

Managing the Mail System

The Maintenance Program

NetMail/3000 uses an Image database, located in the THREEK account, to maintain all its configuration information, mail user information, mailing list information, and all the actual mail messages currently in or passing through the NetMail/3000 system.

There is a wide variety of information in this database, and to aid the mail system administrator in managing this information, we provide a V/Plus based application program to inquire and manipulate the database. To run this program, you type:

:RUN NETMAINT.PUB.THREEK


There is certain information in this database that you would not typically want your end users to see, and as such, the NETMAINT program makes sure that only a user with System Manager (SM) capability, or a user flagged as a Mail Administrator in the NetMail/3000 database will be allowed to run this program. (Designating a user as a Mail Administrator is covered later in this section.)

Initial Set Up

As with most new applications, there is going to be some initial setup required to implement a fully functional and usable electronic mail system. We take efforts to try and reduce this for you, but there are certain tasks that you will need to perform manually (at least initially).

GLOBAL OPTIONS

The first thing you will want to do is to check and set up the global configuration options in accordance with the policies for your system or department. Detailed instructions on how to do this are described later in this section, but the items you need to verify are as follows:

- Assign an administrative user (Mail Administrator) to the mail system
- Set the time zone for this system
- Set the GMT (global mean time) offset for your time zone
- Set the security flag to reflect your requirements
- Set the MPE Commands flag to reflect your requirements
- Set the notification flag to reflect your preferences
- Set the Alternate Host name if your system is on a network and is named something different than its NS name, or if this a stand-alone system 

- If you are using the DeskLink HPDesk FSC Gateway, you need to assign a network/host name to use for incoming HPDesk mail (see the HPDesk configuration item on the main menu) as well as follow the special HPDesk configuration instructions to set up the FSC services within the HPDesk software.

USERS

Next, if you desire a secured mail system, you will need to enter the name and logon information for all the users you wish to allow access to the mail system. If you choose the unsecured mail system, then every user will be prompted to provide their own information the first time they run the mail program.

For users of VESoft's Security*3000 package, user mailboxes can be set up automatically in NetMail/3000 through the use of the VE2MAIL program supplied with NetMail/3000. This program will prompt you for one of several possible mailbox formats (firstname+lastname, initials, etc.) and then proceed to create mailboxes for any users defined in Security*3000 that aren't already defined in NetMail/3000. For users that are already defined, the VE2MAIL program will automatically update them if their names or logon-profile information has changed. The program can be set up in a batch job to be run regularly and automatically add mail access for new users added to the security package.

For users of USS Security/Plus, set up of user information is simplified by the PMS2MAIL program supplied with NetMail/3000. This program automatically loads the NetMail/3000 mail database with the users defined in your Security/Plus database. It can be run as often as desired, and automatically loads any new users for you. Note however, that it does not delete users - users must be removed from the NetMail/3000 database by using the NETMAINT program. PMS2MAIL also establishes and updates mailing lists for you, including a list named "\$ALL" which contains all the users on your system, as well as a separate list for every "department" defined in Security/Plus.

For users with more than one system running NetMail/3000 (unlimited mailbox systems only), you may want to enable the automatic directory synchronization facility. Once this is enabled, any mailboxes created on other NetMail/3000 systems will automatically be added to the local NetMail/3000 directory. See the section on directory synchronization later in this chapter for details on the setup and operation of this facility.

A caveat regarding unsecured mail systems is that since NetMail/3000 allows multiple people using the same MPE logon to each have their own unique mailbox, there is no way to keep one person from maliciously (or accidentally) setting up many mailboxes. Since we must depend on each user entering his or her own name and address information, there is also no way to validate this so managers in uncontrolled environments will either have to keep a continuous watch over the mail systems for erroneous or fraudulent users, or take the initial effort in defining the accesses for the users and securing the mail system.

HOST SYSTEMS

Finally, if your system is part of a network where you will be sending mail among machines, you may need to define some host computer systems in the NetMail/3000 database. The general guidelines for when you need to define a system in the NetMail/3000 database are defined in section 2 under “Required System Configuration” for the various types of network connections you might have. Usually the only systems you will need to define are those that are NOT HP systems, and that reside on an X.25 network or are physically connected to another remote system, and then only if you are not using a Domain Name Server (available to MPE/iX 4.0 or later systems).

For the systems you do need to add, you will need the following information:

- The ‘name’ of the system, as users will refer to it
- The ‘IP’ address of the system
- The network address portion of the IP address
- You enter descriptive information in the ‘host information’ field to help you identify the system (this is optional)

Ongoing Maintenance

As your organization changes, your mailing system will need to be kept up. As users move, join or leave the organization, the mailing system database needs to be updated.

All normal mail system maintenance functions are performed with the NetMaint program. This program is a screen-based application which allows the mail system administrator to change working characteristics of the NetMail/3000 system, add and maintain the access attributes for users of the NetMail/3000 system, define mail system hosts that we will be exchanging mail with, and maintain and add system mailing lists of users.

To run this program, you must be either a system manager, or be defined in the mail system as a “MAIL ADMINISTRATOR” (you will learn how to do this later in this manual). You will need a V/Plus compatible terminal for this program. Once logged on with the proper access, you will type:

:RUN NETMAINT.PUB.THREEK

This will bring up the mail system administrator main menu of tasks.

NETMAINT MAIN MENU

NetMaint - ver B.06 97/01/16 -- 3k Associates



- 1 — Mail System Maintenance
- 2 — Database Information/Status
- 3 — Database Control

Selection: █



This is first screen you are presented when you run NetMaint - the MAIN MENU. At this point, you have the choice of either displaying the database statistics for the mail system database (option 2 on the menu), or going to the next level of menus for mail system administration (option 1). Select your choice and hit the <ENTER> key.

Selecting option 1 at this menu takes you to a second menu which we will describe in the next section. Selecting option 2 here allows the mail system administrator to view the “wellness” of the mail system database. NetMail/3000 utilizes a centralized TurboImage database to maintain everything from user’s access information, to the list of computer systems it knows about, to the actual mail messages being held by the system (this includes both local mailboxes as well as mail in the process of being forwarded to another system). Option 3 allows you to maintain scheduling information for database cleanup operations.

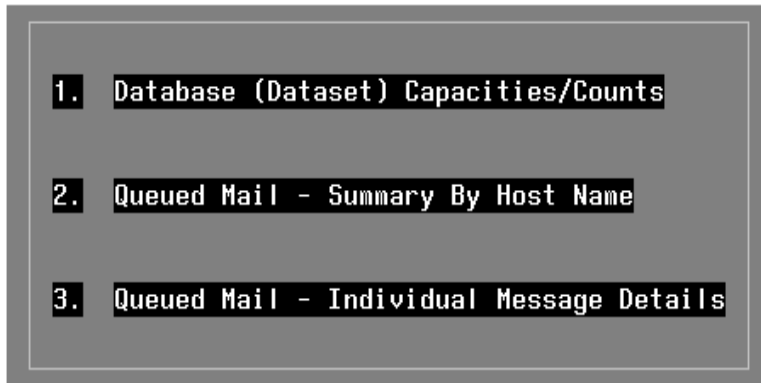
As the mail system administrator, you will need to periodically monitor the capacity of some of the datasets in this database. As your mail system grows and users archive more mail, some of the datasets may reach their capacity, and for those of you on large systems, you may find that the capacities set by the default installation are not large enough for your anticipated usage. The database status screen gives you a listing of all the datasets involved in the mail system, how full they are now, and what their current capacities are.

NETMAINT DATABASE INFORMATION MENU

Selecting option 2 presents you with the following menu:

```
NetMaint - ver B.06 97/01/16 -- 3k Associates
```

DATABASE INFORMATION OPTIONS



Selection: █



At this point, you may select one of the three database status displays; a listing of the individual datasets in the mail database and their capacities and number of entries; a summary of queued mail messages (outgoing) by system name; or a detailed listing of the individual messages in the outgoing queue.

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The database status screen looks like this:

```
NetMaint - ver B.06 97/01/16 -- 3k Associates
```

DATABASE (DATASET) INFORMATION

Dataset	Type	Entries	Maximum	%use	Dataset	Type	Entries	Maximum	%use
LOGONS	A	59	6,000	0	RULES	D	65	5,004	1
USERS	A	115	6,000	1	FOLDERS	D	188	12,000	1
FOLDER-USERS	A	233	12,000	1	KNOWN-HOSTS	D	32	511	6
NAME-OWNERS	A	94	12,000	0	ALIASES	D	112	12,024	0
MAIL-INDEX	A	90	6,000	1	MAIL-NAMES	D	306	18,000	1
INDEXES	A	3,495	6,000	58	MAIL-LISTS	D	91	12,000	0
HOSTS	A	31	501	6	MAIL-USERS	D	105	6,000	1
FORWARD-HOSTS	A	0	501	0	MAIL	D	3,665	15,000	24
NETWORKS	A	7	51	13	MAIL-TO-FORWARD	D	0	12,000	0
PROGRAMS	A	9	51	17	JCL	D	46	60	76
LONG-NAMES	A	2	3,001	0	MESSAGES	D	112,154	200,004	56
NETWORK-INFO	D	2	128	1					

(information is refreshed every 10 seconds)



Here you are shown a display of the mail database and all the various datasets with capacities and number of (used) entries shown. Like any database, these sets may fill up under heavy use and should be monitored. Most of the datasets contain data that will typically grow as time goes by; mail messages that are being kept in individuals' mailboxes, information describing new users, mailing list information, mail folders, and the JCL (program interface information). Monitor the capacities of these datasets periodically to get an idea of how fast they grow (this will vary from site to site). If a dataset fills up, mail users will start seeing errors when they attempt various actions in the mail system, and you may see Image error messages appearing in NetMail/3000's background job \$STDLIST.

An important dataset to monitor is MAIL-TO-FORWARD. This dataset contains entries for each outbound mail message (to another system or to a printer or file). It will normally vary widely, and when the mail system is "caught up", should return to 0 (zero) entries used. Entries

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remaining in this dataset for extended periods may indicate messages which the mailsystem is having trouble delivering. While this is not unusual; mail sent to a system that is temporarily down or too busy to respond will remain in the dataset as it cycles through retries, and mail bound out to a system over a network link which may be down will also cycle through retries (each for up to 3 days for non-urgent mail, 24 hours for urgent mail). Still, continued entries in this dataset are worth investigating, and the other two database status screens can help you isolate problems before they become LARGER problems.

Since the database that NetMail/3000 uses is a standard TurboImage database, you are free to use whatever tools you have available to expand (or contract to save space) the capacities of its datasets. Tools such as Adager, DbChange, or DBGeneral work fine. Be careful in reducing capacities, as even transient messages will take up space as they pass through (if you are using your system to forward mail through), and running out of space in the database can become a major inconvenience for mail users.

If you do not have any third party tools to change database capacities, you can also use the DBUNLOAD and DBLOAD utilities that come with Image to unload the database to tape, then change the capacities in the schema (provided in the SCHEMA.THREEK group on your system), then purge the database, rebuild it with DBSCHEMA and DBUTIL, then re-load it from the tape you made using DBLOAD. These procedures are all outlined in your TurboImage manuals from HP, and if you need assistance 3k Associates technical support is available to assist you (we can also provide you a job stream that automates the process, and uses our DBCOPY utility to unload the database to disc which is much faster than DBUNLOAD/DBLOAD. The third party database maintenance utilities are much faster though, and we recommend them if you have them).

The next option from the database status menu was option 2 - Mail Queued - Summary Info. This screen was designed to present the mail administrator with an overview of outbound messages or messages which the mail system might be having trouble delivering. The mail administrator should make it part of the daily routine to keep an eye out for outbound messages that are delayed in being delivered.

NetMaint - ver B.02 95/08/25 -- 3k Associates				
QUEUED MAIL - SUMMARY INFORMATION				
Total Bytes	Host Name	Date Entered	Last Tried	#Msgs Tries
361	ACCESS.DIGEX.NET			1
	WED, NOV 15, 1995, 9:59 PM			0

Next Screen Print Screen Refresh Screen Refresh DB Info Previous Menu Exit NetMaint

This screen displays a convenient list of the messages queued for special processing. This may include messages bound for other systems, mailing list entries that have not yet been expanded, and messages automatically routed to printers or disc files. In all but the first case, these messages will typically only show up in this dataset for a short time (unless the background job is not active for some reason). There are cases where NetMail may have difficulty delivering mail bound for other systems though, and certain cases where the mail administrator might want to look into the problem further.

You may encounter cases where someone has sent a message to a system whose network link is down for an extended period, where the system itself is down or it's electronic mail software inoperable or not functioning correctly, and even cases where a machine is just plain incorrectly defined (usually in a nameserver somewhere) or has been disconnected and the nameserver network hasn't caught up yet. You may want to monitor this dataset for messages encountering such problems, as it is likely that at some point someone is going to ask you "what happened to my mail message for so-and-so".

In this screen, you get a summary listing of the messages queued up for special processing. You will see a two-line entry for each "host", along with the total number of bytes queued up for transmission, the number of messages queued up, the number of times delivery has been

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attempted already, the date and time at which the oldest message in the queue for that host was created, and the date and time that the last delivery attempt was made.

Records to look our for would include an excessive number of messages queued up for a particular host, or a very old message which has been tried many times. If you encounter such a message, you may get details on the particular message (including the actual recipient name and sender information) to help in isolating the problem. Debugging suggestions include trying to “ping” the host to ensure that it is reachable at the lowest (network) level; if that is successful, trying a TELNET connection to port 25 on that host (if you have a telnet client available). If their mail software is functioning correctly, you should get a welcome message specifying a mail connection (enter QUIT to terminate the connection). If you don’t have telnet, running our TCPACCESS program (described later in the manual) can help you verify that at least SOME TCP/IP services are functional on the remote host and that it is reachable by your HP3000. There are cases where a particular mailer may be having trouble accepting a certain message from NetMail/3000; this is usually due to some bug in the remote mail software (we HAVE encountered broken mailers on the Internet) and if you believe this to be the case, contact 3k Associates technical support and we will attempt to isolate the problem if possible so you can inform the remote site or vendor of the problem.

As mentioned above, if you need to see detailed information on outgoing messages (to aid in debugging or just monitoring the system), choose option 3 on the database status menu -- Queued Mail - Detail Information. This screen looks like this:

```
NetMaint - ver B.02 95/08/25 -- 3k Associates
  QUEUED MAIL - DETAILED INFORMATION

Host Name: ACCESS.DIGEX.NET
Mailbox Name: RCB          Mail Id: 001C9G
Subject: Important meeting
Received: WED, NOV 15, 1995, 9:59 PM  Last Tried:
Status: Pending          Total Bytes: 361  Number of Attempts: 0
From Host: PICARD.3K.COM

From
DEMO

To
rcb@access.digex.net

Delete Record  Goto Find  Print Screen  Refresh Screen  Previous Message  Next Message  Previous Menu  Exit NetMaint
```

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This screen provides a detailed look at each outgoing mail message. You may select a hostname upon entering the screen (or leave it blank and hit enter to browse all entries). You will then be able to scroll through (using the Next Message function key) all the message entries queued up for special processing.

For each entry, you will see the hostname to which the message is destined (this may be \$NONE for mailing list or printer or file destined messages), the user name (mailbox) that sent the message, the internal message id, the subject line from the message, the date and time it was submitted, its status, the size of the message in bytes, the number of times NetMail has attempted to deliver it, the name of the host the message came from (usually just your machine), the full mail address of the sender (from), and the address it is destined for (to). Using this information, you can attempt to isolate problems which might be occurring with its delivery. (The fact that a message shows up in this set does NOT necessarily indicate a problem though -- check for the number of delivery attempts and its age to determine if it has been queued up for an excessive time.)

Note that messages will only appear in this screen until their respective “time limits” have expired. The time limits for delivery attempts are set in the global options screen in the NetMaint maintenance section; the defaults are 24 hours for urgent messages and 72 hours for non-urgent messages. Once a message has passed its maximum time limit, it will be automatically returned to the sender.

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Finally, the third option on the main menu bring you to this menu:

```
NetMaint - ver B.06 97/01/16 -- 3k Associates
```

DATABASE CONTROL OPTIONS

1. Schedule Purging of Expired (dated) Mail

Selection: █



At this menu, there is currently only one option - to schedule the purging of expired mail. This feature allows you to determine when NetMail/3000 will execute the process that checks the mail database for messages older than allowed (based on the limit set on each users' mailbox). (The default setting for all mailboxes is to never expire mail; this can only be changed by the mail system administrator.)

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Once item 1 is selected, you will then see the following screen:

```
NetMaint - ver B.06 97/03/24 -- 3k Associates

      SCHEDULE PURGING OF OLD MESSAGES

---Scheduled---      -----Frequency-----      Start/Stop
03/25/97 - 07:00      Month █ Day 1 Hour █ Minute █      : / :

                                Days of the Week
                                Sunday.... Y
                                Monday.... Y
                                Tuesday... Y
                                Wednesday. Y
                                Thursday.. Y
                                Friday... Y
                                Saturday.. Y

Added      Changed      Last Execution      Restart
11/04/96   11/04/96   03/24/97 07:00      Y

[ ] [ ] [ Print Screen ] [ Refresh Screen ] [ ] [ ] [ Previous Menu ] [ Exit NetMaint ]
```

This screen allows you to set the schedule for when the database cleanup (of expired mail) will execute.

The first field on this screen is the date and time that the “PURGE” event will next attempt to run -- the remainder of the enterable fields on the screen allow you to schedule subsequent executions and to exclude certain days and times from actually performing the event.

Enter the month, day, year, and hours:minutes (military format) that the event should be next attempted. Following that, enter a repetition factor in one of the following (month, day, hour, or minute) fields. For example: “1” in month corresponds to once every month, “2” every 2 months, “7” in day corresponds to every 7 days, “12” in hour means every 12 hours, “30” in the minute field means run every 30 minutes. Enter a value in only one of these fields, depending on the frequency you wish to have the process check your database. NOTE: the process of scanning the database can be a fairly resource-intensive operation, and we recommend that you schedule this process once a month, week, or daily at best - depending on the volume of mail you anticipate needs to be monitored.

The “Restart” field tells the scheduler that in the event the background job was shut down while the process would have run, that it should execute it immediately when the job is restarted - allowing it to “catch up”. If set to “N” then the process will be skipped (if it was missed) and not tried again until it’s next scheduled attempt.

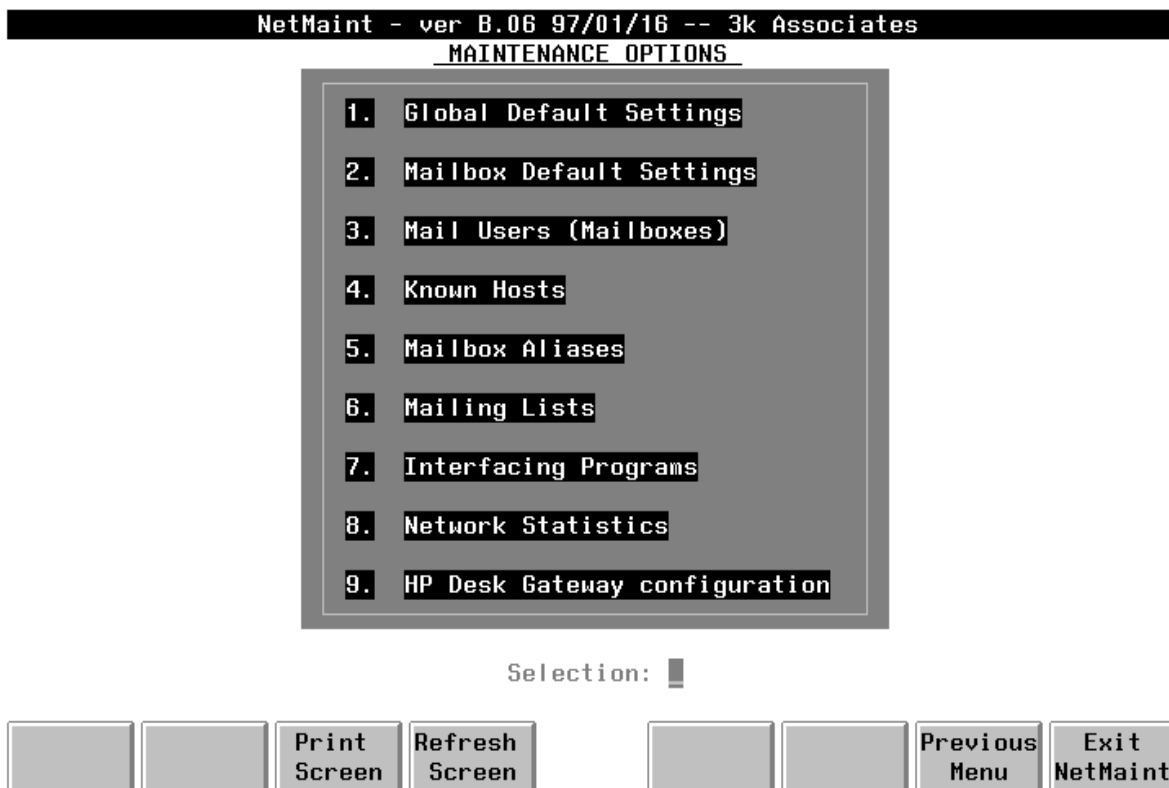
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The days of the week (sunday thru saturday) boxes allow you to control whether the process gets attempted on specific days of the week; for instance if you only wanted the process executed on wednesday and saturday, you would set "Y"s in those boxes, "N" in all the other days - and use a frequency of "1" in "days" so the process would try to execute every day, with the daily restrictions preventing it from doing so except on wednesdays and saturdays. Likewise you could schedule the process to run once a month ("1" in the month box), on the first of the month (use a date of the first of next month in the date field), and further restrict it allow it to run only if that day is not a monday (set all days to "Y" except monday).

The "added" date field on the screen reports when this entry was first added (in NetMaint). "Changed" reports when it was last updated (in Netmaint), and "Last executed" reports when the background process last attempted to execute the process.

NETMAINT MAINTENANCE MENU

Back to the Main Menu. For all other functions, you will select the first option on the main menu - option 1, 'Maintenance'. Upon selecting this option, you will be presented with the following screen:



This menu presents all the various maintenance functions which NetMaint will allow you to perform. (Note that systems using the DeskLink HPDesk FSC gateway will see the additional menu item selecting the HPDesk FSC configuration, which does not appear on systems without the HPDesk FSC gateway software). To select an option, enter the number of the selection and hit the <ENTER> key. We will describe each option in the order they appear on the menu, starting with the GLOBAL SETTINGS. The details of the HPDesk FSC Gateway configuration are covered in the HPDesk Gateway configuration supplement.

NETMAINT GLOBAL DEFAULTS SCREEN

This screen allows the mail system administrator to change some of the parameters that are “global” to the mail system -- that is, they affect all the users of the mail system, though perhaps indirectly in some cases.

NetMaint - ver B.06 97/01/16 -- 3k Associates			
GLOBAL DEFAULT SETTINGS - MAINTENANCE			
Administrative Mailbox Name: <input type="text" value="POSTMASTER"/>		Next Mail Index <input type="text" value="003F6Y"/>	
Time Zone <input type="text" value="Est"/>	GMT Offset <input type="text" value="-4"/>	Secured Mail System <input checked="checked" type="checkbox"/>	
External Loading <input checked="checked" type="checkbox"/>	Spell Program <input type="text" value="HPSPELL"/>	Number of Servers: SMTP <input type="text" value="2"/>	
Bbit Character Sets <input checked="checked" type="checkbox"/>	Enable Finger Server <input checked="checked" type="checkbox"/>	POP2 <input type="text" value="1"/>	POP3 <input type="text" value="1"/>
Alternate Hostname <input type="text" value="hp.acme.com"/>			
Trusted Gateway <input type="text"/>			
Route outbound mail <input checked="checked" type="checkbox"/> (N=none; Y=all, even local; F=only non-local mail)			
Name Server (DNS) <input type="text"/>			
Hide Hostname <input type="text"/>			
Fax Device <input type="text" value="FAX"/>			
Hours of retrying until a NORMAL message is returned "Undeliverable" <input type="text" value="24"/>			
Hours of retrying until an URGENT message is returned "Undeliverable" <input type="text" value="12"/>			

<input type="button" value=""/>	<input type="button" value="Print Screen"/>	<input type="button" value="Refresh Screen"/>	<input type="button" value=""/>	<input type="button" value="Previous Menu"/>	<input type="button" value="Exit NetMaint"/>
---------------------------------	---	---	---------------------------------	--	--

We will describe each of the options in detail, as they are grouped in the ‘boxes’ on the menu.

Item: ADMINISTRATIVE USER

Description:

This is the mailbox name of the person designated to receive all administrative mail -- that is, mail messages regarding mailing system problems, notice of new users joining (unrestricted) mail systems, or mail sent to the system addressed to the “POSTMASTER” (a local mailname that is required by mailing system conventions).

Default Value: MGR

Example:

Administrative User: **MGR**

-or-

Administrative User: **JOE**

Special Considerations:

The administrative user need not be a user on the local system. It can be any defined user in the database, including a user that is forwarded to another computer system entirely.

Item: **NEXT INDEX**

Description:

This is the control number that determines the next mail message number to be assigned by NetMail/3000. Anytime NetMail/3000 needs to assign a message number, for incoming, outgoing, or even mail messages that are merely being forwarded, the process retrieves and increments this control number. You will notice that the number is 6 digits long, but each digit ranges from 0-9 and then from A to Z (this is called BASE 36). For users, this merely means that message numbers may contain letters and or numbers.

Default Value: **000000**

Example:

Next Index: **00001S**

Special Considerations:

This value is maintained by the NetMail/3000 system and need not be changed by the administrator. NetMail/3000 always checks a new number to be sure that there is not already mail with that index (this is in case the message numbers wrap around after **ZZZZZZ** -- the highest message number possible in this numbering scheme).

