABLE (VOLUME SET Multiple), and specification of the account where the *VISTA* MailMan background filer should run. Other entries can be edited subsequent to installation. The PARENT DOMAIN, set to FORUM during initialization, can be changed. TaskMan, spooling, response time, and audit parameters can also be established. Priorities can be set for interactive users and for TaskMan. Defaults for fields such as: TIMED READ, AUTO MENU, and ASK DEVICE are defined for use when *not* otherwise specified for a user or device. Cross-references include: TIME ZONE, DOMAIN NAME, PARENT, and LINKED UCI.



This file was modified with the DNS-Aware MailMan V. 8.0 software. The following fields were added:

- **DNS AWARE (#8.22)**—MailMan uses this field to determine if it should use DNS to look up IP addresses.
 - If "NO," MailMan will use the IP addresses in the Domain scripts.
 - If "YES," will use the IP addresses in the domain scripts, but if they fail, or don't exist, MailMan will use DNS to ascertain other IP addresses to try. MailMan will replace failed script IP address with the successful DNS IP address.
- **TCP/IP COMMUNICATIONS PROTOCOL (#8.23)**—MailMan uses this field to determine which protocol shall be used for TCP/IP. It points to the **COMMUNICATIONS PROTOCOL** file (#3.4).
- **TCP/IP TRANSMISSION SCRIPT (#8.24)**—MailMan uses this field to determine which script shall be used for TCP/IP. It points to the **TRANSMISSION SCRIPT** file (#4.6).

4.4 MAILMAN TIME ZONE ^XMB(4.4,

This file stores MailMan time zones. MailMan time zones are used to calculate the time in the time zone of the receiving Domain for a message coming in from a different time zone. Therefore, times can be expressed in EST (Eastern Standard Time), even if they were originally formed in PST (Pacific Standard Time).

4.501 NETWORK SENDERS REJECTED ^XMBX(4.501,

This file stores names of network addresses. The system manager can input partial or full matches to network addresses into this file. When Network Mail receives a message from a sender that contains the string input, that sender will be rejected. This can be used to prevent large messages or large quantities of messages from coming into a system from a remote site.

4.6 TRANSMISSION SCRIPT ^XMB(4.6,

This file stores transmission scripts. Transmission scripts are lists of script commands that are executed by the script processor for Network Mail transmissions, in order, when they are invoked. The command in a script that invokes a transmission script is the **CALL (C)**. Therefore, "C KERNEL" invokes a script that interfaces with the Simple Mail Transfer Protocol (SMTP) process using the Simple Communications Protocol (SCP). Transmission scripts are used most often to invoke a portion of a longer script that is used in many different domains.

Multimedia MailMan-related Files

In order for Multimedia MailMan to work properly, sites must also have access to the following files:

2005 IMAGE

This file stores pointers to files and related data so that they can be displayed.

2005.2 NETWORK LOCATION

This file stores the logical name of the physical location where an image is stored.

Exported Options

Menu Diagram

MailMan Master Menu

The following menu diagram was generated using the Map Pointer Relations option (i.e., DI DDMAP) on the Programmer Options menu (i.e., XUPROG):



	-----	Purge Messages by Origination Date [XMPURGE-BY-DATE] **LOCKED: XMMGR**
	-----	Purge Unreferenced Messages [XMPURGE]
	-----	Recover ----- DEL Delete Found Messages Messages from Found into User's Messages List IN Basket [XMUT-REC-DELETE] [XMUT-REC-MENU] **LOCKED: XUPROG**
	-----	DRM Deliver Found Messages into User's IN Basket [XMUT-REC-DELIVER]
	-----	FRM Find Messages for User [XMUT-REC-FIND]
	-----	LRM List Messages Found [XMUT-REC-RPT]
	-----	Terminate mail user suggestions [XMMGR-TERMINATE- SUGGEST]
	-----	Terminate many mail users [XMMGR-TERMINATE- MANY]
	-----	Terminate one mail user [XMMGR-TERMINATE- ONE]
-----	Group/Distribution-----	Bulletin edit Management [XMEDITBUL] [XMMGR-GROUP-MAINTENANCE]
	-----	Edit Distribution List [XMEDITDIST]
	-----	Enroll in (or Disenroll from) a Mail Group [XMENROLL]
	-----	Mail Group Coordinator's Edit [XMMGR-MAIL-GRP- COORDINATOR]

			Mail Group Coordinator's Edit W/Remotes [XMMGR-MAIL-GRP-COORD-W/REMOTES]
			Mail Group Edit [XMEDITMG]
	Local Delivery Management [XMMGR-MESSAGE-DELIVERY-MGT]		Active Users/ Deliveries Report [XMMGR-BKFILER-ACT]
			CHECK background filer [XMMGR-CHECK-BACKGROUND-FILER]
			Compile Response Time Statistics [XMMGR-RESPONSE-TIME-COMPILER]
			Deliveries by Group [XMMGR-BKFILER-GROUP]
			Delivery Queue Statistics Collection [XMMGR-DELIVERY-STATS-COLL]
			Edit numbers to Normalize Reports [XMMGR-BKFILER-EDIT-NORMALIZED]
			Graphics Download (TAB separators) [XMMGR-BKFILER-TABBED-STATS]
			Log Response Time Toggler [XMMGR-RESPONSE-TIME-TOGGLER]
			Mail Delivery Statistics Report [XMMGR-BKFILER-STAT]
			New Messages and Logon Statistics [XMMGR-NEWMESS/LOGON-STATS]
			START background filer [XMMGR-START-BACKGROUND-FILER]

		----- STOP background filer [XMMGR-STOP- BACKGROUND-FILER]
		----- MailMan Site Parameters [XMKSP]
	----- Network Management [XMNET]	----- Christen a domain [XMCHRIS]
		----- Compare Domains in System Against Released List [XMQDOMAINS]
		----- Network Help [XMNETHELP]
	----- Queue Management [XMNET-QUEUE- MANAGEMENT]	----- Actively Transmitting/ Receiving Queues Report [XMQACTIVE]
		----- Display Active & Inactive Message Queues [XMQDISP] **LOCKED: XUPROGMODE**
		----- Historical Queue Data/Stats Report [XMQHIST]
		----- List a transcript [XMLIST]
		----- Queues with Messages to Transmit Report [XMQUEUED]
		----- Show a queue [XMQSHOW]
		----- Transmit a Single Queue [XMSTARTQUE]
		----- Transmit All Queues [XMSTARTQUE-ALL]
		----- Site Parameters [XMSITE]
	----- Transmission Management [XMNET-TRANSMISSION- MANAGEMENT]	----- Edit a script [XMSCRIPTEEIT]
		----- Play a script [XMSCRIPTPLAY]

			Receive Messages from Another UCI [XMR-UCI-RCV]
			Send Messages to Another UCI [XMR-UCI-SEND]
			Sequential Media Message Reception [XMR-SEQ-RECEIVE]
			Sequential Media Queue Transmission [XMS-SEQ-TRANSMIT]
			Subroutine editor [XMSUBEDIT]
			Toggle a script out of service [XMSCRIPTOUT]
			Validation Number Edit [XMEDIT-DOMAIN- VALIDATION#]
			New Features for Managing MailMan [XMMGR-HELP]
	Remote MailLink Directory Menu [XMMGR-DIRECTORY-MAIN] **LOCKED: XMMGR**		Enter/Edit Directory Request Flags by Group [XMMGR-DIRECTORY- EDITGRP]
			Enter/Edit Remote User [XMEDIT-REMOTE-USER]
			Group eMail Directory Request [XMMGR-DIRECTORY- GROUP]
			List eMail Directory Request by Groups [XMMGR-DIRECTORY- LISTGRP]
			Load Remote VACO (Wang/Noava) Directory [XMMGR-DIRECTORY- VACO]
			Remote Directory from all Domains [XMMGR-DIRECTORY- ALL]

	-----	Request Mail Directory From a Single Domain Server [XMMGR-DIRECTORY- SINGLE]
	-----	Super Search Message File [XM SUPER SEARCH] **LOCKED: XM SUPER SEARCH**
--XMN Network Management [XMNET]		
--XMU MailMan Menu [XMUSER]	-----	NML New Messages and Responses [XMNEW]
	-----	RML Read/Manage Messages [XMREAD]
	-----	SML Send a Message [XMSEND]
	-----	Query/Search for Messages [XMSEARCH]
	-----	AML Become a Surrogate (SHARED,MAIL or Other) [XMASSUME]
	-----	Personal Preferences [XM PERSONAL MENU]
	-----	User Options Edit [XMEDITUSER]
	-----	Banner Edit [XMBANNER]
	-----	Surrogate Edit [XMEDITSURR]
	-----	Message Filter Edit [XM FILTEREDIT]
	-----	Delivery Basket Edit [XM DELIVERY BASKET EDIT]
	-----	GML Enroll in (or Disenroll from) a Mail Group [XMENROLL]
	-----	Personal Mail Group Edit [XMEDITPERSGROUP]

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		----- Forwarding Address Edit [XMEDITFWD]
	----- Other MailMan Functions [XMOTHER]	----- Report on Later'd Messages [XMLATER-REPORT]
		----- Change/Delete Later'd Messages [XMLATER-EDIT]
		----- Mailbox Contents List [XMBASKLIST]
		-----LML Load PackMan Message [XMPACK] **LOCKED: XUPROGMODE**
	----- Help (User/Group Info., etc.) [XMHELP]	----- User Information [XMHELPUSE]
		----- Group Information [XMHELPGROUP]
		----- Remote User Information [XMHELPLNK]
		----- New Features in MailMan [XM-NEW-FEATURES]
		----- General MailMan Information [XMHELPALL]
		----- Questions and Answers on MailMan [XMHELPQUEST]
		----- Manual for MailMan Users [XMHELP-ON-LINE-USER_MANUAL]

Options—Without Parents

The following options have been modified and exported with the DNS-Aware MailMan V. 8.0 software. The options listed below are *not* assigned to any menu:

XMAUTOPURGE	XMOTHER-COMMUNICATIONS
XMBLOBSEND	XMPOLL
XMDX	XMPRECV
XMMASTER	XMPSEND
XMMGR-BACKGROUND-FILER	XMR-BROADCAST-VA-WIDE
XMMGR-BKFILER-WAIT	XMRONT
XMMGR-DIRECTORY-RECV	XMSCRIPTRES
XMMGR-DIRECTORY-SEND	XMSHARE
XMMGR-PURGE-MESSAGE	XMSUGGESTION
XMNET-TWIX-SEND	XMTALK
XMNET-TWIX-TRANSMIT	XMYB-BROADCAST-VA-WIDE

Options—Listed by Name

The following option list includes information on the: option name, Locks, option type, routine, entry action, exit action, menu text, and option description.



The options whose names begin with XMP (except for XMPURGE*) and XMDX cannot be independently invoked or are for developer/support debugging only. The XMP options (except for XMPOLL, XMPOST, and XMPURGE*) are used as PackMan options and are used from the menus executed from ^DOPT("XMP").

XM DELIVERY BASKET EDIT

Type: run routine

Routine: BASKET^XMVVITA

Menu Text: Delivery Basket Edit

The sender of a message may specify the basket to which the message should be delivered for all recipients. Using this option, you indicate whether or not you accept such target basket delivery, and if you do, to what degree you accept it.

XM FILTER EDIT

Type: run routine

Routine: FILTER^XMVVITA

Menu Text: Message Filter Edit

The filter is used by MailMan to determine into which basket to place a message. Messages can be filtered based on up to three criteria, which are "and"ed together:

- Subject contains
- Message is from
- Message is to

For example, if you specify "subject contains" and "message is from," the filter takes effect only if the subject contains the string you specify *and* the message is from the person you specify. If you wish the filter to take effect upon "subject contains" *or* "message is from" you must create two filters, one with "subject contains," and the other with "message is from."

XM PERSONAL MENU

Type: menu

Menu Text: Personal Preferences

This menu accesses various options to let you configure MailMan to your liking.

XM-NEW-FEATURES

Type: action

Menu Text: New Features in MailMan

Entry Action: S XQH="XM-NEW-FEATURES" D EN^XQH

This option displays a Help Frame that lists and describes features found in MailMan V. 8.0. Many users do not get MailMan manuals. Therefore, it is very important that this sort of documentation be available online.

XMASSUME

Type: run routine

Routine: ASSUME^XMVSURR

Menu Text: Become a Surrogate (SHARED,MAIL or Other)

Synonym: AML

Entry Action: D CHECKIN^XM

Exit Action: D CHECKOUT^XM

This option allows the user to act as a surrogate for another user or for SHARED,MAIL. Before you can act as a surrogate for another user, that user must indicate permission by granting you surrogate privileges through his USER OPTIONS EDIT. You will then be able to read, answer, and send mail for that user, depending on the level of access (READ/WRITE) that you were granted.

You may assume the identity of a special user, "SHARED,MAIL," to read messages of general interest. You will be able to read and respond to messages there, but you will not be able to send any. If you have been given the XMNOPRIV key, you will not be able to access "SHARED,MAIL."

SHARED,MAIL is a place to send messages of general interest. Almost all users may access this area. When you send messages to SHARED,MAIL, you must indicate a BASKET to deliver the messages to so that helps others find yours. Do not create new BASKETS unless it is really necessary. Try to fit your message into a basket that already exists. SHARED, MAIL is a LIBRARY, *not* a repository for trivial or personal communications. Please respect your privilege to be SHARED,MAIL surrogate. The PRIVILEGE to be a SURROGATE of SHARED,MAIL can be taken away.

