

Lucent Technologies
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Message CareTM

Version 1

Solution Guide

585-215-093
Comcode - 108229030
Issue 1
October 1998

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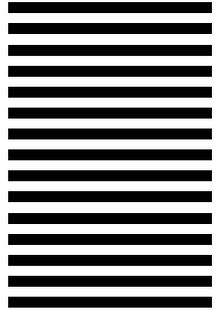
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Preface

Introduction

The *Message Care™ Solution Guide* (585-215-093) provides an overview of the *Message Care* software, including:

- Operations and features
- Planning, requirements, and configuration
- Message processing
- Maintenance and troubleshooting
- Reporting.

It also provides a glossary.

Audience

This document is intended for anyone planning on installing, configuring, administering, customizing, using, or supporting the *Message Care* software.

Chapter 2, “Preparing a Call Center for the Message Care Software” is useful in defining the mailboxes for the *Message Care* software to poll and to design the Vector Directory Numbers (VDNs) and vectors needed to deliver the messages efficiently.

Chapter 3, “Installation and System Administration” is useful for the System Administrator of the *Message Care* software.

Chapter 4, “Agent Login and Logout” and Chapter 5, “Processing Message Calls” is useful for agents using the *Message Care* software.

Chapter 6, “Reports and the Database” is useful for supervisors and management of the *Message Care* software.

Related Documents

Many documents besides the *Message Care Solution Guide* are useful in working with the *Message Care* software. These documents are as follows:

- Internet Call Center (ICC) document(s)
 - *Internet Call Center Version 2 Solution Guide* (585-215-094).
- *DEFINITY*[®] Enterprise Communication Server (ECS) document(s)
 - *DEFINITY ECS CallVisor ASAI DEFINITY LAN Gateway over MAPD Installation, Administration, and Maintenance* (555-230-114).
- Call Management System (CMS) document(s)
 - *CentreVu*[®] Call Management System R3V6 Administration (585-215-850)
 - *CentreVu Call Management System R3V6 Real Time and Historical Reports* (585-215-821)
 - *CentreVu Call Management System R3V6 Custom Reports* (585-215-822).
- *CentreVu Computer Telephony*[®] (T-server) document(s)
 - *CentreVu Computer Telephony for Windows NT^{*} Telephony Services and Callvisor PC Installation*
 - *CentreVu Computer Telephony for Windows NT Telephony Services Administration and Maintenance*
 - *CentreVu Computer Telephony for Windows NT DEFINITY Enterprise Communications Server and Callvisor PC Administration and Maintenance*
 - *CentreVu Computer Telephony for Windows NT Java Telephony API (JTAPI) Client Programmer's Guide*
 - *CentreVu Computer Telephony for Windows NT Java Telephony API (JTAPI) Programmer's Reference (JTAPI v1.2 Specification)*

*Windows NT is a registered trademark of Microsoft Corp.

- CentreVu Computer Telephony for Windows NT Programmer's Guide for DEFINITY Enterprise Communications Server
- CentreVu Computer Telephony for Windows NT Telephony Services CSTA Services PBX Driver Interface Specification
- CentreVu Computer Telephony for Windows NT Telephony Services PBX Driver Interface Specification
- Telephony Services Application Programming Interface (TSAPI) Version 2
- CentreVu Computer Telephony for Windows NT DEFINITY Enterprise Communications Server Simulator User's Guide.

About *Message Care* Software

Introduction

The *Message Care*[™] software provides call centers with the ability to direct (route) email and fax messages to agents by using *DEFINITY*[®] Enterprise Communications Server (ECS) Automatic Call Distribution (ACD) vectoring system features and the Adjunct/Switch Applications Interface (ASAI) message call feature.

The *Message Care* software extends the existing functions of a call center to cover faxes and email, including attached files. The *Message Care* software funnels email and faxes through the ACD, using its call distribution capabilities such as skills-based routing, load balancing, and priority algorithms, and performance measurement capabilities.

The *Message Care* software enables a call center to respond more quickly and accurately to email and faxes. This leads to increased customer satisfaction, as well as increased productivity in handling messages, which reduces costs.

This chapter introduces the *Message Care* software, lists the system features and system capacities, provides an overview of the message flow handling process, describes tracking, logging, and reporting on messages, and provides information on getting help with the *Message Care* software through offer assistance.

System Features

The *Message Care* software offers the following features:

- ACD capabilities extended to email and fax
- Integration into your existing call center
- Vector programming for priority processing of selected transactions
- Automatic distribution of messages to universal agents using the Expert Agent Selection (EAS) capabilities of the *DEFINITY* ECS
- Email message detection in the mailboxes of your choice (must be Post Office Protocol [POP3]-compliant)
- Use of the ASAI message call capability of *DEFINITY* ECS G3 R6.3 (message call support without use of physical port resources in *DEFINITY* ECS)
- Auto-acknowledgement for incoming email messages
- Message handling functions for agents
- Message storage in an Open Database Connectivity (ODBC)-compliant database (*Microsoft** Access)
- Standard *CentreVu*[®] Call Management System (CMS) call statistics collected for messages
- Real-time and historical reports on statistics specific to the *Message Care* software.

*Microsoft is a registered trademark of Microsoft Corp.

System Capacities

Table 1-1 lists the current capacities of the *Message Care* software.

Table 1-1: System Capacities

Capacity	Maximum Supported
Busy hour message rate	2400 messages retrieved from mailboxes and delivered to agents per busy hour
Agents simultaneously logged into the <i>Message Care</i> software	100 agents
Records in the message database (at 8KB [kilobyte] per inbound message and 16KB per outbound message)	<ul style="list-style-type: none"> • 125,000 text messages per GB (gigabyte) of storage • 20,000 fax pages per GB of storage • A 2 GB <i>Microsoft Access</i> database can hold 70,000 inbound consumer messages and 70,000 outbound agent reply messages.
Faxes in the message database (at 80KB per fax message)	A 2 GB database can hold about 2400 faxed messages
Simultaneous message calls (launched or active)	Up to 200, available in increments of 50. The first size is 20. You can order sizes of 20, 50, 100, 150 or 200.
Mailboxes	150
File Attachments	5 per inbound message ^a

a. For information regarding file attachment capacities, please see Chapter 5, “Processing Message Calls.”

Message Handling Flow Process

The typical scenario for processing a message involves a consumer (the person who sends the message to your call center) and an agent (your call center representative, who interacts with the consumer).

Figure 1-1 illustrates the message handling flow process.

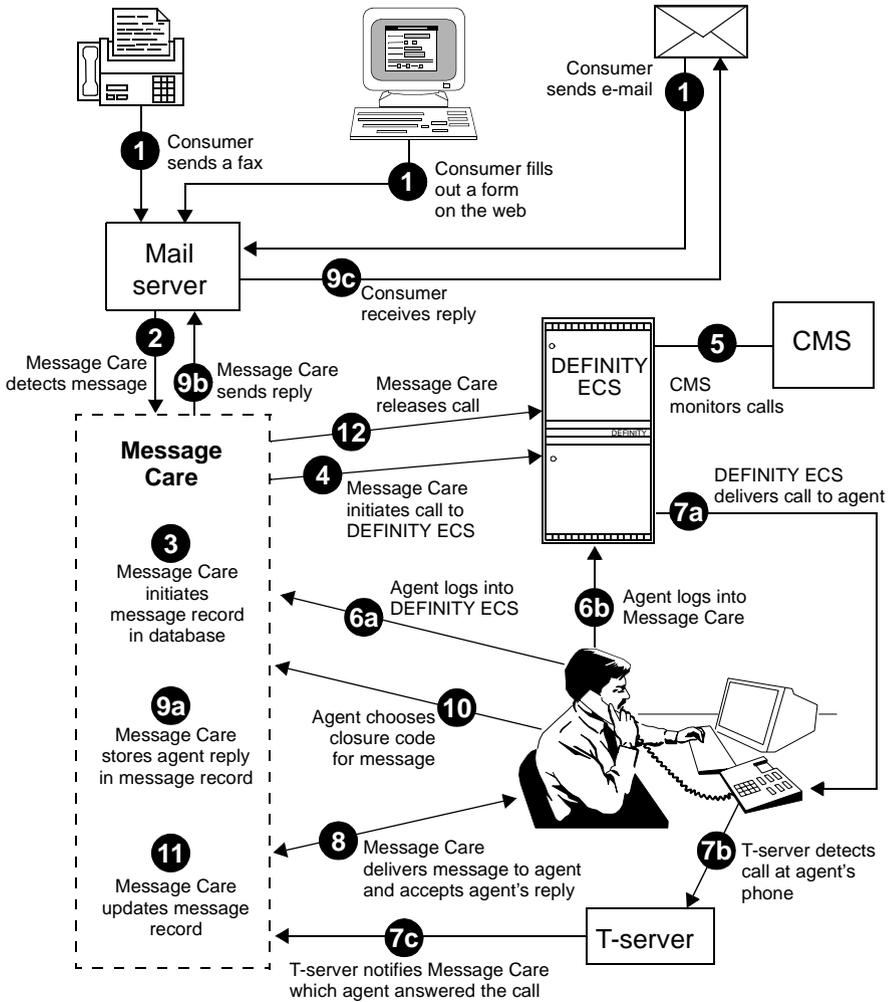


Figure 1-1: Message Handling Flow Process

The *Message Care* software accepts the consumer's message and processes it to the point where the agent marks it closed.

The following steps describe the message handling flow process:

1. A consumer sends a message to the call center by one of the following methods:
 - Sending a fax to a number that you have set up to receive and store the faxed messages in a POP3-compliant mailbox
 - Sending freeform email to a mailbox on your POP3-compliant server
 - Choosing the Write Us button on your Web site. In this case, a form appears, prompting the consumer to compose a message and send it to your call center.

The information you request on the form can help specify the skill set needed to respond to the consumer. When the consumer chooses the Send button on the message form, your Common Gateway Interface (CGI) script uses the consumer's choices (and/or other available information, such as the site where the consumer found your Write Us button) to address the message to a POP3-compliant mailbox corresponding with the skill set needed.

At the call center, messages can also go through a commercial filtering and sorting utility, if desired, to ensure that they arrive in the most appropriate mailbox and receive the most efficient service.

2. The *Message Care* software detects the consumer's arriving message by polling an administered list of mailboxes every five minutes.

3. The *Message Care* software copies the message into an Open DataBase Connectivity (ODBC) database, where it receives a tracking number, and removes it from the mailbox. The database record includes tracking information such as the time of arrival, the message originator, and the mailbox where it arrived.*

If so enabled, the *Message Care* software automatically sends a preformatted acknowledgement to the consumer, indicating that the message has arrived and provides it with a tracking number.

4. The *Message Care* software initiates a call to the *DEFINITY ECS*,[†] using the Vector Directory Number (VDN) administered for the receiving mailbox.

If incoming messages exceed the administered capacity, the *Message Care* software holds the overflow messages and initiates message calls for them as resources become available.

5. *CentreVu* CMS begins tracking the message when the *DEFINITY ECS* launches the message call, using its assigned VDN. The *DEFINITY ECS* queues the message call just like a normal call, so CMS also sees it as a normal call and tracks standard call statistics such as queue times and “talk” time (meaning, the time the message call is active at the agent’s phone), just as it would for traditional voice calls. CMS tracking continues as long as the message call lasts.
6. An agent logs into the *Message Care* software and the *DEFINITY ECS*.[‡]

*If the message comes from an address on an administered list of undesirable addresses (for instance, known sources of junk mail or bulletins from internal post masters), the *Message Care* software stops here and does not process the message for delivery to an agent.

†If this message is a response concerning another message which the *Message Care* software is currently handling, the *Message Care* software links it to the call for that original message.

‡Normally, the agent uses a workstation at the call center, but the *Message Care* software can also provide for remote agents. For further information on enabling remote agents to handle *Message Care* message calls, contact Professional Services at **1-800-4NetCare**.

7. The *DEFINITY* ECS selects an available agent according to the vector associated with the assigned VDN, and sends the message call to the agent's telephone. When the agent answers, the T-server sends a message call-answered notification to the *Message Care* software. Meanwhile, if the VDN so specifies, the agent hears an announcement stating that this is a *Message Care* message call.
8. When the *Message Care* software receives the message call-answered notification, it delivers the message to the agent through a PagePop, a feature that automatically displays Web pages based on message call events:
 - a. The *Message Care* software supplies the agent's browser with the Uniform Resource Locator (URL) associated with the mailbox that received the consumer's message. This URL calls a Common Gateway Interface (CGI) script. The *Message Care* software supplies parameters to the CGI script, specifying the message components to display. The script then accesses the ODBC database of messages, retrieves that set of components from the consumer's message, and dynamically generates a Web page. This Web page presents the contents of the received message to the agent in addition to tools necessary to compose a response.
 - b. If the message includes attached files, such as a fax image, the *Message Care* software lists the attachments. Helper applications* administered in the agent's browser provide access to these files.
 - c. The agent handles the message, using the controls supplied on the Web page that has appeared.
9. The *Message Care* software submits the agent's reply for delivery by a mail server, using Simple Mail Transfer Protocol (SMTP) protocols. It also stores a copy of the reply in the message database, linked to the original incoming message.

*You must provide the appropriate helper applications for each agent, based on the types of message you expect that agent to receive. For instance, agents who process faxes must have a helper application for viewing and handling them.

10. The agent marks the closure code of the message on the Web form, according to a set of closure codes you supply. For instance:

- Reply sent
- Order processed
- No action taken—junk mail.

The record for the processed message remains in the database so you can include it in reports and look it up if future messages make it useful to do so.

11. The *Message Care* software releases the message call.

Tracking, Logging, and Reporting

The *Message Care* software tracks each message from the time it is retrieved from its mailbox until the agent marks it closed. In addition, CMS tracks every message call from the time it enters the *DEFINITY* ECS queue until the message call terminates. Both *Message Care* and CMS reports are useful in evaluating how well your call center is handling messages.

Message States Tracked

Overflow

The time between retrieving a message from its mailbox to launching a corresponding message call in the *DEFINITY* ECS queue is normally insignificant. However, if the *Message Care* software cannot launch the message call (for instance, because the number of message calls already meets your capacity) it gives the message a status of overflow, and adds it to a First In-First Out (FIFO) overflow queue.

Blocked

The *Message Care* software places a message in the Blocked state if **Junk Mail Screening** is administered and activated on the monitored mailbox, and a match has been made between the originator of the mail message and an administration entry on the **Junk Mail Screening** form. When a message is blocked, the *Message Care* software will not attempt to launch a message call.

Failed

The *Message Care* software places a message in the Failed state when repeated attempts to deliver the message fails.

Launched

If resources are available from which to launch a message call, the *Message Care* software attempts to deliver message calls. As soon as it becomes possible to launch the message call, the status of the message changes to Launched.

Messages are selected first if their delivery was requested by an agent through the Retrieve option. If multiple agent retrieval requests are queued, the *Message Care* software selects the message with the oldest agent request time. The agent request time is the time the agent initiated the message retrieve request.

If there are no agent requests, the *Message Care* software selects a message in the Overflow state based on oldest receipt time which has not had a message call attempt in the last 15 minutes.

The *Message Care* software not only tries to launch message calls when active message calls drop, it periodically checks to see if message call attempts should be made.

Active

After an agent answers the message call, the status becomes active. A message call remains active as long as it is being processed by the agent.

Closed

A message often remains active until the agent sends a reply, marks the message call closed, and the status changes to Closed. An agent will mark the message call closed when no further action needs to be taken.

Suspended

In some cases the agent may forward an inquiry to a subject matter expert (SME) in your organization, and switch the status of the message to suspended while awaiting the answer in order to move on to other message calls. In this case, the *Message Care* software instructs the *DEFINITY* ECS to tear down the message call and sets a timer. When the timer expires, the *Message Care* software launches a new message call to return to the agent for processing. Messages may be returned to agents prior to the timer expiration if a response associated with the message is received by the *Message Care* software, such as the response from the SME.

Database Logging

The *Message Care* database is an ODBC-compliant database that logs information about a message at each step in processing. You can work with the database directly using *Microsoft Access*.

Reporting

Because the *Message Care* database collects and logs information on all messages regardless of their current status or the number of message calls involved in processing them, accurate statistics in the *Message Care* reports are ensured. For instance, it is easy to see how long consumers must wait for the service they want.

In the *Message Care* reports, you can drill down beyond the summary in the report to a listing of the specific messages tabulated. Then you can drill down again to review an individual message and its statistics.

Offer Assistance

The Helpline number for all Lucent Technologies™ products is **1-800-242-2121**. Call this number for help with the *Message Care* software. Be prepared to identify the offer you are calling about (the *Message Care* software) and to describe the problem. When you receive your trouble ticket number, write it down so you can use it to expedite any future calls on the same subject.

Helpline services, except for consultative services, are available to customers using a product covered by warranty or a valid maintenance contract, during the hours specified in the contract. If you do not have such a warranty or contract, you can still use Helpline services for the appropriate time-and-materials charges.

You may be able to save time by checking Chapter 7, “Maintenance” and Chapter 8, “Troubleshooting” of this document before you call. Many issues that can arise are easy to handle if you follow the instructions provided in these chapters.

Training

A job aid is provided in order to help agents learn how to operate the software and to help system administrators with all aspects of administering the *Message Care* software.

Optional Professional Services

Lucent Technologies provides a wide array of Professional Services offers to help with the *Message Care* software. These offers provide personnel with the resources to work out every aspect of making the *Message Care* software an integral part of your call center. These offers include the following:

- Call Center Appliaiton Integration Services
- Call Center Tune-Ups
- Firewall Offers
- Data Networking Equipment and Services.

Call Center Application Integration Services

This offer provides an experienced Lucent Technologies Call Center consultant to evaluate a call center and engineer the optimum configuration for it.

Call Center Tune-Ups

This service is provided on an as-needed basis or seasonally, to fine-tune a call center's configuration and translations based upon available reports and feedback.

Firewall Offers

The Lucent Technologies Network Consulting Group can engineer, provision and maintain a new or existing firewall. They also offer testing of an existing infrastructure to ensure security. Equipped to provision and administer the leading enterprise firewall product offerings, the Network Consulting Group can help ensure that a network provides the access its callers require while protecting valuable internal resources.

Data Networking Equipment and Services

The Lucent Technologies Advanced Data Networking Group can engineer and provision industry-leading solutions from Lucent Technologies, Agile (a Lucent Technologies Company), Bay Networks, Ascend, Paradyne, Hypercom, and other leading edge companies. Solutions are maintained and monitored by Lucent Technologies' *NetCare*[®] Services, the oldest and largest network management service in the industry. Lucent's data networking solutions provide solid, highly available infrastructures on which to base business applications.

Lucent Technologies has personnel with the resources required to help you. If you are interested in the above offers, or want to inquire about other services, contact **1-800-4NetCare** for details.

Preparing a Call Center for the *Message Care* Software

Introduction

This chapter explains how to prepare your call center so that you can integrate the *Message Care*[™] system quickly and effectively. These preparations cover three areas:

- Ensuring the correct hardware, software, and connectivity for integrating the *Message Care* software
- Checking that the security provisions are satisfactory
- Designing the *Message Care* software implementation for optimal value in your operation.

Depending on the call center, these preparations can be fairly simple or quite extensive. If you would rather use Lucent's expertise for these activities, contact Professional Services. Lucent Technologies provides a wide array of Professional Services offers to help with the *Message Care* software. These offers provide highly trained and experienced personnel to work out every aspect of making the *Message Care* software an integral part of your call center. For further information, contact Professional Services at **1-800-4NetCare**.

Required Components

Table 2-1 lists the required environment you must have in place before the *Message Care* software can work at your site.

Table 2-1: Required Environment

Component	Hardware	Software	Connectivity
Mail Server		<ul style="list-style-type: none"><li data-bbox="499 467 752 651">• Post Office Protocol 3 (POP3)-compliant over a Transmission Control Protocol (TCP/IP) stack.<li data-bbox="499 667 752 850">• Simple Mail Transfer Protocol (SMTP)-compliant to handle outgoing messages from <i>Message Care</i>.<li data-bbox="499 867 752 1050">• TCP/IP access to the <i>Message Care</i> server over an Ethernet Local Area Network (LAN).	

Table 2-1: Required Environment (Contd)

Component	Hardware	Software	Connectivity
<p><i>Message Care!</i> <i>CentreVu</i>[®] Computer Telephony Server</p>	<ul style="list-style-type: none"> ● 266 megahertz (MHz) Pentium II Processor. ● 8 gigabyte (GB) hard-disk drive. ● 64 MegaByte (MB) Random Access Memory (RAM). ● One 10BASE-T Network Interface Card (NIC) (NOT 10/100) to connect to the <i>DEFINITY</i>[®] Enterprise Communications Server (ECS) and one NIC to connect to Customer LAN (10BASE-T, 100BASE-T, or Token Ring). ● CD-ROM drive. ● Monitor, keyboard, and mouse. 	<ul style="list-style-type: none"> ● <i>Message Care</i> Software. ● <i>Windows NT</i>^a 4.0 Server with Service Pack 3 and <i>Microsoft</i>^b Internet Information Services (IIS) R3.0. ● <i>CentreVu</i>[®] Computer Telephony Server (T-server) Software R2.32.21 or greater. ● Internet browser (<i>Microsoft</i> Internet Explorer 3.0 or 4.0; or <i>Netscape Navigator</i>^c 3.0 or 4.0). ● <i>pcANYWHERE</i>^d, R8. ● <i>Microsoft Access</i> 7.0. ● Server must be configured with display settings capable of supporting 256 colors, as this is a <i>Java</i>^e requirement. 	<ul style="list-style-type: none"> ● 28.8 KiloBytes per second (KBps) or faster modem and analog line for remote diagnostic access. ● Ethernet LAN connectivity, including: ● 1. Adjunct/Switch Applications Interface (ASAI) link to <i>DEFINITY</i> ECS LAN gateway through first NIC.

Table 2-1: Required Environment (Contd)

Component	Hardware	Software	Connectivity
<p><i>Message Care!</i> <i>CentreVu</i>[®] Computer Telephony Server Continued</p>		<ul style="list-style-type: none"> ● <i>Java</i> Runtime Environment (JRE) 1.1.6, Perl, PerlScript, and IIS3.0. 	<ul style="list-style-type: none"> ● 2. TCP/IP access to POP3-compliant mail server and SMTP mail server through second NIC and access to desktops of all <i>Message Care</i> agents through second NIC.
<p>Agent Desktop</p>		<ul style="list-style-type: none"> ● One of two Operating Systems (<i>Windows</i> 95 or NT). ● One of the following Internet browsers (<i>Netscape Navigator</i> R3 or R4 or Internet Explorer R3 or R4). ● Virus checker such as <i>McAfee</i>^f <i>VirusScan</i>. 	<ul style="list-style-type: none"> ● LAN Connectivity to <i>Message Care</i> Server.
<p>Other</p>		<ul style="list-style-type: none"> ● <i>DEFINITY</i> ECS G3 R6.3. 	

a. Windows is a registered trademark of Microsoft Corp.

b. Microsoft is a registered trademark of Microsoft Corp.

- c. Netscape Navigator is a trademark assigned to Netscape Communications Corp.
- d. pcANYWHERE is a registered trademark of Symantec Corporation
- e. Java is a registered trademark of Sun Microsystems, Inc.
- f. McAfee VirusScan is a copyright of McAfee Associates, Inc.

Mail Server

Mail Server Hardware

The mail server containing the mailboxes polled by the *Message Care* software must be POP3-compliant over a Transmission Control Protocol/Internet Protocol (TCP/IP) stack. To handle outgoing messages from the *Message Care* software, the mail server must also be Simple Mail Transfer Protocol (SMTP)-compliant.* An excellent example of such a server is the *Intuity™ AUDIX®* server with Internet Messaging.

Mail Server Connectivity

The mail server must have TCP/IP access to the *Message Care* server over an Ethernet Local Area Network (LAN).

Message Care/CentreVu Computer Telephony Server

Message Care Server Software

The *Message Care* Server must have the following software:

- *Message Care* Software (provided), which includes the following:
 - Modules that poll the incoming mailboxes, control message flow, update the message database, and submit composed messages to an SMTP server for delivery
 - Web pages and scripts that interact with your agents as they receive and process messages, and Web pages and scripts that interact with your supervisors as they generate Reports

*Most leading mail servers provide both of these protocols. If necessary, however, they can be on two separate mail servers.

- Web pages and scripts that interact with your administrators as they use the Administration Interface
 - Spelling checker for outbound messages
 - Message database and interface
 - Administrative database and interface
 - Computer-Telephony Integration (CTI) control engine
 - *Java* applet that downloads to the agent's desktop for login and PagePop.
 - The *Message Care* server and its associated CTI process can be shared with the ICC application.
- *Windows NT* 4.0 Server, with *Windows* Service Pack 3 or later, and *Microsoft* IIS 3.0

The *Windows NT* server license must support the number of agents, supervisors, and administrators expected to access the IIS, which supports the agent's *Java* applet and the Web pages for presenting and processing messages.

- *CentreVu Computer Telephony* T-server software,* Release 2.32.14 or later
- The function of the T-server is to pass CTI information between the *Message Care* software and the *DEFINITY* ECS.
- A *Java* enabled Internet browser (normally *Microsoft* Internet Explorer or *Netscape Navigator*, Release 3 or later) for administration and maintenance

 **NOTE:**

All agent browsers must be optioned to support cookies. Cookies provide a way for *Message Care* to track an agent's processing patterns and, with the cooperation of the Web browser, to store the agent's data. This option is located in Options => Network Preferences => Protocols in *Netscape* or Options => Advanced in *Internet Explorer*.

*If you are running both the *Message Care* and *Internet Call Center (ICC)* applications, you may need additional server hardware in order to minimize the security risks of connecting the T-server software to the public Internet.

- *pcANYWHERE*, Release 8 or later, for remote use with both the T-server and the *Message Care* software
- *Microsoft Access 97* or later, for use with the message storage system.

Message Care Server Hardware

The server where you install the *Message Care* software can also support the T-server and handles the message storage system and the Web pages that agents use in processing messages.

The hardware for the *Message Care* server must meet the following minimum requirements:

- 266 MHz Pentium processor (not multiprocessor)
- 8 GB hard-disk drive
- 64 MB RAM
- Two 10Base-T Network Interface Cards (NICs), or one 10Base-T and one 100Base-T (depending on your LAN)

The reason for having two NICs is to protect the security of the *DEFINITY* ECS LAN gateway

- CD-ROM drive
- Monitor, keyboard, and mouse, for onsite administrative and diagnostic access.

Message Care Server Connectivity

The *Message Care* server requires the following connectivity:

- Modem for setup and installation support
- Modem (28.8 KBPS or faster) and analog line, for remote diagnostic access
- Ethernet LAN connectivity, including the following:
 - ASAI link to the *DEFINITY* ECS LAN gateway, through the first NIC
 - TCP/IP access to the POP3-compliant mail server and the SMTP mail server, through the second NIC

- Access to the desktops of all *Message Care* agents, through the second NIC.

Agent Desktop

The desktop of each *Message Care* agent must have the following software and connectivity:

Agent Desktop Software

- One of two operating systems:
 - *Windows 95*
 - *Windows NT*, Release 3.51 or 4.0.
- One of the following Internet browsers:
 - *Netscape Navigator* Release 3 or Release 4
 - *Microsoft Internet Explorer* Release 3 or Release 4.

NOTE:

Agents who work with both the *Message Care* software and Internet Call Center (ICC) use the same *Java* applet to log into both applications.

- Virus checker such as *McAfee VirusScan* in order to perform virus checking when opening file attachments received in email.

Agent Desktop Connectivity

The agent desktop must have LAN connectivity to *Message Care* Server.

Other Required Components

- *DEFINITY* ECS G3, Release 6.3, which includes support for ASAI message calls. A message call originates under CTI control from a station administered without hardware (AWOH) - a station from which a *DEFINITY* ECS can send a message call, even though there is no physical telephone. This allows *Message Care* message calls into the *DEFINITY* ECS queue without using up any port resources.

The activated *DEFINITY* ECS features must include the following:

- Expert Agent Selection (EAS)
- ASAI or ASAI Proprietary Adjunct Links
- An analog line to the *DEFINITY* ECS for remote maintenance and access
- A *DEFINITY* ECS LAN gateway, for the ASAI link to the *CentreVu* Computer Telephony T-server software.

Although ASAI message calls do not use any port resources, you do need a dial plan on your *DEFINITY* ECS large enough to support the number of message calls you want to queue simultaneously. Message calls do use vectors and queue slots. In addition, each *DEFINITY* ECS has a fixed number of ASAI associations available. The *Message Care* software uses one association for each Vector Directory Number (VDN) with currently active message calls, plus additional, temporary associations for adjunct route steps within the vectors involved. This makes it important to find out how many ASAI associations are available on your *DEFINITY* ECS.

NOTE:

CTI Interactions are possible; for more information, please see the “Sample Vectors” section of this chapter.

Your traffic engineering must also take into account the longer hold times normally expected in processing email. Queue allocation between mailboxes is also an important traffic consideration. For more information, please see the “Sample Vectors” section of this chapter.

It is important to include these considerations when designing your message handling vectors. Since vector-design requirements are different for each call center, the *Message Care* software does not include any automatic changes to vectoring or queuing mechanisms on the

DEFINITY ECS. You must program your *Message Care* vectors to ensure that message handling meets your service objectives, for instance, to ensure that no message call simply sits in the queue indefinitely.

For further information on designing for the *Message Care* software, see the “Design” section in this chapter.

Recommended (but not required) Components

CentreVu CMS Server

The *CentreVu* CMS server is not required but is a useful tool to measure your agent's performance and must have the following hardware and software:

- CMS Server Hardware
- CMS Server Software.

CMS Server Hardware

Lucent recommends (but does not require) a high-end *SPARC** system for the *CentreVu* CMS server.

CMS Server Software

The *CentreVu* CMS software must be R3V5 or later.†

The standard *CentreVu* reports are not formatted for the extended times in queue (hours rather than minutes) that you may need for *Message Care* message calls. Therefore, the *Message Care* software comes with a set of reports formatted to display these times.

For further information on *CentreVu* reports covering *Message Care* message calls, see Chapter 6, "Reports and the Database."

*SPARC is a registered trademark of Sun Microsystems, Inc.

†To make use of the *CentreVu* Advocate features in Release 6.3 of *DEFINITY* ECS, CMS must be R3V6 or later. Note also that *BCMS Vu* cannot track message calls with queue times exceeding 19 hours. Thus, if you expect *Message Care* message calls with longer holding times than 19 hours, you should not use *BCMS Vu*.

Security

The following section provides a high-level overview of firewall and security recommendations for the *Message Care* software. As you plan for the *Message Care* software, be sure to include measures to protect the security of your data.

Message Privacy

Messages in the message storage system are accessible only through Web pages or direct access to the *Microsoft Access* database which stores message information. Only agents currently logged into the *Message Care* software can retrieve messages through the Web pages provided by the *Message Care* software. You need to control direct access to the database through the NT server user restrictions or other standard access control mechanisms in place on your network.

Before messages enter the message storage system, they reside in receiving mailboxes on the POP3 mail server. To protect the security of these mailboxes, use the same measures you use to protect other mailboxes.

LAN Security

Firewall is a term that represents a network component designed to protect an internal network (an intranet) from unauthorized network requests. For example, most corporate sites on the Internet have a firewall between the Internet and their corporate intranet to protect internal systems and information from malicious or casual access. Many intranets also have firewalls between subnets to protect sensitive information.

The main line of defense for your data networks is your firewall. By properly configuring the firewall, you can prevent data from outside the firewall from entering your internal LAN unless they meet specific rules and requirements administered on the firewall. You have probably already designed your firewall to allow appropriate email to pass in and out of your call center, so the *Message Care* software poses no additional security risk to your LAN.

Message Care Server Security

The *Message Care/CentreVu* Computer Telephony T-server require direct-dialed analog lines for remote diagnostic and maintenance support. This remote support is used for all components of the *Message Care* software. *pcANYWHERE* software and a modem are used to provide remote maintenance, diagnostics, and support for the *Message Care/CentreVu* Computer Telephony T-server. This software is very important for the maintenance and support of these servers. It does, however, offer an access point into your server and, possibly, into your network. It is recommended that these dial-in ports also be protected by an RPSD lock.

pcANYWHERE software be, at a minimum, password protected. Please consult the *pcANYWHERE* documentation for additional security recommendations.

It is also recommended that NT facilities be used to log user access and *McAfee VirusScan* be used for virus protection.

Administration and Reports Security

The *Message Care* software utilizes NT password protection for administrative and reporting capabilities. You need to control direct access to reports and the administrative database through the NT server user restrictions or other standard access control mechanisms in place on your network.

You can restrict access to the *Message Care* administration Web pages to only authenticated clients. By using authentication, only those clients having a valid user name and password are permitted to access the administration Web pages.

If you want to restrict access to the *Message Care* administration Web pages, you must ensure the following:

- Password protect the following directories:
 - Program Files/Message Care/WWW/admin
 - Program Files/Message Care/WWW/Reports

- The Internet Telephony Gateway (ITG) installation directory (c:\itg) must be installed on an NTFile System (NTFS). Refer to the ICC Administration page described in Chapter 3, “Installation and System Administration.”
- The Internet Information Services (IIS) software must be configured to handle authentication. There are two methods of authentication:
 - Basic (Clear Text). This method of authentication sends the client *Windows NT* user name and password over the networks unencrypted (for administrators).
 - Windows NT Challenge/Response. This method of authentication protects the password thus providing for a secure login over the network. However, this method of authentication is supported only by *Microsoft* Internet Explorer 3.0 or 4.0 (for supervisors and agents).

By default, both Basic and Windows NT Challenge/Response are enabled. If your browser supports Windows NT Challenge/Response, then it uses that form of authentication. If your browser does not support the Windows NT Challenge/Response method, then it uses Basic authentication.

Once you have ensured the above, you can add users and allocate permissions on the *Message Care* server.

Design

Designing for the *Message Care* software is primarily a matter of defining the following:

- The mailboxes for the *Message Care* software to poll—Ensuring that messages arrive in the correct mailbox is the first step in routing them to the best agents to handle them. The mailbox where a message arrives determine the VDN that the *Message Care* software uses to deliver the message.

In addition, the mailbox that receives a message determines what acknowledgement (if any) automatically goes out as soon as the *Message Care* software receives the message.

- The VDNs and vectors needed to deliver the messages efficiently—A mailbox can have several associated VDNs or a single VDN: the *Message Care* software can search the subject of the message for keywords, and associate each keyword with a VDN.

To develop your *Message Care* design, consider the flow of the messages you expect to receive, from their point of origin through the point where the consumer's request is satisfied. If you are unfamiliar with this flow, review it in Chapter 1, "About Message Care Software." Start by considering the consumer who sends the message.

Who Is Sending the Messages, and What Do They Want?

The design of your *Message Care* software depends on the types of messages you expect, your service expectations for handling each type, and the skills required in the agents who handle them. This means you want to sort messages according to a number of different factors. Sample sorting factors include the following:

- Skill Type—The following factors are valuable in determining the skills required to handle a message (for example, sales or support group skills):
 - The product or service that the consumer wants to know about
 - Whether the consumer already has the product or is considering getting it

- Whether the consumer's question is technical or general
- The urgency of the consumer's question.
- Queue Limits—The following factor influences the *DEFINITY ECS* queuing priority you assign in the VDN where the *Message Care* software sends the message call (vector programming in *DEFINITY ECS* can restrict the number of message calls that may be queued for a specific agent skill set):
 - *DEFINITY ECS* queue limits ensure that a single mailbox cannot use all *Message Care* purchased resources and starve delivery from other mailboxes.
- Auto-Acknowledgment—The following factor influences your decision about whether to have the *Message Care* software send an auto-acknowledgement to the consumer before launching a message call. The auto-acknowledgement can reassure a consumer and thus reduce future inquiries about the progress of email queries:
 - How promptly the consumer expects to hear back from you
 - Insure the consumer that their message did not fall into a black hole on the Internet.

Example

Skills, queue limits, and message call priority are illustrated in the following example:

If a center supports four mailboxes: 1, 2, 3, and 4 and the total *Message Care* capacity purchased is 100, using vectors, the center can limit the number of message calls going to a message skill to 25 and assign a unique skill to each mailbox. Therefore, at any time, only 25 message calls can be queued in *DEFINITY ECS* for each mailbox.

NOTE:

When a message call is active at an agent, this threshold doesn't apply. Therefore, there may be 25 message calls queued and an additional 25 message calls active at agents.

If Mailbox 1 and 2 each receive 50 messages, but no messages arrive in C and D, and fewer than 50 agents are active on message calls, *Message Care* will have sufficient resources to launch message calls. However,

DEFINITY ECS vectors will drop the messages calls once 25 have been queued.

Just like voice call design, the queue limit only applies to calls queued. Once a call is active at an agent, the queue slot is available for another call.

Handling Undeliverable Notices

An undeliverable notice may be received into a *Message Care* monitored mailbox after an agent submitted a message to the SMTP server. Undeliverable messages may also occur when an auto-acknowledgement message is sent.

For detailed information about handling undeliverable notices, see Chapter 5, “Processing Message Calls.”

In What Form Are the Messages Arriving?

The *Message Care* software expands the avenues through which consumers can contact your call center, while providing tools to evaluate the service you are providing. The messages you can route and track include:

- Forms-based email—Email generated by a form on your Web site
- Freeform email (including file attachments)
- Faxes.

The only requirement is that the messages you want to route and track comply with Internet messaging protocols.

Forms-Based Email

Consumers can choose a `Write to Us` link on your Web site, and see a form that you have designed for generating email. The form prompts the consumer to provide the information you need in order to process a request efficiently and effectively. For instance, you can ask consumers whether they have purchased products or services from you before and which products they were. At a minimum, it is important to require an email address where you can reach the consumer. For messages sent from a form, the return address for the message originator should be designed to be the consumer, not the mail server.

Planning this form is similar to planning a menu for routing voice calls. Fortunately, however, a Web form on the screen is easier for consumers to follow than a voice menu is. This means that you can request more detailed information to help route their requests to the correct agent.

When the consumer chooses the `Send` button, the Common Gateway Interface (CGI) script behind the form uses the entered data to compose a message that complies with Internet messaging protocols, and sends it to the appropriate *Message Care* mailbox. The factors determining this mailbox may be part of the information provided by the consumer. The Web page where the consumer chose your `Write to Us` link may also help. For instance, if the consumer was browsing your new products page, the message might go to `new-orders@callcenter.com`.

