

# ***Internet Exchange for cc:Mail***

## **Configuration/Diagnostic Reference Manual**

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## PREFACE

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### OVERVIEW

**Internet Exchange** is an electronic mail gateway that connects Lotus cc:Mail Local Area Network email environments to either the Internet, and/or to a private TCP/IP based Local Area Network. **Internet Exchange** represents the most advanced and complete gateway technology linking cc:Mail users with the Internet.

This manual describes common problems that may be encountered in the operation of **Internet Exchange**, including descriptions of all error and logging messages produced by the gateway. It also describes the format of the gateway initialization file, *IMA.INI*.

There are two versions of **Internet Exchange** that this manual covers - the *Enterprise Edition* (unlimited usage), and the *Workgroup Edition* (100-user). With the exception of the number of users restriction, default address mapping options, and default send/receive permissions in the *Workgroup Edition*, the two versions are identical. The few areas where there are differences are noted in this manual.

Throughout this manual, the term "Internet" is considered to be interchangeable with any TCP/IP based network or collection of networks.

This manual is broken down into the following sections:

- **Chapter 1**, "Overview," introduces the various types of error and logging classes. These include VIM, Winsock, and Btrieve related issues.
- **Chapter 2**, "Interactive Error Messages," describes error messages that are presented to the gateway administrator via popup windows.
- **Chapter 3**, "Logfile Diagnostics," describes the various logging levels, and the logging messages produced by each **Internet Exchange** module for each logging level.
- **Chapter 4**, "Format of the IMA.INI File," describes the internal format of the **Internet Exchange** initialization file, *IMA.INI*.

For information related to the installation, routine configuration, and operation of **Internet Exchange**, please refer to the *Internet Exchange for cc:Mail, Gateway Administrator's Manual, Version 2.0*, for further information.

## CONVENTIONS USED IN THIS MANUAL

This manual uses the following conventions:

<b>Example</b>	<b>Description</b>
<code>text in Courier font</code>	Used to show text in commands, listings, and files. It also shows text to type as it appears.
<i>Italics</i>	Used to show variables that represent actual names or addresses that you enter.

# CHAPTER 1

## OVERVIEW

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### MEMORY REQUIREMENTS

Internet Exchange needs at least 450kb of free conventional memory in the first 640kb. If this much space is not available, try loading drivers and programs in high memory. If you are running DOS 6.0 or higher, the *memmaker* program can be used to help optimize available memory.

### VIM ERRORS

VIM is the interface **Internet Exchange** uses to communicate with the cc:Mail Post Office. If VIM errors are encountered, the first thing to check is which version of the VIM libraries are on the system. There should be only one copy of these libraries, located somewhere in the path, usually the Windows directory. **Internet Exchange** requires version 2.07 or later. To check the version of the VIM libraries, *type* in the directory where they reside. The last column, normally the time of modification, will show which version is running. If an old version of VIM is running, you will need to install a newer version of the VIM libraries in order **Internet Exchange** to operate reliably. Please refer to Chapter 5 *VIM Library Installation* for information on how to obtain and install the VIM libraries.

The most common VIM read/write problem is due to lack of disk space. When such an error occurs, check to make sure that there is enough local disk.

If the problem still persists, check to make sure that the Post Office is accessible via the Configure Post Office screen. Make sure all the parameters are correct, and the LAN is up if the Post Office is on a different PC. If the Post Office window in the system manager initially comes up with question mark(s??), this is usually a sign that the post office has not been properly configured.

If the Post Office is locked and is not being worked upon, check for the file CCPODOWN in the Post Office directory. The existence of this file signifies that the local Post Office is locked. After making sure that no maintenance is being performed on the local Post Office, this file may be removed.

Sometimes the cc:Mail Post Office can get corrupted, which will cause VIM errors. To check the integrity of the Post Office, run the cc:Mail post office utility *chkstat* and *reclaim*.

## WINSOCKERRORS

Neither PC/TCP from FTP Software nor Sun PC-NFS TCP stacks are supported, as they do not operate reliably with **Internet Exchange**. If you are running with either of these stacks, please change to a different stack, such as those from Novell, Microsoft, Frontier Technologies, or The Wollongong Group.

If you are running on top of a known good WINSOCK 1.1 compatible TCP stack and are still encountering problems, make sure that the current version is running. Some older version do not work properly. Also ensure that the Winsock library (*winsock.dll*) is installed in the TCP/IP directory used by the stack. Next, check that the local Internet hostname is a fully qualified domain name and that it matches the name given to the TCP/IP stack. Mail loops sometimes occur when there is a mismatch here, resulting in a message bouncing between the SMTP IN and OUT queues, without ever getting delivered.

## BTRIEVEERRORS

There are several gateway databases which are stored using Btrieve, and any of these might encounter an error during operation. However, such errors are unlikely.

### The DNS Cache

If the DNS cache ever becomes corrupted, it will be automatically deleted and regenerated over time via the usual DNS requests which are made. This might slow down outgoing message delivery but other than that there is no impact on the gateway. In the case that the DNS cache cannot be deleted due to another application holding it open, close all gateway applications and delete the *files.btr* from the installation directory manually.

### Mail Messages

In the case of a badly formatted message, shutdown the gateway and run the utility *rcmesg.exe* from the installation directory. This utility rebuilds the message database from the text message files stored in the queue directory. It also recovers any bad messages from the bad directory. The only side affect is that the status for all messages will be set to unsent, occasionally result in a message being delivered twice.

### User and Domain Mapping Databases

Although a new database format has been introduced for these databases, the old text files SMTP.ADR and SMTP.POD are still required. If either of the two databases become corrupt, they may be regenerated from the text versions. The rebuilds can be made from the *Utilities* screen within **Internet Exchange**.

### The Rules Based Mapping Database

This database can be rebuilt by recompiling the defined rules from *Addr Rules* screen from within **Internet Exchange**.

## CHAPTER 2

### INTERACTIVE ERROR MESSAGES

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#### SYSMAN ERRORS

***could not start SMTP daemon***  
***could not start CCIN***  
***could not start CCOUT***  
***could not start SMTP client***

The SYSMAN interface could not start an **Internet Exchange** queue manager program. The corresponding queue manager may be already running, or there may be insufficient available memory. If the corresponding queue manager is not already running when this message is displayed, try closing some open applications to free up more memory.

***could not start viewer: viewer***

The logfile viewer could not be started. Check to see if write.exe can be found in the Windows directory. If not, edit IMA.INI and change the Viewer entry in the Config section to the pathname of another viewer.

***Forward failed - invalid Internet address***

When trying to forward a message, an invalid address was entered. All Internet addresses must be of the format *user@host.domain*.

***IMA.INI not found - exiting***

The configuration file was not found in the Windows directory. This is due to an incorrect installation. Create a new copy of IMA.INI in the Windows directory and reconfigure via *Setup*.

***message is already locked - try again later***

This message indicates that another program has locked this message in the process of delivering it. No other program is allowed access at this time. Wait for a few minutes until the message is no longer being processed by another application, then try again.

***out of timers/clocks - please delete some and restart***

Close **Internet Exchange** and any programs such as clocks, which might be using system timers. There are only so many timers to go around, **Internet Exchange** needs 8.

***This message failed an integrity check***

This message appears when trying to access a message that has already been deleted. The usual case where this happens is when **Regular Screen Updates** has been disabled. No further action is needed.

***This version of Internet Exchange is not authorized for use***

You are not authorized to use the current release of **Internet Exchange**. Contact technical support to purchase a valid copy and/or authorization.

***this message no longer exists***

This error occurs when trying to access a message that has already been deleted. The usual case where this happens is when **Regular Screen Updates** has been disabled. No further action is needed.

***Your license for Internet Exchange has expired - please contact technical support***

The temporary license for the gateway has expired. Contact technical support to purchase a full license.

## WORKGROUP EDITION ERRORS

**Internet Exchange, Workgroup Edition**, is functionally the same as the **Enterprise Edition**, with the exception that the number of authorized gateway users is limited to 100. In order to accomplish this, the default mapping capability of the **Enterprise Edition** has been disabled and all user address mapping is accomplished by reference to entries in the User Alias Database (*smtpadr.btr*) and the Directory Database (*rulebadr.btr*). Only cc:Mail users that appear in one of these databases are authorized to send or receive messages through **Internet Exchange**. Users with entries in both databases are only counted once in computing the total number of active users.

Under normal conditions **Internet Exchange** will not allow the administrator to configure more than the maximum number of users into the system. Whenever either of the databases is updated, either manually through **SYSMAN**, or automatically through Dynamic Conversion, the number of total users is computed. If the number of users exceeds 100, a dialog box is presented to the administrator in the case of interactive changes introduced through **SYSMAN**, or an email message is sent to the system administrator in the case of Dynamic Conversion indicating the operation had not succeeded. Whenever an attempt to exceed the limit of 100 users is made, the database that has been attempted to update is restored to its prior state.

To aid the administrator in planning, when the number of configured users reaches 95, a warning will be presented to the administrator indicating that the number of configured users is approaching the limit of 100. This message also includes the current number of configured users. To disable these warnings, simply set the variable *DisableUserLimitWarningMessage* = YES in the [Options] section of the *IMA.INI* file.

In rare conditions it may be possible for the combination of the User Alias Database and the Directory Database to contain more users than the maximum allowed for the

*Workgroup Edition*. This is likely to occur if the databases are compiled or substituted manually outside of **Internet Exchange**. In this situation, when *SYSMAN* is started, a warning message will be presented, prompting the administrator to reconfigure the gateway to 100 or fewer users. Until this situation is resolved, *CCIN*, *CCOUT*, and *SMTPC* will fail to run.



## CHAPTER 3

### LOGFILE DIAGNOSTICS

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The **Internet Exchange** uses the *ieccmail.log* logfile is used to record messages about the current state of message processing. There are four levels, depending upon the severity of the condition:

Errors Only	Only errors will be logged.
Message Logging	Information about the delivery of each message will be logged.
SMTP Session	All SMTP conversations will be logged.
Diagnostic	A great deal of extra debugging data will be logged.

As the logging level increases, so does the amount of information saved to the logfile. As the logfile reaches a configurable limit, it is renamed to a different file and optionally emailed to the local postmaster. Old logfiles can either be archived on disk or deleted to save space.

## SYSMAN

The **Internet Exchange** System Manager (*SYSMAN.exe*) is the front end that is responsible for both the scheduling of gateway activity as well as configuration of the gateway. The System Manager keeps track of the times and frequency at which the various queue managers (*CIN*, *CCOUT*, *SMTPC*) are run, and is responsible for the launching of these managers at the appropriate times.

Many of the errors possible with SYSMAN are related to initializing the various software subsystems used by the gateway. By ensuring that these are all correctly installed, with the correct versions, as well as adequate memory and disk space, you can avoid most of these problems.

### Errors Only Logging

**Cannot start SYSMAN.EXE. Btrieve error #n - xxx.**

A Btrieve error occurred (with error code n) when **Internet Exchange** was started. Please contact technical support.

**Cannot access the host table file xxx. Please reconfigure via imasetup**

The host table file cannot be found or is a directory. Please reconfigure *imasetup*. The full path must be specified.

**CCIN not started in configure only mode**

An attempt was made to start CCIN in *configure only* mode. To process incoming messages, change to send/receive mode.

**ccMailInterrogate VIM error**

An error occurred when interrogating cc:Mail. Check the section on VIM errors in Chapter 1.

**CCOUT not started in configure only mode**

An attempt was made to start CCOUT in *configure only* mode. To process outgoing messages, change to send/receive mode.

**CCOUT not started in receive only mode**

An attempt was made to start CCOUT in *receive only* mode. To process outgoing messages, change to send/receive mode.

**checkState failed**

Message files are locked while being processed to prevent concurrent access by other applications. SYSMAN will try to unlock all such files upon startup. This message will be logged if there is a problem unlocking the files. Shutdown and restart the gateway. If there are still problems, please contact technical support.

**Could not find the drive that containing the queue directory**

The *QueueDirectory* entry in IMA.INI does not specify a valid drive. Change the entry via either *imasetup* or manually editing IMA.INI.

**could not start xxx: yyy**

Cannot start the application *xxx, yyy* is the error message returned when attempting to execute the application. Please contact technical support for further information.

**could not start xxx viewer: yyy**

Cannot bring up the text viewer *xxx* due to error *yyy*. Check to make sure that the viewer is accessible at the specified location.

**CreateDialog failed**

Cannot initialize the main dialog box. Shutdown any other applications, and if that doesn't solve the problem, restart Windows.

**CreateLockFile failed**

Message files are locked while being processed to prevent concurrent access by other applications. This messages will be logged if there is a problem in locking files. Shutdown and restart Windows and the gateway. If there are still problems, please contact technical support.

**Ctl3dAutoSubclass failed**

A problem occurred when trying to initialize the 3D library. Make sure that the latest version of CTL3D.DLL is located somewhere in the path.

**Ctl3dColorChange failed**

A problem occurred when working with the 3D library. Make sure that the latest version of CTL3D.DLL is located somewhere in the path.

**Ctl3dRegister failed**

A problem occurred when trying to initialize the 3D library. Make sure that the latest version of CTL3D.DLL is located somewhere in the path.

**Ctl3dUnregister failed**

A problem occurred when trying to initialize the 3D library. Make sure that the latest version of CTL3D.DLL is located somewhere in the path.

**DoStatus failed**

The message status was unavailable. Please contact technical support for further information.

**exit**

**Internet Exchange** has terminated.

**failed to proceed**

The total number of cc:Mail users in the *smtpadr.btr* and *rulebadr.btr* databases exceeds the limit of 100 for the *Workgroup Edition*. Reconfigure **Internet Exchange** for 100 or fewer configured cc:Mail users.

**failed to proceed: Both *smtpadr.btr* and *rulebadr.btr* are missing**

Neither of the files *smtpadr.btr* and *rulebadr.btr* databases have been found for the *Workgroup Edition*. To correct create either the User Alias Database through *MSMAN*, and/or create the Directory Database via Rules Based Addressing in *SYSMAN*.

**fatal exit**

**Internet Exchange** has terminated due to a fatal error. Check the logfile for further information.

**GetQueueLength in error**

An error occurred when trying to obtain the length of the SMTP IN queue. Restart Windows and the gateway.

**GetQueueLength out error**

An error occurred when trying to obtain the length of the SMTP OUT queue. Restart Windows and the gateway.

**GetWindowsDirectory failed**

Unable to obtain the Windows directory. Reinstall Windows and then the gateway.

**hostKnown: cannot open hostfile**

Cannot open the host table. Make sure that the host table file is accessible.

**hostKnown: getline hostfile failed**

Cannot read a line from host table. Make sure that the host table file is accessible and not being used by another application, such as an editor.

**Init Instance failed**

Unable to initialize SYSMAN. Restart Windows and the gateway.

**MakeProcInstance failed**

Unable to initialize a dialog box. Restart Windows and the gateway.

**MimeInitializefailed**

Cannot initialize the MIME related variables when SYSMAN is started. This is most likely because of low system memory.

**Missing message Creation Time : xxx**

Cannot find the time of creation of a specified message. Please contact technical support for further information.

**multiple copies not allowed**

An attempt was made to run more than one copy of **Internet Exchange**.

**n file handles are currently free ( n < 10 )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. Close other applications and opened files to free up more file handles.

**n Intel selectors are currently free. ( n < 512 )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. It is the number of Intel selectors currently available in the system. If there are less than 512 Intel selectors in the system, this message will be logged as an error. Close other applications to free up Intel selectors.

**Out of memory**

**Internet Exchange** has run out of memory. Shutdown other applications and if that doesn't work, restart Windows.

**Out of memory, cannot execute multiple deletion**

Cannot delete more than one message due to shortage of memory. Shutdown other applications to free up more memory.

**out of timers**

All Windows timers are in use. Close some applications to release timers.

**shutdown time has arrived**

It is time to automatically shutdown the gateway.

**Splash window cannot be loaded**

Fail to initialize the splash window. SYSMAN.EXE may be corrupted. Reinstall the gateway.

**startVim failed**

Cannot initialize the VIM library. Check the section on VIM errors in Chapter 1.

**The primary/secondary mail relay hostname is not in the correct format. Please reconfigure via imasetup**

Unable to find primary/secondary mail relay host in host table or the primary/secondary mail relay hostname is invalid. Make sure the hostname is included in host table. Make sure that the host table file is valid.

**Unknown internal error, cannot execute multiple deletion**

Cannot delete more than one message. Restart the gateway.

**UnregisterClass failed**

Error in releasing windows resource when exiting SYSMAN. Restart Windows.

**UpdateQueueList: deleting message with no recipients: xxx**

Attempt to delete an invalid message. No further action is required.

**UpdateQueueList: missing message file: xxx.msg**

A message is missing the message text file: *xxx.msg*. Please contact technical support.

**Unable to initialize Winsock. Please reinstall Winsock**

The Winsock stack is not correctly installed. Shutdown the gateway and reinstall the Winsock stack.

**VIMInitialize failed**

Cannot initialize the VIM library. Check the VIM section in Chapter 1.

**Windows is compacting memory due to shortage.**

Insufficient memory. Possible memory leaks or not enough physical memory. Shutdown any other applications executing.

**Message Logging****(m,n) bounced by administrator**

A message has been bounced by the administrator. *m* and *n* are the VIM reference numbers and are for information only.

**(m,n) forwarded by administrator to: forwardee.**

A message has been forwarded by the administrator.

**qID deleted; size: n from: sender to: recipient**

A message has been deleted from a queue. *qID* is the message queue id, *n* is the message size. Both the sender and recipient are Internet addresses.

**qID forwarded by administrator to: forwarder.**

A message has been forwarded by the administrator.

**unable to delete qID; size: n from: sender to: recipient**

Unable to delete a message from the queue. Restart the gateway and try again.

**VIM message deleted; size: n from: sender to: recipient**

A message has been deleted from the cc:Mail Post Office. *n* is the size of the deleted message, *sender* is the cc:Mail sender and *recipient* is the Internet recipient.

## Diagnostic Logging

**Address conversion utility is activated successfully**

The address conversion utility has been run by autoconversion successfully.

**SYSMAN is waiting for the other application(s) to stop**

Other **Internet Exchange** application(s) are still active, so *SYSMAN* waits before starting the conversion utilities.

**Autoconversion was finished. Restart the applications ...**

Autoconversion is finished and the various queue processors will be restarted.

**Btrieve Version x.y z**

This is the Btrieve version, currently 6.15 W.

**Btrieve engine is terminated**

The Btrieve database engine has closed successfully.

**Calling xxx to stop...**

*SYSMAN* signals queue processor *xxx* to shutdown before starting autoconversion. This is to avoid potential concurrency problems.

**changing to cc:mail/SMTP in/SMTP out queue**

The current queue displayed has changed.

**DEC\_SMTP\_IN / DEC\_SMTP\_OUT / DEC\_CCMAIL**

A message has been processed and the queue counters updated.