Item: **TIME ZONE**

Description:

This is the time zone designation for your location. This field is included on all date descriptions in all messages.

Expected values for this field would be "Est", "Edt", "Pst", "Pdt", "Cst", "GMT", "BST" (British Summer Time), "CET" (Central European Time), etc. Any three character value will be accepted, and military single digit time zones are also acceptable. Upper/Lower case characters

are preserved (not upshifted).

Default Value: **Est**

Example:

Time Zone: **Est**

-or-

Time Zone: **Pst**

Special Considerations:

Though values are not validated, you are encouraged to use some standardized format.

Item: **GMT OFFSET**

Description:

This is the difference, in hours, between time in your region and the time in Greenwich, England (Greenwich Mean Time, or Global Mean Time). This is the global time zone which was designated as the '0' point for the world, and time around the world is measured in the hours of difference between their time and GMT.

This value is used in outgoing mail message headers, and provides a point of reference to a message recipient no matter what time zone or part of the world he or she is in. If you never anticipate sending mail beyond your local area or system you may leave this field zero (0), but it is advisable that you enter the actual value here just in case.

Default Value: **0**

Example:

GMT Offset: **-4** (The value for U.S.' East Coast)

-or-

GMT Offset: **-7** (The value for U.S.' West Coast)

Special Considerations:

Note that the offset in hours is expressed as a signed number, where the number is SUBTRACTED from your local time to yield the global mean time. For example, if you are on the east coast of the united states, your offset in hours from GMT would be "-4", since at a given time, say 6AM local time, it is 10AM in the GMT time zone ($6 - -4 = 10$).

Item: **SECURED MAIL SYSTEM**

Description:

This field is a Yes/No/High value that determines whether access to the mail system is secured or open. A secured mail system requires that access for any user that wishes to use mail must be established by the mail system administrator. An unsecured system allows any user to run the system, and prompts each user for the necessary identifying information the first time they run the mail system.

Allowed values are:

Y = The mail system is secured, mail access must be established by a mail system administrator

N = The mail system is NOT secured. Any user can access it, and will be prompted for identification information the first time they run the NetMail program. After that they will be prompted for only their mail name and password (if specified).

H = High security option. Identical to “Y” above, with the additional security enhancements that users will not be able to display their own passwords.

Default Value: **N**

Example:

Secured Mail System: **N**

-or-

Secured Mail System: **Y**

Special Considerations:

A “secured” mail system insures privacy and integrity of user mail in that accesses are all defined by mail system administrator(s). While this typically involves more set up time and effort, the results are preferable in most cases. Uniqueness of mail names and the identity of mail users can be more accurately determined.

Non-secured mail systems may be applicable in organizations where all users are sophisticated enough to ensure that proper accesses are set up, and the users can be counted on to provide accurate identification information.

Note: for VESOFT Security*3000 or USS Security/Plus customers, NetMail/3000’s installation process determines if Security*3000 or Security/Plus is installed on your system and will automatically load the mail database with accesses for all users defined in the security system, AND will set the secured mail system flag to “Y”.

Item: **EXTERNAL LOADING**

Description:

This is a flag that verifies that an external loading program was used to load mail accesses into the mail system database. This value is “N” except for VESOFT Security*3000 or USS Security/Plus customers -- the installation process sets this flag to “Y”.

Allowed values are:

Y = An external program was used to load the mail database users

N = The mail system must be loaded manually

S = NetMail/3000 directory synchronization is enabled

Default Value: **N**

Example:

External Loading: **N**

-or-

External Loading: **Y**

Special Considerations:

None.

Item: **SPELL PROGRAM**

Description:

This allows you to specify the name of the spell checking program to be used by users when checking the spelling of outgoing messages. This name must correspond to a spelling checker as defined in the external program interface screens.

Default Value:

Example:

Speller: **HPSPELL**

-or-

Speller: **SPELLCHK**

Special Considerations:

You must have a spell checking program available on your system to use this feature, though NetMail/3000 will support most popular spell checking programs available for the HP3000. (You might be able to obtain Boeing's contributed spelling checker from Interex's contributed software library for free if you are an Interex member).

Item: **SMTP SERVERS (NUMBER OF)**

Description:

You can designate the number of background mail server processes to be left "inactive" waiting on incoming mail connections. When the NetMail/3000 background job starts up, it will automatically start (and leave suspended) this number of server processes for incoming mail from other systems. Servers are "woken up" when needed, and go back to sleep when done with a connection; and are available to be re-used once put back to sleep. If at any time there are more incoming requests than server processes available, NetMail/3000 will launch additional servers as necessary, though on a busy system it will take much longer to create new servers than to awaken already sleeping servers (and subsequently you may experience time-outs, which are recovered automatically, but slow down mail processing).

The default of 2 (two) processes should be sufficient for most sites, but any number up to 50 (fifty) can be specified.

Default Value: 2

Example:

SMTP Servers: 2

-or-

SMTP Servers: 12

Special Considerations:

You can designate any number of servers from 0 (zero) to 50 (fifty). Smaller numbers may slow down mail processing under heavy traffic situations; large numbers of servers on lower traffic systems may be excessive (each process will require allocated memory and process resources, though it will not use any CPU cycles unless needed).

Note; if you do not have a network connection (or LanLink software installed) this value is ignored.

Item: **8BIT CHARACTER SETS**

Description:

For sites concerned with foreign character sets (other than US ASCII), NetMail/3000 has the option of using a special transport that will preserve 8-bit characters when sent via mail messages. (The SMTP mail standard defines that only 7-bit US ASCII characters are to be allowed in normal “text” messages, so a special type of message encoding was developed to allow the transport of messages containing 8-bit characters - as typically found in Spanish, French, German, Arabic, Russian, and other non-english languages).

By default, NetMail/3000 assumes the standard “7-bit US ASCII” encoding for messages, and will in fact strip the high-order bit on any 8-bit characters found within TEXT type messages. For sites wishing to allow 8-bit text to be included in messages, there are two options, depending on your extent of use of 8-bit characters.

For sites which normally use 7-bit characters, and may only have a few 8-bit characters commonly used, you may set this value to “A” (for Auto-scan of messages). When set to “A”, any message composed on this system will be scanned by NetMail/3000 before submission to determine if it contains any 8-bit characters; if not, the message is sent as a standard TEXT/PLAIN message using 7-bit US ASCII codes. If any 8-bit characters are found, then the message is encoded using the MIME defined “QUOTED PRINTABLE” encoding. This ensures intact transport of the 8-bit data (as well as the other 7-bit data).

For sites which commonly use several 8-bit characters in written correspondence (this is highly dependent on the language used), a more suitable option here would be “Y”. This automatically encodes ALL correspondence using the MIME defined “QUOTED PRINTABLE” format (and incidentally skips the pre-scan process used for the “A” option).

For most english speaking sites, the default value of “N” (no 8-bit characters allowed) will suffice. **For non english-speaking countries, you will want to set this flag to “A” or “Y”.** See the “special considerations” section for notes on why this might be desirable.

Default Value: N

Example:

8BIT CHARACTER SETS: N
-OR-
8BIT CHARACTER SETS: A

Special Considerations:

There are some considerations you should know of when deciding to allow 8-bit character sets. 8-bit character set transmission (via the “QUOTED PRINTABLE” encoding) is a MIME feature, and as such, if you send such a message to a non-MIME compatible mailer, the messages will range from “some odd looking unreadable sequences” to “gibberish”. “QUOTED-PRINTABLE” is an encoding which passes through all 7-bit characters normally, but encodes (only the) 8-bit characters in the message by replacing them with an “=”, followed by a 2-digit Hexadecimal code for the 8-bit character. While languages using only a few 8-bit characters will usually be very readable to a non-MIME mailer, languages (or messages) which use 8-bit characters heavily will look rather odd, and not be readable to a human reader. MIME mailers decode these characters automatically, and a reader is usually not even aware of the special encoding that was done; all they see is the message looking just like it did when composed.

Item: **ENABLE FINGER SERVER**

Description:

The “FINGER” protocol is a client-server process that allows users on one system to “look up” users on another system in real time. The “FINGER” program is commonly used in Unix environments, and through this option you can configure whether you want to allow users on other systems to be able to “look up” user names on your system.

NetMail/3000’s FINGER server will not provide lists of all names in the mail system (as some FINGER servers do), nor will it provide any information in return other than that which is displayed by the “WHOIS” command in the user interface. Basically, users on other systems will be able to provide a name or partial name and get the full name, and mailbox name in return.

Default Value: N

Example:

ENABLE FINGER SERVER: **N**

-or-

ENABLE FINGER SERVER: **Y**

Special Considerations:

None.

Item: **POP2 SERVERS**

Description:

Managing the Mail System

You can designate the number of background POP2 server processes to be left “inactive” waiting on incoming mail connections. When the NetMail/3000 background job starts up, it will automatically start (and leave suspended) this number of server processes for incoming POP2 connections from PC clients. Servers are “woken up” when needed, and go back to sleep when done with a connection; and are available to be re-used once put back to sleep. If at any time there are more incoming requests than server processes available, NetMail/3000 will launch additional servers as necessary, though on a busy system it will take much longer to create new servers than to awaken already sleeping servers (and subsequently you may experience time-outs, which are recovered automatically, but slow down mail processing).

POP clients “call” the POP server whenever they need to:

- 1) Check for newly arrived mail messages (some clients can be configured to automatically check the server for new mail every ‘n’ minutes - where the user can specify ‘n’)
- 2) Send an outgoing message
- 3) Delete messages from the server’s message store

Since this can mean frequent (though usually quick) connections to a server by each client, it is important that you have sufficient server processes available to serve the base of POP clients using your server. It is also worth noting that having POP clients check for mail every minute (or similar very short intervals) can impose a significant load on your system and users should be discouraged from using such very short intervals if at all possible.

The default of 2 (two) processes should be sufficient for most sites, but any number up to 50 (fifty) can be specified.

Default Value: 2

Example:

POP2 Servers: **2**
-or-
POP2 Servers: **12**

Special Considerations:

You can designate any number of servers from 0 (zero) to 50 (fifty). Smaller numbers may slow down mail processing under heavy traffic situations; large numbers of servers on lower traffic systems may be excessive (each process will require allocated memory and process resources, though it will not use any CPU cycles unless needed).

Since the POP2 server and POP3 servers are separate programs and most modern e-mail clients use the newer POP3 standard, you may not want any POP2 servers active.

Note; if you do not have a network connection (or LanLink software installed) this value

is ignored.

Item: **POP3 SERVERS (NUMBER OF)**

Description:

You can designate the number of background POP3 server processes to be left “inactive” waiting on incoming mail connections. When the NetMail/3000 background job starts up, it will automatically start (and leave suspended) this number of server processes for incoming POP3 connections from PC clients. Servers are “woken up” when needed, and go back to sleep when done with a connection; and are available to be re-used once put back to sleep. If at any time there are more incoming requests than server processes available, NetMail/3000 will launch additional servers as necessary, though on a busy system it will take much longer to create new servers than to awaken already sleeping servers (and subsequently you may experience time-outs, which are recovered automatically, but slow down mail processing).

POP clients “call” the POP server whenever they need to:

- 1) Check for newly arrived mail messages (some clients can be configured to automatically check the server for new mail every ‘n’ minutes - where the user can specify ‘n’)
- 2) Send an outgoing message
- 3) Delete messages from the server’s message store

Since this can mean frequent (though usually quick) connections to a server by each client, it is important that you have sufficient server processes available to serve the base of POP clients using your server. It is also worth noting that having POP clients check for mail every minute (or similar very short intervals) can impose a significant load on your system and users should be discouraged from using such very short intervals if at all possible.

The default of 2 (two) processes should be sufficient for most sites, but any number up to 50 (fifty) can be specified.

Default Value: 2

Example:

POP3 Servers: **2**
-or-
POP3 Servers: **12**

Special Considerations:

You can designate any number of servers from 0 (zero) to 50 (fifty). Smaller numbers may slow down mail processing under heavy traffic situations; large numbers of servers on lower traf-

Managing the Mail System

fic systems may be excessive (each process will require allocated memory and process resources, though it will not use any CPU cycles unless needed).

Since the POP2 server and POP3 servers are separate programs and most modern e-mail clients use the newer POP3 standard, you should use this setting to determine the number of server processes available to serve your POP mail clients.

Note; if you do not have a network connection (or LanLink software installed) this value is ignored.

Item: ALTERNATE HOST NAME

Description:

The alternate host name defines the name of the system to be used on all mail addresses. By default, NetMail/3000 uses the name defined for the system in the NS/3000 configuration IF YOUR SYSTEM HAS NS/3000 installed. You can still redefine this name if you do not wish to use that name in electronic mail communications. Also, if you have an Internet connection and your official "name" is not the same as the "NS" name of your system (perhaps it has more levels than NS allows) then you can use that name here. NetMail/3000 will tag all mail passing through it with this name (if defined).

If you do not have NS/3000 on your system, you must name your system by setting the alternate host name to the name you want your system known as.

Default Value: **\$LOCAL**

Example:

Alternate Host name: **Pluto.Walt.Disney**

-or-

Alternate Host name: **Sys1.admin.company.com**

Special Considerations:

The format of the host name is not verified, but we recommend that you use a format compatible with Internet specifications. The standard hostname followed by domain name, followed by the name of the organization is a common and acceptable format (with periods delimiting the parts). You may also choose a 'domain' name compatible with Internet naming conventions; see RFC 1034 and others for details and guidelines.

It is important that you use a valid (Internet format) system name here, as any other format will very likely not prove compatible with any other mail systems (client or host based).

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You may have other “aliases” for the system (as many as you want) by entering names in the KNOWN HOSTS screen. See the discussion in that section for details on adding further alias names.

Item: **TRUSTED GATEWAY**

Description:

The ‘trusted gateway for your system is the name of another connected computer system with a more capable or better connected mail system. This machine will be used as a ‘gateway’ to pass all outgoing mail through, so that mail destinations that are not known to this system or cannot be reached directly from this system will be passed to the gateway system.

Default Value:

Example:

Trusted Gateway: **Goofy.Walt.Disney**

-or-

Trusted Gateway: **Gatesys.relay.company.com**

Special Considerations:

If your HP3000 is isolated from the Internet (by some sort of firewall) or if you are on an MPE/V system but you do want to be able to exchange message with Internet hosts and you have another SMTP compatible mail system in your organization that supports domain naming and dynamic routing, you may choose to have that system route all outgoing mail for you. This both eases the administration chores for this system and extends your mail system reachability, since the MPE/V HP3000 network software does not support or understand Internet domain name services. (If you’re on MPE/iX 4.0 or later, you don’t NEED to use a trusted gateway unless your organization requires it.) A common use for this feature are organizations connected to the Internet which are using a ‘firewall’ security system, where outside network connections are all handled ONLY by one specific (firewall) system, and it then passes on mail or other data to the final destination.

Note that MPE/iX 4.0 systems do support dynamic routing; see your network management reference manuals. For MPE/V systems and MPE/XL systems before iX 4.0 the HP3000 supports an undocumented “default gateway” function in NS but still cannot perform full domain name service resolution. Contact 3k Associates or the HP response center for details.

Item: **ROUTE OUTBOUND MAIL**

Description:

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For secured or isolated sites, it may be desirable to have all outbound electronic mail traffic go through a designated “gateway” system. This may be because it is the only system capable of resolving (and connecting to) most other systems (due to a firewall setup), or it may just be a policy matter so that all mail leaving the organization passes out through a specific machine or route.

Local mail (mail for users whose mailboxes reside on the same system as where the message originated) IS NOT AFFECTED. Only mail that would normally have to leave the originating computer.

If enabled (“Y”), then any mail message for a user/mailbox on a system which this system cannot locate (i.e. can’t find a DNS entry, NMMGR directory entry, or an entry in the KNOWN-HOSTS section of NETMAINT) will be passed to the “TRUSTED GATEWAY” in the hopes that this system WILL be able to find the other system. For hosts which are truly invalid, the message will get returned to the sender, but only after passing through the trusted gateway - meaning there will be some delay involved. In contrast, NetMail/3000 systems not using a trusted gateway will tell a user definitively that a host is not known immediately when they enter the recipient address in the mail system - and will be allowed to correct the address or cancel the message. As a side note, if you do not want NetMail/3000 to even attempt a DNS lookup of any hosts (perhaps because of an odd firewall-related internal DNS system) you may want to use a “#” setting in the domain nameserver field in this screen.

You also have the option of using “F” which forces even messages sent to local addresses which aren’t known (would otherwise be considered an invalid mailbox) to be routed to the default gateway machine for resolution. This doesn’t affect **valid** local mailboxes nor does it affect mail to a fully qualified remote address (user@hostname) - only a local name “user” that isn’t found in the local directory. This option gives you the advantage of simulating a global or enterprise wide directory (users can just send mail to JOESMITH without the local directory having to know where Joe’s mailbox really is; it just hands it off to the gateway system to deliver). The disadvantage here is if the user mistakenly enters an invalid address, he or she won’t know right away; instead they’ll get their message returned to them later when the default gateway receives it and has time to process it.

Default Value: N

Example:

Force all mail through the Trusted Gateway: **Y**

-or-

Force all mail through the Trusted Gateway: **N**

Special Considerations:

You must have defined a “TRUSTED GATEWAY” if you enable this option.

Item: **NAME SERVER (DNS)**

Description:

In this field, enter the system name of the system you use which performs the “nameserver” function for your network (the resolver). This may or may not be a machine on your local network, as long as the machine is reachable from this system. You can either enter a machine name or an IP address (but if you enter an IP address, it must be in the format nnn.nnn.nnn.nnn - add the leading zeros if necessary so each octet is EXACTLY three digits long). **If you already have a “reslvcnf.net.sys” file setup, LEAVE THIS FIELD BLANK.** Additionally, if you wish to prevent NetMail/3000 from even TRYING to do DNS lookups on hostnames (perhaps due to an internal DNS setup where a firewall separates your network from the Internet but you do need to exchange Internet e-mail) you can put a “#” in this field. This will prevent NetMail/3000 from doing ANY DNS lookups. (If you use this setting, you need to either have a trusted gateway system setup for Internet mail exchange or a comprehensive internal directory - perhaps in NMMGR or in the KNOWN HOSTS section of NETMAINT).

Default Value:

Example:

Name Server (DNS): **164.109.001.003**

-OR-

Name Server (DNS): **Nameserv1.relay.company.com**

Special Considerations:

If present, NetMail/3000 will use the nameserver software running on that system to “look up” the addresses for machines to which mail is destined. NetMail/3000 has a built-in name resolver stub which will use a nameserver on your network if available, or if not, will depend strictly on your HP3000’s ability to look up addresses (i.e. “PROBE”, “PROBE PROXY” protocol, or looking up in the NMMGR directory).

If your HP3000 is running MPE/iX 4.0 or later and you already have the RESLVCNF.NET.SYS file set up to specify listservers, then leave this field blank and NetMail/3000 will automatically use your reslvcnf file to locate nameservers.

NetMail/3000’s name resolver depends on a full nameserver being available somewhere on your network. This could be a Unix system running the “bind” package, or a PC running similar software. Though the nameserver does not need to be local, it will be used EVERY time an outbound message is sent (to look up the computers’ address) so it should be on a relatively fast

and very available link.

Without a nameserver to utilize, most name lookups will work; however, HP3000s do not have the capability to resolve mail systems that are “re-directed” by what is known to nameservers as “MX” (or mail redirect) records. As there are an increasing number of these type of re-directed addresses occurring on the Internet, if you are connected to the Internet and wish to exchange electronic mail, you would be well advised to find or obtain a nameserver which your network can use. Many commercial Internet access providers will provide nameserver service for you. There are also PC packages (such as NetManage’s Chameleon for MS Windows) that will let a PC act as a nameserver relatively inexpensively.

If your network isn’t connected to the Internet, then a nameserver might be useful (for large networks) but you can get along fine if you don’t have one.

Item: **HIDE HOSTNAME**

Description:

There are cases where you want all outgoing electronic mail to appear as if it came from one large machine, simplifying e-mail addresses and making your network’s internals just a little more secure. Though the machine will be known internally by its NS nodename (and/or the alternate host name specified earlier), you can force all outbound e-mail addresses to use the “HIDE HOSTNAME” as a machine name instead of the actual machine name.

If specified, the “HIDE HOSTNAME” replaces the outbound machine name on electronic mail messages; unless an individual has a “DOMAIN.ORG” specified. (The “DOMAIN.ORG” on an individual will override this setting).

Default Value:

Example:

Hide Hostname: **Sys1.Com**

-OR-

Hide Hostname: **Bigcorp.East.Va.Us**

Special Considerations:

If you DO want to “hide” your internal host names to the outside world, and make moving users’ mailboxes around a bit easier, you can designate a “HIDE HOSTNAME” here, but be sure to define a KNOWN HOST entry with the same name as an alias for this system (i.e. an address of “255255255255” and a network of “999999999”). That way you ensure that mail coming back (replied to) will be accepted.

If you designate a "HIDE HOSTNAME" but want mail routed through another system (not this NetMail system) then you may not need the KNOWN HOST alias described above, though it won't hurt. Using Unix (sendmail) style alias files or .forward files can forward inbound messages and change the recipient name to a name recognized by this system.

Item: **FAX DEVICE**

Description:

If you have an Office Extend Fax Server on your network and have a spooled device on your HP3000 flagged as the location for the Fax Server to scan, then enter that device name here. With this feature enabled, you can route mailboxes to fax machines by specifying the fax phone number in the forwarding area of a NetMail/3000 mailbox. NetMail/3000 will automatically create spoolfiles with the appropriate routing information for the fax server to pick up and deliver mail-to-fax messages.

Default Value:

Example:

Fax Device: **FAX**
 -OR-
Fax Device: **LP**

Special Considerations:

Currently only the Office Extend Fax server HP3000 client is supported. Other HP3000 based fax server products will be supported in future releases.

Item: **HOURS RETRYING UNTIL A NORMAL MESSAGE IS RETURNED**

Description:

A message which cannot be delivered (typically because the destination host - or the next host on the route to that destination - is down or otherwise unavailable) will sit in the queue for a limited time before the mail system must give up and return the message to the sender. Delivery attempts are made at regular intervals, and once a delivery attempt is made, if the message (or messages) is found to have been in the queue for longer than the system-defined limit, that message will be returned to the sender, along with a message telling them that the message was unable to be delivered after trying for 'x' hours.

Default Value:

Example:

Hours of retrying until a NORMAL message is returned as “Undeliverable”: **24**

-or-

Hours of retrying until a NORMAL message is returned as “Undeliverable”: **8**

Special Considerations:

When a message first enters the mail system (either from a remote system, a POP client, or by being submitted from NetMail/3000 on the local system) the MTA (message transfer agent of NetMail/3000) will immediately attempt to deliver the message. Since the MTA groups all messages by the hostname they are being sent to, a single process is spawned to attempt to open a connection with the hostname specified. If a connection is made, then all messages for recipients on that host are delivered, then the connection is dropped.

If the connection is not made for some reason (maybe that host is down, it's mail server may not be running, or there is a network problem between your host and that host) then the MTA records the date and time of the last attempt and increments a count of the number of attempts made so far, then goes “to sleep” until it is time for another delivery attempt. This next attempt will occur:

- * Immediately if another (new) message is added to the queue for that host
- * Within about 2 minutes if no messages for this host have been trying for more than 15 minutes
- * In 15 minutes if the queue for this host has been trying for longer than 15 minutes but less than 2 hours
- * In an hour if the queue has been trying for more than 2 hours

Any time the MTA determines that it is time to make another delivery attempt the messages in that queue are checked against the maximum retry time limit. If any message in the queue has been trying for longer than the limit, then the message is returned to the sender with text explaining that the message was unable to be delivered within the set time limit.

Item: **HOURS RETRYING UNTIL AN URGENT MESSAGE IS RETURNED**

Description:

A message which cannot be delivered (typically because the destination host - or the next host on the route to that destination - is down or otherwise unavailable) will sit in the queue for a limited time before the mail system must give up and return the message to the sender. Delivery attempts are made at regular intervals, and once a delivery attempt is made, if the message (or messages) is found to have been in the queue for longer than the system-defined limit, that message will be returned to the sender, along with a message telling them that the message was unable to be delivered after trying for 'x' hours.

Default Value:

Example:

Hours of retrying until an URGENT message is returned as “Undeliverable”: **12**

-or-

Hours of retrying until an URGENT message is returned as “Undeliverable”: **1**

Special Considerations:

See the previous item description for details on the delivery/return process.

NETMAINT USER DEFAULTS SCREEN

This screen allows the mail system administrator to change some of the parameters that are “default” values used when adding new users to the mail system. This is only relevant to users using the NetMail/3000 user interface, and doesn’t affect DeskLink users. We will explain each field in the screen.

```

NetMaint - ver B.06 97/01/16 -- 3k Associates
MAILBOX DEFAULT SETTINGS - MAINTENANCE
    
```

Max Mail Priority: <input type="text" value="M"/>	MPE Commands Allowed? <input checked="" type="checkbox"/>	Mail Notification: <input type="text" value="4"/>
Advertise Mailboxes? <input checked="" type="checkbox"/>	Spell Check Messages? <input type="checkbox"/>	Message Editor: <input type="text" value="NETEDIT"/>
Message Aging Days: <input type="text" value="0"/>	Verify Message Delete? <input checked="" type="checkbox"/>	Allow Extended Cnds? <input type="checkbox"/>
Auto-Process MM files? <input checked="" type="checkbox"/>	Display Minimal Header <input checked="" type="checkbox"/>	Auto Message Listing? <input type="checkbox"/>
Display Pause? <input checked="" type="checkbox"/>	Ret-Rcpt Disabling Ok? <input checked="" type="checkbox"/>	Bytes Per Box: <input type="text" value="0"/>
Menu Interface? <input checked="" type="checkbox"/>	Message Display Lines: <input type="text" value="1"/>	

Printer:

Item: MAXIMUM MAIL PRIORITY

Description:

This field defines the allowable priority for outgoing mail and fax messages. Values define whether users will be allowed to send HIGH priority mail or HIGH priority faxes as opposed to the default NORMAL priority.