In some cases, you may choose to route these messages first to system software on your Web server, before it ever reaches a *Message Care* mailbox. This software may be able to use the information from the form to generate a sufficient answer for the consumer automatically, so that the consumer receives the desired information or assistance without the need for a live agent. Otherwise, the software can route the message to the appropriate *Message Care* mailbox.

Once the message arrives in a *Message Care* mailbox, the *Message Care* software picks it up and gets it to an agent who can handle it.

You need to create a form for generating email from your Web site. The best design for the email form on your own Web site depends on what information you need to handle a message effectively. Key information that the form should gather includes:

- Information to identify the consumer, such as account number or home address
- Contact information about the consumer, such as the return email address or a phone number to call back
- Selection options which, taken together, identify the appropriate skill group for handling the consumer's request; basically, Who is sending the messages, and what do they want?

Only someone familiar with your business can specify exactly what information you need. However, Lucent Technologies Professional Services offers assistance in designing and constructing your Write to Us form. To contact Professional Services, call 1-800-4NetCare.

Freeform Email

Consumers can send a freeform text message to an Internet address you publish. You probably already have at least one such address for general inquiries. You can publish additional addresses to match specific product lines, business interests, consumer concerns, and marketing campaigns. The *Message Care* software can receive all of these messages, as long as they comply with Internet messaging protocols, and deliver them according to the instructions for the mailbox where they arrive.

Normally, freeform messages to a general address require more processing time. Before anyone can actually handle the request in the message, someone must analyze the message, determine what the request is, decide who is best qualified to handle it, and send it to that person.

However, you can automate this process by routing email through a sorting utility. Several commercially available mail-sorting utilities are capable of using rules and filters you specify to analyze a message and, when appropriate, put it into one of the mailboxes monitored by the *Message Care* software.

If, for example, a consumer sends a freeform email and an agent receives it and then forwards it to another agent or SME, and a filter performs a forward operation, the return address should be set to the originator (the original agent that answered the message call).

File Attachments

Attachments can include any type of file. However, you must supply your agents with helper applications for handling these attachments. The selection of helper applications you need to supply for your agents depends on the types of files you expect your consumers to send. These may include plain text, graphics, voice or other sound files, and files created in various spreadsheets, word processors, databases, and other applications.

It is recommended that a virus checker such as *McAfee VirusScan* be installed on the agent's desktop in order to perform virus checking when opening file attachments received in email.

Faxes

From the point of view of the *Message Care* software, a fax is actually just one more type of file attachment to the messages it receives. It works like the following:

- Consumers send their faxes to a number you publish. Most email servers support a fax server interface which enables the mail server to accept fax image files and store them electronically, as a file attachment to a message. An excellent example of such a server is the *Intuity AUDIX* server with Internet Messaging.
- The *Message Care* software works with the mail server to accept messages that include fax images and deliver them according to the VDN for the mailbox where they arrive.

This VDN should stipulate that such messages go only to agents able to view fax files. To work with fax images received through the *Message Care* software, agents must have helper applications for handling faxes through their browser.

Faxes are a special case in another way: they normally have a callback number, but not an email return address. Without such a return address, the *Message Care* software cannot get an auto-acknowledgement to the consumer. Thus you should plan your mailboxes to keep fax messages separate from any messages where you want to send the consumer an auto-acknowledgement.

 **NOTE:**

The *Message Care* software does not provide tools for responding to faxes.

Where Do You Want the Messages to Go?

The following are cases where email messages from consumers should go directly to a specific agent instead of through a general mailbox:

- Direct Correspondence with Agents
- *DEFINITY* ECS Expert Agent Selection.

Direct Correspondence with Agents

Direct agent work occurs in the following cases:

1. New work requests directed to a specific agent
2. Received messages from SMEs
3. When the agent suspends a message. The message is then “dormant” until the time comes for it to be reactivated. Agents may manually request that a message be returned or the “timer” may expire. In either case, *Message Care* returns the message to the suspending agent.

 **NOTE:**

In cases 2 and 3 above, a special mailbox is *not* required.

The vector associated with a VDN may specify a skill set needed to respond to the message, or it may route the message directly to a specific agent. Depending on your business practices, email sent directly to an agent may come from the following:

- Consumers to whom the agents have given their personal address because they have formed a relationship
- Consumers inquiring about something handled by only one particular agent
- Other agents or consultants who are responding to *Message Care* messages forwarded to them.

If you choose to have the *Message Care* software support these messages, it is important to set up your vectors accordingly. Vector programming can insure that work is handled when agents are sick or on vacation. For more information on vectoring, please see the “Sample Vectors” section of this chapter.

Some of the email for individual agents should not go through the *Message Care* software; for instance, notices about training courses or changes in the work schedule. If the *Message Care* software were to handle these messages, the statistics on their handling times would contaminate the data on the efficiency of your call center. However, email from a consumer, or email about a message from a consumer (whether from inside or outside your organization), should always go through the *Message Care* software, to ensure start-to-finish statistics on handling consumer concerns.

Thus, any agent expected to receive direct correspondence from consumers should have two mailboxes, one for *Message Care* messages and one for other email.

DEFINITY ECS Expert Agent Selection

The actual functionality of the *DEFINITY ECS* can be described in the context of agent operations during *Message Care* message calls. To staff a *Message Care* agent position, an agent uses a browser to access a login Web page and inputs their Expert Agent Selection (EAS) agent ID and the physical extension where they will take message calls. The agent submits the completed form to the *Message Care* server. The *Message Care* server sends a login request containing the agent's ID and extension to the *CentreVu* Computer Telephony T-Server, which uses ASAI to log the agent in. This lets the *DEFINITY ECS* know about the agent. Refer to the *DEFINITY ECS Release 6 Call EAS Issue 2 Guide* (555-230-521) document for details on EAS.

What Vectors Do You Need?

For each message it handles, the *Message Care* software tells the *DEFINITY ECS* to launch a message call using the VDN associated with the mailbox where it found the message.* EAS on the *DEFINITY ECS* then uses the vector associated with that VDN to give the message a proper place in the queue and select an agent qualified to process the message.

In addition, CMS uses the VDN associated with a message call in organizing its reports. Thus, each mailbox should normally have its own VDN for successful measurements, even if multiple VDNs all point to the same agent skill set.

* For the maximum number of mailboxes monitored by the *Message Care* software, see the *Message Care Capacities* section in Chapter 1, "About *Message Care Software*." To expand the routing possibilities for each mailbox, the *Message Care* software also provides sorting within a mailbox by up to ten keywords, each with its own VDN. The *Message Care* software searches the subject of the message for each keyword in turn. If it finds none of them, it uses the default VDN for the mailbox. Keyword sorting is limited to the message subject only, not the message body.

It is crucial for you to define your VDNs and vectors carefully, in order to route messages to the correct agents, and in order to track the management information you require. The following issues (priority, skills, and tracking) affect these definitions:

- What is the priority of each message?

EAS on the *DEFINITY* ECS uses the vector to determine the place of each message call in the queue. For instance, one VDN can point to a vector requiring that messages receive an answer within two hours, while messages with another VDN can wait up to six hours.

- What skills do agents need in order to handle the messages?

Defining the skill groups for handling *Message Care* messages is essentially the same as defining skill groups to handle voice calls. You need to consider your standard factors in setting up skill groups, such as the agents' language capabilities and their knowledge of your products. In addition, the members of each skill group receiving *Message Care* calls must know the following:

- Knowledge of how to use a Web browser
- Good written communication skills
- Facilities necessary to view the messages; for instance, to work with faxes, agents must have a helper application for handling fax images through their browser
- Ability to handle both *Message Care* and voice calls. However, the two types of calls should come from separate VDNs to ensure accurate reporting.

- How do you want to track the messages?

A message call originating from the *Message Care* software looks just like any other incoming call to the *DEFINITY* ECS, and *CentreVu* Call CMS collects typical statistics on the call: talk time, speed of answer, and so on. Talk time for a message call is defined as the email work time for an agent. The importance of the VDN to message call tracking arises when you want to sort reports according to internal factors such as the origin of a message, its priority, the type of request it contains, or its method of transmission, such as freeform email versus email from the form on your Web site. To sort data on these factors, each type of message must have a unique VDN which indicates this information.

General Guidelines for Designing Vectors

The following are general guidelines for designing your vectors.

Queue/Hold Time

Due to the potential rollover of statistical values in *DEFINITY* ECS, vectors designed to support message calls should insure that a message call not be queued within a single vector more than eight hours.

Hold time should be limited due to rollover of certain message call tracking values in *DEFINITY* ECS.

CTI Interactions

If you are using multiple CTI applications and one or more of the other CTI applications have a need to 'monitor' *Message Care* message calls, there are some guidelines that need to be followed in order to avoid the possibility that *Message Care* will 'lose monitoring' for the *Message Care* message call.

For CTI applications that will be monitoring message calls through VDNs, these applications should monitor the same set of VDNs that are being monitored by the *Message Care* software. These VDNs are those that have been assigned to the mailboxes.

If the *Message Care* message calls get redirected to subsequent VDNs (through vectoring, through adjunct routing or by agent transfers/conferences), these subsequent VDNs should not be monitored by the other CTI applications. Both *Message Care* and the other CTI applications will continue to receive information about these message calls through monitoring on the initial VDN even though the message calls have been redirected to other VDNs. If the other CTI application does monitor these 'subsequent' VDNs, it is possible that *Message Care* will lose track of the message call and thus, prevent it from doing a PagePop.

Message Care will lose track of the message call if the other CTI application either uses a different platform for CTI connectivity to the *DEFINITY* ECS (for example, CallVisor PC) or uses a separate CTI link.

If the other CTI application needs to monitor *Message Care* message calls, it should monitor the initial VDN. If both *Message Care* and the other CTI application monitor only the initial VDN, both applications will continue to get events for the message call even if the message call gets re-directed to the other VDNs.

In some of the sample vectors shown below, message calls are redirected to other VDNs for the purpose of 'de-queuing/re-queuing' message calls.

In the following examples, the other CTI application should not be monitoring these 'subsequent' VDNs.

Sample Vectors

The following are sample vectors for basic message call delivery, retrieve and suspend delivery, and miscellaneous vectoring that you can use to provide different coverage for supporting message calls.

Sample Vectors for Basic Message Call Delivery

Following are two sample vectors for basic message call delivery: the first sample vector (Sample 1) is for a call center that has scheduled business hours; the second sample (Sample 2) is for a call center that operates around the clock 24 hours a day, 7 days a week.

Sample 1 - Scheduled Business Hours; Hours of Operation: M-F 8-5

This vector (Vector 1) will queue the message call and begin a series of wait steps, which are continued in a second vector (Vector 2), so that the total time in queue approaches eight hours.

⇒ NOTE:

Vector design should limit message call queuing to eight hours. When the queue time approaches eight hours, the vector will automatically disconnect the message call.

Time of day checks are done periodically so that message calls in queue during non-business hours will be automatically disconnected.

⇒ NOTE:

If a message call is disconnected either by an agent hang up or by a vector disconnect, *Message Care* will wait 15 minutes and then retry the message call.

⇒ NOTE:

You may want to limit the number of message calls queued in a specific vector based on the staffing profiles of agents trained to support that mailbox. Your 200 message extension resources need to be shared across all mail boxes in order to prevent starving (starving occurs when a select number of mail boxes continuously receive message calls, leaving other mailboxes with no resources from which calls may be launched). If there are three agents (agent 1, 2, and 3), each agent could have a specific skill (such as handling catalog requests, problems, or technical support). Depending on the percentage of message calls that go to each skilled agent, each mailbox should be set up to limit message call queues accordingly.

In the following sample, *Message Care* launches the 'message call' to VDN 1000 that directs message calls to Vector 1. *Message Care* is monitoring VDN 1000.

VDN 1000 -> Vector 1

1. Go to step 30 if time of day is all 17:00 to all 8:00 (check if outside normal business hours).
2. Go to step 30 if time of day is Friday 17:00 to Monday 8:00 (check if outside normal business hours).
3. Go to step 30 if message calls-queued in skill 1 > 49 (limits the number of message calls that can queue).
4. Queue to skill 1 pri m.
5. Wait time 899 seconds hearing silence (first of a series of 14:59 (mm:ss) wait steps).
6. Wait time 899 seconds hearing silence.
7. Wait time 899 seconds hearing silence.
8. Wait time 899 seconds hearing silence (message call queued for almost an hour).
9. Go to step 30 if time of day is all 17:00 to all 8:00.
10. Go to step 30 if time of day is Friday 17:00 to Monday 8:00.

11. Wait time 899 seconds hearing silence.
12. Wait time 899 seconds hearing silence.
13. Wait time 899 seconds hearing silence.
14. Wait time 899 seconds hearing silence (message call queued for almost two hours).
15. Go to step 30 if time of day is all 17:00 to all 8:00.
16. Go to step 30 if time of day is Friday 17:00 to Monday 8:00.
17. Wait time 899 seconds hearing silence.
18. Wait time 899 seconds hearing silence.
19. Wait time 899 seconds hearing silence.
20. Wait time 899 seconds hearing silence (message call queued for almost three hours).
21. Go to step 30 if time of day is all 17:00 to all 8:00.
22. Go to step 30 if time of day is Friday 17:00 to Monday 8:00.
23. Wait time 899 seconds hearing silence.
24. Wait time 899 seconds hearing silence.
25. Wait time 899 seconds hearing silence.
26. Wait time 899 seconds hearing silence (message call queued for almost four hours).
27. Go to step 30 if time of day is all 17:00 to all 8:00.
28. Go to step 30 if time of day is Friday 17:00 to Monday 8:00.
29. Go to vector 2 if unconditional (continues vector processing in a second vector since vectors are limited to 32 steps).
30. Disconnect after announcement none (automatically disconnects message call if outside business hours or if queue limit reached).
31. Stop.

VDN 1001 -> Vector 2

1. Wait time 899 seconds hearing silence.
2. Wait time 899 seconds hearing silence.
3. Wait time 899 seconds hearing silence.
4. Wait time 899 seconds hearing silence (message call queued for almost five hours).
5. Go to step 23 if time of day is all 17:00 to all 8:00.
6. Go to step 23 if time of day is Friday 17:00 to Monday 8:00.
7. Wait time 899 seconds hearing silence.
8. Wait time 899 seconds hearing silence.
9. Wait time 899 seconds hearing silence.
10. Wait time 899 seconds hearing silence (message call queued for almost six hours).
11. Go to step 23 if time of day is all 17:00 to all 8:00.
12. Go to step 23 if time of day is Friday 17:00 to Monday 8:00.
13. Wait time 899 seconds hearing silence.
14. Wait time 899 seconds hearing silence.
15. Wait time 899 seconds hearing silence.
16. Wait time 899 seconds hearing silence (message call queued for almost seven hours).
17. Go to step 23 if time of day is all 17:00 to all 8:00.
18. Go to step 23 if time of day is Friday 17:00 to Monday 8:00.
19. Wait time 899 seconds hearing silence.
20. Wait time 899 seconds hearing silence.
21. Wait time 899 seconds hearing silence.

22. Wait time 899 seconds hearing silence (message call queued for almost 8 hours).
23. Disconnect after announcement none (automatically disconnects message call if outside business hours or as total time in queue approaches 8 hours).
24. Stop.

Sample 2 – Call Center Working “Around the Clock”; Hours of Operation: 24x7

In this sample vector, rather than disconnecting the message call as the queue time approaches eight hours, the message call is de-queued using a ‘route-to-number’ vector step. The ‘route-to-number’ step will redirect the message call to another VDN where the message call will be re-queued for almost eight hours. The de-queuing and re-queuing can be repeated multiple times. The advantage of de-queuing and re-queuing using this method is that it will enable customers to use CMS reports on VDNs to get an approximation on the total time the message call was in queue before being answered.

As shown in the sample below, the message call initially is sent to VDN 1200 where it will queue for almost eight hours (actually, seven hours and 46 minutes); it gets re-directed to VDN 1300 which will then queue the message call for another eight hours.

If the message call still has not been answered after approximately 16 hours in queue, it will be re-directed to a third VDN that will queue the message call for almost eight hours after which it will be disconnected. *Message Care* will wait 15 minutes and then retry the message call back to VDN 1200. Customers may choose to continue the de-queuing/re-queuing process instead of disconnecting the message call. All DEFINITY ECS-stored parameters used to route message calls are cleared when the message call is routed to a new vector.

In Sample 2, if CMS reports on VDN 1300 indicated an ‘average speed of answer’ of 4.5 hours, the actual ‘average speed of answer’ for the message calls would be 12.25 hours (7.75 hours in queue in VDN 1200 plus 4.5 hours in queue in VDN 1300).

In this example, *Message Care* launches message calls to VDN 1200. Depending on how long it takes for the message call to be answered, the message call may get redirected to VDN 1300 and VDN 1400.

Message Care is monitoring VDN 1200; it is not monitoring VDN 1300 nor VDN 1400. Other CTI applications should not monitor VDN 1300 or VDN 1400 as this may result in *Message Care* losing track of the message call. If the other CTI application needs to monitor *Message Care* message calls, it should monitor VDN 1200. If both *Message Care* and the other CTI application monitor only VDN 1200, both applications will continue to get events for the message call even if the message call gets re-directed to the other VDNs.

Also, as shown in this example, message calls are initially queued at a low priority. Each time the call is de-queued and then re-queued, it is queued at a higher priority. This is to preserve as much as possible first in first out (FIFO) queuing.

The maximum length of the wait step is 999 seconds. Because four steps are used for things other than waiting, this will result in total queue time in this vector of only seven hours and 46 minutes (999 X 28).

In the following sample, *Message Care* launches the 'message call' to VDN 1200 that directs message calls to Vector 120. *Message Care* is monitoring VDN 1200:

VDN 1200 → Vector 120

1. Go to step 32 if message calls-queued in skill 1 > 49 (limits the number of message calls that can queue).
2. Queue to skill 1 pri 1 (initially queues message call at a low priority).
3. Wait time 999 seconds hearing silence (first of a series of 16:39 (mm:ss) wait steps).
4. Wait time 999 seconds hearing silence.
5. Wait time 999 seconds hearing silence.
6. Wait time 999 seconds hearing silence (message call queued for 1:07 [h:mm]).
7. Wait time 999 seconds hearing silence.
8. Wait time 999 seconds hearing silence.
9. Wait time 999 seconds hearing silence.

10. Wait time 999 seconds hearing silence (message call queued for 2:13 [h:mm]).
11. Wait time 999 seconds hearing silence.
12. Wait time 999 seconds hearing silence.
13. Wait time 999 seconds hearing silence.
14. Wait time 999 seconds hearing silence (message call queued for 3:20 [h:mm]).
15. Wait time 999 seconds hearing silence.
16. Wait time 999 seconds hearing silence.
17. Wait time 999 seconds hearing silence.
18. Wait time 999 seconds hearing silence (message call queued for 4:26 [h:mm]).
19. Wait time 999 seconds hearing silence.
20. Wait time 999 seconds hearing silence.
21. Wait time 999 seconds hearing silence.
22. Wait time 999 seconds hearing silence (message call queued for 5:33 [h:mm]).
23. Wait time 999 seconds hearing silence.
24. Wait time 999 seconds hearing silence.
25. Wait time 999 seconds hearing silence.
26. Wait time 999 seconds hearing silence (message call queued for 6:40 [h:mm]).
27. Wait time 999 seconds hearing silence.
28. Wait time 999 seconds hearing silence.
29. Wait time 999 seconds hearing silence.

30. Wait time 999 seconds hearing silence (message call queued for 7:46 [h:mm]).
31. Route to number 1300 if unconditional.
32. Disconnect after announcement none.

VDN 1300 - > Vector 130

1. Queue to skill 1 pri m (re-queues message call at a medium priority).
2. Wait time 959 seconds hearing silence (first of a series of 15:59 (mm:ss) wait steps).
3. Wait time 959 seconds hearing silence.
4. Wait time 959 seconds hearing silence.
5. Wait time 959 seconds hearing silence (message call queued for 1:04 [h:mm]).
6. Wait time 959 seconds hearing silence.
7. Wait time 959 seconds hearing silence.
8. Wait time 959 seconds hearing silence.
9. Wait time 959 seconds hearing silence (message call queued for 2:08 [h:mm]).
10. Wait time 959 seconds hearing silence.
11. Wait time 959 seconds hearing silence.
12. Wait time 959 seconds hearing silence.
13. Wait time 959 seconds hearing silence (message call queued for 3:12 [h:mm]).
14. Wait time 959 seconds hearing silence.
15. Wait time 959 seconds hearing silence.
16. Wait time 959 seconds hearing silence.

17. Wait time 959 seconds hearing silence (message call queued for 4:16 [h:mm]).
18. Wait time 959 seconds hearing silence.
19. Wait time 959 seconds hearing silence.
20. Wait time 959 seconds hearing silence.
21. Wait time 959 seconds hearing silence (message call queued for 5:20 [h:mm]).
22. Wait time 959 seconds hearing silence.
23. Wait time 959 seconds hearing silence.
24. Wait time 959 seconds hearing silence.
25. Wait time 959 seconds hearing silence (message call queued for 6:24 [h:mm]).
26. Wait time 959 seconds hearing silence.
27. Wait time 959 seconds hearing silence.
28. Wait time 959 seconds hearing silence.
29. Wait time 959 seconds hearing silence (message call queued for 7:28 [h:mm]).
30. Wait time 959 seconds hearing silence.
31. Wait time 959 seconds hearing silence (message call queued for almost 8 hours).
32. route to number 1400 if unconditional.

VDN 1400 - > Vector 140

1. Queue to skill 1 pri h (re-queues message call at a high priority).
2. Wait time 959 seconds hearing silence (first of a series of 15:59 (mm:ss) wait steps).
3. Wait time 959 seconds hearing silence.

4. Wait time 959 seconds hearing silence.
5. Wait time 959 seconds hearing silence (message call queued for 1:04 [h:mm]).
6. Wait time 959 seconds hearing silence.
7. Wait time 959 seconds hearing silence.
8. Wait time 959 seconds hearing silence.
9. Wait time 959 seconds hearing silence (message call queued for 2:08 [h:mm]).
10. Wait time 959 seconds hearing silence .
11. Wait time 959 seconds hearing silence.
12. Wait time 959 seconds hearing silence.
13. Wait time 959 seconds hearing silence (message call queued for 3:12 [h:mm]).
14. Wait time 959 seconds hearing silence .
15. Wait time 959 seconds hearing silence.
16. Wait time 959 seconds hearing silence.
17. Wait time 959 seconds hearing silence (message call queued for 4:16 [h:mm]).
18. Wait time 959 seconds hearing silence.
19. Wait time 959 seconds hearing silence.
20. Wait time 959 seconds hearing silence.
21. Wait time 959 seconds hearing silence (message call queued for 5:20 [h:mm]).
22. Wait time 959 seconds hearing silence .
23. Wait time 959 seconds hearing silence.
24. Wait time 959 seconds hearing silence.

25. Wait time 959 seconds hearing silence (message call queued for 6:24 [h:mm]).
26. Wait time 959 seconds hearing silence.
27. Wait time 959 seconds hearing silence.
28. Wait time 959 seconds hearing silence.
29. Wait time 959 seconds hearing silence (message call queued for 7:28 [h:mm]).
30. Wait time 959 seconds hearing silence.
31. Wait time 959 seconds hearing silence (message call queued for almost 8 hours).
32. Disconnect after announcement none (disconnects message call after approximately 24 hours).

Sample Vectors for Retrieve and Suspend

When an agent suspends a message call, the processing of that message is postponed for a specified period of time. When the suspension timer expires or if a response is received linked to the original consumer's request, the *Message Care* software will initiate a call to return the message to the agent. The number called is the Suspend VDN and may be administered per mailbox.

The Retrieve option is used when an agent wants to resume processing of an original message call. The *Message Care* software always attempts to deliver messages first if their delivery was requested by an agent through Retrieve. A message can be retrieved if it is either in the launched, suspended, blocked, and failed status states, but not closed or active.

When the Message Care software launches either a retrieved or suspended call, it is prepared to support an adjunct route request if asked for in the vector processing. When prompted for an adjunct route, the *Message Care* software will respond with an agent ID of either the agent retrieving the message or the agent who suspended the message.

⇒ NOTE:

If another CTI application is monitoring the VDNs used by the *Message Care* software, this other CTI application must not register for adjunct route requests on these VDNs.

To achieve the full benefits of the *Message Care* software, appropriate coverage paths and criteria must be assigned to your agents to insure that returning retrieved and suspended messages are delivered properly. To better understand the recommendations for coverage criteria, here are the assumptions made relative to the handling of message calls:

- Retrieved messages should not go to coverage but should remain queued for the agent who retrieved them.

This assumes that the agent who initiated the retrieval request wants to resume processing the message. Between the retrieve request and the actual delivery of the message, the *DEFINITY* ECS may have delivered another ACD call to the agent. The retrieved message should sit in the agent's queue waiting until service to this other call is completed.

If you implement such a message call handling strategy, you must instruct your agents to not log out of the *DEFINITY* ECS while queues are queued for them.

- Suspended messages should cover to a backup skill group if the suspending agent is not currently logged into the *DEFINITY* ECS.

Cases will arise when the agent who suspended a message is out sick or on vacation when it is necessary to deliver the suspended message. To insure that this message is delivered, the coverage criteria for your agents should route such suspended message calls to a backup skills group. This combination of *Message Care* software and *DEFINITY* ECS coverage, insures that your consumers are serviced.

- Suspended messages should not go to coverage but should remain queued for the suspending agent if that agent is logged in.
- Different coverage treatment can be given to live callers using a combination of the sample coverage vectors provided here and taking advantage of the *DEFINITY* ECS's ability to apply different coverage criteria for internal and external calls.

The following are recommended coverage options for internal calls:

- Active/Busy - set to Yes
- No Answer - set to No
- Coverage Path - one of the sample coverage vectors listed.

With these coverage settings, internal calls such as *Message Care* calls will immediately go to coverage if the agent is not logged in. If the agent is logged in, an internal call will remain queued for the direct agent until answered by the agent. This allows retrieved and suspended calls to wait until the agent is available.

 **NOTE:**

Limitations: With this proposed implementation, internal live callers will not be directed to coverage while an agent is logged in. If such coverage is required, the No Answer ring cycles should be set to a level tolerable to your callers, but high enough to allow an agent to receive a returning suspended or retrieved message.

Based on your business needs, you may also wish to provide one coverage path for message calls and a different coverage path for live callers (voice mail). The following sample vectors (2 and 3) illustrate how such coverage may be accomplished.

Sample 1 - Suspend/Retrieve Vector

In this vector, message calls are routed using an adjunct route step where *Message Care* will return the agent ID. If the agent is not logged in, *DEFINITY* ECS will rotate the call following the agent's assigned coverage path.

In Sample 1, *Message Care* launches the 'message call' to VDN 2000 that directs message calls to Vector 200. *Message Care* is monitoring VDN 2000.

NOTE:

In step 3, link extension 9999 is the extension of the ASAI link where the T-server which is supporting *Message Care* is.

VDN 2000 → Vector 200

1. Go to step 6 if time of day is all 17:00 to all 8:00 (check for business hours).
2. Go to step 6 if time of day is Friday 17:00 to Monday 8:00 (check for business hours).
3. Adjunct route on link extension 9999 (request to *Message Care* for agent login ID).
4. Wait time 4 seconds hearing silence.
5. route to number 2001 if unconditional (default treatment).
6. Disconnect after announcement none (automatically disconnects message call if outside business hours).

VDN 2001 → Vector 201

VDN 2001/Vector 201 provides coverage treatment for the message call. Vector 201 would just queue the message call to one of the *Message Care* skills. It would look similar to the sample vectors provided in the "Sample Vectors for Basic Message Call Delivery" section in this chapter.

Sample 2 - Agent Coverage

In this vector, vector processing diverts traditional calls to coverage appropriate for live calls, such as voice mail, and queue the *Message Care* message calls to the agent's backup skill.

In this example, 'traditional' voice calls are diverted using the call prompting feature. This feature will prompt the caller to press '1' if they want to leave a voice mail; if '1' is pressed then the call is directed to the voice mail. If the caller does not press '1' the message call will be queued.

In this example, rotary calls will not be able to leave voice mail and thus will be redirected into the *Message Care* queue for the first available agent. Rotary callers will not be directed to the 'live call' queue. Also, an interdigit timeout would occur before the rotary callers and the *Message Care* message calls were queued to the *Message Care* skill.

VDN 3000 – Vector 300

In this sample, the coverage vector supports both message calls and live calls by prompting to detect a live call.

1. Wait time 0 seconds hearing ringback.
2. Collect 1 digits after announcement 3000 ('press 1 if you would like to leave a voice mail for the agent').
3. Route to number 5000 if digit = 1 (redirects callers who want to leave voice mail).
4. Route to 1000 (basic skill VDN which checks queue time).

Sample 3 - VDN using Vector Coverage Routing Table

Sample 3 is similar to Sample 2 except that the VDN used for the agent's coverage path or for Redirection on No Answer (RONA) uses the 'Vector Routing Table' capabilities to distinguish between *Message Care* direct agent calls and 'traditional' direct agent calls. It provides better treatment to live callers than the previous example because it enables both rotary and touch-tone callers to leave a message and it avoids the interdigit timeout.

This vector will identify *Message Care* message calls using Automatic Number Identification (ANI) routing along with vector routing tables. The message call extensions used to initiate *Message Care* message calls would be placed in one or more vector routing tables. The number of vector routing tables needed depends upon how many message call extensions have been assigned for use by *Message Care*.

In the example below, the message call extensions for *Message Care* have been administered in Vector Routing Table 1.

VDN 4000 → Vector 400

1. Go to step 3 if ani in table 1 (determines if call is a *Message Care* message call).
2. Route to number 5000 if unconditional (diverts traditional calls for alternative treatment).
3. Route to 1000 (queues message calls to the *Message Care* skill).

Miscellaneous Vectoring Considerations

Consider the following when creating vectors for *Message Care*:

- All message calls must be placed to a VDN, not an agent ID or extension.
- Message calls should not queue for more than eight hours.
- Other CTI applications should only monitor the originating VDNs used to deliver message calls. If subsequent vector processing routes message calls to VDNs monitored by other CTI applications, *Message Care* will not be able to perform the message delivery.

- When relaunching a message call due to a released call (vector disconnect) the original VDN of the receiving mailbox will be used. For example, assume a message was delivered through VDN 1001 to agent 456. Agent 456 then transferred the message call to VDN 2000. If the vector associated with VDN 2000 disconnected the call due to queue limits, *Message Care* will relaunch the call, but to VDN 1001.
- Check that the vector disconnect, which is a system-wide parameter, will support the queue times required for message calls. If blank, *DEFINITY* ECS will not enforce any time outs.
- All agents should be assigned a coverage path to support returning suspended and retrieved messages. Coverage criteria should support agent not logged in, busy conditions, and no answer.
- If agents only require coverage for message calls, then the coverage criteria should be set to allow a long wait time at the agent's station.
- Both retrieve and suspend VDNs can be programmed to use a *Message Care* provided adjunct route step which will provide the agent ID of the agent who initiated the retrieve request or suspended the message.

What mailboxes do you need?

A single mailbox can route messages to up to 11 VDNs, depending on the keywords it finds in the message subject. This is especially useful for messages generated from a form on your Web site. For instance, the form can include a field where the consumer chooses the appropriate keyword. Therefore, in planning your *Message Care* mailboxes, consider the following:

- What messages you want to group into a mailbox
- What keywords you want to use to send each message to the appropriate VDN.

Also consider what you want to say in the auto-acknowledgement that the *Message Care* software can send as soon as it detects each message. For each mailbox, you can specify a different text file to be the body of the auto-acknowledgement. You can also set a mailbox to *not* send auto-acknowledgements at all.

Mailboxes that receive faxes should not have an auto-acknowledgement file, since they do not provide an email return address which can reach the sender. For other mailboxes, consider:

- Whether you want to send auto-acknowledgements
- What text you want in the auto-acknowledgements you choose to send.

Things to Consider When Messages Move Between Two Monitored Mailboxes

Refer to the *Message Care* Installation CD-ROM for information regarding forwarding and transferring messages between two mailboxes.

Specifying the Auto-Acknowledgment Text

If acknowledgments are enabled for a supported mailbox, you are required to specify an American Standard Code for Information Interchange (ASCII) text file to be sent as the text component of the message. *Message Care* supports only a single text file component per mailbox and does not provide a default text message. Auto-acknowledgment text must reside on the same server as the *Message Care* software application.

The auto-acknowledgment files must be stored on a file system accessible from the NT server running *Message Care*.

Because consumers may reply to an agent's response, you must properly administer the return email address. It is recommended that you test the auto-acknowledgment, including a consumer response to the received acknowledgment.

Most mail servers support the POP3 protocol. Some servers, such as *Intuity AUDIX*, require an add-on support package to provide POP3 access (*Intuity AUDIX* must be R4.3 with the add-on *Intuity* Internet Messaging package).

The *Message Care* software provides a field tool to test a call center's server for compliance with the requirements of the POP3 and SMTP protocols.

Installation and System Administration

Introduction

This chapter covers the installation of *Message Care*[™] software as well as System Administration.

Installing *Message Care*

Message Care software is shipped on a CD-ROM and is installed on the customer-provided *Windows*^{*} *NT*[†] 4.0 platform when the system is set up by *Lucent Technologies*[™] personnel.

Activation of the customer's purchased message call capacity is done by the Multimedia Applications Customer Support (MACS).

Procedure for Installing *Message Care*

Follow these steps to install *Message Care*:

1. Make sure you have the appropriate system prerequisites. See the "Required Components" section of Chapter 2, "Preparing a Call Center for the *Message Care* Software" for hardware and software requirements.

The server must also have an NTFile System (NTFS) in order to use NT password protection for the administration web pages. To see what type file system your PC is using, do the following:

- a. Click on the **My Computer** icon on your desktop.
- b. Right click on the drive where *Windows NT*[‡] operating system resides and then select the **Properties** menu item.

The File System type will be listed under the **General** tab.

If the file system type is a File Allocation Table (FAT), you can change it to NTFS by using the convert utility, but only if your PC is an x86 (not RISC) NT systems. To convert to NTFS, open a command window and then type the following at the cursor:

```
convert c: /fs:ntfs
```

*Windows is a registered trademark of Microsoft Corp.

†NT is a registered trademark of Microsoft Corp.

‡Window NT is a registered trademark of Microsoft Corp.

2. Install the Internet Control Manager/Computer-Telephony Integration (ICM/CTI) software from the CD-ROM. In the list of NT services, you should see **Lucent Internet Call Manager** and **Lucent Internet CTI Manager**, including **Lucent Mail Manager**, **Workflow Manager**, and **SpellServer**.

**NOTE:**

This should always be done first.

Result: This will install all required software, including Services registration for Internet Control Manager/Computer Telephony Integration (ICM/CTI) processes.

**NOTE:**

For ICM server/CTI documentation, please see the *Internet Call Center Solution Guide Version 2* (585-215-094).

3. Install the Lucent Technologies PassageWay @ Telephony Services for Windows NT @ (T-Server) software from the CD-ROM.
4. Before installing the *Message Care* software, stop the server's WWW service by doing the following:
 - a. Click on **Start -> Programs -> Microsoft Internet Server (common) -> Internet Service Manager**.
 - b. Right-click on the server name listed as running the WWW service.
 - c. Select **Stop**.

5. Install the *Message Care* software.

Result: During the course of the install, setup will identify and prompt you for the destination directory name where the installed application files will reside. The default directory that will be displayed for the user shall be: C:\Program Files\MessageCare. Setup will copy all non-system files into this destination directory.

Warning: Although you are given the option of choosing an alternate directory for the *Message Care* software, do not install them in the %WINDOWS%, %SYSTEM%, or %TEMP% directories (typically, these are the C:\Winnt, C:\Winnt\System32, and C:\Winnt\Temp directories).

Later in the course of the install, program setup will identify and prompt you for the destination directory name where Perl.exe will reside. The default directory that will be displayed for the user shall be C:\Perl\bin.

Warning: Although you are given the option of choosing an alternate directory for Perl.exe, do not install it in the web server's cgi-bin directory.

Toward the end of the install, you will be given the option of installing *Java** Runtime Environment (JRE) and/or Perl, then Perlscript and/or ASP. You should install these programs only if they are not already on the PC. In particular, you shouldn't install asp.exe if ASP or IIS 3.0 with ASP is already installed. If ASP is being installed, do not install documentation. Do accept the option to Halt IIS while ASP is installed.



CAUTION:

It is important to read the readme file at the conclusion of the setup program. The readme file will include installation procedures that are not covered here.

6. If Perlscript is being installed, then after installation do the following:
 - a. Reboot the machine
 - b. Edit the registry by opening **Start -> Run**

*Java is a registered trademark of Sun Microsystems, Inc.

- c. Type `regedit`.
 - d. Once the Registry Editor is opened, open `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\ Parameters\ScriptMap`.
 - e. Select the `.pl` entry.
7. If JRE is being installed, then after installation, make sure that `c:\Program Files\JavaSoft\Jre\1.1\bin` (or equivalent if you chose a different directory when installing the JRE) is added to the path by doing the following:
- a. Open **Start -> Settings -> Control Panel**.
 - b. Double-click on **System**.
 - c. Under the **System Properties' Environment** tab, highlight **Path** and add the new path string to the end of the **Value** field.

Result: Besides installing **Message Care software, Work Flow Manager (WFM), Mail Manager**, and various Web pages, a Hyper Text Markup Language (HTML) page will be generated which can be used to point to the *Message Care* administration from the ICC Administration menu.



NOTE:

Lucent will verify the ITS server version, the release of *pcANYWHERE**, *Java* Runtime Environment (JRE) 1.1.6, Perl, PerlScript, IIS3.0 Internet Information Services (IIS), and so forth. See the README file (installed by default) for NT password protection procedures. Other NT server Internet security issues should be addressed by your System Administration personnel.

*pcANYWHERE is a registered trademark of Symantec Corporation.



NOTE:

It is recommended that you establish the same user community for ICM administration and *Message Care* administration. If *Message Care* and ICM are installed on different servers, user administration is required on each server. A *Message Care* supervisory group can be set up for report access that is consistent with administration security, but with a different set of users.

8. Lucent personnel installs the *Message Care* license files either remotely or during staging.
9. Copy the HTML file, `MCAdministration.htm`, (created when *Message Care* was installed) to the ICC administration file directory. See the README file for details.