**deleting xxx**

Removing temporary file *xxx*.

**DISPLAY\_NEXT\_MSG: continue cc:Mail**

Continue to display the cc:Mail Post Office queue.

**DISPLAY\_NEXT\_MSG: continue SMTP**

Continue to display the SMTP queue (in or out).

**DISPLAY\_NEXT\_MSG: initial cc:Mail**

Display the initial message in the cc:Mail Post Office queue.

**DISPLAY\_NEXT\_MSG: initial SMTP**

Display the initial message in the SMTP queue (in or out).

**DISPLAY\_NEXT\_MSG: no more cc:Mail messages**

No more messages found in the cc:Mail Post Office.

**DISPLAY\_NEXT\_MSG: no more SMTP messages**

No more messages found in the SMTP queue (in or out).

**do fast startup**

SYSMAN is performing a fast startup when the option *fastAdminstartup* is set to YES.

**Domain conversion utility is activated successfully**

The domain conversion utility has been run by autoconversion successfully.

**End Vim**

An opened VIM session has been successfully closed.

**INC\_SMTP\_IN / INC\_SMTP\_OUT / INC\_CCMAIL**

A new message has been added to one of the mail queues.

**Initializing conversion utility ...**

SYSMAN has started the conversion utility.

**It is time to stop the other applications ...**

When SMTP.ADR/SMTP.POD have been changed and autoconversion is enabled, SYSMAN will try to stop all queue processors before starting the conversion.

**n file handles are currently free ( n ≥ 10)**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. When the number is not critical, this informational message is logged.

**n Intel selectors are currently free. ( n ≥ 512 )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. It is the number of Intel selectors currently available in the system. When the number is not critical, this informational message is logged.

**No other applications are found. Initializing conversion utilities ...**

SYSMAN finds that no queue processors are running and starts the conversion utilities.

**One application is already closed. Remaining applications : n**

SYSMAN is monitoring the situation of the running queue processors before starting autoconversion.

**skip LIST\_QUEUE**

Skip displaying the current queue when *FastAdminStartup* is enabled.

**startup**

The SYSMAN program has just started.

**Start Vim ...**

A valid VIM session has been successfully opened.

**The time stamp of SMTP.ADR was changed**

When autoconversion is set, the time stamp of SMTP.ADR will be checked. A change in this time stamp was detected and the address conversion utility will be started.

**The time stamp of SMTP.POD was changed**

When autoconversion is set, the time stamp of SMTP.POD will be checked. A change in this time stamp was detected and the domain conversion utility will be started.

**unable to delete xxx**

Unable to remove old temporary files. Shutdown the gateway, delete the files manually, and restart the gateway.

**updating counters**

Updating the message queue counters.

**version x.y**

The current version of **Internet Exchange** for cc:Mail.

**Warning: trying to decrement zero SMTP in/SMTP out/cc:Mail queue**

Try to decrease a message queue counter when already zero.

**CCIN**

Mail messages are delivered to the cc:Mail environment by the **Internet Exchange** module *CCIN*. This program is run at regular intervals, and is responsible for moving messages between the *SMTP IN* queue and the cc:Mail post office. The frequency at which *CCIN* is run is a configuration option set by the gateway administrator.

Many of the errors that *CCIN* encounters relate to the VIM interface to cc:Mail. Sometimes the network goes down, so the local cc:Mail post office becomes inaccessible. At other times, the *chkstat* and *reclaim* utilities need to be run to repair a damaged cc:Mail post office. Other errors occur due to badly formatted incoming messages from the Internet. In general, **Internet Exchange** imports these if at all possible, and if not bounces to the sender.

**Errors Only Logging****\_strdup failed**

Unable to copy a string to the memory, due to low memory. Shutdown other applications to free up more memory.

**AddEnvelopeRecipient failed**

Cannot add an envelope recipient to the list. Check the logfile for more information.

**appendString failed**

Cannot append a recipient name to the recipient list, due to low memory. Shutdown other applications to free up more memory.

**AttachMimeMessage: discarding xxx header part. Parts of msg processed to this point=yyy**

A header has been discarded during message import. No further action is needed.

**BounceMimeMessage failed**

Failure to bounce a MIME message. Check for low disk space, and further logfile messages for further information.

**BounceMimeMessageToPostmaster failed**

Cannot bounce message to postmaster. Check the postmaster address.

**Cannot deliver to postmaster. Relocated to ..\bad dir.**

Unable to send a message to the postmaster. The message is treated as a bad message and is moved to BAD directory. It can be manually inspected and then sent on.

**Cannot find the SYSMAN window, already shutdown ?**

All queue processors are signaled to stop when autoconversion is started, and will send back an acknowledge to SYSMAN when they exit. However, in this case, CCIN cannot find the SYSMAN window, probably because SYSMAN has shut down.

**cc:Mail Post Office is down**

The cc:Mail post office is out of service. Check if the post office is locked or corrupted.

**Could not stat message file**

Could not check for the message file. The file may be either corrupted or deleted. Contact technical support for further information.

**Could not extract MIME body part n because xxx**

Failure to get the MIME body part due to reason xxx. Contact technical support for further information.

**CreateEnvelope failed**

Unable to create the envelope. Contact technical support for further information.

**CreateLockFile failed**

Some of the message files are locked during message processing. This prevents the files concurrency problems with other queue processors. If this message occurs, another process was accessing the file. CcIn will try again later.

**CreateWindow failed**

Cannot create the main window for CCIN. Contact technical support for further information.

**Decrypt of cc:Mail post office password from xxx failed**

The cc:Mail post office password is incorrect. Enter the correct password.

**Delivering to first n recipients; others later**

If a user sends a message with more than  $m$  recipients, **Internet Exchange** will deliver it to  $n$  recipients in one pass, and then deliver it to the other recipients in subsequent passes. Usually, **Internet Exchange** will deliver 32 recipients at once.

**Exiting due to configure only mode.**

CcIn will not run when in *configure only* mode.

**failed converting xxx to native attachment**

There was a failure to convert a Mac file to native format. Check the logfile for further details.

**failed to proceed**

The total number of cc:Mail users in the *smtpradr.btr* and *rulebadr.btr* databases exceeds the limit of 100 for the *Workgroup Edition*. Reconfigure **Internet Exchange** for 100 or fewer configured cc:Mail users.

**failed to proceed: Both *smtpradr.btr* and *rulebadr.btr* are missing**

Neither of the files *smtpradr.btr* and *rulebadr.btr* databases have been found for the *Workgroup Edition*. To correct create either the User Alias Database through *YSMAN*, and/or create the Directory Database via Rules Based Addressing in *SYSMAN*.

**fileopen failed: xxx**

Unable to open the file xxx. Contact technical support for further information.

**GetEnvelopeFrom failed**

There was a failure to obtain the *From* field from the envelope. Contact technical support for further information.

**InitInstance failed**

CcIn could not initialize itself. Contact technical support for further information.

**Invalid postmaster**

The postmaster address is incorrect. Enter a valid postmaster address.

**isLocal failed: xxx**

Recipient xxx is not a local user, so the message was rerouted out to the Internet.

**Looping message xxx routed to postmaster**

A looping message has been detected and has been rerouted to postmaster.

**Message xxx failed an integrity check**

A problem has been found in checking the integrity of the message. Contact technical support for further information.

**MimeInitialize failed**

Cannot initialize the MIME related variables when CCIN is started. Most likely due to the lack of memory. Shutdown other applications to free up more memory.

**Missing sender**

No sender is present in the envelope. Contact technical support for further information.

**Multiple instances not allowed**

Cannot open more than one copy of CCIN at the same time.

**n file handles are currently free ( n < 10 )**

When a file is opened, one file handle is used for managing the I/O operation. It shows the current number of free file handles available in the system. Insufficient file handles will halt **Internet Exchange**. This warning appears as an error when the free file handles are less than 10. Close other applications and opened files to free up file handles.

**n Intel selectors are currently free. ( n < 512 )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. It is the number of Intel selectors currently available in the system. If there are less than 512 Intel selectors available, this warning message will be logged as an error. Close some other applications to free up Intel selectors.

**overflow in CCIN**

A message has been found with more than 20 attachments. As a result, overflow occurs. No action is needed.

**ParseHdr failed**

A message header cannot be parsed, probably due to a bad address.

**Received shutdown signal from SYSMAN**

SYSMAN has sent a shutdown signal to CCIN.

**RecipParse failed: xxx**

Cannot parse a recipient xxx, which is probably not a valid Internet address.

**RerouteMimeMessage failed**

A message reroute has been attempted, but failed. Contact technical support for further information.

**SaveRemainingMimeAttachments failed**

There was a failure to save MIME attachments. Contact technical support for further information.

**Shutting down**

CcIn is about to close.

**startVim failed**

Cannot initialize the VIM library. Check the VIM information in Chapter 1.

**Too many recipients; will deliver to others later**

If a user sends a message with more than  $m$  recipients, **Internet Exchange** will deliver it to  $n$  recipients in one pass, and then deliver it to the other recipients in subsequent passes. Usually, **Internet Exchange** will deliver 32 recipients at once.

**translation of xxx to yyy invalid: not a local user**

The cc:Mail address  $yyy$  is not a valid local user. Change the user mapping to replace it with a valid user.

**truncation failed**

A truncation operation failed when importing a Mac message with no data fork. No action is needed.

**Unable to find a valid sender - using postmaster instead**

A valid sender could not be found, so *postmaster* is used as the sender instead.

**unknown local recipient : xxx**

$xxx$  is not a local user.

**UnregisterClass failed**

There was an error in when CCIN exited. Reboot Windows to ensure the 3D effects still operate.

**UpdateMessagePartNumber failed**

Failure to update the part number to the message. No further action is needed.

**UpdateMessageStatus failed**

An error occurred updating the status during VIM importing. Contact technical support for further information.

**VIMCloseMessage failed**

Cannot close a message while importing into cc:Mail. Check the VIM section in Chapter 1 for further information.

**VIMCloseSession failed**

Failure to close the the VIM session. Check the VIM section in Chapter 1 for further information.

**VIMCreateDerivedMailMessage failed**

Cannot create a new mail message derived from an existing message. Check the VIM section in Chapter 1 for further information.

**VIMCreateMessage failed**

Unable to create a new VIM message. Check the VIM section in Chapter 1 for further information.

**VIMEnumerateMessages failed**

Cannot return the reference number and summary attributes for the message. Check the VIM section in Chapter 1 for further information.

**VIMGetMessageHeader failed**

Unable to retrieve the specified message header attributes. Check the VIM section in Chapter 1 for further information.

**VIMInitialize failed**

Cannot initialize the VIM library. Check the VIM section in Chapter 1 for further information.

**VIMOpenMessageContainer failed**

Cannot open the message container. Check the VIM section in Chapter 1 for further information.

**VIMOpenMessage failed**

Unable to open a mail message. Check the VIM section in Chapter 1 for further information.

**VIMOpenSession failed**

Unable to open a valid session of cc:Mail. Make sure that the post office name and password are correct. Check the VIM section in Chapter 1 for further information.

**VIMQueryUnreadMailCount failed**

Cannot check for the number of unread messages. Check the VIM section in Chapter 1 for further information.

**VIMRemoveMessage failed**

Failure to delete a message from the cc:Mail post office. Check the VIM section in Chapter 1 for further information.

**VIMSendMessage failed**

Cannot submit a message to VIM for delivery. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageHeader failed**

An error occurred during setting a message header. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageHeader Date failed**

The *Date* field cannot be set in message header. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageHeader From xxx failed**

The *From* field cannot be set in a message header. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageHeader rrq failed**

An error occurred when setting the *RRQ* field in a message header. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageHeader Subject failed**

The *Subject* field cannot be set in a message header. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageItem failed**

Cannot add an item to a message being composed. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageItem fax page failed: xx.yy**

Failure to add a note part as a fax page. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageItem for entire bounce failed**

Cannot add an item to a message which is being bounced. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageItem large non-mime text failed**

Unable to attach a large non MIME text item to a mail message. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageItem "Read Me" failed**

When a message cannot be sent, it gets bounced back to the sender. The bounced reason (saved as *aReadme* file) will also be attached with the message. However, in this case the README file could not be attached successfully. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageRecipient failed**

Unable to add a recipient to the list of recipients of a message. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageRecipient aux address failed: xxx**

Unable to add a recipient with an auxiliary address to the list of recipients of a message. Check the VIM section in Chapter 1 for further information.

**VIMSetMessageRecipient postmaster xxx failed**

Unable to add the postmaster to the list of recipient of a message. Check the VIM section in Chapter 1 for further information.

**VIMStatusText failed**

Unable to find a description for the VIM error. Check the VIM section in Chapter 1 for further information.

**Windows is compacting memory due to shortage**

Insufficient memory. Shutdown existing applications to free up more memory.

**xxx Disk read/write failure. VIMSetMessageItem attachment failed.**

Cannot attach an item to the mail message because of disk read/write failure. Check the VIM section in Chapter 1 for further information.

**Zero length .msg will be relocated to ..\bad dir**

An empty message file has been found, and then moved to ~~the~~ **BAD** directory. Check the VIM section in Chapter 1 for further information.

## Message Logging

**Combine AppleDouble header and datafork to AppleSingle**

cc:Mail can only handle AppleSingle format. When an MAC-MIME AppleDouble file attachment is found, CCIN will combine the header and the datafork portion to create an attachment in AppleSingle format.

**filename is converted to AppleSingle Format**

The attachment *filename* has been converted to a Macintosh attachment in AppleSingle format.

**Looping message qID returned to sender**

The looping message *qID* has exceeded the local limit of number of trips configured for the gateway and has been returned to the sender.

**Mime message has been split successfully**

cc:Mail can only accept at most 20 attachments. If there are more than 20 attachments in the message, CCIN will try to split it and deliver the two parts separately.

**qID.msg contains more than 20 attachments**

cc:Mail can only accept at most 20 attachments. If there are more than 20 attachments in the message, CCIN will try to split it and deliver the two parts separately.

**qID rerouted to outgoing SMTP queue**

An incoming message has been rerouted out to the Internet.

**qID returned to sender**

A message has been bounced.

**qID returned to sender: AttachMimeMessage failed**

A message has been bounced because CCIN failed to append a MIME attachment to that message during import. Check with technical support for further information.

**qID returned to sender: AttachOtherMessage failed**

A message has been bounced because CCIN failed to append a non MIME attachment to that message during import. Check with technical support for further information.

**qID returned to sender: too big (n bytes)**

When the size of the message is larger than the *ReceiveMessageSize* option under the *Gateway* section in the IMA.INI file, it will be returned to sender.

**qID size: n from: xxx to: yyy**

An informational message recording details of a successful delivery. *ID* is the ID of the mail message, *n* is the message size (in bytes), *xxx* is the sender name and *yyy* is the recipient.

## Diagnostic Logging

### **alternate name matches - recipient is local: xxx**

Hostname/domain matches with the alternate name of the local FQDN. The recipient is local.

### **attached cc:Mail fax page part**

A cc:Mail fax page has been successfully attached.

### **attached entire bounced msg**

A bounced message has been created successfully.

### **attached Mime bodypart**

A MIME body part has been successfully attached.

### **attached note part**

A note part has been successfully attached.

### **attached xxx**

A message header has been attached to a message successfully.

### **AttachMimeMessage: stack unwound to mimeLevel zero**

The stack has been unwound due to a complex message being processed. No action is necessary.

### **Btrieve engine is terminated**

The Btrieve database engine has closed successfully.

### **built a xxx/yyy/zzz Mime message**

MIME message with content type *xxx* and content subtype *yyy* and extension *zzz* has been built.

### **calling AttachMimeMessage**

The function to attach MIME messages has been called.

### **ccMail address found in alias/directory database file is xxx**

A cc:Mail address *xxx* has been matched in the alias/directory database file.

### **Could not open alias database file**

Unable to open SMTPADR.BTR, maybe because it doesn't exist.

### **Could not find equivalent cc:Mail name for xxx in directory database. Try the default.**

Cannot match the cc:Mail name *xxx* in the directory database, so using the default mapping.

**Could not find equivalent cc:Mail name for xxx. Try the directory database**

Cannot match the cc:Mail namøxxx in the alias database, so trying the directory database.

**Could not find equivalent PO name of domain name xxx. Try the default.**

Cannot match domain namøxxx in the domain database, so using the local post office name.

**Could not open directory database file. Try the default**

Directory database file unable to be opened, use default address mapping. Check to see if the directory exists.

**Could not open domain database file. Use default.**

The domain database may not exist, so using the local PO name.

**data fork too short to be BinHex**

The Mac file appears not to be in BINHEX format.

**discarding empty note part**

An empty note part has been discarded.

**discarding MIME header part**

MIME header parts will not be attached to incoming messages.

**discarding zero length attachment**

An empty attachment has been discarded.

**Domain literal matches - recipient is local**

The IP address matches with the local FQDN, so the recipient is local.

**End Vim**

An opened VIM session has successfully closed.

**Equivalent post office name found in the database :xxx**

A match has been found for the entry xxx in the domain database.

**extracted data fork from application/applefile**

The data fork has been extracted successfully from an applefile MIME message.

**Force native attachment enabled, neglecting AppleDouble resource portion**

*Force native* is enabled, so the header and resource parts of an AppleDouble attachment have been discarded.

**found apple resource portion, will attach to datafork later**

An Apple resource fork has been found and will later be attached along with the data fork.

**hostname/domain matches - recipient is local**

The hostname/domain matches with the local FQDN. Thus, the recipient is local.

**message has n leaf bodyparts**

There are  $n$  bodyparts in the message. The limit is 20.

**message has n multipart headers**

There are  $n$  multipart header items.

**n file handles are currently free (  $n \geq 10$  )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. When the number is not critical, this informational message is logged.

**n Intel selectors are currently free. (  $n \geq 512$  )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment.  $n$  is the number of Intel selectors currently available in the system. When the number is not critical, this informational message is logged.

**processing message xxx**

CcIn is now importing the message xxx.

**Recipient is local, domain xxx found in smtpd.btr**

The recipient is found to be local since there is a mapping xxx in the domain database.

**recipient is not local: xxx**

The recipient is not local.

**Recipient name is too long, comment part is ignored.**

The recipient name exceeds the cc:Mail limit (127 characters). The comment part is thus ignored.

**Internet address xxx is modified to yyy**

The recipient name is modified by using internal rules of CCIN. ~~xxx~~ is the original recipient name and yyy the resultant recipient name. Normally, only the comment part of the original recipient name will be changed.

**Send message to SYSMAN to confirm stopping**

CcIn is signaled to exit by SYSMAN before starting autoconversion, and will send an acknowledge to confirm exit. This message confirms the acknowledgment has been sent.

**set cc:Mail rrq header**

An informational message about setting the rrq header for cc:Mail.

**Start Vim ...**

A VIM session has been successfully opened.

**translated xxx to yyy**

Translate the Internet address xxx to cc:Mail user address yyy.