Allowed values are:

N = Normal priority for mail

M = High priority mail allowed

Default Value: M

Example:

Maximum Mail Priority: N

-or-

Maximum Mail Priority: M

Special Considerations:

This field only specifies the maximum allowed priority for messages. All messages are always sent as 'normal' priority unless specifically specified as 'urgent', and then this field is checked for the sending user to determine whether to allow the urgent status.

This value merely sets the default for new users that are added. Each user can be changed by the mail system administrator if desired.

Item: MPE COMMANDS

Description:

This determines if your mail system users will be allowed to execute MPE commands from within the NetMail program and is also used to designate who is designated as mail system administrator(s).

Note that the value set here becomes the default for users that are added later. If this is a secured mail system, then when the mail system administrator adds the access for any subsequent users then the value set here will be the default value in this field on the user access screen.

For unsecured mail systems this value will become the value that is enforced for any users that "join" the mail system after this value is changed.

Allowed values are:

N = No MPE commands will be executable for mail system users

Y = Normal MPE commands (programmatically executable commands) will be allowed at NetMail's command prompt

M = This user will be allowed MPE commands, and in addition is further designated as a Mail System Administrator. He will then be able to run the Net-Maint program to further define mail access or settings

Default Value: Y

Example:

MPE Commands: **N**

-or-

MPE Commands: **M**

Special Considerations:

Care should be taken in the allowing of mail system administrator access, as those users will have full access to the maintenance functions in the NetMaint program.

For VESOFT Security*3000 or USS Security/Plus users, the installation process will set the default value to "N".

Item: MAIL NOTIFICATION

Description:

This value determines what type of messages will be sent to users when new mail is received for them. NetMail/3000 provides immediate notification of incoming mail if you desire it. NetMail sends messages via :TELL commands to users that are not in "QUIET" mode, and can either leave "QUIET" sessions alone, or send a mail notification to them in such a way that it does not overwrite the data on their screen.

The special notification of "QUIET" sessions only works for HP terminals, as the most common reason for sessions to be "QUIET" is that they are in V/Plus applications. The special notification appears as a message which writes over the function key labels on HP terminals, and stays there till the user hits "RETURN" on his terminal, at which time the function keys are returned to the state they were in previously with no loss of data.

Allowed values are:

- 0 = No notification messages are sent
- 1 = Notify users via a :TELL message only for URGENT incoming mail (no message for normal priority mail)
- 2 = Notify users via :TELL messages if they are not in "QUIET" mode, otherwise send a special non-destructive message overlay onto the function-key labels of their HP terminal
- 3 = Notify users via :TELL messages if not "QUIET", send interruptive messages only for URGENT mail (no message if "QUIET" and not URGENT)
- 4 = Always use interruptive mail notification (URGENT or normal)

5 = Notify users with interruptive message for URGENT mail, no notification for normal priority mail messages

Default Value: **4**

Example:

Notification: **0**

-or-

Notification: **4**

Special Considerations:

None.

Item: **ADVERTISE USERS**

Description:

This item specifies whether this mail user will be displayed to anyone requesting a list of mail users using the “WHOIS” command in NetMail/3000. If “ADVERTISE” is on, then the user will be displayed to inquiries, otherwise the user will not be displayed. Mail can still be sent to non-advertised users though user’s can’t get help on their exact mail names if they are not sure. This feature is useful as a privacy feature for users that do not want to potentially receive unsolicited electronic mail, or for special pseudo mailboxes that redirect mail to disc files.

Allowed values are:

Y = This mailbox will be listed if requested in an inquiry by the “WHOIS” command

N = This mailbox will not be displayed to anyone requesting mailbox information with the “WHOIS” NetMail command.

Default Value: **Y**

Example:

Advertise user: **Y**

Special Considerations:

None.

Item: SPELL CHECK MESSAGES

Description:

NetMail/3000 supports resident spell checking programs if you have them. In addition, NetMail can be told to automatically check the spelling on documents that are being mailed. If you have a spell checking program and wish to set a default for users to have their documents spell checked then set this field to a "Y". Otherwise set this field to "N".

Note that this value is a default for users added to the mail system after this point, and can be overridden for each user on the mail user screen in NetMaint.

Allowed values are:

Y = Set the default for mail users to enable spell checking

N = Set the default for mail users to disable spell checking

Default Value: N

Example:

Check Spelling: N

-or-

Check Spelling: Y

Special Considerations:

Enabling default spell checking does not force a user to spell-check his message, but merely prompts the user to decide if he/she wants the message to be checked.

Item: MESSAGE EDITOR

Description:

This allows you to specify a default text editor to be used when composing messages to be mailed. You should enter the name of the program file here.

Default Value: NETEDIT

Example:

Text Editor: **EDITOR**

-or-

Text Editor: **NETEDIT**

Special Considerations:

Any available file editor can be specified, though the instructions for executing the editor must be entered in the screens for defining external program interfaces. The editor "EDITOR.PUB.SYS" is defined in the default installation, as is "NETEDIT.PUB.THREEK".

NetEDIT is the recommended editor for novice mail users as it is easy to use and requires little or no training for users familiar with the basic operation of computer terminals. EDITOR.PUB.SYS is a more full-featured editor, better suited for more sophisticated users. It requires some training for novice users but adds features not available in NetEDIT including the capability to dynamically join text from other files as well as move blocks of lines around within a file.

Item: **MESSAGE AGING DAYS**

Description:

You can designate the value in days after which electronic mail messages in users' mailboxes are automatically deleted. A value of 0 (zero) disables the auto-delete function. Once set here, this value will be used as the default for mailboxes that are created **after** this. This setting does not affect any previously created mailboxes.

Default Value: 0

Example:

Aging Days: **90**

-or-

Aging Days: **365**

Special Considerations:

See the database control "schedule purging of mail" item to set the schedule at which the mail system will actually scan mailboxes for old mail.

Item: **VERIFY MESSAGE DELETES**

Description:

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Each user has the option of selecting whether he or she wants to be prompted to verify that a given message is to REALLY be deleted when the user enters a delete command. You can set the default value for new users added by setting this option. "Y" (yes) will set the default verification on, "N" turns it off. Once set, the user can still change it with the "SET DELETEVERIFY" command in NetMail/3000.

Default Value: Y

Example:

Verify Deletes: Y

-or-

Verify Deletes: N

Special Considerations:

None.

Item: **ALLOW EXTENDED CMDS**

Description:

Each mail user can be designated to be allowed "extended" environment commands, including the ability to change his or her own return (reply) addresses, automatic forwarding, and access to NetMail/3000's message-filtering rules. This sets the default for mailboxes added after this point.

Default Value: N

Example:

Allow Extended Cmds: Y

-or-

Allow Extended Cmds: N

Special Considerations:

This capability will also determine who can create their own message filtering rules - only users with extended command capability will be allowed to create message rules. Note that once a

user has created “rules”, turning his extended capabilities flag off does NOT stop the processing of those rules.

Item: **AUTO-PROCESS MM FILES**

Description:

NetMail/3000’s special multimedia processing capabilities can be set up to automatically download and invoke message attachments as read, or the user can be prompted for each message attachment and asked if a download and invoking is desirable. To set the default for new users added after this so that messages are processed automatically (no prompting) set this option to “Y”. Setting it to “N” causes the default action to be prompting for each attachment.

Default Value: N

Example:

Auto-Process MM files: **Y**

-or-

Auto Process MM files: **N**

Special Considerations:

Note that this value only has affect if 1) the user is running NetMail/3000 using a supported terminal emulator (currently only Reflection for Windows), 2) the user has set the appropriate environment commands on his or her pc, and 3) the message being read is actually “displayable” on the PC being used (i.e. you must have Excel (c) on your PC to process an Excel (c) spreadsheet attached to a message).

Item: **DISPLAY MINIMAL HEADER**

Description:

NetMail/3000 users can choose to “not view” all the miscellaneous headers that are normally part of an SMTP (Internet standard) mail message. If this option is set for a user, when he or she reads a mail message, the ONLY header lines they will see are the “To:”, “From:”, “Cc:”, “Date:”, and “Subject:” lines (by default; those the actual headers displayed are listed in the file “MINHEAD.DATA.THREEK”, which the mail administrator can edit to reflect site preferences). This greatly shortens the (sometimes tremendous) amounts of message header information, which is often not useful anyway. Users can change this option on demand within NetMail/3000 with the

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command “SET MINHEAD” or via a pull-down menu selection in menu mode.

Default Value: Y

Example:

Display Minimal Header: Y

-or-

Display Minimal Header: N

Special Considerations:

Messages “printed” are also affected by this setting, as are messages forwarded to a disc file.

Item: **AUTO MESSAGE LISTING**

Description:

Users can specify whether they want an automatic re-listing of mail messages in the current folder after deleting a message, sending a message, or other commands. You set the default here for users added after this. Users can change this value at will with the “SET AUTOLIST” command in NetMail/3000.

Message listings can be set to list “all” messages in the folder (read or not), “new” messages only (those that have not been read yet), or “off”, where the auto-listing is turned off altogether. Values allowed are “A” (all messages), “U” (un-read messages), or “N” (no auto listing).

Default Value: A

Example:

Auto Listing: A

-or-

Auto Listing: N

Special Considerations:

For users using the MENU interface, only the “new” or “all” settings are valid.

Item: **DISPLAY PAUSE**

Description:

NetMail/3000 can be configured to pause at every page (23 lines) of output when reading mail messages. Each user can turn this display pause on or off with the “SET PAUSE” command in NetMail/3000. You can set up the default value that will be used when mail users are initially set up (for those users added after you set the value at least). Values are “Y” or “N”.

Default Value: **Y**

Example:

Display Pause: **Y**

-or-

Display Pause: **N**

Special Considerations:

None.

Item: **RET-RCPT DISABLING OK**

Description:

NetMail/3000 can automatically return “READ RECEIPTS” to messages if so requested by the SENDER of the message. An automatic message is generated back to the sender when the message is read in NetMail/3000. Normally, this message is returned without any intervention from the reading user - in fact it won't even be apparent.

There are cases (or certain users) where this feature may be undesirable. In this case, you have the option of allowing a user to disable the automatic read receipt if he or she chooses. When disabled, the user will be informed (when they read a message with a read-receipt requested) that a read receipt has been requested, and will be given the option of letting the receipt be sent or not. (The user only gets prompted the first time the message is read, so if the receipt is not allowed at that point, there will be no other opportunity to send an automated receipt.)

For a user to disable the read-receipt capability, the mail administrator has to have decided to allow them to do it. If this value is “N” (the default), then users added after setting this value will not be allowed to disable receipts. If “Y” is selected, then users will by default, be able to disable the feature if they wish. Note that you can change this attribute for each mail user later individually in the user maintenance screen. The setting of this value only **ALLOWs** the user to disable the feature; the user still has to disable the feature themselves with the “SET READRE-

CEIPT” command in NetMail/3000.

Default Value: N

Example:

Allow Disable Receipts: **Y**

-or-

Allow Disable Receipts: **N**

Special Considerations:

None.

Item: **BYTES PER BOX**

Description:

This is the maximum number of bytes (including headers, text, and attachments) that an individual can maintain in his or her mailbox.

Default Value: 0

Example:

Max Mailbox Bytes: **65535**

-or-

Max Mailbox Bytes: **0**

Special Considerations:

This option is not currently implemented. It will be in a future release.

Item: **MENU INTERFACE**

Description:

This indicates whether the mail user will see the menu interface or the command line interface. If “Y” then the menu interface will be used, otherwise the command line interface will be used. Users can change their interface selection easily; in command mode the command “SET

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MODE=MENU” will switch to menu mode, and in menu mode, a pull-down menu provides an option to change to command line mode.

Default Value: Y

Example:

Menu Interface: Y

-or-

Menu Interface: N

Special Considerations:

If you have a large number of existing users and would like to ensure that they are all set to the same interface (or just review them quickly) there is a program called “SETUS-RIF.PUB.THREEK which allows you to view or change the settings for all mailboxes in the system. The program can prompt you to change each mailbox, or change them all automatically. Run the program for more instructions - it prints a usage summary if run with no parameters.

Item: **MESSAGE DISPLAY LINES**

Description:

This determines whether the message display (only if using the menu interface) displays each message on a single line (one-line display) or uses 2 lines per message (2-line display) where the subject is placed on the second line (this allows more room in the listing for the sender and message size information).

Default Value: 1

Example:

Message Display Lines: 1

-or-

Message Display Lines: 2

Special Considerations:

Users can change this option at will from the menu interface.

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Item: **PRINTER**

Description:

This is the default “printer” used for mail users added after this value is changed. Users are free to change their printer in NetMail/3000 at any time with the “SET PRINTER” command, but will be given the printer specified here as a default until changed. Each user can have a unique printer as well, though this default serves as a convenient means of setting up working defaults.

Default Value:

Example:

Printer: **LP,1**

-or-

Printer: **LASER1,13;ENV=TTLJ3X.PUB.SYS**

-or-

Printer: **\$LOCAL**

Special Considerations:

None.

NETMAINT USER MAINTENANCE SCREEN

```

NetMaint - ver B.06 97/01/16 -- 3k Associates
MAIL USERS (MAILBOXES) - MAINTENANCE
Mailbox: [redacted] Id: [redacted] Last used: [redacted]
Real Name: [redacted]
Company: [redacted] Dept: [redacted] Menu Interface? 
Phone: [redacted] Password [redacted] ^ Display Lines 
Street Address: [redacted] MPE Commands 
Notification 
Advertise address 
Spell checking 
Local language 
Signature file: [redacted] Max mail priority 
Message editor  Extended Capabilities  Pause every page 
Allow auto read-receipt  Minimal headings on msgs  Verify deletes 
Autoprocess MM parts  Auto message listing 
Max days to save mail [redacted] Total messages: Total bytes:
Printer: [redacted]
Replyto: [redacted]
Home system: [redacted]
PC Mail server: [redacted]
Domain.org: [redacted]
Forward mail to mailbox: [redacted]
On node: [redacted]
(^use special codes for disc files, faxes, printers, etc.)

[Add a new user] [Print Screen] [Refresh Screen] [Previous Record] [Next Record] [Previous Menu] [Exit NetMaint]
    
```

The MAIL USERS MAINTENANCE screen allows you to call up and review the mail system information for mail users. You will notice when you call up this screen, that the only field you are allowed to type in is the User: field. Here you may enter the mail user name of a user you wish to review, hit the <ENTER> key, and the user's information will be displayed on the screen, filling in all the fields that contain information. After calling up a user, the other fields on the screen will "open up", and allow you to enter data in them.

This screen controls the setup and configuration of mailboxes used by NetMail/3000 users, POP clients accessing the POP server (if present), as well as some special mailboxes which can cause mail to be routed to the MPE spooler, MPE files, or even have a user-created command file executed whenever they receive incoming mail. (The special mailbox functions are available to NetMail/3000 users as well as DeskLink users.)

Updating Mail Users

Once you have selected a record, you may enter data in any of the fields on the screen, making whatever changes you wish. You may skip fields by using the <TAB> key on your terminal. Once you have made all the changes you need, hit the <ENTER> key. At this point, the NET-

MAINT program will perform some edit checks on the data you have entered. If all is valid, you will see a message displayed in the “window” line at the top of the screen telling you to hit the “UPDATE” function key to verify that you really want the changes made. You may also hit the “CANCEL” function key to forget the changes and bring back the original record.

Deleting Mail Users

When you have selected a mail user, you may also choose to delete that mail user from the mail system. If you choose to do so, select the “DELETE USER” function key. You will be prompted to verify your choice, as when you delete a user, all that users’ mail system references are removed -- including the mail in the user’s mailbox if he or she has any. If you still choose to delete the user, the window at the top of the screen will flash through the various information being deleted, and once deleted, the user’s original record will be left on the screen (just in case you wish to add the user back -- you can hit <ENTER> which will take you back to ADD mode with the original data still on the screen).

After you have selected the “DELETE USER” key, you still have the opportunity to cancel the action by selecting the “CANCEL” function key when NETMAINT asks you to verify your choice.

Browsing Mail Users

At any time while in the MAIL USERS MAINTENANCE screen (except when being prompted to verify a delete or while adding a record) you may scroll through the database of mail users by selecting the “NEXT” or “PREVIOUS” function keys. While the records in the database are not in any particular order, it is a simple and convenient means of scanning the users in the database.

In the following pages, we present the definitions and special information about the fields you will find on the USER MAINTENANCE SCREEN.

Item: MAILBOX

Description:

The MAILBOX field is the key field on the screen. This is the mail system ID of the user. His or her mailbox will be addressed by using this name. The name is not case sensitive -- all Net-Mail/3000 mail names are internally upshifted so they correspond more closely to MPE style user names.

Default Value:

Example:

User: **JOESMITH**

-or-

User: **STEWART**

Special Considerations:

The MAILBOX field is 16 characters long, and may contain a combination of letters and digits. Special characters are also allowed (printable characters excluding spaces) though their use is discouraged -- many foreign mailing systems do not allow special characters within mail addresses so using them may prevent you from communicating with some systems. Any spaces entered will be replaced with dashes "-". If you do use other special characters, do NOT use "@", "%", or "!" as these characters have special meaning to most SMTP mail systems and could prevent mail from being deliverable.

For HP3000 sites, mail names which correspond to MPE user names may prove convenient and manageable. Many Unix sites prefer a first letter of the first and middle names, followed by 5 to 10 characters of the last name. The choices are yours if the mail system is defined as "secured" so that only the administrator may add users -- unsecured systems must make do with whatever users choose for themselves. In the long run, you will find that setting a standard and sticking with it makes life much easier for all involved.

Item: **ID**

Description:

This is the employee-id number for this user. This is not used by NetMail except as displayed here and in "WHOIS" inquiries. The intention is to aid the administrator in relating users to other records. The format of the field is not fixed and no edits are done so that you may enter ids in any manner that is helpful. Social security numbers, student id numbers, or employee identification numbers can be used depending on your organization's needs.

Default Value:

Example:

Employee ID: **1234567**

-or-

Employee ID: **000013**

Special Considerations:

This field is only used in reports and as output for the WHOIS NetMail command. It's format is not fixed, but it is recommended that all numbers be entered in the same format.

Item: Last Used

Description:

This field displays on the screen but cannot be modified here. It records the last date and time that the specified user ran the NetMail program, either as a logged-on user or invoked it via a POP2 client.

Default Value:

Example:

Last Run: THU, MAY 6, 1993, 3:11 PM

Special Considerations:

None.

Item: USERS REAL NAME

Description:

This is the real name of the mail user on this screen. You may enter the full first, middle, and last names here. This field is used to identify the user for inquiries and is also inserted in the FROM field of outgoing mail messages.

Default Value:

Example:

User's real name: **Joe R Smith**

-or-

User's real name: **Robert James Herringway II**

Special Considerations:

This field must match the current system's alias or hostname if the user will be using a POP2 client to retrieve his or her mail off the HP3000. If this field is not blank and is also not the name of the current system, then POP2 clients attempting to connect to this system and read mail (for this user) will be informed that the user's mail is not stored on this system, and that they should connect to the system named here.

Item: COMPANY

Description:

This is the name of the company or organization with which the mail user is affiliated. It is only displayed on this screen, and to inquiries with the “WHOIS” command or finger server (if the ADVERTISE flag is on). The value entered here is also copied into all outgoing mail messages by this user in the “Organization:” header line.

Default Value:

Example:

Company name: **3k Associates, Inc.**

-or-

Company name: **University of Timbuktu**

Special Considerations:

The format for this field is not defined, but it is recommended that all values for people in the same company be entered identically, to aid in searches for users by company. The field is displayed in reports and in the WHOIS NetMail command output.

Item: DEPT

Description:

This is the department which the user belongs to. This field is a comment, used to aid in identifying and tracking NetMail/3000 users. The field is visible on this screen, and is presented to anyone requesting user information with the “WHOIS” command. The field here is not upshifted or justified; the mail system administrator is free to enter any value that makes sense.

Default Value:

Example:

Department: **Programming**

-or-

Department: **Ancient studies**

Special Considerations:

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The format for this field is not defined, but it is recommended that all values for people in the same department be entered identically, to aid in searches for users by department. The field is displayed in reports and in the WHOIS NetMail command output.

Item: **MENU INTERFACE**

Description:

This indicates whether the mail user will see the menu interface or the command line interface. If “Y” then the menu interface will be used, otherwise the command line interface will be used. Users can change their interface selection easily; in command mode the command “SET MODE=MENU” will switch to menu mode, and in menu mode, a pull-down menu provides an option to change to command line mode.

Default Value: Y

Example:

Menu Interface: **Y**
-or-
Menu Interface: **N**

Special Considerations:

None.

Item: **PHONE**

Description:

This is reserved for the phone number of the person on this screen. It is not used other than being reported on “WHOIS” inquiries within the mail system by other users (if this user is flagged to ADVERTISE). It may also be used to track the person and allow the administrator to get in touch with the person if problems arise.

Default Value:

Example:

Phone number: **(703) 569-9189**

-or-

Phone number: **x248**

-or-

Phone number: **011-345-432-1987**

Special Considerations:

This field is only used in reports, “finger” queries (if allowed), and as output for the WHOIS NetMail command. It’s format is not fixed, but it is recommended that all numbers be entered in the same format.

Item: PASSWORD

Description:

Mail users may select a password to restrict access to their mailboxes. The password can be up to 8 characters long, with any printable characters allowed. Upper and lower case letters are preserved, and the password must be entered exactly as it appears in the field.

Once the user has entered his mailbox, he or she can change the mail password with the “SET PASSWORD” NetMail/3000 command or via a pull-down menu in the menu interface.

Default Value:

Example:

Password: **MyPass**

-or-

Password: **1PaSs\$\$**

Special Considerations:

This field is especially useful in unsecured mail environments to prevent a user that may share the same MPE logon from accessing another user’s mail.

Passwords are REQUIRED for a mailbox if it will be accessed by a POP client.

If a password is defined, the mail user will be prompted for it and not allowed access to the mailbox until the proper password is supplied.

If a password is defined, then this field will display “*****” to indicate that a password is present. Passwords will not be displayed in this screen, though they can be changed by entering a new password in the field and updating the user.

Item: **DISPLAY LINES**

Description:

This determines whether the message display (only if using the menu interface) displays each message on a single line (one-line display) or uses 2 lines per message (2-line display) where the subject is placed on the second line (this allows more room in the listing for the sender and message size information).

Default Value: 1

Example:

Message Display Lines: **1**

-or-

Message Display Lines: **2**

Special Considerations:

Users can change this option at will from the menu interface.

Item: **MPE COMMANDS**

Description:

This field determines whether the mail user will be allowed to execute MPE (programmatically executable) commands at the NetMail/3000 command prompt. It also is used to flag those users that will be allowed access to the NETMAINT program (NetMail administrators).

Allowed values are:

N = No MPE commands will be executable for this mail user

Y= Normal MPE commands (programmatically executable commands) will be allowed at NetMail's command prompt

M = This user will be allowed MPE commands, and in addition is further designated as a Mail System Administrator. He will then be able to run the Net-

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Maint program to further define mail access or settings

L = This user will be allowed CERTAIN MPE commands, which are listed in the control file "COMMAND.DATA.THREEK" and maintained by the mail administrator.

Default Value: **N**

Example:

MPE commands: **Y**

-or-

MPE commands: **M**

Special Considerations:

Care should be taken in the allowing of mail system administrator access, as those users will have full access to the maintenance functions in the NetMaint program.

Secured environments may wish to not allow the execution of MPE commands from the NetMail/3000 program, and may set this field to "N" to accommodate this. The "L" option allows a point in-between no MPE access and full access - the mail administrator can list those command they wish to allow their users to have access to in the control file "COMMAND.DATA.THREEK" - a plain ascii file easily maintainable by the administrator. MPE commands listed in this file must match EXACTLY what the user enters (except for case) and with the exception that the "^" (carat) character used in the control file means "anything is allowed after this point". For instance, "TELL^" would match "TELLOP etc." or "TELL #s1 Hi there", or just "TELL" (which isn't a valid command and would thus return an MPE error if a user typed it).

Item: **STREET ADDRESS**

Description:

This is the standard (Post office) style mail address for this user. The format and data are not validated, but a consistent standard for the entry of the data is recommended. Other than this screen, the data is only available via "WHOIS" inquiries from NetMail/3000 users or from "finger" clients (if the ADVERTISE flag is set).

Default Value:

Example:

Address:**6901 Old Keene Mill Rd. #500**
Springfield, VA
22150-2802

Special Considerations:

This field is only used in reports and as output for the WHOIS NetMail command. It's format is not fixed, but it is recommended that all values be entered in the same format.

Item: **NOTIFICATION**

Description:

This value determines what type of messages will be sent to users when new mail is received for them. NetMail/3000 provides immediate notification of incoming mail if you desire it. NetMail sends messages via :TELL commands to users that are not in "QUIET" mode, and can either leave "QUIET" sessions alone, or send a mail notification to them in such a way that it does not overwrite the data on their screen.

The special notification of "QUIET" sessions only works for HP terminals, as the most common reason for sessions to be "QUIET" is that they are in V/Plus applications. The special notification appears as a message which writes over the function key labels on HP terminals, and stays there till the user hits "RETURN" on his terminal, at which time the function keys are returned to the state they were in previously with no loss of data.