Result: This links the administration of *Message Care* to the main ICC administration menu.



NOTE:

If the ICM has been installed on a different NT server, this technique still applies.

10. In the **ICC/Message Care Common Administration** Web page, set the agent idle page to the *Message Care* provided agent idle page:
`http://<servername>/mcscrip t/idlepage.asp`



NOTE:

If you do not use the *Message Care* supplied agent idle (agent home page) but do use the *Message Care* supplied message processing pages, the page you do use for the agent idle page must set a browser cookie called `AgentId` that contains the agent's login ID. The value can be obtained from the `agentId` parameter that is passed to the popped agent idle page by the ICM.

This applies not only in situations where the you supply your own agent idle page, but also where *Message Care* is co-resident with ICC (because the ICC agent idle page doesn't set the necessary cookie).

If the cookie is not set, agents will not be able to perform all required actions on a message (for example, close and suspend messages) and they could be blocked from popping the message delivery page.

 **NOTE:**

Even if *Message Care* is in a co-resident configuration with the Lucent Internet Call Center, the agent idle page should be the page provided with the *Message Care* software to ensure full *Message Care* functionality.

11. Administer all of the required elements, Common and *Message Care* specific through the following Web pages by doing the following:

 **NOTE:**

Each required element is marked with an asterisk on the associated Web page.

- a. Administer CTI
 - b. Administer Common Parameters
 - c. *Message Care* software Options
 - d. *Message Care* - add a mailbox.
12. If ICM is installed on a different server than the *Message Care* software (typical in a co-resident *Message Care*/Internet Call Center installation), modify the *Message Care*
C:\Program Files\MessageCare\parms.txt file parameter, WorkFlowMan.ICMAddr, to reflect the IP address of the server running the ICM software module.

 **NOTE:**

This is done as a part of the initial offer installation.

13. Reboot the PC after the *Message Care* installation is complete.

After the Installation...

After *Message Care* is installed, the T-server must be administered and the phantom extensions must be edited.

T-server Administration

An important part of the *Message Care* installation process involves Administering VDNs and Vectors on the *DEFINITY* ECS. For information on how to do this, see the “Sample Vectors” section of Chapter 2, “Preparing a Call Center for the Message Care Software”.

All VDNs must be incorporated into the T-server administration. Follow these steps to incorporate each VDN:

1. Open **Start -> Programs -> TS Win32 Client -> Telephony Services Admin.**
2. At the **Open Tserver** window, click **<OK>**.
3. Double-click **Devices** (left frame), and open **Admin -> Create Device.**
4. In the **Device ID** field, enter the VDN extension number. The Location field may be left blank.
5. For **Device Type**, select **ACD.**
6. For **Tlink Group**, select **Any Link.**

Phantom Extensions

Message Care Phantom Extensions are administered at the *DEFINITY* ECS and the `C:\itg\ctiparms.txt` file must be edited for *Message Care* phantom extensions. The `PhantomExtMessages` parameter must be set equal to the range administered at the *DEFINITY* ECS. The end result will look similar to the following in the `ctiparms.txt` file:

```
Controller.PantomExtMessages=2601-2607
```

Administering the *Message Care* Software

The following information is for the system administrator of the *Message Care* software for the purposes of administering parameters.

Web-based customer administration utilities provided by the *Message Care* software allow a system administrator to:

- Define the set of mailboxes to be monitored
- Define the call routing number or rules to associate a number for each mailbox
- Specify the group of Administered WithOut Hardware (AWOH) extensions available for call origination
- Specify the Web PagePop per mailbox
- Customize the agent processing tools per mailbox
- Administer the set of canned message responses used by agents
- Specify the file location of the message storage system.

Administration Security

In the administration hierarchy, the highest level of access is reserved for the *Lucent Technologies*[™] support personnel responsible for setting *Lucent Technologies* controlled options such as the purchased capacity.

Next, you must assign a *Message Care* administrator who will be responsible for adding, deleting, and modifying Post Office Protocol 3 (POP3) mailboxes and other mailbox administration matters.

Last, the agent supervisors, the front line management team of the call center must have access to the set of *Message Care* provided reports. These reports are password protected to prevent agents from comparing themselves with other agents and so forth. Supervisors are given a different password than the administrator since they will not require access to the administration options. Not only do they not require access, they might inadvertently break something.



NOTE:

Setting the report password is not done through a *Message Care* provided administration screen, but instead through NT administration.

Only one report password will be supported per instance of *Message Care*. NT passwords may be any combination of alpha-numeric characters up to ten characters. A null entry is not be a valid entry. All matches must be exact and are case sensitive.

Agents are not required to have access to historical and interval reports for either their skill or performance. Historical and Interval reports are restricted to supervisory staff and is enforced using a report password. The report password restricts access to the supervisory search and all *Message Care* reports except the Real-Time Snapshot Report.

You can restrict access to the *Message Care* administration Web pages to only authenticated clients. By using NT authentication, only those clients having a valid user name and password are permitted to access the administration Web pages.

If you want to restrict access to the *Message Care* administration Web pages, you must ensure the following:

- Password to protect the following directories:
 - ICM administration - C : \WINNT\%SYSTEM%\ct3dv2.dll
 - *Message Care* administration - C : \WINNT\Program Files\Message Care\WWW\admin
 - *Message Care* reports - C : \WINNT\Program Files\Message Care\WWW\Reports
 - *Message Care* agent Web interface files -C : \WINNT\Program Files\Message Care\WWW\Scripts
- The ITG installation directory (c:\itg) must be installed on an NTFS.

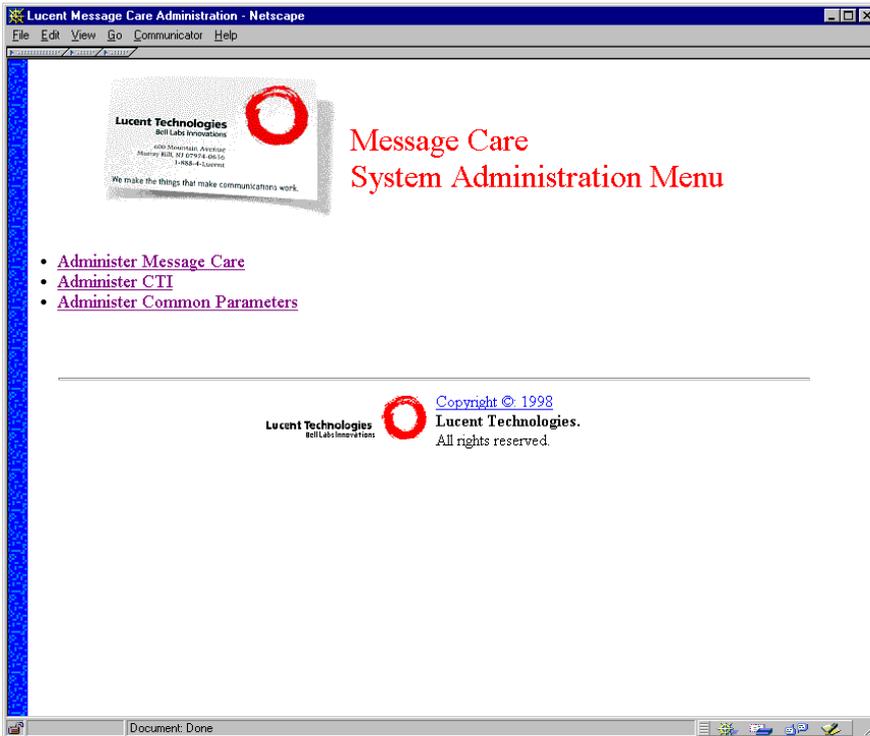
- The IIS software must be configured to handle authentication. There are two methods of authentication:
 - **Basic (Clear Text)** - This method of authentication sends the client's *Windows NT* user name and password over the networks unencrypted (for administrators).
 - **Windows NT Challenge/Response** - This method of authentication protects the password thus providing for a secure login over the network. However, this method of authentication is supported only by *Microsoft* Internet Explorer 2.0 or greater (for agents and supervisors).

By default, both Basic and Windows NT Challenge/Response are enabled. If your browser supports Windows NT Challenge/Response, then it uses that form of authentication. If your browser does not support the Windows NT Challenge/Response method, then it uses Basic authentication.

You can add users and allocate permissions on the ICM server. NT is also running on the ICM server. Refer to *Microsoft* NT 4.0 Server documentation for help with adding users.

Message Care System Administration Menu

The following illustration is an example of the Internet Call Center System Administration Menu Web page:



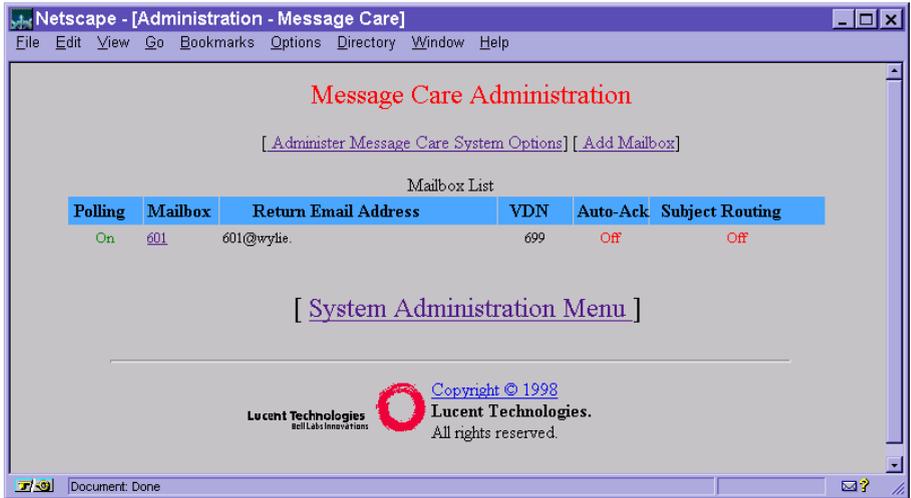
The Message Care System Administration Menu includes the following three links:

- Administer Message Care
- Administer CTI
- Administer Common Parameters.

Administer *Message Care*

This link brings up the Message Care Administration Web page which allows you to administer parameters specific to the *Message Care* software.

The following example is a display of the *Message Care* Administration Web page:



This is the form used to view mailboxes currently administered. Click on a mailbox name to edit the mailbox. Following is a description of each column:

- Polling - Indicates whether the mailbox has been enabled for polling.
- Mailbox - Indicates the specific name of the mailbox.
- Return Email Address - The message email address seen by the consumer in an auto-acknowledgment and the default "from" address used in the Reply and Forward agent Web pages for this mailbox.
- VDN - The Vector Directory Number called when a message is received in this mailbox.
- Auto-Ack - Indicates whether the mailbox has been enabled for an auto acknowledgment message to be sent.
- Subject Routing - Indicates whether the mailbox has been enabled for subject based routing.

Message Care System Options

The following illustration is an example of the Message Care System Options administration Web page:

Netscape - [Administration - Message Care System Options]

File Edit View Go Bookmarks Options Directory Window Help

Save Back to Mailbox List Help

Message Care System Options

Site Identifier: *

Max Simultaneous Message Calls: *

SMTP Server: *

Retrieve VDN Number: *

Alarm Email Address: *

* Indicates required field for system operation

WARNING: Changes to the required fields, except for Retrieve VDN, will need a system restart to take effect.

Junk Mail Screening

Block messages if from following originators:

No	EmailAddress
1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>
5	<input type="text"/>
6	<input type="text"/>
7	<input type="text"/>

Document: Done

The following parameters can be administered on the *Message Care* System Options page (not all parameters are required):

- **Site Identifier** - A number tag (numeric suffix) assigned by a customer to be included into all assigned message tracking numbers. Site identifiers are used to distinguish messages processed at different centers using multiple *Message Care* applications. This suffix is fixed at four digits. The default suffix is 1000. Even though this initial release of the *Message Care* software only supports a single site, you may forward messages between sites using your email networks.
- **Max Simultaneous Message Calls** - A customer-purchased value limit set for the number of simultaneous messages calls in a system which defaults to one of the following supported purchased capacities: 20, 50, 100, 150 and 200 simultaneous message calls.
- **SMTP Server** - A single customer-administered server used for all outbound mail, identified by a server identification, either in the form of an Internet Protocol (IP) address or a host name. *Message Care* requires that the Simple Mail Transfer Protocol (SMTP) server listen on port 25.
- **Retrieve VDN Number** - The number called when an agent requests that a message be retrieved and a call is launched to the agent. When an agent retrieves a message, the *Message Care* software supports a vector route request step identifying the agent who requested the message.



NOTE:

You need to insure that whatever VDN you administer in *Message Care* has also been administered on the T-server. Both the T-server application and the *Message Care* application must then be restarted in order to synchronize them.

- Alarm Email Address - The specified email address to which an email alarm will be sent through the SMTP server in response to a *Message Care* alarm condition; it is recommended that this be a group mailing list of your support team.
- Junk Mail Screening - A list of up to 20 email address entries of message originators from which you wish to block messages, thereby allowing you to screen incoming mail. If messages are received from this set of originators, the *Message Care* software marks the message status as blocked. Blocked messages will not receive an auto-acknowledgment nor will they be delivered to agents. Wild cards are supported.



NOTE:

For each individual mailbox, this option must be turned on or off on the Mailbox Administration page.

- Subject Screening to Block Auto Acknowledgment - Up to 10 text strings to search for in the message text. If a match is found, no auto-acknowledgment will be sent for the message. Note that strings are searched in order of ranking and that partial matches are valid. For example, if the first search string is "DEFINITY" and the second search is "DEFINITY ECS", all cases of "DEFINITY ECS" will match on the first search string, since DEFINITY is included in the text. It is important to be explicit and to pay attention to partial matches when administering and ranking search strings. Examples of where this is useful are corporate broadcast messages or undeliverable messages.

Mailbox Administration

Mailbox parameters include information relative to a specific mailbox. This form administers the rules for routing messages and the tools for an agent to process messages.

The following illustration is an example of the Mailbox Administration page:

The screenshot shows a Netscape browser window with the title "Administration - Message Care MailBox". The browser's menu bar includes File, Edit, View, Go, Bookmarks, Options, Directory, Window, and Help. The page content is titled "Mailbox Administration" and features several sections:

- Navigation:** Buttons for "Save", "Back to Mailbox List", and "Help".
- Left Sidebar:** A vertical list of links: [Subject Routing], [Canned Responses], [Suspension Codes], [Suspension Time], [Closure Codes], [SME list], [File Attachments], and a "Save" button.
- Main Form Fields:**
 - Enable Polling:** Radio buttons for Yes and No (No is selected).
 - Friendly Mailbox Name*:** Text input field.
 - Mailbox Server*:** Text input field.
 - Login Name*:** Text input field.
 - Login Password*:** Text input field.
 - Return Email Address*:** Text input field.
 - Message Display URL*:** Text input field containing "http://<server_name>/mcscrip/msgframe.asp?".
 - Message View URL*:** Text input field containing "http://<server_name>/mcscrip/msgview.asp?M".
 - Auto Acknowledgment File:** Text input field.
 - Enable Junk Mail Screening:** Radio buttons for Yes and No (No is selected).
 - Select Number to Call:**
 - Default VDN Number*:** Text input field.
 - Suspend VDN*:** Text input field.
 - Default ASAI Digit Number:** Text input field.
- Subject Based Call Routing:**
 - Checkbox: "Select a number based on subject search text:" (unchecked).
 - Table with 3 columns: Rank, If search text is, then place a call to.
 - Table content:

Rank	If search text is	then place a call to
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>

* Value required for system operation

The following parameters can be administered:

- **Enable Polling** - An option which can be set to Yes or No to allow or prevent the mailbox from being polled. This allows a mailbox to be pre-administered in anticipation of a new campaign.
- **Friendly Mailbox Name** - The label of a mailbox used by the *Message Care* software to report and search operations. Each mailbox name must be unique.

- Mailbox Server - The IP address or host name of the mail server where the mailbox resides.
- Login Name - The login ID of the mailbox to be monitored by the *Message Care* software.
- Login Password - The login password of the mailbox to be monitored by the *Message Care* software.



NOTE:

If your system automatically requires new passwords periodically, you must update the value used by the *Message Care* software.

- Return Email Address - The default email address seen by the consumer in an auto-acknowledgment and agent reply (from the address in the Reply and Forward agent Web pages).
- Message Display URL - The URL used to deliver the message contents to an agent in order to view a message and compose a reply.
- Message View URL - The URL used to allow an agent to view a message without being able to make any changes.



NOTE:

A default value is provided for the Message Display URL and the Message View URL in which you can modify it to include your *Message Care* server name.

- Suspend VDN - The Vector Directory Number (VDN) called when the timer expires or if a related message is received while a message is suspended; the *Message Care* software is designed to support an adjunct route step in this VDN. The *Message Care* software detects the expiration of a suspended timer within minutes of expiration.



NOTE:

You need to ensure that whatever VDN you administer in *Message Care* has also been administered on the T-server. Both the T-server application and the *Message Care* application must then be restarted in order to synchronize them.

 **NOTE:**

It is important to consider how to cover a call when an agent is not logged in; please refer to the “Sample Vectors” section of Chapter 2, “Preparing a Call Center for the Message Care Software.”

- **Auto Acknowledgment File** - The full path name of the file to be used for the ASCII file containing the text of the acknowledgment. If no auto-acknowledgment file location is administered, auto acknowledgments are not sent from this mailbox.
- **Enable Junk Mail Screening** - An option which can be set to Yes or No in order to block certain incoming messages based on the originating address. If set to Yes, messages administered in the System Options “Junk Mail Screening” will be blocked.
- **Default VDN Number (to use for new received messages)** - This is the VDN called when a message arrives from this mailbox. This is the value that will be tracked in Call Management System (CMS) statistics and should identify the required skill set of the agents processing the messages received in this mailbox. This value is overridden by matching values in the “Subject Based Call Routing” administration, if used.

 **NOTE:**

If the Default VDN has Route To Digits, then any VDN selected through subject based call routing will also use the same set of Route To Digits. If the Default VDN selected does not use adjunct routing, then the digits are ignored.

- Route To Digits - a fixed value to pass to the *DEFINITY* ECS as a route to step during vector processing; this can be used to specify a specific agent.
- Rank - The Rank field is used in several of the tables to impose an ordering on the entries. For example, when the agent shows the Closure Codes, it might be efficient to have certain entries at the top. The administration screens will ensure that the values in this field are unique and ordered (for example, for ten entries, they must have the values 1 through 10).
- Subject Based Call Routing - Up to 10 text strings to search for in the message subject. If a match is found, the corresponding VDN is used when placing the call in the *DEFINITY* ECS. Note that strings are searched in order of ranking, and that partial matches are valid. For example, if the first search string is "DEFINITY" and the second search string is "DEFINITY ECS", all cases of "DEFINITY ECS" will match on the first search string, since *DEFINITY* is included in the text. It is important to be explicit and to pay attention to partial matches when administering and ranking search strings.

To route a message, the *Message Care* software initiates the call routing processes on the *DEFINITY* ECS by launching a message call to a VDN. *DEFINITY* ECS performs the real call routing processing, looking at the available pool of agents and workload at the center.

Each *Message Care* monitored mailbox has a defined set of rules for selecting the VDN associated with a message. You can administer a mailbox so that all received messages are directed to the same number. Alternatively, you can request that the *Message Care* software select a number based on the contents of the message subject field by administering subject based call routing.

- Canned Responses - A list of any ASCII files (“canned answers” to frequently-asked questions) that agents can use in replying to the consumer; for each file, include its location and the label that the agent uses to select it.
- Suspension Codes - A list of reason codes for agents to assign when suspending a message.
- Suspension Time - A set of allowable suspension times, in minutes, in which calls can be suspended; agents can choose from these values when suspending a call from this mailbox.
- Closure Codes - A list of reason codes for agents to assign when closing a message; the set of administered closure codes are used to generate reports.
- SME List - A list of the Subject Matter Experts (SMEs) and their email addresses; this list should contain the email addresses of members of your company who can receive email from agents requesting assistance in the processing of messages.
- File Attachments - A list of the call center’s file attachments (consumers may send files such as voice or bit mapped files within a message to a published email address) and their file locations (label and path). File types must be administered for all call center file attachments. This association is used in creating the Multipurpose Internet Mail Extensions (MIME) message sent to the consumer through the SMTP server. MIME is a common method for transmitting non-text files through Internet email, which was originally designed for ASCII text. MIME encodes the files using one of two encoding methods and decodes it back to its original format at the receiving end. A MIME header is added to the file which includes the type of data contained and the encoding method used.

Mailbox Administration Radio Buttons

Bordering the top and bottom of the Mailbox Administration Web page are the following buttons:

- Save - Takes any information displayed for a mailbox and updates it.
- Copy - Allows you to borrow information from another mailbox's fields and paste it to another mailbox. When the copy command is selected, all information except the mailbox ID and password are copied into the mailbox. In this way, if you have more than one mailbox that you would like to populate with the same settings, you can pre-load the mailbox with information from another similar mailbox.
- Delete - removes a mailbox from the administration database used by *Message Care*; once a mailbox is deleted, the mailbox will no longer be polled and no reports will be requested on the deleted mailbox.



NOTE:

You should not delete a mailbox if there are open messages in it. If you choose to use the delete button, you should first disable polling for that mailbox, wait until all messages are closed, then delete it.

Once a mailbox is deleted, the search and report options for that mailbox are also deleted.

- Back to Mailbox List - Returns you to the *Message Care* Administration Web page.
- Help - Opens help pages containing information on administering *Message Care*.

Administer CTI

This link brings up the following CTI Administration Web page which allows you to administer CTI parameters:

CTI Administration

Description	Value
CTI IP Address	cti.enterprise.com
Telephony Server IP Address	tserver
Telephony Server Login ID	tman
Telephony Server Password	*****
Telephony Server Identifier	LUCENT#G3_SWITCH#CSTA#TSRV
Monitored Hunt Groups	171.172.173.174.175.401.402.403.690.691

To save these values, click the "Save" Button

WARNING: Changes to the Telephony Server IP Address, Telephony Server Login ID, Telephony Server Password or Telephony Server Identifier will cause the CTI application to restart when the "Save" option is chosen. A restart of the CTI application will drop all active calls in progress. All other changes will take effect automatically when the "Save" option is chosen!

[[System Administration Menu](#)]

Other Administration Pages

[[Common Administration](#) | [CTI Administration](#) | [ICC Administration](#) | [Message Care Administration](#)]

The following parameters must be administered on the CTI Administration page:

- CTI IP Address - This field contains the IP address or the network name of the server where the Message Care/ICC CTI software module is installed.
- Telephony Server IP Address - This field contains the IP address or the network name of the *CentreVu*[®] Computer Telephony Server.

- Telephony Server Login ID - This field contains a valid *CentreVu* Computer Telephony Server login-ID to be used by the CTI process.
- Telephony Server Password - This field contains a valid *CentreVu* Computer Telephony Server password (associated with the login-ID) to be used by the CTI process.



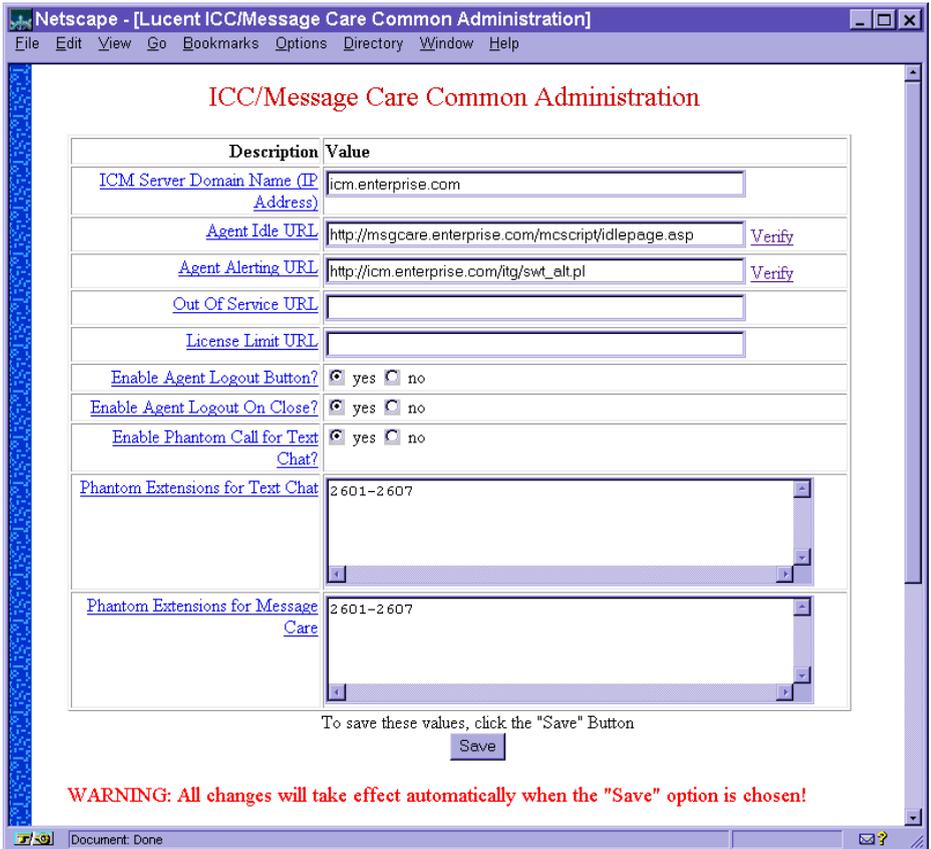
NOTE:

This is a *Windows NT 4.0* Server username and login. This user is administered to login as a service on the NT server where the CTI software module is installed. The same username is also administered in the *CentreVu* Computer Telephony software.

- Telephony Server Identifier - This field contains the link type description and *CentreVu* Computer Telephony Server identification name to be used by the CTI process.
- Monitored Hunt Groups - This field identifies the extension numbers assigned to hunt groups (also known as skills) in the *DEFINITY* ECS that the *CentreVu* Computer Telephony software is to monitor; each skill that agents log in to for the *Message Care* software calls should have the lead extension administered in this field.

Administer Common Parameters

This link brings up the following ICC/Message Care Common Administration Web page which allows administration that is common to both the ICC and *Message Care* offers:



ICC/Message Care Common Administration

Description	Value
ICM Server Domain Name (IP Address)	icm.enterprise.com
Agent Idle URL	http://msgcare.enterprise.com/mcscript/idlepage.asp Verify
Agent Alerting URL	http://icm.enterprise.com/itg/swt_alt.pl Verify
Out Of Service URL	
License Limit URL	
Enable Agent Logout Button?	<input checked="" type="radio"/> yes <input type="radio"/> no
Enable Agent Logout On Close?	<input checked="" type="radio"/> yes <input type="radio"/> no
Enable Phantom Call for Text Chat?	<input checked="" type="radio"/> yes <input type="radio"/> no
Phantom Extensions for Text Chat	2601-2607
Phantom Extensions for Message Care	2601-2607

To save these values, click the "Save" Button

WARNING: All changes will take effect automatically when the "Save" option is chosen!



NOTE:

The Phantom Extensions for the *Message Care* parameter is available only if you have the *Message Care* software installed on your system.

The following parameters must be administered on the ICC/Message Care Common Administration Menu Web page:

- ICM Server Domain Name (IP Address) - This field contains the full domain name or IP address of the server where the ICM application is executing.
- Agent Idle URL - This field contains the URL of the page to be displayed to an agent who is logged in but not currently active on a call.



NOTE:

If you do not use the *Message Care*-supplied agent idle (agent home page) but do use the *Message Care*-supplied message processing pages, the page you do use for the agent idle page must set a browser cookie called AgentId that contains the agent's login id. The value can be obtained from the agentId parameter that is passed to the popped agent idle page by the ICM.

This applies not only in situations where you supply your own agent idle page, but also where *Message Care* is co-resident with ICC (because the ICC agent idle page does not set the necessary cookie).

If the cookie is not set, agents will not be able to perform all required actions on a message (for example, close and suspend messages) and they could be blocked from popping the message delivery page.

- Agent Alerting URL - This field contains the URL of the page to be displayed for the agent when they are receiving a call.
- Out of Service URL - This field contains the URL of the page to be displayed when the ICM is taken out of service.
- Enable Agent Logout Button - This option allows you to enable or disable the Logout button on the Agent Control Window.
- Enable Agent Logout on Close - This option allows you to enable or disable automatic agent logout from the call center if the agent connection to the ICM application on the ICM server is lost or dropped. If enabled, the agent will be logged out of the *Message Care* software and the *DEFINITY* ECS if the agent closes the Agent Control Window. This does not apply to lost connections with the ICM server.

Call Center File Attachments

Because messages may contain file attachments, such as fax image files, the call center must provide helper applications to view the content of the file attachment. These helper applications must be chosen based upon the agent's desktop operating system. Multiple attachments are presented as individual files.

ACD Translations

The MACS group inputs standard *DEFINITY* ECS ACD translations as part of the *Message Care* software installation. These include:

- 10 VDNs
- 10 vectors
- 10 skills
- 10 mailboxes.

You can expand this capability to take advantage of the powerful capabilities of the *DEFINITY* ECS ACD software to provide sophisticated routing, prioritization, and overflow treatment for your calls.

DEFINITY ECS Administration

Once the *DEFINITY* ECS has been set up for *Message Care* functionality, it requires very little administration.

The following must be administered on the *DEFINITY* ECS.

Dial Plan

A dial plan must be administered for VDNs on the *DEFINITY* ECS. In addition, the T-server security database must be set up with a list of numbers for the valid VDN extensions. Please refer to the administration guides for each system for further details.

Administering Agents for Direct Agent Calls

Direct Agent Calls (DACs) are queued at an agent's desktop if the agent is active on an ACD call.

The *Message Care* software uses DACs for delivering retrieved or suspended messages to specific agents. However, since most DACs are from live users, the *DEFINITY ECS* would typically route a DAC call to coverage after a few ring cycles. Care should be taken relative to the skill group used to track DAC calls since retrieved and returning suspended calls will utilize queue slots.

Message calls should remain queued at the agent's terminal long enough to allow the agent to complete the processing of their current call. A message call will not abandon due to an impatient caller and should not be routed to *AUDIX™*.

If you use DAC for real time calls, care must be exercised when administering DAC parameters for the *Message Care* software. Real time calls may be administered to cover to a voice mail box, while message calls should never be sent to voice mail.

Supporting adjunct routing by passing ASAI-provided digits enables the *Message Care* software to support direct agent calls with a single vector on the *DEFINITY ECS*, a necessary feature for retrieving suspended messages and delivering direct agent correspondence.

Please refer to the "Sample Vectors" section of Chapter 2, "Preparing a Call Center for the Message Care Software" for sample vectors that you can use to provide different coverage for an agent for "live" versus message calls.

Since DACs are "queued" to agents, care should be exercised in specifying the queue size of the DAC. Refer to the "Sample Vectors" section, in Chapter 2, "Preparing a Call Center for the Message Care Software."

The Class of Restriction (COR) on the switch should set the Direct Agent Calling Field to "y" for the stations administered for the *Message Care* software. This directs the *DEFINITY ECS* to treat calls originated from these extensions as ACD calls and to follow DAC parameters administered.

Skills, VDNs, and Vectoring

A queued message call has no live party on the call. Because of this, special treatments intended for the party waiting on the queued call, such as music on hold, recorded announcements, and coverage to voice mail, are not necessary.

The use of VDN of Origin (VOA) Announcement to the agent, stating the type of call (email or fax), is encouraged. This announcement is assigned to a VDN and plays a short recording when the agent answers the message call. This recording can be used to tell the agent the origination of the call (for example, “Sales Mailbox” or “Support Mailbox”).

Vectors may include multiple wait steps to provide for the long wait times that are possible on message calls.

For more information on vectoring, please see the “Sample Vectors” section in Chapter 2, “Preparing a Call Center for the Message Care Software.”

Stroke Counts

To help collect data on subject factors or on factors that cannot be detected by the system, it is recommended that you implement stroke counts on the agent’s phone. Stroke counts can be administered to track items such as: messages completed in a single call, received junk mail, and so forth.

CMS

CMS provides the same statistics on *Message Care* calls as for the other calls that go through the *DEFINITY* ECS. Other statistics of interest for *Message Care* calls in particular are available through the *Message Care* reports. See Chapter 6, “Reports and the Database” for additional statistics.

T-Server

The Telephony Services Database (SDB) is the T-server security database that stores information about users and the devices they control. The T-server uses this information in its permission checking. VDNs, skills (hunt groups), lead extensions, agent phone extensions, and phantom extensions must all be in the SDB.

The T-server database must be set up with a list of valid VDNs; see the T-server administration guide: *CentreVu[®] Computer-Telephony for Windows NT[®] Release 3.10 Telephony Services Administration and Maintenance Issue 3.2* May 1998.

POP3/SMTP Mail Server Compliance

The mail server containing the mailboxes polled by the *Message Care* software must be POP3-compliant over a Transmission Control Protocol/Internet Protocol (TCP/IP) stack. To handle outgoing messages from the *Message Care* software, the mail server must also be Simple Mail Transfer Protocol (SMTP)-compliant.

The *Message Care* software receives incoming messages through a POP3-compliant mail server, such as *Intuity[™] AUDIX[®]*, and sends outgoing messages through an SMTP mail server (usually the same server). POP3-compliant mail server software is available for a variety of server platforms from *Windows NT* to *UNIX**.

Message Care software provides a field tool to test a call center's mail server for compliance with the required portions of the POP3 and SMTP protocols.

Most leading mail servers in the industry, including *Intuity AUDIX*, *Microsoft[†] Exchange*, *Lotus Domino*, *Novell GroupWise*, and *UNIX* mail servers, support the POP3 protocol. Some servers, such as *Intuity AUDIX*, require an add-on support package to provide POP3 access (*Intuity AUDIX* must be R4.3 with the add-on *Intuity Internet Messaging* package). If necessary, however, they can be on two separate mail servers.

*UNIX is a registered trademark licensed exclusively through X/Open Company, Ltd.

†Microsoft is a registered trademark of Microsoft Corp.

Procedure - Testing Your Mail Server's Compliance

For information on testing the compliance of your mail server with the required portions of the POP3 and SMTP protocols, please see the *Message Care* Installation CD-ROM.

The Administration Database

The administration data (*Message Care* software parameters and mailbox parameters) is stored in the Administration database and in a set of text files.

Whereas the design for the Messages database is shared with customers in order that they can extend it, the Administration database design should not be modified.

This database has the Open Database Connectivity (ODBC) Data Source name "Message Care Admin."

Agent Login and Logout

Introduction

This chapter describes how a *Message Care*[™] agent logs in and logs out of the *Message Care* software.

Audience

This chapter is intended for anyone needing to log in to and out of the *Message Care* software.

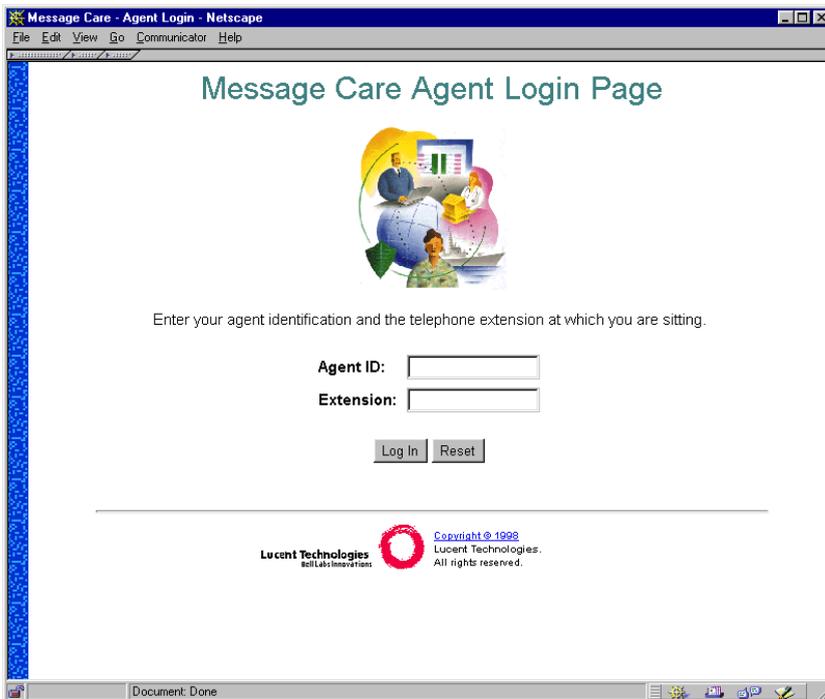
Agent Login

To take *Message Care* message calls, an agent must first log in to the *Message Care* software as follows:

1. In the location or address field of your Web browser, enter the following Uniform Resource Locator (URL) for the Message Care Log In page:

`http://<your server>/mcscript/mc_agent.html`

You must use the Message Care Log In Web page provided to ensure full *Message Care* functionality. The Message Care Log In Web page appears as shown below:



2. Enter your agent ID, extension, and any additional items requested, and then click on the Log In button.

Use the Reset button to clear information you have entered in the log in fields.

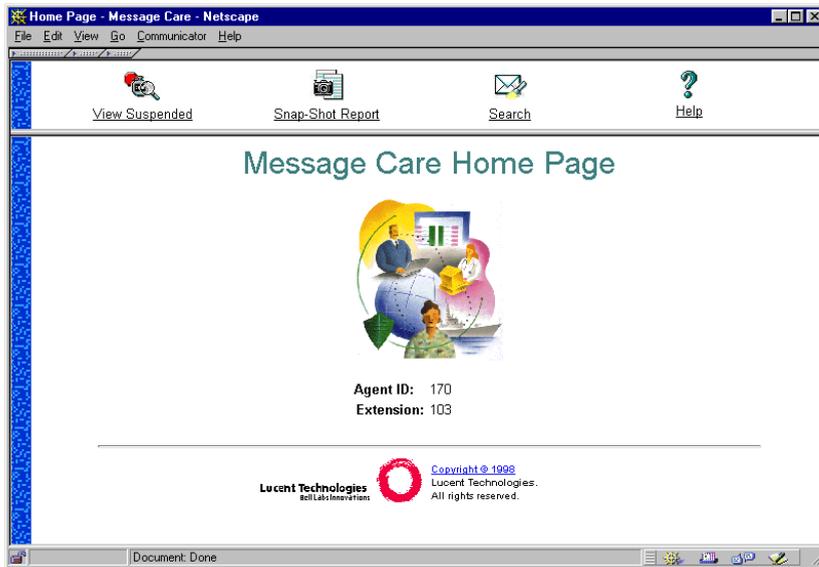
Select the OK button to reenter your user information.