XMAUTOPURGE

Type: run routine

Routine: EN^XMA3

Menu Text: Automatic Purge of MailMan Messages

This option automatically purges MailMan messages. It is designed to be run without a terminal.



This option is not assigned to a menu.

XMMGR

Type: menu

Menu Text: Manage Mailman

Entry Action: D CHECKIN^XM S XMMENU(0)="XMUSER"

Exit Action: K XMMENU D CHECKOUT^XM

This menu provides options that allow the site manager to manage the MailMan system, by manipulating the MESSAGE (#3.9), MAIL GROUP (#3.8), BULLETIN (#3.6), and MAILBOX (#3.7) files. It includes the following options:

```

Select Systems Manager Menu Option: Manage Mailman

      Check MailMan Files for Errors                [XMUT-CHKFIL]
      Create a Mailbox for a user                    [XMMGR-NEW-MAIL-BOX]
      Disk Space Management ...                     [XMMGR-DISK-SPACE-MANAGEMENT]
      Group/Distribution Management ...             [XMMGR-GROUP-MAINTENANCE]
      Local Delivery Management ...                 [XMMGR-MESSAGE-DELIVERY-MGT]
      MailMan Site Parameters                       [XMKSP]
      Network Management ...                        [XMNET]
      New Features for Managing MailMan            [XMMGR-HELP]
      Remote MailLink Directory Menu ...           [XMMGR-DIRECTORY-MAIN]
      Super Search Message File                    [XM SUPER SEARCH]

Select Manage Mailman Option:
    
```

Figure 3: Manage Mailman menu [XMMGR] options

XMMGR-BACKGROUND-FILER

Type: menu

Menu Text: Background Filer (XMAD)

This option is a submenu of options for the background filer. It includes the following options:

- XMMGR-START-BACKGROUND-FILER
- XMMGR-STOP-BACKGROUND-FILER
- XMMGR-CHECK-BACKGROUND-FILER
- XMSTAT



This option is not assigned to a menu.

XMMGR-DISK-SPACE-MANAGEMENT

Type: menu
 Menu Text: Disk Space Management

This option provides a submenu located on the Manage Mailman menu (i.e., XMMGR). It contains options for managing disk space. All reports are 80 columns wide.

The following options can be found on the Disk Space Management menu:

```
Select Manage Mailman Option: Disk Space Management

    AI x-Ref Purge of Received Network Messages                [XMMGR-PURGE-AI-XREF]
    Ask users with many messages to do maintenance [XMMGR-DISK-MANY-MESSAGE-MAINT]
    Clean out waste baskets                                     [XMCLEAN]
    IN Basket Purge                                           [XMMGR-IN-BASKET-PURGE]
    Large Message Report                                       [XMMGR-LARGE-MESSAGE-REPORT]
    Message statistics                                         [XMSTAT]
    Purge a message                                           [XMMGR-PURGE-MESSAGE]
    Purge Messages by Origination Date                         [XMPURGE-BY-DATE]
    Purge Unreferenced Messages                               [XMPURGE]
    Recover Messages into User's IN Basket ...                 [XMUT-REC-MENU]
    Terminate mail user suggestions                            [XMMGR-TERMINATE-SUGGEST]
    Terminate many mail users                                  [XMMGR-TERMINATE-MANY]
    Terminate one mail user                                    [XMMGR-TERMINATE-ONE]

Select Disk Space Management Option:
```

Figure 5: Disk Space Management menu [XMMGR-DISK-SPACE-MANAGEMENT] options

XMMGR-GROUP-MAINTENANCE

Type: menu
 Menu Text: Group/Distribution Management

This option provides a submenu located on the Manage Mailman menu (i.e., XMMGR).

The following options can be found on the Group/Distribution Management menu:

```
Select Manage Mailman Option: group/Distribution Management

    Bulletin edit                                             [XMEDITBUL]
    Edit Distribution List                                     [XMEDITDIST]
    Enroll in (or Disenroll from) a Mail Group               [XMENROLL]
    Mail Group Coordinator's Edit                            [XMMGR-MAIL-GRP-COORDINATOR]
    Mail Group Coordinator's Edit W/Remotes                  [XMMGR-MAIL-GRP-COORD-W/REMOTES]
    Mail Group Edit                                           [XMEDITMG]

Select Group/Distribution Management Option:
```

Figure 6: Group/Distribution Management menu [XMMGR-GROUP-MAINTENANCE] options

XMMGR-HELP

Type: action

Menu Text: New Features for Managing MailMan

Entry Action: S XQH="XMMG-NEW-FEATURES" D EN^XQH

This option provides help for site management.

XMMGR-IN-BASKET-PURGE

Type: run routine

Routine: ENTER^XMUPIN

Menu Text: IN Basket Purge

This option purges "IN" baskets in two steps:

1. In the first step messages are sent to users
 - a. Message will contain a list of messages to be purged in Step 2.
 - b. Message will contain list of actions that will prevent the purging of the listed messages.
 - c. Message will state how many days later listed messages will be purged unless the action is taken on a message-by-message basis.
 - d. The messages listed will *not* have been referenced for 30 days or the number of days in the MAILMAN SITE PARAMETERS file ("4.3), IN-BASKET-PURGE DAYS field, if it is not null.
2. In the second step, the messages listed in the message from Step 1 will be purged *not* less than 30 days later unless they:
 - a. Have been saved into a basket other than the "IN" basket.
 - b. Have been referenced (read or printed) otherwise.
 - c. Are marked as NEW.



This option can be run via TaskMan!

XMMGR-MESSAGE-DELIVERY-MGT

Type: menu

Menu Text: Local Delivery Management

This option provides a submenu located on the Manage Mailman menu (i.e., XMMGR). It includes options for the background filer. All reports are 132 columns wide.

The following options can be found on the Local Delivery Management menu:

```
Select Manage Mailman Option: local Delivery Management

Active Users/Deliveries Report                [XMMGR-BKFILER-ACT]
CHECK background filer                        [XMMGR-CHECK-BACKGROUND-FILER]
Compile Response Time Statistics             [XMMGR-RESPONSE-TIME-COMPILER]
Deliveries by Group                          [XMMGR-BKFILER-GROUP]
Delivery Queue Statistics Collection          [XMMGR-DELIVERY-STATS-COLL]
Edit numbers to Normalize Reports            [XMMGR-BKFILER-EDIT-NORMALIZED]
Graphics Download (TAB separators)           [XMMGR-BKFILER-TABBED-STATS]
Log Response Time Toggler                    [XMMGR-RESPONSE-TIME-TOGGLER]
Mail Delivery Statistics Report              [XMMGR-BKFILER-STAT]
New Messages and Logon Statistics           [XMMGR-NEWMESS/LOGON-STATS]
START background filer                       [XMMGR-START-BACKGROUND-FILER]
STOP background filer                        [XMMGR-STOP-BACKGROUND-FILER]

Select Local Delivery Management Option:
```

Figure 7: Local Delivery Management menu [XMMGR-MESSAGE-DELIVERY-MGT] options

XMMGR-NEW-MAIL-BOX

Type: run routine

Routine: NEWMBOX^XM

Menu Text: Create a Mailbox for a user

This option is only meant to be used on systems where Kernel V. 6.0 or later is *not* running (or when a repair must be made to the MAILBOX file [#3.7]). A mailbox is created for each new or reinstated user in Kernel V. 6.0 or later so there should be no need to use this routine unless there was an error setting up the user or there was a file degradation problem. Using this option for a user whose mailbox is partially or wholly set up will *not* cause data to be lost.

A *mailbox* can be *created* or *repaired* using this option.

XMMGR-NEWMESS/LOGON-STATS

Type: run routine

Routine: XMUT5R1

Menu Text: New Messages and Logon Statistics

This option prints the number of new messages created, logons, and logon minutes for a specified time period.

XMMGR-TERMINATE-MANY

Type: run routine

Routine: ALL1^XMUTERM

Menu Text: Terminate many mail users

This option goes through the MAILBOX file (#3.7) and removes any mailbox if:

- The user is not in the NEW PERSON file (#200).
 - The user has no Access Code and was *not* terminated.
 - The user has no Access Code and was terminated without mailbox retention.
 - The user has an Access Code and primary menu, but no Verify Code, AND:
 - Has never signed on, since being added before a cutoff date.
- OR
- Last signed on before a cutoff date.

Remove means:

- Delete user's private mail groups.
- Remove user from membership in all groups.
- Remove user as an authorized sender from all groups.
- Remove user from anyone's list of surrogates.
- Delete user's "latered"-messages list.
- Delete user's mailbox.

As a result, the user will not receive any mail. This option can be run in "test" or "real" mode.

The report lists, in DUZ order:

- The user's DUZ and name.
- Whether the user has an access code, verify code, and primary menu.
- When the user was added to the NEW PERSON file (#200).
- When the user last signed on.
- When the user was terminated (if applicable).
- If the user was terminated, then whether the site manager chose to delete the user's mailbox. (It's generally a good idea to go ahead and delete the mailbox upon termination.)

The report page breaks on Service/Section and includes the following information:

- User's DUZ and name.
- Whether the user has an Access Code, a Verify Code, and a primary menu.
- When the user last signed on.
- When the user was terminated (if applicable).
- If the user was terminated, then whether the site manager chose to delete the user's mailbox. (Remember, you should usually answer "yes" to this question, unless the user is coming back and needs to have his mail retained.)
- How many new messages the user has. (New messages are never purged, except during purge-by-date purges.)

Finally, there are two blank columns with the following headings:

- "Term User Mbox" (Terminate user mailbox).
- "Deact VISTA Access" (Deactivate VISTA Access).

Besides being of interest to the site manager, this report is also designed to be submitted to other services. The intent is that the other services would check one of the columns for each user in the report and return the report to the site manager for action.

XMNET

Type: menu

Menu Text: Network Management

Entry Action: D CHECKIN^XM

Exit Action: D CHECKOUT^XM

This menu allows the user to control the network: editing/playing/listing scripts, managing domains, christening subordinate domains, and controlling pollers.

The following options can be found on the Network Management menu:

```

Select Manage Mailman Option: network Management

      Christen a domain                                [XMCHRIS]
      Compare Domains in System Against Released List [XMQDOMAINS]
      Network Help                                     [XMNETHELP]
      Queue Management ...                             [XMNET-QUEUE-MANAGEMENT]
      Site Parameters                                  [XMSITE]
      Transmission Management ...                      [XMNET-TRANSMISSION-MANAGEMENT]

Select Network Management Option:
    
```

Figure 8: Network Management menu [XMNET] options



The options located on the Network Management menu are discussed in depth in the "Network MailMan Reference Manual."

XMNET-QUEUE-MANAGEMENT

Type: menu

Menu Text: Queue Management

This option is a submenu for Queue Management. It includes the following options:

- XMQACTIVE
- XMQHIST
- XMQUEUED
- XMQDISP
- XMSTARTQUE-ALL
- XMQSHOW
- XMSTARTQUE
- XMLIST

XMNET-TRANSMISSION-MANAGEMENT

Type: menu

Menu Text: Transmission Management

This is a menu with options having to do with network transmissions. It includes the following options:

- XMSCRIPTPLAY
- XMSCRIPTEDIT
- XMR-UCI-SEND
- XMR-UCI-RCV
- XMR-SEQ-RECEIVE
- XMS-SEQ-TRANSMIT
- XMSUBEDIT
- XMEDIT-DOMAIN-VALIDATION#
- XMSCRIPTOUT

XMOTHER

Type: menu

Menu Text: Other MailMan Functions

This is the mailman option menu for special user activities. It includes the following options:

- XMLATER-REPORT
- XMLATER-EDIT
- XMBASKLIST
- XMPACK

XMOTHER-COMMUNICATIONS

Type: Menu

Menu Text: Communications

Lock: XMNET

This menu contains options that allow users to send and receive data that is not necessarily in an electronic mail message form. FTP options to get and put files are here. It includes the following options:

- XM-FTP-GET
- XM-FTP-PUT

This option is locked with the XMNET security key.



This option is not assigned to a menu.

XMPACK

Type: run routine

Routine: PAKMAN^XMJMS

Menu Text: Load PackMan Message

Synonym: LML

Entry Action: D CHECKIN^XM

Exit Action: D CHECKOUT^XM

Lock: XUPROGMODE

This option enables the user to create a PackMan message. It is locked with the XUPROGMODE security key.

Archiving and Purging

There are no application-specific archiving procedures or recommendations for the DNS-Aware MailMan V. 8.0 software.

The MESSAGE file (#3.9) has the potential to grow in size over time.

Callable Routines

There are no new APIs exported with the DNS-Aware MailMan V. 8.0.



For a complete list and description of all MailMan V. 8.0 APIs, please refer to the "MailMan Programmer Manual."

External Interfaces

Hardware Interfaces

The DNS-Aware MailMan APIs and files will reside on the standard hardware platforms employed by Department of Veterans Affairs healthcare facilities. These systems consist of DSM on OpenVMS or Caché on NT.



For a list of DNS-Aware MailMan APIs, please refer to the "DNS-Aware Application Programmer Interfaces (API)" topic in Chapter 2, "Programmer Manual Information," in this manual.