**treat note part as VIM\_RTF**

A message item has been attached as Rich Text.

**truncated application/applefile part**

Try to truncate the file because no data fork cannot come up.

**trying reverse separators**

The reverse separator is being tried, as *tryReverseSeparator* is set to YES.

**Value of ReceiveMessageSize n is too small, reset to 8192**

If the setting of *ReceiveMessageSize* is smaller than 8kb, 8kb will be used.

**version x.y**

This is the CCIN version number.

## CCOUT

The module that performs the polling of the cc:Mail gateway post office and transfers messages into the gateway is *CCOUT*. *CCOUT* logs into the post office using the cc:Mail VIM interface. When messages are present, it moves each message, one at a time out of the gateway post office and into an internal gateway queue (SMTP OUT). *CCOUT* performs any address and message format translations necessary. *CCOUT* also creates the initial SMTP envelope.

Common errors that *CCOUT* encounters are related to the VIM interface to cc:Mail. Sometimes the network goes down, so the local cc:Mail post office becomes inaccessible. If this happens, shutdown the gateway until the network becomes functional again.

Another possible problem is when the local cc:Mail post office needs repair. In this case, wait until the gateway is idle and run *chkstat* and *reclaim* utilities. There is no need to shutdown the gateway, so SMTP transfers can still continue.

Another error is a badly formatted recipient in messages bound for the Internet. These are bounced to the sender with a short message indicating what the problem is. Local cc:Mail users should be instructed as to the correct format to use when sending email to the Internet.

## Errors Only Logging

**\_lclose failed**

A file close operation failed. Contact technical support for further information.

**\_lread failed**

A file read operation failed. Contact technical support for further information.

**\_lseek failed**

A file seek operation failed. Contact technical support for further information.

**\_lwrite failed**

A file write operation failed. Check that the system hasn't run out of disk space.

**Apple attachment not AppleSingle version 2 format**

An Apple item is not in version 2 format and so cannot be processed. Check with your local cc:Mail administrator.

**AppleSingle Data fork offset+length exceeds file size**

The attachment is not a valid AppleSingle file. Check with your local cc:Mail administrator.

**Bad ptr passed to AS extractor**

An error occurred during BinHex encoding. Contact technical support for further information.

**Bad ptr passed to VerifyDOSBinHex.**

An error occurred during BinHex encoding. Contact technical support for further information.

**Cannot find the SYSMAN window, already shutdown ?**

CCOUT is signaled to stop when autoconversion is started, and will send back an acknowledgment to SYSMAN when it exits. However, in this case, CCOUT cannot find the SYSMAN window to send the acknowledge. SYSMAN has probably shut down.

**Cannot found PostOffice: xxx in recipient: yyy in address book**

There has been a failure to match the recipient name yyy in the post office xxx. The message has been sent to a user who does not exist at a specific post office.

**Cannot parse recipient: xxx, peer-based encoding failed**

xxx is not in a valid Internet address and peer-based encoding cannot proceed.

**ccMail2InternetName failed**

CCOUT cannot translate cc:Mail name to Internet Name. See the logfile for more detailed information.

**ccmail2mime failed: n**

Cannot translate cc:Mail name to Mime. The error code is See the logfile for more detailed information.

**Could not stat message item: xxx**

The stat() call failed for the message item xxx. Contact technical support for further information.

**CreateWindow failed**

Cannot create the main windows for CCOUT. Contact technical support for further information.

**data fork not found**

A data fork cannot be found in the attachment. The attachment is not a valid AppleSingle file. Check with your local cc:Mail administrator.

**data fork too short to be BinHex**

The data fork of the Apple attachment is too short. The BinHex encoding cannot be applied. Check with your local cc:Mail administrator.

**Error processing recipient: xxx**

There has been an error when processing a recipient. See the logfile for more detailed information.

**Exiting due to configure only mode**

CCOUT cannot be run when in *configure only* mode.

**Exiting due to receive only mode**

CCOUT cannot be run when in *receive only* mode.

**failed extract datafork from xxx**

There are read/write errors or the attachment is not an AppleSingle file. Check with your local cc:Mail administrator.

**failed to proceed**

The total number of cc:Mail users in the *antpadr.btr* and *rulebadr.btr* databases exceeds the limit of 100 for the *Workgroup Edition*. Reconfigure **Internet Exchange** for 100 or fewer configured cc:Mail users.

**InitInstance failed**

Unable to initialize CCOUT. Contact technical support for further information.

**Local user unauthorized to send Internet mail xxx**

The local user is unauthorized to send Internet mail.

**MimeBuildMessage failed**

Cannot construct a MIME message. See the logfile for more detailed information.

**MimeBuildMultipartMessage failed**

An attempt at building a multipart MIME messages failed. See the logfile for more detailed information.

**MimeInitialize failed**

Cannot initialize MIME related variables, probably due to low memory. Shutdown other applications to free up more memory.

**multiple instances not allowed**

Only one copy of CCOUT can run at once.

**n file handles are currently free ( n < 10 )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number.

Insufficient file handles will halt **Internet Exchange**. Close other applications and opened files to free up more file handles.

**n Intel selectors are currently free. ( n < 512 )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. It is the number of Intel selectors currently available in the system. If there are less than 512 Intel selectors in the system, this message will be logged as an error. Close other applications to free up Intel selectors.

**notAllAscii: cannot open file xxx**

Cannot open a binary file xxx. Contact technical support for further information.

**notAllAscii: getline failed**

Cannot read a line from a binary file. Contact technical support for further information.

**OpenFile failed**

Cannot open a file. Contact technical support for further information.

**Open peer database fail xxx**

The peer database cannot be opened due to error code xxx. Contact technical support for further information.

**Out of memory**

CCOUT has run out of memory. Shutdown other applications to free up more memory.

**Received shutdown signal from SYSMAN**

SYSMAN has sent a signal to CCOUT to exit.

**Send message to SYSMAN to confirm stopping**

CCOUT is signaled to exit by SYSMAN before autoconversion, so CCOUT sends out an acknowledge to SYSMAN to confirm exit.

**startVim failed**

Cannot initialize the VIM library. Check the VIM section in Chapter 1 for more information.

**stat failed**

Cannot get information for a file. Contact technical support for further information.

**Unable to bounce to postmaster: xxx**

Failure to bounce a message to postmaster. Check that the postmaster address is correct.

**UnregisterClass failed**

An error occurred when exiting CCOUT. Reboot Windows to ensure that the 3D style of windows is retained.

**VIMCloseAddressBook failed**

Cannot close the address book through VIM. Check the VIM section in Chapter 1 for more information.

**VIMCloseMessage failed**

Cannot close the message while exporting from the cc:Mail post office. Check the VIM section in Chapter 1 for more information.

**VIMCloseSession failed**

Failure to close the VIM session. Check the VIM section in Chapter 1 for more information.

**VIMCreateDerivedMailMessage failed**

Cannot create a new message derived from an existing message. Check the VIM section in Chapter 1 for more information.

**VIMEnumerateMessages failed**

Cannot return the reference number and summary attributes for a message. Check the VIM section in Chapter 1 for more information.

**VIMGetABEntryAttributes failed**

Cannot get an attribute from an address book entry. Check the VIM section in Chapter 1 for more information.

**VIMGetMessageItem failed**

Cannot get a file attachment. Check the VIM section in Chapter 1 for more information.

**VIMGetMessageHeader failed**

Unable to retrieve the specified message header attributes. Check the VIM section in Chapter 1 for more information.

**VIMInitialize failed**

Cannot initialize the VIM library. Check the VIM section in Chapter 1 for more information.

**VIMOpenAddressBook failed**

Could not open an address book. Check the VIM section in Chapter 1 for more information.

**VIMOpenMessage failed**

Could not open a message in the cc:Mail Post Office. Check the VIM section in Chapter 1 for more information.

**VIMOpenSession failed**

Unable to open a VIM session. Make sure that the post office name, path and password are correct. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_APPLESINGLE failed**

Unable to check for the support of Applesingle. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_IMPLEMENTATION\_VERSION failed**

Unable to check for the VIM library version. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_MAX\_TEXT\_LEN failed**

Unable to check the maximum text item. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_PRODUCT failed**

Unable to check the VIM product information. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_RTF failed**

Unable to check for the support of Rich Text Format. Check the VIM section in Chapter 1 for more information.

**VIMQueryCapability \_VERSION failed**

Unable to make note of the customer's VIM release info. Check the VIM section in Chapter 1 for more information.

**VIMQueryUnreadMailCount failed**

Cannot check for the number of unread messages. Check the VIM section in Chapter 1 for more information.

**VIMRemoveMessage failed**

Failure to delete a message from the cc:Mail post office. Check the VIM section in Chapter 1 for more information.

**VIMSendMessage failed**

Cannot send a message. Check the VIM section in Chapter 1 for more information.

**VIMStatusText failed**

Unable to find a description for the VIM error. Check the VIM section in Chapter 1 for more information.

## Message Logging

**qID size: n from: xxx to: yyy**

Informational logging of a successful delivery. *qID* is the ID of the mail message, *n* is the message size (in bytes), *xxx* is the sender and *yyy* is the recipient.

## Diagnostic Logging

**7bit message contains binary data - using qp**

Binary data has been found in an ASCII message, so quoted printable encoding is used.

**7bit message is all ASCII**

The message has been verified as pure ASCII.

**Alias database is created**

A new alias database has been created.

**Alias database is not found. Try the directory database ...**

SMTPADR.BTR cannot be found, trying RULEBADR.BTR (database generated by Rules-based Addressing).

**attached non-mime text**

Non MIME text has been successfully attached.

**BinHex opening phrase not found**

The Apple attachment cannot be decoded as BinHex.

**BinHex opening colon not found**

The Apple attachment cannot be decoded as BinHex.

**Bounced unauthorized outbound message qld.**

The host of the recipient of an outbound message is banned from receiving Internet mail, so the message is bounced to the sender.

**Btrieve engine is terminated**

The Btrieve engine has successfully terminated.

**built a multipart Mime message**

A multipart message has been built after more than one attachment was found.

**cc:Mail address xxx is not found in the alias database. Try the directory database ...**

Cannot find the cc:Mail address in SMTPADR.BTR, trying RULESBADR.BTR.

**cc:Mail address xxx is not found in the directory database. Try the default ...**

No record xxx was found in RULEBADR.BTR, so default mapping is being used instead.

**cc:Mail name xxx is converted to yyy**

cc:Mail address xxx has been converted to Internet address yyy.

**ccmail2mime is processed successfully**

Translation from cc:Mail address to Mime has been completed.

**Could not find the PO name in the database**

Could not match the post office name in SMTPPOD.BTR, so the local PO name will be used.

**Could not open domain database**

SMTPPOD.BTR was not found or is locked.

**data fork not found**

When looking at an apparentAppleSingle file, the data fork was not found.

**Directory database is not found. Try the default ...**

RULEBADR.BTR was not found. The default mapping for cc:Mail addresses is being tried.

**discarding empty note part**

An empty note part is being discarded.

**discarding MIME header part**

A MIME header is being discarded.

**discarding zero length attachment**

An empty attachment is being discarded.

**Domain database is created**

A new Domain database has been created successfully.

**e-mail to this host xxx is banned**

xxx is not allowed to receive Internet email.

**Equivalent Internet subDomain xxx found in the database**

A matching record has been found for a subDomain.

**found Internet recipient xxx**

An Internet recipient xxx has been found.

**MIME database is created**

A new MIME database has been created successfully.

**n file handles are currently free (  $n \geq 10$  )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will haltInternet Exchange. When the number is not critical, this informational message is logged.

**n Intel selectors are currently free. (  $n \geq 512$  )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. n is the number of Intel selectors currently available in the system. When the number is not critical, this informational message is logged.

**no domain - recipient is local: xxx**

xxx does not contain a domain name, so is assumed to be local.

**Post Office name to search : xxx**

Trying to search PO name xxx in the domain database.

**primary/secondary mail relay host xxx found in host table yyy**

The primary/secondary mail relay host record has been found in the host table.

**processing message (xx,yy)**

CCOUT is processing the message with reference xx, yy.

**Send message to SYSMAN to confirm stopping**

CCOUT has been signaled to exit by SYSMAN before autoconversion. This message logs the confirmation signal has been returned to SYSMAN.

**start high/normal/low priority pass**

Checking for the cc:Mail message priority.

**The string is modified from xxx to yyy**

cc:Mail address xxx is modified to yyy (changes to lower case and comma handling).

**This VIM does not support RTF/AppleSingle**

The current VIM library does not support Rich Text Format/AppleSingle.

**This VIM supports RTF with/without conversion at the source**

The current VIM library may or may not support Rich Text Format with conversion.

**translating envelope sender ...**

CCOUT is translating the cc:Mail address in the ~~cc~~From field to an Internet sender for the message envelope.

**translating message sender ...**

CCOUT is translating the cc:Mail address in the ~~cc~~From field to Internet address for the message header.

**unauthorized recipient dropped: xxx**

An unauthorized recipient has been discarded.

**version x.y**

The CCOUT version number.

## **SMTPC**

The SMTP client program (*SMTPC*) delivers messages to the Internet. It regularly checks for messages queued in the *SMTP OUT* queue, establishes connections with external SMTP servers and transfers the message to the appropriate Internet mail host.

Common errors encountered by SMTPC relate to Winsock. Sometimes remote sites do not follow the expected protocols, at other times remote sites are unavailable or too busy to accept messages. In these cases, the local message will be retried later. If the delay in sending a message exceeds a configurable limit, it will be bounced back to the local sender.

Another common error is related to name resolution, either via DNS or using a local host table. These can usually be remedied by making sure that the routing configuration information is correct and checking that remote DNS servers are still operational.

## Errors Only Logging

### **\_lread failed xxx : n**

An error *n* occurred while reading from the file *xxx*. Contact technical support for further information.

### **Auth DNS answer is empty. resource does not exist!**

The authoritative DNS contains no information about a particular domain. Check with the message author to see that such a domain exists.

### **Bad parm to IsDomainNameOK**

A wrong parameter was passed to check the domain name. The domain name may not be valid.

### **BounceMimeMessage xxx failed**

Unable to bounce back the Mime message *xxx*. Check to make sure that there is enough disk space.

### **buildHostInfo: appendString failed**

Cannot append a recipient name to the recipient list. Close applications to free up more memory.

### **buildHostInfo: CreateLockFile failed**

Message files are locked during processing to prevent concurrency problems. Another application is accessing this file, and should be closed.

### **buildHostInfo: GetEnvelopeFrom failed**

Failure to obtain the *From* field from the message envelope. Contact technical support for further information.

### **buildHostInfo: out of memory**

Close other running applications to free up more memory.

### **Cannot find the SYSMAN window, already shutdown ?**

SMTPC is signaled to stop when autoconversion is started, and will send back an acknowledgment to SYSMAN when it exits. However, in this case, SMTPC cannot find the SYSMAN window to send the acknowledge. SYSMAN has shut down.

### **cannot get envelope from**

Cannot get the *From* field for a particular message. Check to see if MESH.BTR has been corrupted.

### **Close DNS database file failed**

Unable to close the DNS cache database. The file is either closed or locked.

**closesocket on socket n failed: xxx**

Cannot close socket *n* due to Winsock error *xxx*. Contact technical support for further information.

**Could not stat message file**

Unable to check the message file. Contact technical support for further information.

**CreateWindow failed**

Cannot create the main SMTPC window. Contact technical support for further information.

**delayed mail notification: cannot open msg file**

Unable to open a message file. Contact technical support for further information.

**delayed mail notification: create rfc822.msg file failed**

Failure to copy the original message header to a separate file *rfc822.msg*. Contact technical support for further information.

**Delete of xxx failed**

Unable to delete file *xxx*. Contact technical support for further information.

**DNS A record lookup failed: xxx**

Cannot find a DNS A record for the host *namexxx*. Check the address for the host using a manual tool such as *nslookup*.

**DNS answer invalid domain**

The DNS server answered incorrect domain. Contact technical support for further information.

**DNS answer invalid qdcount**

The DNS server answered incorrect *qdcount*. Contact technical support for further information.

**DNS response bit not set**

Within a successful DNS response, there is no response bit set. Contact technical support for further information.

**dotStuffData failed**

SMTPC attempts to send a final dot (.) to the remote host. However, this is not treated correctly by either end. Contact technical support for further information.

**Exiting due to configure only mode**

SMTPC cannot be run in *configure only* mode.

**failed to proceed**

The total number of cc:Mail users in the *smtpadr.btr* and *rulebadr.btr* databases exceeds the limit of 100 for the *Workgroup Edition*. Reconfigure **Internet Exchange** for 100 or fewer configured cc:Mail users.

**failed to proceed: Both smtpadr.btr and rulebadr.btr are missing**

Neither of the *filessmtpadr.btr* and *rulebadr.btr* databases have been found for the *Workgroup Edition*. To correct create either the User Alias Database through *SYSMAN*, and/or create the Directory Database via Rules Based Addressing in *SYSMAN*.

**FD\_CLOSE #n but LinkState not in use**

An attempt was made to close a socket which was not in use. No further action is needed.

**FD\_CLOSE #n ignored - LinkState in use by socket n**

A request was made to close a socket still in use by SMTPC. The request is ignored.

**FD\_CONNECT #n ignored - LinkState in use by socket #n**

A connect request was made for a socket already in use by SMTPC. The request is ignored.

**FD\_CONNECT #n ignored - not connecting mode**

A connect request was made for a socket while SMTPC was not in connecting mode. The request is ignored.

**FD\_CONNECT: WSAAsyncSelect RWC on socket n failed: xxx**

A WSAAsyncSelect call failed on socket *n* with Winsock errorxxx. Contact technical support for further information.

**FD\_READ #n ignored - LinkState in use by socket #n**

A read signal came in for a socket while SMTPC was not expecting it. The request is ignored.

**FD\_WRITE #n ignored - LinkState in use by socket #n**

A write signal came in for a socket while SMTPC was not expecting it. The request is ignored.

**fileopen failed: xxx**

Cannot open filexxx. The file might not exist. If it does, contact technical support for further information.

**finishUp: WSAAsyncSelect NULL on socket #n failed: xxx**

A WSAAsyncSelect call failed on socket *n* with Winsock errorxxx. Contact technical support for further information.

**getHostAddr: gethostbyname hostname failed: xxx**

SMTPC was unable to do a host lookup for the remote host. This may not be a problem if SMTPC can find the information in a different manner.

**GetIPAddrOfMX: Invalid domain name parm: xxx**

The domain xxx is invalid. Tell the message sender to check the email address.

**getRelayHostAddr: No relay host is specified in [Routing] session of ima.ini**

There is no mail relay host set in IMA.INI. Add one to the file.

**Host table lookup failed: xxx**

Cannot find the domain xxx in the host table.

**ima\_dn\_expand failed at n**

SMTPC was unable to expand the domain name at the <sup>th</sup> byte. Contact technical support for further information.