The Agent Control Window appears:



The Agent Control Window provides control buttons to perform specific tasks. When you are active on a message call, the **Enter**, **Send Page**, **Drop Call**, and **Call Back** buttons are enabled and the **Log Out** button is disabled. The opposite is true when you are not active on a call. When control buttons are grayed out (disabled), you will not be able to use them. Note that the **Send Page** and **Call Back** control buttons are Internet Call Center specific, and although they are enabled when you are active on a call, they will not work unless you have the Internet Call Center solution installed.

3. Enter your password, if any, into the text entry field labeled **Enter Text Here**, then select either **Enter** on the keyboard or the **Enter** button on the Agent Control Window. The administered agent idle URL appears. The following illustration is an example of the *Message Care* agent idle page:



4. You may minimize the Agent Control Window while processing message calls.

Agent Logout

There are two methods for logging out of the *Message Care* software:

- Using the **Log Out** button (when enabled) from the Agent Control Window is another method for logging out of the *Message Care* software. Enabling or disabling the **Log Out** button is an administrative option on the Internet Control Manager (ICM). See Chapter 3, "Installation and System Administration," for details.
- Using your voice terminal. This logout procedure is always available and logs you out of the *DEFINITY*[®] ECS. If reason codes are administered and desired, the agent should log out this way. To log out of the *Message Care* software, you must close the Agent Control Window and the *Message Care* Web page(s).

In either of these cases, the agent receives a "Connection terminated. Please quit." message on the Agent Control Window. Then, a JavaScript alert dialog box appears with the following message: Press OK to Quit. When you select the **OK** button, both the dialog box and the Agent Control Window close.

Processing Message Calls

Introduction

This chapter describes how an agent handles various types of messages and also describes the functionality provided by the *Message Care*[™] software to handle those messages.

The following sections are provided in this chapter:

- Methods Used to Contact Call Centers
- Message Processing Cycle
- Message Status States
- Message Care Processing Options
- Message Care Message Processing Web Pages
- Handling Undeliverable Messages and Notifications.



WARNING:

This chapter is based on Web pages delivered with the *Message Care* software. If you choose to modify *Message Care* Web pages, then this chapter may no longer apply. In addition, modifications to *Message Care* Web pages may affect the functionality of the product. Therefore, any modification of *Message Care* Web pages or scripts will void any warranty or maintenance support of the product.

Audience

This chapter is intended for agents or anyone else needing to know how to process messages.

Methods Used to Contact Call Centers

Message Care software enables consumers to contact your call center by various forms of email. For example, if your call center has published an email address and the email address is routed to a mailbox monitored by *Message Care* software, then a consumer using the email address will generate an inbound email message that will be delivered to you or another agent for processing.

Each inbound message (email or fax) will be routed to a specific mailbox. The mailbox to which an inbound message is routed is determined by an address (for an email message call) or a dialed number (for a fax message call).

Inbound Email Message Calls

The following information describes some types of email messages that can be used to generate messages supported by the *Message Care* software:

- Form-based email (file attachments supported)—A form-based email is a form provided by the call center that the consumer fills out and then sends to the call center. For example, your company's consumer Web page has a Write Us link that when clicked on, presents the consumer with a form prompting the consumer to provide specific information. The consumer completes the form, and then clicks on the Send button. A form has a script that composes an email message from the contents of the form. The message is then sent to the destination address (mailbox) monitored by *Message Care* software and then sent to you or another agent for processing.

- Free-formatted email (file attachment supported)—A free-formatted email is a message that is addressed (using your company's email address) and created by the consumer. This email may be in response to a link in a Web page or may be independently composed by the consumer. For example, if your call center provided a MAILTO link on a consumer Web page, then the consumer would click on the email link and a message composition window for composing and sending the message (with the recipient's address automatically filled in) would appear. The consumer would then compose a message and click on a **Send** button. The email is then sent to the destination address (mailbox) monitored by the *Message Care* software and delivered to you or another agent for processing.

How *Message Care* Handles File Attachments

The *Message Care* software will store five attachments with each inbound message. If an inbound message contains more than five attachments, the *Message Care* software truncates the message (that is, attachment six and beyond will be discarded) and adds the following statement to the message:

```
This message has been truncated since the
Message Care application supports a maximum of 5
file attachments. Please contact the sender for
copies of the additional attachments if
necessary.
```

Inbound Fax Message Calls

Inbound fax messages may be distributed through the *Message Care* software if your fax server supports retrieval of the fax through Post Office Protocol 3 (POP3). To use faxes with the *Message Care* software, your email server must support a fax server interface (for example, *Intuity*TM *AUDIX*[®] with Internet Messaging). The fax server interface treats the fax image as an attachment to an email message. See Table 5-1 for the differences between a fax message and an email message.

Differences Between Fax Messages and Email Messages

Both fax and email messages are delivered to you in the same manner (the *DEFINITY*® Enterprise Communications Server (ECS) notifies you of a message by sending a message call to your voice terminal); however, there are appearance and operational differences between the two types of messages. See Table 5-1 for a description of the differences between a fax message and an email message.

Table 5-1: Operational Differences Between a Fax and Email Message

Fax Message	Email Message
1. After answering the message call, a PagePop associated with the fax message is delivered to you.	1. After answering the message call, a PagePop associated with the email message is delivered to you.
2. The message will contain a file attachment which contains the fax image.	2. The message display will contain the following: <ul style="list-style-type: none">— Consumer’s Return Email Address— Subject— Text Body— File Attachment (possibly).
3. You must click on the file attachment to view the fax message.	3. You do not have to take any action to view the email message (the email message is in the text body).
4. Reply—A third-party tool, provided by you, must be used to compose and send a fax response. The original fax image (not the newly created, annotated, or modified fax image) is stored in the <i>Message Care</i> database.	4. Reply—Use the <i>Message Care</i> software tools to compose a reply.

Table 5-1: Operational Differences Between a Fax and Email Message (Contd)

Fax Message	Email Message
5. A fax message must be marked as closed (with a reason code) to complete the processing. If a third-party tool is used to compose a fax reply, the fax message still must be closed in the <i>Message Care</i> software to complete the process.	5. An email message must be marked as closed (with a reason code) to complete the process.

Message Processing Cycle

Introduction to the Message Processing Cycle

All *Message Care* messages go through a process cycle. As an agent, you are an integral part of the message processing cycle because you are responsible for the proper handling of each message.

A message processing cycle begins when the *Message Care* software retrieves a message from the POP3 mail server and ends when the message associated with that message call is placed in the Closed state (see the “Message Status States” section in this chapter for more information about message call status states). Your part in the message processing cycle begins when you answer a message call.

NOTE:

A message call is a call (associated with a message) that is launched to the *DEFINITY* ECS. A message call remains active in the *DEFINITY* ECS while you are processing the associated message. A message call ends when you close or suspend the associated message.

It is important that you keep the message call active at your voice terminal. If you hang up the message call, the *Message Care* software will launch the message call to the administered extension (Vector Directory Number [VDN]) for that mailbox, and that message call may not return to your terminal.

The *Message Care* software provides specific functionality that you can use to process messages. This functionality is accessible through *Message Care* Web pages.

Phases of the Message Processing Cycle

The following list provides you with phases involved in the message processing cycle. All processing of a message should take place through your Web browser and the *Message Care* tools.

1. Phase One—Log In

To begin receiving message calls and the messages associated with those message calls, you must log in to the *Message Care* software and the *DEFINITY* ECS. See Chapter 4, “Agent Login and Logout,” for more information about logging in to the *Message Care* software and the *DEFINITY* ECS.

2. Phase Two—Answer the Message Call

The *DEFINITY* ECS notifies you of a message by sending a message call to your voice terminal. Accept the message call by answering the message call from your voice terminal. When you answer the message call, the *Message Care* software displays the New Message Delivery Web page on your browser. The New Message Display Web page provides information about the message as well as all of the tools required to process the message.

3. Phase Three—Determine How to Process the Message

Once you have answered the message call and read the consumer’s message, you must determine how to process the message. Below are the options available to you to process a message (depending on how you choose to process the message, more than one processing option may be needed to process a single message):

- Redirect the message to another *Message Care* enabled agent or skill group (transfer).
- Create and send a reply to the consumer.
- Request help before replying to the consumer.
- Terminate the message call.

- Stop the processing of the message for a specified amount of time.
- View processing information about a message.
- Look for other messages in the Message Care database.
- Annotate the message.
- Display help information about the *Message Care* Web page and processing options.

4. Phase Four—Message Processing Ends

Once you have processed the message (that is, closed the message), the *DEFINITY* ECS releases the message call and you become available to receive another call. Based on the workload of your call center, your next call may be another message call or a real-time call (Public Switched Telephone Network [PSTN] or real-time Internet call).

Things to Know About Messages

The following list provides important information about messages. Read the list below before you begin accepting message calls.

- A message is delivered to a browser upon answering a message call on your voice terminal.
- A message can be active with only one agent at a time.
- Message calls can be delivered to you only when you are available to take a call (that is when you are in the Auto-In or Manual-In Automatic Call Distribution [ACD] work mode).
- Other agents may view a message when the message is active; however, only an active agent can modify the message.
- All messages (whether fax or email) must be closed after you have completed the message handling process. If a message is not explicitly closed (for example, by hanging up the phone instead of selecting the Close option), the *Message Care* software will return the message (by way of a message call) to the VDN specified in *Message Care* administration. This may result in the message being delivered to another agent.
- It is possible to receive a message with no content or no file attachment. If you should receive such a message, simply close the message. See the “Close Message Web Page” section in this chapter for details on how to close a message.
- To ensure the correct tracking of a message, you should drop the message call using only *Message Care* functionality (that is, the Close or Suspend options). If you release a message call with functionality other than that provided by *Message Care* (for example, hanging up the voice terminal), the *Message Care* software will not be aware of the release and will attempt to redeliver the message call to another agent.

- You can print all aspects of a message by printing the *Message Care* Web pages that contain the specific information you want to print. To print a *Message Care* Web page, use your browser's Print function.

Because the *Message Care* software uses frame-based Web pages, be sure to place your cursor in the frame that you want to print. For example, if your cursor is placed inside the toolbar frame of a *Message Care* Web page when you select the print function, then the frame containing the toolbar will print and not any other part of the *Message Care* Web page.

- To transfer a call while active on a message, use regular voice terminal transfer procedures. When the transfer of a message call is complete, the agent receiving the transferred message call will be presented with the New Message Display Web page containing the message just transferred and will then be identified as the active agent. The agent transferring the message call will be presented with the *Message Care* Home Web page (or the administered idle page) and will no longer be the active agent.
- To conference a call while active on a message, use regular voice terminal conference procedures. The *Message Care* software, however, will not automatically pop up a Web page containing the message to the conferee's browser. For the conferee(s) to view the same message while on the conference call, the agent initiating the conference must inform the conferee(s) to explicitly access the message by performing a search on the tracking number of the message.

Message Status States

Each message at any point in the process cycle has a status state. Status states describe each message's standing in the message handling process. You can view the status state of any message through the *Message Care View Web* pages. You can access the *Message Care View Web* pages through the Snapshot report or the Search option. In the *Message Care View Web* pages, you can view all of the status states that a message has gone through during its process cycle. Table 5-2 provides descriptions for the different message status states available in the *Message Care* software.

Table 5-2: Message Call Status States

Option	Description
Blocked	The <i>Message Care</i> software places a message in the Blocked state if the Junk Mail Screening parameter is administered and activated on the monitored mailbox, and a match has been made between the originator of the mail message and an administration entry on the Junk Mail Screening form. When a message is blocked, the <i>Message Care</i> software will not attempt to launch a message call. A message in the Blocked state must be retrieved manually from the View Web page. You may want to periodically review blocked messages to ensure that the message should not be processed.
Overflow	The <i>Message Care</i> software places a message in the Overflow state while it is awaiting resources to place the message call. Messages will be placed in the Overflow state if the maximum number of allowed simultaneous message calls between the <i>Message Care</i> server and the <i>DEFINITY ECS</i> (as administered in <i>Message Care</i>) is reached. Overflow calls must wait for a message call(s) to drop (hence resources become available) before being able to launch the message call.

Table 5-2: Message Call Status States (Contd)

Option	Description
Launched	The <i>Message Care</i> software places a message in the Launched state when the message has been successfully launched to the <i>DEFINITY</i> ECS (message call made) and is waiting to be answered by an agent.
Active	The <i>Message Care</i> software places a message in the Active state when the message call has been answered at an agent's voice terminal. The message remains in the Active state the entire time the message call is active on your voice terminal.
Suspended	You place a message, for a period of time, in the Suspended state when you want to postpone the processing of that message. The message remains in the Suspended state until it is retrieved, the suspend timer expires, or a reply for that message has been received.
Failed	The <i>Message Care</i> software places a message in the Failed state when repeated attempts to deliver the message fails. A message in the Failed state must be retrieved manually from the View Web page.
Closed	You place a message in the Closed state when you are finished processing the message. The Closed state signifies the end of the process cycle.

Message Care Processing Tools

This section describes how an agent processes a message using the options provided by the *Message Care* Web pages.

Message Care Processing Options

The *Message Care* software provides a number of message processing options. These options are presented on the toolbar of the *Message Care* Web pages (see the “Message Care Message Processing Web Pages” section in this chapter for more information). Some of the processing options can be administered to better meet your call center needs. Table 5-3 lists the processing options provided by the *Message Care* software.

Table 5-3: Message Care Processing Options

Option	Application
 <u>Reply</u>	Use the Reply option to send a reply to the consumer. For example, your reply to the consumer could be a status update or a complete answer to the consumer’s request. You can send a reply to the consumer only if you are active on the original message in which you want to reply. See the “Message Care Reply Web Page” section in this chapter to learn how to reply to a consumer’s request.
 <u>Forward</u>	Use the Forward option when you need help from another person (for example, a special matter expert [SME] or another agent) to compose a consumer reply. With this option, you are forwarding a copy of the consumer’s original message (with the option of including your own comments and attaching call center files) to another person for help. You can forward a message only if you are the active agent on that message. Forwarding a message does not remove you as the active agent on the message. After you have forwarded a copy of the original message, you can suspend the active message to wait for an answer and to process other messages. See the “Message Care Forward Web Page” section in this chapter to learn how to forward a message.

Table 5-3: Message Care Processing Options (Contd)

Option	Application
<p>Suspend</p>  <p><u>Suspend</u></p>	<p>Use the Suspend option when you want to delay the processing of a message for a specified amount of time. For example, you may want to suspend the message while you are awaiting an answer from a message you forwarded. Another reason for suspending a message may be because incoming real-time calls (PSTN or real-time Internet call) have increased and your assistance is needed to handle the real-time calls rather than the non-real time calls (message calls). You can use the Suspend option only if you are the active agent on that message. When you click on the Suspend option, the Suspend Message Web page appears with the option to confirm the suspend. See the “Suspend Message Web Page” section in this chapter to learn how to suspend an active message.</p>
<p>History</p>  <p><u>History</u></p>	<p>Use the History option when you want to view a chronological record of message processing details. A message’s history log displays the event changes a message has undergone along with the agent active during those state changes. You do not have to be active on the message to view a message call’s history. See the “Message History Web Page” section in this chapter to learn more about the history Web page.</p>
<p>Search</p>  <p><u>Search</u></p>	<p>Use the Search option when you want to find specific messages in the <i>Message Care</i> database. When you conduct a search, a list of messages matching the search criteria you entered appears. From this list, you can refine the search or view a specific message. You do not have to be active on a message to conduct a search. See the “Message Search Web Page” section in this chapter to learn how to search for a message.</p>

Table 5-3: Message Care Processing Options (Contd)

Option	Application
<p>Note</p>  <p><u>Note</u></p>	<p>Use the Note option when you want to document additional information about the processing of a message. You can add a note to a message only if you are the active agent on that message. Even if you are not the active agent on a message, you can view notes about a specific message by viewing the history of that message. All notes are saved in the message's history record. See the "Message Care Note Web Page" section in this chapter to learn how to create a note while you are active on a message.</p>
<p>Send</p>  <p><u>Send</u></p>	<p>Use the Send option when you are ready to send a reply to a consumer or when you want to forward a message (regarding an original message) to another person (SME or agent). You can send a reply or forward a message regarding an original message only if you are the active agent on the original message. See the "Send Acknowledgment Web Page" section in this chapter to learn more about this option.</p>
<p>Cancel</p>  <p><u>Cancel</u></p>	<p>Use the Cancel option when you want to quit the creation of a forward message or reply and return to the original message through the New Message Display Web pag, or when you want to quit the creation of a note.</p>

Table 5-3: Message Care Processing Options (Contd)

Option	Application
<p>Save</p>  <p><u>Save</u></p>	<p>Use the Save option when you want to save your reply or save your forward message. Situations that may warrant a save are:</p> <ul style="list-style-type: none"> • Incoming real-time calls (PSTN or real-time Internet call) have increased and your assistance is needed to handle the real-time calls rather than the non-real time calls (message calls) • For unknown reasons, you may have to abandon the composition of a reply or forward message. In this case, you may want to save the information you have already composed so that you can finish it at a later time. <p>When you retrieve a saved message, you are presented with the original message. From here, you can click on the Reply button (if you were in the process of replying to an original message) and you will be presented with the <i>Message Care</i> Reply Web page with the saved data; or, you can click on the Forward button (if you were in the process of forwarding a message) and you will be presented with the <i>Message Care</i> Forward Web page with the saved data.</p> <p>⚠ CAUTION: If you use the <i>Message Care</i> Close option to complete the processing of a message immediately after a Save, the saved reply or forward message will be lost. This is because a closed message cannot be reopened.</p>
<p>Close</p>  <p><u>Close</u></p>	<p>Use the Close option to complete the processing of a message (all messages must eventually be closed). The most likely reason for closing a message is that you have completed the processing of that message (for example, you sent a final reply to the consumer). You may also want to close a message if you have determined that the message is junk mail and requires no processing. You can use the Close option only if you are the active agent on that message. When you select the Close option, the Close Message Web page appears with the option to confirm the close. See the “Close Message Web Page” section in this chapter to learn how to close an active message.</p>

Table 5-3: Message Care Processing Options (Contd)

Option	Application
<p>Retrieve</p>  <p><u>Retrieve</u></p>	<p>Use the Retrieve option when you want to resume processing of an original message. You can retrieve a message that is in the Launched, Suspended, Blocked, and Failed states. You cannot retrieve a closed or active message. To retrieve a message, you must be viewing that message from the View Web page. See the “Retrieve Acknowledgment Web Page” section in this chapter to learn how to retrieve a message.</p>
<p>Resend</p>  <p><u>Resend</u></p>	<p>Use the Resend option to resend a reply or forward message. See the “Handling Undeliverable Messages and Notifications” section in this chapter for more uses of the Resend option.</p>
<p>Message Display</p>  <p>Message Display</p>	<p>Use the Message Display option to display the original message. Once the message is displayed, you can send your reply or forward message to another recipient or use one of the other processing options available on the Web page.</p>
<p>Reset</p>  <p><u>Reset</u></p>	<p>Use the Reset option to clear any text entered in to the Web page fields.</p>
<p>View Suspended</p>  <p><u>View Suspended</u></p>	<p>Use the View Suspended option to view your suspended messages. When you click on the View Suspended button, the <i>Message Care</i> software conducts a search and provides a list of messages suspended by you.</p>

Table 5-3: *Message Care* Processing Options (Contd)

Option	Application
Snap-shot Report  <u>Snap-Shot Report</u>	Use the Snap-shot Report option to generate a real-time report. See the “Real Time Snap-Shot Report Web Page” section in this chapter for more information about <i>Message Care</i> reports.

Message Care Message Processing Web Pages

The *Message Care* software provides Web pages to handle all facets of email message processing. Each of these Web pages contain information pertinent to the task at hand as well as options for further processing. Message processing options are located on the toolbar of each *Message Care* Web page. The processing options available on a specific Web page depends on the purpose of the Web page. A Help option is also available on each Web page toolbar that provides help information about that specific Web page. (See the “Message Care Processing Options” section in this chapter for detailed information about each processing option.)

The following sections describe the information contained in each Web page as well as how to use each Web page:

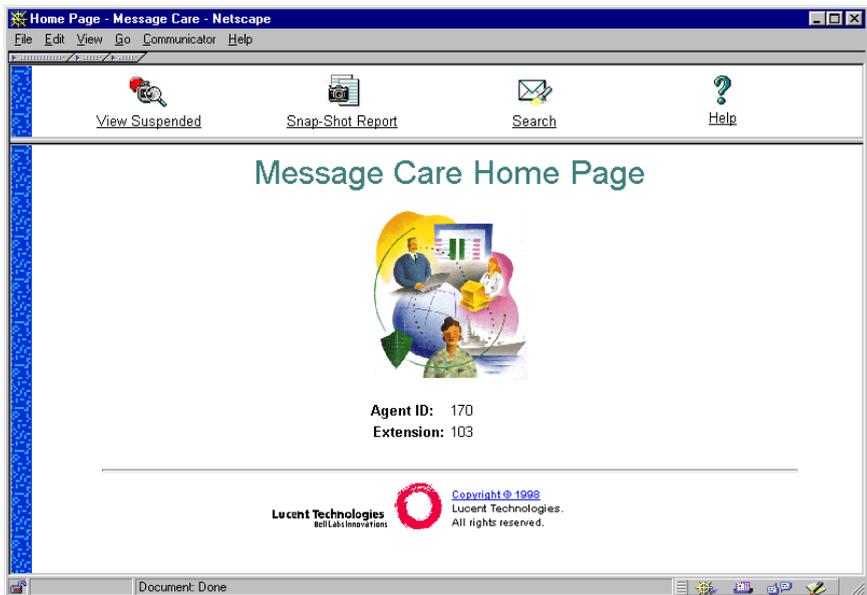
- Message Care Home Page
- New Message Web Page
- Message Care Reply Web Page
- Suspend Message Web Page
- Message Care Forward Web Page
- Message Search Web Page
- Message History Web Page
- Message Care Note Web Page
- Message View Web Page
- Retrieve Acknowledgment Web Page
- Send Acknowledgment Web Page
- Real Time Snap-Shot Report Web Page
- Close Message Web Page.

Message Care Home Page

After you have logged in to the *DEFINITY ECS* and *Message Care* software, the Message Care Home Page appears if administered. The Message Care Home Page is an idle page where you wait to answer a message call. While you are waiting for a message call, you can do the following:

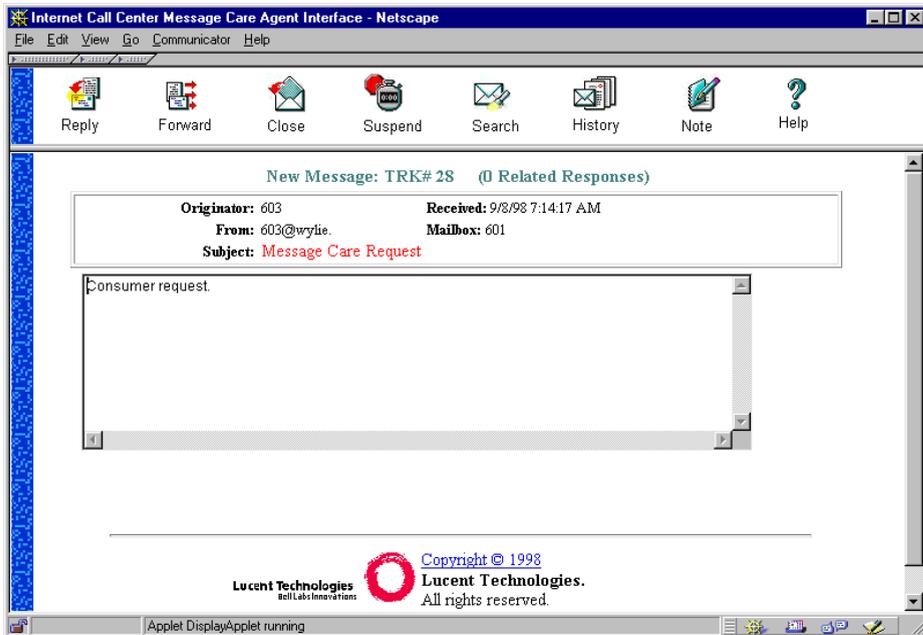
- View your Suspended Messages
- Generate a Real Time Snap-Shot Report
- Search for other messages
- Browse the Internet or your Intranet
- Minimize the browser window and perform other duties.

The following illustration is an example of the Message Care Home Page:



New Message Web Page

A message is delivered to you when you answer a message call from your voice terminal. When you answer the message call, the *Message Care* software will display the New Message Web page. The New Message Web page provides information about the message as well as tools to process the message. It is from this Web page that message processing begins. The following illustration is an example of the New Message Web page:



New Message Web Page Fields

Table 5-4 provides descriptions of the fields contained in the New Message Web page.

Table 5-4: New Message Web Page Fields

Field	Description
TRK # (Tracking Number)	A numeric value (eight digits) automatically generated by <i>Message Care</i> software for each received original message (for example, TRK # 12345678). A tracking number is followed by a four-digit suffix as a site identifier (for example, TRK # 12345678-1000). The <i>Message Care</i> software uses the tracking number to handle messages. As an agent, you can use the tracking numbers to find a specific message by searching on that message's tracking number. A consumer could use a tracking number to reference an email correspondence.
Mailbox	This field identifies the "friendly name," as administered in the <i>Message Care</i> software, for the mailbox that received the message.
Originator	This field identifies the name of the person (agent or consumer) who created the message.
From	This field identifies the email return address of the originator. The <i>Message Care</i> software uses this email address to populate the To field in a reply message.
Subject	This field provides the subject of the message.
Received	This field provides the time and date the message was retrieved by the <i>Message Care</i> software.

Table 5-4: New Message Web Page Fields (Contd)

Field	Description
Attachments	<p>This field represents the links that identify file attachments contained in the message. Clicking on an attachment link will open the file attachment. To view file attachments, you must have associated helper applications. (Your call center must provide the appropriate helper applications based on the types of messages you expect to receive. For instance, if you process fax messages, you must have a helper application for viewing and handling faxes.) If you cannot view a file attachment, contact your system administrator</p> <p>If the message does not have any attachments, then the Attachments field will not appear.</p>
Related Responses	<p>This field identifies the number of related responses. Related responses include replies sent to the consumer, messages forwarded to other people (for example, an SME or an agent), and messages sent by the consumer. Use the History option to view related responses.</p>
Text Body	<p>This field provides the actual message from a consumer. If this area is blank, then the message is most likely a fax message, especially if there is a file attachment.</p>

New Message Processing

From the New Message Web page, determine how you want to process the message. For example, you may know exactly how to reply to the consumer; therefore, you can use the Reply option to compose a reply and send it to the consumer; or, you may want to search the history database prior to creating your reply. In this case, you would use the History option. After finding the information in the history database, you close the Message History Web page and then click on the Reply button to compose a reply to the consumer.

Processing Options on the New Message Web Page

The New Message Web page contains links to the following processing options:

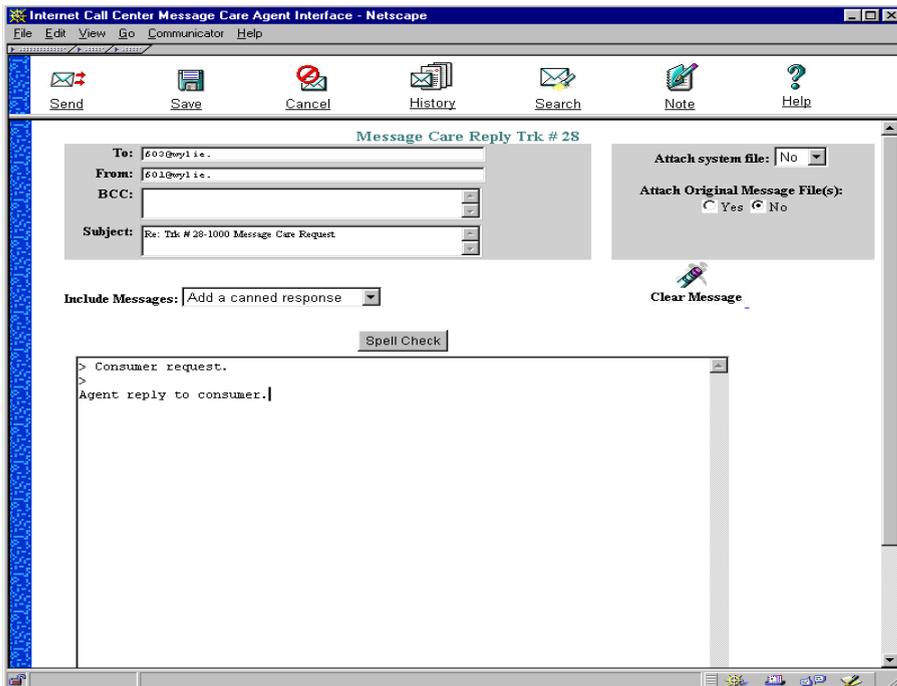
- Reply
- Forward
- Close
- Suspend
- Search
- History
- Note
- Help.

For information on each processing option, see the “Message Care Processing Options” section in this chapter. For instructions on each processing option’s Web page, see the related section in this chapter.

Message Care Reply Web Page

The *Message Care Reply Web* page appears when you click on the Reply button. From the *Message Care Reply Web* page, you can reply to the consumer's request by composing a reply and then sending that reply to the consumer. For example, you may want to keep your consumer informed on the status of their request. In this case, you could use the Reply option to send your consumer a reply stating that you are working on their request and will have an answer for them shortly. Replying to a message does not complete the processing of a message. To complete the processing of a message after you have sent a reply, you must close the message.

The following illustration is an example of the *Message Care Reply Web* page:



Message Care Reply Fields and Buttons

Table 5-5 provides descriptions of the fields and buttons contained in the *Message Care Reply Web* page.

Table 5-5: Message Care Reply Fields and Buttons

Field/Button	Description
To	This field identifies the email address where your reply will be sent. This field will automatically be populated with the “ From ” information associated with the message. You can edit this field.
From	This field identifies the return email address set by your administrator for the mailbox in which the message was delivered. You can edit this field.
BCC	This field is a blank field used to enter additional recipients as blind copies. Use this field if you want to send your reply to additional recipients (for example, if you want to keep other agents or SMEs informed) but do not want to show your consumer the email list of additional recipients. Before using the BCC field, ensure that your Simple Mail Transfer Protocol (SMTP) server supports blind copies.
Subject	<p>This field contains the prefix Re: (indicates a reply message) and the original message call’s Trk # and subject text. For example, Re: Trk # 12345678-1000 <i>Message Care Request</i>.</p> <p> CAUTION: You can edit this field; however, if you modify or remove the subject (especially the Trk #), the <i>Message Care</i> software will not be able to link a consumer response with the original message. The <i>Message Care</i> software searches the subject lines of email messages to see if there is a tracking number match with an open message. If the tracking number is not found in the subject header, no match can be made.</p>

Table 5-5: Message Care Reply Fields and Buttons (Contd)

Field/Button	Description
Attach System file	This field is a drop-down list box providing file attachments that you can include in your reply. You can select only one file attachment to be included in your reply. If there is no file attachment drop-down list box, then file attachments for that mailbox were not administered. The default is No.
Attach Original Message File(s)	This field has option buttons (Yes and No) used to include or exclude file attachments received in the original message. The default is No.
Include Messages	This field is a drop-down list box providing a set of pre-formatted answers (set by your administrator) for your reply. When selected, the pre-formatted answer is inserted in the text box at the point where your cursor is located. You can select more than one pre-formatted answer to include in your reply or enter your own text. The first item in the drop-down list box (Add a Canned Response) is explanatory only and not a valid choice.
Clear Message	This button clears all the text from the reply text box when clicked on and then confirmed.
Spell Check	<p>This button checks text in the text box for spelling errors. The spell checker identifies words that are not in the spell check dictionary and allows you to either edit the word, ignore the word, or add the word.</p> <p>The spell check dictionary is shared by all <i>Message Care</i> agents; therefore, care should be taken when adding words to the dictionary.</p>

Table 5-5: Message Care Reply Fields and Buttons (Contd)

Field/Button	Description
Text Box	This field is a standard text box that provides basic text input with editing support. Editing includes the insertion or deletion of characters. The text box is where you compose your reply to the consumer. By default, the text box is populated with the original message. However, if you or someone else saved a reply message, the text box will be populated with the reply text instead of the original message text.

Processing Options for the Reply Web Page

The *Message Care* Reply Web page contains links to the following processing options:

- Send
- Save
- Cancel
- History
- Search
- Note
- Help.

For information on each processing option, see the Message Care Processing Options section in this chapter. For instructions on each processing option's Web page, see the related section in this chapter.

Things to Know About Replying to a Message

The following list provides information about how the *Message Care* software handles replies to original message calls:

- By default, the original message text received from the consumer is included in the **Include Message** text box. Each line of the original text is preceded by the ">" symbol. This symbol distinguishes between the original message's text and text added during processing.

Exception:

If you save a reply and then retrieve that reply at a later time, the saved reply will populate the **Include Message** text box, not the original message text.

- You can use Copy and Paste commands to add text into your reply. When you use these commands, formatting style is lost.
- When you send a reply, the *Message Care* software will not request a return receipt from the SMTP server.
- *Message Care* software will store the following information for each reply submitted:
 - Message reply text
 - List of file attachments
 - Message reply subject
 - Return address specified
 - All destination addresses specified.
- To submit a reply for delivery to the consumer, the reply must contain the following:
 - Return address
 - Destination address
 - Either a message subject, file attachment, or text component.
- The *Message Care* history database will record when a reply was sent to the SMTP server as well as who sent it.
- The *Message Care* software will inform you when a reply submission failed. In this case, you may want to save your reply and then follow the procedures established by your call center.

- If you close the original message that you are replying to before sending your reply, the reply will be lost.
- You can save only one reply per original message. Subsequent save commands on a reply will overwrite the reply.

Replying to an Original Message Call

To reply to an original message, do the following:

1. If you have not already done so, click on the **Reply** button. The *Message Care Reply Web* page appears populated with information about the original message.
2. Verify that the consumer's email address located in the **To** field is correct. If not, enter the correct email address. For example, you may notice that the consumer entered their email address incorrectly (consumer@ao.com instead of consumer@aol.com) when entering information in a form created by your call center.
3. The **From** field email address is set by your administrator and in most instances will be correct. However, if you determine that the **From** field email address is incorrect, enter the correct address.
4. From the **BCC** field, enter the email addresses of other recipients for your reply. If you do not want to send your reply to other recipients, keep the field blank.
5. If you want to include a file attachment with your reply, select the file from the **Include System File** drop-down list.
6. From the **Attach Original Message File(s)** option buttons, select Yes to include all of the original message's file attachments with your reply. If you do not want to include the original message's file attachments with your reply, select No.

7. By default, the original message content or the content of a previously saved reply will appear in the text box. Refer to the following table for instructions on how to perform the tasks associated with the text box:

To...	Click....
Clear text from the text box	On the Clear Message button.
Add a canned response	In the text box area, and then click on the Include Messages drop-down list and select a reply.
Add your own text to the reply	In the area where you want to add text, and then begin entering your text.
Spell check the text in the text box	On the Spell Check button.

8. To send your reply, click on the Send button. The Send Acknowledgment Web page appears stating that your message was sent. See the “Send Acknowledgment Web Page” section in this chapter for more information.
9. At this point, you can do the following:
- Close the message
 - Suspend the message
 - Display the message
 - Annotate the message.

Suspend Message Web Page

The Suspend Message Web page appears when you click on the Suspend button. When you suspend a message, you are delaying the completion of that message for a specified period of time and requesting that the *Message Care* software launch the suspended message call when the specified time has expired.

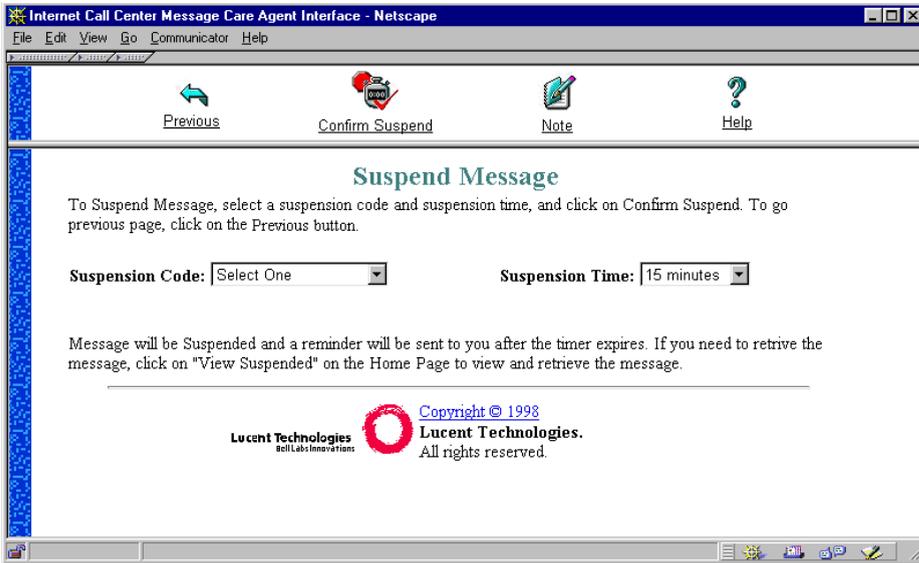
Why Suspend a Message?

The following list provides some reasons why you might want to suspend a message:

- To await information from a forwarded message
- To go on a scheduled lunch or break
- To handle the real-time calls (PSTN or real-time Internet call) rather than the non-real time calls (message calls).
- To work on non-call related activities.

For example, you may want to suspend a message because you are scheduled to go on a break. In this example, you could suspend the message for 15 minutes. When 15 minutes has expired, the *Message Care* software will launch the suspended message call so that the processing of that message can continue.

The following illustration is an example of the Suspend Message Web page:



Processing Options for the Suspend Message Web Page

The Suspend Message Web page contains links to the following processing options:

- Previous
- Confirm Suspend
- Note
- Help.

For information on each processing option, see the "Message Care Processing Options" section in this chapter. For instructions on each processing option's Web page, see the related section in this chapter.