For a list of the DNS-Aware MailMan files, please refer to the "File List" topic in this chapter.

There are no additional hardware system interface issues with this project.

Software Interfaces

There are no additional software system interface issues with this project.

Communications Interfaces

VISTA MailMan is the communication interface of concern. It is to be modified to address Domain Name Service (DNS).



For a list of the XM* routines, please refer to the "Routines" topic in this chapter.

External Relations

Software Requirements

The DNS-Aware MailMan V. 8.0 software requires a standard **VISTA** operating environment in order to function correctly. Check your **VISTA** environment for software packages and versions installed.

The DNS-Aware MailMan V. 8.0 requires that *fully* patched versions of the following software:

- MailMan V. 7.1



DNS-Aware MailMan V. 8.0 requires a site already have MailMan V. 7.1 installed and running, and that it is fully patched through at least MailMan Patch XM*7.1*198.

- Kernel V. 8.0



DNS-Aware MailMan V. 8.0 requires a site already have Kernel V. 8.0 installed and running, and that it is fully patched through at least Kernel Patch XU*8.0*216.

- Kernel Toolkit V. 7.3
- VA FileMan V. 22.0



DNS-Aware MailMan V. 8.0 requires a site already have VA FileMan V. 22.0 installed and running, and that it is fully patched through at least VA FileMan Patch DI*22*68.

Dependencies

The DNS-Aware MailMan V. 8.0 software uses Kernel's MAIL^XLFNSLK API for DNS lookup.



For more information on the Kernel DNS Lookup API, please refer to the MAIL^XLFNSLK Home Page at the following web address:

<http://vista.med.va.gov/kernel/apis/mail^lfnslk.htm>

Integration Agreements (IA)

Supported References

DNS-Aware MailMan V. 8.0 software has a Supported Integration Agreement (IA) with Kernel to use the DNS Lookup API (MAIL^XLFNSLK). It is recorded as Supported in the IA database on FORUM (IA #3056). Permission to use it is granted by the custodian software package (Kernel).



For more information on the Kernel DNS Lookup API, please refer to the MAIL^XLFNSLK Home Page at the following web address:

<http://vista.med.va.gov/kernel/apis/mail^xlfnslk.htm>

General Instructions for Obtaining Integration Agreements

To obtain the current list of active IAs of which VISTA MailMan is a custodian:

- 1.) Sign on to the **FORUM** system.
- 2.) Select the **DBA menu [DBA]**.
- 3.) Select the **Integration Agreements Menu [DBA IA ISC]**.
- 4.) Select the **Custodial Package Menu [DBA IA CUSTODIAL MENU]**.
- 5.) Choose the **ACTIVE by Custodial Package option [DBA IA CUSTODIAL]**.
- 6.) Enter **MAILMAN** at the "Select PACKAGE NAME:" prompt. You may have to further refine your choice, if presented with a list of similar named software packages.
- 7.) Choose the device to display the list of IAs.
- 8.) All current active IAs for which the **VISTA** MailMan software package is custodian are listed.

To obtain detailed information on a specific integration agreement:

- 1.) Sign on to the **FORUM** system.
- 2.) Select the **DBA menu [DBA]**.
- 3.) Select the **Integration Agreements Menu [DBA IA ISC]**.
- 4.) Choose the **Inquire option [DBA IA INQUIRY]**.
- 5.) Enter the **integration agreement number of the IA you would like to display** (e.g., DBIA2171) at the "Select INTEGRATION REFERENCES:" prompt.
- 6.) Choose the device to display the list of IA.
- 7.) The full text of the requested IA will be displayed.

To obtain the current list of IAs to which *VISTA* MailMan, which includes the DNS-Aware MailMan, is a subscriber:

- 1.) Sign on to the **FORUM** system.
- 2.) Select the **DBA** menu [DBA].
- 3.) Select the **Integration Agreements Menu** [DBA IA ISC].
- 4.) Select the **Subscriber Package Menu** [DBA IA SUBSCRIBER MENU].
- 5.) Choose the **Print ACTIVE by Subscribing Package option** [DBA IA SUBSCRIBER]].
- 6.) Enter **MAILMAN** (in uppercase) at the "START WITH SUBSCRIBING PACKAGE: FIRST/" prompt.
- 7.) Enter **MAILMAN** (in uppercase) at the "GO TO SUBSCRIBING PACKAGE: LAST/" prompt.
- 8.) Choose the device to display the list of IAs.
- 9.) All current active IAs to which the **VISTA** MailMan software package is a subscriber are listed.

Internal Relations

Namespace

The namespace for **VISTA** MailMan is **XM**. All routines and globals used in MailMan V. 8.0 start with **XM**, except for some that are shared and located in the **DI** and **XU** namespaces.

File Numbers

This section contains a list of all **VISTA** MailMan files (data dictionaries) that are exported with the DNS-Aware MailMan V. 8.0 software. The list includes file numbers, global locations,, and file names as follows:

File #	Global	Name
3.4	^DIC(3.4,	COMMUNICATIONS PROTOCOL
3.6	^XMB(3.6,	BULLETIN
3.7	^XMB(3.7,	MAILBOX
3.73	^XMB(3.73,	MESSAGES TO BE NEW AT A LATER DATE
3.8	^XMB(3.8,	MAIL GROUP
3.816	^XMB(3.816,	DISTRIBUTION LIST
3.9	^XMB(3.9,	MESSAGE
4.2	^DIC(4.2,	DOMAIN
4.281	^%ZISL(4.281,	INTER-UCI TRANSFER
4.2995	^XMBX(4.2995,	MAILMAN OUTSTANDING FTP TRANSACTIONS
4.2996	^DIC(4.2996,	INTERNET SUFFIX
4.2997	^XMD(4.2997,	REMOTE USER DIRECTORY
4.2998	^XMBX(4.2998,	MESSAGE DELIVERY STATS
4.2999	^XMBS(4.2999,	MESSAGE STATISTICS
4.3	^XMB(1,	MAILMAN SITE PARAMETERS
4.4	^XMB(4.4,	MAILMAN TIME ZONE
4.501	^XMBX(4.501,	NETWORK SENDERS REJECTED
4.6	^XMB(4.6,	TRANSMISSION SCRIPT

Table 10: Files and globals exported with the DNS-Aware MailMan V. 8.0

The full Data Dictionaries for these files (Table 10) are being exported with the DNS-Aware MailMan V. 8.0 software. The file and field definitions will be transported in the KIDS transport global and installed at the site.



For more information on the specific files listed in Table 10, please refer to the "File List" topic in this chapter.

Pointer Relationships

The Pointer Relationship Map is a diagram of the pointer relationships between fields in MailMan V. 8.0 files. As files are added to a system, new pointer relationships can be created; thus, the actual map for an operational system may differ.

The following diagram was created using the Map Pointer Relations option on the VA FileMan Data Dictionary Utilities submenu.

 For a list of MailMan files included in this diagram, please refer to Table 10.

File/Package: PCTS TO MAILMAN		Date: JUL 12,2002	
FILE (#)	POINTER TYPE	(#) FILE	FILE POINTED TO
POINTER FIELD		POINTER FIELD	
L=Laygo *=Truncated		S=File not in set m=Multiple	
		N=Normal Ref. v=Variable Pointer	

MAILMAN SITE PARAMET (#4.3)			
TCP/IP COMMUNICATIONS * (N)->		3.4 COMMUNICATI*	

OPTION (#19)			
SERVER BULLETIN (N S L)->		3.6 BULLETIN	
		m MAIL G:MAIL G*	-> MAIL GROUP

		3.7 MAILBOX	
		NAME	-> NEW PERSON
		LAST MAILMAN A*	-> NEW PERSON
		MESSAGE BEING *	-> MESSAGE
		MESSAGE BEING *	-> MESSAGE
		BASK:MESS:MESS*	-> MESSAGE
		m SURROG:SURROG*	-> NEW PERSON

		3.73 MESSAGES T*	
		USER	-> NEW PERSON
		MESSAGE	-> MESSAGE

BULLETIN (#3.62)			
MAIL GROUP (N L)->		3.8 MAIL GROUP	
MAIL GROUP (#3.811)			
MEMBER GR:MEMBER GROU* (N C)->		ORGANIZER	-> NEW PERSON
PACKAGE (#9.4)			
MAIL GROUP (N S)->		COORDINATOR	-> NEW PERSON
DUPLICATE RESOLUTION (#15.1)			
DUPLICATE MANAGER MAIL* (N S)->		m AUTHOR:AUTHOR*	-> NEW PERSON
VERIFIED DUPLICATE MAI* (N S)->		m MEMBER:MEMBER	-> NEW PERSON
MERGE MAIL GROUP (N S)->		m MEMBER:MEMBER*	-> MAIL GROUP
ANCILLARY:MAIL GROUP* (N S)->		m DISTRI:DISTRI*	-> DISTRIBUTION LI*
OPTION (#19)			
SERVER MAIL GROUP (N S L)->		m FAX RE:FAX RE*	-> *** NONEXISTENT*
MCCR SITE BUNDLING P (#466.1)			
MAIL GROUP REC'G MM BU* (N S L)->		m FAX GR:FAX GR*	-> *** NONEXISTENT*
QUALITY ASSURANCE SI (#740)			

Technical Manual Information

EWS LOCAL MAIL GROUP . (N S)->		
MAILGROUP (QAN) (N S)->		
HL7 NON-DHCP APPLICA (#770)		
MAIL GROUP (N S)->		
HL7 APPLICATION PARA (#771)		
MAIL GROUP (N S)->		
HL LOWER LEVEL PROTO (#869.2)		
MAIL GROUP (N S)->		
HL COMMUNICATION SER (#869.3)		
MAIL GROUP (N S L)->		
HL LOGICAL LINK (#870)		
MAIL GROUP (N S L)->		
FS TRACKMAN PARAMETE (#7000.1)		
TOP PRIORITY NOTIFICAT* (N S)->		
CM SITE PARAMETERS (#8986.095)		
MAILGROUP FOR REPORTS/* (N S L)->		
MAILGROUP FOR REMOTE X* (N S L)->		
TWX ROUTER (#11000100.02)		
MAIL GROUP(S) (N S)->		
SERVICE:MAIL GROUP ... (N S)->		

MAIL GROUP (#3.813)		
DISTRIBUTION LIST (N C L)->	3.816 DISTRIBUT*	
	m DOMAIN:DOMAIN	-> DOMAIN

(#1.12)		
MESSAGE (N S)->	3.9 MESSAGE	
MAILBOX (#3.7)		
MESSAGE BEING EDITED . (N C L)->	ORIGINAL MESSA*	-> MESSAGE
MESSAGE BEING RESPONDE* (N L)->	m RESPON:RESPON*	-> MESSAGE
BASKET:MESSAGE (N)->	RECIPIENT:PATH	-> DOMAIN
MESSAGES TO BE NEW A (#3.73)		
MESSAGE (N)->	RECIPI:FORWAR*	-> NEW PERSON
MESSAGE (#3.9)		
ORIGINAL MESSAGE (N)->	RECIPI:FAX RE*	-> *** NONEXISTENT*
RESPONSE (N)->	LATER :BY WHO*	-> NEW PERSON
MESSAGE STATISTICS (#4.2999)		
MESSAGE IN TRANSIT ... (N)->	m OBJECT:OBJECT*	-> *** NONEXISTENT*
A6AJIM (#16100)		
NAME (N S C)->		

DISTRIBUTION LIST (#3.8161)		
DOMAIN (N C)->	4.2 DOMAIN	
MESSAGE (#3.91)		
RECIPIENT:PATH (N)->	RELAY DOMAIN	-> DOMAIN
INSTITUTION (#4)		
DOMAIN (N S)->		
DOMAIN (#4.2)		
RELAY DOMAIN (N L)->		
MESSAGE STATISTICS (#4.2999)		
NAME (N C)->		
MAILMAN SITE PARAMET (#4.3)		
DOMAIN NAME (N C)->		
PARENT (N C)->		
SUBORDINATE DOMAIN ... (N)->		
SUBSCRIPTION CONTROL (#774.01)		
DESTINATION:DOMAIN ... (N S C)->		
HL COMMUNICATION SER (#869.3)		
DOMAIN (N S)->		
HL LOGICAL LINK (#870)		
DOMAIN (N S C)->		
FS TRACKMAN PARAMETE (#7000.1)		
SITE (N S C)->		

