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CentreVu[®]
Internet Solution Guide

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Preface

Purpose The *CentreVu® Internet Solution Guide Version 4.1(585-215-025)* document provides an overview of elements of the Solution, such as operations and features, prerequisites and the baseline configuration, some troubleshooting items, and a glossary.

The Preface introduces the main elements of the document, including the following:

- Intended audience for this document
- Contents of this document
- Conventions used in this document
- Related documents
- Using this document
- How to order this document.

Reason for reissue The reason for reissuing the *CentreVu* Internet Solution Guide is to provide documentation on the new features provided in Release 4.1 of the *CentreVu* Internet Solution.

Safety labels The *CentreVu* Internet Solution Guide does not require the use of safety labels.

Intended-Audience This solution guide is intended for anyone installing, configuring, administering or using the *CentreVu* Internet Solution, including agents, supervisors, trainers, Webmasters, and system administrators. This document should also be useful to Lucent Technologies personnel in Technical Service Centers (TSC), Sales, the Design Support Center, the International Technical Assistance Center (ITAC), the NetCare Services Organization, and the Centers of Excellence. It should also be helpful for data networking security personnel, firewall administrators, and anyone else who might use or support a *CentreVu* Internet Solution.

This document is intended for anyone who needs to know the following:

- Overall configuration and connectivity of the *CentreVu* Internet Solution
 - Data connectivity for the *CentreVu* Internet Solution with the call center's network
 - Operational details about the *CentreVu* Internet Solution
 - *DEFINITY*® Enterprise Communications Server (ECS) switch administration and connectivity for the *CentreVu* Internet Solution
 - *CentreVu* Call Management System (CMS) connectivity, installation, and database items for the *CentreVu* Internet Solution
 - *CentreVu* CMS and Supervisor reports for the *CentreVu* Internet Solution
 - *CentreVu* Computer-Telephony connectivity and administration for the *CentreVu* Internet Solution
 - Recommended Web page design guidelines for the *CentreVu* Internet Solution
 - Firewall and security issues relative to the *CentreVu* Internet Solution
 - Troubleshooting for the *CentreVu* Internet Solution.
-

How to use The *CentreVu* Internet Solution Guide is organized into the following:

Chapter 1, “About the CentreVu Internet Solution”

Introduces and briefly describes the *CentreVu* Internet Solution. The information in Chapter 1 includes descriptions of components, features, requirements, and how the solution works.

Chapter 2, “Prepare your call center for the CentreVu Internet Solution”

Explains how to prepare your call center so that you can integrate the *CentreVu* Internet Solution quickly and effectively.

Chapter 3, “Install and uninstall CentreVu Internet Solution software”

Describes, at a high-level, the procedures for installing *CentreVu* Internet Solution software.

Chapter 4, “Install and uninstall the Message Care™ software”

Describes, at a high-level, the procedures for installing the *Message Care* software and other related software.

Chapter 5, “Administration”

Informs you of the administration required for the *CentreVu* Internet Solution. After you have installed and connected all necessary components, you must administer your *CentreVu* Internet Solution so that you can use all of its features and functions.

Chapter 6, “Agent login and logout”

Describes how an agent logs in and logs out of the *CentreVu* Internet Solution.

Chapter 7, “How to Process Internet calls”

Details how agent handles various types of incoming Internet calls. The call-handling information covers PagePop, Escorted Browsing, and Call Control Windows.

Chapter 8, “How to process message calls”

Describes how an agent handles various types of message calls and also describes the functionality provided by the *Message Care* software to handle those messages.

Chapter 9, “Reports”

Discusses the reporting capabilities of the *CentreVu* Internet Solution.

Chapter 10, “CentreVu Internet Solution Databases”

Describes the different databases (*Message Care* database and ICMS database) used for the *CentreVu* Internet Solution.

Chapter 11, “Web page guidelines”

Contains guidelines for creating or modifying Web pages for the *CentreVu* Internet Solution.

Chapter 12, “Monitor and maintain the CentreVu Internet Solution”

Covers basic monitoring and maintenance tasks.

Chapter 13, “Troubleshooting”

Identifies problems that may occur during installation and operation of the *CentreVu* Internet Solution, and suggests diagnostic and corrective actions that can be taken toward their resolution.

Chapter 14, “Error logs”

Discusses *CentreVu* Internet Solution errors and error logs.

Appendix A, “Multisite configuration”

Discusses the multisite feature which includes functions, installation, and administration.

Appendix B, “Using Another CTI Application”

Contains information about using another Computer-Telephony Integration (CTI) application to log in to the *DEFINITY* ECS.

Appendix C, “Overcoming feature limitations due to browser security restrictions”

Describes how to work with browser security restrictions regarding the HTML forms-sharing feature and the Send Page button.