Allowed values are:

- 0 = No notification messages are sent
- 1 = Notify users via a :TELL message only for URGENT incoming mail (no message for normal priority mail)
- 2 = Notify users via :TELL messages if they are not in "QUIET" mode, otherwise send a special non-destructive message overlay onto the function-key labels of their HP terminal
- 3 = Notify users via :TELL messages if not "QUIET", send interruptive messages only for URGENT mail (no message if "QUIET" and not URGENT)
- 4 = Always use interruptive mail notification (URGENT or normal)

5 = Notify users with interruptive message for URGENT mail, no notification for normal priority mail messages

Default Value: **2**

Example:

Notification: **0**

-or-

Notification: **2**

Special Considerations:

Users will find out if they have new mail by either running the NetMail/3000 program or for Security/Plus users notification will be displayed on their terminal when at the Security/Plus prompt or after they terminate an application.

If you desire, NetMail/3000 will also send a message to the recipient immediately upon receipt of incoming mail. This is usually preferable, though in very high traffic mail environments the messages may become interruptive.

For non Security/Plus sites, we recommend that NetMail/3000 be run as an OPTION LOGON UDC, as in the following example (or added to the existing system wide UDC):

```
LOGON
OPTION LOGON
RUN NETMAIL.SYS.THREEK;INFO=" "
```

(Note: there is exactly one space enclosed in the quotes)

This will notify users if there is new mail in their mailbox when they logon. For efficiency, you may wish to expand on this UDC by only running NetMail if the logon is a session (not a batch job), though this is optional.

Another option is the "NEWMAIL.PUB.THREEK" program which can be told to print a list of new messages in the current-user's mailbox whenever it's run. It runs quicker than loading NETMAIL.SYS.THREEK and users may find it more useful.

Item: **ADVERTISE ADDRESS**

Description:

The ADVERTISE field determines whether you want this mail user to be displayed to

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people inquiring on mail users with the “WHOIS” command. It DOES NOT affect mail addressed to this user, but by allowing the user’s information to be “advertised” you allow users that may be unsure of the exact spelling or the mail name of a specific user to find the information with the “WHOIS” command searching capabilities.

Allowed values are:

Y = Allow the information to be advertised

N = Do not display the information to “WHOIS” or “Finger” inquiries

Default Value: Y

Example:

Advertise user: Y

-or-

Advertise user: N

Special Considerations:

Normally it is a good idea to allow a user’s mailbox information to be advertised, though there are certain conditions where it may be desirable. The “advertised” information is minimal, and doesn’t pose a security or privacy problem in most cases. No “private” information is made public, only minimal directory information. Note that this setting also controls whether information will be available to “finger” clients (if the finger server is enabled). If “Advertise user” is “Y” and the finger server is enabled, then users with finger clients could “look up” the mail users information (full name, address, company, and pc mail server if specified).

Item: SPELL CHECKING

Description:

Each user can specify whether he or she wishes to be prompted for automatic spell-checking of outgoing messages (if the mail system has a spell checker defined in the CONTROL screen). If available, and this value is set to “Y” then the user will be asked each time a message is being sent to “Check spelling?”. The user can respond with Yes or No.

If this value is “N”, then the user will never be asked to check the spelling on any outgoing messages.

Default Value: N

Example:

Spell checker: **N**

-or-

Spell checker: **N**

Special Considerations:

None.

Item: **SIGNATURE FILE**

Description:

User's may create an ascii file to be appended to outgoing mail messages (usually indicating their full name, e-mail address, company name, and other contact information) if they wish. The files can be created with any editor and can contain any ascii text the user wishes to include. Network etiquette discourages very long files as they use up resources. :-)

If this field is not blank, then the user will be prompted each time he or she sends a message as to whether they want to append their signature file. A filename can be set here or an individual can designate it himself at the NetMail prompt with the "SET SIGNATURE" command or via a pull-down menu selection in the menu interface.

If a "!" precedes the filename then the signature file is automatically appended to all outgoing messages without prompting the user whether or not to append it.

Default Value:

Example:

Sigfile: **myfile.mygroup**

-or-

Sigfile: **company.pub**

Special Considerations:

This field, if present, must be a valid ASCII file, with <=80 byte records.

Item: **LOCAL LANGUAGE**

Description:

Local language sets the language to be used when conversing with this user. Languages

are selected by number, with “00” being native-3000 (American). All user prompts and commands will be displayed in the language specified for the user, and local date and numeric formats will be used as well.

Default Value: **00**

Example:

Local language: **00**

-or-

Local language: **04**

Special Considerations:

Currently, the only valid language setting is “00” for Native-3000. Other languages will be supported in future releases.

Item: **MESSAGE EDITOR**

Description:

This allows you to specify a default text editor to be used when composing messages to be mailed. You should enter the name of the program file here.

Default Value: **EDITOR**

Example:

Text Editor: **EDITOR**

-or-

Text Editor: **NETEDIT**

Special Considerations:

Any available file editor can be specified, though the instructions for executing the editor must be entered in the screens for defining external program interfaces (in NETMAINT). The editor “EDITOR.PUB.SYS” is defined in the default installation, as is “NETEDIT.PUB.THREEK”.

NetEDIT is the recommended editor for novice mail users as it is easy to use and requires little or no training for users familiar with the basic operation of computer terminals. EDITOR.PUB.SYS is a more full-featured editor, better suited for more sophisticated users. It requires some training for novice users but adds features not available in NetEDIT including the capability to dynamically join text from other files as well as move blocks of lines around within a file.

Item: **EXTENDED CAPABILITIES**

Description:

Each mail user can be designated to be allowed “extended” environment commands, including the ability to change his or her own return (reply) addresses, set auto-forwarding addresses for the mailbox, and to create message filtering “rules” (if the rules system is enabled). For users using the “menu” interface, if they have “extended capabilities” set on their mailbox, they will automatically see additional options on their pull-down menus.

Default Value: N

Example:

Extended Capabilities: **Y**

-or-

Extended Capabilities: **N**

Special Considerations:

None.

Item: **MAX MAIL PRIORITY**

Description:

This field defines the allowable priority for outgoing mail and fax messages. Values define whether users will be allowed to send HIGH priority mail or HIGH priority (URGENT) faxes as opposed to the default NORMAL priority.

Allowed values are:

N = Normal priority for mail

M = High priority mail allowed

Default Value: **N**

Example:

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Maximum Mail Priority: N

-or-

Maximum Mail Priority: M

Special Considerations:

This field is only specifies the maximum allowed priority for messages. All messages are always sent as 'normal' priority unless specifically specified as 'urgent', and then this field is checked for the sending user to determine whether to allow the urgent status.

Item: **ALLOW AUTO READ-RECEIPT**

Description:

NetMail/3000 can automatically return "READ RECEIPTS" to messages if so requested by the SENDER of the message. An automatic message is generated back to the sender when the message is read in NetMail/3000. Normally, this message is returned without any intervention from the reading user - in fact it won't even be apparent.

There are cases (or certain users) where this feature may be undesirable. In this case, you have the option of allowing a user to disable the automatic read receipt if he or she chooses. When disabled, the user will be informed (when they read a message with a read-receipt requested) that a read receipt has been requested, and will be given the option of letting the receipt be sent or not. (The user only gets prompted the first time the message is read, so if the receipt is not allowed at that point, there will be no other opportunity to send an automated receipt.)

For a user to disable the read-receipt capability, the mail administrator has to have decided to allow them to do it in the user defaults screen.

Default Value: N

Example:

Allow auto read-receipt: Y

-or-

Allow auto read-receipt: N

Special Considerations:

None.

Item: **MINIMAL HEADINGS ON MSGS**

Description:

NetMail/3000 users can choose to “not view” all the miscellaneous headers that are normally part of an SMTP (Internet standard) mail message. If this option is set for a user, when he or she reads a mail message, the ONLY header lines they will see are the “essential” header lines; for example “To:”, “From:”, “Cc:”, “Date:”, “Message id”, and “Subject:” lines. This greatly shortens the (sometimes tremendous) amounts of message header information, which is often not useful anyway. Users can change this option on demand within NetMail/3000 from the menu “options” area or from the command interface with the command “SET MINHEAD”.

The actual headers that are displayed when the “minimal headers” is selected are determined based on the headers that appear in the configuration file “MINHEAD.DATA.THREEK”, which can be modified by the mail administrator to suit local needs.

Default Value: Y

Example:

Minimal headings on msgs: Y

-or-

Minimal headings on msgs: N

Special Considerations:

Messages “printed” are also affected by this setting, as are messages forwarded to a disc file.

Item: **PAUSE EVERY PAGE**

Description:

NetMail/3000 can be configured to pause at every page (23 lines) of output when reading mail messages. Each user can turn this display pause on or off with the “SET PAUSE” command in NetMail/3000. You can set up the default value that will be used when mail users are initially set up (for those users added after you set the value at least). Values are “Y” or “N”.

Default Value: Y

Example:

Display Pause: Y

-or-

Display Pause: **N**

Special Considerations:

None.

Item: **AUTO-PROCESS MM PARTS**

Description:

NetMail/3000's special multimedia processing capabilities can be set up to automatically download and invoke message attachments as read, or the user can be prompted for each message attachment and asked if a download and invoking is desirable. To set the default for new users added after this so that messages are processed automatically (no prompting) set this option to "Y". Setting it to "N" causes the default action to be prompting for each attachment.

Default Value: N

Example:

Autoprocess MM parts: **Y**

-or-

Autoprocess MM parts: **N**

Special Considerations:

Note that this value only has affect if 1) the user is running NetMail/3000 using a supported terminal emulator (currently only Reflection for Windows), 2) the user has set the appropriate environment commands on his or her pc, and 3) the message being read is actually "displayable" on the PC being used (i.e. you must have Excel (c) on your PC to process an Excel (c) spreadsheet attached to a message).

Item: **AUTO MESSAGE LISTING**

Description:

Users can specify whether they want an automatic re-listing of mail messages in the current folder after deleting a message, sending a message, or other commands. You set the default here for users added after this. Users can change this value at will with the "SET AUTOLIST"

command in NetMail/3000.

Message listings can be set to list “all” messages in the folder (read or not), “new” messages only (those that have not been read yet), or “off”, where the auto-listing is turned off altogether. Values allowed are “A” (all messages), “U” (un-read messages), or “N” (no auto listing).

Default Value: Y

Example:

Auto message listing: A

-or-

Auto message listing: N

Special Considerations:

None.

Item: **VERIFY DELETES**

Description:

Each user has the option of selecting whether he or she wants to be prompted to verify that a given message is to REALLY be deleted when the user enters a delete command. You can set the default value for new users added by setting this option. “Y” (yes) will set the default verification on, “N” turns it off. Once set, the user can still change it from the “options” area in the menu interface or from the command interface with the “SET DELETEVERIFY” command.

Default Value: Y

Example:

Verify Deletes: Y

-or-

Verify Deletes: N

Special Considerations:

None.

Item: **MAX DAYS TO SAVE MAIL**

Description:

You can designate the value in days after which electronic mail messages in users' mailboxes are automatically deleted. A value of 0 (zero) disables the auto-delete function.

Default Value: 0

Example:

Aging Days: **90**
-or-
Aging Days: **365**

Special Considerations:

This option is not currently implemented but will be in a future release.

Item: **PRINTER**

Description:

Users may choose a printer where their printouts will go to from NetMail. Print commands in NetMail/3000 will automatically go to the printer specified here.

The printer designation can be changed by the user with the "SET PRINTER" command in NetMail/3000 as well as through this screen.

The default value comes from the global options screen.

Default Value: **LP,1**

Example:

Printer: **LP,1**
-or-
Printer: **HP2688,12,1;ENV=PRES86.HPENVSYS**

Special Considerations:

Any device specification that is valid to MPE is valid here. Specifically, anything you can specify after a :FILE Netmail;DEV= is allowed in this field.

Also, the special designation “\$LOCAL” can be set, which will cause printouts to be sent to the users’ PC or terminal slaved printer. (Note that the terminal or PC emulator must have the printer port configured before using it.)

Item: REPLYTO

Description:

If the mail user was allowed the “extended capabilities”, he or she may designate their own REPLYTO address. If designated then any outgoing mail messages will include the SMTP Reply-To: header, specifying that replies to the message should be returned to the mailbox specified in the REPLYTO instead of the default (which would be the senders mailbox).

If specified, the address should be a fully-qualified and valid address (i.e. include the domain.organization and any other necessary information).

Default Value:

Example:

Replyto: **JIM@ACCTG.GIANT.COM**

-or-

Replyto: **“JANE DOE/HPSYS1/01”@DESK.ADMIN.ABC.EDU**

Special Considerations:

None.

Item: HOME SYSTEM

Description:

This field will be set by NETMAINT to the name of the system where this user was added. This is meant to designate the system where the user’s mail will actually be stored, though his name and mailing information may be stored in many NetMail/3000 databases throughout the organization. (All other systems should forward the users mail to the “HOME” system). This field is only used by the automatic directory synchronization processes (if you have them enabled).

The system name comes from the “ALT-HOSTNAME” defined in the GLOBALS screen, or from the system’s NS node name if there is no “ALT-HOSTNAME” specified on the system where the user was added.

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Default Value:

Example:

Home system: **Goofy.Walt.Disney**

-OR-

Home system: **Mailserv1.admin.companyname.com**

Special Considerations:

Currently this field is only stored for information, but will be used in later releases.

Item: **PC MAIL SERVER**

Description:

This field maintains the name of the host that holds mail for the user on this screen **IF THE USER utilizes a (POP compatible) PC electronic mail client package**. This field both serves to name the system and by being non-blank specifies that this user can use a PC based mail client (such as a POP2 client) to read and submit mail. **To allow POP access to this mailbox, this field MUST contain the HP3000's host name (or alternate host name).**

If the mail server specified in this field is a NetMail/3000 POPServer, you may specify an additional parameter that affects the selection of mail the POPServer downloads to the POP client. By default, the NetMail/3000 POPServer downloads mail from only the user's "INBOX". Normally this is not a problem, but if the user "doubles" as a NetMail/3000 user and has folders defined other than "INBOX", messages from those folders will not be downloaded to the POP client. To have all mail downloaded, regardless of the folder it is contained in, append ";allmail" to the host name. To download mail from a specific folder, append ";folder=foldername" to the host name.

Default Value:

(if the mail server is a NetMail/3000 POPServer)

Example:

PC mail server: **Goofy.Walt.Disney**

-OR-

PC mail server: **Mailserv1.admin.companyname.com**

-OR-

(only if the mail server is a NetMail/3000 POPServer)

PC mail server: **ima.netmail.popserver;allmail**

-OR-

PC mail server: **ima.netmail.popserver;folder=urgent-mail**

Special Considerations:

Also note that POP users must have a (non-blank) password set.

Item: **DOMAIN.ORG**

Description:

This field should normally be blank, however if the user specified should be identified (in their outgoing mail) as having come from a “host” different than the system’s defined name, then the appropriate host (or domain) name should appear here.

Default Value:

Example:

Domain.Org: **HP.Com**

-or-

Domain.Org: **otherhost.admin.companyname.com**

Special Considerations:

This field can be useful in situations where several departments or entire organizations share a common host for e-mail, yet each organization wishes to have their e-mail return addresses show the appropriate local domain and organization. This can also be used if many systems are shared by the same organization and they wish all outgoing mail to reflect only the organization name and not individual hosts (for example, say HP has 20,000 computer systems worldwide but wishes to make e-mail response easier for outsiders to remember by globally making all user’s domain.organizations appear merely as <user- name>@hp.com, no matter what host computer the employee might be using for e-mail.

Item: **FORWARD MAIL TO MAILBOX**

Description:

In certain cases, it may be desirable to forward mail from one user’s mailbox to another. In these cases, any incoming mail to this mail user is automatically re-routed to the user named in this field. Note that any mail already in this user’s mailbox is not moved, only mail that comes in after the forwarding is set. Users with “extended capabilities” can set this value themselves from

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the command or menu interface (if a normal “user@host” address is entered in the user interface for a forwarding address, then the “user” part is placed in this field automatically). Any other format causes the address to be placed into the “FORWARD TO NODE” field.

Note also that forwarded mail is NOT kept in the local mailbox -- it is never accessible in the local mailbox; it moves immediately to the forwarded destination.

Default Value:

Example:

Forward to user: **MGR**

-or-

Forward to user: **JOESMITH**

Special Considerations:

This field can be used in conjunction with the “ON NODE” (described next) to allow mail to be forwarded to a user on a completely different mail system. This can be useful in cases where a user is known on certain systems but wants his e-mail delivered to a different system, where he uses a different mail address (perhaps on a Unix or other operating system).

Item: **ON NODE(FORWARD TO NODE)**

Description:

This field can be used in conjunction with the “FORWARD MAIL TO MAILBOX” field, or by itself. If used by itself, then mail for this mail user is forwarded on to the system specified here but using the same mail name as this mailbox.

If used in conjunction with the FORWARD MAIL TO MAILBOX field, any mail directed to this mailbox gets routed to the system named here and to the mailbox named in the FORWARD MAIL TO MAILBOX field.

Any user entering the mail system on a system where the ON NODE or FORWARD MAIL TO MAILBOX is not blank will be allowed to send mail and access other mail functions but will be informed that his or her mail is being forwarded each time the mail program is run. Users with “extended capabilities” can set this value from the command or menu interface. If a normal “user@host” format is entered as a forwarding address in the user interface, then the “host” part is placed here automatically; if one of the other forwarding address formats is used, then the entire entry is entered into this field.

This field is also used to denote special “pseudo mailboxes” by entering special values in this field.

Allowed values are:

- 1) A valid node or system name known to NS/3000 or the NetMail/3000
- 2) A “!” followed by a valid MPE filename.
- 3) A “%” followed by a valid device name or class.
- 4) An “*” followed by a valid device name or class.
- 5) A “|” followed by a valid MPE filename.

Default Value:

Example:

Forward to node: **Sneezy.Dwarfs.Disney**

-or-

Forward to node: ***LP,13**

-or-

Forward to node: **!mailbox.data.admin**

Special Considerations:

A node name with no leading special character designates that mail will be forwarded (for this user) to the system specified by the name designated in this field.

!FILENAME

If the value in ON NODE is preceded by a “!”, then the rest of the field is an MPE filename. Mail for this user will be routed to this file and not saved in the mail system database. If using this feature, make sure that the MAILMAN.THREEK user (which manages the background mail operation) has WRITE, APPEND, and LOCK access to the file named.

Note that it may also be useful with this option to specify the “;NOHEAD” parameter after the filename. If specified, then only message bodies are copied to the MPE file, not the heading parts of the message(s).

%DEVICE

If the value in this field is preceded by a “%”, then the rest of the field specifies a device name or number to which mail for this user will be copied. After being copied, the mail will also be saved in the mail system so it may also be reviewed on-line if desired. Any value is allowed after the “%” that MPE rules allow after a “;DEV=” parameter in a file equation.

***DEVICE**

If the value in this field is preceded by an “*”, then the rest of the field specifies a device name or number to which mail for this user will be copied. After being copied, the mail will be deleted from the mail system. Any value is allowed after the “*” that MPE rules allow after a “;DEV=” parameter in a file equation.

\$FAX RECIPIENTS

A “\$” preceding an entry in this field indicates routing to a fax device. For users with HP3000 based fax systems installed (like Office Extend Fax), mail messages can be routed to fax machines by entering a “\$” followed by the phone number to send the fax to. The number can optionally be followed by billing codes “B xxxxxxxx” or other parameters understood by the fax software. The “Attention” name can end the field, though if not provided, then the “real name” field from the mailbox will automatically be used for you.

For fax systems that support fax output from specific spooled devices by accessing a fax machine phone number in the FORMS message of the output file, you can provide this information via these options and route messages to fax machines. For example:

Forward to node: **\$7034513720**

or

Forward to node: **\$7035551234 B “AcmeCorp” “Support Manager”**

Be aware that the MPE “FORMS=” parameter (used to pass this information to the fax software) has a length limit of 59 characters (of which about 4 are already used internally) so you should limit your total string length for fax information to less than 55 characters.

FILENAME

If the value in ON NODE is preceded by a “|” (a vertical bar), then the rest of the field is an MPE filename which will be executed (a command file) whenever mail is received in the current mailbox. The command file must be accessible from the netmail background job (which will be running under the THREEK account if you are using NetMail/3000, or under the HPOFFICE account if you are running DeskLink). This file can contain any command allowable in command files on the MPE/iX version you are on (sorry, command files are not available to MPE/V users). This can include RUNs, other MPE commands, :TELLs, etc. The command file must be set up properly as it will be passed (at least) two parameters from the NetMail/3000 process that executes it; it will be passed the name of a temporary filename which contains the body of the message (in ASCII), as well as the return e-mail address of the person that SENT the mail. It will also pass any extra parameters specified after the command filename (in the ON NODE field) as parameters in-between the temporary filename and the return e-mail address. This option is designed to integrate easily with custom applications and to allow the easy deployment of “info-bots” (automated mailboxes commonly used on the Internet).

You can also specify “(nohead)” (don’t include the quotes, but the parenthesis are required) IMMEDIATELY after the command file name (before any other parameters and with

no space between “(nohead)” and the file name) to specify that when NetMail/3000 extracts the incoming message and writes it to the temporary file to be passed to the command file, it will strip out all incoming mail headers first. This is useful if the command file expects to receive a data stream as a message and Internet mail headers would get in the way.

Also, the first occurrence of the string “%MSGNUM%” (not case-sensitive, but without the quotes) anywhere in the parameters following the command file name will be replaced with the six-digit message number (from which the temporary file name containing the message body was created), enclosed in single quotes. Note that this message will automatically be deleted upon termination of the command file.

Example:

Forward to node: **mycmd.pub.sys infofile.data.acct1,%MSGNUM%,xyz**

-or-

Forward to node: **mycmd.pub.sys(nohead) infofile.data.acct1,%MSGNUM%,xyz**

This will cause the command file to be executed as:

```
XEQ mycmd.pub.sys XMSGBODY,infofile.data.acct1,'001DBF',xyz,'me@node1'
```

(the temporary file “XMSGBODY” will actually be a random/different name for every message, and the message number “001DBF” is an arbitrary value for example here)

The user can create any command files he wishes; here's just an example:

```
PARM fname,infofile,from=' '  
ECHO > tmpx  
ECHO Automated 'info' Reply >> tmpx  
ECHO !from >> tmpx  
ECHO // >> tmpx  
RUN NETMAIL.SYS.THREEK;INFO="SEND !infofile";STDIN=TMPX  
PURGE tmpx,TEMP
```

This command file uses the default parameters plus a filename. It creates a new temporary file with commands to send an automated message to the person who sent the message, and sends the contents of the file substituted for 'infofile' to that user.

NETMAINT USER MAINTENANCE (ADD) SCREEN

```

** "ADD" mode:  when finished entering data, press <ENTER>.
                MAIL USERS (MAILBOXES) - MAINTENANCE
Mailbox: [REDACTED] Id: [REDACTED] Last used: [REDACTED]
Real Name: [REDACTED] LOGON: [REDACTED], [REDACTED], [REDACTED]
Company: [REDACTED] Dept: [REDACTED] Menu Interface? [Y]
Phone: [REDACTED] Password [REDACTED] ^ Display Lines [1]
                                                MPE Commands [Y]
Street Address: [REDACTED] Notification [4]
                                                Advertise address [Y]
                                                Spell checking [N]
Signature file: [REDACTED] Local language [00]
Message editor [NETEDIT] Extended Capabilities [N] Max mail priority [M]
Allow auto read-receipt [Y] Minimal headings on msgs [Y] Pause every page [Y]
Autoprocess MM parts [Y] Auto message listing [U] Verify deletes [Y]
Max days to save mail [ 0] Total messages: Total bytes:
Printer: $LOCAL [REDACTED]
Replyto: [REDACTED]
Home system: [picard.3k.com] [REDACTED]
PC Mail server: [REDACTED]
Domain.org: [REDACTED]
Forward mail to mailbox: [REDACTED]
On node: [REDACTED]
                (^use special codes for disc files, faxes, printers, etc.)

[ ] [ ] [ Print Screen ] [ Refresh Screen ] [ ] [ ] [ ] [ CANCEL ]
    
```

Adding Mail Users

This screen is used to add new mail users to the mail system. From the user maintenance screen, hit the "ADD A NEW USER" function key to bring up this screen. It is identical to the user maintenance screen, except that a new field appears under the mail user name; a user alias (Session,User.Acct).

Item: **LOGON**

Description:

This field is an initial alias to be assigned to the user. Additional aliases can be added in

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the “ALIAS MAINTENANCE” screen, but an initial logon must be provided here.

Default Value: . -

Example:

Session,User.Acct: @ .JOHN.ACCTING

-or-

Session,User.Acct: MIKE,USERS.ADMIN

Special Considerations:

This logon value will be saved in the mail database and used to identify a user running NetMail/3000. A value of “@” may be used for the session portion, though it is important to make sure the alias is as unique as possible - if the alias could match the logon for more than one mail user it doesn’t help to identify the individual.

Multiple logons are accommodated by adding more aliases in the “ALIAS MAINTENANCE” screen, so this initial entry is merely a timesaver for the initial entry of users.

NETMAINT KNOWN HOSTS MAINTENANCE SCREEN

Netmail/3000 maintains its own list of systems that it may communicate with. This list is in addition to the systems known to NS/3000 (if that software is installed on your system) or the DNS (domain name server) system (if you are utilizing that).

If you use NS/3000 and you have no WAN (i.e. X.25 or other public network access) you probably won't need to use these screens. On MPE/iX systems configured to use a domain nameserver, you probably also won't need this screen much. Where this screen DOES come in useful is in adding multiple aliases for your own system, either for NetMail/3000 or in conjunction with the DeskLink HPDesk gateway. This can allow your system to accept mail (or pass mail on to HPDesk) when addressed to a variety of host names - especially useful if your system is shared by more than one organization, or if your computer is known by one name on your internal network and another to the Internet.