Things to Know About Suspending Messages

The following list provides information about how the *Message Care* software handles suspended messages:

- When you suspend a message, the *Message Care* software drops the message call associated with that message. The ACD work state that you are placed in when a message call is dropped depends on *DEFINITY* ECS station administration.
- When you suspend a message, the *Message Care* software does the following:
 - Changes the status state from Active to Suspended
 - Records the suspension reason code
 - Records the suspending agent (agent ID) and the administered return destination. In addition, the *Message Care* software continues to associate you (the suspending agent) with the original message.
- When the suspension time has elapsed, the *Message Care* software will launch the message call. The launched message call may go directly to you or to some other agent. Where the launched message call is delivered depends on the number specified by your administrator.
- Specific events can induce a suspended message into an active state. Events that can activate a suspended message are as follows:
 - You manually retrieve the suspended message which cancels the suspension timer
 - The suspension timer expires and a message call related to the suspended message is launched
 - Someone sends an email linked to the suspended message (for example, a reply to a forwarded message).
- You must save and close notes that you are composing before suspending the associated message.
- When the *Message Care* software receives a request to suspend a message, it checks for any message response that was received while you were processing the message. If a response was received, the *Message Care* software informs you of the response and allows you to cancel the suspension of the message.

Suspending a Message Call

To suspend a message, do the following:

1. If you have not already done so, click on the Suspend button. The Suspend Message Web page appears.
2. Select a reason for suspending the message by clicking on a suspension code in the **Suspension Code** drop-down list box.
3. Select the amount of time you would like to suspend the message by clicking on a suspension time in the **Suspension Time** drop-down list box.
4. To add a note (optional), click on the Note option. The *Message Care* Note Web page appears. Compose your note, and then click on **Save** to preserve your note or click on **Cancel** to disregard your note.
5. Select the Suspend Confirm button to suspend the message. The *Message Care* software releases the message call and the *Message Care* Home Page (or the administered idle page) appears. You are now available to take new calls.

Message Care Forward Web Page

The *Message Care Forward Web page* appears when you click on the Forward button. From the *Message Care Forward Web page*, you can forward a copy of the consumer's original message to people other than the consumer.

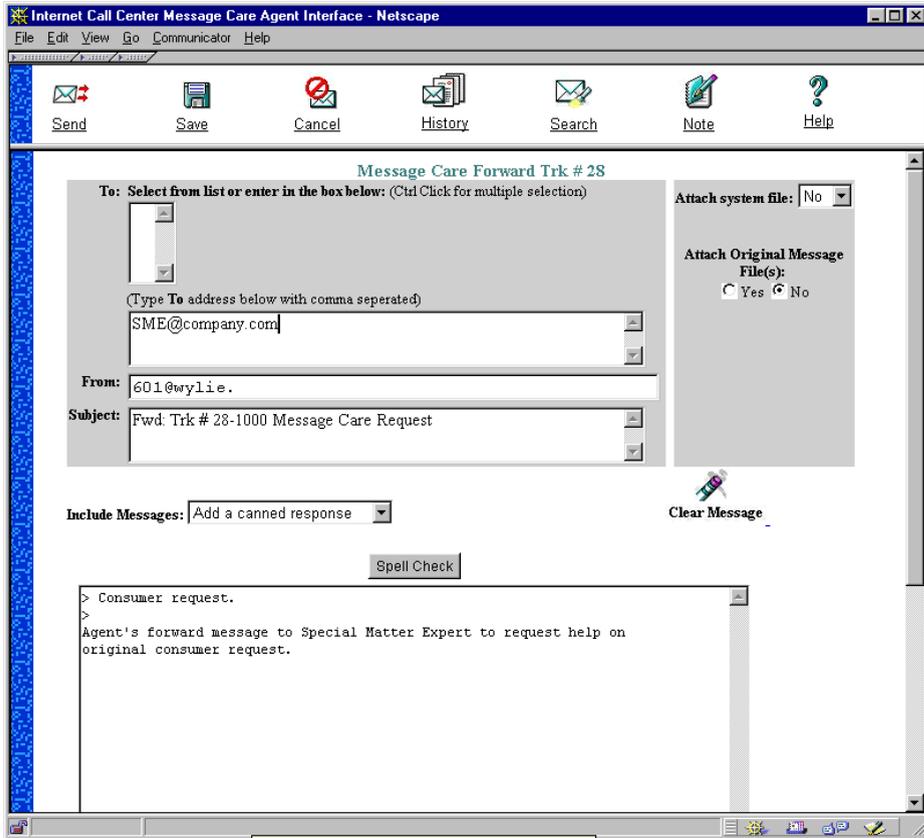
Why Forward a Message?

You may want to forward a copy of the consumer's original message to an SME, another agent, or to another call center to request information or help about the consumer's original message. When you forward a copy of the consumer's original message, you can also include your own comments in the message as well as a call center file attachment.

What Happens When You Forward a Message?

When you forward the consumer's original message, you are still the active agent on the message. Forwarding a message is unlike transferring a message. When you transfer a message, you are relinquishing ownership of the original message. If you want to transfer responsibility for a message to another agent or group, use the transfer function not the forward function.

The following illustration is an example of the *Message Care Forward Web* page:



Message Care Forward Fields and Icons

Table 5-6 provides descriptions of the fields and buttons contained in the *Message Care* Forward Web page.

Table 5-6: Message Care Forward Fields and Buttons

Field/Button	Description
To	<p>This field provides a list of administered email destinations to which you can send your message. An empty list box indicates that no email destinations were administered. In this case, you would use the text box below the To field to enter an email address. Use commas to separate multiple email addresses.</p> <p>Because commas are used to distinguish between multiple addresses, the <i>Message Care</i> software does not support email addresses containing commas.</p>
Subject	<p>This field contains the prefix Fwd: (indicates a forwarded message) and the original message call's Trk # and subject text. For example, Fwd: Trk # 12345678-1000 <i>Message Care</i> Request.</p> <p> CAUTION: You can edit this field; however, if you modify or remove the subject (especially the Trk #), the <i>Message Care</i> software will not be able to link a consumer response with the original message. Message Care searches the subject lines of email messages to see if there is a tracking number match with an open message. If the tracking number is not found in the subject header, no match can be made.</p>

Table 5-6: Message Care Forward Fields and Buttons (Contd)

Field/Button	Description
Attach system file	This field is a drop-down list box providing file attachments that you can include in your forward message. You can select only one file attachment to be included in your forward message. If there is no file attachment drop-down list box, then file attachments for that mailbox were not administered. The default is No.
Attach Original Message File(s)	This field has option buttons (Yes and No) used to include or exclude file attachments received in the original message. The default is Yes.
From	This field is a return email address set by your administrator for the mailbox in which the message was delivered. The From field allows the SME to reply back to your call center. You can edit this field if you want the SME's reply to go elsewhere. Follow your call center's established procedures. If your mail server is <i>Intuity AUDIX</i> , then the return address must be a valid mailbox address otherwise, the message will not be delivered.
Include Messages	This field is a drop-down list box providing a set of pre-formatted answers (set by your administrator) for your forward message. When selected, the pre-formatted answer is inserted in the text box at the point where your cursor is located. You can select more than one pre-formatted answer to include in your forward message or you can enter your own text. The first item in the drop-down list box (Add a Canned Response) is explanatory only and not a valid choice.
Clear Message	This button clears all the text from the text box when clicked on and then confirmed.

Table 5-6: Message Care Forward Fields and Buttons (Contd)

Field/Button	Description
Spell Check	<p>This button checks text in the text box for spelling errors. The spell checker identifies words that are not in the Spell Check dictionary and allows you to either edit the word, ignore the word, or add the word.</p> <p>The spell check dictionary is shared by all <i>Message Care</i> agents; therefore, care should be taken when adding words to the dictionary.</p>
Text Box	<p>This field is a standard text box that provides basic text input with editing support. Editing includes the insertion or deletion of characters. The text box is where you compose your forward message to the consumer. By default, the text box is populated with the original message. However, if you or someone else saved a forward message, the text box will be populated with the forward text instead of the original message text.</p>

Processing Options for the Forward Web Page

The *Message Care* Forward Web page contains links to the following processing options:

- Send
- Save
- Cancel
- History
- Search
- Note
- Help.

For information on each processing option, see the “Message Care Processing Options” section in this chapter. For instructions on each processing option’s Web page, see the related section in this chapter.

Things to Know About Forwarding a Message

The following list provides information about how the *Message Care* software handles forwarded messages:

- The return address of a forward message is the same address to which the original message was sent. You can edit the return address.
- When you forward a message, the consumer’s return email address is not contained in the forward message. The recipient of the forward message will not be able to reply to the consumer.
- By default, the original message text received from the consumer is included in the **Include Message** text box. Each line of the original text is preceded by the “>” symbol. This symbol distinguishes between the original message’s text and text added during processing.

Exception:

If you save a forward message and then retrieve that forward message at a later time, the saved forward message will populate the **Include Message** text box, not the original message text.

- You can use Copy and Paste commands to add text into your response message. When you use these commands, all formatting is lost.
- When you forward a message, you will not get a return receipt from the SMTP server.
- The *Message Care* software will store the following information for each forwarded message:
 - Message forward text
 - List of file attachments
 - Message forward subject
 - Return address specified
 - All destination addresses specified.
- To forward a copy of the consumer's original message, the forward message must contain the following:
 - Return address
 - Destination address
 - Either a message subject, file attachment, or text.
- The *Message Care* History database will record when a forward message was sent to the SMTP server as well as the agent who sent it.
- The *Message Care* software will inform you when your forwarded message failed. In this case you may want to save your forward message, and then follow procedures established by your call center.
- If you close the original message before sending your forward message, the forward message will be lost.
- You can save only one forward message per original message. Subsequent save commands on a forward message will overwrite the forward message.

Forwarding a Message

To forward a copy of the consumer's original message, do the following:

1. If you have not already done so, click on the Forward button. The *Message Care* Forward Web page appears populated with information about the original message.
2. Enter one or more email addresses to whom you want to forward a copy of the consumer's original message. You can use the **To** drop-down list to select from an administered list of recipients, or you can type one or more email addresses in the **To** text box.
3. If you want to include a file attachment with your forward message, select the file from the **Attach system file** drop-down list.
4. From the **Attach Original Message File(s)** option buttons, select Yes to include all of the original message's file attachments with your request. If you do not want to include the original message's file attachments with your request, select No.
5. By default, the original message content or the content of a previous forward will appear in the text box. Refer to the following table for instructions on how to perform the tasks associated with the text box:

To...	Click....
Clear text from the text box	On the Clear Message button.
Add a canned response	In the text box area, and then click on the Include Messages drop-down list and select a reply.
Add your own text to the forward message	In the area where you want to add text, and then begin entering your text.
Spell check the text in the text box	On the Spell Check button.

6. To send your forward message, click on the Send toolbar button. The Send Acknowledgment Web page appears stating that your forward message was sent to the email address of the recipient. See the “Send Acknowledgment Web Page” section in this chapter for more information.
7. At this time, you can do one of the following:
 - Close the message
 - Suspend the message
 - Display the message
 - Annotate the message.

Message Search Web Page

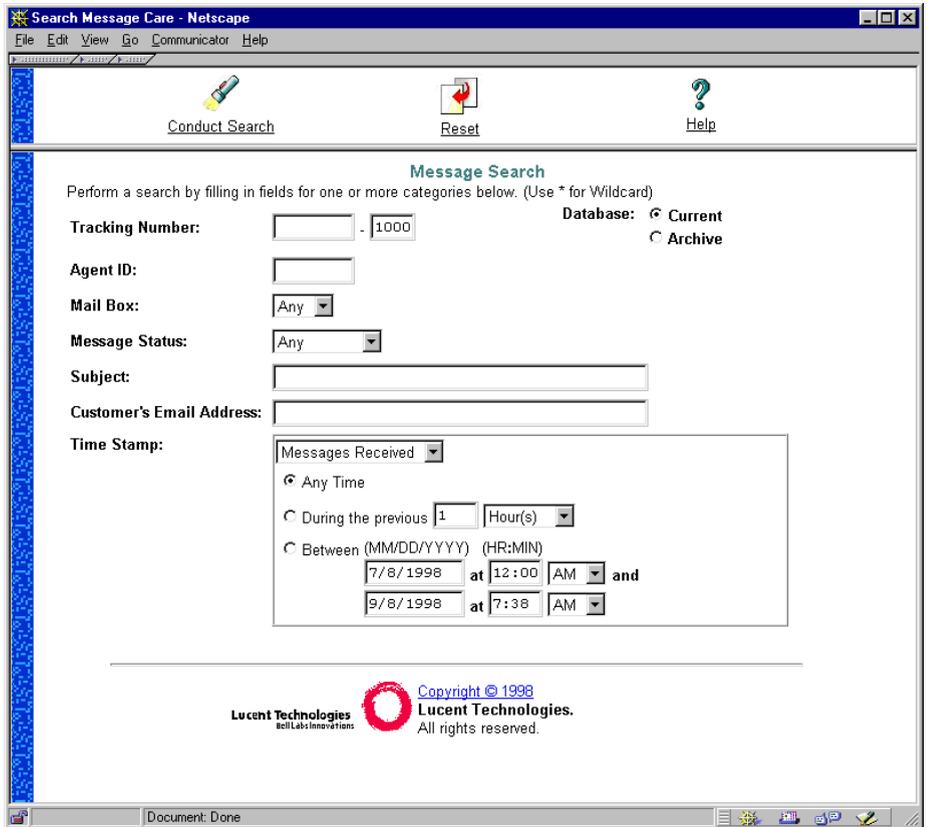
The Message Search Web page appears when you click on the Search button. The Search function allows you to search for messages using specific search criteria. *Message Care* software presents the messages matching your search criteria through the Search Results Web page. You can view any message presented in the Search Results Web page; however, you can retrieve only those messages with a Launched, Suspended, Blocked, Overflow, or Failed status state (the Retrieve button is present for messages in these status states).

Why Conduct a Search?

You may want to conduct a search on messages for the following reasons:

- To determine the status of a consumer's request
- To view suspended messages
- To search for messages from the same consumer
- To reply to a consumer using the same reply from a similar consumer request.

The following illustration is an example of the Message Search Web page:



Message Search Fields

Table 5-7 provides descriptions of the fields contained in the Message Search Web page.

Table 5-7: Message Search Fields

Field	Description
Tracking Number	<p>Use this search category when you want to search for messages by their tracking numbers. The Tracking Number category provides two text boxes. The first text box is used to enter a message's tracking number which can be populated with digits and wild cards of up to eight characters. The second text box is used to enter the site identifier which can be populated with digits and wild cards of up to four characters. The default for the first text box is no value and the default for the second text box is the site identifier administered for your system. For example, you may want to search for all messages with a site identifier of 1002.</p>
Database	<p>Use this search category to identify the database for which you want to conduct your search. You must select either the Current or Archive option. The default is Current.</p> <p>The Current database contains all messages that are being processed. Depending on the size of the Current database, it can also contain some closed messages. As the Current database reaches its size limit, your system administrator will move closed messages to the Archive database.</p>

Table 5-7: Message Search Fields (Contd)

Field	Description
Agent ID	Use this search category when you want to search on messages that have been or are still being processed by a specific agent or agents. For example, you may want to search for all messages that have been processed by Agent 12345. The Agent ID text box can be populated with digits and wild cards of up to 12 characters. The default is no value.
Mail Box	Use this search category when you want to search for messages that arrived in a specific mailbox. For example, you may want to search for all messages that were sent to your Technical Support mailbox. The default is Any Mail Box.
Message Status	Use this search category when you want to search for messages with a specific status. For example, you may want to search for all messages in the Failed state. The default is Any Status.
Subject	Use this search category when you want to search for messages containing specific text in the subject field. For example, you may want to find all messages regarding a specific product. The Subject text box can be populated with up to 128 alphanumeric characters (including wildcards). However, after 40 characters the text scrolls to the right. The default is no value.
Customer's Email Address	Use this search category when you want to search for messages from a specific email address. For example, you may want to find all messages that have come from customer@company.com. The Customer's Email Address text box can be populated with up to 128 alphanumeric characters (including wildcards). However, after 40 characters the text scrolls to the right. The default is no value.

Table 5-7: Message Search Fields (Contd)

Field	Description
Time Stamp	<p>Use this search category when you want to search for a specific time and date that messages were either received or closed. For example, you may want to find all messages that were closed between 06/01/98 at 11:00 am and 06/05/98 at 04:00 pm. Or, you may want to search on all messages that were received between 06/01/98 at 11:00 am and 06/05/98 at 04:00 pm.</p> <p>You can use wildcards on any editable field in the Message Time category.</p> <p>The default is Any Time. Any Time refers to all messages received or closed regardless of the date and time.</p>

Processing Options for the Search Web Page

The Message Search Web page contains links to the following:

- Conduct Search
- Reset
- Help.

Things to Know About the Search Function

The following list provides important information about the *Message Care* Search function:

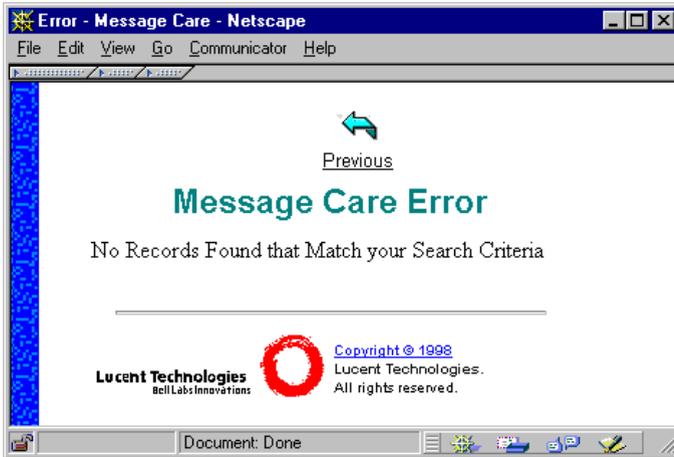
- The search function supports wild card characters. The supported wild card character is an asterisk (*). Table 5-8 provides examples of using a wild card in your search criteria.

Table 5-8: Wild Card Search Examples

If the agent ID is...	Then the <i>Message Care</i> software will search on...
12345	The agent ID 12345 (exact match).
1234*	All agent IDs starting with 1234.
1*5	All agent IDs starting with 1 and ending with 5.
1234	All agent IDs containing 1234.
*1234	All agent IDs ending with 1234.

- You can use the Copy and Paste commands to enter text in all of the category search fields consisting of a text box.
- Multiple search criteria can be used to find a specific message.

- You can choose a combination of criteria items for which you want to conduct a search. However, when selecting criteria items, verify that the criteria items do not contradict each other. For example, you cannot select the *Active* criteria in the Message Status category and then select the *Closed Time* criteria in the Message Time category. If you attempt to use criteria items that contradict each other as in the example above, the *Message Care* software will provide the following Web page:



- You must follow the syntax displayed in the Message Time category for the date and time fields.
- Not all search categories allow text entry. Instead, some search categories provide a drop-down list box from which you can select from a list of category items. These categories are:
 - Mailbox—choose from a list of administered mailboxes
 - Message Status—choose from a list of status states
 - Message Time—choose either Received or Closed
 - Message Time:During the Previous—choose either Hour(s), Day(s), or Week(s)
 - Message Time:HR:MIN—choose either AM or PM.
- To stop a message search, do one of the following:
 - Click on your browser's Stop button.
 - Press the Esc button on your keyboard.

- The *Message Care* software sorts the search results by the tracking number.
- Because searches are conducted on the same server that contains the *Message Care* Web pages, performance problems could occur when attempting a large search (for example, conducting a search on all messages in the database). If you attempt to conduct a large search, the *Message Care* software will alert you. When the *Message Care* software alerts you, you will be able to continue the search using your original search criteria or you can cancel the search and refine your criteria.

Searching for a Message

The best method of explaining how to use the search capability of the *Message Care* software is to provide an example such as looking at a search that makes use of almost all of the search categories. For example, in our search, we want to find all automobile loan messages closed during the previous eight hours by agent IDs ending in 45 and that have arrived at site 1002 in the loan application mailbox (601). The following information is a breakdown of the search criteria:

- Site Identifier = 1002
- Database = Current (depends on how often your call center archives messages)
- Agent ID = All agent IDs ending in 45
- Mailbox = 601-Loan Application (an administered mailbox)
- Message Status = Closed
- Subject = Automobile Loans
- Customer's Email Address = None
- Time Stamp = Closed during previous 8 hours.

To find all messages meeting the criteria in the example, you would do the following:

1. Click on the Search button to display the Message Search Web page.
2. Complete the form as shown below:

Search Message Care - Netscape

File Edit View Go Communicator Help

Conduct Search Reset Help

Message Search

Perform a search by filling in fields for one or more categories below. (Use * for Wildcard)

Tracking Number: * - 1002 Database: Current
 Archive

Agent ID: *45

Mail Box: 601

Message Status: Closed

Subject: *Automobile*

Customer's Email Address:

Time Stamp: Messages Closed

Any Time

During the previous 8 Hour(s)

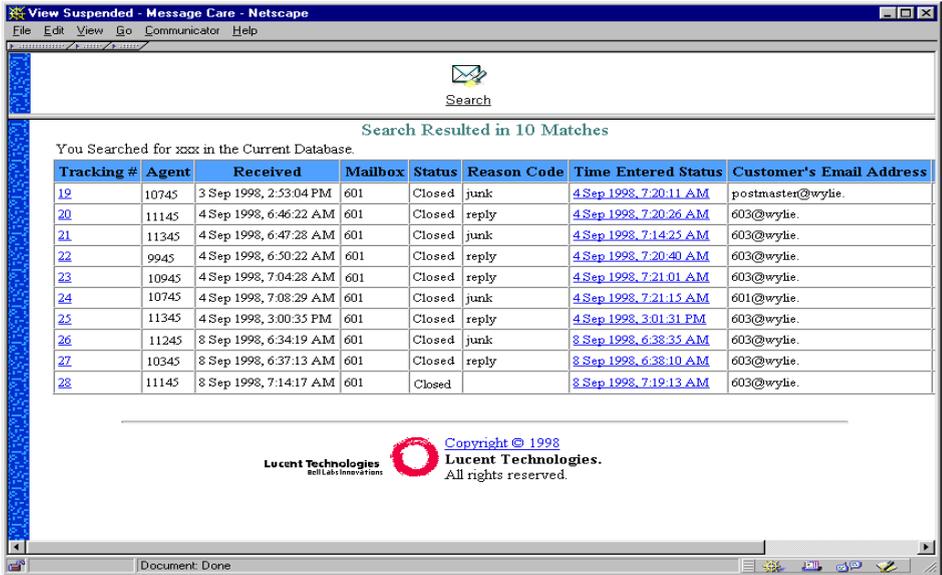
Between (MM/DD/YYYY) (HR:MIN)

05/22/1998 at 11:00 AM and
03/13/1998 at 4:00 AM

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- Click on the Conduct Search button. The *Message Care* software searches for all messages meeting the specified criteria and displays the messages through the Search Results Web page. The following illustration is an example of a Search Results Web page:



- Click on the Tracking# link, the Time Entered link, or the Status link to view the message, or click on the Search option to refine your search. You cannot modify any message while in the view mode.
- While viewing the message, you can retrieve the message for further processing by clicking on the Retrieve button. A Retrieve button will be available only if the status of the message is Launched, Suspended, Overflowed, Failed, or Blocked. See the "Message View Web Page" section in this chapter for more information about viewing a message.

Message History Web Page

The Message History Web page appears when you click on the History button. The Message History Web page allows you to view a chronological record of message processing details. A message's history log displays the state and event changes a message has undergone along with the agent active during those state changes. A message can go through numerous events and agents during processing; therefore, having the history of a message can prove valuable in correctly processing the message. Table 5-9 provides the history information that may be recorded for each message.

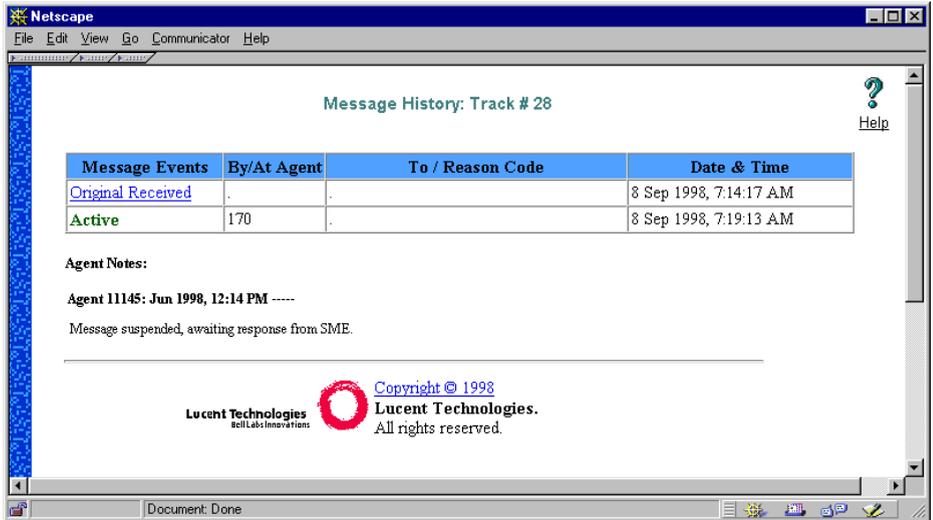
Table 5-9: Message History

Message Event	Link to View Message Event	Information Recorded
Original Received	Yes	Date and Time
Acknowledgment Sent	No	Date and Time
Active	No	Active At: Agent ID Date and Time
Replied	Yes (Resend Option is available.)	Replied By: Agent ID Replied To: email address Date and Time
Forwarded	Yes (Resend Option is available.)	Forwarded By: Agent ID Forwarded To: email address Date and Time
Suspended	No	Suspended By: Agent ID Reason for Suspending: Reason Code Date and Time
Response Received	Yes	Received Date and Time

Table 5-9: Message History (Contd)

Message Event	Link to View Message Event	Information Recorded
Closed	No	Closed By: Agent ID Reason for Closing: Reason Code Date and Time
Agent Notes	Agent Note text is viewable on the Message History Web page.	Note Composed By: Agent ID Date and Time Note Text (not editable)

The following illustration is an example of the Message History Web page:



Things to Know About the Message History Web Page

The following list provides important information about the History Web page:

- You can resend any of the following outgoing message events by clicking on the underlined event and then clicking on the Resend button:
 - Replied Message
 - Forwarded Message.
- The Message History Web page uses a new browser window; therefore, you can view the history of a message while processing the message. If the History Web page does not appear when you click on the History option, check to see if the window is already open, but minimized.
- The Message History Web page remains open until you close it.
- In the History log of a message, an Active event followed immediately by another Active event indicates that the message was transferred.

Viewing a Message's History

To view the history of a message, do the following:

1. If you have not already done so, click on the History button. The Message History Web page appears populated with information about the message you are currently processing.
2. To resend a replied or forwarded message, click on either the Replied or Forwarded underlined text to display the message, and then click on the Resend button.
3. When you are finished viewing a message's history, close the Web page by clicking on the Close button in the title bar.

Viewing a Message from the History Web Page

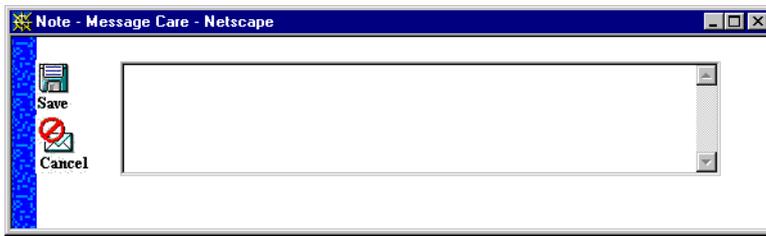
To view the Original Received, Replied, Forwarded, or Response Received message from the History Web page, do the following:

1. After you have clicked on the History button and received the History Web page, click on either the Original Received, Replied, Forwarded, or Response Received link. The appropriate View Web page appears.
2. From the View Web page, you can do the following:
 - a. Go back to the History page by clicking on the Prev button.
 - b. Resend either the Replied or Forwarded message by clicking on the Resend button.

Message Care Note Web Page

The *Message Care* Note Web page allows you to enter information relative to message processing. Although Agent Notes are part of the message record, notes do not accompany outgoing replies. However, any agent viewing a message will also be able to view the notes associated with that message.

The following illustration is an example of the *Message Care* Notes Web page:



The *Message Care* Agent Notes Web page contains the Save and Cancel processing options.

Things to Know about Agent Notes

The following list provides additional information about agent notes:

- You can cancel the composition of your note by clicking on the Cancel button in the *Message Care* Agent Note Web page. You will be presented with a message box asking if you are sure you want to cancel. Clicking on OK will close the *Message Care* Agent Note Web page without saving your note.
- The *Message Care* software does not automatically save your notes. You must save your note prior to closing the *Message Care* Agent Notes Web page.
- The *Message Care* Agent Note Web page automatically closes when you leave the message (for example, reply or forward) you are annotating.
- You must enter carriage returns when entering notes.
- A note can reach approximately 30 Kilobytes (KB) of data.

Creating an Agent Note

To create an agent note, do the following:

1. If you have not already done so, click on the Note button. The *Message Care Note Web* page appears.
2. Enter your text in the text box. You can use the Copy and Paste commands to enter text.
3. When you are finished entering text, save your note by clicking on the Save button. The *Message Care Note Web* page closes.

Message View Web Page

The Message View Web page is used to view a message from the Search Result Web page and Real Time Snap-Shot Reports Results Web page.

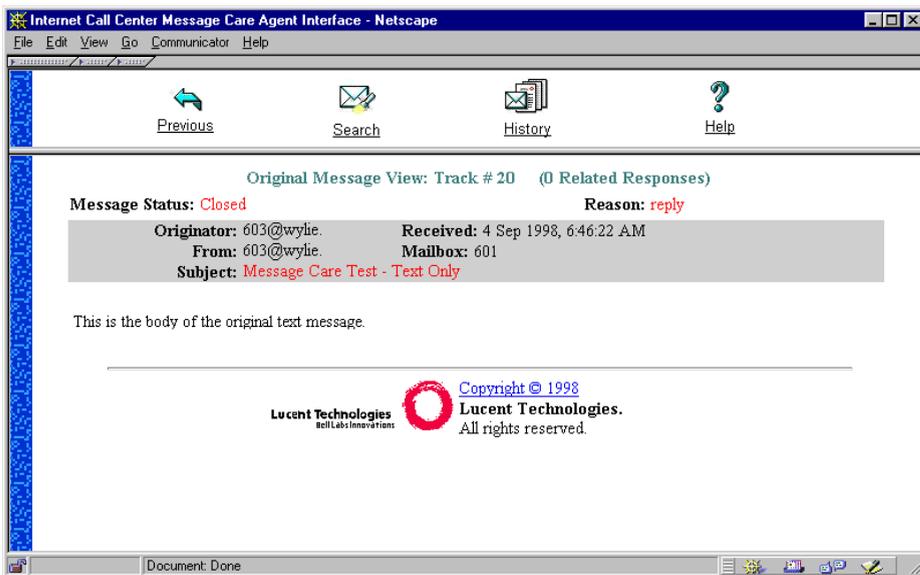
The viewing capability allows you to view a message without being active on a message.

Why View a Message?

Viewing a message is useful for:

- Determining how a message was processed
- Viewing similar messages to perhaps reuse replies sent to the consumer
- Evaluating agent responses.

The following illustration is an example of a View Web page arrived at through the Search Results Web page. See Table 5-10 for a description of the fields found on the Search Results View Web page.



Processing Options for the Search Results View Web Page

The Search Results View Web page contains links to the following:

- Previous
- Search
- History
- Retrieve
- Help.

Table 5-10 describes the fields found on the Search Results View Web page.

Table 5-10: Search Results View Web Page Fields

Fields	Description
Status	The field provides the status of the message (Blocked, Launched, Active, Suspended, Closed, or Failed).
Reason	This field provides the reason chosen when the message was suspended or closed.
Agent	This field provides the ID of the agent currently active on the message. If the message is not active, then the Agent field will not appear.
Originator	This field identifies the name of the person who created the message.
From	This field identifies the email address of the originator. The <i>Message Care</i> software uses this email address to populate the To field in a reply message.
Subject	This field provides the subject of the message.

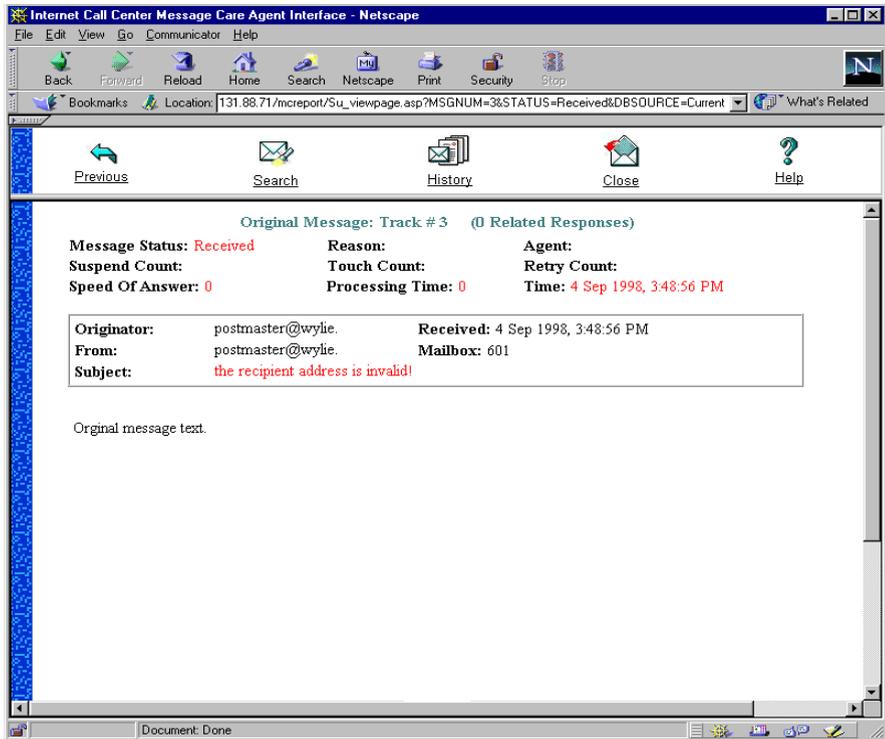
Table 5-10: Search Results View Web Page Fields (Contd)

Fields	Description
Attachments	<p>This field provides links that identify file attachments contained in the message. Clicking on an attachment link will open the file attachment. To view file attachments, you must have associated helper applications. (Your call center must provide the appropriate helper applications based on the types of messages you expect to receive. For instance, if you process fax messages, you must have a helper application for viewing and handling faxes.) If you cannot view a file attachment, contact your system administrator.</p> <p>If the message does not have any attachments, then the Attachments field will not appear.</p>
Received	<p>This field provides the time and date the message was retrieved by the <i>Message Care</i> software.</p>
Related Responses	<p>This field identifies the number of related responses. Related responses include replies sent to the consumer, messages forwarded to other people (for example, an SME or an agent), and messages sent by the consumer. Use the History option to view related responses.</p>
Mailbox	<p>This field identifies the “friendly name,” as administered in the <i>Message Care</i> software, for the mailbox that received the message.</p>

Table 5-10: Search Results View Web Page Fields (Contd)

Fields	Description
Text Box area	This field provides the actual message from a consumer. If the text box area is blank, then the message is most likely a fax message, especially if there is a file attachment.

The following illustration is an example of a View Web page arrived at through the Real Time Snap-Shot Report Results Web page. See Table 5-11 for a description of the fields found on the Snapshot Report Results View Web page.



Processing Options for the Report Results View Web Page

The Report Results View Web page contains links to the following:

- Previous
- History
- Close
- Help.

Table 5-11 describes the fields found on the Snapshot Report Results View Web page.

Table 5-11: Snapshot Report Results View Web Page Fields

Fields	Description
Track #	Tracking # of original message.
Status	This field provides the status of the message (Blocked, Launched, Active, Suspended, Closed, or Failed).
Time	This field provides the time and the date the message entered the current status.
Agent	This field provides the ID of the agent currently active on the message. If the message is not active, then the Agent field will not appear.
Reason	This field provides the reason chosen when the message was suspended or closed.
Speed of Answer	This field provides the time it took when the message was received to when the message was answered by an agent.

Table 5-11: Snapshot Report Results View Web Page Fields (Contd)

Fields	Description
Processing Time	This field provides the total time the message was active at the agent(s) while the message was being processed.
Suspend Count	This field provides the number of times the message was suspended.
Touch Count	This field provides the number of times the message was active at an agent.
Retry Count	This field provides the number of call attempts that occurred while processing the message.
Originator	This field identifies the name of the person who created the message.
Received	This field provides the time and date the message was retrieved by <i>Message Care</i> software.
From	This field identifies the email address of the originator. The <i>Message Care</i> software uses this email address to populate the To field in a reply message.
Mailbox	This field identifies the “friendly name,” as administered in the <i>Message Care</i> software, for the mailbox that received the message.
Subject	This field provides the subject of the message.

Table 5-11: Snapshot Report Results View Web Page Fields (Contd)

Fields	Description
Attachments	<p>This field provides links that identify the file attachments contained in the message. Clicking on an attachment link will open the file attachment. To view file attachments, you must have associated helper applications. (Your call center must provide the appropriate helper applications based on the types of messages you expect to receive. For instance, if you process fax messages, you must have a helper application for viewing and handling faxes.) If you cannot view a file attachment, contact your system administrator.</p> <p>If the message does not have any attachments, then the Attachments field will not appear.</p>
Related Responses	<p>This field identifies the number of related responses. Related responses include replies sent to the consumer, messages forwarded to other people (for example, an SME), and messages sent by the consumer. Use the History option to view related responses.</p>
Text Body area	<p>This field provides the actual message from the consumer. If this area is blank, then the message is most likely a fax message (especially if there is a file attachment).</p>

Things to Know About Viewing a Message

The following list provides background information about the viewing capability in the *Message Care* software:

- You can view a message regardless of the message's current state.
- Viewing a message is a read-only operation.
- You can view a message without being active on a message call.
- While viewing a message, you cannot modify any information related to that message. To modify a message you are viewing, you must first retrieve it.
- When you view a message, Call Management System (CMS) statistics are not gathered on the time spent viewing the message.
- You do not have to be the active agent to resend a message; however, you must be logged in to the *Message Care* software to resend a message.
- While viewing a message, you are available to receive a new message call if you are in an available ACD state (Auto-In or Manual-In) on your voice terminal. If you do not wish to receive calls while viewing a message, make yourself unavailable to receive ACD calls by using your voice terminal to enter the Auxillary work (AUX) or After Call Work (ACW) mode.