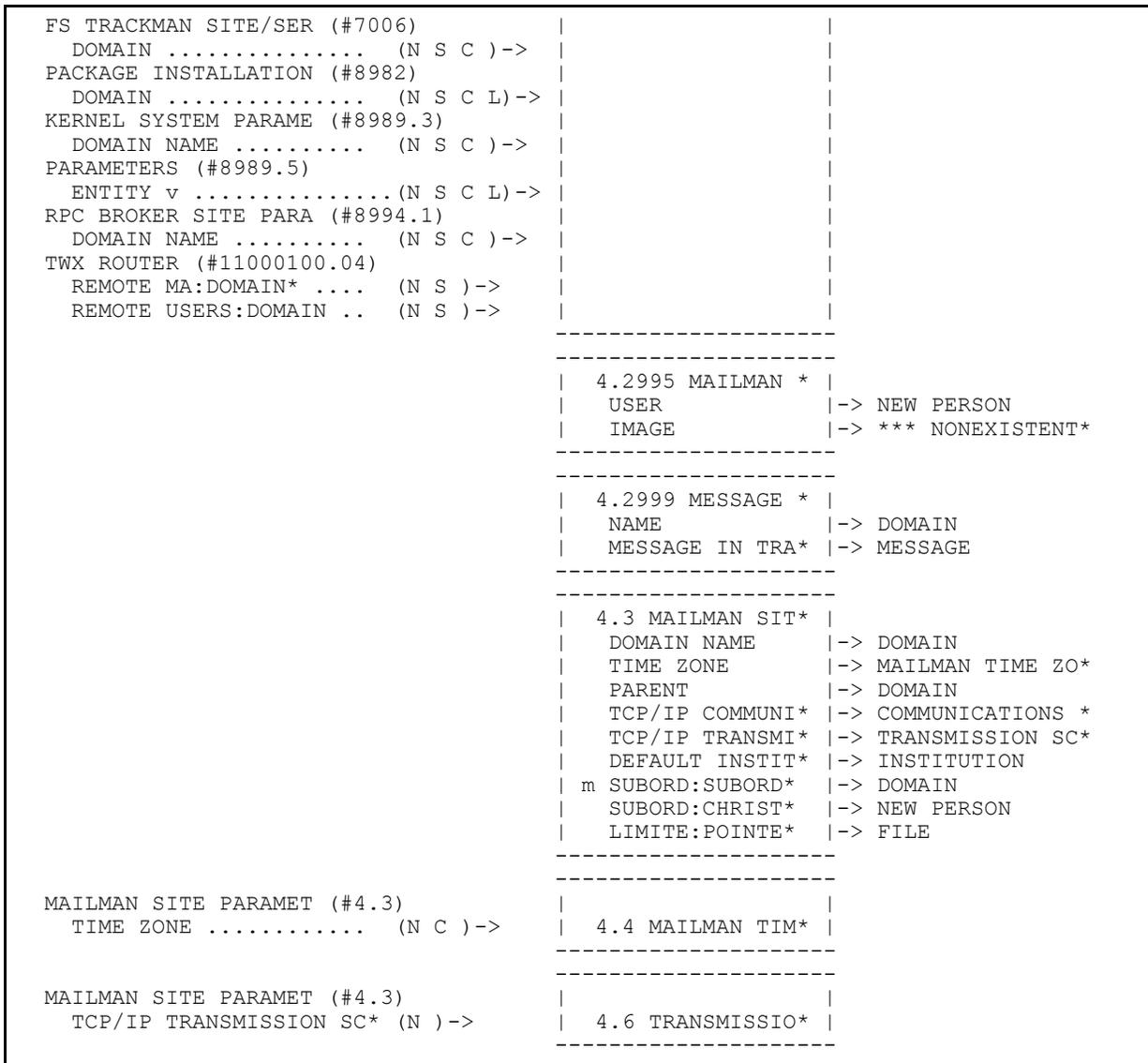


Figure 11: DNS-Aware MailMan V. 8.0 Pointer Relationship Map



For more information about creating and reading this map, please refer to the "Map Pointer Relations option" topic in the "List File Attributes" chapter in the "File Management" section of the "VA FileMan Advanced Users Manual."

Templates

SORT Templates

XMMGR-BKFILER-DAY@23:30

```
NUMBER: 1287                                NAME: XMMGR-BKFILER-DAY@23:30
DATE CREATED: FEB 14, 1992@12:12           FILE: MESSAGE DELIVERY STATS
DESCRIPTION: This template is used to produce a report that lists the number of
messages that were created in a month, a day at a time.

SORT BY: DATE/TIME// (User is asked range)
WITHIN DATE/TIME, SORT BY: '$E($P(INTERNAL(DATE/TIME),".",2),1,3)=233;L1// From
'0' To '1'
COMPILED (c): NO
```

Figure 12: XMMGR-BKFILER-DAY@23:30 SORT Template (File #4.2998)

XMMGR-BKFILER-TIME_PER_DATE

```
NUMBER: 1288                                NAME: XMMGR-BKFILER-TIME_PER_DATE
DATE CREATED: JUN 11, 1992@09:10           FILE: MESSAGE DELIVERY STATS
DESCRIPTION: This template allows information in a time-oriented file to be
output from a beginning time to an ending time.

SORT BY: @DATE/TIME// (User is asked range)
WITHIN DATE/TIME, SORT BY: @$E($P(INTERNAL(DATE/TIME),".",2),1,3)// (User is
asked range)
COMPILED (c): NO
```

Figure 13: XMMGR-BKFILER-TIME_PER_DATE SORT Template (File #4.2998)

PRINT Templates

XMHOSTLIST

```

NUMBER: 2840959                                NAME: XMHOSTLIST
DATE CREATED: APR 09, 1987                     FILE: DOMAIN
DESCRIPTION:  This template may be used to produce a list of domains with
pertinent network routing information.
HEADER (c): DOMAIN HOST LIST
FIRST PRINT FIELD: NAME;L10//
THEN PRINT FIELD: STATION;"STATION";R5//
THEN PRINT FIELD: DHCP ROUTING INDICATOR;"DHCP";L6//
THEN PRINT FIELD: MAILMAN HOST;"HOST";R8//
THEN PRINT FIELD: MCTS ROUTING INDICATOR;"MCST";L6//
COMPILED (c): NO
    
```

Figure 14: XMHOSTLIST—PRINT Template (File #4.2)

XMMGR-BKFILER-ACTIVE_USERS/DEL

```

NUMBER: 2841688                                NAME: XMMGR-BKFILER-ACTIVE_USERS/DEL
DATE CREATED: OCT 17, 1993@18:30              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template is used to display active users and message delivery
information.
HEADER (c): ACTIVE USERS VERSES DELIVERIES
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: ACTIVE USERS#//
THEN PRINT FIELD: TOTAL QUEUE LENGTH#//
THEN PRINT FIELD: MESSAGE DELIVERIES MADE#//
THEN PRINT FIELD: RESPONSE DELIVERIES MADE#//
THEN PRINT FIELD: MESSAGE DELIVERIES IN QUEUE#//
THEN PRINT FIELD: RESPONSE DELIVERIES IN QUEUE#//
COMPILED (c): NO
    
```

Figure 15: XMMGR-BKFILER-ACTIVE_USERS/DEL—PRINT Template (File #4.2998)

XMMGR-BKFILER-DEL_BY_GROUP

```

NUMBER: 2841690                                NAME: XMMGR-BKFILER-DEL BY GROUP
DATE CREATED: OCT 17, 1993@18:30              FILE: MESSAGE DELIVERY STATS
DATE LAST USED: NOV 18, 1997
DESCRIPTION:  This template is used to output mail deliveries by delivery group.
It will output two message delivery groups and three response delivery groups.
HEADER (c): DELIVERIES BY GROUP
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: QUEUED DELIVERIES MESSAGE G1#//
THEN PRINT FIELD: QUEUED DELIVERIES MESSAGE G2#//
THEN PRINT FIELD: QUEUED DELIVERIES RESPONSE G1#//
THEN PRINT FIELD: QUEUED DELIVERIES RESPONSE G2#//
THEN PRINT FIELD: QUEUED DELIVERIES RESPONSE G3#//
COMPILED (c): NO
    
```

Figure 16: XMMGR-BKFILER-DEL_BY_GROUP—PRINT Template (File #4.2998)

XMMGR-BKFILER-LENGTH_OF_QUEUES

```
NUMBER: 2841689                                NAME: XMMGR-BKFILER-LENGTH_OF_QUEUES
DATE CREATED: OCT 17, 1993@18:31              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template is used to output the length of mail delivery queues.
Each queue is a column and two message and three response columns are displayed.
HEADER (c): QUEUE LENGTH REPORT
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: TOTAL QUEUE LENGTH#//
THEN PRINT FIELD: MESSAGE NUMBER GROUP1#//
THEN PRINT FIELD: MESSAGE NUMBER GROUP2#//
THEN PRINT FIELD: RESPONSE NUMBER GROUP1#//
THEN PRINT FIELD: RESPONSE NUMBER GROUP2#//
THEN PRINT FIELD: RESPONSE NUMBER GROUP3#//
COMPILED (c): NO
```

Figure 17: XMMGR-BKFILER-LENGTH_OF_QUEUES—PRINT Template (File #4.2998)

XMMGR-BKFILER-LONGTERM-STATS

```
NUMBER: 2841695                                NAME: XMMGR-BKFILER-LONGTERM-STATS
DATE CREATED: MAY 06, 1994@14:10              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template is used to output statistics of mail deliveries by
month.
HEADER (c): MESSAGE & RESPONSE CREATION HISTORY
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: MESSAGE NUMBER LAST ASSIGNED//
THEN PRINT FIELD: W:$S('$D(XMLAST):0,$P(X,U,11)-XMLAST>999999:0,$P(X,U,11)-
XMLAST>0:1,1:0) $P(X,U,11)-XMLAST S XMLAST=$P(X,U,11);"New Messages"//
COMPILED (c): NO
```

Figure 18: XMMGR-BKFILER-LONGTERM-STATS—PRINT Template (File #4.2998)

XMMGR-BKFILER-OLD_STATS/TABBED

```

NUMBER: 2841692                                NAME: XMMGR-BKFILER-OLD_STATS/TABBED
DATE CREATED: OCT 17, 1993@18:32             FILE: MESSAGE DELIVERY STATS
DESCRIPTION: This template will produce a report just like the XMMGR-BKFILER-
STATS-PLUS template, except that the output is formatted for capture into a file
that can then easily be converted into a graphical display.
HEADER (c): TABBED STATISTICS
FIRST PRINT FIELD: DATE(#.01);L12//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: TIME(#.01)//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: S %XMNORMAL=$S($D(^XMB(1,1,120001)):^(120001),1:"");X//
THEN PRINT FIELD: ACTIVE USERS;L6//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: W $J($S('$D(X):.1,X=0:.1,1:X)/%XMNORMAL,4,2);X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: LINES OUTPUT;R6//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: W $J($S('$D(X):.1,X=0:.1,1:X)/$P(%XMNORMAL,"",2),8,2);X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: MESSAGE DELIVERIES MADE;R10//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: S XMTEMP=X;X//
THEN PRINT FIELD: RESPONSE DELIVERIES MADE;R10//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: S Y=X+XMTEMP W
$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",3),7,2);X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: MESSAGE DELIVERIES IN QUEUE;R10//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: S XMTEMP=X;X//
THEN PRINT FIELD: RESPONSE DELIVERIES IN QUEUE;R10//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: S Y=X+XMTEMP W
$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",4),7,2);X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: RESPONSE TIME - AVERAGE;R8//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: W $J($S('$D(X):.1,X=0:.1,1:X)/$P(%XMNORMAL,"",5),4,2);X//
THEN PRINT FIELD: K %XMNORMAL;X//
COMPILED (c): NO

```

Figure 19: XMMGR-BKFILER-OLD_STATS/TABBED—PRINT Template (File #4.2998)

XMMGR-BKFILER-QUEUE-WAIT

```
NUMBER: 2841687                                NAME: XMMGR-BKFILER-QUEUE-WAIT
DATE CREATED: OCT 17, 1993@18:33              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template is used to output the time messages are waiting to be
delivered in the mail delivery queues.  Each queue is a column and two message and
three response columns are displayed.
HEADER (c): DELIVERY WAIT BY QUEUE
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: TOTAL QUEUE LENGTH#//
THEN PRINT FIELD: MESSAGE AGE GROUP1#//
THEN PRINT FIELD: MESSAGE AGE GROUP2#//
THEN PRINT FIELD: RESPONSE AGE GROUP1#//
THEN PRINT FIELD: RESPONSE AGE GROUP2#//
THEN PRINT FIELD: RESPONSE AGE GROUP3#//
COMPILED (c): NO
```

Figure 20: XMMGR-BKFILER-QUEUE-WAIT—PRINT Template (File #4.2998)

XMMGR-BKFILER-STATS-PLUS

```
NUMBER: 2841691                                NAME: XMMGR-BKFILER-STATS-PLUS
DATE CREATED: OCT 17, 1993@18:33              FILE: MESSAGE DELIVERY STATS
DATE LAST USED: NOV 18, 1997
DESCRIPTION:  This template gives important daily delivery statistics.
HEADER (c): MESSAGE DELIVERY STATS LIST
FIRST PRINT FIELD: DATE/TIME//
THEN PRINT FIELD: ACTIVE USERS#//
THEN PRINT FIELD: LINES OUTPUT#//
THEN PRINT FIELD: MESSAGE DELIVERIES MADE#//
THEN PRINT FIELD: RESPONSE DELIVERIES MADE#//
THEN PRINT FIELD: MESSAGE AGE GROUP1#//
THEN PRINT FIELD: RESPONSE AGE GROUP1#//
THEN PRINT FIELD: MESSAGE DELIVERIES IN QUEUE#//
THEN PRINT FIELD: RESPONSE DELIVERIES IN QUEUE#//
THEN PRINT FIELD: RESPONSE TIME - AVERAGE#//
COMPILED (c): NO
```

Figure 21: XMMGR-BKFILER-STATS-PLUS—PRINT Template (File #4.2998)