**ima\_dn\_skipname failed at n**

Cannot skip the domain name inside the DNS response string. It fails at the <sup>th</sup> byte. Contact technical support for further information.

**ima\_res\_init failed at rc**

Unable to initialize DNS lookup. Contact technical support for further information.

**ima\_res\_query xxx failed: yyy**

The DNS lookup failed due to yyy. Contact technical support for further information.

**inBuf: out of memory**

SMTPC ran out of memory. Close other applications to free up more memory.

**InitInstance failed**

Unable to initialize the SMTPC. Contact technical support for further information.

**initLink failed**

Failure to initialize a new connection. Contact technical support for further information.

**Invalid domain name parm: xxx**

Incorrect format domainxxx. Check with the sender of the message to find the correct domain.

**LinkState for socket #n has NULL outBuf**

An internal data structure is invalid. Contact technical support for further information.

**Local host table lookup failed for: xxx**

Failure to resolve local hostxxx by host table lookup. Enter the local host into the host table.

**Mail relay host table lookup failed**

Unable to lookup the mail relay host in the host table. Enter the mail relay host into the host table.

**MimeInitialize failed**

Cannot Initialize MIME related variables when SMTPC starts. Contact technical support for further information.

**MX dlen inconsistent with data**

The data length of an MX record is inconsistent with the original information. Contact technical support for further information.

**MX no memory**

SMTPC ran out of memory. Close other applications to free up more memory.

**MX record lookup failed: xxx**

Unable to find the MX record of the hostname xxx. No further action is needed.

**n file handles are currently free ( n < 10 )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. Close other applications and opened files to free up more file handles.

**n Intel selectors are currently free. ( n < 512 )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. **n** is the number of Intel selectors currently available in the system. If there are less than 512 Intel selectors in the system, this message will be logged as an error. Close other applications to free up Intel selectors.

**netGetLine: invalid socket n**

A line reading operation failed as socket **n** is invalid. Contact technical support for further information.

**netGetLine: line too long: n chars**

The line contains too many characters. No further action is needed.

**netGetLine: null input buffer**

An internal data structure is invalid. Contact technical support for further information.

**netGetLine: zero length buffer**

An internal data structure is invalid. Contact technical support for further information.

**netGetLine on socket #n failed**

Unable to get data from socket **n**. Contact technical support for further information.

**netPutLine: invalid socket**

Writing a line of data to the network failed, due to an invalid socket. Contact technical support for further information.

**netPutLine: null input buffer**

An internal data structure is invalid. Contact technical support for further information.

**netReadBlock on socket #n failed: xxx**

Cannot read data from socket **n** due to reason **xxx**. Contact technical support for further information.

**netWriteBlock: invalid socket**

Writing a block of data to the network failed, due to an invalid socket. Contact technical support for further information.

**netWriteDataBlock failed**

Writing a block of data to the network failed. Contact technical support for further information.

**no SMTP daemon available at host**

The remote host has no SMTP daemon listening for email, so no connection can be made. The message will be retried later.

**null A in DNS answer**

Empty A record in the reply. SMTPC will attempt delivery using the host table and/or mail relay host(s).

**Null A resource in answer**

There is no A resource. SMTPC will attempt delivery using the host table and/or mail relay host(s).

**Null MX resource in answer**

No MX resource record. SMTPC will attempt delivery using the host table and/or mail relay host(s).

**Null NS resource in DNS answer**

No name server resource record. SMTPC will attempt delivery using the host table and/or mail relay host(s).

**Open DNS database file xxx failed**

An error occurred while opening the DNS cache database. SMTPC will attempt delivery using the host table and/or mail relay host(s).

**outBuf: out of memory**

Close other applications to free up more memory.

**processQ: connect on socket #n failed: xxx**

Cannot make a connection for socket #n. Contact technical support for further information.

**processQ: initLink failed**

Unable to initialize link. Contact technical support for further information.

**processQ: socket allocation failed: xxx**

Failure to assign a new socket due to xxx. Contact technical support for further information.

**processQ: WSAAsyncSelect on socket #n failed: xxx**

WSAAsyncSelect Winsock error xxx. Contact technical support for further information.

**processQWrapUp: appendString failed**

Cannot append a recipient name to the recipient list. Close other applications to free up more memory.

**processQWrapUp: BounceMimeMessage xxx failed**

Failure to bounce a MIME message. Make sure that there is enough free disk space.

**processQWrapUp: CreateLockFile failed**

Message files are locked during processing to prevent concurrency problems. Here, the locking process failed. Contact technical support for further information.

**processQWrapUp: Status update phase terminated**

SMTPC stops to update the status. No further action is needed.

**Protocol error: expecting 354**

There was a protocol error during an SMTP session. The message was bounced to the sender.

**qID to recipient: rerouted inwards**

The message *qID* is rerouted inwards, as it is for a local recipient.

**RerouteMimeMessage failed**

An attempt to reroute a message has failed. Check the logfile for more information.

**Resolve Mail relay host via DNS failed**

Cannot resolve the mail relay host name. There may be no record in the DNS. No further action is needed.

**Retrieved MX record for hostname via database failed**

Cannot find the MX record for the hostname. There may be no record in the DNS cache database. No further action is needed.

**Send data failure: 250 expected**

Send data to peer host fails. Contact technical support for further information.

**send error on socket #n: xxx**

Failure to send via socket *n*, with Winsock error *xxx*. Contact technical support for further information.

**shutdown on socket #n failed: xxx**

Cannot shutdown socket *n* with Winsock error *xxx*. No further action is needed.

**Shutting down**

SMTPC is exiting. No further action is needed.

**Timeout socket #n**

The SMTP session on socket *n* will be closed due to a timeout. The message will be retried later.

**Unexpected READ\_NEXT\_BLOCK: msg file not open**

Attempt to read data when the message file has not been opened. Contact technical support for further information.

**Unexpected READ\_NEXT\_BLOCK: not in data mode**

A read data signal was received at an unexpected time. Contact technical support for further information.

**Unexpected record class in DNS additional section**

**Unexpected record class in DNS answer section**

**Unexpected record class in DNS authority section**

**Unexpected record type in DNS additional section**

**Unexpected record type in DNS answer section**

**Unexpected record type in DNS authority section**

Contact the postmaster at the DNS server to find out why the DNS reply isn't as expected.

**UnregisterClass failed**

An error occurred when exiting SMTPC. Reboot Windows to ensure that the 3D style of windows works correctly.

**Your license for Internet Exchange has expired - please contact technical support**

**Internet Exchange** has expired. Please contact technical support for a new license key.

**Warning: xxx.msg has disappeared!**

Mail file xxx.msg has cannot be found. Contact technical support for further information.

**Warning: could not stat xxx.msg**

Could not check for information of filexxx.msg. Contact technical support for further information.

**Warning: dataBufSize reduced from n to maximum of 32767**

When dataBufSize is larger than 32767, it will be reset to 32767. No further action is needed.

**Warning: netBufferSize reduced from n to maximum of 32767**

When netBufferSize is larger than 32767, it will be reset to 32767. No further action is needed.

**Warning: Timer fired for inactive socket #n**

A timer went off for an unused socket, and so will be ignored.

**Windows is compacting memory due to shortage.**

Insufficient memory. Close other applications to free up more memory.

**WSACleanup failed: xxx**

Winsock could not be cleanly terminated when SMTPC exits.

## Message Logging

### **qID bounced for all users at host xxx**

Message *qID* for users at hostxxx encountered an SMTP permanent error. It will be bounced back to the sender.

### **qID returned to sender: cannot parse recipient: xxx**

SMTPC cannot parse the recipient address xxx, which is an invalid Internet address.

### **qID returned to sender: recipient has no hostname: xxx**

SMTPC will bounce messages with unqualified recipients if the *RejectUnqualifiedAddresses* option is not set.

### **qID returned to sender: too big (n bytes)**

A message which exceeds the local send limit has been bounced.

### **qID returned to sender: unable to deliver after n hours**

A message is being sent back to the sender after SMTPC failed to deliver it after hours.

### **qID returned to sender: unable to resolve hostname: xxx**

SMTPC cannot resolve a hostname, so it bounces the message. Check the DNS and host table file settings to see why host resolution didn't work. Also check the spelling for the destination host.

### **qID returned to sender: unable to parse sender: xxx**

SMTPC cannot resolve the sender addressxxx which is probably an invalid Internet address.

### **qID to recipient: bounced n bytes**

The message *qID* (size *n* bytes) was successfully bounced to the sender.

### **qID to recipient: delivered n bytes**

The message *qID* (size *n* bytes) is successfully sent to the recipient.

### **qID will be retried later**

The message *qID* cannot be sent, so will be retried later.

### **Retry qID after xxx**

SMTPC will retry the message again at time xxx.

### **Unable to parse sender: xxx**

SMTPC cannot resolve the sender addressxxx which is probably an invalid Internet address.

## SMTP Session Logging

**Note:** many messages begin with the characters *s* to show which socket the message is being written to. This helps in coordinating which messages in the logfile are going to which session.

**Calling alternate MX MXhost on socket #n**

When the first MX host is not available, SMTPC will try other MXs hosts.

**Calling peerhost on port m using socket #n**

SMTPC is calling a host on TCP port *m*, socket *n*.

**Calling Secondary Mail Relay Host xxx on socket #n**

When the primary relay host is not available, SMTPC will try to call secondary relay host.

**DNS unavailable**

Domain Name Server did not respond. Make sure that one or more mail relay hosts are configured, or a complete host table file.

**Invalid [Routing]NameResolution: xxx**

*xxx* is not a valid method of name resolution. Reconfigure name resolution from the *Configure Routing* screen.

**Message qID not yet due for retry**

The retry time for message *qID* is not yet due.

**Resolved mail relay via DNS lookup.**

SMTPC resolved the mail relay hostname using DNS.

**Resolved mail relay via host table lookup.**

SMTPC resolved the mail relay hostname using the host table.

**Resolved xxx via host table lookup**

SMTPC resolved host *xxx* using the host table.

**Retrieved MX record for xxx via database**

SMTPC found an MX record for hostname *xxx* in the DNS cache database.

**Retrieved MX record for xxx via DNS**

SMTPC found an MX record for hostname *xxx* using DNS.

**s> .**

Sent *.* to the peer host on socket *s*.

**s> DATA**

Sent *DATA* to the peer host on socket *s*.

**s> HELO ourhostname**

Sent *HELO* to the peer host on socket *s*.

**s< line**

Received a line from the peer host on socket *s*.

**s> MAIL FROM:<sender>**

Sent *MAIL FROM:<sender>* to the peer host on socket *s*.

**s> RCPT TO:<recipient>**

Sent *RCPT TO:<recipient>* to the peer host on socket *s*.

**s> RSET**

Sent *RSET* to the peer host on socket *s*.

**s> QUIT**

Sent *QUIT* to the peer host on socket *s*.

**Socket #n closed with error=m**

The socket *n* closed unsuccessfully with error *m*. Contact technical support for further information.

**Socket #n connect failed with error=m**

A connection attempt failed on socket *n* with error *m*. Contact technical support for further information.

**Socket #n connection aborted**

A connection attempt has been aborted. Contact technical support for further information.

**Socket #n connection refused by remote side**

The peer host has rejected a connection. This might be due to an overload at the peer site. The message will be retried later.

**Socket #n connection request timed out**

A connection timeout has occurred, probably due to an overload at the remote site. The message will be retried later.

**Socket #n network subsystem has failed**

The TCP stack has failed. Contact technical support for further information.

**Socket #n reports host unreachable**

SMTPC discovers an unreachable peer host. Contact technical support for further information.

**Socket #n reports network subsystem has failed**

The TCP stack has failed. Contact technical support for further information.

**Socket #n reports network unreachable**

A destination network cannot be reached. Contact technical support for further information.

**Socket #n reports no buffers available**

There are no free buffers in the TCP stack. Restart the gateway to free up more buffers.

**Socket #n reset by remote side**

The remote side shutdown a connection. The message will be retried later.

**Stack Information**

The TCP/IP stack details are logged.

**Using domain literal for [a.b.c.d]**

SMTPC is using the raw IP address *a.b.c.d*.

**xxx is local host**

The host name *xxx* is local.

**Diagnostic Logging****Btrieve engine is terminated**

The Btrieve database engine has closed successfully.

**CNAME to xxx skipped**

The CNAME record of hostname *xxx* has been skipped.

**dataBufSize of n used**

A data buffer of *n* bytes is being used.

**Delayed mail notification processed successfully**

The delayed mail notification message has been sent to the sender successfully.

**DNS answer not authoritative**

The DNS response received was not from an authoritative server.

**DNS answer recursion avail bit not set**

The DNS recursion bit was not set in the last response.

**Failed to find A record for (Alias) MX xxx.**

Unable to find the A record for the hostname *xxx*.

**finishing up**

SMTPC is terminating.

**got FD\_CONNECT with error code=n**

An error *n* occurred while connecting to the peer host. Contact technical support for further information.

**ignored an FD\_READ**

An unexpected read signal has been ignored.

**IP for (Alias) MX xxx is a.b.c.d**

When the MX record points to a CNAME, another query for an A record is issued. The A record for hostname xxx has been found successfully.

**Issue MX query again to auth name server xxx**

An MX query is being reissued to an authoritative DNS server.

**just did WSAAsyncSelect NULL**

A WSAAsyncSelect has been executed.

**MaxDNSRecordNumber in [Gateway] section of ima.ini is 0, no DNS caching will be used**

DNS caching will not be used by SMTPC.

**Message qID deleted**

The message *qID* has been successfully delivered.

**n file handles are currently free (  $n \geq 10$  )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. When the number is not critical, this informational message is logged.

**n Intel selectors are currently free. (  $n \geq 512$  )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment. *n* is the number of Intel selectors currently available in the system. When the number is not critical, this informational message is logged.

**NameResolution in [Routing] section of ima.ini is HostOnly, no DNS caching will be used**

When the *HostOnly* option is set, the DNS cache database is not used.

**NameResolution in [Routing] section of ima.ini is MailRelayHostOnly, no DNS caching will be used**

When the *MailRelayHostOnly* option is set, the DNS cache database is not used.

**netBufferSize of n used**

A network buffer size of *n* is being used.

**netRead: m bytes on socket #n**

SMTPC has read *m* bytes from socket *n*.

**No auth name servers known for domain xxx**

No authoritative DNS server was found for a particular domain.

**not going to DATA**

SMTPC doesn't send the DATA command, as the remote recipient has been rejected.

**Not restarting SMTPC according to [Gateway] SMTPCrestartIfNotDone setting**

SMTPC is not restarting the SMTP OUT queue, as the option `SMTPCrestartIfNotDone` is not set.

**resolve A record for xxx**

SMTPC is looking for an A record for host xxx.

**Send message to SYSMAN to confirm stopping**

SMTPC has been signaled to exit by SYSMAN before autoconversion. Before exiting, sends an acknowledge to SYSMAN.

**SendMessageSize (n) in [Gateway] section of ima.ini is too small, reset to 8192**

If *n* is smaller than 8192 bytes, 8K will be used instead.

**skip CNAME**

A CNAME record has been skipped.

**Target MX will be xxx at a.b.c.d**

SMTPC will connect to the MX forwarder.

**version x.y**

This is the SMTPC version number.

**Warning: trying to write 0 bytes**

SMTPC intended to write to the network, but had no data to write.

## SMTPD

*SMTPD* is a background Windows process that listens for incoming SMTP connections on TCP port 25, and then accepts incoming messages from hosts which connect to it. When a connection request is detected, it creates a new sub-process that manages the new connection. *SMTPD* is capable of maintaining many simultaneous SMTP connections, the maximum number being a configurable parameter that can be set based upon the performance of the underlying TCP/IP stack. This ability to handle concurrent SMTP sessions reduces delay in message delivery as remote mail forwarders do not have to wait for an existing SMTP session to complete.

Many of the errors encountered by SMTPD relate to Winsock. Sometimes remote sites do not follow the expected protocols, at other times timeouts occur and the connection is closed locally. In these cases, the remote site usually tries to deliver the message again later. Other errors are related to name resolution, either via DNS or using a local host table. These can usually be remedied by making sure that the routing configuration information is correct and checking that remote DNS servers are still operational.

## Errors Only Logging

**bind on socket #n failed: xxx**

SMTPD cannot bind to socket *n*, and will exit. Contact technical support for further information.

**Cannot find the SYSMAN window, already shutdown ?**

SMTPD is signaled to stop when autoconversion is started, and will send back an acknowledgment to SYSMAN when it exits. However, in this case, SMTPD cannot find the SYSMAN window to send the acknowledge. SYSMAN has probably shut down.

**Close DNS database file xxx failed**

Unable to close the DNS cache database xxx. Contact technical support for further information.

**connect failed: n**

SMTPD cannot connect to a remote client, with Winsock error code. Contact technical support for further information.

**Connection on socket #n terminated. Too many bad commands.**

If more than 25 bad commands are issued by the peer host, the connection on socket will be closed. Try to contact the postmaster at the remote site to let them know of the problem.

**CreateEnvelope failed**

Unable to create the envelope in for a message. Contact technical support for further information.

**CreateLockFile failed**

Message files are locked during processing to prevent concurrency problems. Another application is accessing this file, and should be closed.

**CreateStatusFile failed**

Failure to create message status in the message database. Contact technical support for further information.

**daemonInit failed**

Unable to initialize SMTPD, so it exits. Contact technical support for further information.

**daemonInit: socket failed: xxx**

Cannot open a socket while initializing. Contact technical support for further information.

**data: putline failed**

Cannot write data on the socket during the DATA phase. Contact technical support for further information.

**Decrypt of cc:Mail post office password from xxx failed**

The cc:Mail post office password is incorrect. Enter the valid password *Configure Post Office*.

**doLine failed**

An error occurred processing a line of data from the remote peer. Contact technical support for further information.

**doLine: putline failed**

An error occurred sending a line of data to the remote peer. Contact technical support for further information.

#### **Exit**

SMTPD is about to exit.

#### **Exiting due to configure only mode**

SMTPD will not run in *configure only* mode.

#### **Exiting due to fewer than ten file handles available**

When a file is opened, one file handle is used for managing the I/O operation. It shows the current number of free file handles available in the system. Insufficient file handles will halt further operation of file I/O. SMTPD exits when the number of free file handles is less than 10.

#### **Exiting due to send only mode**

SMTPD will not run in *send only* mode.

#### **filecreate failed**

Cannot create a file. Check to make sure there is enough free space on the local disk.

#### **getline from hostfile failed**

Unable to read a line from host file. Contact technical support for further information.

#### **GetNewQueueId failed**

Failure to create a new qID for a message. Contact technical support for further information.

#### **getNextLink: no more links available**

The link table is full, as there are too many incoming connections. Set a limit to the number of incoming sessions under *Configure Gateway*.

#### **host xxx unauthorized to send mail**

Host xxx does not have permission to send Internet mail to the local host.