For Internet users and X.25 network users on MPE/V systems, once a foreign system has initiated mail communications with your system, NetMail/3000 will record the name of that system in the mail database for you. From then on, any mail users will be able to address mail to that system. To allow communication before the other system has initiated any mail traffic, you will need to add the system to the list of known systems using this screen (or you can add it to your NS/3000 configuration using NMMGR -- though you will find the NetMail/3000 screens much easier).

An important note: **you should NOT add an entry for your own machine here with an IP address.** NetMail automatically detects the name of your system as defined in NMMGR, and if you don't have any network installed, will use the alternate-host name you defined in the global defaults screen. If you want to add "aliases" for your machine (so it will respond and accept mail for other host names) you must use the special address format of "255.255.255.255" for the address and "999999999" for the network name or for aliases used to pass mail to HPDesk use "000.000.000.000" for the address and "HPDESK" for the network name.

This screen works the same as the other NETMAINT screens you have seen. The key field on this screen is "HOSTNAME". A value can be entered in this screen and retrieved by hitting <ENTER>, or systems can be browsed sequentially by using the "PREVIOUS RECORD" and "NEXT RECORD" function keys. Records retrieved sequentially will not be in any particular order, but this means does present a simple and effective way of browsing through the systems in your database.

In addition, once you have selected a host and the record has been retrieved, you have the option of changing information on that screen, or deleting the record. To change the record, type over the field(s) you want changed, and press <ENTER>. You will be prompted to verify your change and offered the option of canceling the update.

You may also select the option of deleting the record once you have called it up. Use the "DELETE HOST" function key, and you will be prompted to verify your delete request. You

Managing the Mail System

NetMaint - ver B.06 97/01/16 -- 3k Associates
KNOWN HOSTS - MAINTENANCE

Host name: **HUEY.IIT.COM**

Address: **255.255.255.255** Cached: **N**

Network: **999999999** Loaded:

Time to live: **-1**

Alternate host name:

Host Information:

Last sent to:
Last received from:

Messages sent: 0 Messages received: 0
Bytes sent: 0 Bytes received: 0

Delete Host Go to Find/Add Print Screen Refresh Screen Previous Record Next Record Previous Menu Exit NetMaint

have the option of canceling the delete request if you need to.

In the following entries we provide a list and description of all the fields found on the “KNOWN HOSTS MAINTENANCE” screen.

Item: **HOST NAME**

Description:

This is the key value for the screen. To call up a host entry, enter the name of a host (system) here. This can be any valid system name, and it is also valid to have several entries with different names referring to the same computer.

Default Value:

Example:

Host name: **HALJR.THREEK.COM**

-or-

Host name: **COMPSCI-1.COMPSCI.UTT.EDU**

Special Considerations:

Host names are caseless (as required by SMTP standards) for the purposes of NetMail/3000, but note that this field preserves the case of the hostname for compatibility with UUCP systems which are case sensitive. Host names used in SMTP communications will be upshifted as needed.

Host names can, however, contain some hyphens if desired, but any other special characters should be avoided. HP's host names generally follow the computer.domain.organization standard, though you are also free to utilize host names meeting the "DNS" (Domain naming standard), which allows as many levels of names as desired, as long as they are unique, and end with a well known (high level) domain (i.e. .MIL, .EDU, .COM, etc.).

Item: ADDRESS

Description:

The address in this field refers to the IP (Internet Protocol) address for the host in question. This is the low-level numeric address which other computers and equipment use to communicate with the specified computer. IP addresses are usually written in the format:

num.num.num.num

Each 'num' is a three digit number ranging from 0 to 255. The specific rules for the assignment of addresses is more complex than this, and if your systems might ever communicate with a public network (like the Internet), you need to have an address 'assigned' to you (this is free and done by a central organization which maintains the single worldwide definitive computer address list).

Default Value: .. .

Example:

Address: **192.105.032.001**

-or-

Address: **015.001.121.108**

Special Considerations:

You must enter the IP address of the machine in these fields, zero filling from the right (i.e. 015.000.105.033).

As a special feature, in certain cases you may want to define multiple names for your current system. You may define as many different host name entries as you want for the current sys-

Managing the Mail System

tem by creating entries with the name you want, with an address of the special value “255.255.255.255” AND with a network address of “999999999”. The combination of these two values defines a secondary “alias” for your system. This is especially useful if you have several departments using the same system and desire to use a separate Domain.Organization for each.

An additional note for users of the DeskLink HPDesk FSC Gateway; the system name which defines hpdesk-routed mail should have an address of “000.000.000.000” along with a network of “HPDESK”. You can also have as many of these names as you like, effectively giving your HPDesk gateway multiple aliases as well.

Item: **CACHED**

Description:

This field indicates whether this address is ‘cached’ in the database (i.e. a candidate to be replaced if the number of hosts gets too large and this address has not been referenced for a long time).

Allowed values are:

Y = Entry is a candidate for overlay at some point

N = Entry will not be overlaid at any point

Default Value: **N**

Example:

Cached: **Y**

-or-

Cached: **N**

Special Considerations:

This field is not implemented. Use ‘N’.

Item: **NETWORK**

Description:

The NETWORK field stores the ‘network’ portion of the IP address for the host. For class A addresses, this would be the first 3-digit portion of the address, for class B addresses the first

Managing the Mail System

two 3-digit portions, and for class C addresses the first three 3-digit address portions.

IP addresses whose first 3-digit number are between 0 and 127 are class 'A' addresses. Addresses between 128 and 191 are class 'B' addresses, and addresses between 192 and 223 are class 'C' addresses.

Default Value:

Example:

Network: **015** (for IP **015.000.121.201** - Class 'A')

-or-

Network: **129171** (for IP **129.171.121.108** - Class 'B')

-or-

Network: **192105032** (for IP **192.105.032.001** - Class 'C')

Special Considerations:

Addresses (other than the special "HPDESK") can be used to "group" hosts into logically associated lists for which mail statistics will automatically be kept. Any "network" name entered will show up under the "Network Statistics" screen in NetMaint, allowing you to track the number of messages and bytes sent and received between this host and those on that list. You may find this useful in tracking mail traffic among internal systems. There will also always be a network entry that shows up in the "Network Statistics" screen called "Other" that accumulates statistics for all systems not explicitly named - i.e. the Internet.

An additional note for users of the DeskLink HPDesk FSC Gateway; the system name(s) which defines HPdesk-routed mail should have an address of "000.000.000.000" along with a network of "HPDESK".

Item: **LOADED**

Description:

This field stores the timestamp for when addresses were loaded into the database. This field is for display only and cannot be modified by the user.

Default Value:

Special Considerations:

None.

Item: TIME TO LIVE

Description:

This field stores the counter information used in the caching algorithm.

Default Value:

Example:

Time to live: **1**

Special Considerations:

This field is not currently implemented. Enter a “-1” in this field for all entries at this time.

Item: ALTERNATE HOST NAME

Description:

This field is treated as comment, but is intended to help link systems that may be known by several different names. You may enter an alternate name for the current host here.

Default Value:

Example:

Alternate host name: **Poodle.dogpound.PGC.MD.GOV**

-or-

Alternate host name: **SYS1**

Special Considerations:

None.

Item: HOST DESCRIPTION

Description:

This field is intended to store miscellaneous information regarding the host, including but not limited to its location, administrator or contact information, or the make and type of equipment.

Default Value:

Example:

Host Information: **Tom's 286 PC -x2014**

-or-

Host Information: **HP9000/825S workstation in programming rm 810**

Special Considerations:

The format for this field is not defined. It is used to help identify systems when the administrator calls them up in the maintenance screen. The field can be used for any useful information including a description of the type and model of the system or its physical location or administrator.

Item: **LAST SENT TO**

Description:

This field stores the date and time that a message was last sent to this system.

Default Value:

Example:

Last sent to: **1**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

Item: **LAST RECEIVED FROM**

Description:

This field stores the date and time that a message was last received from this system.

Default Value:

Example:

Last received from: **1**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

Item: **MESSAGES SENT**

Description:

This field stores the number of messages that have been sent to this system.

Default Value:

Example:

Messages sent: **10**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

Item: **MESSAGES RECEIVED**

Description:

This field stores the number of messages that have been received from this system.

Default Value:

Example:

Messages received:**10**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

Item: **BYTES SENT**

Managing the Mail System

Description:

This field stores the total number of bytes that have been sent to this system.

Default Value:

Example:

Bytes Sent: **10**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

Item: **BYTES RECEIVED**

Description:

This field stores the total number of bytes that have been received from this system.

Default Value:

Example:

Bytes Received: **10**

Special Considerations:

This field cannot be edited - it is maintained by the background server processes.

NETMAINT ALIASES MAINTENANCE SCREEN

NetMail/3000 tries to automatically identify users when they run the NetMail program. To do this, it compares the logon session, user, and account the person is logged on to with a list of logon information and corresponding mail user names in its database. In this way, when a user runs the NetMail/3000 program, even if he or she uses several different MPE logons throughout their job, NetMail/3000 will be able to identify them and present them with the appropriate mailbox automatically.

To facilitate this, the administrator must maintain a list of valid logons for every mail user on the system. For VESOFT Security*3000 or USS Security/Plus users, this list can be automatically generated from your security database. For other sites, the information needs to be entered manually at some point.

NetMail tries to not make any assumptions about workers habits. Any number of logon combinations are possible for every person, though it is important that any specific logon combination NOT be duplicated for more than one mailbox. If duplicate entries are found and NetMail cannot uniquely identify a user when he runs the mail program, then NetMail will notify the user that it could not identify the user because of more than one qualifying alias, and will then prompt the user to supply his mail name. For this reason, it is important to make the logon combinations as specific as possible -- down to MPE session names if appropriate.

In the following paragraphs, we will list the items and descriptions which you will encounter on the "ALIASES MAINTENANCE" screen.

NetMaint - ver B.06 97/01/16 -- 3k Associates

ALIAS MAINTENANCE

Mailbox Name:

Delete:	Jobname	User	Account
-			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			
[]			

		Print Screen	Refresh Screen	Previous User	Next User	Previous Menu	Exit NetMaint
--	--	--------------	----------------	---------------	-----------	---------------	---------------

As in the other NETMAINT screens, you have one key field in which you may enter a specific value and retrieve a particular record. You may also use the “PREVIOUS USER” and “NEXT USER” function keys to browse through the database sequentially to select a user.

Once you have selected a user (and the screen will list the first 16 aliases for that user) you may modify aliases for that user, add aliases for that mail user, or delete individual aliases from the user’s list.

To delete aliases from the list, <TAB> down to the column under the “Delete” heading, and enter any character in the column in front of the line you wish to delete. Press <ENTER>, where you will then be prompted to confirm your request, hit the “DELETE ALIASES” function key and the item(s) will be deleted.

If you encounter a list with more than 16 aliases, you may use the “NEXT SCREEN” function key to scroll through the aliases.

Item: USER

Managing the Mail System

Description:

The USER field is the key field on the screen. This is the mail system ID of the user. His or her mailbox will be addressed by using this name. The name is not case sensitive -- all Net-Mail/3000 mail names are internally upshifted so they correspond more closely to MPE style user names.

Default Value:

Example:

User: **JOESMITH**

-or-

User: **STEWART**

Special Considerations:

See discussion under the "USER MAINTENANCE" screen.

Item: **DELETE**

Description:

Once a record is displayed on the screen, any value entered in this column will cause the corresponding alias line to be deleted. Once selected, press <ENTER> and then respond to the confirmation message. The updated record will then be displayed.

Default Value:

Special Considerations:

None.

Item: **SESSION,USER.ACCT**

Description:

This is the logon information that will identify the mail user to NetMail by looking them up in its database. An initial entry is required when the user is first added, but further entries can be added here, as well as modified and removed.

Managing the Mail System

Default Value:, .

Example:

Session,User.Acct: <u>@</u>	<u>.JOHN.</u>	<u>.ACCTING</u>
-or-		
Session,User.Acct: <u>MIKE</u>	<u>.USERS</u>	<u>.ADMIN</u>

Special Considerations:

This logon value will be saved in the mail database and used to identify a user running NetMail/3000. A value of “@” may be used for the session, user, and/or account portions (by itself, no subsets allowed). It is important to make sure the alias is as unique as possible - if the alias could match the logon for more than one mail user it doesn't help to identify the individual.

NETMAINT MAILING LIST MAINTENANCE SCREEN

NetMail/3000 provides some powerful distribution list capabilities. NetMail can maintain any number of lists of recipients tied together under “mailing list names”, for individual owners or for the use of all mailing system users.

A mailing list is a common name which is linked to a list of users mail addresses. The idea is that for common routing groups, a list can be set up then mail can be sent to the “list” rather than entering every single recipient individually. One person or group is responsible for maintaining the list -- adding and removing users from the list. Anyone allowed access to the list can then send mail to the list and be assured that all the necessary personnel will get copies of the message.

As you will see in the following screen, NetMail/3000’s mailing lists are named (with a valid mailbox name) and have an “owner” and a security level. After that, each list is merely a linked list of other mailbox names, each of which can be a local mailbox name (like ‘MGR’ or ‘JOHNB’), or a fully qualified remote mailbox name (like ‘JIMC@HOST1’ or ‘artc@nsr.hp.com’).

NetMail/3000 understands mailing lists both at its interactive prompt (when it asks you who to deliver to), as well as for mail that comes in from other systems. (Mail coming in from other systems can only be sent to PUBLIC or SYSTEM owned mailing lists, not private individual’s lists.)

There are three types of mailing lists managed by NetMail/3000: \$SYSTEM owned, \$PUBLIC ownership, and private ownership. The differences come from who maintains the list and who is allowed to address mail to it.

\$SYSTEM Mailing Lists

Mailing lists ‘owned’ by ‘\$SYSTEM’ are lists that can only be maintained by the mail system administrator. He or she is responsible for adding and removing mail addresses from that list. All users on the system can address mail to a ‘\$SYSTEM’ mailing list, as can anyone sending incoming mail from a remote system.

\$PUBLIC Mailing Lists

Mailing lists ‘owned’ by ‘\$PUBLIC’ are lists that can be joined by any mail system user (and unjoined). Mail users can “subscribe” and “unsubscribe” to these mailing lists themselves, though the actual “list” must have been created by the mailsystem administrator.

‘\$PUBLIC’ mailing lists can be addressed by any mail user, either on the local system or from remote systems.

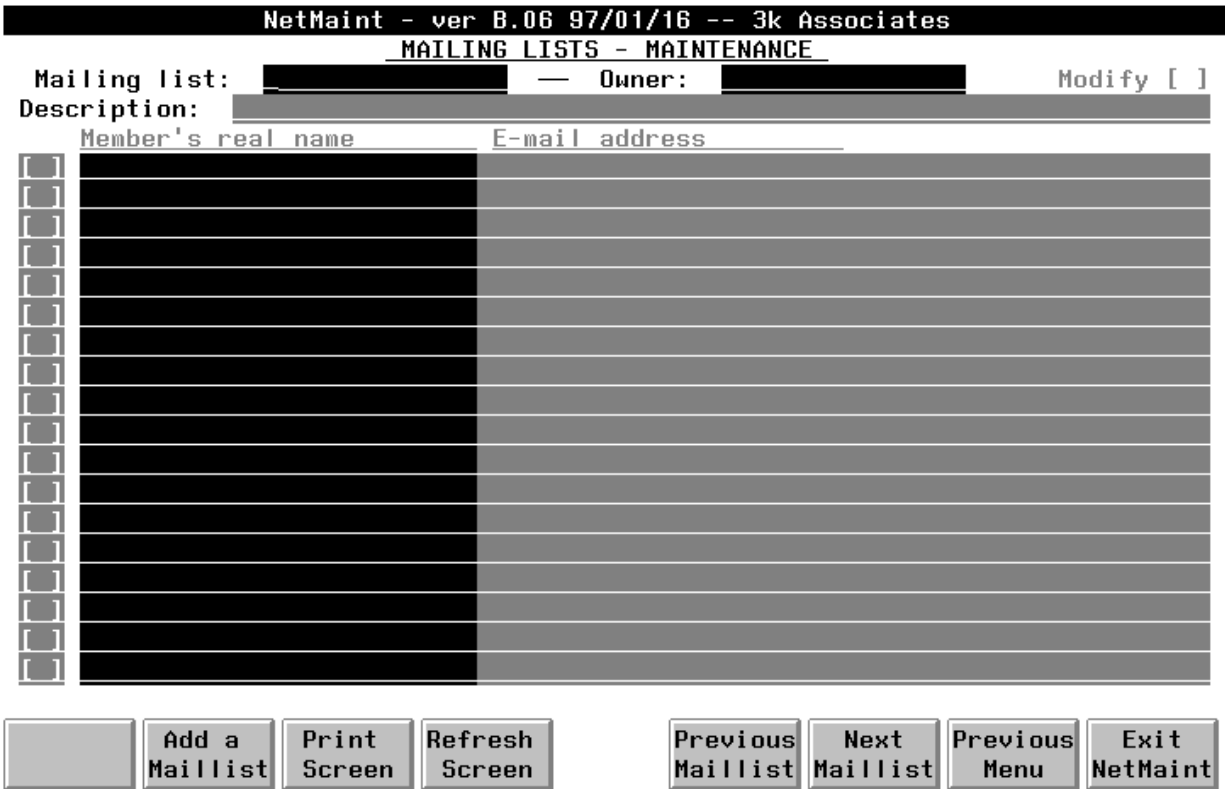
Private Mailing Lists

Managing the Mail System

Private mailing lists are lists that are owned and maintained by individual mail users. Private mailing lists have an ownership of the mail-id that set them up, and only that user can address mail to that list. These lists allow any user to set up 'shorthand' lists to save typing on lists of mail users that are used frequently. It also allows a much shorter or easier to remember name to be substituted for a remote mail user that may have a very long or complex mail address.

System level mailing lists (owned by the system, and only the mail administrator can add or remove members) can only be maintained from this screen. Public mailing lists must be created here and can be edited here, but can be joined by any user with NetMail/3000's "SUBSCRIBE" command (and can remove themselves from the list with the "UNSUBSCRIBE" command). Private mailing lists can be maintained here by the mail administrator, or created and maintained completely by the individual user with NetMail/3000's "ADD" and "REMOVE" commands.

For the mail system administrator, the following paragraphs list all the relevant fields and their definitions as they relate to mailing list maintenance.



Item: MAILING LIST

Managing the Mail System

Description:

This is the 'name' of the mailing list. To send mail to all the names on a list, the mail is addressed to the 'name' of the mailing list.

Default Value:

Example:

Mailing list: **\$NEWUSERS**

-or-

Mailing list: **UNIX-FANS**

Special Considerations:

Mailing list names should follow the same rules as that for mail names. The exception NetMail follows is that many of the public mailing lists it maintains begin with '\$'s to distinguish the names from possible real mail names.

NetMail/3000 automatically creates a mailing list named "\$ALL", which all mail users on the system are placed on -- providing a convenient means of addressing important mail to all personnel in the organization.

NetMail/3000 also sets up a list of users to be sent mail when a new user joins the mail system (if the system is NOT secured). This list is '\$NEWUSERS', and is a public list.

For VESOFT Security*3000 or USS Security/Plus users, the program that loads your mail database also sets up a mailing list for each department it encounters in the security database. Every user listed in each department is added to the list automatically, and all lists are named the same as the department with a '\$' inserted at the beginning of the name.

Item: OWNER

Description:

This field contains the owner of the mailing list. The following values are allowed:

- \$SYSTEM - For public mailing lists maintained by the mail system administrator
- \$PUBLIC - For public mailing lists that users may join or remove themselves from.
- mailname - The mail system name of a mail user. This is a private list and can

Managing the Mail System

only be used or modified by the list owner (and the mail system administrator)

Default Value:

Example:

Owner: **\$PUBLIC**

-or-

Owner: **JSMITH**

Special Considerations:

None.

Item: **MODIFY**

Description:

This field is used after a mailing list is called up (by selecting a name and owner and hitting <ENTER>). If you type a character in this field and hit <ENTER>, NetMail/3000 will display a special screen where the special attributes of the mailing list can be modified. The actual screen and its function is described in the following pages.

Default Value:

Example:

Special Considerations:

None.

Item: **DESCRIPTION**

Description:

This is a field to provide a description of the mailing list -- its purpose or meaning. It only serves as a comment, but can be seen by users with the "EXPAND" NetMail command.

Default Value:

Example:

Description: **User's interested in mail system updates**

-or-

Description: **Friday night poker club**

Special Considerations:

None.

Item: **MEMBER'S REAL NAME**

Description:

This field, which appears 18 times on the screen, contains the name of each member in the mailing list - that is the regular name, not the email address. Each entry is 26 characters long.

Default Value:

Example:

[]: **John Smith**

Special Considerations:

The real name gets filled in automatically for local users when they subscribe to a mailing list or when their address is added to a list by the administrator. For remote users added by the list server, the real name comes from the name the remote user provided when he or she subscribed.

Item: **EMAIL ADDRESS**

Description:

This field, which appears 18 times on the screen, contains the mailbox name of each member in the mailing list. Each entry is necessarily long. Mailbox names can be local 16 character names, or fully qualifiable Internet compatible mail addresses which can be up to 254 characters long (though rarely are longer than about 40 characters). Up to 18 mailbox names are listed on each screen, and you can use the "Next Screen" function key to see the next screen full of mailbox names (Note - this key only appears if there are more than 18 mailboxes in the list). If you desire to add new names to a mailing list, after selecting the list, use the "Add Members" function key.

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Default Value:

Example:

[]: JSMITH

[]: G.EVANS@bigsys1.marketing

[]: U66571%XYZSYS1.BITNET@CUNYVM.CUNY.EDU

Special Considerations:

None.

Should you wish to modify the attributes of a mailing list, by entering any character in the "Modify" field and hitting ENTER, you will see the following screen, where you can see and change the global attributes of the mailing list.

```
** "UPDATE" mode: when finished entering data, press <ENTER>.
MAILING LISTS - LIST INFORMATION MAINTENANCE

Mailing list: $ALL
List owner:  $SYSTEM

Description:
List of all mail-users

List type [0] 0 - Unmoderated list   List security [N] Y - secured
              1 - BBS                N - unsecured
                                      G - global

Digest file:

Last digest distribution: TUE, FEB 1, 1916, 8:32 PM

Hours between digest postings: 0000

Archive file:

[DELETE LIST] [ ] [Print Screen] [Refresh Screen] [ ] [ ] [ ] [CANCEL]
```

Item: MAILING LIST

Managing the Mail System

Description:

This is the 'name' of the mailing list. To send mail to all the names on a list, the mail is addressed to the 'name' of the mailing list.

Default Value:

Example:

Mailing list: **\$NEWUSERS**

-or-

Mailing list: **UNIX-FANS**

Special Considerations:

Mailing list names should follow the same rules as that for mail names. The exception NetMail follows is that many of the public mailing lists it maintains begin with '\$'s to distinguish the names from possible real mail names.

Item: OWNER

Description:

This field contains the owner of the mailing list. The following values are allowed:

- \$SYSTEM - For public mailing lists maintained by the mail system administrator
- \$PUBLIC - For public mailing lists that users may join or remove themselves from.
- mailname - The mail system name of a mail user. This is a private list and can only be used or modified by the list owner (and the mail system administrator)

Default Value:

Example:

Owner: **\$PUBLIC**

-or-

Owner: **JSMITH**

Special Considerations:

None.

Item: DESCRIPTION

Description:

This is a field to provide a description of the mailing list -- its purpose or meaning. It only serves as a comment, but can be seen by users with the "EXPAND" NetMail command.

Default Value:

Example:

Description: **User's interested in mail system updates**

-or-

Description: **Friday night poker club**

Special Considerations:

None.

Item: LIST TYPE

Description:

This field describes the type of mailing list. The only currently supported option is "0" for unmoderated mailing lists.

Default Value: 0

Example:

List Type: **0**

-or-

List Type: **1**

Special Considerations:

Currently the only value supported for this field is "0".

Item: LIST SECURITY

Description:

This field defines who maintains the mailing list. Lists can be private (security = "Y"), public (security = "N") so that local users can subscribe to mailing lists from NetMail/3000, or a list can be designated globally available (security = "G") so that the list server software can also control the adding and removing of mailing list members.

Default Value:Y

Example:

List Security: **Y**
-or-
List Security: **G**

Special Considerations:

None.

Item: DIGEST FILE

Description:

The "Digest File" field specifies the name of the ascii file used to store copies of messages sent to the mailing list during the "digest interval" (specified by the hours between digest postings field). The file must be built large enough to hold all the messages sent during the interval. At the end of each interval, this file is used to send the single message summary of messages to the list to all members of the list that were set to "digest" mode. Digest mode is not available for the list unless there is a file specified in this field.

Default Value:

Example:

Digest file: **DIGFRND.DATA.THREEK**
-or-
Digest file: **FILEDIG.PUB.HPOFFICE**

Special Considerations:

Digest functionality is not implemented in this release but will be added in a future

release.

Item: LAST DIGEST DISTRIBUTION

Description:

This field displays the last time a digest-mode message was sent to the mailing list. If no digest-mode message has been sent yet, then this field is initialized to the date/time that the list was created.

Default Value:

Example:

Last digest distribution: **TUE, NOV 14, 1995 12:01 AM**

Special Considerations:

Digest functionality is not implemented in this release but will be added in a future release.

Item: HOURS BETWEEN DIGEST POSTINGS

Description:

This field determines the interval between digest-mode postings to members of the specified mailing list subscribed in digest mode. The interval is expressed in hours.

Default Value:

Example:

Hours between digest postings: **0001**

-or-

Hours between digest postings: **0024**

Special Considerations:

Digest functionality is not implemented in this release but will be added in a future release.

Item: **ARCHIVE FILE**

Description:

This field names the file used to archive all messages sent to the specified list. The file-name must be an ascii file, and must be large enough to accommodate all messages sent to the list.