XMMGR-BKFILER-STATS/TABBED

```

NUMBER: 2841693                                NAME: XMMGR-BKFILER-STATS/TABBED
DATE CREATED: FEB 11, 1994@15:22              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template will produce a report just like the XMMGR-BKFILER-
STATS-PLUS template, except that the output is formatted for capture into a file
that can then easily be converted into a graphical display.
HEADER (c): TABBED STATISTICS
FIRST PRINT FIELD: DATE(#.01);L12//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: TIME(#.01)//
THEN PRINT FIELD: S XMTEMP=$P(X,U,21) W $C(9);X//
THEN PRINT FIELD: S %XMNORMAL=$S($D(^XMB(1,1,120001)):^(120001),1:"");X//
THEN PRINT FIELD: ACTIVE USERS;L6//
THEN PRINT FIELD: S Y=$P(X,U,21) W
"A" $C(9) $S(+%XMNORMAL=0:0,1:$J($S('$D(Y):.1,Y=0:.1,1:Y)/%XMNORMAL,4,2));X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: LINES OUTPUT;R6//
THEN PRINT FIELD: W
"L" $C(9) $S(+%P(%XMNORMAL,"",2)=0:0,1:$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",
2),8,2));X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: MESSAGE DELIVERIES MADE;R10//
THEN PRINT FIELD: S XMTEMP=Y;X//
THEN PRINT FIELD: RESPONSE DELIVERIES MADE;R10//
THEN PRINT FIELD: S Y=Y+XMTEMP W
"R" $C(9) $S(+%P(%XMNORMAL,"",3)=0:0,1:$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",
3),7,2));X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: MESSAGE DELIVERIES IN QUEUE;R10//
THEN PRINT FIELD: S XMTEMP=Y;X//
THEN PRINT FIELD: RESPONSE DELIVERIES IN QUEUE;R10//
THEN PRINT FIELD: S Y=Y+XMTEMP W
"Q" $C(9) $S(+%P(%XMNORMAL,"",4)=0:0,1:$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",
4),7,2));X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: RESPONSE TIME - AVERAGE;R8//
THEN PRINT FIELD: W
"T" $C(9) $S(+%P(%XMNORMAL,"",5)=0:0,1:$J($S('$D(Y):.1,Y=0:.1,1:Y)/$P(%XMNORMAL,"",
5),4,2));X//
THEN PRINT FIELD: K %XMNORMAL;X//
COMPILED (c): NO

```

Figure 22: XMMGR-BKFILER-STATS/TABBED—PRINT Template (File #4.2998)

XMMGR-BKFILER-TABBED-RT

```

NUMBER: 2841694                                NAME: XMMGR-BKFILER-TABBED-RT
DATE CREATED: OCT 17, 1993@18:35              FILE: MESSAGE DELIVERY STATS
DESCRIPTION:  This template provides information about daily response time.
HEADER (c): MESSAGE DELIVERY STATS LIST
FIRST PRINT FIELD: DATE/TIME;X//
THEN PRINT FIELD: $C(9);X//
THEN PRINT FIELD: RESPONSE TIME - AVERAGE//
COMPILED (c): NO

```

Figure 23: XMMGR-BKFILER-TABBED-RT—PRINT Template (File #4.2998)

Help Frames

An extensive set of MailMan Help Frames have been created and updated for MailMan V. 8.0.



For a complete list of Help Frames, please refer to "Appendix A—Help Frames" in this manual."

Software Package-wide Variables

The following software package-wide variables are contained within the DNS-Aware MailMan V. 8.0 software:

- XMC
- XMV

Variables used throughout the package include:

- **DUZ** User's IEN in NEW PERSON file (#200).
- **XMABORT** 0=don't abort; 1=abort.
- **XMDUZ** DUZ of user or surrogate.
- **XMFROM** Message from.
- **XMINSTR(** Special handling instructions for a message.
- **XMK** Basket number (IEN in BASKET multiple of the MAILBOX file [#3.7]).
- **XMKN** Basket name.
- **XMKZ** Message sequence number (in basket).
- **XMRESTR(** Special restrictions for a message.
- **XMSUBJ** Message subject.
- **XMTO** Array of addressees [XMTO(addr)=""], or addressee [XMTO=addr].
- **XMV(** User identification and preferences.
- **XMZ** Message number (IEN in the MESSAGE file [#3.9]).
- **XMZO** Original message number (IEN in the MESSAGE file [#3.9]), used during copy, answer, reply.
- **XMZREC** Zero node of message.

Standards and Conventions (SAC) Exemptions

The following software package-wide variables have received Standards and Conventions Committee (SACC) exemptions.

- STANDARD SECTION: 2A **B,J,V,Z,\$V,\$Z**
 - Beginning December 14, 1989, MailMan, by virtue of being defined as part of Kernel, can use non-standard **\$Z** functions and non-standard **\$Z** special variables.
 - Beginning April 27, 1995, MailMan has an exemption to use **\$ZV** in the **XML*** series of routines that are used for reading and writing data across the network for Patch XM*7.1*8.

- STANDARD SECTION: 2A **OPEN, CLOSE device**

Beginning October 25, 1990, MailMan is exempted from using the device handler to open and close synchronous communications channels to support electronic communications until such time that the VA device handler provides the needed functionality.

Also involved are scripts distributed in the DOMAIN file (#4.2) or the TRANSMISSION SCRIPT file (#4.6). This exemption allows MailMan to set the appropriate IO* variables as needed.

- STANDARD SECTION: 2D2 *** & # READs**

Beginning March 26, 1990, the following MailMan routines can use * or # READs: XMC1, XMCTLK, XLM, XML1CRC, and XML4CRC*.

- STANDARD SECTION: 4B **Package-wide variables**

Beginning February 9, 1989, XMDUN, XMDUNO, XMDUZ, and XMPRIV are package-wide variables for use in MailMan.

■ STANDARD SECTION: 6D

FM compatibility

- Beginning February 3, 1993, the global **^XMBPOST** is exempted from VA FileMan compatibility in Version 7.1 of MailMan and later. This global will be used to store information concerning mail messages to be posted by MailMan's background filer. It will also temporarily store statistical data concerning mail messages.

**MailMan no longer uses the following globals referenced in this exemption:**

- The global **XMB("NOP"**, is exempted from VA FileMan compatibility. It is a temporary list of messages that should *not* be purged.
- The global **XMB("POST"**, is exempted from VA FileMan compatibility. It is a temporary list of messages to be posted by MailMan's background filer. This exemption is for Version 7.0 or earlier of MailMan.
- Beginning August 10, 1989, the global **XMB("PURGE"** is exempt from VA FileMan compatibility.

Software Product Security

Mail Groups

The following mail group is exported with the DNS-Aware MailMan V. 8.0 software.

- XM SUPER SEARCH



For more information on the Super Search functionality, please refer to the XM SUPER SEARCH option in the "Options—Listed by Name" topic in this chapter.

Remote System(s)

The *VISTA* MailMan software itself transmits data and provides the capability to transmit data to remote systems, facilities, and databases. Numerous routines have been modified and modularized with the DNS-Aware MailMan V. 8.0 software. This modularization was necessary for maintainability.



For a list of all routines modified with the DNS-Aware MailMan V. 8.0 software, please refer to the "Routines" topic in this chapter.

Archiving and Purging

There are no application-specific archiving procedures or recommendations for the DNS-Aware MailMan V. 8.0 software.

The MESSAGE file (#3.9) has the potential to grow in size over time.

Interfacing

The DNS-Aware MailMan V. 8.0 software requires the use of the following hardware and software:

Hardware

The DNS-Aware MailMan APIs and files will reside on the standard hardware platforms employed by Department of Veterans Affairs healthcare facilities. These systems consist of DSM on OpenVMS or Caché on NT.

There are no additional hardware system interface issues with this project.

Software

There are no additional software system interface issues with this project.

Menu(s)/Option(s)

The following is a list of all *VISTA* MailMan menu options exported with the DNS-Aware MailMan V. 8.0 software of particular interest to Information Security Officers (ISOs):

- XM SUPER SEARCH



For a description of this option and to view a more detailed list of all options exported with the DNS-Aware MailMan V. 8.0 software, please refer to the "Exported Options" topic in this chapter.

Security Key(s)

The following security keys are exported/distributed with the DNS-Aware MailMan V. 8.0 software:

Security Key	Description
XM CAC ADPAC	<p>This key allows users, such as Clinical Application Coordinators (CACs) and Automated Data Processing Application Coordinators (ADPACs) to edit other users' mail groups. Users holding this key can edit any mail group, except personal mail groups. (Personal mail groups are those mail groups that only the organizer may edit or use.)</p> <p>The following users should <i>not</i> be given this key, because they already possess the privilege this key grants:</p> <ul style="list-style-type: none"> • Holders of the XMMGR security key.
XM GROUP EDIT MASTER	<p>This key allows users to edit other users' mail groups. Users holding this key can edit and add new users to any other users' mail groups except personal mail groups. (Personal mail groups are those mail groups that only the organizer may edit or use.)</p> <p>The following users should <i>not</i> be given this key, because they already possess the privilege this key grants:</p> <ul style="list-style-type: none"> • Holders of the XMMGR security key. • Clinical Application Coordinators, as identified in File #8930, USR Class, belonging to the Text Integration Utility (TIU) package.
XM GROUP PRIORITY	<p>This key allows users to forward priority mail to groups. Without this key, only the sender of a priority message can forward it to groups.</p>
XM NO BROADCASTS	<p>This key is used to prevent broadcast messages from being delivered to the user.</p>

Security Key	Description
XM SUPER SEARCH	<p>This key allows users to run the Super Search Message File option (i.e., XM SUPER SEARCH), which performs a search for messages in the MESSAGE file based on multiple criteria.</p> <p>This key should be given, on a time-limited basis, to trusted individuals who have a valid need to research messages in the MESSAGE file (#3.9). For example, in sexual or other harassment cases, in which the harassment is in the form of MailMan messages.</p> <p> For more information on the Super Search functionality, please refer to the XM SUPER SEARCH option in the "Options—Listed by Name" topic in this chapter.</p>
XMMGR	<p>This key is required for options that can remove data from the MailMan system or for options that require most trusted employee status and are used for managing MailMan. This key is also used to control privileges in SHARED,MAIL.</p>
XMNET	<p>This key is used to control options that require special privileges for use of network mail. Also, this key can be used to control the ability for users to have and change their forwarding address.</p>
XMNOPRIV	<p>This key is used to control privileges in SHARED,MAIL. Without this key, users <i>cannot</i> assume the identity of SHARED,MAIL.</p>
XMQ- (DOMAIN file Keys)	<p>There are domains in the DOMAIN file (#4.2) whose names begin with "Q-". These are referred to as "Queue Domains." Each has a security key. Each security key begins with "XMQ-". For example, if the Domain name is Q-CLM.VA.GOV, the corresponding security key is named "XMQ-CLM". Since these domains are used to send data to central collection points, this security key prevents users from sending personal messages. Any domain containing FOC-AUSTIN.VA.GOV or Q- should have keys.</p>
XMSTAR	<p>This key gives users the ability to broadcast messages to <i>all</i> local mail users by entering an asterisk/star ("*") at the "Send to:" prompt.</p>
XMSTAR LIMITED	<p>This key gives users the ability to broadcast messages to a <i>subset</i> of local mail users by entering an asterisk/star ("*") at the "Send to:" prompt.</p>

Security Key	Description
XMTALK	This key is used to control access to the TalkMan options, which allow users to connect to remote computers via Network Mail scripts.

Table 11: Security keys distributed with DNS-Aware MailMan V. 8.0

The following security keys are not exported/distributed with the DNS-Aware MailMan V. 8.0 software but are required for certain functionality:

Security Key	Description
XUPROG	This key is used to allow access to the PackMan options.
XUPROGMODE	This key is used to allow access to the PackMan options.

Table 12: Security keys required for certain functionality within DNS-Aware MailMan V. 8.0

File Security

MailMan has two levels of VA FileMan file security. MailMan files contain data that are prepared according to VA policy and procedures and therefore require a high level of protection regarding WRITE, DELETE, and LAYGO access.

The following file security is established with DNS-Aware MailMan V. 8.0-related files. The definitions for each security key attached to these files are:

- #—System Manager access
- @—Programmer access
- ^—No access
- Null—Full access

File #	File Name	DD	RD	WR	DEL	LAYGO	AUDIT
3.4	COMMUNICATIONS PROTOCOL	#	@	#	#	#	#
3.6	BULLETIN	#		#	#		#
3.7	MAILBOX	#		#	#	#	#
3.73	MESSAGES TO BE NEW AT A LATER DATE	@	#	#	#	#	@
3.8	MAIL GROUP	#		#	#		#
3.816	DISTRIBUTION LIST						
3.9	MESSAGE	^	^	^	^	#	^
4.2	DOMAIN	#	#	#	#	#	#
4.281	INTER-UCI TRANSFER						
4.2995	MAILMAN OUTSTANDING FTP TRANSACTIONS						
4.2996	INTERNET SUFFIX						
4.2997	REMOTE USER DIRECTORY						
4.2998	MESSAGE DELIVERY STATS						
4.2999	MESSAGE STATISTICS						
4.3	MAILMAN SITE PARAMETERS	@	#	#	#	#	@
4.4	MAILMAN TIME ZONE						
4.501	NETWORK SENDERS REJECTED						
4.6	TRANSMISSION SCRIPT						

Table 13: File security for the DNS-Aware MailMan V. 8.0 software



For more information on the files exported with the DNS-Aware MailMan V. 8.0 software, please refer to the "File List" topic in this chapter.