Viewing a Message

To view a message from the Search Results Web page or the Snapshot Report Results Web page, do the following:

1. After you have conducted a search and received the Search Results Web page or generated a report and selected the mailbox for which you want to view Report Results, click on either the `Tracking #`, `Time Entered In Status`, or `Subject` link of the message you want to view. The Original Message View Web page appears.
2. From the Original Message View Web page you can do the following:
 - a. Retrieve the message by clicking on the Retrieve button if available. See the "Retrieve Acknowledgment Web Page" section in this chapter for more information about retrieving messages.
 - b. View the history of the message by clicking on the History button.
 - c. Go back to the Search Results Web page by clicking on the Back button.
 - d. Conduct a new search by clicking on the Search button.

Retrieve Acknowledgment Web Page

You can retrieve a message in the Launched, Suspended, Blocked, and Failed states. The Retrieve option allows you to request a message call and become the active agent on a specific message so that you can process that message. When you click on the Retrieve button, the Retrieve Acknowledgment Web page appears in your browser stating that your message will be delivered to you as soon as possible.

Retrieve Message Process

When you click on the Retrieve button, the *Message Care* software will launch a call when facilities are available to deliver the requested message retrieval to you. The message call associated with your retrieval request may not be delivered to you immediately based on the traffic load of your system. You may even receive a different message call while waiting for your retrieval.

Once you receive and answer the message call associated with your retrieval, the New Message Display Web page appears in your browser with the message that you requested.

Things to Know About Retrieving a Message

The following list provides important information about retrieving a message:

- Retrieving a message in the suspended state cancels the suspension timer.
- You can request a retrieval of a message while on a live ACD call; however, you must complete the current ACD call before the *DEFINITY* ECS will deliver the retrieval message to you.
- Retrieved message calls appear as direct-agent message calls. If you log out of the *DEFINITY* ECS with direct-agent calls launched, the calls remain active until you log back in to the *DEFINITY* ECS (this is not a good use of *Message Care* facilities). To make good use of facilities, retrieve one message at a time, process the message to completion, and then retrieve another message.

- If you want a retrieved message to go directly to you, then do the following:
 1. Place yourself in the AUX or ACW work mode.
 2. Retrieve the message.

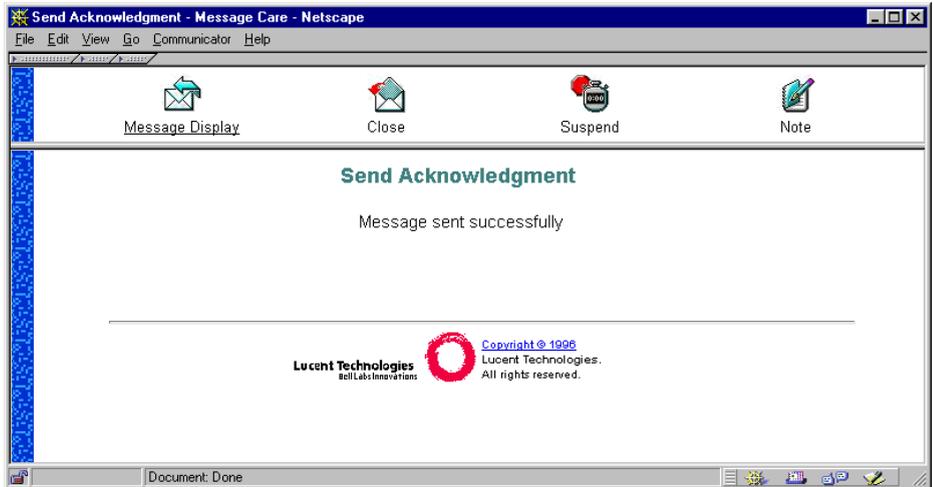
Since direct-agent calls are placed at the top of your *DEFINITY* ECS work queue, when you go into the AUX or ACW work mode, then the retrieved message will most likely be the next message call delivered to you.

 NOTE:

The above procedure is only true if your administrator has administered the Retrieve vector as recommended in Chapter 2, “Preparing a Call Center for the Message Care Software.”

Send Acknowledgment Web Page

Whenever you send a message (Forward or Reply), the *Message Care* software displays the Send Acknowledgment Web page to inform you that your message was sent. The following illustration is an example of the Send Acknowledgment Web page:



Processing Options for the Send Acknowledgment Web Page

The Send Acknowledgment Web page contains links to the following processing options:

- Message Display
- Close
- Suspend
- Note.

For information on each processing option, see the “Message Care Processing Tools” section in this chapter. For instructions on each processing option’s Web page, see the related section in this chapter.

Resent Acknowledgment Web Page

As you are viewing a Forward or Reply message from the History Web page, you can resend that message by clicking on the Resend button. When you click on the Resend button, the Resent Acknowledgment Web page appears in your browser stating that the message was successfully submitted for delivery.

Things to Know about Resending a Message

The following list provides important information about resending a message:

- You cannot resend messages through the Snapshot Report Web pages.
- You do not have to be the active agent to resend a message; however, you must be logged in to the *Message Care* software to resend a message.

Real Time Snap-Shot Report Web Page

The Real Time Snap-Shot Report displays current open (that is, any message that does not have a status of Closed) message activity. In addition, Real Time Snap-Shot Reports include messages in the Overflow and Suspended state, thus providing a more complete picture of message activity than is possible through CMS statistics. Unlike other *Message Care* reports, the Real Time Snap-Shot Report is not password-protected.

Purpose of the Real Time Snap-Shot Reports

The purpose of a Real Time Snap-Shot Report is to provide you with current information on open message activity. This type of information can be useful to you when allocating resources to non-message call activities (for example, real-time calls, breaks, or administrative work).

Things to Know About Real Time Snap-Shot Reports

The following list provides important information about Real Time Snap-Shot Reports:

- Since the Snap-Shot report is a view of current open message activity, it will not report on any closed messages.
- When requesting a Real Time Snap-Shot Report, you must select either one, all, or multiple mailboxes as your criteria.
- Because the Real Time Snap-Shot Report is based on current data, a drill-down request of the information presented may require that you request a refresh of the data.

For example, if you requested a Snap-Shot Report for all mailboxes at 11:00 and then at 11:15 drilled down to the message activity for a specific mailbox, the data in the report at 11:00 would no longer be current. To obtain the most current data, you would have to generate a new report using the same criteria and then immediately drill down to the information of interest.

- During the time you request a Real Time Snap-Shot Report, the values that are generated (Overflow, Launched, Active, Suspended) may not accurately represent the current value of all Open messages. This is because, during the time that the *Message Care* software generated the report, agents continued to process messages and message states could have moved from Overflow to Launched or from Active to Suspended.
- You can retrieve or view messages identified through a Real Time Snap-Shot Report.
- You can print the Real Time Snap-Shot Report by using your browser's Print functionality. To view the entire report, use the Landscape option.
- You can save the Real Time Snap-Shot Report in an HTML file by using your browser's Save function.

Real Time Snap-Shot Report Illustrations

The following illustration is an example of the Real Time Snap-Shot Report for all *Message Care* monitored mailboxes:

Results - Message Care Search - Netscape

File Edit View Go Communicator Help

Previous Reports Menu Help

Real Time Snap-Shot Report

Report Generated on: 9 May 1998, 11:44 AM

Mailbox	Open	Overflow	Launched	Active	Suspended
Message Care	100	32	20	42	6
Intuity	70	32	20	42	6
Message Manager	122	32	20	42	6
Internet Call Center	200	32	20	42	6
VMMCC	220	32	20	42	6

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The following illustration is an example of drilling down to information for a specific mailbox from the Real Time Snap-Shot Report (in this example, a drill down to the Intuity mailbox was conducted):

Results - Message Care Search - Netscape

File Edit View Go Communicator Help

Previous Reports Menu

Report Results

Report: Messages in Intuity

Tracking #	Agent	Status	Received	Speed of Answer Hr Min	Close Time Hr Min	Process Time Min Sec	Touch Count	Retry Count	Suspend Count	Mailbox
12345678-1000	71235	Closed	19 Jun 1998, 8:20 PM	8	2 13	24 14	2	3	2	Message C
12345000-1000	73456	Closed	21 Jun 1998, 7:55 AM	18	5 21	45 12	4	2	5	Home Mort
12345134-1000	73408	Closed	22 Jun 1998, 11:14 AM	23	3 18	36 16	5	6	2	Home Mort
12345234-1000	71208	Closed	23 Jun 1998, 10:14 PM	14	4 17	44 12	3	6	1	Home Mort
12345378-1000	72957	Closed	24 Jun 1998, 2:14 PM	15	3 12	35 34	5	6	3	Home Mort
12345379-1000	74096	Closed	26 Jun 1997, 8:17 AM	23	2 14	45 25	5	5	2	Home Mort
12345578-1000	73099	Closed	27 Jun 1997, 8:17 AM	26	1 34	33 12	4	2	1	Home Mort

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Document: Done

Generating a Real Time Snap-Shot Report

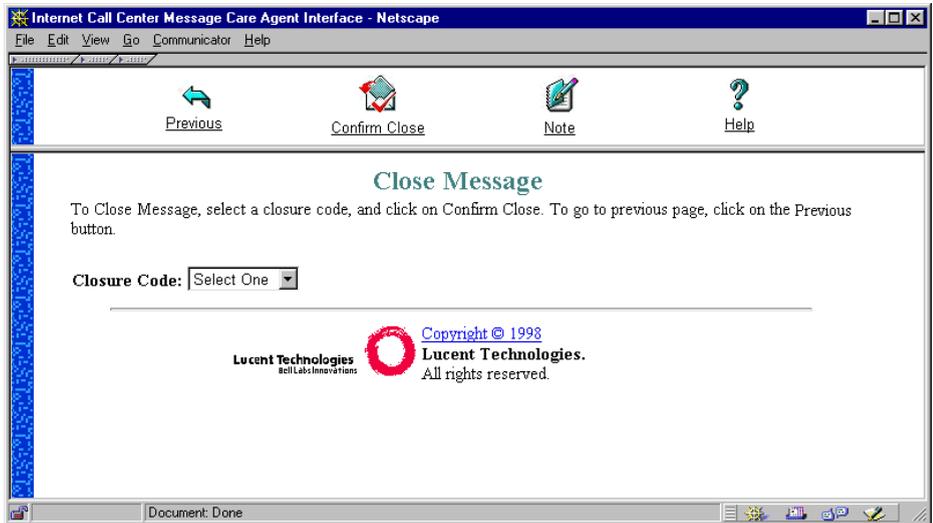
To generate a Real Time Snap-Shot Report, do the following:

1. From the *Message Care* Home Page, click on the Snap-Shot Report button. The Select Criteria for the Real Time Snap-Shot Report Web page appears.
2. From the **Mailbox** drop-down list, select one, multiple, or all mailboxes for which you want to generate a report.
3. Click on the Generate Report button. The Real Time Snap-Shot Report Web page appears with current mailbox data.

4. To display message-level data in a specific mailbox, click on a link for that specific mailbox. The Report Results Web page appears with a listing of all open messages in that mailbox.
5. To view a specific message in the list of messages on the Report Results Web page, click on a link for that specific message. The Original Message View Web page for that message appears.
6. From the Original Message View Web page, you can do the following:
 - Display the History for the message
 - Retrieve the message
 - Close the message
 - Return to the Reports Menu.

Close Message Web Page

The Close Message Web page is used to close a message. You would use the Close option when you have determined that all message processing is complete. When you close a message, the message calls drops, CMS tracking of the message is terminated, and you may be available (based on your ACD state in the *DEFINITY ECS*) to take new calls. The following illustration is an example of the Close Message Web page:



The Close Message Web page contains only one field: Closure Code. The Closure Code is a drop-down list containing reasons (reason codes) why you are closing a message. Your call center uses reason codes to measure operating efficiency. Selecting a reason code is mandatory.

Things to Know About Closing a Message

The following information explains how the *Message Care* software handles closed messages:

- When the *Message Care* software receives a request to close a message, it checks for any message response that was received while you were processing the message. If a response was received, the *Message Care* software informs you of the response and allows you to cancel the message closure.
- When you close a message, the *Message Care* software drops the message call associated with the active message and all CMS tracking for that message call ends.
- When you close a message, the *Message Care* software sets the status to Closed, records the time you closed the message, records your agent ID, and records the reason code.
- Once a message is closed, it cannot be reopened.

Closing a Message

To close a message, do the following:

1. If you have not already done so, click on the Close button. The Close Message Web page appears.
2. From the **Closure Code** drop-down list, click on a reason code that best describes why you are closing the message.
3. If you want to create a note, click on the Note button and then compose your note; otherwise, go to Step 4.
4. Click on the Confirm Close button to close the message. The *Message Care* software releases the call and the *Message Care* Home Page (or the administered idle page) appears. You are now available to receive a new message call.

Handling Undeliverable Messages and Notifications

There are instances when a reply or a forward message may not be delivered to the recipient. When a message cannot be delivered, the SMTP server sends an undeliverable message notification to the **From** address of that message. The undeliverable message notification may then be delivered to a *Message Care* monitored mailbox. The following list provides explanations as to why a message may not be delivered:

- The message recipient's mail server is not operating properly.
- The message recipient address is incorrect.

Things to know About Undeliverable Messages

The following list provides information about undeliverable messages and notifications:

- When a message (reply or forward) cannot be delivered to a recipient, the SMTP server creates another message (undeliverable notification) to notify the call center that the reply or forward message could not be delivered.
- The undeliverable notification is a new message (that is, it has a unique tracking number); however, the reply or forward message tracking number is contained in the body of the undeliverable notification. By using the reply or forward message tracking number, the agent who received the undeliverable notification can then search for the reply or forward message that could not be delivered and attempt to redeliver the message.

Processing Undeliverable Messages and Notifications

Let us consider the following scenarios to understand how to process undeliverable messages and notifications. All scenarios apply to forwarded messages also.

Scenario One—Original Message Closed

Agent 789 receives an original message (message A), sends a Reply (message B) to the consumer, and then closes the original message (message A). The reply (message B) cannot be delivered due to one of the reasons stated earlier; therefore, the SMTP server creates an undeliverable notification (message C) and delivers message C to Agent 123.

Agent 123 does one of the following:

- Use Resend Option—if the reply (message B) was not delivered because the recipient's server was not operational at the time that agent 789 sent the Reply, do the following:
 1. Search the database for the original message (message A) by using the original message tracking number as the search criteria. The Original Message View Web page appears for message A.
 2. Click on the History button. The History Web page for message A appears.
 3. Click on the Reply (message B) link. The Reply appears.
 4. Click the Resend button.
 5. Close the undeliverable notification (message C) with a note indicating that the reply (message B) was resent.
- Correct Destination Address—if the reply (message B) was not delivered because the recipient's address was incorrect, do the following:
 1. Search the database for the original message (message A) by using the original message tracking number as the search criteria. The Original Message View Web page appears for message A.
 2. Click on the History button. The History Web page for message A appears.
 3. Click on the Reply (message B) link. The Reply appears.

4. Copy the Reply text (message B).
5. Paste the Reply text from message B into the Reply screen for message C (undeliverable notification).
6. Make the correction to the consumer's email address.
7. Send the Reply.
8. Close the view of message A.
9. Close message C.

Scenario Two—Original Message Active

Agent 789 receives an original message (message A), sends a Reply (message B) to the consumer, and remains the active agent for the original message (message A). The reply cannot be delivered due to one of the reasons stated earlier; therefore, the SMTP server creates an undeliverable notification (message C) and delivers message C to Agent 123.

Agent 123 does the following:

- If the reply (message B) was not delivered because the recipient's server was not operational at the time the agent sent the reply (message B), do the following:
 1. Call agent 789 to inform the agent of the need to resend the reply (message B).
 2. Close the undeliverable notification (message C) with a note indicating that the reply (message B) was resent by the original agent (agent 789).
- If the reply (message B) was not delivered because the recipient's address was incorrect, do the following:
 1. Call agent 789 to inform the agent of the need to modify the address and resend the reply (message B).
 2. Close the undeliverable notification (message C) with a note indicating that the reply (message B) was resent by the original agent (agent 789).

Scenario Three—Original Message Suspended

Agent 789 receives an original message (message A), sends a Reply (message B) to the consumer, and suspends the original message (message A). The reply (message B) cannot be delivered due to one of the reasons stated earlier; therefore, the SMTP server creates an undeliverable notification (message C) and delivers message C to Agent 123.

Agent 123 does the following:

- Use Resend Option—if the reply (message B) was not delivered because the recipient’s server was not operational at the time the agent sent the reply (message B), do the following:
 1. Search the database for the original message (message A) by using the original message tracking number as the search criteria. The Original Message View Web page appears for message A.
 2. Click on the Retrieve button. The New Message Display Web page for message A appears.
 3. Click on the Reply (message B) link. The Reply appears.
 4. Click the Resend button.
 5. Close the undeliverable notification (message C) with a note indicating that the reply (message B) was resent.
- If the reply (message B) was not delivered because the recipient’s address was incorrect, do the following:
 1. Search the database for the original message (message A) by using the original message tracking number as the search criteria. The Original Message View Web page appears for message A.
 2. Click on the Retrieve button. The New Message Display Web page for message A appears.
 3. Click on the Reply (message B) link. The Reply appears.
 4. Copy the Reply text (message B).

5. Paste the Reply text from message B into the reply screen for message C (undeliverable notification).
6. Make the correction to the consumer's email address.
7. Using the Note option, document information about the address correction.
8. Send the Reply.
9. Suspend message A.
10. Close message C with a reason code.
11. Make a call to agent 789 to inform the agent that the reply (message B) had to be resent due to an incorrect email address.

Reports and the Database

Introduction

This chapter describes *Message Care*[™] reports and the *Message Care* database. *Message Care* statistics exist in both the Call Management System (CMS) and the *Message Care* database. You can identify message calls in your CMS reports by their special Vector Directory Numbers (VDNs) and skills.

It is important to use both CMS reports and *Message Care* reports to evaluate message handling at your call center. CMS is a valuable tool for tracking agent activities and actual Automatic Call Distribution (ACD) time, however, you should not rely on CMS reports alone for information on message handling. CMS does not track the time that messages spend in Overflow or the time while messages are suspended (suspended messages are not associated with any *DEFINITY*[®] Enterprise Communications Server [ECS] calls and are, therefore, not reported in CMS). In these cases, statistics collected by the *Message Care* software provides a broader view of message handling in your call center.

The *Message Care* software includes several reports that focus specifically on end-to-end information about messages routed through the *Message Care* software. These reports draw their information from the *Message Care* database.

How Message Tracking Works

Message tracking occurs through an Open Database Connectivity (ODBC) database that stores received messages, outbound consumer replies, received information from Subject Matter Experts (SMEs), plus selected header and status information on each message. The report output is created from Common Gateway Interface (CGI) scripts. This provides the call center with data for historical as well as comparative evaluation.

CMS can be used to collect statistics for message-based calls, thus providing reports on the number of message calls handled, processing time for a message, and the relative efficiency of various types of consumer contact.

Message Care provides end-to-end tracking of the message process including the following message status states:

- Overflow
- Launched
- Active
- Suspended
- Closed
- Failed
- Blocked.

CMS Reports versus *Message Care* Reports Statistics

Reports track new or original messages. Therefore, values such as average speed of answer reference the time an original message was retrieved and first delivered to an agent. *Message Care* does not report on subsequent delivery times of responses from SMEs or the time spent queuing prior to launching a call when a suspension timer expires. In general, CMS reports display statistics regarding agent work time and message call volumes; and *Message Care* reports display statistics regarding the specifics of end-to-end message processing, including capturing details on how agents perform.

CMS reports display the following statistics:

- Total ACD talk time spent processing message calls per skill.
- The amount of calls answered by an agent

NOTE:

If vectors have been designed to limit the calls queued per skill, CMS reports will display how many times a vector dropped a message call.

Message Care reports display the following statistics:

- Total agent work time for a specific message call; even if that message call was touched by multiple agents, *Message Care* will track the total work time for all of the agents.
- Delivery time to an agent
- Total message processing time
- Message service objectives, including delivery, processing, and time to close.

The statistics in your CMS reports may differ from the “same” statistics in your *Message Care* reports. This can happen for several reasons:

- CMS begins tracking only at the point where a call enters the *DEFINITY ECS* queue. Thus, there is no CMS information on the time that messages spend in Overflow

- CMS stops tracking when the call ends. Thus, there is no CMS information on the time while messages are Suspended or when message calls are queued for delivery within *Message Care*.
- The *Message Care* software may initiate multiple calls in the handling of a message. For example, once a message call is suspended, *Message Care* launches a new call each time it goes into the queue again. *Message Care* statistics tie all of these calls together and reports on them under the same original email message. Thus, the CMS count of calls can differ from the number of messages actually handled.

CMS and *Message Care* Terminology Overlap

Table 6-1 documents cases where the terminology used by CMS and *Message Care* overlap:

Table 6-1: CMS and *Message Care* Terminology Overlap

Terminology	When used by CMS	When used by <i>Message Care</i>
ASA – average speed of answer	Refers to the time a message call was launched to when it was answered by an agent.	DetectionTime to call answered by agent. The <i>Message Care</i> value will always be greater than the CMS value. The difference may be in seconds for a system with no capacity issues and ASA values less than eight hours. CMS will also track the ASA for retrieved, response and returning suspended messages. <i>Message Care</i> will not.

Table 6-1: CMS and *Message Care* Terminology Overlap (Contd)

Terminology	When used by CMS	When used by <i>Message Care</i>
Reason Codes	Values entered by agents when completing a call.	Values entered by agents when closing or suspending a message. Multiple calls may be required to service a message and, therefore, CMS may track multiple reason codes for a single message.

Message Care Reports

Message Care reports support both agents and supervisors, and include three types of reports:

- Real-time
- Historical (non-real-time based on closed messages)
- Interval report (non-real time that may also include open messages).

The *Message Care* reports are:

- Objective Report
- Closure Code Report
- Mailbox Report
- Real Time Snap-Shot Report
- Message Arrived Daily Report
- Message Arrived Monthly Report
- Agent Correspondence Report.

Writing Your Own Reports

Message Care is not designed to allow customizing of reports and, therefore, you are not expected to modify the standard reports provided with *Message Care*.

If you have different reporting needs, you may elect to write your own reports, using the schema published by *Lucent Technologies*.

With the exception of agent processing times, all report time values are truncated to minute granularity. If you need a more granular report, you should use the data stored directly and write your own report.

Drill Downs

You can drill down (click on a link with sub-links) from a message search or report result listing of multiple messages to a single message through the message tracking number.

For an example of drilling down to information for a specific mailbox, see the "Real Time Snap-Shot Report" section in Chapter 5, "Processing Message Calls."

Accessing Reports/Message Search

Reports can only be accessed through a bookmark supplied by your administrator. This bookmark will take you to the *Message Care* Report and Message Search page.

From here, you can select from the following links to generate a report or conduct a message search:

- Objective Report
- Reason Code Report
- Mailbox Report
- Real Time Snap-Shot Report
- Message Arrived Daily Report
- Message Arrived Monthly Report
- Agent Correspondence Report
- Message Search.

The following illustration displays an example of the Message Care Report and Search page:



Objective Report

The Objective Report compares performance on *Message Care* messages with performance objectives you specify, for the mailbox(es) and the time period you request. You can specify objectives for average speed of answer, average processing time, and average close time. This report measures performance on a message-by-message basis, regardless of the number of calls involved in handling each message. See the following example of an Objectives Report.

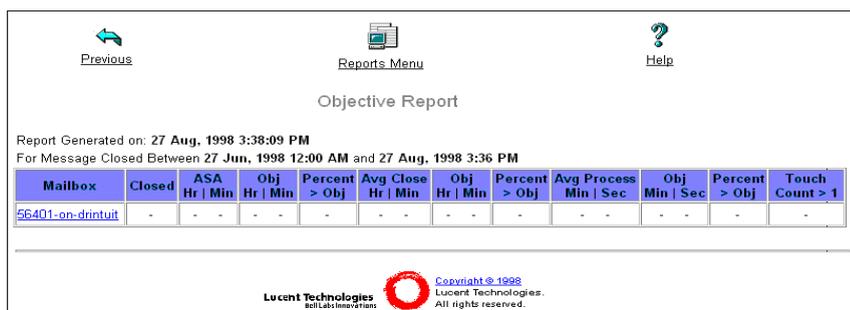
The goals of the objective report are to allow a system administrator to specify a performance objective and to determine how well this objective was met. Using the *Message Care* provided drill downs, you can view the set of messages that did not meet your objectives.

An objective report may be requested for messages closed within the customer-specified interval. You must specify at least one and may specify up to three of the following objectives:

- Average Speed of Answer
- Average Time to Close
- Average Processing Time.

Wildcards are not supported.

The following displays an example of an Objectives Report:



Objective Report

Report Generated on: 27 Aug, 1998 3:38:09 PM
For Message Closed Between 27 Jun, 1998 12:00 AM and 27 Aug, 1998 3:36 PM

Mailbox	Closed	ASA Hr Min	Obj Hr Min	Percent > Obj	Avg Close Hr Min	Obj Hr Min	Percent > Obj	Avg Process Min Sec	Obj Min Sec	Percent > Obj	Touch Count > 1
55401-on-drntuit	-	- -	- -	- -	- -	- -	- -	- -	- -	- -	-

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Obtaining an Objective Report

To obtain an Objective Report, do the following:

1. From the *Message Care Report and Search* page, click the Objective Report link. This brings up the **Select Criteria for Objective Report** page.
2. Select specific mailboxes or all mail boxes, define a between period between two dates and times (both hour and minutes/seconds) in which the messages were closed, and select a Performance Objective. You can select one or more of the following Performance Objectives: Average Speed of Answer
 - Average Time to Close
 - Average Processing Time).

3. Click on the **Generate Report** button to view the report.

 **NOTE:**

For all reports, on each Select Criteria page, the **Generate Report** button appears at the top.

After you click on the **Generate Report** button, there are three buttons along the top of your report results page:

- Previous
- Reports Menu
- Help.

Previous returns you to the previous screen. Reports Menu returns you to the main *Message Care* Reports Menu page.

The report result categories are listed as follows:

- Mailbox - A mailbox monitored by *Message Care* used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence between a consumer and an agent or replies to inquiries from SMEs within the call center. Any messages arriving in an agent mailbox are delivered to the agent through a direct agent message call, thus collecting CMS statistics.
- Closed - A status which indicates that no additional processing by an agent is required. All closed messages require a closure code.
- Avg Speed of Answer Hr | Min - The average value from detection time to delivery time. This is limited to delivery of original message calls.
- Obj Hr | Min - The customer-specified objective.
- Percent > Obj - The percentage of the customer-specified objective that was not met.
- Avg Process Time Hr | Min - The sum of all agent work time for a selected message. For example, if the touch count = 1, the message was closed by the first agent.
- Obj Hr | Min - The customer-specified objective.

- Percent > Obj - The percentage of the customer-specified objective that was not met
- Avg. Close Time Hr | Min - The average time it took for an original message to be retrieved off of the mail server and marked closed by an agent.
- Obj Hr | Min - The customer-specified objective.
- Percent > Obj - The percentage of the customer-specified objective that was not met
- Touch Count >1 - The number of messages which were active at more than one agent or SME

Closure Code Report

The Closure Code Report allows a system administration to compare code count, average speed of answer, average process time, average close time, and touch count for messages closed with different closure codes. Since messages may be routed differently, based on keyword searches of the message subject, delivery times may vary.

Closure codes only apply to the closed message state. When agents close a message, they assign a reason for doing so, selecting the reason from a list of codes you administer. The Closure Code Report shows how often each reason code gets used, for the mailbox(es) and the time period you request.

A closure code report may be requested for messages closed within a customer-specified time interval.

For each requested mailbox, *Message Care* will search for all unique closure codes and generate a report listing the number of occurrences for each found closure code for the specified mailbox.

NOTE:

To view reasons for message suspension, you need to use the snap-shot report to see how many messages are currently suspended and for which reasons. This can also be achieved through Message Search.

The following illustration displays a sample Closure Code Report:

 [Previous](#)
 [Reports Menu](#)
 [Help](#)

Closure Code Report

Report Generated on: 27 Aug, 1998 3:39:36 PM
 For Message Closed Between 27 Jun, 1998 12:00 AM and 27 Aug, 1998 3:39 PM

Mailbox	Closure Code	Code Count	ASA Hr Min	Avg Process Min Sec	Avg Close Hr Min	Touch Count > 1
mcdev2	Junk	6	0 2	3 11	3 46	2
	NoReply	2	0 1	1 0	0 2	0
	ReplySent	1	0 0	24 24	0 28	1
UNIX msgcare	Super	1	0 0	71 57	8 10	1


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Obtaining a Closure Code Report

To obtain a Closure Code Report, do the following:

1. From the *Message Care* Report and Search page, click the Closure Code Report link. This brings up the Select Criteria for Closure Code Report page.
2. Select specific mailboxes or all mail boxes and define a between period (between two dates and times) in which the messages were closed.
3. Click on the Generate Report button to view the report.

The report result categories are listed as follows:

- Mailbox - A mailbox monitored by Message Care used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence between a consumer and an agent or replies to inquiries from SMEs within the call center. Any messages arriving in an agent mailbox are delivered to the agent through a direct agent message call, thus collecting CMS statistics.
- Closure Code - Customer-defined, reason codes entered by an agent when closing a message.
- Code Count - The number of times a message was marked closed for a given closure code.
- Avg Answer Speed Hr | Min - Detection time a call was answered by an agent.
- Avg Process Time Hr | Min - The average of all agent work time for a set of messages with the same closure code.
- Avg. Close Time Min | Sec - The average time it took for an original message to be retrieved off of the mail server and marked closed by an agent.
- Touch Count =1 - How many times a message was touched by agents or SMEs.

Mailbox Report

The Mailbox Report shows the workload conditions for specified *Message Care* mailbox(es) during the time period you request. It includes data on messages with *Overflow* status, including the amount of time they remain in that condition.

A mailbox report may be requested for messages closed within a customer-specified time interval.

The following illustration displays a sample Mailbox Report:

Mailbox	Closed	ASA Hr Min	Avg Process Min Sec	Avg Close Hr Min	Touch Count > 1	Retry Count	Suspend Count	Blocked Count	Failed Count
56401-on-drintuit	-	- -	- -	- -	-	-	-	-	-

Obtaining a Mailbox Report

To obtain a Mailbox Report, do the following:

1. From the *Message Care* Report and Search page, click the [Mailbox Report](#) link. This brings up the Select Criteria for Mail Box Report page.
2. Select specific mailboxes or all mail boxes and define a between period (between two dates and times) in which the messages were closed.
3. Click on the Generate Report button to view the report.

The report result categories are listed as follows:

- Mailbox - A mailbox monitored by *Message Care* used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence between a consumer and an agent or replies to inquiries from SMEs within the call center. Any messages arriving in an agent mailbox are delivered to the agent through a direct agent message call, thus collecting CMS statistics.
- Closed - A status which indicates that no additional processing by an agent is required. All closed messages require a closure code.
- Avg Speed of Answer Hr | Min - The average value from detection time to delivery time. This is limited to delivery of original message calls.
- Avg Process Time Hr | Min - The sum of all agent work time for a selected message. For example, if the touch count = 1, the message was closed by the first agent.
- Avg. Close Time Hr | Min - The average time it took for an original message to be retrieved off of the mail server and marked closed by an agent.
- Touch Count >1 - How many times a message was touched by agents or SMEs
- Retry Count - The number of call attempts required to deliver a message to an agent. Call attempts include the first time a message was delivered, expiration of suspension timers, agent retrieval requests, and delivery of message responses. The RetryCount also counts the number of times a call was dropped by *DEFINITY* ECS vector programming.
- Suspend Count - The number of times any message was in the suspended state.
- Blocked Count - The number of times any message was in the blocked state.
- Failed Count - The number of times any message was in the failed state.

Hints for Interpreting Mailbox Reports

The goals of the mailbox report are to allow a system administrator to understand the workload offered by each mailbox and to identify any potential capacity constraints in the system. The following guidelines are offered to help understand how such report information may be used.

If the RetryCount is large, you should look at why calls are being dropped. Possible causes include vectors limiting the number of calls queued for a certain agent skill or a lack of resources to launch the call.

The difference in the value of closed messages and those messages with a TouchCount > 1, is the number of messages closed by the agent who first received the work. A large value in TouchCount > 1 indicates that the message goes through multiple active states. This may result from a message returning from a suspended state or transfers of the message call.

A large SuspendCount indicates that agents either have to suspend message processing to await a response from an SME or agents are suspending message to perform other work, for example, to service voice calls.

Real Time Snap-Shot Report

For detailed information about the Real Time Snap-Shot Report, see Chapter 5, "Processing Message Calls."

Messages Arrived Daily Report

The Messages Arrived Daily Report displays the arrival rate for all messages that arrived on a particular date for specified mailboxes. The results are displayed by hour in a 24-hour time frame.

The following illustration displays a sample Messages Arrived Daily Report:

Messages Arrived Daily Report

Report Generated on: 28 Aug, 1998 3:58:32 PM
For Messages Arrived on 27 Aug, 1998

Mail Box	AM											Hour	PM									
	12	1	2	3	4	5	6	7	8	9	10		11	12	1	2	3	4	5	6	7	8
5B401-on-drintuit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mcdev2-exchange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pats-testing-mailbox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UNIX msgcare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Obtaining a Message Arrived Daily Report

To obtain a Message Arrived Daily Report, do the following:

1. From the *Message Care* Report and Search page, click the Message Arrived Daily Report link. This brings up the Select Criteria for Message Arrived Report page.
2. Select specific mailboxes or all mail boxes and specify a date in which the messages arrived (day, month, and year).
3. Click on the Generate Report button to view the report.

The report result categories are listed as follows:

- Mail Box
- Hours.

NOTE:

The Messages Arrived Daily Report results are displayed by hour in a 24-hour time frame; 1-12 AM and 1-12 PM.

Messages Arrived Monthly Report

The Messages Arrived Monthly Report displays the arrival rate for all messages that arrived during a particular month for specified mailboxes. The results are displayed by day for each day of the month.

The following illustration displays a sample Messages Arrived Monthly Report:

Report Generated on: 27 Aug. 1998 3:52:47 PM
For Messages Arrived in Jan. 1998

Mail Box	Jan. 1998																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
56401-on-drintuit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
mcdev2-exchange	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pats-testing-mailbox	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UNIX msgcare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Obtaining a Message Arrived Monthly Report

To obtain a Message Arrived Monthly Report, do the following:

1. From the *Message Care* Report and Search page, click the Message Arrived Monthly Report link. This brings up the Select Criteria for Message Arrived Report page.
2. Select specific mailboxes or all mail boxes, and specify a month and year in which the messages arrived.
3. Click on the Generate Report button to view the report.

The report result categories are listed as follows:

- Mail Box
- Day.

 **NOTE:**

The Messages Arrived Monthly Report results are displayed by day for each day of the month.

Agents Correspondence Report

The Agents Correspondence Report displays a listing of all outbound messages created by a given agent. A log entry is created as soon as the agent either replies directly to a consumer or forwards a message to an SME.

 **NOTE:**

The Agents Correspondence Report is an effective tool for Supervisors to measure the quality of an agent's work.

The following illustration displays a sample Agents Correspondence Report:


[Previous](#)


[Reports Menu](#)


[Help](#)

Agents Correspondence Report

Report Generated on: **27 Aug, 1998 3:54:30 PM**
 For Messages Sent by Agent: **1234** Between **27 Jun, 1998 12:00 AM** and **27 Aug, 1998 3:54 PM**

Tracking #	Sent Time	Message	Destination Email Address	Subject
 <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p style="font-size: small; margin: 0;">Copyright © 1998 Lucent Technologies. All rights reserved.</p> </div>				

Obtaining an Agents Correspondence Report

To obtain an Agent Correspondence Report, do the following:

1. From the *Message Care* Report and Search page, click the Agent Correspondence Report link. This brings up the Enter Criteria for Agent Correspondence Report page.
2. Enter an Agent ID and define a time between two periods (between two dates and times) in which the messages were sent.
3. Click on the Generate Report button to view the report.

The report result categories are listed as follows:

- Tracking #
- Sent Time
- Message
- Destination Email Address
- Subject.

Search

Table 6-2 provides descriptions of the search options contained in the Message Search Web page for a supervisory search:

Table 6-2: Message Search Fields

Field	Description
Tracking Number	<p>Use this search category when you want to search on a message's tracking number. For example, you may want to search for all messages with a site identifier of 1002. The Tracking Number category provides two text boxes. The first text box is used to enter a message's tracking number which can be populated with digits and wild cards of up to eight characters. The second text box is used to enter the site identifier which can be populated with digits and wild cards of up to four characters. The default for the first text box is no value and the default for the second text box is the site identifier administered for your system.</p>
Database	<p>Use this search category to identify the database for which you want to conduct your search. You must select either Current or Archive. The default is Current.</p> <p>The Current database contains all messages that are being processed. Depending on the size of the Current database, it can also contain some Closed messages. As the Current database reaches its size limit, your system administrator will move Closed messages to the Archive database.</p>

Table 6-2: Message Search Fields (Contd)

Field	Description
Agent ID	Use this search category when you want to search on messages that have been or are still being processed by a specific agent or agents. For example, you may want to search for all messages that have been processed by Agent 12345. The Agent ID text box can be populated with digits and wild cards of up to 12 characters. The default is no value.
Mail Box	Use this search category when you want to search for a message(s) that arrived in a specific mailbox. For example, you may want to search for all messages that were sent to your Technical Support mailbox. The default is Any .
Message Status	Use this search category when you want to search for messages with a specific status. For example, you may want to search for all messages in the Failed state. The default is Any .
Subject	Use this search category when you want to search for messages containing specific text in the subject field. For example, you may want to find all messages regarding a specific product. The Subject text box can be populated with up to 128 alphanumeric characters (including wildcards). However, after 40 characters the text scrolls to the right. The default is no value.
Customer's Email Address	Use this search category when you want to search for messages from a specific email address. For example, you may want to find all messages that have come from customer@company.com. The Customer's Email Address text box can be populated with up to 128 alphanumeric characters (including wildcards). However, after 40 characters the text scrolls to the right. The default is no value.