Default Value:

Example:

Archive file: **ARCH.DATA.HPOFFICE**

-or-

Archive file: **FRARC01.PUB.THREEK**

Special Considerations:

Archive functionality is not implemented in this release but will be added in a future release.

In order to add members to a mailing list, from the Mailing List Maintenance screen, select the “Add Members” function key and you are presented with the following screen:

Managing the Mail System

** "ADD" mode: when finished entering data, press <ENTER>.

MAILING LISTS - MEMBER MAINTENANCE

Mailing list:
List owner:

Member's E-mail address:

Member's real name:

Personal preferences for lists to which member subscribes:

- "hide" member.
- Subscribe member in "digest" mode.
- Member is active on list (receives messages sent to list).

<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value="Print Screen"/>	<input type="button" value="Refresh Screen"/>	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value="CANCEL"/>
---------------------------------	---------------------------------	---	---	---------------------------------	---------------------------------	---------------------------------	---------------------------------------

On this screen, you can add a member to a mailing list (one member at a time, though the screen will repeat). You can also set the attributes for this person's subscription. In addition to the Mailing List name and List owner fields described earlier, the following fields are present on this screen:

Item: MEMBERS EMAIL ADDRESS

Description:

This is the e-mail address of the person to be added to the mailing list. The field is three lines long, but must contain only a single address (Internet e-mail addresses can legally be several hundred characters long, though they are usually less than 40 characters long). Do NOT put multiple addresses in the box - after entering each address and setting the attributes for that person, the screen will repeat and give you the option to add further members.

Default Value:

Example:

Managing the Mail System

Member's E-mail address: **John-smith@sys1.acctg.acme.com**

-or-

Member's E-mail address: **jane.doe/west/00@hpdesk.acme.co.uk**

Special Considerations:

None.

Item: **MEMBERS REAL NAME**

Description:

This is the actual name of the person to be added to the mailing list. This name will appear with the member's E-mail address in the headers of a message sent to this list. You may enter any combination of characters you wish. However, if left blank when you press the ENTER key, it will automatically be filled in (if "Member's E-mail address" matches a NetMail/3000 mailbox name) with the real name from the "MAIL USERS (MAILBOXES) - MAINTENANCE" screen.

Default Value: (real name of member if member's E-mail address is a NetMail/3000 mailbox)

Example:

Member's real name: **John smith**

-or-

Member's real name: (blank - to be filled in automatically)

Special Considerations:

NetMail/3000 mailboxes are NOT searched for a match on "Member's E-mail address" if the address contains a node/system name.

Item: **HIDE MEMBER**

Description:

This field determines whether the members subscription will be viewable by others reviewing the mailing list membership. Members that aren't hidden will be displayed when someone requests a list of the mailing list membership. This setting can also be changed by the member through the listserv program if the list is accessible by listserv.

Default Value:

Example:

Hide member: Y
-or-
Hide member: N

Special Considerations:

None.

Item: **SUBSCRIBE MEMBER IN DIGEST MODE**

Description:

This field determines whether the member specified gets every message sent to the list (as soon as they are sent) or whether he or she gets only a single “digest” message containing copies of all messages sent to the list throughout the “digest interval”. This setting can also be changed by the member through the listserv program if the list is accessible by listserv.

Default Value:N

Example:

Subscribe member in digest mode: Y
-or-
Subscribe member in digest mode: N

Special Considerations:

Digest functionality is not implemented in this release but will be added in a future release.

Item: **MEMBER IS ACTIVE ON LIST**

Description:

This field determines whether the user will actually get messages sent to the list. Normally all users are active, but at times it may be desirable to inactivate a member for a period of time without removing the member from the list (for example during vacations or a leave of absence). This setting can also be changed by the member through the listserv program if the list is accessible by listserv.

Managing the Mail System

Default Value: Y

Example:

Member is active on list: Y

-or-

Member is active on list: N

Special Considerations:

None.

NETMAINT INTERFACING PROGRAM MAINTENANCE SCREEN

NetMail/3000 provides a facility to allow the customization of the mail environment through the utilization of external programs. These programs include file editors and spelling checkers. The following screen in the maintenance program allows the mail administrator to define file editors and spelling checkers and set them up so that NetMail/3000 users can use them.

```
NetMaint - ver B.06 97/01/16 -- 3k Associates
INTERFACING PROGRAM MAINTENANCE

Program name:           Secured: 
                                                    (Delete: )

Type (0): Editor

JCL lines (check here to edit)——> 

FILE EDTTEXT=!
RUN QUAD.PUB.THREEK;INFO="T *EDTTEXT"
RESET EDTTEXT

Next JCL   Add a   Print   Refresh
Screen    Program Screen  Screen

Previous   Next   Previous   Exit
Program   Program Menu     NetMaint
```

Item: **PROGRAM NAME**

Description:

This is the “program” name which can appear in the “Editor” field of both the CONTROL screen and the MAIL-USERS screen or the “Speller” field in the CONTROL screen. For example, when it comes time for a user to compose/edit a mail message, the “Editor” defined for that

Managing the Mail System

user will correspond to a program name here which points to a series of JCL lines. These JCL lines are executed by NetMail/3000 and actually run the "Editor." Likewise, if a spelling checker is available, then the JCL for that spelling checker will be executed when the user selects to have the spelling checked of the composed message.

Default Value:

Example:

Program name: **EDITOR**

-or-

Program name: **HPSPELL**

Special Considerations:

The program name is just a mnemonic by which one or several executable JCL lines may be referenced. The name need not be the same as the actual program to be run (although it is suggested).

Item: **SECURED**

Description:

This field indicates the accessibility of the program to users. An "N" would indicate the program is not secured and any user in the mail system may access it. Conversely, A "Y" indicates the program is secured and can only be assigned for users to access by the mail system administrator.

Default Value:

Example:

Secured: **Y**

-or-

Secured: **N**

Special Considerations:

None.

Item: **DELETE**

Description:

Managing the Mail System

This field is used after a program description is called up (by selecting a program and hitting <ENTER> or by scrolling through entries with the Next-Program function key). Once selected, NetMail/3000 will display the JCL defined to execute the specified program. If you wish to delete the entire entry, type a character in this field and hit <ENTER>. You will then be asked to confirm the request to delete this entry by hitting the function key now labeled as “DELETE ENTRY”. Selecting this key will confirm the delete; the “CANCEL DELETE” key gives you the option to cancel.

Default Value: []

Example:

[x]

Special Considerations:

None.

Item: **TYPE**

Description:

The type of program “program name” refers to is denoted by a 0 or a 1. Type 0 is an editor, and 1 is a spell checking program. This is simply information which helps NetMail/3000 to process the JCL lines linked to this program.

Default Value:

Example:

Type (0): **Editor**

-or-

Type (1): **Spell Checker**

Special Considerations:

None.

Item: (edit flag)

Description:

Managing the Mail System

Any key entered into this field before pressing <ENTER> indicates you wish to edit (change) the JCL lines displayed below. As you may note, you cannot change the JCL lines directly on the screen - they must be changed from NetEdit (as explained next).

Default Value:

Example:

(check here to edit)---->[**X**]

-or-

(check here to edit)---->[]

Special Considerations:

None.

Item: JCL LINES

Description:

The JCL lines are a group of commands which NetMail/3000 executes. They define how your program is run. A typical set of JCL lines will perform three functions: 1) set up the environment for the program to be run; 2) actually run the program; 3) reset the environment for re-entry into NetMail/3000.

Default Value:

Example:

```
FILE EDTTEXT=!  
RUN EDITOR.PUB.SYS,BASICENTRY  
RESET EDTTEXT  
-or-  
COMMENT no need to set up environment for NetEdit  
RUN NETEDIT.PUB.THREEK;INFO="!"  
COMMENT nothing to reset
```

Special Considerations:

The “!” (exclamation) character seen in the example JCL lines above is for special use by NetMail/3000. NetMail/3000 creates a file to be used for the editing of your mail message. The editor you will be running will need to know the name of this file, so where the “!” appears in your JCL lines, NetMail/3000 will insert the name of this file before executing the JCL lines.

When displaying “program” entries on the screen, you will see the JCL lines but will not be able to edit (change) them. To do this, you must select the aforementioned “edit flag.” At this point, you will be placed in NetEdit with which you will be free to edit your JCL lines. For information on how to use NetEdit, refer to the section on NetEdit, “The NetMail/3000 NetEDIT message composer.”

PC commands can also be used in the JCL lines, though they will only be valid for users invoking the specified editor or spellchecker that are using a supported terminal emulator program. At this time, some (limited) commands are available to Advancedlink or Business Session users; much more capability is available to Reflection users (this is a function of the commands available from the emulator to be invoked by a host). See your terminal emulator manual for commands which can be invoked by a host. Any PC commands in a JCL script need only be preceded by a “\$”. For example, reflection users can use a JCL script including a command such as:

```
$SHELL write
```

which would invoke windows “write” program on the user’s PC.

HP DESK GATEWAY CONFIGURATION SCREEN

If you purchased the optional HPDesk Gateway option with NetMail/3000 or bought the DeskLink HPDesk Gateway stand-alone package then you will see this option on your main menu. Otherwise, you will only see the first 8 options.

The instructions for installing and setting up the DeskLink gateway software are included in a separate addendum, and are quite simple. There is a screen in the NetMaint program to set up the options in DeskLink that control our end of the gateway process however, and we will describe this screen and the fields on it below.

```
NetMaint - ver 8.06 97/01/16 -- 3k Associates
HP DESK GATEWAY CONFIGURATION - MAINTENANCE

Host name: HPDESK.ACME.COM

Network description: NetMail/3000<->HPDESK interface

Gateway input file name(from HPDESK):
NETMAIL.NETMAIL.HPOFFICE

Gateway output file name(to HPDESK):
AREFIPC.MAILDB.HPOFFICE

Desk Location: NTMAIL
Place headers in Desk Messages? [Y]

Default encoding [U]
(M) MIME/base 64
(U) UUencode
(B) BIN/HEX

Outgoing Address Format [1]
(1) "First_Last" only
(2) "First_Last"/Location
(3) "First_Last"/Location/Subloc
(4) "First.Last" only
(5) "First.Last"/Location
(6) "First.Last"/Location/Subloc

[ ] [ ] [ Print Screen ] [ Refresh Screen ] [ ] [ ] [ Previous Menu ] [ Exit NetMaint ]
```

Item: HOST NAME

Description:

The name of the (pseudo) host to which Internet mail will be addressed for messages destined to HPDesk users. It should be a valid "Internet format" name, but need not be the same as

the NS node name, or even as the “ALT-HOSTNAME” used in the control screen.

Default Value:

Example:

Host Name: **Deskgate.threek.com**

-or-

Host Name: **Main1.admin.ss.bigu.edu**

Special Considerations:

The host name selected here need not be the same name as the “NS node name”, or even the same name as you might use for messages coming in directly to NetMail (if you have both NetMail/3000’s user interface AND the DeskLink HPDesk gateway).

To simplify incoming addressing if you like, you can configure one (or more) host names for inbound HPDesk user’s mail, and another name (or several names) for inbound mail bound for NetMail/3000 users (if you have the NetMail/3000 user interface AND the DeskLink HPDesk gateway option). If you have only the DeskLink HPDesk FSC standalone package, your configuration may be simpler if you used the same name here as your “ALT-HOSTNAME” or NS node name.

Note that even though you define a host name here, you can also create other aliases which will accept HPDesk users’ mail in the KNOWN-HOSTS screen, using whatever name you choose, but specifying an address of all 0s (zeros) and a network of “HPDESK”. Any inbound mail for a system name which has a the zero address and “HPDESK” network values will be treated as mail bound for HPDesk, and will be passed directly through. The only exception here is that if the name on an inbound message exactly matches the name of a NetMail/3000 recipient (ONLY IF you have the NetMail/3000 user interface) then that message will be delivered to the NetMail/3000 recipient and not passed on into HPDesk.

Item: **NETWORK DESCRIPTION**

Description:

This is a comment which describes the purpose of this interface.

Default Value: DeskLink<->HPDesk interface

Example:

Network Description: **DeskLink<->HPDesk interface**

Special Considerations:

None.

Item: **GATEWAY INPUT FILENAME**

Description:

The name of the filename into which messages are imported from HPDesk. This is the filename as defined in HPDesk's mailconfig utility (as related to the FSC gateway). The filename should be left at the default (netmail.netmail.hpooffice) unless you have VERY good reason to change it.

Default Value: NETMAIL.NETMAIL.HPOFFICE

Example:

Gateway Input Filename: **NETMAIL.NETMAIL.HPOFFICE**

Special Considerations:

This filename COULD be changed in order to work with other mail systems (besides HPDesk), but these are not currently supported.

Item: **GATEWAY OUTPUT FILENAME**

Description:

This is the name of the file which the DeskLink processes write to in order to submit a message to HPDesk to be processed. Since the DeskLink HPDesk gateway utilizes HPDesk's ARPA-Reference format FSC interface, this filename must be AREFIPC.MAILDB.HPOFFICE and should not be changed.

Default Value:AREFIPC.MAILDB.HPOFFICE

Example:

Gateway Output Filename: **AREFIPC.MAILDB.HPOFFICE**

Special Considerations:

It is possible to use another filename to communicate with other mail systems - beside HPDesk, but these are currently not supported.

Item: **DEFAULT ENCODING**

Description:

This specifies the means of encoding that the gateway will use on binary (non text) message parts on HPDesk messages leaving the HP3000. By default, any outgoing message with parts that aren't plain text will be encoded (translated for transfer over the network) using the MIME Internet standard, an encoding method called "BASE64". This is the most reliable and flexible encoding method available for electronic mail.

However, there are cases where some important systems with which you communicate have mail systems that don't yet support MIME's BASE64 encoding. If this is the case, you can change the default encoding to the old Unix style encoding called "UUENCODE" (using a "U" value in the field), or even to the pseudo-standard used by some old (mostly Macintosh based mail systems) called "BINHEX".

Incoming mail messages with attachments encoded in ANY of the three formats are automatically decoded and translated before they reach the HPDesk user, so incoming messages are not a problem - all the Desk user sees is the binary (whatever type) message attachment, ready to use.

Default Value: M

Example:

Default Encoding: **U**

-or-

Default Encoding: **M**

-or-

Default Encoding: **B**

Special Considerations:

Note: we advise that you keep the default MIME encoding method (BASE64) whenever possible, as the other two methods of encoding are not as robust, and not official standards, and thus you are likely to find implementations of both UUENCODE and BINHEX which will not be compatible with others.

Item: **OUTGOING ADDRESS FORMAT**

Description:

The HPDesk gateway automatically formats the HPDesk mailbox name into a format

acceptable to the Internet mail system. This is done by extracting the mailbox name (changing any imbedded spaces to “_”s - underscores) and appending the computer (host) name after an “@” (at sign). In many cases this is all that is required. Usually in organizations with only one HPDesk location, or organizations where mailbox names are unique even if there are different locations, then mail addressed in this manner will be delivered correctly. In other cases (multiple locations and the same name may exist in different locations) then the gateway needs to form Internet addresses with the mailbox name PLUS the HPDesk location (and possibly also the sublocation). As the administrator, you can decide how you want (or need) to have the addresses formatted.

Option 1 creates an address simply consisting of the user’s mailbox (HPDesk) name, replacing spaces with underscores (“_”).

Option 2 creates an address consisting of the mailbox name followed by a “/” (slash) and then the HPDesk location, again replacing spaces in the name with underscores (“_”).

Option 3 creates an address composed of the HPDesk mail name, a slash (/), the HPDesk location, another slash, then the HPDesk sublocation, with spaces replaced by underscores.

Option 4 creates an address simply consisting of the user’s mailbox (HPDesk) name, replacing spaces with periods (“.”).

Option 5 creates an address consisting of the mailbox name followed by a “/” (slash) and then the HPDesk location, again replacing spaces in the name with periods (“.”).

Option 6 creates an address composed of the HPDesk mail name, a slash (/), the HPDesk location, another slash, then the HPDesk sublocation, with spaces replaced by periods.

Default Value: 3

Example:

Outgoing Address Format: **1**

-or-

Outgoing Address Format: **3**

Special Considerations:

Some odd (usually old) mail systems might have trouble parsing mail addresses with “/”s in them, so to be the most universally compatible and keep your mailbox names looking more “Internet like”, you’ll be better off choosing option 1 (the more Internet “looking” format), though if your organization uses multiple locations where the same name is likely to be encountered in more than one location, you must choose one of the other options or end up with undeliverable mail as Desk won’t be able to resolve the intended recipient if there are multiple people with the same name in different locations (and the location or sublocation isn’t included in the address).

Item: **DESK LOCATION**

Description:

Enter the HPDesk location which you used when you configured the DeskLink gateway in HPDesk (mailconfig).

Default Value: NTMAIL

Example:

Desk Location: **NTMAIL**

Special Considerations:

None.

Item: **PLACE HEADERS IN DESK MESSAGES**

Description:

Since some Internet mail headers (especially routing/distribution information) only appear in the ARPA HEADERS part of an HPDesk message, some users may prefer to have some of this information copied into the body of the message as well. If specified here, messages sent to HPDesk will have the To:, Cc:, From:, and Subject: header lines copied into the body of HPDesk messages. This list of headers is site-configurable; the mail administrator can edit this list by editing the file "DESKHEAD.DATA.THREEK". This file contains an easily modified list of headers that will be copied into messages, and can be easily modified to suit individual site preferences.

Default Value: N

Example:

Place headers in Desk Messages: **Y**

Special Considerations:

None.

Directory Synchronization

NetMail/3000 supports mail system directory synchronization across systems (running NetMail/3000 Unlimited mailbox systems). To do this, NetMail/3000 utilizes a defacto standard called “ADE”, automatic directory exchange format, as used by Lotus in their cc:Mail product (among others).

Note; directory synchronization is not available with the HPDesk directory (via the DeskLink gateway). Directory synchronization is only available for systems using the NetMail/3000 user interface.

Directory synchronization is the process by which mail users added to or changed in remote mail systems are also processed on the local system. This has an advantage for local users within an organization in that they can easily search for mailbox names within an entire organization on their local system, even though the organization’s users may be split among several (or several hundred) different systems. By synchronizing directories automatically, NetMail/3000 helps to insure that organizational changes are reflected in the mail system accurately and rapidly.

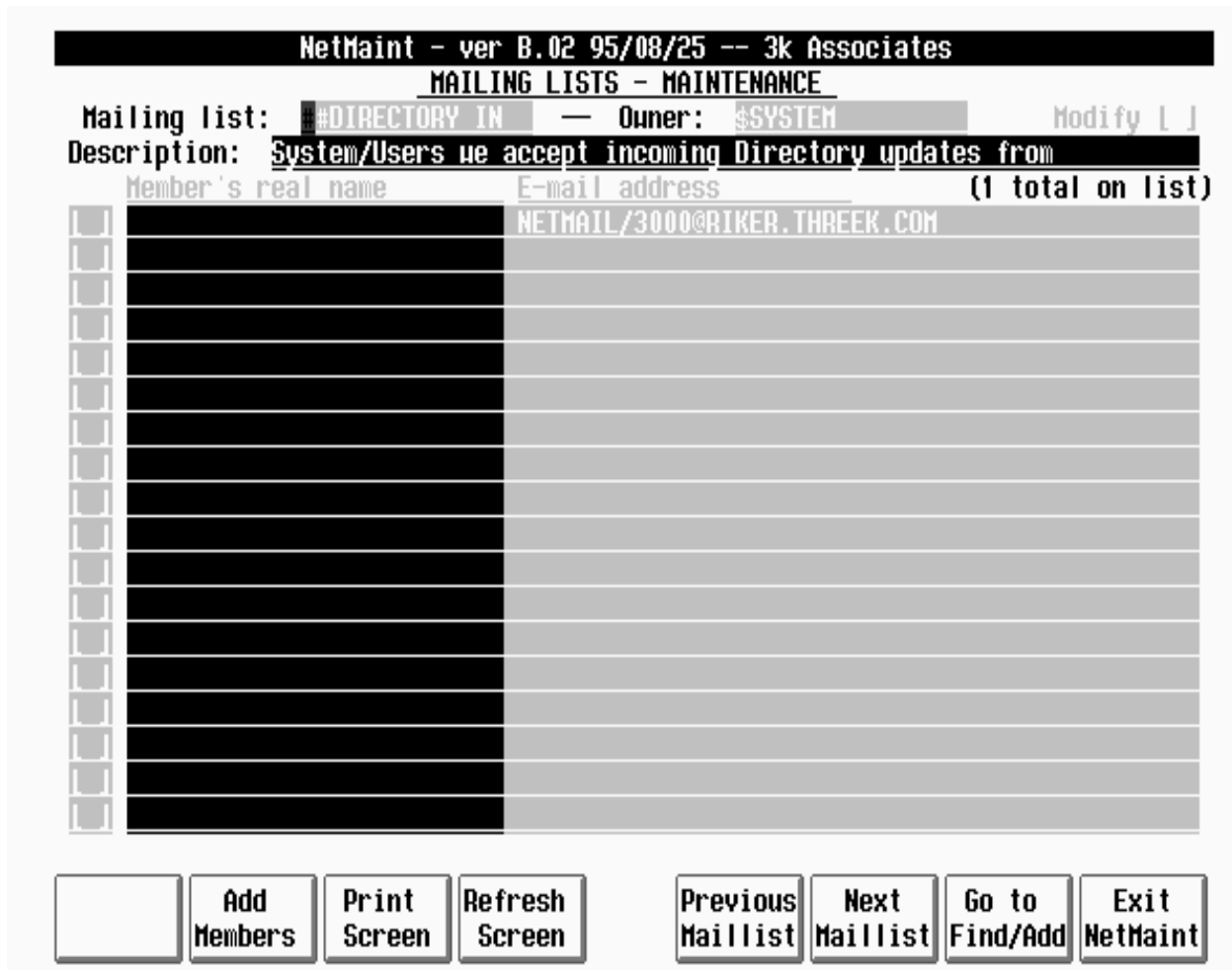
Directory synchronization must be set up by the local mail system administrator, and involves the creation of two mailing lists and a special local mailbox, as well as the scheduling of the directory extraction and directory update batch jobs. (In a later release, this will be done in real-time without the need to schedule any batch jobs.)

NetMail/3000 directory synchronization works in two directions -- each system can both send out updates as well as elect to receive updates from other systems. Incoming updates from other systems are received in a special mailbox which is created for you by the NetMail/3000 installation job. This mailbox is named “##DIRECTORY UPD”, and resides on every system that may receive directory updates from any other system. This mailbox routes incoming mail messages into a message file (also built in the installation process). Messages are actually directory update transactions, and will queue up in the message file until the file fills up or until the local directory update batch job is executed to empty the file. DO NOT delete this mailbox if you want mail directory synchronization to be available.

NetMail/3000 directory synchronization performs new user additions, and changes to already existing users. NetMail/3000 also keeps track of the system that originally added a user to insure that another system cannot make changes to a user that “belongs” to a local system.

Incoming and outgoing directory updates are controlled by two special mailing lists, ##DIRECTORY IN, and ##DIRECTORY OUT. The ##DIRECTORY IN mailing list is not currently used, but will contain a list of the system and mailbox names that your system will accept directory updates from. This is not currently used, but it is best to set this up as it will be implemented in a future release. When you call the mailing list up in the MAIL-LIST maintenance screen, each line will list a mailbox and system name from which your system will accept updates. (All mailbox names should normally be “postmaster@hostname”, where “hostname” is the system’s name that the updates are coming from. The owner should always be “\$SYSTEM”.

For example:

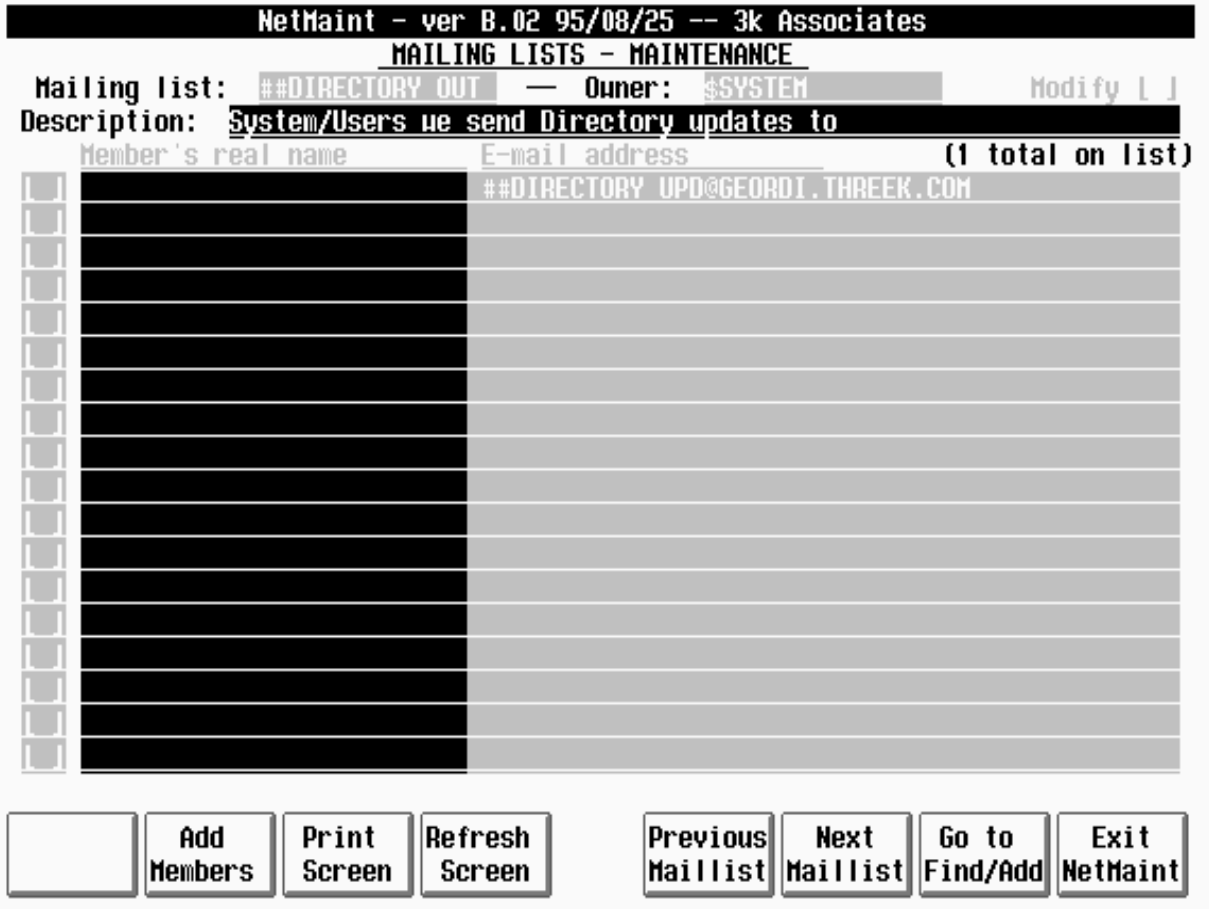


In addition, a separate mailing list maintains the names of the mailboxes and systems which this system will send its updates out to. The ##DIRECTORY OUT mailing list maintains a list of those system and mailboxes that will get copies of the user updates generated on this system. Again, this mailing list is owned by "\$SYSTEM". All remote mailbox ids are "##DIRECTORY UPD", the mailbox we discussed earlier.