References

The DNS-Aware MailMan V. 8.0 has been developed in accordance with all VA regulations.

Official Policies

No additional legal requirements are imposed by the DNS-Aware MailMan V. 8.0 software on **VISTA** users, nor does the DNS-Aware MailMan V. 8.0 software relieve users of any previously established requirements.

Glossary

ADPAC	Automated D ata P rocessing A pplication C oordinator.
ANSI	American N ational S tandards I nstitute
API	A pplication P rogramming I nterface
APPLICATION PACKAGE	In <i>VISTA</i> , software and documentation that support the automation of a service, such as Laboratory or Pharmacy within VA medical centers (see Package).
APPLICATION PROGRAMMING INTERFACE (API)	Programmer calls provided for use by application programmers. APIs allow programmers to carry out standard computing activities without needing to duplicate utilities in their own software. APIs also further DBA goals of system integration by channeling activities, such as adding new users, through a limited number of callable entry points.
ARRAY	An arrangement of elements in one or more dimensions. An M array is a set of nodes referenced by subscripts that share the same variable name.
BULLETINS	Electronic mail messages that are automatically delivered by <i>VISTA</i> MailMan under certain conditions. For example, a bulletin can be set up to "fire" when database changes occur, such as adding a new Institution in the INSTITUTION file (#4). Bulletins are fired by bulletin-type cross-references.
CALLABLE ENTRY POINT	Authorized programmer call that can be used in any <i>VISTA</i> application software. The DBA maintains the list of DBIC-approved entry points.
CROSS REFERENCE	There are several types of cross-references available. Most generally, a VA FileMan cross-reference specifies that some action be performed when the field's value is entered, changed, or deleted. For several types of cross-references, the action consists of putting the value into a list; an index used when looking-up an entry or when sorting. The regular cross-reference is used for sorting and for lookup; you can limit it to sorting only.
DATA	A representation of facts, concepts, or instructions in a formalized manner for communication, interpretation, or processing by humans or by automatic means. The information you enter for the computer to store and retrieve. Characters that are stored in the computer system as the values of local or global variables. VA FileMan fields hold data values for file entries.

Glossary

DATA DICTIONARY (DD)	<p>The Data Dictionary is a global containing a description of what kind of data is stored in the global corresponding to a particular file. VA FileMan uses the data internally for interpreting and processing files.</p> <p>A Data Dictionary contains the definitions of a file's elements (fields or data attributes); relationship to other files; and structure or design. Users generally review the definitions of a file's elements or data attributes; programmers review the definitions of a file's internal structure.</p>
DBA	<p>Database Administrator, oversees software development with respect to VISTA Standards and Conventions (SAC) such as namespacing. Also, this term refers to the Database Administration function and staff.</p>
DBIA	<p>Database Integration Agreement, a formal understanding between two or more VISTA software packages, which describes how data is shared or how software packages interact. The DBA maintains a list of DBIAs.</p>
DEFAULT	<p>Response the computer considers the most probable answer to the prompt being given. It is identified by double slash marks (//) immediately following it. This allows you the option of accepting the default answer or entering your own answer. To accept the default you simply press the Enter (or Return) key. To change the default answer, type in your response.</p>
DELIMITER	<p>Special character used to separate a field, record, or string. VA FileMan uses the ^ character as the delimiter within strings.</p>
DHCP	<p>Decentralized Hospital Computer Program now known as Veterans Health Information Systems and Technology Architecture (VISTA).</p>
DIRECT MODE UTILITY	<p>A programmer call that is made when working in direct programmer mode. A direct mode utility is entered at the MUMPS prompt (e.g., >D ^XMP). Calls that are documented as direct mode utilities <i>cannot</i> be used in application software code.</p>
DNS	<p>Domain Name Service (DNS)</p>
ENTRY	<p>VA FileMan record. An internal entry number (IEN, the .001 field) uniquely identifies an entry in a file.</p>
EXTRINSIC FUNCTION	<p>Extrinsic function is an expression that accepts parameters as input and returns a value as output that can be directly assigned.</p>
FACILITY	<p>Geographic location at which VA business is performed.</p>

FIELD	In a record, a specified area used for the value of a data attribute. The data specifications of each VA FileMan field are documented in the file's data dictionary. A field is similar to blanks on forms. It is preceded by words that tell you what information goes in that particular field. The blank, marked by the cursor on your terminal screen, is where you enter the information.
FILE	Set of related records treated as a unit. VA FileMan files maintain a count of the number of entries or records.
FILE MANAGER (VA FILEMAN)	The <i>VISTA</i> 's Database Management System (DBMS). The central component of Kernel that defines the way standard <i>VISTA</i> files are structured and manipulated.
FORM	Please refer to the Glossary entry for "ScreenMan Forms."
FORUM	The central E-mail system within <i>VISTA</i> . Developers use FORUM to communicate at a national level about programming and other issues. FORUM is located at the OI Field Office - Washington, DC (162-2).
FREE TEXT	A DATA TYPE that can contain any printable characters.
GAL	Global Address List
GLOBAL VARIABLE	Variable that is stored on disk (M usage).
HEALTH LEVEL SEVEN (HL7)	National level standard for data exchange in all healthcare environments regardless of individual computer application systems.
HEALTH LEVEL SEVEN (HL7) VISTA	Messaging system developed as a <i>VISTA</i> software package that follows the HL7 Standard for data exchange.
HIPAA	Health Insurance Portability and Accountability Act
INPUT TEMPLATE	A pre-defined list of fields that together comprise an editing session.
INSTITUTION	A Veterans Affairs (VA) facility assigned a number by headquarters, as defined by Directive 97-058. An entry in the INSTITUTION file (#4) that represents the Veterans Health Administration (VHA).
INTEGRATION AGREEMENTS (IA) (Formerly known as DATABASE INTEGRATION AGREEMENTS [DBIA])	Integration Agreements (IA) define an agreement between two or more <i>VISTA</i> software packages to allow access to one development domain by another. Any software developed for use in the <i>VISTA</i> environment is required to adhere to this standard; as such it applies to vendor products developed within the boundaries of DBA assigned development domains (e.g., MUMPS AudioFax). An IA defines the attributes and functions that specify access. All IAs are recorded in the Integration Agreement database on FORUM. Content can be viewed using the DBA menu or the System Design & Development's web page.

Glossary

INTERNAL ENTRY NUMBER (IEN)	The number used to identify an entry within a file. Every record has a unique internal entry number.
IRA	Initial Request Analysis
IRM	Information Resource Management. A service at VA medical centers responsible for computer management and system security.
KERNEL	<i>VISTA</i> software that functions as an intermediary between the host operating system and the <i>VISTA</i> application software (e.g., Laboratory, Pharmacy, IFCAP, etc.). Kernel provides a standard and consistent user and programmer interface between application software and the underlying M implementation.
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
LINK	Non-specific term referring to ways in which files can be related (via pointer links). Files have links into other files.
MAILMAN	<i>VISTA</i> software that provides a mechanism for handling electronic communication, whether it's user-oriented mail messages, automatic firing of bulletins, or initiation of server-handled data transmissions.
MENU	List of choices for computing activity. A menu is a type of option designed to identify a series of items (other options) for presentation to the user for selection. When displayed, menu-type options are preceded by the word "Select" and followed by the word "option" as in Select Menu Management option: (the menu's select prompt).
MENU SYSTEM	The overall Menu Manager logic as it functions within Kernel's framework.
MENU TEXT	The descriptive words that appear when a list of option choices is displayed. Specifically, the Menu Text field of the OPTION file (#19). For example, User's Toolbox is the menu text of the XUSERTOOLS option. The option's synonym is TBOX.
NAMESPACING	Convention for naming <i>VISTA</i> software elements. The DBA assigns unique two to four character string prefix for software developers to use in naming routines, options, and other software elements so that <i>VISTA</i> software packages can coexist. The DBA also assigns a separate range of file numbers to each software package.
OPTION	An entry in the OPTION file. As an item on a menu, an option provides an opportunity for users to select it, thereby invoking the associated computing activity. Options can also be scheduled to run in the background, non-interactively, by Task Manager.

OPTION NAME	Name field in the OPTION file (e.g., XUMAINT for the option that has the menu text "Menu Management"). Options are namespaced according to <i>VISTA</i> conventions monitored by the DBA.
PACKAGE	The set of programs, files, documentation, help prompts, and installation procedures required for a given software application. For example, Kernel, Laboratory, Pharmacy, and PIMS are <i>VISTA</i> software packages. A <i>VISTA</i> software environment composed of elements specified via the PACKAGE file (#9.4). Elements include files and associated templates, namespaced routines, and namespaced file entries from the OPTION, HELP FRAME, BULLETIN, and FUNCTION files. As public domain software, <i>VISTA</i> software can be requested through the Freedom of Information Act (FOIA).
POINTER	The address at which a data value is stored in computer memory. A relationship between two VA FileMan files, a pointer is a file entry that references another file (forward or backward). Pointers can be an efficient means for applications to access data by referring to the storage location at which the data exists.
PRIVATE INTEGRATION AGREEMENT	Where only a single application is granted permission to use an attribute/function of another <i>VISTA</i> software package. These IAs are granted for special cases, transitional problems between versions, and release coordination. A Private IA is also created by the requesting software package based on their examination of the custodian software package's features. An example would be where one software package distributes a patch from another software package to ensure smooth installation.
PROMPT	The computer interacts with the user by issuing questions called prompts, to which the user issues a response.
RECORD	Set of related data treated as a unit. An entry in a VA FileMan file constitutes a record. A collection of data items that refer to a specific entity (e.g., in a name-address-phone number file, each record would contain a collection of data relating to one person).
REQUIRED FIELD	A mandatory field, one that must not be left blank. The prompt for such a field will be repeated until the user enters a valid response.
REVERSE VIDEO	The reversal of light and dark in the display of selected characters on a video screen. For example, if text is normally displayed as black letters on a white background, reverse video presents the text as white letters on a black background or vice versa.
ROUTINE	Program or a sequence of instructions called by a program that has some general or frequent use. M (previously referred to as MUMPS) routines are groups of program lines, which are saved, loaded, and called as a single unit via a specific name.

Glossary

SAC	Standards and Conventions. Through a process of verification, VISTA software packages are reviewed with respect to SAC guidelines as set forth by the Standards and Conventions Committee (SACC).
SACC	VISTA's Standards and Conventions Committee . This Committee is responsible for maintaining the SAC.
SCREEN EDITOR	VA FileMan's Screen-oriented text editor. It can be used to enter data into any WORD-PROCESSING field using full-screen editing instead of line-by-line editing.
SCREENMAN FORMS	Screen-oriented display of fields, for editing or simply for reading. VA FileMan's Screen Manager is used to create forms that are stored in the FORM file (#.403) and exported with a software package. Forms are composed of blocks (stored in the BLOCK file [#.404]) and can be regular, full screen pages or smaller, "pop-up" pages.
SCREEN-ORIENTED	A computer interface in which you see many lines of data at a time and in which you can move your cursor around the display screen using screen navigation commands. Compare to Scrolling Mode.
SCROLLING MODE	The presentation of the interactive dialog one line at a time. Compare to Screen-oriented.
SUPPORTED REFERENCE INTEGRATION AGREEMENT	This applies where any VISTA application can use the attributes/functions defined by the IA (these are also called " Public "). An example is an IA that describes a standard API such as DIE or VADPT. The software package that creates/maintains the Supported Reference must ensure it is recorded as a Supported Reference in the IA database. There is no need for other VISTA software packages to request an IA to use these references; they are open to all by default.
TEMPLATE	Means of storing report formats, data entry formats, and sorted entry sequences. A template is a permanent place to store selected fields for use at a later time. Edit sequences are stored in the INPUT TEMPLATE file (#.402), print specifications are stored in the PRINT TEMPLATE file (#.4), and search or sort specifications are stored in the SORT TEMPLATE file (#.401).

TOOLKIT	<p>Toolkit (or Kernel Toolkit) is a robust set of tools developed to aid the Veterans Health Information Systems and Technology Architecture (<i>VISTA</i>) development community, and Information Resources Management (IRM), in writing, testing, and analysis of code. They are a set of generic tools that are used by developers, documenters, verifiers, and <i>VISTA</i> software packages to support distinct tasks.</p> <p>The Toolkit provides utilities for the management and definition of development projects. Many of these utilities have been used by the OI Field Office – Oakland (formerly San Francisco) for internal management and have proven valuable. Toolkit also includes tools provided by other OI Field Offices based on their proven utility.</p>
TRIGGER	<p>A type of VA FileMan cross-reference. Often used to update values in the database given certain conditions (as specified in the trigger logic). For example, whenever an entry is made in a file, a trigger could automatically enter the current date into another field holding the creation date.</p>
VA	<p>The Department of Veterans Affairs, formerly called the Veterans Administration.</p>
VA FILEMAN	<p>Set of programs used to enter, maintain, access, and manipulate a database management system consisting of files. A <i>VISTA</i> software package of online computer routines written in the M language, which can be used as a stand-alone database system or as a set of application utilities. In either form, such routines can be used to define, enter, edit, and retrieve information from a set of computer stored files.</p>
VAMC	<p>Veterans Affairs Medical Center.</p>
VARIABLE	<p>A character or group of characters that refer(s) to a value. M (previously referred to as MUMPS) recognizes 3 types of variables: local variables, global variables, and special variables. Local variables exist in a partition of main memory and disappear at sign-off. A global variable is stored on disk, potentially available to any user. Global variables usually exist as parts of global arrays. The term "global" can refer either to a global variable or a global array. A special variable is defined by systems operations (e.g., \$TEST).</p>
VDSI	<p><i>VISTA</i> Data Systems & Integration.</p>
VHA	<p>Veterans Health Administration.</p>
VISN	<p>Veterans Integrated Service Network.</p>

Glossary

VISTA

Veterans Health Information Systems and Technology Architecture (VISTA) of the Veterans Health Administration (VHA), Department of Veterans Affairs (VA). **VISTA** software, developed by VA, is used to support clinical and administrative functions at VA Medical Centers nationwide. It is written in M, and, via Kernel, runs on all major M implementations regardless of vendor. **VISTA** is composed of software packages that undergo a verification process to ensure conformity with namespacing and other **VISTA** standards and conventions.