Table 6-2: Message Search Fields (Contd)

Field	Description
Time Stamp	<p>Use this search category when you want to limit the search for the time and date messages were either received or closed. For example, you may want to find all messages that were closed between 06/01/98 at 11:00 am and 06/05/98 at 04:00 pm. Or, you may want to search on all messages that were received between 06/01/98 at 11:00 am and 06/05/98 at 04:00 pm.</p> <p>You can use wildcards on any editable field in the Message Time category.</p> <p>The default is Any Time. Any Time refers to all messages received or closed regardless of the date and time.</p>

Initiate a Message Search

To initiate a message search, do the following:

1. From the *Message Care* Report and Search page, click the Search link. The Message Search Web page appears.
2. Fill in any combination of the following search criteria: the tracking number, choose the database (current or archive), fill in the Agent ID, select a Mail Box, select a Message Status, fill in a Subject, fill in the Customer's Email Address, and define the Message Time. Wildcards are supported.

NOTE:

A Reset button appears at the top of the page which allows you to clear the page and begin a new search.

3. Click on the Conduct Search button to view the report.

The report results lists the messages that meet your specified criteria.

An example of a Search Results Web page follows:

Search

Search Resulted in 10 Matches

You Searched for xxx in the Current Database.

Tracking #	Agent	Received	Mailbox	Status	Reason Code	Time Entered Status	Customer's Email Address
19	10745	3 Sep 1998, 2:53:04 PM	601	Closed	junk	4 Sep 1998, 7:20:11 AM	postmaster@wyllie.
20	11145	4 Sep 1998, 6:46:22 AM	601	Closed	reply	4 Sep 1998, 7:20:26 AM	603@wyllie.
21	11345	4 Sep 1998, 6:47:28 AM	601	Closed	junk	4 Sep 1998, 7:14:25 AM	603@wyllie.
22	9945	4 Sep 1998, 6:50:22 AM	601	Closed	reply	4 Sep 1998, 7:20:40 AM	603@wyllie.
23	10945	4 Sep 1998, 7:04:28 AM	601	Closed	reply	4 Sep 1998, 7:21:01 AM	603@wyllie.
24	10745	4 Sep 1998, 7:08:29 AM	601	Closed	junk	4 Sep 1998, 7:21:15 AM	601@wyllie.
25	11345	4 Sep 1998, 3:00:35 PM	601	Closed	reply	4 Sep 1998, 3:01:31 PM	603@wyllie.
26	11245	8 Sep 1998, 6:34:19 AM	601	Closed	junk	8 Sep 1998, 6:38:35 AM	603@wyllie.
27	10345	8 Sep 1998, 6:37:13 AM	601	Closed	reply	8 Sep 1998, 6:38:10 AM	603@wyllie.
28	11145	8 Sep 1998, 7:14:17 AM	601	Closed		8 Sep 1998, 7:19:13 AM	603@wyllie.

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NOTE:

For more information on Search, please see the “Message Search Web Page” section in Chapter 5, “Processing Message Calls”.

Procedure for Saving Reports to a File

You can save any *Message Care* provided report to a file.

 **NOTE:**

This capability may be provided by using functionality provided in your browser.

Procedure for Printing Reports

You can print a *Message Care* provided report. When setting your print options, your print orientation should always be set to landscape.

 **NOTE:**

This capability may be provided by using functionality provided in your browser.

Archived Reports versus Current Reports

The *Message Care* database is ODBC-compliant. It logs and stores all information recorded during each step in processing a message.

Message Care maintains two databases:

- A current or active message store - *Message Care Messages* (`MessageCare.mdb`) - The file name of the Access 97 database containing the message records for messages currently being processed and those messages which entered the closed, blocked, or failed status states since the last message archive was created.
- An archived store - *Message Care Archive* (`ArchiveMessageCare.mdb`) - The file name of the Access 97 database containing the message records for messages currently in the closed, blocked or failed status states when the last message archive was created.

Reports may be generated on both, but as separate reports. The report view of the data is not merged. So if a message archive contains 50 messages that were closed in mailbox A and the current database has 20 messages closed in mailbox A, you cannot request a report showing that 70 messages were closed in mailbox A.

The database is designed to store and connect the following information about each message:

- Processing Agent - the agent handling the message call
- Received Message Data - original message including tracking number, subject, text, header information, and file attachments
- Current State - status of the message
- Responses Sent/Outbound Data - outbound messages (does not include auto-acknowledgments) created by agents and sent to the consumer or forwards sent to SMEs within your organization
- Responses Received - from SMEs and the consumer
- Agent Notes - notes created by an agent

- Message History - includes timestamps and, where relevant, agent IDs for each event
- Agent “Workbench” - stores messages that the agent is composing, but has not yet sent.

Messages Database Structure

The *Message Care* Messages Database has the ODBC Data Source name “*Message Care Messages*”. It contains message-specific information.

Within the *Message Care* Database, information is organized into the following tables:

- Messages Table
- Attachments Table
- Outbound Table
- Notes Table
- Events Table
- Workbench Table.

Messages Table

The Messages Table contains “Received Message Data” and “CurrentState” information. It also has fields (as marked with “%”) needed to facilitate reporting and responses.

Message Care puts the Tracking Number for a message in the subject line of any outgoing message (for example, forward or reply). Therefore, replies to those messages (responses) still have the tracking number in them (assuming you do not modify the subject) and they will be stored in the Messages table. They are stored here because many of the database elements are common to both types of messages and because it makes handling of attachments straightforward.

Responses are identifiable by the fact that the Original Message flag is set to “No”. Other fields (for example, State) are not set for those messages, but are set in the corresponding OriginalMessage. Original messages and Response message are linked by having the same TrackingNumber. Table 6-3 describes the Messages Table.

Table 6-3: Messages Table

Name	Type /Size	Purpose
MsgID #	Long	Counter (unique value for this table)
MailboxName	Text 20	Identifies mailbox (Friendly Name) that received this message
MailboxID	Long	Matches a Mailbox ID in the Mailboxes table. Used by Web screens for per-mailbox options (for example, Closure Codes)
TrackingNumber #	Text 8	Each message has a tracking number which is used to identify related messages. The tracking number for “original messages” will be a mathematical function of the ID (for example, ID modulus 100,000,000). For “related messages” the TrackingNumber will have been found in the Message Subject (since that is the definition of a related message).
SiteID	Text 4	The site ID is a component of the tracking number, ensuring uniqueness amongst a network of <i>Message Care</i> nodes.
DetectionTime	Date/Time	When this entry was put in the database
OriginalMsgID #	Long	0 if this is the first message with this TrackingNumber, otherwise the MsgID of the Original message

Table 6-3: Messages Table (Contd)

Name	Type /Size	Purpose
SenderAddress	Text 128	Sender of Message ("From" line from the Message, excluding name if included).
SenderName	Text 128	Name of Sender of Message (if included in "From" line).
Subject	Text 128	Subject in Message.
Headers	Memo	Complete list of Headers from Message.
Body	Memo	Body of Message
MessageDate	Text 50	The date in the message header, usually the date/time the message was sent
MessageHeaderID	Text 128	Most SMTP servers put a unique ID in the message header. Using this field will help determine whether we already read a message from the mailbox and added it to the database but for some reason had not deleted it and we are now attempting to read it again.
ToAddress	Text 128	The address this message was sent to (needed for reply).
AttachCount	Integer	Indicates the number of attachments.
AgentID	Text 5	Switch Agent Login ID number of agent last active on the call. ^a
StateTime	Date/Time	Time current state was entered
StatusState #	Text 10	Call State of message, for example, queued, active, suspended
ReasonCode	Text 20	Secondary information about the state (for example, how the message was completed)

Table 6-3: Messages Table (Contd)

Name	Type /Size	Purpose
NewMsgArrived	Yes/No	Indicates if a related message arrived while an agent was processing the message.
RevivalTime	Date/Time	Time to unsuspend the call.
Destination	Text 5	The number the call was made to. For suspended messages, the number to call when it is revived.
ASAI Digits	Text 16	ASAI digits to be provided with the call. Applies to original calls and revived calls.
WorkbenchReply	Yes/No	“Yes” if a partial reply composition was saved in the workbench.
WorkbenchForward	Yes/No	“Yes” if a partial forward composition was saved in the workbench.
ViewURL	Text 128	Same as the ViewURL in the Administration database but with parameters resolved.
DeliveryURL	Text 128	Same as the DeliveryURL in the Administration database but with parameters resolved.
CustValue	Text 128	Value for customer to add (for example, Account Number).
The following fields are primarily for reporting purposes:		
RetryCount %	Short	The number of times we tried to make a call for this message.
SuspendCount %	Short	How often this message was suspended.
TouchCount %	Short	How many times was this message made active by an agent.

Table 6-3: Messages Table (Contd)

Name	Type /Size	Purpose
FirstAnswerTime %	Date/Time	The time an agent first answered a call (should not be overwritten by subsequent answers).
SpeedOfAnswer %	Long	The firstAnswerTime - DetectionTime (seconds).
TimeToProcess %	Long	Sum of all active times by agents (from Answer to Suspend, Drop or Transfer.)
CloseTime	Date/Time	This is needed for Search.
TimeToClose %	Long	CloseTime - DetectionTime (seconds).

a. For the *DEFINITY* ECS, the maximum size of an AgentID is the same as for an extension, (5 digits).

Attachments Table

The Attachments Table stores attachments associated with the message. Since there may be zero or more attachments in a message, they are stored in a separate table and linked by MsgID. The AttachCount in the Messages table is a “flag” as to whether there are attachments. Table 6-4 describes the Attachments Table.

Table 6-4: Attachments Table

Name	Type/Size	Purpose
ID #	Long	The counter (unique value for this table).
MsgID #	Long	Matches a MsgID in the Messages table.
MimeType	Text 50	The mime type of the attachment (for example, application/msword).
FileName	Text 128	The name of the attachment.

Table 6-4: Attachments Table (Contd)

Name	Type/Size	Purpose
File	OLE Object	The attachment. The attachment can hold an arbitrarily large binary file.

Outbound Table

The Outbound Table stores outbound data (forwards or replies created by agents). Table 6-5 describes the Outbound Table.

Table 6-5: Outbound Table

Name	Type/Size	Purpose
ID #	Long	The counter (unique value for this table).
MsgID #	Long	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID).
AgentID	Text 5	The agent who sent the reply.
Timestamp	Date/Time	The time /date this reply was sent.
MessageType	Text 10	Can be either "Forwarded", "Replied", or "Resent."
Body	Memo	Can hold an arbitrarily large text file.
ToAddress	Text 255	Who the message was sent to.
CCList	Text 255	Who the message was copied to.
Subject	Text 128	The subject sent with the message.
AttachmentName	Text 128	Name of attachment sent with the message.

Table 6-5: Outbound Table (Contd)

Name	Type/Size	Purpose
OriginalAttachments	Yes/No	Were original message attachments sent with this message.
FromAddress	Text 255	Return address of the mailbox that the mail has been sent from.

Notes Table

The Notes Table stores notes created by an agent. Table 6-6 describes the Notes Table.

Table 6-6: Notes Table

Name	Type/Size	Purpose
ID #	Long	The counter (unique value for this table).
MsgID #	Long	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID).
Agent ID #	Text 5	The agent who created the note.
Timestamp	Date/Time	The time/date this note was saved.
Note	Memo	Can hold an arbitrarily large text file.

Events Table

The Events Table contains data corresponding to the Message History object. Table 6-7 describes the Events Table.

Table 6-7: Events Table

Name	Type/Size	Purpose
ID #	Long	The counter (unique value for this table).
MsgID#	Long	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID).
RelatedID	Long	For events that refer to a related message (for example, forward and reply events) this matches the MsgID of the related message.
Timestamp	Date/Time	The time/date this event occurred.
Event	Text 20	Events include call states (for example, queued) and message processing states (for example, replied).
ReasonCode	Text 20	Secondary information about the state (for example, how the message was completed).
AgentID	Text 5	Applicable to some events, for example, answered, suspended.
OtherData	Text 50	Zero or more pieces of data associated with the event. Actual data depends on event. For example, a suspend event may include the VDN to call on expiration of the Suspend timer.

Workbench Table

The Workbench Table stores saved versions of composed replies associated with the message. Since there may be 0, 1, or 2 of these per message and they may be large, they are stored in a separate table and linked by MsgID. The WorkBench field in the Messages table is a “flag” as to whether there is a previously saved response. The layout of this table is very similar to the Outbound Table (minus the AgentID and Timestamp). Table 6-8 describes the Workbench Table.

Table 6-8: Workbench Table

Name	Type/Size	Purpose
ID #	Long	The counter (unique value for this table).
MsgID #	Long	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID).
MessageType	Text 8	Can be either “Forward” or “Reply.”
Body	Memo	Can hold an arbitrarily large text file.
ToAddress	Text 255	Who the message was sent to.
CCList	Text 255	Who the message was copied to.
Subject	Text 128	The subject sent with the message.
AttachmentName	Text 128	The name of attachment sent with the message.
OriginalAttachments	Yes/No	Were original message attachments sent with this message.

Customizing the Database

Because the database is ODBC-compliant, you can modify it to contain additional custom fields to ensure that the information stored with each message meets your business needs.

For instance, you may want to associate an account number with each message. Either a Web page you supply, or any other data-handling application, can insert the desired values in your custom fields. Then you can use these fields in searching the database.

It is your responsibility to create the tools you need for extracting information or porting data to another database (for example, an internal customer database).

In addition, you can modify the agent interface to collect and display the additional information when and where you want it.

NOTE:

If you choose to modify the database, be sure not to change or delete any fields that came with it.

If you want to customize the *Message Care* database, first examine the structure of the database as it comes with the *Message Care* software. Then, if you find that the database does not already include the information you need, add the fields you want.

NOTE:

The one customer-administrable option regarding *Message Care* reports is to select which database to use when generating a report.

Searching Multiple Archives

The search capabilities provided by the *Message Care* Web pages will only search the current message storage system and a single archive. Searches on other archived messages must be provided by you.

For additional information on database archiving, please see the “Database Archiving” section of Chapter 7, “Maintenance.”

Extracting Information From Storage

Message Care supports the individual retrieval of each stored message. By using the published schema of the *Message Care* message storage system, you can retrieve specific pieces of correspondence associated with a message (for example, you may wish to retrieve only responses from the consumer). These consumer responses can then be extracted for storage into your customer-maintained "consumer contact database."

Storing timestamp information, including the time the consumer sent the request and when *Message Care* retrieved it, allows you to better understand the consumer's service time. For example, if your Web site takes too long to send mail, the call center is disadvantaged.

Maintenance

Introduction

The following chapter covers basic maintenance of the *Message Care* system. Many documents besides the *Message Care™ Solution Guide* are useful in maintaining the *Message Care* software.

- Internet Call Center (ICC) documents:
Internet Call Center Version 2 Solution Guide (585-215-094).
- *DEFINITY*® Enterprise Communication Server (ECS) documents:
DEFINITY ECS CallVisor ASAI DEFINITY ECS LAN Gateway over MAPD Installation, Administration, and Maintenance (555-230-114).
- Call Management System (CMS) documents:
CentreVu Call Management System R3V5 Administration (585-215-850).

- *CentreVu Computer Telephony*[®] (T-server) documents:
 - *CentreVu Computer Telephony for Windows NT Telephony Services Administration and Maintenance.*
 - *CentreVu Computer Telephony for Windows NT DEFINITY Enterprise Communications Server and CallVisor PC Administration and Maintenance.*

- NT documents:

For *Microsoft* NT maintenance, please refer to the documentation that came with your NT product.

Backup and Restore

You need to backup and restore your message storage system (current and archived databases).

Backup is achieved by copying files to a specified location. You can backup your files on your hard disk to tape through an application such as the *Microsoft* Windows NT†* Backup application found in *Microsoft Windows‡* Explorer. When you've made a backup file, you can restore it if your original files are damaged or lost.

Restoring databases is achieved by restarting the *Message Care* application.

It is recommended that the following components of *Message Care* be backed up and restored separately:

1. Administration Database
2. `params.txt` file
3. License file
4. ICM files
5. Dictionary file.

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†Windows NT is a registered trademark of Microsoft Corp.

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Startup, Reboot, Recovery, and Shutdown

Windows NT provides services for automatic start-up, reboot, and recovery after a graceful shutdown as well as disaster recovery of the *Message Care* software.

The application software necessary to provide *Message Care* are installed as NT services that are automatically started anytime NT restarts.

Procedure for Manual Shutdown



WARNING:

If running both *Message Care* and ICC, shutting down ICM/CTI affects ICC calls. For further information, please see Appendix A, "Combining the Internet Call Center Solution with Message Care."

To manually shut down the *Message Care* software and stop all running Message Care applications, do the following:

1. Click on **Start** -> **Settings** -> **Control Panel** -> **Services**.
2. Stop all Message Care applications (one at a time) by highlighting each and clicking the **Stop** button.



NOTE:

Shutting down *Message Care* while messages are open prevents agents from being able to process them, however, the messages will not be lost and will be re-delivered upon startup.

Reinstalling and Uninstalling

The following sections provide procedures on how to reinstall and uninstall your *Message Care* software.

Procedure for Resinstalling Message Care Software

NOTE:

If you reinstall the *Message Care* software, the existing “translations” are not overwritten.

To reinstall your current *Message Care* software, please see the “Installation Procedure” section in Chapter 3, “Installation and System Administration”.

Procedure for Uninstalling Message Care Software

To uninstall current your *Message Care* software, please use the Uninstall utility that came with your installed *Message Care* software.

Archiving Message Records

Because the database has a limited capacity, you need to periodically create an archive of message records.

Message Care provides tools for you to archive message records into another *Microsoft Access* database. Once this archived database is created, you can use the *Message Care* reports and search capabilities to access archived messages. *Message Care* Reports and Search capabilities are designed in order that you can use both the active database (*MessageCare.mdb*) and the archived database (*ArchiveMessageCare.mdb*).

 **NOTE:** It is important to keep in mind the capacity constraints of the *Message Care* software. If the system capacities of the database are full, *Message Care* will generate an alarm. For information on capacity constraints, please see the “System Capacities” section in Chapter 1, “About Message Care Software.”

For additional information on database archiving, please see the “Database Archiving” section of Chapter 6, “Reports and the Database.”

It is important to plan ahead prior to creating an archive because the *Message Care* software must first be halted. Therefore, before an archive is created, you must terminate all *Message Care* processes that access the database (Mail Manager, Work Flow Manager, and the Internet Information Services [IIS] Web Server).

When the archive utility is run, the current archive file is copied to a default location and an empty Messages database is copied to the location pointed to by the *Message Care* Archive Domain Naming System (DNS). Then, the selected messages are copied from the Active Messages to the Archive database, and then deleted from the Active database. When the copy is completed, the Active database will be compacted to recover the space used up.

Procedure - Archiving Messages

To archive messages, do the following:

1. Before using the Archive utility, stop the following services that use the Messages database:
 - Lucent Mail Manager
 - Lucent Workflow Manager
 - IIS WWW Service.
2. Use the Archiving utility (MCArchive.exe in the bin directory) in one of the two following methods:

- **Interactive Mode**—Select the MCArchive.exe command (double-click on it from *Windows Explorer*, or use a shortcut from the **Start** menu).

Result: This brings up a dialog box that asks the age of the messages to archive. A selection of "7" instructs the utility to archive all messages closed, failed, or blocked for more than seven days.

- **Command Line Mode**—Enter the command:

MCArchive.exe /i<x> (for example, MCArchive.exe /i7) where the value after "/i" is taken to be the "interval" of time, in days, before which messages should be archived.

Result: In either case, the intended operation of the archive utility is the same and the following occurs:

The current *Archive* database is renamed to:

```
MCArchive<currentdate>.mdb
```

If there already is a file of that name, then a suffix is added to the name, for example:

```
MCArchive<currentdate>.1.mdb
```

A new empty *Archive* database is created containing all Blocked, Closed, and Failed messages older than the interval. This includes all related records such as notes, outgoing messages, and attachments.

If all messages are copied successfully, the corresponding messages (including all related records) are deleted from the `MessageCare.mdb` database.

The `MessageCare.mdb` database is compressed to recover space freed up by deleting records.

The Administration database is also compacted.

Managing and Updating the Dictionary

The *Message Care* software provides controls on agent processing Web pages to create a text message response to the consumer with preview and spell checking utilities. The spell checker identifies words that are not in the spell check dictionary and allows you to either edit the word or ignore the word. The spell checker also allows an agent to add new words to the dictionary.

Periodically, the dictionary file needs to be managed and updated.

The *Message Care* software will not provide the Web-based tools for updating the dictionary.

Preventing Overflow

When a facility becomes available, the *Message Care* software delivers messages using a selection process according to the following priorities:

1. Messages manually retrieved by agents.
2. All other messages awaiting delivery to an agent. These include the following messages:
 - Newly arrived
 - Original and response
 - Expired suspension timer
 - Previous call attempts.

Overflow is a message status state given to messages being managed by the *Message Care* software while waiting to launch a call to *DEFINITY* ECS. For example, if there is a lack of facilities to launch message calls or if vector programming in the *DEFINITY* ECS restricts the number of calls that may be queued for a specific agent skill set, the calls are delayed and wait in the Overflow state.

If the number of incoming messages exceeds the available total of message calls, the *Message Care* software queues the overflow messages internally, in a First In-First Out (FIFO) queue. Then, as resources for launching a message call become available, the *Message Care* software launches them in the order received.

The number of incoming message calls can exceed the available total in any of the following three ways:

- All the assigned stations administered without hardware (AWOH) are in use.
- The number of simultaneous message calls reaches the maximum you have purchased (this includes both calls queued on the *DEFINITY ECS* and calls active at an agent's desktop).
- The total reaches a threshold you have administered.

The *Message Care* software retries overflow calls every 15 minutes. If an overflow call was already tried in the last 15 minutes, the *Message Care* software skips it and goes to the next. Thus, even if *DEFINITY ECS* rejects an overflow call because the queue for that skill (mailbox) is full, the *Message Care* software tries the next overflow call anyway, in case it goes to a different skill/queue.

Procedure for Preventing Overflow

Using the *DEFINITY ECS*, you can prevent flooded mailboxes by limiting the queue size by skill and set up skills by mailboxes.

 **NOTE:** Overflow messages cause distortion in CMS statistics, since CMS can track messages starting only at the *DEFINITY ECS* CMS.

Troubleshooting

Introduction

This chapter documents problems that might occur, offers suggestions for isolating and fixing problems, lists reference documents for solution components, and identifies items to check before calling the Lucent Technologies National Customer Care Center on **1-800-242-2121**.

References

Many documents besides the *Message Care™ Solution Guide* are useful in troubleshooting the *Message Care* software. These documents are as follows:

- *DEFINITY® Communications System Call Vectoring/EAS Guide* (555-230-520)
- *CentreVu Computer Telephony® Telephony Services Solution, Microsoft* Windows† NT‡ Telephony Services Installation Guide* (555-201-116) (provided on the *CentreVu Computer Telephony Services CD*)
- *CentreVu Computer Telephony Services for Microsoft Windows NT Telephony Services DEFINITY Enterprise Communications Server Network Manager's Guide* (555-201-505) (provided on the *CentreVu Computer Telephony Services CD*)
- *Internet Telephony Gateway Technical Reference Issue 2* (555-027-212).

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Mail Server Compliance

The mail server containing the mailboxes polled by the *Message Care* software must be Post Office Protocol (POP3)-compliant over a Transmission Control Protocol/Internet Protocol (TCP/IP) stack. To handle outgoing messages from the *Message Care* software, the mail server must also be Simple Mail Transfer Protocol (SMTP)-compliant.

For more information on testing your mail server for compliance, see the “POP3/SMTP Mail Server” section of Chapter 3, “Installation and System Administration.”

The Error Log

An error is a problem condition that occurs that may lead to service problems. Some errors are stored for informational purposes only. The *Message Care* software logs errors and other events, to provide a record of events related to the processing of messages and the operation of the system. All message error log entries record the event and time the event occurred.

The *Message Care* logs include notice of communication problems between the *Message Care* software and another system, such as the *DEFINITY* ECS or the *CentreVu* Computer Telephony T-server. However, problems between other systems appear in the logs for those systems. For instance, a communication problem between the *DEFINITY* ECS and the *CentreVu* Computer Telephony T-server appears in the *CentreVu* Computer Telephony reporting system.

Errors can occur during the message handling flow process. There are two cases where, when an alarm occurs, an email message is sent reporting the error: a full database and the loss of the mail manager functionality.

Error Log Files

The error log file where *Message Care* application errors are logged is as follows:

```
<message care installation  
directory>\mcerrorlog.txt file  
(where the default installation directory is:  
c:\Program Files\MessageCare)
```

Also, most of the *Message Care* processes keep a "trace" (or error) log for that process. The process trace logs are as follows:

- Mail Manager Process:
`<installdir>\temp\mungeerror.log`
- MsgCareDLL Process:
`<installdir>\temp\MimeDllError.log`
- Work Flow Manager Process:
`<installdir>\bin\wfm\wfmlog.txt`

Mail Manager Error Codes

The following are error codes used by the Mail Manager:

- 1002, SMTP failure
- 1003, SMTP cannot initialize
- 1004, SMTP cannot initialize winsock
- 1005, SMTP out of memory
- 1006, Cannot resolve SMTP host name
- 1007, SMTP cannot allocate socket
- 1008, SMTP cannot bind socket
- 1009, SMTP host not responding
- 1010, cannot send SMTP command
- 1011, SMTP host timed out
- 1012, Invalid SMTP handle
- 1013, Invalid SMTP option
- 1014, Another SMTP operation is in progress
- 1015, SMTP aborted
- 2001, Messages database larger than 750 million bytes
- 2002, Messages database larger than 700 million bytes

- 2003, Messages database larger than 650 million bytes
- 2004, Messages database larger than 600 million bytes
- 2100, Unable to connect to POP3 host -- invalid host name or password
- 2101, Unable to connect to POP3 host -- unknown host
- 2102, POP3 server not responding
- 2200, Timer expired before polling was completed
- 3000, Too many attachments on message
- 3001, Acknowledgment file for mailbox does not exist or is a directory.



NOTE:

The database limits in errors 2001 through 2004, above, may change.

Message Care DLL Error Codes

Error codes 1002 through 1015 are used by the *Message Care* Dynamic Link Library (DLL).

Mail Test Tool Error Codes

Error codes 1002 through 1015 are used by the Mail Test Tool.

Simple Mail Transfer Protocol Error Codes

Error codes defined by the Simple Mail Transfer Protocol may be included in error messages 1002, 1012, and 1015. These include the following, which are taken from RFC 821 (SMTP):

- 421, <domain> Service not available, closing transmission channel (this may be a reply to any command if the service knows it must shut down)
- 450, Requested mail action not taken—mailbox unavailable (mailbox busy)
- 451, Requested action aborted—local error in processing
- 452, Requested action not taken—insufficient system storage

- 500, Syntax error, command unrecognized (this may include errors such as command line too long)
- 501, Syntax error in parameters or arguments
- 502, Command not implemented
- 503, Bad sequence of commands
- 504, Command parameter not implemented
- 550, Requested action not taken: mailbox unavailable (mailbox not found, no access)
- 551, User not local; please try <forward-path>
- 552, Requested mail action aborted—exceeded storage allocation
- 553, Requested action not taken—mailbox name not allowed (mailbox syntax incorrect)
- 554, Transaction failed.

**NOTE:**

Please see the *Message Care* Installation CD-ROM for additional error codes.

Viewing the Error Logs

Error logs can be viewed using a simple text editor (for example, WordPad).

Recoverable and Non-Recoverable Delivery Failures

Recoverable Delivery Failures

DEFINITY ECS architectures recommend that vectors be written to drop message calls if the oldest message call waiting exceeds eight hours. When a call failure of this type is encountered, the *Message Care* software repeatedly continues trying to deliver the message call.

A message retry is initiated after the appropriate message history update. When retrying a message call, the *Message Care* software launches the call using the same call setup parameters, dialed number, and any Adjunct/Switch Applications Interface (ASAI)-provided digits. If the system is in the Overflow state, the retry message will be placed at the end of the overflow queue.

The following are the known recoverable message call delivery errors that can result in *Message Care* placing the message in the failed status state:

- No available resources
- *DEFINITY* ECS returns busy condition
- *DEFINITY* ECS vector processing drops call
- Message call dropped by a *Message Care* enabled agent without a reason code.

Error Log For Delivery Failures

If a call delivery is placed in the failed state for one of the reasons identified as having a limited number of retries, *Message Care* will record an error log entry.

The log will record the *DEFINITY* ECS extension where the call was delivered, the agent ID if available, the called number, any ASAI digits associated with the call, and any error conditions received from *DEFINITY* ECS, including any J-TAPI provider proprietary data.

Non-Recoverable Delivery Failures

Other conditions, such as the call being routed off-switch repeatedly, have a limited number of retries and are not tried indefinitely.

When these types of errors (non-recoverable call delivery errors) occur, the *Message Care* software eventually stops trying after three such errors are encountered in consecutive call attempts, for a given message. For example, if you incorrectly administered the number to call and message calls repeatedly arrive at the same person's phone, *Message Care* stops.

When this occurs, the message will be placed in the failed state and no further attempts will be made to launch message calls relative to a failed message.

Failures need not be the same. For example, if the first call attempt was rejected due to an invalid number and the next two calls result in the call being routed off-switch, then the message will fail.

Messages in the failed state can only be manually retrieved by an agent since the *Message Care* software will not try any further automatic deliveries.

The following are the known non-recoverable message call delivery errors that can result in the *Message Care* software placing the message in the failed status state:

- Message call routed off the *DEFINITY* ECS
- Message call answered and dropped by an agent not logged into the *Message Care* software
- Dialed number not valid.

Message Handling Flow Process Errors

Errors can occur during the message handling flow process. There are two cases where, when an alarm occurs, an email message is sent reporting the error: a full database and the loss of the mail manager functionality.

The *Message Care* software will check the current database capacity at each polling interval. If the database is larger than 600 MegaBytes (MB), an email alarm notification will be sent. Additional email alarms will be sent at the 650, 700, and 750 MB thresholds. Messages will not be retrieved from POP3 mailboxes until the capacity is below a threshold of 750 MB. When such a notification is sent, an entry will be made in the error log.

The following steps describe the errors that can occur in the message handling flow process:



NOTE:

For a detailed description of the message handling flow process, see Chapter 5, "Processing Message Calls."

1. A consumer sends a message to the call center.
2. Messages arrive in appropriate mailboxes at the call center.

Invalid Password Error: If *Message Care* is denied access to a mailbox due to an invalid password, an error condition will be reported immediately. The *Message Care* software will continue to attempt to access the mailbox.

If the customer corrects the administered password in the mail system, the *Message Care* software will gain access on the next attempt without the customer having to restart the *Message Care* software.

3. The *Message Care* software detects the consumer's arriving message by polling an administered list of mailboxes every five minutes.

Polling Interval Error: *Message Care* polls each mailbox on a five minute interval. This means that there is a minimum of five minutes from the start of one polling cycle to the start of the next polling cycle. If a polling cycle takes less than five minutes, then there is a period where no polling occurs. If the polling cycle takes longer than five minutes, then the next polling cycle starts as soon as the last one ends. In this last case, *Message Care* logs an error.

The *Message Care* software continues to poll a mailbox at five minute intervals even if polling failures occur. *Message Care* then waits for a response from a POP3 server. An error is recorded each time a polling failure occurs.

 **NOTE:**

When the fail polling interval is not met, you should periodically check the errors. If there are too many of these errors, you may have a performance problem on your system.

4. The *Message Care* software copies the message into an Open Database Connectivity (ODBC) database.
5. The *Message Care* software automatically sends an acknowledgment to the consumer, indicating that the message has arrived and provides its tracking number.

Auto-Acknowledgment Text File Not Found Error: If the administered text file for an auto acknowledgment message is not found, no acknowledgment will be sent and an error will be logged. The error event will identify the receiving mailbox.

Auto-Acknowledgment Delivery Failure Error: An error will be generated if the *Message Care* software is unable to deliver an auto-acknowledgment to the SMTP server for delivery. The error will identify the message through its tracking number. The *Message Care* software will wait for confirmation that the message will be received by the SMTP server. Message processing will continue even if the auto-acknowledgment cannot be sent.

The *Message Care* software gives up after a period of time in its attempt to send an auto-acknowledgment to the SMTP server, logs the error, and continue to deliver the message to the agent.

Failure to Submit a Message to the SMTP Server Error: The *Message Care* software waits to submit a message for delivery to the SMTP server. Then, if the message cannot be submitted, the *Message Care* software informs the agent that the message submission failed and records an error in the error log.

Message Call Routed Off the DEFINITY: A message's status is set to failed if three subsequent message calls relative to the same message are routed off the *DEFINITY* ECS serviced by the *Message Care* T-server.

Any time a message call is routed off the *DEFINITY* ECS being monitored by the T-server, the *Message Care* software will release the phantom call.

In this case, the *Message Care* software has no information about the destination station, nor can it deliver a message to an agent or person off its native switch. Therefore, the *Message Care* software releases the phantom call and attempts a call retry. The phantom call is dropped since the receiving station will have no indication of the type of incoming call.

Calls may be routed off the *DEFINITY* ECS either when the call attempt is first made or an agent may decide to transfer the message call, hopefully by mistake.

The error log will record the called number and any ASAI provided digits associated with the call.

6. The *Message Care* software initiates a call to the *DEFINITY* ECS,* using the Vector Directory Number (VDN) administered for the receiving mailbox. If incoming messages exceed the administered capacity, the *Message Care* software holds the messages in overflow and initiates calls for them as resources become available.
7. *CentreVu* CMS begins tracking the message when the *DEFINITY* ECS launches the phantom call, using its assigned VDN.

*If this message is a response concerning another message which the *Message Care* software is currently handling, the *Message Care* software links it to the call for that original message rather than initiating another call.

8. An agent logs into the *Message Care* software and the *DEFINITY ECS*.

Call Answered and Dropped by an Agent Not Logged In Error: If an agent is logged into the *DEFINITY ECS* but not logged into the *Message Care* software, a message call will be delivered to the agent, but no page pop will appear.

The agent should then log in to the *Message Care* software. The *Message Care* software will retry the message call delivery, increment the retry counter, and the message will be placed in the overflow message state.

The history log will record the extension, and agent id if available, when a message call is answered by an agent not logged into the *Message Care* software.

9. The *DEFINITY ECS* selects an available agent according to the vector associated with the assigned VDN, and sends the phantom call to the agent's telephone. When the agent answers, the T-server sends a call-answered notification to the *Message Care* software.

Dialed Number Not Valid: This is a non-recoverable delivery failure.

No facilities Are Available to Retrieve a Message Error: If an agent requests a message retrieval and no facilities are available to launch a message call, the *Message Care* software records the event in the message history and increments the retry counter. The message is then placed at the top of the overflow queue.

No Number to Call for a Retrieve Request Error: If an agent requests a message retrieval and no VDN has been defined to call, the *Message Care* software records the error and alerts the agent of the error condition.

10. When the *Message Care* software receives the call-answered notification, it delivers the message to the agent through a PagePop:

- a. The *Message Care* software supplies the agent's browser with the Uniform Resource Locator (URL) associated with the mailbox that received the consumer's message. This URL calls a Common Gateway Interface (CGI) script.

Invalid URL Error: If the customer-administered URL, for either Display or View, is invalid, the agent receives an error indication. If the URL is incorrectly administered to an invalid entry, the browser displays the error message to the agent. One example of such an error message is: "The requested object does not exist on this server. The link you followed is either outdated, inaccurate, or the server has been instructed not to let you have it." Other displayed errors include "Error 404". If this occurs during message processing, the agent will probably drop the message call. The *Message Care* software will process the message as if a *Message Care* enabled agent dropped a message call without a reason code. The message call will be retried at a later time.

If an agent receives a message call with an invalid URL, the agent should be instructed to alert the supervisor. A VDN of origin announcement, may help the agent identify the mailbox with the invalid URL. The message history can also be searched by agent id and time, to identify which message and therefore, which mailbox has an invalid URL.

- b. The *Message Care* software supplies parameters to the CGI script, specifying the message components to display. This script then accesses the ODBC database of messages, retrieves that set of components from the consumer's message, and dynamically generates a Web page.

- c. If the message includes attached files, such as a fax image, the *Message Care* software lists the attachments. Helper applications* administered in the agent's browser provide access to these files.
- d. The agent handles the message, using the processing options supplied on the Web page, one of which allows the agent to suspend processing of a message for a specified period of time

This option can free an agent to handle more urgent matters, such as increased volume in real-time calls. It is also useful when the agent is waiting for information from a subject-matter expert.

If the agent does not manually retrieve the suspended message within the specified period of time, the *Message Care* software returns the message through a call. You should set up a coverage vector to handle cases when the suspension timer expires and the agent is not logged in, or disregards the message call. This way, you need not rely on the agent to remember to retrieve the suspended message; the *Message Care* software handles it automatically.

11. The *Message Care* software submits the agent's reply for delivery by a mail server, using SMTP protocols. It also stores a copy of the reply in the message database, linked to the original incoming message.

The agent marks the disposition of the message on the Web form, according to a set of closure codes you supply and *Message Care* releases the call.

*You must provide the appropriate helper applications for each agent, based on the types of message you expect that agent to receive. For instance, agents who process faxes must have a helper application for viewing and handling them.

Call Dropped without a Completion Code Error: If after waiting to receive an agent notification, no completion code is marked, the following is recorded:

- The *DEFINITY* ECS extension where the call was delivered
- The agent ID (if available)
- The called number
- Any ASAI digits associated with the call
- Any error conditions received from *DEFINITY* ECS, including any J-TAPI provided proprietary data.

Trouble Scenarios

The following sections describe typical call center trouble scenarios and list actions to take when troubleshooting them.

Administration Trouble Scenarios

Administration Web Pages Cannot Be Accessed

Description

An attempt to access the *Message Care* Web-based administration at `http://<icm_server_name>/admin` produces an error or else no Web page appears.

Action

1. From the *Microsoft* Internet Information Server (IIS) Manager, verify that the WWW service is running on the *Message Care/CentreVu* Computer Telephony Server. If the WWW service is not running, select the WWW service and start it from the Properties menu.
2. From the IIS Manager, verify that the alias for the `c:\itg\admin` directory (your directory may be different depending on where the Internet Telephony Gateway [ITG] software was installed) is set to `/admin` and that the Read and Execute Access permissions are selected.
3. Verify that you have permission to access the administration Web pages.
4. If there is a connectivity problem between the current browser and the *Message Care/CentreVu* Computer Telephony Server, troubleshoot LAN connectivity. Verify that the *Message Care/CentreVu* Computer Telephony Server is accessible on the LAN and from the computer running the browser.