For example:

To process the mail updates queued in the local message file, stream the (provided) batch job "MAILUPD.JOB.THREEK". This job will process all the transactions in the message file and add or change the relevant mail users.

To extract your mail system directory (and export it automatically to all the remote system you listed on the ##DIRECTORY OUT mailing list), stream the batch job "MAILUPD.JOB.THREEK". This can be run at any time, though it does do a complete "extract" of the mail directory which is mailed to the systems on the list -- this extract can be lengthy and may



have an impact on the throughput of the rest of the mail system as it processes and transfers this file.

TRANSACTION FORMATS

For those sites interested in the internal format of the transactions in ADE (useful in cases where a local site may wish to synchronize or load the NetMail/3000 directory from other sources) we include the format for the ADE transaction files below. The program that reads the ADE transaction file and updates the NetMail/3000 database is MAILUPD.PUB.THREEK. The job stream file MAILUPD.JOB.THREEK runs the program, reading transactions from the file "MAILDIR.NETMAIL.THREEK" which is created by mail messages sent to the mailbox "##DIRECTORY UPD", which has it's mail redirected to this file. This file is a message file, but the input file for the MAILUPD.PUB.THREEK program need not be a message file.

The job stream "MAILDUMP.JOB.THREEK" runs the "MAILDUMP.PUB.THREEK" program which creates an ADE format transaction file; the job then "mails" this transaction file to the mailing list "##DIRECTORY OUT", which in turn distributes the transactions to all the systems designated to receive directory update information from this system. You can run the MAIL-DUMP program separately to generate an ADE transaction file for testing purposes if you wish.

Managing the Mail System

ADE transactions as accepted by NetMail/3000 are formatted into ASCII fixed size record files (of 80 bytes per record). A single transaction may span several lines, and transactions are delimited by a blank record. A transaction may be made up of several lines, each line begins with a field identifier (4 bytes long), followed immediately by a colon (:) and a space, then followed by a field value (which varies by field). Records containing invalid field names are ignored. Each transaction must have a key value, the "NAME:" record, without which the transaction cannot be processed. The "NAME:" record identifies the mailbox name which is to be acted upon (added, deleted, or modified). By default, a transaction is assumed to be an "ADD" mailbox transaction unless 1) the mailbox already exists, in which case it becomes an "UPDATE" transaction by default or 2) a "LOCN: D" record is present making it a "DELETE" mailbox transaction. The "NAME:" field follows NetMail/3000's format of being no more than 16 bytes long. All other records are optional, and are described below. Optional values that are not provided will be set to the system default values.

MAILUPD (ADE) Record Formats

ADDR: Node/System Name of user (56 bytes)
ADR1: Postal address line 1 of 3 (40 bytes)
ADR2: Postal address line 2 of 3 (40 bytes)
ADR3: Postal address line 3 of 3 (40 bytes)
CHNG: Mailbox name (to change/update to) (16 bytes)
DEPT: Department (20 bytes)
DOMN: User's DOMAIN.ORGANIZATION if not default (56 bytes)
HOLD: User's designated holding node/system for POP mail (56 bytes)
HOME: User's HOME node/system for e-mail (56 bytes)
IDNO: User's ID number (10 bytes)
LOCN: a transaction type code =
 'D' code to delete a mailbox
 'L' means this is a remote user- set his home-node=<addr>
 no LOCN present means this system is his home
NAME: Mailbox name
PHON: User's phone number (24 bytes)
PRNT: User's designated printer (64 bytes)
RNAM: User's real name (26 bytes)

Example of a transaction to ADD a mailbox:

NAME: JOESMITH
ADDR: admin1.acmecorp.com
ADR1: PO Box 1234
ADR2: Anytown, MD USA
DEPT: Personnel
LOCN: L
HOLD: admin1.acmecorp.com
PRNT: \$LOCAL

RNAM: Joe Q Smith

Example of a transaction to DELETE a mailbox:

NAME: JOHNSMITH

LOCN: D

An example of an update (assuming JOESMITH was just added above)

NAME: JOESMITH

DEPT: Purchasing

PRNT: LPADMIN,13,1

An example of a transaction to rename a mailbox:

NAME: JOESMITH

CHNG: JSMITH

Mailsystem Maintenance

NetMail/3000 has a special check for a maintenance file so the mail administrator can prevent new users from running the NetMail/3000 user interface (NETMAIL.SYS.THREEK). The user interface checks for the existence of the file "LOCKOUT.PUB.THREEK", and if FOUND, will not allow any user to start the NetMail/3000 program.

The format or type of this file does not matter; the mail administrator merely needs to log on under the THREEK account and:

```
:BUILD LOCKOUT.PUB
```

Once you wish to allow users back into the program, simply:

```
:PURGE LOCKOUT.PUB.THREEK
```

Any user attempting to run the program while the "lockout" is in effect, will get a message from NetMail/3000 telling them that the mail system is "locked" and to consult the mail system administrator

Message Logging

NetMail/3000 can maintain “log” files - records of the messages that passed through the mail system (incoming and outgoing). If you wish to enable this feature, you must manually build the logfiles. To do so, log into the group and account where your background job logs in (for NetMail/3000 users without HPDesk this is the NETMAIL.THREEK group; for users with HPDesk this will be the NETMAIL.HPOFFICE group), then execute;

:BUILD smtpoulg.netmail;rec=-512,,v,ascii;disc=100000,32;cir

(this file logs OUTGOING SMTP messages - messages leaving the system)

:BUILD smtpinlg.netmail;rec=-512,,v,ascii;disc=100000,32;cir

(this file logs INCOMING SMTP messages - messages coming into this system from another system)

:BUILD deskoulg.netmail;rec=-512,,v,ascii;disc=100000,32;cir

(this file logs OUTGOING HPDesk messages - messages leaving HPDesk)

:BUILD deskinlg.netmail;rec=-512,,v,ascii;disc=100000,32;cir

(this file logs INCOMING HPDesk messages - messages leaving HPDesk)

You can adjust the EOF's to your own preference (the DISC= number). There are four separate files, and you are free to build whichever files you want to utilize - you don't HAVE to build all four, or even any of them (unless you want to log messages).

Another statistical feature you may want to utilize is the ability to keep statistics on individual computer systems - the number of messages going to and coming from a system, as well as the total bytes transferred in each direction and the last time that system was communicated with.

These statistics are automatically kept for any system entered in the “KNOWN HOSTS” screen in the NetMaint program. NOTE: For systems which you do not want to enter a static IP address for but would like to keep statistics on anyway, you can enter the hostname and use a special address-network combination; enter “255.255.255.255” for the IP Address and “255255255” for the network - the other fields on the screen don't matter. This address-network combination is a special code that tells NetMail/3000's transport to keep statistics for this hostname, but still use the regular DNS (nameserver) or NS lookup methods to find the systems' address.

In addition, an “error log” file can be created which logs various mail system errors including:

- * Inbound mail to an invalid or non-existent mailbox
- * Inbound mail refused because it's source was in the “refuse” (spam filter) file
- * Inbound mail refused because an HPDesk address was specified but it wasn't unique enough

To track these errors, build an errorlog file in the group where the background job runs:

:BUILD errorlog.netmail;REC=-256,,f,ascii;disc=5000;CIR

Managing the Mail System

Be sure to build this file in the HPOFFICE account if you use the DeskLink product, otherwise build it in the THREEK account. This file is built as a circular file so it can be viewed easily with a :PRINT command at any time; you can use any limit (disc=) value you wish, depending on the amount of historical data you wish to keep.

We strongly advise that you monitor this file regularly, as it can indicate patterns of addressing problems as well as information on spam sites or hackers that may be targeting you.

Remote Access Restrictions

NetMail/3000 and DeskLink have a built-in facility to prevent direct access to any server (TCP/IP) process should you need it. There are times when it might be desirable to restrict access to your machine to a specific subset of systems, or simply disable connections from a pesky remote system - perhaps a site known for “spamming” (sending annoying unsolicited mail messages). “Spamming” used to be a minor annoyance on the Internet, but today has spawned many commercial organizations who do nothing but send out unsolicited e-mail messages - mostly to addresses they have found somewhere (old postings to news groups, commercial listing services, or pirated directories for commercial organizations). These junk messages range from “get rich quick” schemes to ads for pornography. Most business organizations would choose not to “foot the bill” for using their network bandwidth and messaging resources to have their mail users bombarded by unsolicited and generally non-business related message ads. To protect your network resources and users productivity, we provide you with several means of isolating your system from these pests.

To restrict any network connections from specified system(s), build the following file in the THREEK account:

```
:BUILD EXCLUDES.DATA;REC=-80,,F,ASCII
```

You can then use any file editor to add lines to the file to exclude or include specific sets of IP addresses from accessing your system. For example, to disallow access from a specific system you could enter a line like the following:

```
-192.192.000.001
```

Note that every octet (set of digits between the periods) must be three digits long, filled with leading zeros if necessary. You can enter as many exclusion lines as desired. Any systems not specifically excluded are allowed access. You can specify subsets (networks) by leaving off the trailing digits; for example:

```
-192.
```

would exclude connections from any machine whose network address started with a “192.”. A “-” on a line by itself matches all entries. The file:

```
+192.001.001.
```

```
-
```

would allow connections from any machine whose address started with “192.001.001” but exclude all others.

Note that while we can restrict connections from specific machines, clever mailers might be able to still get mail to you by routing their mail through another machine you do allow access from. Unless all mail systems you communicate with are under your control and enforce the same

restrictions then the exclusions here are not foolproof and should not be depended on as a critical part of your site security.

Still another option in preventing “spam” mailers to reach your users is to build a file called “REFUSE.DATA.THREEK”.

```
:BUILD REFUSE.DATA;REC=-80,,F,ASCII
```

You can use EDITOR.PUB.SYS or any other text editor to create and edit this file. Within the file, you can specify specific mail addresses (i.e. “From:” addresses) which you desire to prevent reaching your mail users. More flexible than the excludes file method mentioned earlier, this file can weed out known “spam house” addresses, no matter what host they come from. This method has a considerable benefit over other filtering methods in that mail attempting to reach your system will never even be accepted if it is identified as coming from an address on your “refuse” list; that is the body of the message never reaches your system - meaning it also never (even for a short time) takes up disc space, nor does it use up network bandwidth getting to your system. Additionally, these messages are refused at such a point that your system does not have to deal with returning these messages as “undeliverable” messages (a noticeable advantage since spammers often forge false or unreachable return e-mail addresses anyway). Instead, the *SPAMMERS* mail system must deal with it’s failure to deliver the message - not your system.

The format of the file is simple; each record contains a string which is matched against the incoming “MAIL FROM” address (sent by the remote SMTP mail system). Names are not case sensitive, but must match exactly or have wildcards at the start or end of the string. For example, the following record

```
joesmith@spammers-r-us.com
```

will cause any mail message coming from this address to be refused. Useful for specific mailboxes, but many spamming operations may use any mailbox name within their domain, so a record like:

```
*spammers-r-us.com
```

will refuse to accept any mail message from an address that ends with “spammers-r-us.com”. This would match any of the following examples:

```
joesmith@spammers-r-us.com  
joe@spammers-r-us.com  
someone@host2.spammers-r-us.com
```

NetMail/3000 and DeskLink both ship with a default REFUSE file initialized with addresses of many known spamming organizations. You are free to keep this file, add to it, modify it, or delete it as you wish.

Finally, individual users may also want to create custom “rules” or message filters to deal

with unwanted messages. For details on these options, consult the users manual section on message rules.

About the MailMan Job

NetMail/3000 requires a background job at all times which processes incoming and outgoing mail traffic from the system it is on, as well as managing all mailing lists and other forwarded mail.

The job is provided in the JOB group of the THREEK account, and is called "NET-MAIL.JOB.THREEK". As the installation process assigns random passwords to the users and groups in the account, you may need to copy the job to a secure group and insert the proper passwords in the job card line.

The "NETMAIL" job is simply:

```
!JOB NetMail,MAILMAN.THREEK;RESTART;OUTCLASS=LP,1
!COMMENT **The following JCW is only used if you are also running
!COMMENT **our gopher server product. If not, then the JCW is
!COMMENT **meaningless
!COMMENT
!COMMENT The following jcw determines if console messages will be sent
!COMMENT to the console every time someone connects and retrieves a
!COMMENT document from the server. When gophertell=0 no messages are
!COMMENT sent. When gophertell=1 then messages are sent.
!COMMENT
!SETJCW GOPHERTELL=0
!COMMENT
!COMMENT The ENABLEFTP jcw determines whether you want the ftp server
!COMMENT to be enabled (if you are already using the HP Ftp server then
!COMMENT you want this disabled - set it to 0). If you want to enable
!COMMENT the Office Extend FTP Server, then set ENABLEFTP=<some number
!COMMENT greater than 0>. If >0 then this determines the number of ftp
!COMMENT server processes which are pre-launched (queued).
!COMMENT
!SETJCW ENABLEFTP=0
!COMMENT
!COMMENT The ARPAQUEUE jcw determines the priority the background
!COMMENT processes execute in. 0=CS, 1=DS, 2=ES
!COMMENT The default (CS) should be used unless you have specially
!COMMENT modified another queue to give even better response time
!COMMENT
!SETJCW ARPAQUEUE=0
```

Managing the Mail System

```
!COMMENT
!COMMENT GETDNSHOSTNAME determines whether the mailjob looks up the
!COMMENT calling machine's hostname (and prints it in the $stdlist)
!COMMENT -can only be used on MPE/iX 5.0 (or later) systems
!COMMENT -also only on systems with DNS in use, and for Internet
!COMMENT connected systems, only if the HP 3000 has full DNS access
!COMMENT to the Internet (i.e. not limited DNS behind a firewall)
!COMMENT set to '1' to perform lookups; '0' to skip lookups
!COMMENT
!SETJCW GETDNSHOSTNAME=0
!COMMENT
!COMMENT The following file equation tells NetMail where to send its
!COMMENT mail cleanup report (only applicable to NetMail and POP
!COMMENT mailboxes - not Desk)
!COMMENT
!FILE JANITOR;DEV=LP,1
!COMMENT
!COMMENT The following jcw (SEPARATESTDLISTS) will cause this job to
!COMMENT maintain separate stdlist spoolfiles for all the major
!COMMENT processes created under this job if set to 1. If not present
!COMMENT or =0, then all process messages go to this single stdlist.
!COMMENT
!SETJCW SEPARATESTDLISTS=1
!RUN ARPA.SYS.THREEK
!EOJ
```

For DeskLink HPDesk FSC Gateway systems, the job card will be different (the logon will be as NETMAIL.HPOFFICE) though the contents of the job are the same, with the following additions:

```
!COMMENT
!COMMENT DESKLINKVERIFY should be set to '1' if you want DeskLink to
!COMMENT verify Hpdesk addresses for incoming mail (i.e. it will then
!COMMENT automatically bounce inbound messages for invalid mailboxes
!COMMENT instead of letting them just fall into the General Delivery
!COMMENT mailbox.
!COMMENT
!SETJCW DESKLINKVERIFY=0
```

and

```
!COMMENT
!COMMENT The following JCW determines whether To/Cc headers copied into
!COMMENT HPDesk message bodies (if the flag is set in netmaint) will be
!COMMENT reformatted so recipients will be listed ONE per line
!COMMENT If '0' (or not present) then the headers are left as they are
!COMMENT created. If '1', then they are reformatted.
!COMMENT
!SETJCW DESKREFORMATRECIPS=0
```

and

```
!COMMENT
!COMMENT The following jcw determines whether DeskLink will use the
!COMMENT shortened format for inbound e-mail (Sender) addresses when
!COMMENT possible. This format is limited to 32 character e-mail
!COMMENT addresses (longer addresses will automatically be formatted
!COMMENT the old -extended- way). Shortened addresses mean two things
!COMMENT for HPDesk users;
!COMMENT 1) the sender looks like "NTMAIL(user@hostname)" in the
!COMMENT message display in HPDesk - as opposed to the other format
!COMMENT which takes the user's name from the comment area of their
!COMMENT address, converts spaces to "-"s and looks something like:
!COMMENT "USER-HOSTNAME/NTMAIL(*)"
!COMMENT 2) if an HPDesk mailbox is autoforwarded out via the DeskLink
!COMMENT gateway, HPDesk trashes the longer (extended) addresses,
!COMMENT making the messages received in the destination mailbox
!COMMENT un-replyable. The shortened format will get around this --
!COMMENT at least for addresses less than 32 characters. [HP is
!COMMENT working on a permanent fix to the autoforward-extended-
!COMMENT address problem]
!COMMENT Set the jcw to '1' to use short addresses where possible;
!COMMENT '0' means always use the extended address format.
!COMMENT
!SETJCW DESKUSESHORTADDR=0
```

Note that there are several JCW (job control words) in the job stream which can be user-modified. The first has effect only if you are also running 3k Associates' Gopher Server product; the GOPHERTELL jcw is a flag that determines whether console messages are generated when gopher clients request data from the server (HP3000). If enabled (set to "1") then console messages will be generated every time someone requests something from the server, indicating who requested it (the IP address of the source computer) and the item requested.

The ENABLEFTP job control word only applies to sites which also have the Office Extend FTP Server product licensed. This number determines the number of ftp server processes which are pre-launched.

The job control word ARPAQUEUE determines the priority the background processes execute in. This should be set to the default (CS) queue to ensure adequate response time to remote clients. The background processes MUST have adequate CPU available to serve the incoming requests of remote systems or mail delivery will be adversely impacted. If your system does have CPU queues realigned such that there is another queue which would offer better response time overall than the CS queue, then the jcw can be changed to utilize that queue. (Note that the main process - ARPA.SYS.THREEK - sets its priority itself, and is not dependent on the priority set on the job card.)

The GETDNSHOSTNAME job control word determines whether you want the host names of connecting systems reported in the mailman job's \$STDLIST. All incoming network connections are always reported in the \$STDLIST, telling you the originating IP address, the service requested, and the date and time of the request. If you have a DNS (domain name server) setup and the RESLVCNF.NET.SYS file is set up then you can turn on the reporting of the NAMES of the systems that connect to your system - that is in addition to the other information reported, the hostname registered for the IP address making the connection will also be listed in the \$STDLIST.

For NetMail/3000 users with automatic mail aging enabled, the report output from the JANITOR program can be routed to any printer you desire. The JANITOR program is the process that runs (based on the schedule you define in NETMAINT) which actually scans the database for obsolete messages and deletes them. The messages deleted are reported to the "JANITOR" output file. You can also set this to \$NULL if you never want to see the reports.

The SEPARATESTDLISTS job control word, if set to '1', causes all the sub processes of the NetMail job to be run with separate \$STDLIST spool files. Normally this isn't necessary, but it is useful to help determine where some messages reported in the \$STDLIST are actually coming from. The default condition is to use separate \$STDLIST files, though you can change this setting to '0' and all process messages will be printed in the same \$STDLIST file.

For DeskLink users, the additional JCWs are "DESKLINKVERIFY", "DESKREFORMATREIPCS", and "DESKUSESHORTADDR". These options allow you to control aspects of the DeskLink software's operation.

The DESKLINKVERIFY JCW allows DeskLink to interactively interrogate the HPDesk "global" database for recipient information whenever an incoming message is received. If enabled, then recipients are validated by the DeskLink job - if invalid they are refused and routed back to their senders. If this option is not enabled, all messages are passed into HPDesk and HPDesk must determine which recipients are valid - in this case messages to invalid recipients get deposited into the "General Delivery" mailbox in HPDesk.

The "DESKREFORMATRECIPS" JCW tells DeskLink to reformat To and Cc headers if they are copied into the HPDesk message (per the option in NetMaint). If reformatted, recipients will be listed one address per line; if not they will be passed through as they were received from the originating mail system (which varies in format depending on the system).

The DESKUSESHORTADDR JCW tells DeskLink to use the shorter internal address are for incoming foreign addresses when possible. By default (if this option is off - or '0') then all addresses sent into Desk use an internal area called the "extended foreign address" area in HPDesk. This area supports foreign mail addresses up to 255 characters long, but due to a known bug in HPDesk, an HPDesk mailbox with "AUTOFORWARDING" enabled will corrupt the "sender" or "from" address of any message autoforwarded through that mailbox *IF* the message came into HPDesk from an FSC gateway (like DeskLink uses). This results in the user receiving mail messages in his other mailbox with invalid or unreplyable return addresses. As a temporary workaround to this problem, you can set the DESKUSESHORTADDR option on. This causes incoming addresses which are less than 32 characters long to use a non-extended format (internally) resulting in replyable addresses in the final mailbox. This option cannot do anything for addresses longer than 32 characters long (they still must use the extended format and thus get corrupted when autoforwarded). Also, return addresses displayed in HPDesk "look" somewhat different when using this format (they actually show the "foreign" email address in HPDesk vs. the other method which only shows an "(*)" - but to which we prepend an approximation of the senders real name). Once (or if) the autoforward bug is fixed by HP this option will not be necessary, though some sites may prefer the different address format.

The mailman job should be running at all times if there may be mail coming into the system or being processed. Keep in mind that in many network environments, many systems defer low priority mail delivery until after normal working hours so it is important that the mailman job run all the time in these environments. Also, **DeskLink users need to be aware that if the DESKLINKVERIFY option is enabled, that the mailman job will keep the HPDesk global database open whenever it is running -- this may affect HPDesk mailmaint processes.**

The mailman job and related processes are designed to minimize the impact on system performance. Aside from a regular 'heartbeat' that checks the mail database status, all other actions are interrupt-driven, so that all mail processes are 'asleep' until awakened by the initiation of a mail transaction by some mail user, or a connection request from a remote system.

As the mailman job does keep the mail database open while it is running, you may wish to shut the job down during system backups. If you have NS/3000 installed on the system and have network links, the mailman job will also keep the links open (in case your backup procedures shut down the network links). A :NETCONTROL STOP will cause the mailman job to terminate, so if your backup procedure does shut down the network, it will cause the mailman job to log off (though it is preferable to use the SHUTDOWN program).

The MAILMAN job runs the ARPA program. This is the main process that answers all supported ARPA sockets (including mail and POP client requests) and also launches the NetMail/3000 database monitoring process.

NOTE

An important note for users with a network link: for

the background job to operate properly, you must have a “LOOPBACK” network interface configured. NetMail/3000 uses the “LOOPBACK” service to shut down its network drivers (when you run the SHUTDOWN.SYS.THREEK program). If it is not configured, the job will not shut down (it would have to be aborted, which while usually safe, may interrupt any mail processing in progress).

To configure a “LOOPBACK” interface, consult your (HP) NMMGR reference manual.

Example Configurations

Here we will describe a few example mail system configurations to aid you in making some of the decisions necessary in setting up and maintaining an electronic mail system. We'll first describe a scenario involving hardware and perhaps management decisions, and then proceed to describe some of the special functions in NetMail/3000 or DeskLink which can help you achieve such a setup, as well as some special circumstances and settings you should watch out for. These examples are not meant to be all-inclusive, merely a guideline in helping you make decisions about the kind of environment you want for your mail system, and some helpful pointers for items that might aid you in getting there.

Configuration 1 - The Isolated HP3000

Many sites opt for a network setup such that your HP3000 system(s) are not accessible to the "world." This is especially common with sites that have Internet connections on their networks, as well as with large sites that simply have many users in areas perhaps not under the control of the people responsible for the HP3000s. In such cases, the HP3000 is often "isolated" on the network; it is purposely configured such that only limited users (or other machines) can access it, and if access such as electronic mail is to be allowed, it usually is set up such that all electronic mail traffic is "routed" through a neighboring machine which acts as a clearinghouse for such traffic, then forwards it on to the HP3000.

In setting up such a configuration, there are a few points you need to address.

- 1) You want the HP3000 to be able to "talk" to the neighbor system, but not other systems.
- 2) You want incoming electronic mail to be "routed" through the neighbor machine.
- 3) You want outgoing messages from the HP3000 to have "return addresses" such that replies will also get routed to the neighbor machine.
- 4) You want to make sure that the HP3000 doesn't know (and can't resolve) the IP addresses for other systems it shouldn't be able to talk to - otherwise it will assume it **can** reach those systems and mail destined to those systems will not be deliverable. Also, if your HP3000 can't talk to other systems, they can't reach it either (even if they DO know how to get to your system).