#### **Host table lookup for xxx failed.**

Cannot find the local host namexxx in the host table, so SMTPD will exit. Add this entry to the local host table, as it is needed by **Internet Exchange**.

#### **initClient failed: xxx**

Unable to accept an incoming connection, due to Winsock errorxxx. Contact technical support for further information.

#### **initClient: accept on socket #n failed: xxx**

Unable to accept an incoming connection, due to Winsock errorxxx. Contact technical support for further information.

#### **initClient: getNextLink failed for socket #n**

Unable to initialize an incoming connection, due to Winsock error ~~xxx~~. Contact technical support for further information.

**initClient: WSAAsyncSelect on socket #n failed: xxx**

Unable to perform WSAAsyncSelect for an incoming connection, due to Winsock error xxx. Contact technical support for further information.

**InitInstance failed**

Unable to initialize SMTPD. Contact technical support for further information.

**LinkState for socket #n has NULL outBuf**

An internal structure is not as expected. Contact technical support for further information.

**listen on socket #n failed: xxx**

An error occurred listening on socket ~~t~~, so SMTPD will exit. Contact technical support for further information.

**MimeInitialize failed**

Cannot Initialize MIME related variables. Close other applications to free up more memory.

**n file handles are currently free (n < 10)**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. Close other applications and opened files to free up more file handles.

**n Intel selectors are currently free. (n < 512)**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment ~~ntis~~ is the number of Intel selectors currently available in the system. If there are less than 512 Intel selectors in the system, this message will be logged as an error. Close other applications to free up Intel selectors.

**netGetLine: invalid socket**

An invalid socket has been found when trying to read from the network. Contact technical support for further information.

**netGetLine: line too long: n chars**

The line contains too many characters. Contact the postmaster at the remote site to inform him/her of the problem.

**netGetLine: null input buffer**

An internal structure is missing. Contact technical support for further information.

**netGetLine: zero length buffer**

An internal structure is missing. Contact technical support for further information.

**netGetLine on socket #n failed**

SMTPD was unable to read a line from the network. Contact technical support for further information.

**netPutLine: invalid socket**

SMTPD was unable to write a line to the network. Contact technical support for further information.

**netPutLine: null input buffer**

An internal structure is missing. Contact technical support for further information.

**netReadBlock: recv on socket #n failed: xxx**

Cannot read data from socket ~~n~~ due to reasonxxx. Contact technical support for further information.

**netWriteBlock: invalid socket**

Cannot write data to an invalid socket. Contact technical support for further information.

**netWriteBlock:send on socket#n failed: xxx**

Cannot write a block of data for socket *n* due to Winsock error xxx.

**Out of memory**

Out of memory. Close other applications to free up more memory.

**Open host file xxx failed**

Unable to open the host table at locationxxx. Make sure that the path for the host table is correct.

**Open peer database fail #n**

Cannot open peer database due to Btrieve error code Contact technical support for further information.

**out of timers/clocks - please delete some and restart**

All Windows timers are in use. Close other applications to free up some timers.

**Resolve xxx by address failed: yyy**

Cannot resolve hostnamexxx due to yyy. Contact technical support for further information.

**s> 421 Error - out of memory**

Out of memory. SMTPD will exit. Close other applications to free up more memory.

**send error on socket #n: xxx**

A Winsock errorxxx error occurred while sending a message on socket Contact technical support for further information.

**send failed: n**

A send attempt failed with error code. Contact technical support for further information.

**SetMessageQueue failed**

SMTPD will exit due to a failed system call. Contact technical support for further information.

**shutdown on socket #n failed: xxx**

Cannot shutdown the socket#n due to xxx. Contact technical support for further information.

**Shutting down after signal from SYSMAN**

SYSMAN signaled SMTPD to shutdown.

**Shutting down on Windows exit**

SMTPD is exiting due to Windows exiting.

**socket failed: xxx**

A socket operation failed. Contact technical support for further information.

**socket #n network subsystem has failed**

The TCP/IP network has failed. Reboot Windows and restart the gateway.

**Socket not in use: FD\_CLOSE**

A close request came in for a socket not in use. No further action is needed.

**UnregisterClass failed**

Error in releasing resources when exiting SMTPD. Reboot Windows to ensure 3D style will be present.

**VIMInitialize failed**

Cannot initialize the VIM library. Check the VIM section in Chapter 1 for further information.

**VIMOpenSession failed: xxx**

Unable to open a VIM session. Make sure the post office name, path and password are correct. Check the VIM section in Chapter 1 for further information.

**Warning: xxx pretending to be yyy**

A remote hostxxx is pretending to beyyy, as revealed by SMTPD host resolution. Contact the remote postmaster to inform them of this discrepancy.

**Warning: could not stat qID.msg**

Cannot check information for a message file. Contact technical support for further information.

**Warning: dataBufSize reduced from n to maximum of 32767**

When dataBufSize is larger than 32767, it will be reset to 32767.

**Warning: netBufferSize reduced from n to maximum of 32767**

When netBufferSize is larger than 32767, it will be reset to 32767.

**Windows is compacting memory due to shortage**

Insufficient memory. Shutdown other applications to free up more memory.

**winsock api socket() fails**

Cannot open a valid socket. Check the Winsock section in Chapter 1 for further information.

**WSAAsyncSelect NULL on socket #n failed: xxx**

A WSAAsyncSelect call failed, so SMTPD will exit. Contact technical support for further information.

**WSACleanup failed: xxx**

Winsock did not terminate properly before SMTPD exited. Contact technical support for further information.

**WSAStartup failed: n**

Winsock did not startup correctly, so SMTPD exited. Contact technical support for further information.

**WSAAsyncSelect RWAC on socket #n failed: xxx**

A WSAAsyncSelect call failed, so SMTPD will exit. Contact technical support for further information.

## Message Logging

**Message received: qId size: n bytes**

A message *qId* of *n* bytes was received.

## SMTP Session Logging

**Note:** most messages begin with the characters *s>* to show which socket the message is being written to. This helps in coordinating which messages in the logfile are going to which session.

**Accepting connection on socket#n.**

SMTPD accepted a new connection on socket *n*.

**Listening on port n using socket#m; MAXSOCKETS = n**

SMTPD is listening on TCP port *m*. The TCP stack can support at most *n* connections.

**s> 211 The following commands are available:**

SMTPD sends a help line to the remote host.

**s> 211 HELO MAIL RCPT DATA RSET VRFY EXPN HELP NOOP QUIT**

SMTPD sends a help line to the remote host.

**s> 220 ourhostname IMA SMTP version\_number Server serial\_number ready at xxx**

SMTPD sends a greeting to the remote host, identifying the local hostname, SMTPD version, serial number and time.

**s> 221 Goodbye - have a nice/wonderful day!**

SMTPD confirms a remote QUIT command. The word ~~dice~~ or *wonderful* will appear randomly.

**s> 221 ourhostname closing transmission channel: timeout**

A connection is closed due to a timeout. The other side will probably retry the message later.

**s> 250 localhostname: Hello [a.b.c.d] - nice to meet you!**

SMTPD greets a remote host whose IP address it cannot determine.

**s> 250 localhostname: Hello helohostname - nice to meet you!**

SMTPD answers a remote HELO command.

**s> 250 localhostname: Helo helohostname (resolvedhostname) - you are an imposter!**

SMTPD informs a remote host that its declared hostname doesn't match with the name found when resolving its IP address.

**s> 250 OK**

SMTPD acknowledges various remote SMTP commands.

**s> 250 OK - address**

SMTPD acknowledges a remote *MAIL FROM:* command.

**s> 250 OK - recipient**

SMTPD acknowledges a remote *RCPT TO:* command.

**s> 354 Start mail input, finishing with <CR><LF>.<CR><LF>**

SMTPD acknowledges a remote *DATA* command.

**s> 421 Error - internal error**

An internal error has occurred. Check the logfile for further information.

**s> 421 local limit of m sessions exceeded. Please call back later**

When the maximum configured number of connections is reached, no more connection will be accepted.

**s> 421 Out of memory: retry later**

SMTPD ran out of memory. Shutdown other applications to free up more memory.

**s> 421 SMTP service is being shutdown.**

SMTPD is about to shutdown.

**s> 451 command refused: still resolving hostname**

All commands will be refused when SMTPD is still trying to resolve the hostname. Normally, the remote site will not issue any commands until this process has completed.

**s> 500 blank line ignored**

SMTPD has ignored a blank line from a remote site.

**s> 500 command: Unknown command**

An unknown command has been issued by the peer host.

**s> 500 commandline command not implemented**

An unknown command has been issued by the peer host.

**s> 500 ESMTP not spoken here**

This message appears when the peer host issues *EHLO* command. SMTPD does not support extended SMTP.

**s> 500 Line too long (1000 chars max)**

SMTPD will not accept a line with more than 1000 characters.

**s> 500 MAIL xxx: unknown command**

SMTPD rejects a malformed *MAIL FROM:* command from a remote host.

**s> 500 RCPT xxx: Unknown command**

SMTPD rejects a malformed *RCPT TO:* command from a remote host.

**s> 501 Bad hostname in HELO: xxx**

An invalid hostname was included in a *HELO* command from a remote host.

**s> 501 bad sequence of commands**

SMTPD is ignoring a command sent out of order by a remote host.

**s> 501 HELO must be followed by your full hostname**

The remote host sent a *HELO* command without appending its FQDN.

**s> 501 MAIL FROM: no address specified**

SMTPD rejects a malformed *MAIL FROM:* command from a remote host.

**s> 501 MAIL FROM: unrecognized address: xxx**

SMTPD rejects a *MAIL FROM:* command with an invalid address from a remote host.

**s> 501 RCPT TO: no address specified**

SMTPD rejects a malformed *RCPT TO:* command from a remote host.

**s> 501 RCPT TO: unrecognized address: xxx**

SMTPD rejects a *RCPT TO:* command with an invalid address from a remote host.

**s> 550 host peerhostname is not authorized to connect to localhostname.**

A remote host is not permitted to send mail to the local host.

**s> 550 recipient not a local mailing list**

SMTPD answers negatively to a remote *EXPN* command.

**s> 550 recipient not a local user**

SMTPD answers negatively to a remote VRFY command.

**s> 550 unqualified recipient rejected**

SMTPD rejects an unqualified address when `rejectUnqualifiedAddresses` is set under the *Options* section of IMA.INI.

**s> 550 unqualified sender rejected**

SMTPD rejects an unqualified address when `rejectUnqualifiedAddresses` is set under the *Options* section of IMA.INI.

**s> 553 non local recipient rejected**

SMTPD rejects a remote recipient when `rejectRemoteRecipients` is set under the *Options* section of IMA.INI.

**s> 553 unauthorized recipient: rejected**

A local recipient is unauthorized to receive email.

**s< line**

A line is received from a remote host while in *DATA* mode.

**Socket #n closed with error=m**

An error has occurred when closing a session.

**Socket #n connection aborted**

A remote connection has been aborted. Contact technical support for further information.

**Socket #n network subsystem has failed**

The network subsystem has failed. Reboot Windows and restart the gateway.

**Socket #n reset by remote side**

The remote host has reset a connection. No action is needed.

**Stack Information**

The TCP/IP stack details are logged.

**Diagnostic Logging****attempting to cleanup old SMTPD main socket**

SMTPD attempts to close the old socket during startup.

**Btrieve engine is terminated.**

The Btrieve database engine has closed terminated successfully.

**checking timeout for socket #n**

SMTPD is checking for timeouts on the various open sockets.

**dataBufSize of n used**

A data buffer of  $n$  bytes is being used.

**endClient: socket #n**

A connection is being shutdown.

**finishUp: socket n**

SMTPD is being shutdown.

**got FD\_ACCEPT with error code=n**

An error occurred when accepting a remote connection. The remote side will probably retry later on.

**got msg #n**

A Windows message has been received.

**line too long: line**

SMTPD has received a line of data which is too long. Try to contact the remote postmaster to inform him/her of the situation.

**looking up old SMTPD main socket**

When *killSMTPDzombie* in the *Options* section is set, SMTPD will try to cleanup the old main socket before binding a new one.

**MaxDNSRecordNumber in [Gateway] section of ima.ini is 0, no DNS caching will be used**

DNS caching has been disabled.

**maxLink increased to n**

The number of open connections has increased to  $n$ .

**maxLink reduced to n**

The number of connections has decreased to  $n$ .

**n file handles are currently free (  $n \geq 10$  )**

When a file is opened, one file handle is used for managing the I/O operation. This message shows the current number of free file handles when it falls to a critical number. Insufficient file handles will halt **Internet Exchange**. When the number is not critical, this informational message is logged.

**n Intel selectors are currently free. (  $n \geq 512$  )**

This message appears in Windows NT system only. In place of the segment address, the segment register contains a selector that selects a descriptor. The descriptor is used to show the location, length and access right of the memory segment.  $n$  is the number of Intel selectors currently available in the system. When the number is not critical, this informational message is logged.

**nConnections down to m**

The number of open connections has fallen to  $m$ .

**netBufferSize of  $n$  used**

A network buffer of  $n$  bytes is being used.

**netWriteBlock WSAEWOULDBLOCK socket # $n$**

SMTPD delays writing data to the network due to congestion. It will write the data later, once the congestion has disappeared.

**next free link found:  $n$**

A new connection has been opened.

**Received Auto Shutdown signal from SYSMAN**

SMTPD has been signaled to shutdown by *SYSMAN*.

**s2l: links not found:  $n$**

SMTPD cannot find a link which matches socket  $n$ . No action is needed.

**Send message to *SYSMAN* to confirm stopping**

SMTPD has been signaled to exit by *SYSMAN* before autoconversion. Before exiting, it will send an acknowledgment to *SYSMAN*.

**SMTP daemon is being shutdown**

SMTPD is about to exit.

**version  $x.y$**

This is the SMTPD version.

## DNS RESOLVER

**Internet Exchange** uses DNS (Domain Name System) to route messages to the Internet. The DNS is an Internet network service that provides for the storage and retrieval of information associated with domain names. In the context of Internet mail, the records that are of interest are mail exchanger (MX) records and address (A) records. These records allow mail for any system on the Internet to be routed to the appropriate host (which may or may not be the destination) for delivery to the final destination. Although more complex than a local host file, it is immensely more capable, and maintains more up-to-date information.

Common errors occurring within the DNS system relate to lack of MX records for a particular host. In this case, the A record is usually retrieved, and is adequate for message delivery. On other occasions, the DNS reply will be incorrectly formatted, but this is unusual. In the case of no DNS response at all, typically it is a local configuration problem.

### Errors Only Logging

**buffer too small**

The buffer size is too small to hold the required information. Contact technical support for further information.

**connect failed: n**

Unable to make a connection through Winsock. Contact technical support for further information.

**connection refused**

A connection to the name server is refused, probably due to overloading. The DNS query will be retried. Check that the DNS servers have been configured correctly.

**DNS answer invalid domain**

An invalid response has been received from DNS. Contact technical support for further information.

**DNS no memory**

The DNS system is low on memory. Shutdown other applications to free up more memory.

**DNS record response bit not set**

The response bit was not set in a reply to a DNS query. Contact the postmaster at the DNS server to find out what is going wrong.

**general failure: m; n**

A general Winsock failure has occurred. Contact technical support for further information.

**ima\_dn\_comp failed**

Unable to compile the DNS query. Contact technical support for further information.

**ima\_dn\_expand failed at n**

Unable to expand the domain name. Contact technical support for further information.

**ima\_dn\_skipname failed at n**

Cannot skip the domain name in the DNS response string. Contact technical support for further information.

**ima\_res\_init failed at n**

Unable to initialize DNS. Contact technical support for further information.

**ima\_res\_query xxx failed: n**

Unable to resolve the hostname xxx. Contact technical support for further information.

**ima\_sethrent: unable to open hostfile: xxx**

Cannot open the host table xxx. Check that the host table is configured correctly.

**mkquery failed**

Unable to perform a DNS query. Contact technical support for further information.

**missing name server address in IMA.INI under [Routing]: xxx**

A name server address was not found in IMA.INI. Configure a valid address via the *Configure Routing* screen.

**MX lookup not implemented**

MX lookup is not implemented in the name server. Contact technical support for further information.

**MX query refused**

MX query is rejected by the name server. Contact the postmaster at the DNS server to find out what is going wrong.

**nameserver could not process this query**

The current query could not be processed by the name server. Contact technical support for further information.

**nameserver unable to interpret query**

The nameserver could not interpret a DNS query. Contact technical support for further information.

**no answer obtained**

No response was obtained from the name server. Another nameserver will be tried, if configured. If not, the host table and/or mail relay host may be tried.

**no MX record found**

No MX record was found. The DNS system will search for an A record next.

**no name server responded**

No DNS responses were received. The host table and/or mail relay host may be tried next.

**Null DNS resource in answer**

There is no DNS RR in the response. Contact the postmaster at the DNS server to find out what is going wrong.

**recv failed: n**

A Winsock receive operation failed. Contact technical support for further information.

**resolve a.b.c.d.in-addr.arpa failed**

DNS was unable to do a reverse DNS lookup. Contact technical support for further information.

**resolve hostname.domain failed**

There was a failure to do DNS lookup for a domain. The host table and/or mail relay host may be tried next.

**send error**

Cannot send a query to the name server. Contact technical support for further information.

**send failed: n**

An error occurred sending data. Contact technical support for further information.

**socket (dg) failed: n**

An error occurred creating a datagram socket. Contact technical support for further information.

**socket (vc) failed: n**

An error occurred creating a virtual circuit socket. Contact technical support for further information.

**timeout**

A timeout occurred while DNS query. Further attempts will be made after a delay.

**truncated answer**

The DNS response was truncated. Contact technical support for further information.

**undefined error**

An unknown error has occurred during name server query. Contact technical support for further information.

**Unexpected record class in DNS answer section**

**Unexpected record type in DNS answer section**

An unexpected response was received from a DNS query. Contact technical support for further information.

## **MIME**

MIME (Multipurpose Internet Mail Extensions) is the Internet standard for specifying how non-textual and multipart messages are encoded for transmission over the Internet. This standard defines certain encoding and decoding methods and the format in which attachments are to be labeled and identified within the message body. Its use by Internet Exchange allows easy transport of any and all types of cc:Mail attachments transparently over the Internet.

Common errors encountered by the MIME library relate to incorrectly formatted MIME messages. If possible, defaults are substituted for invalid parameters, and the message is processed. In the case that this is not possible, the message will be imported into cc:Mail unchanged, allowing the user to decode it.

### **Errors Only Logging**

**<MesgId>, Boundary length exceeds internal buffer**

The length of mime multipart boundary for message <MesgId> exceeds the size of internal buffer for holding it. The maximum length is 70 characters. The message will be bounced.

**<MesgId>, "content-description:" field invalid**

The Content-description field in message <MesgId> is in bad format. It will be ignored.