WAN

Wide Area Network

Appendix A—Help Frames

This appendix contains the Help Frames available with MailMan V. 8.0.

The following Help Frame naming convention was introduced with the release of MailMan V. 8.0:

Help Frame Prefix	Description
XM-I	IRM-related Help Frames
XM-I-C	Communicate
XM-I-D	Disk
XM-I-N	Network
XM-I-S-	Site Parameters
XM-U-	User-related Help Frames
XM-U-A-	Address-related Help Frames
XM-U-B-	Basket-related Help Frames
XM-U-BO-	Basket Options-related Help Frames
XM-U-H-	Help Option-related Help Frames
XM-U-H-Q	Frequently Asked Questions-related Help Frames
XM-U-I-	Information-related Help Frames
XM-U-K-	KIDS/PackMan-related Help Frames
XM-U-M-	Message-related Help Frames
XM-U-MO-	Message Options-related Help Frames
XM-U-NEW-	New features in MailMan V. 8.0-related Help Frames
XM-U-P-	Personal Preferences-related Help Frames
XM-U-Q-	Query/Searching/Lookup-related Help Frames
XM-U-R-	Reading and Managing Mail-related Help Frames (including New Mail)

Table 14: MailMan Help Frame Naming Conventions

Help Frame Name	Help Frame Title
XM-I-C-TALKMAN	TALKMAN
XM-I-C-TALKMAN CAPTURE	CAPTURING A TALKMAN SESSION
XM-I-C-TALKMAN END	ENDING A TALKMAN SESSION
XM-I-D-RECOVER MSGS	RECOVER MESSAGES FOR A USER
XM-I-D-RECOVER MSGS-FIND	RECOVER MESSAGES FOR A USER - FIND THEM
XM-I-D-RECOVER MSGS-LIST	RECOVER MESSAGES FOR A USER - LIST THEM
XM-I-D-RECOVER MSGS-PUT	RECOVER MESSAGES FOR A USER - PUT IN USER'S MAILBOX
XM-I-N-BULLETINS	BULLETINS SIGNALING TROUBLE IN NETWORK TRANSMISSION
XM-I-N-DOMAIN FILE	DOMAIN FILE
XM-I-N-DOMAIN FILE-ADDRESSING	DOMAIN FILE FIELDS INVOLVED IN ADDRESSING
XM-I-N-DOMAIN FILE-CONNECT	DOMAIN FILE FIELDS USED TO CONNECT TO A SITE
XM-I-N-DOMAIN FILE-CONNECT-2	DOMAIN FILE FIELDS USED TO CONNECT TO A SITE (CONTINUED)
XM-I-N-DOMAIN FILE-FLAGS	DOMAIN FILE - FLAGS FIELD
XM-I-N-DOMAIN FILE-SESSION	DOMAIN FILE FIELDS USED WHILE TRANSMITTING
XM-I-N-DOMAIN FILE-TURN	DOMAIN FILE - DISABLE TURN COMMAND FIELD
XM-I-N-DOMAIN FILE-VALIDATE	DOMAIN FILE - VALIDATION NUMBER FIELD
XM-I-N-NETWORK	NETWORK OVERVIEW
XM-I-N-XMIT PLAY	TRANSMIT - PLAY A SCRIPT
XM-I-N-XMIT POLL	POLL A SITE
XM-I-N-XMIT QUEUES	TRANSMIT QUEUES
XM-I-N-XMIT SCHEDULE TASK	TRANSMIT - SCHEDULE A TASK
XM-I-N-XMIT TAPE	TRANSMIT VIA TAPE
XM-I-N-XMIT TASK	TRANSMIT TASK
XM-I-N-XMIT TASK-2	TRANSMIT TASK (CONTINUED)
XM-I-N-XMIT UCI	TRANSMIT BETWEEN UCI'S VIA A GLOBAL
XM-I-NEW FEATURES	NEW FEATURES FOR SITE MANAGERS
XM-I-S-BIG GROUP SIZE	BIG GROUP SIZE FIELD
XM-I-S-MAX DIGITS FOR MSG NUM	MAX DIGITS FOR MESSAGE NUMBER FD
XM-I-S-MESSAGE LINE LIMIT	P-MESSAGE LINE LIMIT FIELD
XM-I-S-SITE PARAMETERS	MAILMAN SITE PARAMETERS FILE

Help Frame Name	Help Frame Title
XM-I-S-SITE PARAMETERS-DISK	SITE PARAMETERS AFFECTING DISK SPACE MANAGEMENT
XM-I-S-SITE PARAMETERS-ID	SITE PARAMETERS AFFECTING THE SITE
XM-I-S-SITE PARAMETERS-LOCAL	SITE PARAMETERS AFFECTING LOCAL MESSAGES
XM-I-S-SITE PARAMETERS-REMOTE	SITE PARAMETERS AFFECTING REMOTE MESSAGING
XM-I-S-SITE PARAMETERS-USER	SITE PARAMETERS AFFECTING USERS
XM-I-S-SITE PARAMETERS-USER-2	SITE PARAMETERS AFFECTING USERS (CONTINUED)
XM-MASTER	VA ELECTRONIC MAIL SYSTEM
XM-U-A-ADDRESS	SENDING A MESSAGE - ADDRESSING
XM-U-A-CC	ADDRESSING A RECIPIENT AS 'CARBON COPY'
XM-U-A-GROUP LARGE	ADDRESSING MAIL TO LARGE MAIL GROUPS
XM-U-A-GROUP LARGE-2	ADDRESSING MAIL TO LARGE MAIL GROUPS (CONTINUED)
XM-U-A-INFO ONLY	ADDRESSING A RECIPIENT AS INFORMATION ONLY
XM-U-A-LOCAL USER NAME	ENTERING A LOCAL USER'S NAME IN MAILMAN
XM-U-A-LOCAL USER NAME-2	ENTERING A LOCAL USER'S NAME (CONTINUED)
XM-U-A-STAGGER DELIVERY	STAGGER DELIVERY OF A MESSAGE
XM-U-A-STAGGER DELIVERY-2	STAGGER DELIVERY OF A MESSAGE (CONTINUED)
XM-U-B-BASKET CONTENTS LIST	DIRECTORY OF BASKETS
XM-U-B-BASKET NAME	NAMING BASKETS
XM-U-B-BASKET NAME CHANGE	CHANGE A MAIL BASKET NAME
XM-U-B-BASKET SELECT	RESPONDING TO THE 'MAIL BASKET' PROMPT
XM-U-B-CHANGE DETAIL	CHANGE DETAIL
XM-U-B-FILTER	FILTERING MESSAGES - BASKET ACTION
XM-U-B-NAVIGATE CLASSIC	READING A MESSAGE AND NAVIGATING IN THE CLASSIC READER
XM-U-B-NAVIGATE FULL SCREEN	READING A MESSAGE AND NAVIGATING IN THE FULL SCREEN READER
XM-U-B-NEW MAIL LIST	LIST OF NEW MESSAGES IN A BASKET
XM-U-B-OPPOSITE TOGGLE	OPPOSITE SELECTION TOGGLE
XM-U-B-READER	MAILMAN MESSAGE READERS
XM-U-B-READER CLASSIC	CLASSIC MESSAGE READER
XM-U-B-READER DETAILED	DETAILED MESSAGE INFORMATION
XM-U-B-READER DETAILED LIST	DETAILED INFORMATION DISPLAYED WITH MESSAGE LISTS

Help Frame Name	Help Frame Title
XM-U-B-READER DIFF	BASKET ACTION CODES
XM-U-B-READER DIFF-2	BASKET ACTION CODES (CONTINUED)
XM-U-B-READER DIFF-3	BASKET ACTION CODES (CONTINUED)
XM-U-B-READER FULL SCREEN	FULL SCREEN MESSAGE READER
XM-U-B-READER SUMMARY	SUMMARY MESSAGE INFORMATION
XM-U-B-RESEQUENCE MESSAGES	RESEQUENCING MESSAGE NUMBERS
XM-U-B-XMIT PRIORITY TOGGLE	TOGGLING MESSAGE TRANSMISSION PRIORITY
XM-U-B-XMIT PRIORITY TOGGLE-2	TOGGLING MESSAGE TRANSMISSION PRIORITY (CONTINUED)
XM-U-B-ZOOM TOGGLE	ZOOM SELECTION TOGGLE
XM-U-BO-CLASSIC	CLASSIC READER BASKET MESSAGE ACTIONS
XM-U-BO-CLASSIC-2	CLASSIC READER BASKET MESSAGE ACTIONS (CONTINUED)
XM-U-BO-FULL SCREEN	FULL SCREEN READER BASKET MESSAGE ACTIONS
XM-U-BO-FULL SCREEN LIST	FULL SCREEN READER MESSAGE LIST ACTIONS
XM-U-BO-FULL SCREEN-2	FULL SCREEN READER BASKET MESSAGE ACTIONS (CONTINUED)
XM-U-H-GROUP	MAIL GROUP INFORMATION
XM-U-H-GROUP-2	MAIL GROUP INFORMATION (CONTINUED)
XM-U-H-GROUP-3	MAIL GROUP INFORMATION (CONTINUED)
XM-U-H-GROUP-4	MAIL GROUP INFORMATION (CONTINUED)
XM-U-H-Q DELETE	DELETED MESSAGES
XM-U-H-Q DISAPPEARED	'DISAPPEARED' MESSAGES WHICH HAVE NOT BEEN DELETED
XM-U-H-Q INTERRUPT	INTERRUPTED MESSAGES
XM-U-H-Q LOOKUP	LOOKING UP A MESSAGE TO BE READ
XM-U-H-Q RECALL	RECALLING OR EDITING A MESSAGE AFTER TRANSMISSION
XM-U-H-Q REMOVE	REMOVING A RECIPIENT FROM THE LIST
XM-U-H-Q REPLIES	REPLIES TO A MESSAGE FROM AN UNKNOWN RECIPIENT
XM-U-H-QUESTIONS	FREQUENTLY ASKED QUESTIONS ABOUT MAILMAN
XM-U-H-USER	USER INFORMATION
XM-U-I-EDITOR FM LINE	VA FILEMAN LINE EDITOR
XM-U-I-EDITOR FM SCREEN	VA FILEMAN SCREEN EDITOR
XM-U-I-GROUP	MAIL GROUPS

Help Frame Name	Help Frame Title
XM-U-I-GROUP COORDINATOR	MAILMAN MAIL GROUP COORDINATORS
XM-U-I-GROUP MEMBER	MEMBERS OF MAIL GROUPS
XM-U-I-GROUP-2	MAIL GROUPS (CONTINUED)
XM-U-I-SHARED MAIL	SHARED,MAIL - A LIBRARY OF MESSAGES
XM-U-I-SURROGATE	MAILMAN SURROGATES
XM-U-I-SURROGATE BECOME	BECOMING A SURROGATE
XM-U-I-SURROGATE-2	MAILMAN SURROGATES (CONTINUED)
XM-U-I-SURROGATE-3	MAILMAN SURROGATES (CONTINUED)
XM-U-I-SURROGATE-4	MAILMAN SURROGATES (CONTINUED)
XM-U-K-PACKMAN	PACKMAN - MOVING ROUTINES AND DATA IN MESSAGES
XM-U-K-PACKMAN COMPARE	COMPARE PACKMAN MESSAGE ROUTINES AGAINST THOSE INSTALLED NOW
XM-U-K-PACKMAN INSTALL	INSTALLING A PACKMAN MESSAGE
XM-U-K-PACKMAN LOAD GLOBALS	LOADING GLOBAL DATA INTO A PACKMAN MESSAGE
XM-U-K-PACKMAN LOAD PACKAGE	LOADING AN ENTIRE PACKAGE INTO A PACKMAN MESSAGE
XM-U-K-PACKMAN LOAD ROUTINES	LOADING ROUTINES INTO PACKMAN MESSAGES
XM-U-K-PACKMAN PRINT	PRINTING PACKMAN MESSAGES
XM-U-K-PACKMAN SUMMARIZE	SUMMARIZE PACKMAN MESSAGE
XM-U-M-ANSWER	ANSWERING A MESSAGE (INTERNET STYLE)
XM-U-M-BACKUP	BACKING UP THE MESSAGE DISPLAY
XM-U-M-BACKUP BEFORE SENDING	BACKUP A MESSAGE TO REVIEW BEFORE SENDING
XM-U-M-BROWSER	PRINTING TO THE BROWSER
XM-U-M-CHOOSE RANGE	SPECIFYING A LIST OR RANGE OF MESSAGES
XM-U-M-CHOOSE RESPONSES	SPECIFYING A LIST OR RANGE OF RESPONSES
XM-U-M-CHOOSE SELECT	SELECTING MESSAGES
XM-U-M-CHOOSE SELECT-2	SELECTING MESSAGES (CONTINUED)
XM-U-M-CLOSED	CLOSED MESSAGES
XM-U-M-CONFIDENTIAL	MAKING A MESSAGE CONFIDENTIAL
XM-U-M-CONFIRM RECEIPT	REQUESTING CONFIRMATION BEFORE SENDING A MESSAGE
XM-U-M-COPY	COPYING A MESSAGE INTO A NEW MESSAGE
XM-U-M-COPY-2	RESPONSES TO THE COPY OPTION PROMPTS
XM-U-M-DELETE	DELETING MESSAGES