Agent Trouble Scenarios

Agent Cannot Log In

Description

The initial download of the Agent Control Window occurs properly, but the login sequence fails.

Action

1. If no further progress is seen after the applet downloads in the Agent Control Window, verify that the *Message Care/CentreVu* Computer Telephony Server is up and the *Message Care* software is running.
2. Verify that the firewall is administered to allow TCP connections from a dynamic TCP port (>1023) on the agent's PC to the *Message Care/CentreVu* Computer Telephony Server, TCP port 8101.
3. If Agent Control Window activity stops after the "Logging In, Please Wait" message, perform the following:
 - Verify that the specified Agent extension is in use. If so, hang up the phone and enter the password again.
 - Verify *DEFINITY* ECS status for station xxxx, using the adjunct link (ADJLK) extension. Check the status of the *DEFINITY* LAN Gateway board. If the status station command reveals that the ADJLK station is "disconnected," refer to *CentreVu* Computer Telephony documentation to troubleshoot the *DEFINITY* ECS-to-*CentreVu* Computer Telephony T-server connection.
 - Confirm that *CentreVu* Computer Telephony T-server and the *Message Care/CentreVu* Computer Telephony Server are communicating.

4. If a “Login failed” message is displayed in the Agent Control Window with one of the following additional messages, perform the indicated action:
 - “Agent_Already_Logged_Into_Switch” means that the specified agent ID or extension has been logged into the *DEFINITY* ECS through a voice terminal rather than through the Web login page. Use the *DEFINITY* ECS `list agent-id` command to discover whether the agent ID or the extension is in use.
 - “Requested_AgentID_Ext_Mismatch” means that the specified agent ID has been logged into the *DEFINITY* ECS at the specified extension rather than through the Web login page. Log off from the voice terminal and log in again through the Web login page.
 - “Agt_Not_Split_Member_Or_Bad_Passwd” means that an incorrect password was entered. (In a non-Expert Agent Selection [EAS] environment, this can also mean that the agent attempted to log into a split that the agent is not a member of.)
 - “Invalid_Skill/Split” means that an invalid agent ID was entered. The agent ID was either entered incorrectly or the *DEFINITY* ECS administration is incorrect. Be sure that the agent is administered with the *Message Care* skill, then have the agent try to log in manually from a phone. If the login attempt fails, troubleshoot the *DEFINITY* ECS. If the login attempt works, have the agent log out and try to log in again through the browser.
 - “Tsrv_Device_No_Admin” means that the specified extension was entered incorrectly or that it is not administered in the *CentreVu* Computer Telephony T-server’s Security Database.
 - “INVALID_EXT” means that the specified extension is on an active call. The agent phone must be completely idle on all line appearances for the login to succeed. Placing an active call on hold will not suffice, all line appearances must be idle.

5. If a pop-up window appears stating “You are already logged in at Extension xxx. What would you like to do?,” perform the following:
 - The ICM Control Window shows that the specified agent ID is logged in at the indicated extension. Select the Force Log Out button on the pop-up window to log the other session out, or select the Quit button to abort the login attempt.
 - If the Force Log Out button is used but the message “Force Out FAILED Agent_Is_Busy” is displayed, then a call is in progress at the other agent station. When that call terminates, the agent is logged out.
 - If the forced logout does not work, then on a *DEFINITY* ECS console enter `list agent-id xxxx`. If it shows as “unstaffed,” then there may be a *Message Care / CentreVu* Computer Telephony Server or *CentreVu* Computer Telephony T-server problem.
6. Check the *CentreVu* Computer Telephony T-server hardware to make sure that it is fully in service and does not have any status windows showing a problem. Make sure the agent’s physical phone extension is administered as a device in the *CentreVu* Computer Telephony T-server’s Security Database.

 NOTE:

Shut down any software packages running on the *CentreVu* Computer Telephony T-server (except for CTI). Do not run any other applications on the server until the problem is resolved.

7. Check the status of the *Message Care/CentreVu* Computer Telephony Server by doing the following:
 - Make sure that the *Message Care* software is running by clicking on the Services icon in the Control Panel. The Internet Call Manager (ICM) service should be started. Display the ICM Control Window by clicking on the Start menu, and then selecting the Lucent Internet Call Manager program. Once opened, look for errors that may describe why an agent cannot log in.
 - Enter the command `display agents` in the text entry field or from the Display menu, select the Agents menu item. See whether ICM thinks the agent is already logged in, as shown by a line listing the Agent with the specified ID.
 - If the agent is shown to be logged in, issue the ICM command `sendto cti logout extension centrevu computer telephony_group agent-id`. (The *CentreVu* computer telephony_group is typically “none.”) Reissue the `display agents` command to verify the agent is logged out, and have the agent try logging in again from the Web page. If the command does not log the agent out, verify the phone extension and group in the *CentreVu* Computer Telephony T-server.

Agent Control Window Fails to Launch Properly

Description

The Agent Control Window fails to download or display properly after the agent fills out the form on the login page and submits it.

Actions

1. Verify that the agent's Web browser is *Java*^{*} enabled:
 - On *Netscape Navigator*[†] 3.x, from the Options menu select the **Network Preferences** item, and then select the **Languages** tab to display its contents. On *Netscape Navigator* 4.x, from the Edit menu select the **Preferences** item, and then select **Advanced** to display its contents. Both the "Enable Java" and "Enable JavaScript" items should be checked.
 - On Internet Explorer 3.x, from the View menu select the **Options** item, and then select the **Security** tab. The "Enable Java Programs" and "Run ActiveX Scripts" items should be checked.

On Internet Explorer 4.x, from the View menu select the Internet Options menu item, and then select **Advanced**. The "Java JIT compiler Enabled under Java VM" should be checked
2. Check for error messages on the browser window. Also open the *Java* Console window and look for errors:
 - On *Netscape Navigator*, use Options->Show Java Console.
 - On Internet Explorer, check the "Enable Java Logging" box on the View->Options->Advanced tab. Stop and restart Internet Explorer, then periodically use a text editor (such as Notepad) to examine the c:\windows\javalog.txt file.

^{*}Java is a registered trademark of Sun Microsystems, Inc.

[†]Netscape Navigator is a trademark assigned to Netscape Communications Corp.

3. Verify whether the network settings have been changed. The browser may need to be changed to reflect “no proxy” settings for the *Message Care* components on the network.
4. Connect a PC to the same LAN segment as the *Message Care/CentreVu* Computer Telephony Server and verify that the agent can log in. If so, then examine the administration of the firewall and other intermediate equipment.

Agent Cannot Receive Calls

Description

Once an agent is logged in and the Agent Control Window is open on the desktop, calls should be able to reach the agent. If it becomes apparent that the agent is not receiving calls, follow these steps to identify the problem. Also see the *DEFINITY Communications System Call Vectoring/EAS Guide* (555-230-520) for more detailed *DEFINITY* ECS troubleshooting guidelines.

Action

1. Confirm that the agent is logged into the *DEFINITY* ECS ACD by entering the `list agent_id xxxx` command on a *DEFINITY* ECS console. Also note whether the agent is administered with the Internet skill(s).
2. Verify that the agent is in the Auto-In or Manual-In mode on the voice terminal.
3. If the call center is a Basic Call Management System (BCMS), enter the command `monitor bcms skill <Internet skill>`. Verify that the agent is staffed, has the correct physical extension, and is in the “Available” state.
4. On the *Message Care/CentreVu* Computer Telephony Server, confirm that the ICM lists the agent as logged in by selecting the agent menu item from the Display menu. Look for a line listing the agent with the specified ID.

5. Verify that the VDN is processing the call correctly by placing a test call from another phone to a mailbox VDN. Check vector steps for the correct call flow.
6. Verify that the URL and VDN administered for the mailbox are correct.
7. Send a test message.

Agent Gets a Call But No PagePop

Description

As part of the process of connecting with an incoming message call, the browser should display a PagePop. If no PagePop occurs when a call comes in, use the following steps to identify the problem.

Action

1. Confirm that the agent is logged into the *DEFINITY* ECS ACD by entering the `list agent_id xxxx` command on a *DEFINITY* ECS console. Also note whether the agent is administered with the Internet skill(s).
2. Verify that the agent is in the Auto-In or Manual-In mode on the voice terminal.
3. If the call center is a BCMS, enter the command `monitor bcms skill <Internet skill>`. Verify that the agent is staffed, has the correct physical extension, and is in the "Available" state.
4. On the *Message Care/CentreVu* Computer Telephony Server, confirm that the ICM lists the agent as logged in by selecting the agent menu item from the Display menu. Look for a line listing the agent with the specified ID.

5. Verify that the VDN is processing the call correctly by placing a test call from another phone to an mailbox VDN. Check vector steps for the correct call flow.
6. Verify that the URL and VDN administered for the mailbox are correct.
7. Send a test message.

Control Window Closes During a Message Call

Description

In general, if the Caller Control Window closes during a message call, the call is dropped. This can happen, for instance, if the *Message Care* server reboots due to a power hit.

If the Agent Control Window closes while the agent is still staffed, the current call, if any, ends and the agent is logged out. The agent needs to log in from the Agent Login Web page again, then put the voice terminal into Manual-In or Auto-In work mode.

There is no way to reconnect or recover the original call.

“Connection Lost” Message Appears on the Agent Control Window

Description

A “Connection Lost” message appears in the Text Chat region of the Agent Control Window. A pop-up window also appears with the message “Your connection has been lost. Would you like to reconnect?” These actions indicate that the TCP connection between the agent’s PC and the *Message Care / CentreVu* Computer Telephony Server has been dropped, so the agent has no communication channel to *Message Care*.

Action

1. Select the Yes button on the pop-up window. If there are no further error messages, there was probably a temporary LAN glitch.
2. Verify that the *Message Care / CentreVu* Computer Telephony Server is up and the *Message Care* software is running.

3. Check the administration for a rule that causes TCP connections to time out after a certain interval of inactivity. Consider increasing this timeout parameter.
4. Troubleshoot LAN problems. Inspect all intermediary equipment (hubs, switches, routers) for errors. Check for excessive LAN congestion. To have the LAN inspected by a Lucent Technologies Network Consultant, contract for this work by calling **1-800-4NetCare**.

Erroneous Label on a Control Window Button or Text Area

Description

This indicates that the applicable string is missing from the resource file.

Action

1. Determine the language that is being used when the button label appears with erroneous data.
2. Go to the `itg/resources` folder located on the *Message Care/CentreVu* Computer Telephony Server.
3. In the `itg/resources` folder, locate the resource file for the language that is causing the label to appear incorrectly (for example, `<lang-code>/resources.txt`).
4. In the `resources.txt` file for the language that is causing the label to appear incorrectly, locate the key that is missing the string (perhaps by examining another resource file), and then enter the key=string pair in the correct language.
5. Save and close the `resources.txt` file.
6. Go to the Internet Call Manager Control window. In the text entry box, type "load resource lang-code," where "lang-code" is the code for the language file that you updated. For example, "it" is the code for Italian.

System Trouble Scenarios

Message Care Cannot Connect to the *Message Care/CentreVu* Computer Telephony Server

Description

If the ICM process on the *Message Care/CentreVu* Computer Telephony Server is not able to connect to the Workflow Manager, it displays the message “Connection failed, will try again” in the Internet Call Manager window. Agents are blocked from logging in or out, and callers are not able to place calls.

This connection may fail due to administration or LAN problems, or because *Message Care* is not in service. The ICM process periodically attempts to re-establish the connection.

Action

1. If there have been administration changes to *Message Care* or *Message Care/CentreVu* Computer Telephony Server, then first verify that the administration information is correct:
 - Refer to the *Internet Telephony Gateway Technical Reference Issue 2* (555-027-212) or the Web-based administration on-line Help on the ITG at http://<icm_server_name>/admin for a description of the administration.
 - Examine the “CTI Administration” Web page at http://<icm_server_name>/admin and verify that all the IP Address fields have valid entries.
2. If the connection has been working but has recently gone down, then:
 - Verify that the ITG is in service by entering the `showstatus` command on the console. It should show a system state of `IS`. If the ITG is not in service, then follow standard procedures to bring it into service.
 - Verify that the components can communicate with each other across the network by pinging each component.

CTI Cannot Connect to the *CentreVu* Computer Telephony T-server

Description

The CTI process log (`icmctilog.txt`) on the ITG installation directory (`c:\itg`) displays alarms when it is unable to connect with the *CentreVu Computer Telephony* T-server. When this connection is not available, agents are not able to log in or out, and caller requests are not routed to agents.

The CTI process periodically attempts to reconnect with the server.

Contacting Technical Support

Contact the Lucent Technologies National Customer Care Center at **1-800-242-2121** for assistance. You will be asked to identify the product or offer and to describe the problem.

Technical Support supplies a trouble ticket number to expedite tracking in case solving your problem involves more than one organization within Lucent Technologies. Write this number down in case you need to call back. However, Technical Support normally keeps you informed eliminating the need for you to call again.

If it turns out that your problem involves functions or systems not covered by Lucent Technical Support, it is your responsibility to involve the parties necessary to reach resolution.

Combining the Internet Call Center Solution with *Message Care*

Introduction

Both the *Message Care*[™] solution and the Internet Call Center (ICC) solution link your call center to the Internet to deliver voice calls, text chat, callback capabilities, email, and fax capabilities through the Internet. The *Message Care* software uses elements of the Lucent Technologies Internet Call Center (ICC) solution to provide a common interface for agent login and administration and can be co-resident with your existing *DEFINITY*[®] ECS Automatic Call Distribution (ACD) vectoring system features and the Adjunct/Switch Applications Interface (ASAI) phantom call feature.

The following sections are provided in this chapter:

- Commonality
- Things to Know About Combining Message Care and ICC
- Combined Message Care and ICC Topology.

For specific information about the Internet Call Center Solution, see the *Internet Call Center Solution Guide Version 2* (585-215-094). For specific information about the *Message Care* software, refer to this document.

Audience

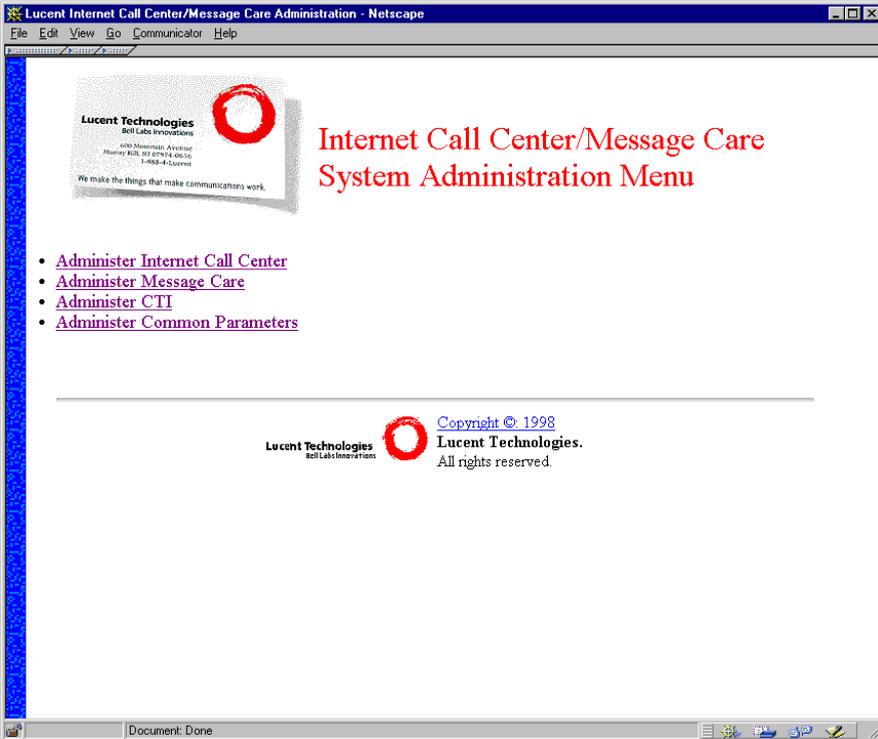
This chapter is intended for anyone interested in combining the ICC solution with the *Message Care* software.

Commonality

This section describes the Internet Call Center elements used by the *Message Care* software. Each ICC element is described from a *Message Care* point of view. For information on how these elements work with the ICC, see the *Internet Call Center Solution Guide Version 2* (585-215-094). The common elements used by the Internet Call Center and the *Message Care* software are as follows:

- Internet Call Manager (ICM)—The ICM provides an interface between the *Message Care* Work Flow Manager and the Computer Telephony Integrations (CTI) process and provides the following functions:
 - Manages agent login
 - Downloads the Agent Control Window applet and maintains its connection
 - PagePop—displays Web pages to the agent based on call events (for example, a PagePop could be the delivery of an email or fax message).
- CTI Process—The CTI process is responsible for communications between the ICM server and the *DEFINITY* ECS. Specifically, the ICM is responsible for the following:
 - Logging the agent in to the *DEFINITY* ECS
 - Launching message calls
 - Monitoring the message calls and reporting events such as agent answer, drop call, transfer, and so forth.
 - Dropping message calls when a request to drop the message call comes from the *Message Care* software.

- ICM Server Administration—The ICM server must be administered to customize your call center’s configuration. The administration of the ICM server is performed through a Web-based interface shared by the ICC and *Message Care*. The following illustration is the Internet Call Center/Message Care System Administration Menu:



- There are administration parameters that are used by both *Message Care* and ICC. These common parameters are:
 - Telephony Server IP address
 - Telephony Server Login ID
 - Telephony Server Password
 - Telephony Server Identifier
 - Monitored Hunt Groups
 - CTI IP address

- ICM Server Domain Name (IP address)
- Agent Idle URL
- Enable Agent Logout Button
- Agent Logout on Close
- Enable Other CTI Login?

For more information about administering the ICM server, see Chapter 3, “Installation and System Administration,” in this document.

- Login Script—To log an agent in to the *Message Care* software, login parameters (for example, agent extension and agent ID) are passed to the ICC `agentapplsu.pl` script.

- Login Web Page—In a combined environment, the ICC login Web page is used to log in to the ICC, *Message Care*, and the *DEFINITY* ECS. The following illustration is the ICC login Web page:



Things to Know About Combining *Message Care* and ICC

The following list provides information about combining *Message Care* and ICC:

- **Localization**—Unlike the Internet Call Center Solution, the Graphical User Interface (GUI) for the *Message Care* software is presented in US English only. Release 2 of the Internet Call Center Solution supports translations for multiple languages and provides the files needed to support seven specific languages. For more information about localization and the ICC Solution, see the *Internet Call Center Solution Guide Version 2* (585-215-094).
- **Agent Idle Page**—In a co-resident configuration, the agent idle page (the *Message Care* Home Page) should be the page provided with the *Message Care* software to ensure full *Message Care* functionality. If you do not use the agent idle page supplied by the *Message Care* software, then you must set a browser cookie called `Agent Id` that contains the agent's login ID. For more information, see Chapter 3, "Installation and System Administration."
- **Agents logging in to the ICM can take both voice and message calls.** A single agent can handle both voice and message calls providing that the station is administered on the *DEFINITY* ECS for both skills.
- ***Message Care* and ICM on Different Servers**—For security reasons, you may want to run the *Message Care* software on a different server than the server on which the Internet Call Manager (ICM) runs. See the following section "*Message Care* and ICM on Different Servers" for more information.

Message Care and ICM on Different Servers

To run the *Message Care* software on a different server than the server on which the ICM runs, do the following:

1. Modify the `WorkFlowMan.ICMAddr` parameter in the `parms.txt` file to reflect the IP address of the server running the ICM software module.
2. Install the ICM software on the *Message Care* server in addition to the ICM server. Installing the ICM software on both the *Message Care* server and on the ICM server is required because the *Message Care* software uses specific files from the ICM software.
3. Stop the ICM service on the *Message Care* server if it is started. To stop the ICM service on the *Message Care* server, do the following:
 - a. From the Start menu, click on Setting->Control Panel.
 - b. From the Control Panel, double-click on the Services icon. The Services dialog box appears.
 - c. Click on the **Lucent Internet Call Manager** service and click on the Stop button.
 - d. To prevent start-up of the ICM service when the *Message Care* server reboots, change the Startup Type for the Lucent Internet Call Manager service to Manual.
4. Maintain a common administration page by doing the following:
 - a. From the Message Care server, copy the `C:\Program Files\MessageCare\temp\MCAadministration.htm` to the `C:\itg\admin\msgcare` folder on the ICM server (where common administration will be maintained).

- b. Open the C:\Program Files\MessageCare\temp\MCAAdministration.htm file using a text editor such as WordPad, and edit the second line [action=/mcaadmin/MsgcareAdmin.asp] so that it looks like the following (note that the <message care server address> is the IP address of the *Message Care* server):

```
action=http://<message care server  
address>/mcaadmin/MsgcareAdmin.asp
```

- c. Open the C:\Program Files\MessageCare\www\scripts\mc_agent.html file located on the *Message Care* server using a text editor such as WordPad, and edit the 15th line [<form action=/itg/agentappls.pl] so that it looks like the following:

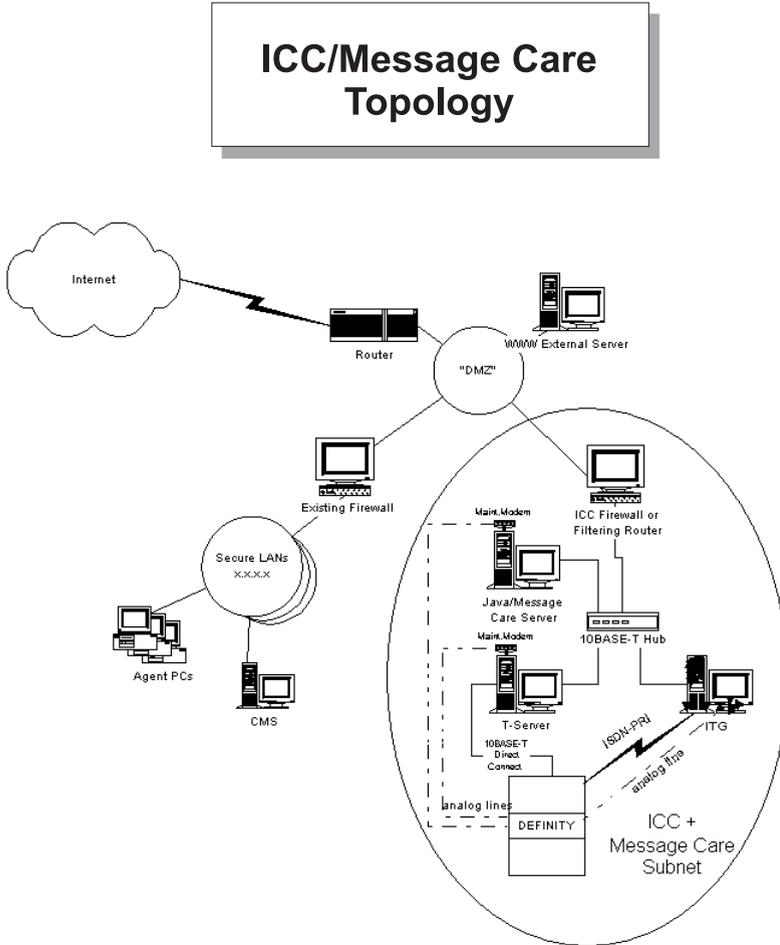
```
[form action="http://<ICM server  
address>/itg/agentappls.pl]
```

- d. In the same file as in Step c above, edit the 27th line [<input type=hidden name=browser URL value=/mcscrip/mc_welcome.html>] so that it looks like the following:

```
<input type=hidden name=browser URL  
value=http://<MC server  
address>/mcscrip/mc_welcome.html>
```

Combined *Message Care* and ICC Topology

The figure that follows presents a combined *Message Care* and Internet Call Center configuration:



Glossary

ACD	Automatic Call Distribution—A switch feature that distributes incoming calls to available agents.
Active Agent	A call center employee who is processing a message call. A message call can be active only with a single agent.
Agent	A call center employee who services calls from the call center's customers.

Agent Mailbox A *Message Care*[™] monitored mailbox used to collect messages which need to be serviced by a specific agent. Messages in an agent mailbox originate from either a direct correspondence between a consumer and an agent or from replies to inquires from another agent. Any message arriving in an agent mailbox is delivered to the agent through a direct agent message call, thus collecting Call Management System (CMS) statistics.

Alarms Notifications generated when certain threshold conditions are met for an error (contrast with **Error**).

ANI Automatic Number Identification—A telecommunications industry term referring to knowledge of the calling party's number.

Applet A small application that is downloaded from the Internet and executed in a browser on a desktop.

Archive Database Contains only closed messages. As the Current database reaches its storage limit, the system administrator moves closed messages to the Archive database (see **Current Database**).

ASAI	Adjunct/Switch Applications Interface—Lucent's CTI offering/recommendation for interfacing data adjuncts and communications systems. ASAI supports activities such as event notification and call control.
ASAI Phantom Calls	A call placed through ASAI as a third_party make_call. A phantom call is originated from a station administered without hardware (AWOH), and may be placed anywhere. In all other ways, a phantom call is treated like a voice call. This feature is be available with <i>DEFINITY</i> [®] ECS software release R6.3.
ASCII	American Standard Code for Information Interchange - A binary code for text as well as communications and printer control. It is used for most communications and is in the built-in character code in most minicomputers and all personal computers.
AWOH	Administered WithOut Hardware—A station from which a <i>DEFINITY</i> ECS can send a call, even though there is no physical telephone.
BCMS	Basic Call Management System—A <i>DEFINITY</i> ECS feature that provides a variety of measurements that may be used to monitor the ACD.

Call Center	A business that provides service to its customers through agents. Traditionally, requests for service have come through the use of the telephone, but modern technology has broadened that channel to include fax, voice mail, email, and the Internet.
CGI	Common Gateway Interface—The programming interface for executing programs on Web (HTTP) servers. CGI defines the structure for passing data from the server to the server's gateway program, which does the processing, returning the results from the gateway program to the HTTP server, and then back to the requesting client.
CGI Script	A program that is run on a Web server, triggered by a request from a browser.
CMS	<i>CentreVu</i> [®] Call Management System—An application which runs on an adjunct processor to collect, store, and report call statistics from the ACD. CMS enables call centers to monitor and manage their operations by generating reports on the status of agents, splits/skills, trunks, trunk groups, vectors, and VDNs.
Consumer	A call center's customer; the person requesting contact with an agent.

CTI	Computer-Telephony Integration—The integration of services provided by a computer and a telephone (data adjuncts and communication systems).
Current Database	Contains all messages that are being processed. Depending on the size of the current database, it can also contain some closed messages. As the current database reaches its storage limit, the system administrator moves the closed messages to the Archive database (see Archive Database).
Customer	The call center where <i>Message Care</i> is used to process message calls.
Designer Reports	<i>CentreVu</i> Supervisor reports that are developed by Lucent associates and generally sold to customers. <i>Message Care</i> specific Supervisor reports are specially tagged to appear and run even if the Report Designer feature is not purchased.

DNS Domain Naming System - A computer system that returns the IP address for an Internet host name (or vice versa).

Software that lets users locate computers on the Internet by domain name. The DNS server maintains a database of domain names (host names) and their corresponding IP addresses. In this hypothetical example, if `www.mycompany.com` were presented to a DNS server, the IP address 204.0.8.51 would be returned. DNS has replaced the manual task of updating HOSTS files.

DNIS Dialed Number Identification Service—An ACD capability that enables calls to be routed based on the number dialed by the caller.

Drill Down To move from summary information to the detailed data that created it.

EAS Expert Agent Selection—A *DEFINITY* ECS feature that provides a group of capabilities, including assigning skills to VDNs and agents. This is a skills-based form of call routing.

ECS Enterprise Communications Server—A *DEFINITY* switch providing features and capabilities specially designed to enhance call center operations.

Email	In the <i>Message Care</i> environment, email includes messages of any media type, including, but not limited to, text-based messages that can originate through forms filled out by consumers by way of Internet Web pages or free-formatted messages sent to general Internet addresses supported by business.
Error	A problem condition that occurs which may lead to service problems. Some errors will be stored for informational purposes only. Other errors can lead to an alarm being generated if certain threshold conditions are met (contrast with Alarms).
Forward Message	Used to refer to a message that is forwarded by an agent to another person (for example, a special matter expert [SME) or an agent) through email. Messages are forwarded to other people to request assistance in composing a reply to a consumer request.
Frame	A portion of a Web page that can change without a change in the URL.
Free-formatted Email	Any message generated by a consumer using their email client. The format of such a message cannot be predicted and may include file attachments.

Hacker	A person who tries to gain unauthorized entrance into a corporate network for the purpose of theft, malicious destruction, and/or amusement. A hacker may try to gain access to computer systems by electronic or brute force means.
HTTP	HyperText Transport Protocol—The client/server protocol used to connect to servers on the World Wide Web (WWW). Addresses of Web sites begin with an “http://” prefix.
ICC	Internet Call Center - A Lucent Technologies offer which provides access, call management, transaction processing, and management information support to integrate WWW and call center functionality.
ICM	Internet Control Manager—A shared process with the ICC product. At a high level, the ICM manages agent login, downloads the agent applet, maintains a connection to it, and performs PagePops to the agent.
IETF	Internet Engineering Task Force—The controlling body for Internet standards.

IMAP4	Internet Message Access Protocol, version 4—An evolving Internet client email access protocol, rapidly gaining in popularity.
Inbound Message	A message received by the call center and processed by <i>Message Care</i> . Typically, these messages will originate from the consumer, but they may also originate from another associate within the call center (for example, a SME or an agent.)
ISDN	Integrated Services Digital Network—A telecommunications service package which is, basically, the telephone network turned all-digital end to end, using existing switches and wiring.
ITG	Internet Telephony Gateway—An industrial grade, <i>Pentium</i> [*] based PC running <i>LynxOS</i> (a <i>UNIX</i> [†] compatible operating system). The ITG is supplied by Lucent Technologies as part of the <i>Message Care</i> offer. It contains one or more voice processing boards to convert between packetized Internet voice and circuit-switched voice used by the <i>DEFINITY</i> (ECS).
<i>Java</i> [‡]	A cross-platform programming language developed by <i>Sun</i> ^{**} Microsystems.

*Pentium is a registered trademark of Intel Corporation

†UNIX is a registered trademark of X/Open Company, Ltd.

JTAPI JAVA Telephony Application Programming Interface

LAN Local Area Network—A communications network that serves users within a confined geographical area. It is made up of servers, workstations, a network operating system and a communications link.

Launched The status of a message, once a call has been launched to *DEFINITY* ECS and is waiting to be answered by an agent.

MACS Multimedia Applications Customer Support—A group of engineers within Lucent Technologies who perform pre-sale, installation, and post-sale escalated support for the *Message Care*, ICC and MMCX (MultiMedia Communications eXchange).

***Message Care* Administration** Customer-defined options administered through browser based administration Web pages.

Message Email retrieved by the POP3 protocol from a mail server. The POP3 protocol does not limit the types of files that may be contained in a message body. Traditionally, email is considered to be text; however, it may also be a fax.

‡Java is a registered trademark of Sun Microsystems, Inc.

**Sun is a registered trademark of Sun Microsystems, Inc.

Message Call

A message call is a call (associated with a message) that is launched to the *DEFINITY* ECS. A message call remains active in the *DEFINITY* ECS while you are processing the associated message. A message call ends when you close or suspend the associated message.

Message Care

The software application responsible for monitoring customer-administered mailboxes for message arrival and delivery of these messages to agents. *Message Care* also provides functionality for the agent to use in responding to messages.

Message Care-Enabled Agent

An agent that has successfully logged into the *Message Care* application. A *Message Care*-enabled agent can be identified by their agent ID and IP address.

Message Call

A call associated with a message (email) that is launched to the *DEFINITY* ECS to be processed by an agent. The message call will remain active in *DEFINITY* ECS while an agent processes the associated message. This allows CMS to capture message processing statistics.

Message History

The message history generated by *Message Care* tracks state status changes and events associated with each processed message.

**Message
Response**

A message received in a POP3 mailbox, monitored by *Message Care*, that was sent in response to an existing message (that is, a received message that already has a tracking number associated with it in the subject line). Message responses can be received from either consumers or from SMEs. Consumers may reply to an auto-acknowledgment or an agent-generated message. SMEs respond to inquires sent by agents.

MIME

Multi-purpose Internet Mail Extensions—A relatively recent extension to the text-only Internet email definition allowing multimedia email content. MIME enables file attachments in Internet email.

ODBC

Open Database Connectivity—A *Microsoft* defined Open Interface for accessing most commercial databases.

Original Message

The original message is a new service request received from a consumer to be processed by the call center (the customer). Original messages may result in outbound messages being sent to both SMEs and the consumer. Additionally, original messages may result in received response messages (for example, a consumer may elect to reply to a received message from the agent). Both these outbound and received responses will be linked to the original message. Original messages are identified by the lack of a *Message Care* generated tracking number in the received message subject header.

Outbound Message

A message sent by the agent to either a consumer or an SME. Replies are outbound messages providing the consumer with either the answer to their question (see **Reply**) or a status update. Outbound messages to SMEs are requests for information.

Overflow

A message status state. Messages in the Overflow state are waiting to be launched as a call to *DEFINITY* ECS. For example, if there is a lack of facilities to launch a message call, then that message will sit in the Overflow state.

PagePop A feature that automatically displays Web pages based on call events (for example, when a message call is answered by an agent, the browser will display the New Message Display Web page).

POP3 Post Office Protocol—The most prevalent Internet client mail access protocol. *Message Care* uses the POP3 protocol to poll the monitored set of mailboxes to detect message arrival. POP3 access also enables *Message Care* to retrieve the message from the mail server.

PRI Primary Rate Interface—An ISDN standard interface which specifies B and D channels for T1 and E1 trunks.

PTSN Public Switched Telephone Network—The traditional medium for telephone communications.

Purchased Designer Reports *CentreVu* Supervisor Designer reports that are developed by Lucent associates and generally sold to customers. *Message Care* specific Supervisor reports have been specially tagged to appear and run even though the Report Designer feature has not been purchased.

Received Message	A message, either an original message or a response message, that has been retrieved from the POP3 server.
Related Message	A message that is related to an original message. Related messages include replies sent by the agent to the consumer, responses received from the SME, messages sent to SMEs, or follow-up questions received from the consumer. Related messages are identified by a shared tracking number stored in the message subject field.
Reply	An outbound message sent to a consumer by an agent.
RONA	Redirection on No Answer—If an agent does not answer the message call, RONA redirects it to other coverage.
Site Identifier	A numeric value (four digits) assigned by the call center to be appended to a message's tracking number. For example, Trk # 12345678-1111 (see Tracking Number.)

Skills Mailbox	A <i>Message Care</i> monitored mailbox used to collect messages which are to be serviced by any member of that skills group. <i>Message Care</i> monitors a skills mailbox and collects the messages for delivery to the agent skills group. These messages may originate from a consumer or be the response to a forwarded message from SMEs within the call center (see Agent Mailbox).
SME	Subject Matter Expert—An associate within the call center who is consulted by a call center agent for assistance in creating a consumer reply.
SMTP	Simple Mail Transfer Protocol—The standard machine to machine (server to server) Internet electronic mail protocol. <i>Message Care</i> uses SMTP to submit a message to a mail server for delivery to the consumer.
Supervisor	The person in charge of watching and directing the operation and course of action of the call center's agents.
System Administrator	A call center associate who successfully entered the system administration password and is, therefore, awarded administrative privileges. These privileges include, but are not limited to mailbox administration and all functional available to a supervisor (contrast with Supervisor).

TCP/IP	Transmission Control Protocol/Internet Protocol—A communications protocol developed under contract from the U.S. Department of Defense to internetwork dissimilar systems. It is a de facto UNIX* standard that is the protocol of the Internet and widely supported on all platforms.
TIFF	Tagged Image File Format—A compressed image format used to store fax images.
Tracking Number	A numeric value (eight digits) automatically generated by the <i>Message Care</i> software for each received original message (Trk # 12345678). The <i>Message Care</i> software sequentially assigns tracking numbers and starts with the number 1. A tracking number is followed by a four digit suffix as a site identifier that you can define (see Site Identifier).
TSAPI	Telephony Services Application Programming Interface—A telephony programming interface from <i>Novell</i> † and AT&T. Based on the international Computer Supported Telephony Application (CSTA) standard, TSAPI is designed to interface a telephone PBX with a NetWare server to provide interoperability between PCs and telephone equipment.

*UNIX is a registered trademark licensed exclusively through X/Open Company, Ltd.

†Novell is a registered trademark of Novell, Inc.

T-Server	<i>CentreVu Computer Telephony</i> * Telephony Server (T-server). This software interprets proprietary CTI signaling and converts it into an industry-standard TSAPI and/or JTAPI interface to the LAN.
UDP	User Datagram Protocol—A TCP/IP protocol used to transmit data on data networks.
URL	Uniform Resource Locator—An address used to locate information on the World Wide Web.
UUencode	A <i>UNIX</i> utility that encodes data into 7-bit ASCII for communications over the Internet, which only supports seven bits. The UUencode utility then converts UUencoded data back into its original 8-bit format. Programs such as these are used to transmit proprietary file formats, documents, databases, spreadsheets, and binary executable files, as well as text files that use the full eight bits of the byte.
UUI	User-to-User Information—An option in call control for computer telephony, used to pass information along with a call for the receiving system to manipulate.

*CentreVu Computer Telephony is a registered trademark of Lucent Technologies

VDN	Vector Directory Number—A switch extension that provides a software link between trunk groups and vectors, enabling incoming ACD calls to be processed by specified vectors.
Vector	A list of steps that process calls in a user-defined manner. The steps in a vector can send calls to splits/skills, play announcements and music, disconnect calls, give calls a busy signal, or route calls to other destinations. Calls enter vector processing via VDNs, which may have received calls from assigned trunk groups, from other vectors, or from extensions connected to the switch.
Voice Terminal	A single-line or multiappearance telephone.
Web	Short for the World Wide Web.
Web Page	A display created with HTML (HyperText Markup Language), the standard language for displaying information on the World Wide Web.

Work Modes

Work modes are different states the agent can be in while logged into the call center. Work modes for a *DEFINITY* ECS R3V6 call center include: Auto-In, Manual-In, Auxiliary Work, and After Call Work (ACW).

WWW

World Wide Web—The body of information available on the Internet. Also referred to as "the Web."

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