**<MesgId>, "content-disposition:" field invalid**

The Content-Disposition field for message <MesgId> is in an invalid format. It will be ignored.

**<MesgId>, "content-disposition:" field invalid. Missing parm separator**

The parameter separator semi-colon is not present for the Content-Disposition field for message <MesgId>. It will be ignored.

**<MesgId>, "content-disposition:" field invalid. Premature end of file, or file read error**

Cannot retrieve Content-Disposition information for message <MesgId> because of end of file or file reading error. The message will be imported as non MIME.

**<MesgId>, "content-id:" field invalid**

Content-id field in message <MesgId> is in bad format. It will be ignored.

**<MesgId>, "content-transfer-encoding:" field invalid**

The Content-Encoding field for message <MesgId> is improperly specified. It will be ignored.

**<MesgId>, "content-type:" field invalid**

Content-Type field in message <MesgId> is in bad format. The message will be imported as non MIME.

**<MesgId>, "content-type:" field invalid. Misplaced slash**

The slash in the Content-Type field in message <MesgId> is misplaced. The correct position should be : "type/subtype". The message will be imported as non MIME.

**<MesgId>, "content-type:" field invalid. Missing parm separator**

Parameter separator - semi-colon is not presented in the content-type field for message <MesgId>. The message will be imported as non MIME.

**<MesgId>, "content-type:" field invalid. Missing subtype**

Subtype value cannot be found within content-type field for message <MesgId>. The message will be imported as non MIME.

**<MesgId>, "content-type:" field invalid. Premature end of file, or file read error**

Cannot retrieve content-type information for message <MesgId> because of end of file or file reading error. The message will be imported as non MIME.

**<MesgId>, Invalid parm in "content-disposition:" header: <content disposition parameter>**

The Content-Disposition field for message <MesgId> contains an invalid parameter. The message will be imported as non MIME.

**<MesgId>, Invalid parm in "content-type:" header: <content type parameter>**

The Content-Type field for message <MesgId> contains an invalid parameter. The message will be imported as non MIME.

**<MesgId>, Quoted value too big**

The quoted value for MIME header field is larger than the internal buffer. The message will be imported as non MIME.

**<MesgId>, "mime-version:" field invalid**

The Mime-version field in message <MesgId> is not valid. The correct version is 1.0. The message will be imported as non MIME.

**<MesgId>, Missing Boundary**

The boundary is missing for a multipart message. The message will be imported as non MIME.

**<MesgId>, Missing quote in "content-type:" parms**

Unpaired quotation marks are found in the Content-Type field. The message will be imported as non MIME.

**<MesgId>, Missing quote in "content-disposition" parms**

Unpaired quotation marks are found in the Content-Disposition field. The message will be imported as non MIME.

**<MesgId>, Recursive MimeParseMessage call failed. Unwinding stack**

It can occur when the internal routine MimeParseMessage() is called recursively. When an error is detected in the process of multilevel attachments, the internal stack is unwound to the initial level. The message will be imported as non MIME.

**AddBounceReason, Bad qId pointer**

AddBounceReason failed because of an invalid value *qId* passed to the function. Contact technical support for further information.

**AddBounceReason, Bad reason pointer or string longer than 1k**

Either an invalid reason pointer or a reason string larger than 1kb was passed to AddBounceReason. Contact technical support for further information.

**AddBounceReason, filecreate failed: <MesgId.bad>**

AddBounceReason failed to create the *MesgId.bad* file. Contact technical support for further information.

**AddBounceReason, fileopen failed: <MesgId.bad>**

AddBounceReason failed to open an existing *MesgId.bad* file. Contact technical support for further information.

**AddBounceReason, putline failed**

AddBounceReason failed in writing data to a file. Make sure there is enough free disk space available.

**AddEnvelopeRecipient, Cannot add Recipient, error #n**

AddEnvelopeRecipient failed with error *n* in setting the *Recipient* field. Contact technical support for further information.

**AddEnvelopeRecipient, Open message database failed #n**

AddEnvelopeRecipient failed with error *n* while opening the message database. Contact technical support for further information.

**AddGroupAttribute, Open message database failed #n**

AddGroupAttribute failed with error #n while opening the message database. Contact technical support for further information.

**appendString, Bad data parameter**

Unable to append a string due to an invalid string linked list. Contact technical support for further information.

**appendString, Bad head parameter**

Unable to append a string due to an invalid head pointer to a string linked list. Contact technical support for further information.

**appendString, bad Next pointer in stringChain**

Unable to append a string due to an invalid next pointer to a string linked list. Contact technical support for further information.

**appendString, Out of memory**

Out of memory. Close other applications to free up more memory.

**BounceMimeMessage, Warning: called with no reasons**

No reason was supplied to the function BounceMimeMessage. This is a warning only and will not affect the normal operation.

**BounceMimeMessage, Warning: trying to bounce message with no envelope From**

Messages are normally bounced to the envelope ~~from~~ sender. In this case, the ~~From~~ field cannot be found. Contact technical support for further information.

**BounceMimeMessageToPostmaster, Warning: called with no reasons**

No reason was supplied to the function BounceMimeMessageToPostmaster. This is a warning only and will not affect the normal operation.

**BuildMacMimeAppleDouble, cannot find datafork**

A datafork cannot be found. Contact technical support for further information.

**BumpMessageRetryCount, failed #n**

BumpMessageRetryCount failed with error #n while updating a message record. Contact technical support for further information.

**CCIN, \_lclose failed in BinHex decoder**

CcIn failed to close a BinHex encoded file. Contact technical support for further information.

**CCIN, \_lread failed in BinHex decoder**

Binhex decoding failed due to a read error. Contact technical support for further information.

**CCIN, \_llseek failed for <BinhexedFileName>**

Unable to seek within <BinhexedFileName>. Contact technical support for further information.

**CCIN, \_lwrite failed for <DecodedFile>**

Cannot write BinHex decoded data to <DecodedFile>. Make sure that the system isn't out of disk space.

**CCIN, Bad ptr passed to BinHex decoder**

An invalid pointer was passed to the BinHex decoder. Contact technical support for further information.

**CCIN, Bad ptr passed to ConvertBinHex**

ConvertBinHex failed due to an invalid pointer. Contact technical support for further information.

**CCIN, Binhex decode failed. <msgfile>**

There was a failure in decoding a BinHex message file <msgfile>. Contact technical support for further information.

**CCIN, Binhex decode failed. Header CRC error**

A header CRC value is not correct, so BinHex decoding failed. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Header name length null**

The name parameter in a Binhex header is empty, so decoding failed. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Header name not terminated by null**

The name parameter in a Binhex header is not terminated by a null character, so decoding failed. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Header too short**

A Binhex byte stream header is too short, so decoding failed. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Incomplete RLE run at end of datafork**

Binhex decoding failed due to incomplete run-length code at the end of a datafork. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Incomplete RLE run at end of resourcefork**

Binhex decoding failed due to an incomplete run-length code at the end of a resourcefork. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Invalid character found**

Binhex decoding failed due to an invalid character in a BinHex-encoded byte stream. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Premature EOF**

Binhex decoding failed due to premature end-of-file. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, Binhex decode failed. Premature logical EOF**

Binhex decoding failed due to premature logical end-of-file. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, BinHex internal error!**

The BinHex decoder failed due to an unknown error. Contact technical support for further information.

**CCIN, BinHex opening colon not found**

The starting colon of BinHex data stream is missing. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, BinHex opening phrase not found**

The BinHex opening phrase *(This file must be converted with BinHex)* is missing. Contact the message sender to inform him/her of the badly formatted message.

**CCIN, ConvertBinHex: tempnam failed**

Cannot open a temporary file for converting a BinHex file. Contact technical support for further information.

**CCIN, xxx is not AppleSingle byte stream**

xxx is not in valid AppleSingle format. Contact technical support for further information.

**CCIN, OpenFile failed n for xxx**

Cannot open file xxx with error *n*. Contact technical support for further information.

**CCIN, Out of Memory**

Out of memory. Close other applications to free up more memory.

**CCOUT, CombineBinhexRaw failed**

Cannot combine raw BinHex data. Contact technical support for further information.

**CCOUT, DoRLEandHqx7 failed**

An error occurred in Run-length encoding and/or 7-bit character mapping during BinHex encoding. Contact technical support for further information.

**CCOUT, OutHqx7 failed**

An error occurred in writing BinHex data to a file. Make sure that the system has enough free disk space.

**CheckMessageIntegrity, missing message file: xxx**

CheckMessageIntegrity failed due to a missing message ~~file~~ in the queue directory. Contact technical support for further information.

**CreateEnvelope, Cannot set From address, error #n**

CreateEnvelope failed with error *n* in setting the *From* address field in database. Contact technical support for further information.

**CreateLockFile, cannot lock message: xxx**

CreateLockFile failed for messagexxx. Close other applications which may be using the message file.

**DeleteEnvelopeRecipient, Cannot delete recipient, error #n**

DeleteEnvelopeRecipient failed with errorn in deleting a recipient entry from the database. Contact technical support for further information.

**DeleteLockFile, cannot unlock message: xxx**

DeleteLockFile failed for messagexxx. Contact technical support for further information.

**DeleteQueueId, delete xxx failed: yyy**

DeleteQueueId failed while removingxx with erroryyy. Contact technical support for further information.

**FindFirstQueueId, out of memory**

Out of memory. Close other applications to free up more memory.

**FindNexQueueId, out of memory**

Out of memory. Close other applications to free up more memory.

**from64, getline failed**

Cannot read a line from a Base64 encoded file. Contact technical support for further information.

**frommqp, getline failed**

Cannot read a line from a Quoted Printable encoded file. Contact technical support for further information.

**GenerateEmptyMsgWarning, Warning: called with null parm**

An invalid parameter was passed to GenerateEmptyMsgWarning. Contact technical support for further information.

**GenerateMimeMessage, IsFileAscii failed**

Unable to verify whether the file contains non ASCII characters. Contact technical support for further information.

**GetBounceReason, Bad qId pointer**

GetBounceReason failed because of an invalid pointer. Contact technical support for further information.

**GetBounceReason, fopen failed: <MesgId.bad>**

GetBounceReason failed because of an error opening the <MesgId.bad> file. Contact technical support for further information.

**GetBounceReason, getline failed**

GetBounceReason failed while reading data. Contact technical support for further information.

**GetBounceReason, No memory**

Out of memory. Close other applications to free up more memory.

**GetEnvelopeFrom, Cannot find envelope From, error #n**

GetEnvelopeFrom failed with error #n while looking up the database. Contact technical support for further information.

**GetMessageCreationTime, cannot find message record <MesgId>**

GetMessageCreationTime failed in looking up <MesgId> from the database. Contact technical support for further information.

**GetMessageRetryCount, cannot found message record <MesgId>**

Cannot get the message retry count because of failure looking up <MesgId> in the database. Contact technical support for further information.

**GetMessageRetryTime, cannot find message record <MesgId>**

Unable to look up <MesgId> from the database while getting the message retry time. Contact technical support for further information.

**GetMessageStatus, cannot found message record <MesgId>**

Cannot get message status because of a failure in looking up <MesgId> in the database. Contact technical support for further information.

**GetNewQueueId, access failed <QueueDirectory>**

Cannot access QueueDirectory. Make sure that the queue directory is configured correctly. If on a network drive, check that the network is still up.

**GetNewQueueId, out of memory**

Out of memory. Close other applications to free up more memory.

**isMsgLocked, cannot find message record <MesgId>**

isMsgLocked failed because of a failure in looking up <MesgId> from the database. Contact technical support for further information.

**MimeBuildMessage, Cannot send unencoded binary via Mime**

This message is generated when building a MIME message without specifying a Content-Transfer-encoding. Contact technical support for further information.

**MimeBuildMessage, Recipient address too long. Truncated**

The length of a recipient address has been truncated to 1kb, as it was too long.

**MimeBuildMessage, to64 failed**

Cannot convert binary to base64 format. Contact technical support for further information.

**MimeBuildMessage, toqp failed**

Cannot convert binary to Quoted Printable format. Contact technical support for further information.

**MimeBuildMessage, uuencode failed**

Cannot uuencode a binary file. Contact technical support for further information.

**MimeInitialise, out of memory**

Out of memory. Close other applications to free up more memory.

**MimeSendMessage, Null recipient cannot be added to envelope**

A null recipient has been found, and was ignored.

**MimeSendMessage, ParseHdr failed**

An invalid Internet recipient was found, and was ignored.

**NextMsgNum, realloc failed**

Out of memory. Close other applications to free up more memory.

**relocateBadMessage, <BadMessageFile> moved to ..\bad**

A bad message file has been moved to the bad directory. Contact technical support for further information.

**relocateBadMessage, rename (<OriginalMesgFile>, <BadMessageFile>) failed**

Cannot rename OriginalMesgFile to the bad directory. Contact technical support for further information.

**SetMessageRetryTime, Open message database failed #n**

SetMessageRetryTime failed with error opening the message database. Contact technical support for further information.

**SetMessageRetryTime, failed #n**

SetMessageRetryTime failed with error while updating a message record. Contact technical support for further information.

**toqp, putline failed**

Cannot write a line to a Quoted Printable encoded file. Make sure the system hasn't run out of disk space.

**TruncateMsgFile, \_chsize failed**

Cannot truncate a message file because of \_chsize failure. Contact technical support for further information.

**UpdateEnvelope, Open message database failed #<error code>**

UpdateEnvelope failed with error while opening message database. Contact technical support for further information.

**UpdateMessageStatus, failed #n**

Cannot update message status. Contact technical support for further information.

**UpdateMessageStatus, Open message database failed #n**

Cannot update message status because of error opening the message database. Contact technical support for further information.

**UnlockAllMessage, Open message database failed #n**

UnlockAllMessage failed with error while opening message database. Contact technical support for further information.

### **UpdateMessagePartNumber, Open message database failed #n**

UpdateMessagePartNumber failed with error while opening the message database. Contact technical support for further information.

## **Diagnostic Logging**

### **file contains non-ascii character, assume binary**

A non-ASCII character has been found in a file, so it will be encoded.

### **file is ASCII**

A file is completely ASCII.

### **<MsgId>, ...and the previous LocalBoundary is final!**

The last local boundary has been found for a multipart message body.

### **<MsgId>, "content-disposition:" field invalid. Invalid comment or continuation**

A comment for the Content-Disposition field is improperly formatted, and will be ignored.

### **<MsgId>, "content-id:" field invalid. Invalid comment or continuation**

A comment for the content-id field is improperly formatted, and will be ignored.

### **<MsgId>, "content-transfer-encoding:" field invalid. Invalid comment or continuation**

A comment for the content-transfer-encoding field is improperly formatted, and will be ignored.

### **<MsgId>, "content-type:" field invalid. defaulting to application/octet-stream**

The Content-Type field contains an unrecognized value. Default value "application/octet-stream" is used instead.

### **<MsgId>, "content-type:" field invalid. Invalid comment or continuation**

A comment for the content-type field is improperly formatted, and will be ignored.

### **<MsgId>, found Boundary at line <\_LINE\_> when ThisMsg=<MsgNum>**

Found a boundary at <\_LINE\_> in message body part number <MsgNum>.

### **<MsgId>, found LocalBoundary at line <\_LINE\_> when ThisMsg=n**

Found a local boundary at <\_LINE\_> in message body part number *n*.

### **<MsgId>, "mime-version:" field invalid. Invalid comment or continuation**

A comment for Mime-Version field is improperly formatted, and will be ignored.

### **<MsgId>, stack unwound due to problem in message/rfc822**

An error occurred when parsing a message/rfc822 body part. Contact technical support for further information.

### **<MsgId>, try to parse message/rfc822**

Attempting to parse a body part with content-type *message/rfc822*.

**<MsgId>, try to parse multipart/appledouble**

Attempting to parse a *multipart/appledouble* bodypart.

**<MsgId>, type/subtype bigger than tmp**

The size of a type/subtype value is bigger than the internal buffer. Contact technical support for further information.

**Mesg, Create new message database xxx**

Creating a new message database xxx when **Internet Exchange** runs for the first time.

**MimeBuildMessage, Our relay host name is attached to local**

When an Internet address contains no host/domain information, **Internet Exchange** will append the relay host name, if no local host name/domain is configured.

**MimeBuildMultipartMessage, creating empty message**

An empty message has been built.

**MimeBuildMultipartMessage, ignoring unavailable custom MIME preamble file xxx**

The MimePreambleFile is set to a non-existent file, so it is ignored.

**Expanding tab in text attachment, tabsize = n**

This shows the current tab setting during tab expansion in a text message.



## CHAPTER 4

### FORMAT OF THE IMA.INI FILE

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#### INITIALIZATION FILE LAYOUT

The file *ima.ini* is the **Internet Exchange** configuration file, and stores all gateway configuration information. The installation process creates this file and installs it in the Windows directory. Whenever SYSMAN makes changes to the configuration data, it will be updates. Most initialization file settings are loaded into memory at the start of program execution. Since *CCIN*, *CCOUT*, and *SMTPC* are not long lived tasks, they load any needed configuration data each time they run. The settings *SYSMAN* references are loaded each time it needs to test them, so changes are reflected instantly *SMTPD* must be shutdown and restarted to load changes.

The configuration parameters in the *ima.ini* file are broken down into several functional categories. They are:

<i>Post Office</i>	Local post office connection information
<i>Gateway</i>	General gateway parameters
<i>Schedules</i>	Queue manager scheduling
<i>Connection</i>	TCP/IP host parameters
<i>Routing</i>	TCP/IP routing
<i>Options</i>	Operational switches
<i>Confirm</i>	User confirmation options
<i>Config</i>	Miscellaneous configuration options
<i>Tuning</i>	TCP and SMTP tuning parameters
<i>Debug</i>	Debugging options
<i>License</i>	Software licensing information
<i>Addressing</i>	Internationalization of cc:Mail tokens

<i>DelayedMail</i>	Delayed Mail Notification options
<i>Charset Map</i>	Character Set Mapping
<i>Dynamic Conversion</i>	Text File to Database Conversion
<i>Rules-based Addressing</i>	Rules Based Address Compilation

Each section of the *ima.ini* file is identified by the section name enclosed between brackets. For example, the *PostOffice* section will be identified by the marker *[PostOffice]* in the configuration file. Section and variable names are not case sensitive. If a value contains embedded spaces, you may enclose it with double quotation marks, however it is not required. To include comments in the *IMA.INI* file, begin each comment line with a semicolon (;). Each configurable parameter within a given section will be of the form:

*OptionName=OptionValue*

## PostOffice

### PoName

This is the name of the local cc:Mail Post Office which will be used to store messages. This is the same name the cc:Mail administrator supplies on the cc:Mail *admin* utility command line when doing user additions, deletions, etc., to the cc:Mail directory. The default value is *main-po*.

*example:* PoName=Main Post Office

### PoPath

This is the full DOS path to the local cc:Mail post office referenced by the *PoName* setting above. The default value is *m:\ccdata*.