Help Frame Name	Help Frame Title
XM-U-M-DELETE-2	DELETING MESSAGES (CONTINUED)
XM-U-M-DELETE-3	DELETING MESSAGES (CONTINUED)
XM-U-M-DELIVERY BASKET SET	DELIVERY BASKET SET OPTION
XM-U-M-EDIT RECIPIENTS	EDIT RECIPIENTS
XM-U-M-EDIT SUBJECT	EDIT THE SUBJECT OF A MESSAGE
XM-U-M-EDIT TEXT	EDIT THE TEXT OF A MESSAGE
XM-U-M-FORWARD	FORWARDING MESSAGES
XM-U-M-FORWARD-2	FORWARDING MESSAGES (CONTINUED)
XM-U-M-INCLUDE MESSAGE	INCLUDING A MESSAGE
XM-U-M-INFO ONLY	MESSAGES MARKED AS INFORMATION ONLY
XM-U-M-LATER	MAKE MESSAGES NEW LATER
XM-U-M-LATER-2	MAKE MESSAGES NEW LATER (CONTINUED)
XM-U-M-LATER-3	MAKE MESSAGES NEW LATER (CONTINUED)
XM-U-M-LATERED MESSAGE CHANGE	CHANGE/DELETE LATERED MESSAGES
XM-U-M-LATERED MESSAGE REPORT	REPORT ON LATERED MESSAGES
XM-U-M-MESSAGE HEADER	WHAT APPEARS IN THE MESSAGE HEADER
XM-U-M-NETWORK SIGNATURE	ADD YOUR NETWORK SIGNATURE TO A MESSAGE
XM-U-M-NEW	FORCING A MESSAGE TO APPEAR AS NEW
XM-U-M-NEW-2	MAKE NEW MESSAGES NOT NEW AND VICE VERSA (CONTINUED)
XM-U-M-PRINT	PRINTING MESSAGES
XM-U-M-PRINT DEVICE P-MESSAGE	P-MESSAGE DEVICE
XM-U-M-PRINT HEADER	IDENTIFYING YOUR MESSAGE PRINTOUT
XM-U-M-PRINT NO HEADER	HEADERLESS PRINTING
XM-U-M-PRINT NO HEADER-2	HEADERLESS PRINTING (CONTINUED)
XM-U-M-PRINT-2	PRINTING MESSAGES (CONTINUED)
XM-U-M-PRIORITY SEND	SENDING MESSAGES WITH A PRIORITY STATUS
XM-U-M-PRIORITY TOGGLE	PRIORITY REPLIES TOGGLE
XM-U-M-QUERY	QUERYING A MESSAGE FOR ITS STATUS
XM-U-M-QUERY DETAILED	DETAILED QUERY ON A MESSAGE
XM-U-M-QUERY GENERAL	GENERAL QUERY ON A MESSAGE
XM-U-M-QUERY INFO BASIC	BASIC QUERY INFORMATION
XM-U-M-QUERY INFO LOCAL	LOCAL USER QUERY INFORMATION

Help Frame Name	Help Frame Title
XM-U-M-QUERY INFO REMOTE	REMOTE USER QUERY INFORMATION
XM-U-M-QUERY NETWORK	NETWORK QUERY ON A MESSAGE
XM-U-M-QUERY NETWORK-2	NETWORK QUERY ON A MESSAGE (CONTINUED)
XM-U-M-QUERY SPECIFIC	SPECIFIC QUERY ON A MESSAGE
XM-U-M-QUERY-2	QUERYING A MESSAGE FOR ITS STATUS (CONTINUED)
XM-U-M-REPLY	REPLYING TO A MESSAGE
XM-U-M-REPLY INCLUDE	INCLUDE PREVIOUS RESPONSES IN YOUR REPLY
XM-U-M-REPLY-2	REPLYING TO A MESSAGE (CONTINUED)
XM-U-M-SAVE	SAVING MESSAGES
XM-U-M-SCRAMBLE	SCRAMBLING A MESSAGE BEFORE SENDING
XM-U-M-SCRAMBLE HINT	RESPONDING TO 'Enter Scramble Hint'
XM-U-M-SCRAMBLE PASSWORD	RESPONDING TO 'Enter Scramble Password'
XM-U-M-SEND	USING THE 'Send a message' OPTION
XM-U-M-TERMINATE	TERMINATING MESSAGES
XM-U-M-TERMINATE-2	TERMINATING MESSAGES (CONTINUED)
XM-U-M-TRANSMIT LATER	SEND A MESSAGE LATER (DEFER)
XM-U-M-TRANSMIT NOW	SEND A MESSAGE NOW ('Transmit Now')
XM-U-M-VAPORIZE DATE EDIT	VAPORIZE MESSAGE WITH AUTOMATIC DELETION DATE
XM-U-M-VAPORIZE DATE EDIT-2	VAPORIZE DATES (CONTINUED)
XM-U-M-VAPORIZE DATE SEND	SET A VAPORIZE DATE WHEN SENDING A MESSAGE
XM-U-M-WRITE	SENDING A NEW MESSAGE INSTEAD OF A REPLY
XM-U-M-WRITE-2	SENDING A NEW MESSAGE INSTEAD OF A REPLY (CONTINUED)
XM-U-MO-EDIT	EDITING A MESSAGE
XM-U-MO-READ	READING A MESSAGE - OPTIONS
XM-U-MO-READ-2	READING A MESSAGE - OPTIONS (CONTINUED)
XM-U-MO-REPLY	REPLYING TO A MESSAGE - OPTIONS AT THE 'Transmit' PROMPT
XM-U-MO-SEND	SENDING A MESSAGE - OPTIONS AT THE 'Transmit' PROMPT
XM-U-MO-SEND-2	MORE MESSAGE OPTIONS
XM-U-NEW FEATURES	NEW FEATURES AND FUNCTIONALITY
XM-U-P-ASK BASKET	THE 'ASK BASKET' PROMPT

Help Frame Name	Help Frame Title
XM-U-P-BANNER	THE MAILMAN BANNER
XM-U-P-DELIVERY BASKET PRIV	DELIVERY BASKET PRIVILEGES
XM-U-P-EDITOR	PREFERRED EDITOR
XM-U-P-FILTER	FILTERING MAIL
XM-U-P-FILTER ACTIONS	FILTERING MAIL ACTIONS
XM-U-P-FILTER CRITERIA	FILTERING MAIL CRITERIA
XM-U-P-FILTER CRITERIA-2	FILTERING MAIL CRITERIA (CONTINUED)
XM-U-P-FILTER ORDER	FILTERING MAIL - ORDER FIELD
XM-U-P-FILTER-2	FILTERING MAIL (CONTINUED)
XM-U-P-FILTER-3	FILTERING MAIL (CONTINUED)
XM-U-P-FORWARDING ADDRESS	HOW TO USE THE FORWARDING ADDRESS
XM-U-P-GROUP ENROLL	PUBLIC MAIL GROUPS
XM-U-P-GROUP ENROLL-2	PUBLIC MAIL GROUPS (CONTINUED)
XM-U-P-GROUP PERSONAL	PERSONAL MAIL GROUPS
XM-U-P-GROUP PERSONAL-2	PERSONAL MAIL GROUPS (CONTINUED)
XM-U-P-INSTITUTION	MAILMAN INSTITUTION
XM-U-P-INTRODUCTION	INTRODUCING YOURSELF IN MAILMAN
XM-U-P-MESSAGE ACTION DEFAULT	MESSAGE ACTION DEFAULT
XM-U-P-MESSAGE ORDER	MESSAGE LIST ORDER
XM-U-P-NETWORK SIGNATURE	NETWORK SIGNATURE
XM-U-P-NEW MESSAGES OPTION	NEW MESSAGES DEFAULT OPTION
XM-U-P-NEW MESSAGES READ ORDER	NEW MESSAGES READ ORDER
XM-U-P-OFFICE INFO	CONTACT INFORMATION
XM-U-P-OPTIONS	PERSONAL PREFERENCES
XM-U-P-OPTIONS-2	PERSONAL PREFERENCES (CONTINUED)
XM-U-P-OPTIONS-3	PERSONAL PREFERENCES (CONTINUED)
XM-U-P-OPTIONS-4	PERSONAL PREFERENCES (CONTINUED)
XM-U-P-P-MESSAGE FROM	P-MESSAGE FROM
XM-U-P-PERSONAL PREFERENCES	PERSONAL PREFERENCES MENU
XM-U-P-PRIORITY FLAG	PRIORITY RESPONSES FLAG
XM-U-P-PRIORITY PROMPT	PRIORITY RESPONSES PROMPT
XM-U-P-PRIORITY PROMPT-2	PRIORITY RESPONSES PROMPT (CONTINUED)
XM-U-P-READ NEW MSGS BSKT	READ NEW MESSAGES BASKET PRIORITY

Help Frame Name	Help Frame Title
XM-U-P-READER DEFAULT	DEFAULT MESSAGE READER
XM-U-P-READER PROMPT	MESSAGE READER PROMPT
XM-U-P-SHOW MESSAGE PREVIEW	SHOW MESSAGE PREVIEW
XM-U-P-SHOW TITLES	SHOW TITLES
XM-U-P-SURROGATE EDIT	SURROGATES - DESIGNATING SURROGATES
XM-U-P-SURROGATE READ PRIV	SURROGATES - READ PRIVILEGES
XM-U-P-SURROGATE WRITE PRIV	SURROGATES - WRITE PRIVILEGES
XM-U-Q-CLASSIC LOOKUP ?	LOOKING FOR MESSAGES WHOSE SUBJECT CONTAINS A SPECIFIC STRING
XM-U-Q-CLASSIC LOOKUP ??	LOOKING FOR MESSAGES WHOSE SUBJECT BEGINS WITH A SPECIFIC STRING
XM-U-Q-REMOTE USER NAME	ENTERING A REMOTE USER'S NAME WHEN FILTERING OR SEARCHING MAIL
XM-U-Q-SEARCH	SEARCHING FOR MESSAGES
XM-U-Q-SEARCH CRITERIA	SEARCHING FOR MESSAGES - SEARCH CRITERIA
XM-U-Q-SEARCH CRITERIA DATE	SEARCH CRITERIA - DATE SENT
XM-U-Q-SEARCH CRITERIA TEXT	SEARCH CRITERIA - TEXT CONTENTS
XM-U-Q-SEARCH CRITERIA USERS	SEARCH CRITERIA - SENDERS AND ADDRESSEES
XM-U-Q-SEARCH CRITERIA-2	SEARCH CRITERIA (CONTINUED)
XM-U-Q-SEARCH MAILBOX	SEARCHING FOR MESSAGES - SEARCHING YOUR MAILBOX
XM-U-Q-SEARCH SYSTEM	SEARCHING FOR MESSAGES - ANYWHERE ON THE SYSTEM
XM-U-R-NEW LIST ALL	LIST ALL NEW MESSAGES
XM-U-R-NEW LIST BASKETS	LIST BASKETS WITH NEW MAIL
XM-U-R-NEW LIST PRIORITY	LIST ALL PRIORITY MESSAGES
XM-U-R-NEW PRINT	PRINT ALL NEW MESSAGES
XM-U-R-NEW READ	READ NEW MAIL BY BASKET
XM-U-R-NEW SCAN	SCAN ALL NEW MESSAGES
XM-U-R-READ	READING AND MANAGING YOUR MAIL
XM-U-R-READ NEW	PROCESSING NEW MAIL
XM-U-R-READ NEW-2	PROCESSING NEW MAIL (CONTINUED)
XM-U-R-READ-2	READING AND MANAGING YOUR MAIL (CONTINUED)
XM-U-R-READ-3	READING AND MANAGING YOUR MAIL (CONTINUED)
XMHELP	USING MAILMAN

Help Frame Name	Help Frame Title
XMHELP-MANUAL	THE ONLINE MAILMAN USER MANUAL
XMNET-BLOB-HARDWARE	BLOBs (Binary Large Objects) Message
XMNET-BLOB-NETWORK	Sending and Receiving BLOBs across a Network
XMNET-FTP-COMPONENTS	Basic components in setting up the Multimedia MailMan
XMNET-FTP-REC-NETWORK-LOCATION	FTP Receive Network Location
XMNET-MULTIMEDIA	HOW MULTIMEDIA MAILMAN WORKS
XMNET-MULTIMEDIA-HARDWARE	The relationships of Multimedia hardware
XMNET-MULTIMEDIA-OVERVIEW	Multimedia Technical Overview

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