HOW TO DO THIS

To ensure that your HP3000 can talk to your "neighbor" but not other systems, for the most part there are items that you just need to make sure you DON'T do. By default, your HP3000 can't get far beyond systems on the same local lan segment its on. Any HP3000 can use PROBE or PROBE PROXY protocols to find other HP systems (and some other brands) on the same lan segment (or "bridged" segments), so your best bet is to have a "router" between your local segment and the segment or segments that have ties to the outside world. A router will help

because 1) PROBES won't go out through a router, and 2) most routers have even higher security capabilities built into them.

If your router has the capability and you want to ensure VERY TIGHT security (i.e. only e-mail access to the outside world) you might try restricting your router to only allow TCP/IP traffic through that uses "PORT" (or "SERVICE") number "25" (twenty-five decimal). This is the TCP/IP port used (exclusively for Internet compatible electronic mail - SMTP).

If nothing else, on your HP3000, do NOT configure a "default" route or "default gateway" in NMMGR. (This is defined as a neighbor system with a reachable nodes list of "@" on MPE/iX 4.0 or later, or with a pair of odd-looking A.000.000.000.001 addresses (an undocumented hack) on MPE/V). If you don't have this defined, then no machine with a network part of its IP address that's different from your HP3000s (like some remote network) can be reached from your HP3000; likewise, they can't get to you since your system couldn't respond to any inbound packet.

Additionally, there's no point in defining pointers to a nameserver on your HP3000 (as defined in HP's Network Planning and Configuration Guide). Note that this is the nameserver entries defined in files in the NET.SYS group on your machine as well as the nameserver information in Netmaint. Since your system couldn't make network connections to them anyway (if you didn't define the default route), configuring a nameserver would only waste time as your system would assume that since it knows the address, it should be able to reach the systems directly (it will try and retry to do so, since the software can't distinguish that the "network unreachable" error it gets is a permanent condition instead of just a temporary line outage).

Per part 1, ideally your "trusted gateway" should be on the same segment as your HP3000, though it doesn't have to be. If it is, and it responds to PROBES, you should be able to talk to it without further trouble. (Make sure you have "ETHERNET ENABLED" in your NMMGR configuration if the machine isn't an HP system though.)

If the trusted gateway is behind a router, then you may need to add a "gateway" entry in your NMMGR configuration specifying the IP address of the router, and the IP address of your "trusted gateway" system as the "reachable node(s)" list. Fully qualify the address so ONLY that system is reachable through that gateway(router). Now your HP3000 ONLY knows how to reach that single remote system.

Part 2 above, routing electronic-mail through the neighbor machine is accomplished in NetMail/3000 in the Netmaint program by specifying a trusted gateway (the name of the system you want to route mail through), and further by specifying the option to "force all mail through the trusted gateway".

Part 3, return addresses can be directed to that machine by selecting either individual "domain.org" values for each user which are the name of the trusted gateway (or a name that corresponds to that machine), or more simply by specifying the name of the trusted gateway (or corresponding name) in the "HIDE HOSTNAME" field in Netmaint. This will cause every users return address to be <their local address>@<the hide-hostname value>.

Configuration 2 - Routing Mail Through A Unix System

If you're using a Unix system to route your mail through, then you should first read through the previous section, as many of those points apply. A Unix system can act as your trusted gateway, either entirely (if your HP3000 is too isolated/secured from the rest of the network), or in combination with your HP3000 if you wish to allow direct access to your HP3000. A Unix system can also act as your "gateway" to the rest of the world by translating mail between different protocols.

Unix systems have some inherent advantages in the electronic mail world. First and foremost, they come with (at least most commercial Unix systems do) the software to exchange electronic mail with SMTP as well as UUCP networks. While NetMail can perform nicely in the Internet world of SMTP mail transport, there are times when a link to the UUCP (Unix to Unix Copy Program/protocol) world can be invaluable. If for no other reason, then UUCP can be a cheap means to link your network to the Internet for electronic mail (if you don't have a direct TCP/IP link available, or can't afford one). UUCP is a batch-oriented file-transfer protocol that was adapted to transmit mail messages as well. It does NOT allow any interactive access to the network, which means two important things; 1) as a security measure it can ensure that hackers can not get to your network, and 2) since it is NOT interactive, none of the other nifty Internet tools you may be familiar with can use the link (like Telnet, Gopher, WAIS, WWW, Veronica, Archie, etc.) - basically it can transmit batch files for applications, e-mail, and the network news (nn) service if set up to do so. UUCP CAN be configured to allow sending of batch "job" type files, for executing commands and programs, but this is usually not advisable unless you really know the security ramifications and can deal with them.

Setting up your Unix system to gateway between SMTP and UUCP is beyond the scope of this manual, but it is commonly done. UUCP allows many options for the scheduling of sending and receiving mail, and with SMTP enabled, can both receive UUCP mail and send it to a NetMail/3000 system, as well as receive mail from a NetMail/3000 system and forward it out via UUCP to the outside world.

Depending on rest of your network, you can either set up NetMail/3000 to route ALL outbound mail through your Unix system (useful if your ONLY link to other systems is via UUCP), or let NetMail/3000 resolve and send whatever it can, letting mail for the systems NetMail/3000 doesn't know about go through the Unix system.

HOW TO DO THIS

Basically, in either case (above), you want to define your Unix system as the "trusted gateway" for NetMail/3000. Depending on whether you want the HP3000 to deliver local mail (mail to other systems it **can** reach) by itself, you could set the "Force all mail through trusted gateway" accordingly. If you have other systems that your HP3000 could deliver to, it might make sense to let it handle those itself (lessening the load on your Unix system).

On the Unix side, if you're using SMTP and UUCP, you would do well to become familiar with the mailer on the Unix system (on most Unix systems, this program is called "sendmail").

If you're using sendmail, then you may want to pick up the book on sendmail from O'Reilly & Associates, Inc., ISBN 1-56592-056-2. You can reach them at (800) 998-9938 or +1 707 829-0515), or on the Internet at order@ora.com.

Configuration 3 - A Fully Reachable HP3000

To set up your HP3000 to be fully reachable as a network node (you must have some sort of TCP/IP link to the network) there are two things you need to take care of on your HP3000 (outside of NetMail/3000 configuration).

The first thing you'll need is to set up pointers to a nameserver. This can only be done at the system level on MPE/iX systems running version 4.0 of MPE or later. Other systems need only configure the nameserver in NetMail/3000 (in this case NetMail/3000 will work fine, but any other TCP/IP applications on your system that need to reach arbitrary systems may have difficulty - it depends on the application).

The second thing you'll need to take care of is defining a "default route" to the network for all network numbers not already defined in your NMMGR configuration. This is a "pointer" to the router or system that interconnects your local network with the "larger" network (or the Internet).

HOW TO DO THIS

Setting up pointers to a nameserver on MPE/iX is defined in HP's manual "Network Planning and Configuration Guide" in Chapter 13. The setup is simple and painless; basically you copy a file in the NET.SYS group on your system, edit it to include the IP address of the nameserver you use, rename it to RESLVCNF.NET.SYS, and stop and restart your network services. For MPE/V sites and sites running versions prior to MPE/iX 4.0, merely define the name of the nameserver in your NetMail/3000 configuration (you may have to put its name and IP address in your NMMGR directory if the host running nameserver software doesn't support HP PROBE protocol).

Defining a default route is done in NMMGR on your HP3000. You need to define a "gateway" in NMMGR, with an IP address of the router or system that will forward IP traffic for you onto the network. For MPE/iX versions 4.0 and later, you define the "reachable nets" value as "@" for all networks (or at least all networks that aren't already defined in NMMGR with other gateways). For MPE/V and MPE/iX systems prior to 4.0, you'll need to add two entries to the "reachable nets" list, with masks for each. The addresses you use and network mask are a bit bizarre, and you should contact the HP Response Center, or 3k Associates technical support for assistance in setting them up.

Configuration 4 - Gateways to Other Mail Systems

It's not uncommon to try and "reach" the Internet by going through another system that will act as a "gateway" for you between your local mail system and the mail system you're trying to connect to. NetMail/3000 is unique among HP3000 products in that it already "speaks" the e-

Managing the Mail System

mail language of the Internet, or SMTP (Simple Mail Transport Protocol). SMTP is defined as **The** standard for electronic mail communications on the Internet (as well as many other networks). As such, if your network is logically connected (via a router or routing device) then you don't NEED to worry about gateways, at least as far as getting your HP3000 to talk to the Internet.

Now, if you have another local e-mail system which doesn't talk "SMTP", or if you're connecting to the Internet using the older "UUCP" dial-up protocol you'll need to know about e-mail gateways.

It's important to understand that a "gateway" in e-mail terms is a hardware and/or software system that communicates using more than one computer language (protocol) and can translate messages from one format to another. You need a "gateway" to communicate among systems using the different protocols, though you usually just need ONE gateway to handle a large number of computers using either protocol. For instance, you may have 5000 PCs all using cc:Mail, and 25 Unix systems using SMTP (or UUCP or whatever), but you would usually only require one gateway to handle the messages between all the machines (unless of course the volume of traffic was too much for the hardware you use for your gateway, in which case you may want more than one "gateway" to distribute the processing load).

FILE ATTACHMENTS

Another important issue you'll have to deal with when using gateways is just how binary message attachments are handled. NetMail/3000 is (by default) MIME compliant, which means it can send and receive any kind of binary attachment from any other MIME compliant mail system. What you may find however, is that some of the large commercial PC mail systems have not yet released MIME compliant gateways (though all are supposedly working on it). In these cases, the mailers may send binary attachments (if they can at all; most can) using another type of encoding; usually "uuencode"d or "BINHEX"ed. While this is not a problem for messages sent to NetMail/3000 users (NetMail/3000 can automatically detect and process message attachments in any of those formats - and a few others), attachments SENT by NetMail/3000 users may need to be encoded in the non-default means (accomplished by specifying a special encoding when the user names the file to be attached). One other item to be aware of; some SMTP gateways we have encountered limit the number of message attachments or total size of message attachments they will handle in a message. Since NetMail/3000 does not, it is possible to send a message to such a mail system that might get rejected, or worse yet, truncated if it has too many attachments for that mail gateway to handle. DeskLink users also need to be aware of these issues as the DeskLink configuration can only pick one encoding method per installation - you may have to choose based on the lowest common denominator in your network. The moral here is: check the specs on the gateway, and at least let your users know of any special limitations they need to be aware of.

UUCP

UUCP is a common means of linking to the Internet as well as to other isolated sites and among Unix systems. Even though it is an older and (sometimes) less efficient protocol, it does

have distinct advantages. UUCP is a batch-oriented protocol; it can accommodate a form of file transfer (not the FTP protocol though), can batch-transmit remote shell commands (if enabled - only among unix systems), and can transport electronic mail messages, but that's about it. None of the new glamorous Internet protocols like telnet, gopher, WWW, wais, veronica, FTP, SMTP, etc. Still, this can also be viewed as an advantage, depending on your viewpoint. Some sites don't want their users to have on-line Internet access for a variety of reasons, and more importantly, some sites want to be ABSOLUTELY sure that other sites can't telnet or FTP into THEIR network either.

So, if your Internet access link of choice (or requirement) is a UUCP link, you need a gateway. Since the Internet is SMTP based, and NetMail/3000 is SMTP based, you'll need a gateway between NetMail/3000 on your end and your UUCP link (while on the other end, your Internet link must also have a gateway converting UUCP back to SMTP - though this piece isn't your problem).

The critical thing to understand about these two protocols are that SMTP is a network (TCP/IP) based protocol. UUCP is a serial-line (usually) protocol. To get between the two, you'll need a piece of software/hardware that has:

- 1) A TCP/IP stack with a network link
- 2) An SMTP compatible mail package
- 3) A UUCP link (usually includes a modem for access)
- 4) A UUCP compatible mail package
- 5) A means of translating messages from SMTP format to UUCP format

Don't assume that PC mail package that talks UUCP and another package (even on the same computer) which talks SMTP will be able to exchange messages between the two; or even be able to import messages from one to the other. While UUCP systems often have means of importing flat (ascii) files, SMTP systems usually do not. In fact, many SMTP mailers won't even correctly handle UUCP style mail addresses (called "bang" addresses, due to the use of the "!" (or bang in Unix jargon) character).

The only package we know of (currently) that will do this translation is the Unix sendmail package. The bad news is, it requires a Unix based system to run. The good news is it usually is included with the Unix operating system at no extra charge (except for some PC Unix versions that sell networking modules separately) and in fact is available in the freeware Unix distribution called "Linux".

So, on a system running Unix, with both a TCP/IP network link and a UUCP link, you merely configure sendmail to route across the two "networks". While this is not trivial, it is well outlined in the O'Reilly & Associates book "sendmail" (see previous examples for details on ordering).

PC (MHS based) Mailers

Another broad category of electronic mail systems you may need gateways for are the PC

MHS (Message Handling System standard) based mail packages. Packages such as cc:Mail, WordPerfect Office, Microsoft Mail, and Pegasus (or Pmail) all require gateways to communicate with any other SMTP based mail package (including NetMail/3000). Each of these vendors provides their own SMTP gateway as an optional part of their product (except the freeware mail system Pegasus, which works with either the Charon or Mercury freeware SMTP gateways). There are also some third party gateways for some of the large commercial e-mail packages; you can contact 3k Associates if you need contact information for one of these gateways.

Basically, to get cc:Mail, WordPerfect Office, Microsoft Mail, or most of the other PC mail packages to talk SMTP, you need to get a compatible SMTP gateway. Once installed, each of these works similarly; e-mail from the outside world (including NetMail/3000 or HPDesk via DeskLink) gets addressed to a mailbox name (or a variation of mailbox and post office) “@” and then the Internet name of the machine running the gateway software. Most of these gateways either run on a stand-alone, dedicated PC, or run as NLMs on a Novell server. The details of that don’t matter to us; we just need to know the address format they use and the name of the gateway machine. From the PC end, each product seems to handle outbound Internet style addresses differently so check the documentation on that gateway and the mail package. In some cases it may be desirable to create “mailboxes” in the PC system with “foreign addresses” (or whatever the individual package calls them) that forward messages to a mailbox on a remote system. This allows the users to be known locally to the other PC mail users, looking like just another name in their list of local addresses, even though actual messages flow out through the gateway to another system entirely. NetMail/3000 can accommodate this as well, by creating mailboxes for PC based users in the NetMail/3000 directory, and specifying a forward-user and forward-node which routes mail for that mailbox to the remote (PC) system. This allows the user’s addresses to show up in NetMail/3000’s directory (and whois commands and finger server) as a local mailbox; this also prevents users from having to learn the sometimes oddly formed structure for gateway’ed mailbox addresses. Similarly, you can create mailboxes in HPDesk and assign foreign aliases to PC based users.

X.400

X.400 based mail systems are another instance where you’ll need a gateway, since X.400 mail transport requires an entirely different network protocol (stack) than does SMTP. X.400 applications use the OSI (Open Systems Interconnect) protocol, while SMTP uses TCP/IP. OSI and TCP/IP offer (roughly) the equivalent level of communication, but are distinct and entirely incompatible. Like UUCP gateways discussed earlier, to communicate with X.400 based mail systems, you’ll need a gateway that provides X.400 and SMTP translation capability. Companies such as Retix, Hewlett-Packard, and Softswitch (now Lotus) market such gateways, and they usually involve dedicated hardware running their applications. Check the documentation on the gateway carefully; there are several flavors of X.400 (1984, 1988, 1992), and the various revisions are NOT compatible in many areas; including message attachments. Some implementations may limit the transport of some binary file types, or the number of such attachments. If possible, select a gateway that handles MIME compatible SMTP mail (not just standard SMTP). You’ll save yourself a lot of headaches down the road.

Configuration 5 - NetMail/3000 as a Mail Hub

NetMail/3000 (or a system running DeskLink) can perform very well as the “hub” for a distributed electronic mail network. By this we mean sites with several multiuser computers, where it is often desirable to designate all electronic mail traffic between hosts, or between the local network and the outside world go through one designated “hub”. In many cases, a prime example of this would be where an organization has a registered domain name and many individual machines, yet wishes to standardize e-mail addresses throughout the organization. Using our domain name as an example, “3k.com”. Since we have several machines within our domain, normally our Internet mail addresses would be a “name” followed by “@” then a machine.3k.com. For instance, rcb@riker.3k.com. However, to make addressing easier when there may be a lot of machines, and even people moving among machines, we standardized our e-mail addresses as merely “initials@3k.com”. (We use initials just as an arbitrary choice.) This form of address, especially for organizations that might have many levels of organization (i.e. rcb@riker.ap.admin.3k.com) is much easier for people to remember, and only requires a few steps on your part to set up. It is also often easier to maintain than multiple directories on multiple machines.

HOW TO DO THIS

Setting this up is a relatively straightforward process. First, choose the machine you want to act as your mail “hub” - this is the machine through which all mail from the outside world will come, so pick a machine capable of handling the load required. Second, set up an address record in your organization’s nameserver which defines the domain name (in our case 3k.com) to point to the host’s IP address which you have chosen as a hub. (You may choose to use MX records in the nameserver instead of an A (address) record; it’s up to you.)

Now, you need to insure that outbound mail messages all have their addresses formatted as “name@domain.org” - in our case “initials@3k.com”. Depending on the mailers you are using on the machines in your network, this is accomplished in different ways. In Unix sendmail implementations, this is accomplished by enabling the “hide hostname” macro and defining it as your domain.org name. In NetMail/3000 or DeskLink, you use the “hide hostname” field in the Net-Maint Global Settings screen; just set it to your domain.org name and all mail messages coming from that system will have e-mail addresses which consist entirely of the local mailbox name and the domain.org you specify. (If for some reason you don’t want ALL addresses to come out like that, you can set the domain.org individually for users mailboxes in the NetMaint Users Maintenance screen; note too that a value set there will override the “hide hostname” set for the entire machine.)

If you happen to have multiple domain.org’s sharing a computer (perhaps client or subsidiaries using the same computer, you can set up multiple domain.org’s by using the domain.org setting on individual mailboxes.

Next, you also have to make sure that your system will accept mail for this “strange” machine called “domain.org” (or whatever your particular domain.org might be; 3k.com in our

case). To do this, you need to add a Known-Host entry in NetMaint creating an alias for your system. You do this in the NetMaint Known Hosts maintenance screen; add a host entry with a name of “domain.org” (again, “3k.com” in our example), with an address of “255.255.255.255” and a network of “999999999” (the other fields don’t matter). This tells NetMail/3000 that if an inbound message comes in for “someone@3k.com” to treat “someone” as a local mailbox, even though “3k.com” isn’t the “official” node name for this computer.

Finally, since all mail messages will be coming through this system, this system needs to know the mailbox names and final destinations of all the users in the organization. This sounds like a lot of work, but it is often easier to maintain this list in this one place, then duplicate effort throughout your network. You’ll need to enter into the NetMail/3000 directory on this system (using either the NetMaint program or through directory synchronization or a combination) an entry for every user in the organization. Local users (those that use this system to read and send their mail anyway) are set up normally, users on other systems are created with the forward-user and/or forward-node fields designating the final mailbox name (if different than the name in this directory) and the final system name. The forward-user field can be left blank if the mailbox name on the destination system is the same as it is here, but you can just as easily enter another name; this can be useful if some remote system uses a different format for e-mail addresses than this system does, and provides an easy way of enforcing a “organization wide” standard for e-mail addresses, even if there are some holdouts.

Configuration 6 - An On-Demand (Dialup) Internet Link

Setting up NetMail/3000 or DeskLink on an HP3000 with a dial-up link to the Internet may involve many of the items in the previous examples, so you might want to browse through them if you haven’t already. There are a few important considerations in hooking up via a dial-up line that you should be aware of.

First, the HP3000 doesn’t have the capability to dial-up the Internet itself (at least not yet!) so you’ll need some other piece of hardware to do this for you. You have several options however, and we’ll review a few of those for you.

There are also two significant (and unique) types of dial-up connections to the Internet (or to any remote TCP/IP based network); a network level (IP routing) link, and a service level (e-mail gateway) link. A network level link routes TCP/IP traffic directly from your HP3000 to the remote network (the underlying TCP/IP based software, including NetMail/3000 or DeskLink, doesn’t know or care that you’re talking to remote systems instead of local ones. The service level link is a software system which accepts e-mail messages and forwards them on to another system for you; this type of link requires some setup at the software (e-mail) level as the mail software must be told to direct all outbound messages to a specified system instead of just trying to deliver them directly itself.

Since NetMail/3000 and Desklink talk the “e-mail language” of the Internet already, the easiest and most efficient way to establish a link (dial-up or leased) is via a TCP/IP compatible line. Dial-up TCP/IP protocols commonly used in the Internet world are “SLIP” (Serial Line Internet Protocol), and the newer “PPP” (Point to Point Protocol). Either will work; SLIP is an

older and sometimes easier to find (more common) protocol, though it can ONLY route IP traffic and can be more difficult to configure. PPP is newer, has built-in facilities for (some) data compression, and can also be configured (in some cases) to pass IPX (Novell) or Appletalk protocol traffic as well. The most common means of establishing dial-up SLIP or PPP links is through a dedicated dial-up router, such as the Rockwell NetHopper, the Telebit Netblazer, HP's router PR, and higher end models from companies like Cisco, 3Com, HP, or Wellfleet. These devices are usually the most flexible and easy to set up, and usually include some security configuration options (such as filtering IP traffic by service, allowing SMTP for instance but not telnet or ftp). Some will even automatically establish your dialup link whenever traffic destined for an outside network is detected on the network. You can also get SLIP or PPP software for most Unix systems which will act as a router when properly configured, and there are even a few PC packages on the market that can perform routing for you.

If you choose a dial-up service level connection (i.e. a gateway), then you should read the previous section on gateways. You will probably be using the UUCP protocol which is discussed in depth in that section.

Some important caveats; some Internet providers provide "POP" mail support, as does NetMail/3000. While this may sound like a match, what you will find is that both the Internet providers and NetMail/3000 provide POP "servers". This means both systems allow you to RETRIEVE e-mail from their mailsystem if YOU are using a POP "client". The POP protocols ONLY retrieve e-mail, and then only for an individual; POP cannot be made to retrieve e-mail for more than one individual (especially not arbitrary individuals in an organization), and it won't retrieve e-mail from one system and place it into another; POP clients retrieve the e-mail for THE user running the client, let him read, delete, or save on the local PC or Mac some messages. In essence, two POP "servers" can't talk to each other; POP is strictly a protocol where one machine holds the mail (the server), while a client retrieves it (for an individual) and browses it.

Something else you should look for (this is a GOOD thing) are those Internet providers who hold e-mail for you and whenever you dial in, their e-mail sending process is triggered so that any mail destined for your site is "sent" to you. This is a nice feature, and one which several Internet service providers provide. This works well with NetMail/3000 or DeskLink, so that any time you make the connection to your Internet provider, our SMTP server will be awakened by the incoming mail process (from the service provider) and your incoming mail (if any) will be delivered.

HOW TO DO THIS

The only special configuration items you need to set up to accommodate a direct IP link (a SLIP or PPP network link) are to be sure you have defined a "gateway" in NMMGR which points to the machine which is acting as a router for you, and which has a "reachable nodes" entry of "@". For MPE/V systems or MPE/iX versions prior to 4.0, you need to enter two reachable node entries (a "hack" which performs the same function) which either HP's response center or 3k's technical support can describe for you. This tells your HP3000 to route any network traffic for networks it doesn't already know about, through the "router", assuming the router will take care of sending it on to its proper destination. Secondly, if you haven't done it already, make sure both your MPE configuration (RESLVCNF.NET.SYS) and the NetMaint program's global configura-

tion screen point to a nameserver; either one on your local network, or your Internet provider's nameserver.

If you are using a service level network link, see the considerations in the example defining how to set up a mail gateway. You'll define the gateway system as your "trusted gateway" in the NetMaint program so that any messages bound for systems not known locally will automatically get passed on to the gateway.

Another important point here is that this setup will cause a connection to be initiated with your service provider EVERY time anyone sends a message. While this is ok in some situations, if you're paying for each call to a dialup service you may not care for this. If on the other hand you want to configure your mail system so that it only dials up the provider on a regular schedule (determined by you) then there are a few other items you need to take care of.

Dial-up Links (scheduled access)

First, on a scheduled dialup connection you likely won't be able to support nameserver queries (using DNS) as these require connections to arbitrary machines at the time a mail address is entered in NetMail/3000 (when sending a message), so you'll need to NOT configure the nameserver and just use a trusted gateway at your Internet provider's site.

Secondly, you'll want to create a "KNOWN HOST" entry for your trusted gateway, using the appropriate IP address for the host, but with a "NETWORK NAME" of "DIALUP" (in all caps). This special code tells the NetMail/3000 (and DeskLink) transports to never try an automatic connection to this host - all connections must be initiated by a separate job. It is this separate job that you will set up and stream whenever you want your link opened. This job will open an outbound connection to your trusted gateway host (thus opening your line) and will transmit any outbound mail at that time. While the link is open, your Internet provider's machine has an opportunity to deliver any inbound mail to your system as well. This scenario counts on the fact that the job will open the line (so incoming mail can be delivered) even if there is no outbound mail to deliver - which it does; and also that your Internet link (router/modem) are set to hold the link open for at least a few (say 5) minutes (i.e. set a time-out in your router of about 5 minutes).

Since the job stream is unrelated to the background (NetMail/3000 or DeskLink) job - it doesn't matter if the background job is running or not - you can schedule the job to run at any interval you choose; either using whatever job scheduler package you might use on your system, or simply by adding a :STREAM command at the end of the job stream to stream itself again after a certain interval.

The job to open the link is simply:

```
!JOB MAILOUT,NETMAIL.THREEK  
!RUN SMTPOUT.SYS,FORCED;INFO="GATEWAY.NAME.HERE"  
!EOJ
```

(substitute the name of your trusted gateway host for the "GATEWAY.NAME.HERE")

used in the example.)