*example:* PoPath=m:\ccdata

### PoPassword

This is set to the encrypted password of the cc:Mail Post Office (i.e. the same password you use to invoke the cc:Mail *admin* utility). It is set by *IMASETUP* and the *Configure Post Office* screen and is not intended to be modified by any other means.

### PoAdministrator

This is the name of the local cc:Mail administrator. Messages addressed to *postmaster* will be forwarded to this cc:Mail user. The default value is *postmaster*.

*example:* PoAdministrator=Adam Smith

### **InternetPoName**

This is the name which *Internet Exchange* uses to log into the local cc:Mail Post Office. It is an upper case P entry in the cc:Mail directory. This should be left as *Internet* unless this name is already used. **Note:** At installations which provide cc:Mail users with several means of delivering messages to and from the Internet, the P.O. name *Internet* may be too broad, in which case you might consider using a more specific name such as *SMTP* or *MIME*. The default value is *Internet*.

*example:* InternetPoName=Internet

### **Gateway**

#### **SendMessageSize**

This is the maximum size for outgoing messages. *CCOUT* will return messages larger than this to the sender. A value of 0 indicates no limit. The default is 0.

*example:* SendMessageSize=0

#### **ReceiveMessageSize**

This is the maximum size for incoming messages. *CCIN* will return messages larger than this value to the sender. If a message must be returned, and it is also larger than *SendMessageSize*, only the message headers will be returned. A value of 0 indicates no limit. The default is 0.

*example:* ReceiveMessageSize=0

#### **LogfileSizeLimit**

This is the maximum size of logfile in bytes. The Windows notepad application cannot display files larger than about 50kb, so when the logfile exceeds this size, it is renamed and a new logfile is started. If your logfile viewer (see [Config]Viewer) can handle larger files, then this number can be increased. A value of 0 indicates no limit. The default is 50,000.

*example:* LogfileSizeLimit=50000

#### **QueueDirectory**

This is the directory *Internet Exchange* uses for queuing incoming and outgoing messages. It is sometimes desirable to change the default location of this directory if you want to move the whole queue directory tree off to a network drive. The default value for this option is c:\ieccmail\queue.

*example:* QueueDirectory=c:\ieccmail\queue

#### **TimeZone**

This is the local timezone. The format is NNNHH:MMSSS, where NNN is the 3 digit code for normal time, HH:MM a signed value indicating the difference in hours from Greenwich Mean Time (GMT) and SSS is the 3 digit code for daylight saving time. This last code can be omitted if daylight saving is not

used locally. It is generally easier for the user to set this option from *IMASETUP* or *SYSMAN's Configure Gateway* dialog. If the value for this option is set to "XXX0", the TZ environment variable will be used to determine the proper time zone. The default value is PST8PDT.

*example:* TimeZone=PST8PDT

### LoggingLevel

This option defines how much information to record in *EXCHMAIL.LOG*. Level 1 is the lowest level, which allows only errors to be logged. Level 2 allows queue processors to log successful delivery of messages. Level 3 additionally logs all SMTP transactions, while level 4 includes much diagnostic information as well. Normally, level 2 or 3 should be used, although SMTP logging consumes a great deal of disk space. **Note:** See the [Debug] *DetailedSMTPlog* option for additional ways to control SMTP logging. The default is 3.

*example:* LoggingLevel=3

### GatewayMode

This option accepts the values *send*, *receive*, *configure*, or *send/receive*. *Send* causes **Internet Exchange's** *SYSMAN* program to only execute *CCOUT* and *SMTPC*, while *receive* causes it to only run *SMTPLD* and *CCIN*. *Send/receive* allows all programs to function normally. *Configure* mode will not allow any message traffic to be processed and can be used when it is necessary to make configuration changes while message delivery is suspended. **Note:** When **Internet Exchange** is restricted to either *send* or *receive* mode, error reports (i.e. bounced messages) will still be produced, but their delivery will be postponed until the gateway mode is changed to a mode that will allow for these error reports to be delivered. The default mode is *send/receive*.

*example:* GatewayMode=send/receive

### RetryPeriod

This is the number of hours during which *SMTPLD* will attempt to deliver a message. After this time has elapsed, the message will be returned to sender. The default is 72.

*example:* RetryPeriod=72

### MaxRetryPeriod

This specifies the maximum value (in hours) for the *SMTPLD* retry period, generated via the exponential back-off algorithm. i.e. if this value is reached, then all further retries before *RetryPeriod* will be every *MaxRetryPeriod* hours. e.g. if *RetryPeriod*=72 and *MaxRetryPeriod*=12, then the retry increment each time will double until it hits 12 hours. It will then be retried every 12 hours until 72 hours have elapsed, at which point the message will be bounced. The default is 60 hours.

*example:* MaxRetryPeriod=4

### SMTPLDQueueRunSize

This is the number of messages which *SMTPLD* will attempt to deliver in a single queue pass. *SMTPLD* will continue to process messages (based upon the setting of *SMTPLDrestartIfNotDone*) as long as there are any messages remaining in the

queue after a given pass. A value of 0 allows *SMTPC* to process all the messages in a single queue run. The default is 5.

*example:* SMTPCqueueRunSize=10

### **SMTPCrestartIfNotDone**

Controls the restarting of *SMTPC* after it has processed *SMTPCqueueRunSize* number of messages. The default is *YES*.

*example:* SMTPCrestartIfNotDone=YES

### **MaxSessions**

This limits the number of simultaneous incoming SMTP connections. Some Winsock stacks cannot handle unlimited incoming connections. Values are numeric, with the default and maximum supported value being 40.

*example:* maxSessions=8

### **TemporaryDirectory**

This points to the directory which **Internet Exchange** will use for the storage of temporary files. If this can be configured as a RAM disk or a disk with lazy write caching enabled, a considerable speedup can be achieved. The default value is *c:\ieccmail\queue\tmp*.

*example:* TemporaryDirectory=c:\ieccmail\queue\tmp

### **FastAdminStartup**

If there has been a network outage or hardware failure, etc., which has caused the *cc:Mail* post office queue to grow very long, you can reduce the time required for *SYSMAN* to startup by enabling the *FastAdminStartup* option. This will postpone the queue counter update until the first mouse or keyboard action from the user, and will delay the updating of the listbox until the second mouse or keyboard action from the user. The default is *NO*.

*example:* FastAdminStartup=NO

### **LoopingItemsToPostmaster**

Controls whether *CCIN* forwards items which appear to be caught in a routing loop to the system administrator, or returns them to the sender (which may only perpetuate the loop). The default is *NO*.

*example:* LoopingItemsToPostmaster=NO

### **LocalCharSet**

This value is either *US-ASCII* or *ISO-8859-1* up to *-10*. These are the standard ISO strings used for the MIME character set parameter. The default is *US-ASCII*.

*example:* LocalCharSet=US-ASCII

### **MaxTrips**

This option specifies the maximum number of ~~received~~ lines allowed in an incoming message which include the FQDN of the gateway machine. If this number is exceeded, the message will be bounced. This can be used to stop message loops. The default is 5.

*example:* MaxTrips=5

### **SMTPC554DuringDATAisTemporary**

RFC 821 (SMTP) is unclear whether a 554 *transaction failed* error during the SMTP DATA phase indicates a non-retryable error. Generally 5XX errors are considered permanent, non-retryable errors, but some SMTP implementations issue 554 for non-fatal error conditions. **Internet Exchange** takes the conservative approach and treats this as retryable, unless you set this option to *NO*. If set to *YES*, a 554 SMTP error during the data phase of an SMTPC session is treated as temporary and the message will be retried later, otherwise it will be bounced. The default is *YES*.

*example:* SMTPC554DuringDATAisTemporary=YES

### **MAXDNSRecordNumber**

DNS caching was introduced as a performance enhancement **Internet Exchange** version 1.1. This parameter is used to control the maximum number of DNS records in the DNS-caching database. If set to 0, DNS caching is disabled. The default is 1000.

*example:* MAXDNSRecordNumber=1000

### **OldLogFile**

The **Internet Exchange** system manager, *SYSMAN*, uses this parameter to store the name of the last logfile which is being renamed. It is not necessary for users to configure this parameter.

### **Low Disk Warning**

This option specifies the amount of free disk space (in MB) below which *SYSMAN* will issue a warning message in the status area of the main screen. This is an additional warning mechanism to the gauge indicating the amount of free disk space. The default is 5MB.

*example:* WarnIfSpaceLeft=5

### **VIM Character Set**

This option specifies the character set used by VIM. Possible values include CP850, CP1252, CP436, LMBCS, ISTRING and UNICODE. This option can be useful when the local site is running using a different character set than the standard US-ASCII.

*example:* VIMCharSet=CP1252

## Schedules

### CcInInterval

This is the interval in minutes for starting up the *CCIN* queue manager. The default is 5.

*example:* CcInInterval=5

### CcOutInterval

This is the interval in minutes for starting up the *CCOUT* queue manager. The default is 5.

*example:* CcOutInterval=5

### SMTPCInterval

This is the interval in minutes for starting up the *SMTPC* queue manager. The default is 5.

*example:* SMTPCInterval=5

### SysInterval

This is the interval in minutes for performing system checks with *SYSMAN*. The default is 5.

*example:* SysInterval=5

### CcInSync

If set, *ccInSync* will cause *CCIN* to start up as soon as a message is fully received by *SMTPD* into the SMTP IN directory. Valid values are *YES* and *NO*. The default value is *NO*.

*example:* CcInSync=YES

### CcOutSync

If set, *ccOutSync* will cause *CCOUT* to start up as soon as a message is detected in the outgoing cc:Mail post office queue (i.e. in the cc:Mail database). Valid values are *YES* and *NO*. The default value is *NO*.

*example:* CcOutSync=YES

### SMTPCSync

If set, *SMTPCSync* will cause *SMTPC* to start up as soon as a message is fully delivered by *CCOUT* to the SMTP OUT directory. Valid values are *YES* and *NO*. The default value is *NO*.

*example:* SMTPCSync=YES

### ShutdownTime

This value, if set to a value other than *NONE*, is the time at which the gateway will shut itself down. To shutdown the gateway once per day on a regular basis, use the format *hh:mm* using a 24 hour clock. The auto shutdown option can also specify a time interval from when the gateway was started rather than an absolute time. The time can be specified in the format "+hh:mm" or "+mm". If set to *NONE*, the gateway will run continuously. The default value is *NONE*.

*example:* ShutdownTime=23:30

### IMASStartTime

This value is used to store the start time of the **Internet Exchange** system manager, *YSMAN* for calculating the auto-shutdown time. This value is not to be user modified, and is automatically set by the system. The time is stored in the format of *time\_t*.

*example:* IMASStartTime=819626538

### KeepAlive

For TCP connections that are made over a PPP dialup connection, some stacks can be configured to timeout and automatically disconnect after a predetermined period with no network activity. Under these conditions, it is necessary for the gateway to keep the stack active if *SMTPD* is to continue to be able to receive incoming mail. If the *KeepAlive* option is enabled, *SMTPD* will send keepalive packets (actually a single UDP packet) to the discard port (9) of a remote host. The gateway will first look for a DNS server, followed by a sequential search for any host other than the gateway itself in the hosts file to send the keepalive packets to. The keepalives are sent one packet approximately every 10 seconds. The default value is *NO*.

*example:* KeepAlive=NO

### AutoDialUp

This option allows **Internet Exchange** to automatically dial a remote Internet Service Provider when using the Microsoft PPP implementation under Windows 95. When trying to connect *YSMAN* will wait for a successful *Connected* status and will keep trying to establish the connection within a timeout of 10 minutes. If **Internet Exchange** is configured to automatically shutdown, *SMTPD* will wait until the last connection has terminated and will disconnect the dialup connection after one minute of inactivity when *AutoDialUp* is enabled. The default value is *NO*.

*example:* AutoDialUp=NO

### DialUpNetName

When *AutoDialUp* is enabled, *DialUpNetName* specifies the name of the Dialup Networking name created within Windows 95. There is no default value.

*example:* DialUpNetName=IMA CISCO 2511

## Connection

### GatewayHostName

This is the Internet name of the gateway machine *WITHOUT* the domain part. The default value is *iegate*.

*example:* GatewayHostName=iegate

### GatewayDomain

This is the domain component of the Internet name of the gateway machine. **Note:** Together, *GatewayHostName* and *GatewayDomain* make up the gateway's Fully Qualified Domain Name, which is sometimes referred to as the FQDN. The default value is *anon.com*.

*example:* GatewayDomain=anon.com

### HostTable

This is the location of the TCP/IP HOSTS file. Your specific Winsock TCP/IP stack may dictate the location of this file. The default value is *c:\ieccmail\hosts*.

*example:* HostTable=c:\ieccmail\hosts

### AlternateNameList

This is a comma separated list of alternate host/domain names (i.e. FQDNs) by which the gateway is known on the Internet. There is no default value.

*example:*  
AlternateNameList=victoria.ima.com, cm.ima.com

## Routing

### DNSAddresses

This is a comma-delimited list of Internet addresses of DNS nameservers, to be tried in succession. There should always be at least one DNS nameserver listed if DNS is being used.

*example:* DNSAddresses=190.9.200.1,190.9.200.5

### NameResolution

This is the order of methods used to resolve domain names. Valid options are *HostOnly*, *DNSonly*, *HostThenDNS*, *DnsThenHost* or *MailRelayHostOnly*. This can be set via the *Configure Routing* dialog. *Note:* this is **not** a comma separated list. Only a single value is allowed. The default value is *DnsThenHost*.

*example:* NameResolution=DnsThenHost

### **PrimaryRelayHostname**

This is the name of default host to be used *MailRelayHostOnly* is enabled or if the DNS fails to resolve a hostname. The message is forwarded to this host under the assumption that it will know how to deliver the message to its recipients. It is highly recommended that a Mail Relay Host be defined here in the event that mail cannot be delivered by any other method. There is no default for this option.

*example:* PrimaryRelayHostname=ima.com

### **EnableSecondaryRelayHost**

This option is used to switch on/off the secondary mail relay host. If this option is enabled, messages will be forwarded to the secondary mail relay host if the DNS fails to resolve a hostname and the primary relay host is not responding. The default value is *NO*.

*example:* EnableSecondaryRelayHost=NO

### **SecondaryRelayHostname**

This is the name of secondary host to be used if DNS fails to resolve a hostname. The message is forwarded to this host under the assumption that it will know how to deliver the message to its recipients. It is highly recommended that a Mail Relay Host be defined here in the event that mail cannot be delivered by any other method. There is no default for this option.

*example:* SecondaryRelayHostname=ima.net

### **RelayHostUsed**

This option is set by **Internet Exchange**, and is not settable by the user. It is used by the gateway to indicate that it is currently trying to route mail via the mail relay host. There is no default for this option.

*example:* RelayHostUsed=NO

### **TimeToRetryPrimaryRelayHost**

This is the waiting time (in minutes) to retry connecting to the primary relay host when it is not responding. The default for this option is 60 minutes.

*example:* TimeToRetryPrimaryRelayHost=60

### **TimeToTrySecondaryRelayHost**

This is the waiting time (in minutes) to try connecting to the secondary relay host (if one has been configured) when the primary relay host is not responding. The default for this option is 5 minutes.

*example:* TimeToTrySecondaryRelayHost=5

### **TimeFirstTryPrimaryRelayHost**

This parameter is used to record the time when **Internet Exchange** should first attempt to reconnect to the primary relay host. This value is internally generated and is not settable by the user. The time is stored in *time\_t* format.

*example:* TimeFirstTryPrimaryRelayHost=8175293

## Options

### DefaultEncoding

If a file with an extension not configured under the *[Magic]* section, or a file with no extension, is exported, then it will be encoded using this encoding method. Valid values are *base64*, *quoted-printable* or *x-uu*. The latter value is for sending files to sites which cannot handle MIME messages. *Note:* Text items which contain non-ASCII characters will always be encoded using *quoted-printable*. The default value is *base64*.

*example:* DefaultEncoding=base64

### DisableUserLimitWarningMessage

For the *Workgroup Edition* of **Internet Exchange**, warning messages will be generated when the number of configured users reaches 95. These messages are for information only purposes to warn the administrator that the number of users are approaching the *Workgroup Edition* limit of 100. These messages may be disabled by setting this option to *YES*. The default value is *NO*.

*example:* DisableUserLimitWarningMessage=NO

### IncludeRfc822Header

This option indicates if the gateway should import all RFC 822 headers from incoming messages and attach them as a separate note item. Valid values are *YES* and *NO*. The default is *YES*.

*example:* IncludeRfc822Header=YES

### IncludeccMailName

This option indicates if the gateway should include cc:Mail user names (extracted from the cc:Mail directory) in outgoing Internet addresses. Valid values are *YES* and *NO*. The default is *YES*.

*example:* IncludeccMailName=YES

### IncludeNonRepliableAddresses

When the default permission to receive is set *NO*, Internet addresses can only be converted into a corresponding cc:Mail user name if a corresponding entry is present in either the Alias or the Directory (produced by rules based addressing) databases. This implies that some cc:Mail users mentioned as recipients (either *To:*, or *Cc:*) on outgoing messages may not have any associated valid Internet address. By default, they are not considered for conversion while building the recipient headers of the resulting Internet message. In order to enable **Internet Exchange** to generate references to these users, this variable should be set to *YES*. The default is *NO*.

*example:* IncludeNonRepliableAddresses=NO

### UseReplyTo

This option controls setting the cc:Mail sender field to the value of the Internet Reply-to: header instead of the From: header. You need to choose between the two header fields because cc:Mail is unable to differentiate between the two. Valid values are *YES* and *NO*. The default is *NO*.

*example:* UseReplyTo=NO

### **RegularScreenUpdates**

This option will update the current queue being displayed in the **SYSMAN** screen every minute. Normally this should be set. However, if a large backlog has accumulated in a particular queue, displaying all the messages will drastically slow down the gateway. In this case the option should be turned off until the queue size has gone down. Valid values are **YES** and **NO**. The default is **YES**.

*example:* RegularScreenUpdates=YES

### **CloseSMTPD**

This option indicates whether SMTPD should shutdown when the **SYSMAN** interface exits. Valid values are **YES** and **NO**. If set to **NO**, SMTPD will continue to accept messages, even if **SYSMAN** is not running. The default is **YES**.

*example:* CloseSMTPD=YES

### **AutoRestartSMTPD**

This option is used to automatically restart the SMTP daemon if it exits for any reason. This should normally be set to **YES**. Valid values are **YES** and **NO**. The default is **YES**.

*example:* AutoRestartSMTPD=YES

### **IncludeMimeHeader**

This variable controls the importation of MIME headers for a given message. If set, an extra text item will be created for each incoming MIME bodypart in each message. This will result in a large number of attachments in the resulting cc:Mail message, which may push it over the cc:Mail limit of 20 attachments. It is recommended that this variable be set for debugging purposes only. Valid values are **YES** and **NO**. The default value is **NO**.

*example:* IncludeMimeHeader=NO

### **Separator**

This variable holds the addressing delimiter used to perform default address mapping. Currently **Internet Exchange** is limited to use just the dot and underscore characters. Valid values are **dot** and **underscore**. The default value is **underscore**.

*example:* Separator=underscore

### **BounceToPostmaster**

This is used to send a copy of all bounced messages to the local postmaster as well as the original sender of the message. This can be useful for debugging delivery problems. Valid values are **YES** and **NO**. The default value is **NO**.

*example:* BounceToPostmaster=NO

### **BounceSender**

This option specifies an Internet ID to be used as the sender of bounced messages. The FQDN of the gateway is appended onto the end of this parameter, forcing the address of the sender to appear to be local to the gateway. This value can point to a nonexistent ID, such as *nobody*, so that remote users **cannot** reply successfully to these error reports! The default is *postmaster*.

*example:* BounceSender=postmaster

### **UseHostname**

This indicates whether to include the local Internet hostname in outgoing addresses. Some sites prefer to use just the domain name, with no host component at all. Valid values are *YES* and *NO*. If set to *NO*, the gateway domain must be added to the alternate host name domain list. The default value is *YES*.

*example:* UseHostname=YES

### **DeleteMIMEheaders**

This indicates whether to discard outgoing MIME header text items, which are created when importing MIME messages into cc:Mail. It is recommended that this variable be set to *YES* to discard such headers as these attachments typically cause confusion and do not convey any useful information when re-exported. Valid values are *YES* and *NO*. The default value is *NO*.

*example:* DeleteMIMEheaders=YES

### **RrqHeader**

This contains the name of the header field used to contain return receipt information. The default value is *return-receipt-to*.

*example:* RrqHeader=return-receipt-to

### **UseRemotePoName**

If set to *YES*, default addresses include the cc:Mail post office name of the sender and are of the form:

Bill\_Smith\_at\_Sales@a.b.c

If set to *NO* they do not include the cc:Mail post office name and take the form:

Bill\_Smith@a.b.c

The later form is usually desirable when the post office *Internet Exchange* sends messages to knows how to route messages to all possible recipients, i.e. when running ADE. The default is *YES*.

*example:* UseRemotePoName=YES

### **RejectUnqualifiedAddresses**

If this option is set to *YES*, *SMTPD* rejects all unqualified addresses. This forces use of fully qualified addresses at all times. The default is *NO*.

*example:* RejectUnqualifiedAddresses=NO

### **RejectRemoteRecipients**

If set to *YES*, *SMTPD* will reject remote recipients for incoming mail. This is to prevent remote sites spoofing messages which get re-routed through the gateway. The default is *YES*.

*example:* RejectRemoteRecipients=YES

### **SmtpcPort**

This specifies the TCP port number to use for *SMTP*. The default is 25.

*example:* SmtpcPort=25

### **SmtpdPort**

This specifies the TCP port number to use for *SMTPD*. The default is 25.

*example:* SmtpdPort=25

### **WarnIfEmptyMsgSentOut**

This option, when set to *YES*, causes outbound empty messages to trigger a warning from postmaster. This is designed to alert users who sometimes put their reply text in imported header text items, which gets deleted on the way out (if *DeleteMIMEHeaders* is set to *YES*), resulting in an empty message going out. The default is *YES*. The warning message is:

*Warning: your message went out the cc:Mail gateway with an empty message body.*

*If you intentionally sent an empty message, disregard this warning.  
If you included a reply in an old header body part, it was purged.*

Key headers from the message which was sent follow.

*example:* WarnIfEmptyMsgSentOut=YES

### **TryReverseSeparator**

This option if set to *YES* causes both address separators to be compared with incoming addresses during default address translation. The default is *NO*.

*example:* TryReverseSeparator=NO

### **KillSMTPDzombie**

When this option is set to *YES*, *SMTPD* checks for *[config] SMTPDmainSocket* on startup. If this is not set to *NONE*, this socket number indicates the main socket used by *SMTPD* when it shutdown prematurely last time around. An attempt

to close this socket is performed, so that **SMTPD** does not get an “address already in use” error the next time around. The default is *YES*.

*example:* KillSMTPDzombie=YES

### **MimePreambleFile**

MIME messages contain an initial section known as the MIME preamble, where an optional short message useful to non-MIME gateways and User Agents can be stored. This section resides after the RFC 822 headers and before the first MIME body part. If this option is set to point to an existing file, the contents of this file is used as the MIME preamble in outgoing messages. If set to a nonexistent file, no preamble is used. If not set, a default preamble built into **Internet Exchange** is used. The default is *internal*.

*example:* MimePreambleFile=c:\ieccmail\pre.txt

### **TabSize**

The cc:Mail clients typically do not perform any TAB character expansion with incoming mail messages. Not only, but they also have trouble displaying TAB characters in messages. To get around this problem **Internet Exchange** can be configured to perform automatic TAB expansion for incoming messages. The *TabSize* parameter is used to set the tab size which appears in the cc:Mail client program. This option is used to set the equivalent number of spaces which are generated for each TAB character received. The default value is 8, which means that a single TAB will be replaced by 8 spaces. If set to 0, TAB expansion conversion is disabled.

*example:* TabSize=8

### **RFC822HeaderPlacement**

The RFC822 header is treated as an attachment in the cc:Mail client program. The location of this attachment can be configured to be placed at either the top or the bottom of the attachment list. Valid values for this option are *top* and *bottom*. The default is *bottom*.

*example:* RFC822HeaderPlacement=bottom

### **UseResentFrom**

When enabled, **Internet Exchange** will try to determine the existence of a *Resent-From:* header in incoming messages. If this option is set to YES, the address found in the received *Resent-From:* header will be mapped to the cc:Mail From address if no RFC822 *From:* field is detected and if no *Reply-To:* field is detected and *UseReplyTo* is enabled. The default is YES.

*example:* UseResentFrom=YES

### **ForceNative**

By enabling this option, inbound Macintosh attachments (in BinHex, MacMIME or uuencoded AppleSingle format) are stripped of their file header and (if present) the resource fork before being attached to messages in the cc:Mail Post Office. If this is not done, some applications (Excel 4 for Windows as an example) may refuse to open the resulting file. The default is *NO*.

*example:* ForceNative=NO

### **ForceApple**

By enabling this option, inbound non-Macintosh file attachments are automatically given a dummy header and converted into AppleSingle cc:Mail attachments. The default is *NO*.

*example:* ForceApple=NO

### **ScanOutboundMAChqx**

Macintosh files can sometimes be encoded by the user manually using BinHex encoding and then locally stored. Such encoded files typically carry a “.hqx” extension identifying them as Macintosh BinHex encoded files. If the *ScanOutboundMAChqx* option is enabled, files attached to cc:Mail messages with a “.hqx” extension will be attached to the message in their original BinHex encoded format and not re-encoded. The default is *YES*.

*example:* ScanOutboundMAChqx=YES

### **DefaultSendPermission**

The ability for local cc:Mail users to send Internet mail is determined by the send property for the user in the Alias mapping and directory databases. If a user does not have a specific mapping in one of these databases, the system default send permission, defined by this option, is used. The default for this option is *YES*.

*example:* DefaultSendPermission=YES

### **DefaultReceivePermission**

The ability for local cc:Mail users to receive Internet mail is determined by the receive property for the user in the Alias mapping and directory databases. If a user does not have a specific mapping in one of these databases, the system default receive permission, defined by this option, is used. The default for this option is *YES*.

*example:* DefaultReceivePermission=YES

### **SendOldLogFile**

At the time a logfile is renamed, it is also possible to send a copy of this file to the postmaster. The default for this option is *NO*.

*example:* SendOldLogFile=NO

### **KeepOldLogFile**

Over time, as logfiles are renamed, if not manually maintained, they can start to consume significant amounts of disk space. If the *KeepOldLogFile* option is set to *NO*, the old logfiles are automatically removed instead of being renamed. The default is *YES*.

*example:* KeepOldLogFile=YES

### **RejectUnqualifiedAddresses**

This option is used by *SMTPD* during the *MAIL FROM* and *RCV TO* portion of the SMTP protocol. If this option is enabled and *SMTPD* receives an address that is not fully qualified, it will be rejected. If *RejectUnqualifiedAddresses* is not enabled and a non-fully qualified address is

received, **Internet Exchange** will add the remote machine's host name to the sender address (and the local hostname to recipient addresses) to obtain a fully qualified address. The default is *NO*.

*example:* RejectUnqualifiedAddresses=NO

## DelayedMail

Each line in the *[DelayedMail]* section identifies options related to the way **Internet Exchange** handles mail that experiences delivery delays

### EnableNotification

This option enables the generation of delayed mail notification to message originators. If *EnableNotification* is enabled, users will be notified by return mail when a message is delayed for a period of time longer than *SendNotificationAfter*. The default is *NO*.

*example:* EnableNotification=NO

### SendNotificationAfter

This is the period of time (in hours) an undelivered message is held in an **Internet Exchange** message queue before a delayed notification message is sent to the sender. If *EnableNotification* is enabled, messages in the queue for a period of time longer than this option will have delayed notification messages generated. The default is 4.

*example:* SendNotificationAfter=4

### DelayMessageFile

When **Internet Exchange** generates a delayed notification message, it normally uses a builtin message template. The *DelayMessageFile* allows the administrator to specify an alternate text file to use instead of the builtin text. The default message path is *c:\ieccmail\delay.txt*. If no file exists in this location, the default message text is used.

*example:* DelayMessageFile=c:\ieccmail\delay.txt

### WarnOnlyOnce

Messages that have been delayed for an extended period can generate many delayed notification messages. If this is not desired, by setting *WarnOnlyOnce* the message originator will only receive a single warning message for each delayed message. The default is *YES*.

*example:* WarnOnlyOnce=YES

### EnableSuccessNotification

This option enables the generation of successful mail notification to message originators for messages that have previously been delayed in transit. If *EnableSuccessNotification* is enabled, users will be notified by return mail when a message that has been previously delayed has been finally delivered. The default is *NO*.

*example:* EnableSuccessNotification=NO

### **SuccessDeliveryMessageFile**

For messages that have been delayed, and eventually delivered to their final recipient, a message indicating eventual successful delivery can be sent back to the originator. When **Internet Exchange** generates a positive notification message, it normally uses a builtin message template. The *SuccessDeliveryMessageFile* allows the administrator to specify an alternate text file to use instead of the builtin text. The default message path is *c:\ieccmail\success.txt*. If no file exists in this location, the default message text is used.

*example:* SuccessDeliveryMessageFile=c:\ieccmail\delay.txt

### **Confirm**

The entries in the *[confirm]* section are boolean values that can be set to either *YES* or *NO*. They determine whether to ask the user for confirmation before performing the action desired. They are a convenience for experienced users.

### **Quit**

This value is used to confirm exit of SYSMAN. The default is *YES*.

*example:* Quit=YES

### **DeleteMsg**

This value is used to confirm deletion of messages. The default is *YES*.

*example:* DeleteMsg=YES

### **MessageDeleted**

This value is used to control display of a message deletion confirmation dialog. The default is *YES*.

*example:* MessageDeleted=YES

### **ClearLog**

This value is used to confirm clearing of the logfile. The default is *YES*.

*example:* ClearLog=YES

### **Config**

The *[config]* section stores various configuration information used by the gateway.

### **Version**

The current version of the gateway software. This value should not be changed.

### **Viewer**

The program used to view the various logfiles. Defaults to write.exe if unspecified.

*example:* Viewer=c:\windows\write.exe

### **Addressfile**

The name and location of text address file. This value should not be changed.

*example:* Addressfile=c:\ieccmail\smtp.adr

### **Domainfile**

The name and location of text domain file. This value should not be changed.

*example:* Domainfile=c:\ieccmail\smtp.pod

### **InstallDirectory**

This entry is created by the install script and used by other programs. This value should not be changed.

*example:* InstallDirectory=c:\ieccmail

### **HelpFile**

This is the location of the Internet Exchange help file. This value should not be changed.

*example:* HelpFile=c:\ieccmail\ieccmail.hlp

### **SetupHelpFile**

This is the location of the Internet Exchange setup help file. This value should not be changed.

*example:* SetupHelpFile=c:\ieccmail\imasetup.hlp

### **UpSince**

This records the time and date when **Internet Exchange** was last started. It is useful in tracking how long the gateway has been in continuous operation. There is no default value.

## **Tuning**

The options in the *[tuning]* section contain tuning parameters used in SMTP.

### **SMTPDtimeout**

This variable indicates the timeout value (in minutes) used in SMTPD. It should not need to be changed, but if unusual delays are experienced, can be adjusted to stop SMTPD from timing out.

*example:* SMTPDtimeout=5

#### **SMTPCInitialTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the initial contact of a remote host to complete. The default value is 5 minutes.

*example:* SMTPCInitialTimeout=5

#### **SMTPCHeloTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to HELO. The default is 5 minutes

*example:* SMTPCHeloTimeout=5

#### **SMTPCQuitTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to QUIT. The default is 5 minutes.

*example:* SMTPCQuitTimeout=5

#### **SMTPCMailTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to MAIL FROM. The default is 5 minutes.

*example:* SMTPCMailTimeout=5

#### **SMTPCRcptTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to RCPT TO. The default is 5 minutes.

*example:* SMTPCRcptTimeout=5

#### **SMTPCDataTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to DATA. The default is 5 minutes.

*example:* SMTPCDataTimeout=5

#### **SMTPCDataBlockTimeout**

This variable defines the period (in minutes) *SMTPC* is to wait for the remote system to acknowledge an individual buffer transmission of the message data. Another way of looking at this is the period which *SMTPC* is willing to wait between writes to the Winsock stack before it considers the remote system “dead”. The default is 5 minutes.

*example:* SMTPCDataBlockTimeout=5

### **SMTPCDataEndTimeout**

Defines the period (in minutes) *SMTPC* is to wait for the remote system to respond to DATA phase wrap up. The default is 5 minutes.

*example:* SMTPCDataEndTimeout=5

### **DataBufferSize**

This is a numeric value that sets the file read buffer size (in bytes) used by *SMTPC*. The maximum value that can be configured is 32K. If you are utilizing disk caching software, set this value to the size of its caching-unit (a.k.a. read-ahead) size. The default value is 4096 (4K).

*example:* DataBufferSize=4096

### **DNStimeout**

If set, this option specifies the number of seconds before a DNS timeout is registered. The default is 5.

*example:* DNStimeout=5

### **DNSretries**

If set, this option specifies the number of times a DNS query is retried after a timeout. *Note:* DNS retries utilize an exponential-backoff timer to extend the period between successive retries. The default is 4.

*example:* DNSretries=4

## **Debug**

These options in the *[debug]* section are not normally needed, and are only used for tracking problems.

### **LogFileIO**

This value, if set, will log all file I/O functions. Valid values are *TRUE* and *FALSE*. **Note:** This will produce a huge amount of output.

*example:* LogFileIO=TRUE

### **DetailedSMTPlog**

If this option is set to *YES*, and logging is in diagnostic mode, detailed *SMTPC* and *SMTPD* Winsock activity will be logged. The default is *NO*.

*example:* DetailedSMTPlog=NO

## License

The values in the *[License]* section store **Internet Exchange** licensing information

### SerialNumber

This is the numeric value that corresponds to the **Internet Exchange** serial number. This will be different for each installation and should not be changed.

*example:* SerialNumber=46

### LicenseKey

This is the numeric value of the IMA license key. This is supplied by IMA when enabling the gateway license. This value, consisting of 16 hexadecimal digits, must be entered exactly as supplied by your licensing agent, except that the case of the hex digits A-F are not important.

*example:* LicenseKey=38c74bc0f239d5be

### IEccMailInstallDate

This is the date that **Internet Exchange** was installed. This value should not be changed.

*example:*  
IEccMailInstallDate=Thu Aug 03 11:11:01 1995

### ExpirationDate

For sites that are running with Interim or evaluation license keys, this parameter stores the date in which the **Internet Exchange** license will expire. This field is not used by the gateway, but is present to aid IMA Technical Support in cases where the analysis of a customer configuration file is necessary.

## Addressing

The *[Addressing]* section effects how default Internet to cc:Mail user address mappings are performed.

### PrimaryATWord

When this option is set, this is the value of the main word used by cc:Mail to separate the user name from the post office name. The default is the character string *AT*.

*example:* PrimaryATWord=AT

### ATWordList

When this option is set, it corresponds to the list of possible local words used by various international versions of cc:Mail locally. The default is *NONE*.

*example:* ATWordList=NONE

## Rules-based Addressing

The *[Rules-based Addressing]* section stores the rules that are generated by the *Rules Editor* within **Internet Exchange**. These rules are stored one per line within this section. It is highly recommended that these values ~~not~~ be hand modified, but only updated via the *Rules Editor*.

example: Rule1=FA\_L1SR  
Rule2=F1M2L3S

## Charset Map

The *[Charset Map]* section stores the character set mapping used in the address translation process. This information is generated by the *Character Set Mapping Editor* inside **Internet Exchange**. The character set mapping is used to map the extended ASCII code (character codes 128-255) to standard ASCII characters (character codes 0-127). It is recommended that these mappings only be modified using the *Character Set Mapping Editor*.

example: 129=a  
220=ea

## Dynamic Conversion

The *[Dynamic Conversion]* section is used by the **Internet Exchange** conversion programs when converting between the internal database file formats and the older (pre-2.0) flat file databases (SMTP.ADR, SMTP.POD, etc.).

### AutoCheckAddressFile

This option is used to enable to automatic conversion of SMTP.ADR files to the **Internet Exchange** Alias database. When the gateway detects a modification of the SMTP.ADR file, and with *AutoCheckAddressFile* set to YES, the gateway database file will automatically be updated. The default is NO.

example: AutoCheckAddressFile=NO

### AutoCheckDomainFile

This option is used to enable to automatic conversion of SMTP.POD files to the **Internet Exchange** Domain database. When the gateway detects a modification of the SMTP.POD file, and with *AutoCheckAddressFile* set to YES, the gateway database file will automatically be updated. The default is NO.

example: AutoCheckDomainFile=NO

### UseNewAddressFileFormat

Send permission, receive permission, and comment fields were added to the SMTP.ADR file format with **Internet Exchange** Version 2.0. When the routine checking of the SMTP.ADR file is enabled, the SMTP.ADR file will be updated if the database is modified inside the *Config Users* dialog box. If this option is

disabled, the new three fields will not be updated to the *SMTP.ADR* file. The default is *NO*.

*example:* UseNewAddressFileFormat=NO

### **SMTPADR**

This specifies the location of the *SMTP.ADR* text file. The default path is *c:\ieccmail\smtp.adr*.

*example:* SMTPADR=c:\ieccmail\smtp.adr

### **SMTPPOD**

This specifies the location of the *SMTP.POD* text file. The default path is *c:\ieccmail\smtp.pod*.

*example:* SMTPPOD=c:\ieccmail\smtp.pod

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