Glossary

Provides a list of terms and definitions that relate to the *CentreVu* Internet Solution.

This document uses the following conventions:

Convention	Description
Internet calls (Real-time calls)	Refers to the four types of real-time calls: Internet voice and chat, chat-only, request for callback, and callback and collaborate.
Message calls (Messaging)	Refers to email and fax messages.
Initial Capital Letters	Names of windows and keyboard keys. For example: This field is in the Phone Settings window.
KEY + KEY	Key combinations for which you must press and hold down one key while you press another. For example: ALT+F4
<information>	Refers to information that you are requested to provide. For example, to access the administration Web pages, enter the following: <i>http://<ICM_server_name>/admin</i> In this case, you are being asked to enter the actual ICM server name or IP address.
Click and double click	Whenever you are asked to click or double click the mouse button, click the left hand, or primary button, unless the specified.
Terms	For definitions of terms and acronyms used in this guide, please see the “Glossary.”

Related documentation Many documents other than the *CentreVu* Internet Solution Guide pertain to the solution. The most important set of documents are:

- *DEFINITY* ECS documentation
- *CentreVu* Computer-Telephony documentation
- *CentreVu* Call Management System and Supervisor documentation set
- Web guidelines documentation

Using this document This document includes information for the *CentreVu* Internet Solution. Standard installation and administration activities for components other than *Message Care* and Internet Call Center (ICC) (for example, *DEFINITY* ECS, *CentreVu* CMS, and so forth) are covered in the respective documentation.

About customer-provided equipment

This guide assumes that it is the call center's responsibility to procure, provision, and maintain all customer-provided equipment.

About customer expertise

This guide assumes that the customer is familiar with basic call center operations and has the technical expertise to implement the *CentreVu* Internet Solution as described in this document.

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1 About the *CentreVu*® Internet Solution

Overview

Purpose This section introduces the *CentreVu* Internet Solution, which includes discussions of major components and system operations.

For the purpose of this document, Internet Call Center (ICC) refers to real-time communications and *Message Care*™ refers to messaging.

Audience This section is intended for anyone interested in an overview of the *CentreVu* Internet Solution, features and elements of the solution, and how it is supported before and after the sale.

Contents Specific topics covered in this section are as follows:

- [What is new in this release of the CentreVu Internet Solution? \(1-2\)](#)
- [What is the CentreVu Internet Solution? \(1-4\)](#)
- [What are the features of the CentreVu Internet Solution? \(1-7\)](#)
- [What do you need to make the CentreVu Internet Solution work? \(1-13\)](#)
- [How does the CentreVu Internet Solution work for real-time calls? \(1-31\)](#)
- [How does the CentreVu Internet Solution work for messaging? \(1-34\)](#)
- [What is localized? \(1-39\)](#)
- [Where can I get CentreVu Internet Solution assistance? \(1-42\)](#)



What is new in this release of the *CentreVu* Internet Solution?

Overview Release 4.1 of the *CentreVu* Internet Solution builds on the strengths of the previous release, thus enhancing established functionality while providing new features.

4.1 of the *CentreVu* Internet Solution includes the following:

- Globalization—*Message Care* support for Japanese.

Message Care supports the Japanese version of Microsoft Corp. *Microsoft® NT* and the Japanese version of Microsoft Corp. *Microsoft SQL 7.0*. When *Message Care* is installed on a Japanese NT server, it automatically enters a Japanese operational mode (J-Mode).

When operating in J-Mode, agents and supervisors may work in either English or Japanese.

- Complete installation procedures for the *Message Care* system is included in this document.
- Enhancement to help callers connect to the ICC call center when a firewall is involved—in some instances, callers using Netscape Communications, Inc. *Netscape™ 4.x* browsers have difficulty connecting to an ICC call center because of the company's firewall, despite the use of HTTP Tunneling. (When a firewall is involved, ICC uses HTTP Tunneling to open a connection through an HTTP port instead of the ICM port when the caller's firewall does not allow the applet to communicate directly to the ICM over a socket connection.)

In a situation where HTTP tunneling is invoked, ICC checks to see if the caller is using a Netscape Communications, Inc. *Netscape 4.x* browser. If the caller's browser is Netscape Communications, Inc. *Netscape 4.x*, then JavaScript code executes to check whether the `security.lower_java_network_security_by_trusing_proxies` preference is set to true (when this preference is set to true, the browser can send message through the proxy to the ICM). If not, ICC 4.1 will ask the caller for permission to edit the `prefs.js` (or `preferences.js`) file to set this preference to true. If the caller grants permission, the caller's applet is successfully connected through the company's firewall. Upon the next event (such as alerting or a Web page pop), ICC sets the caller's `prefs.js` file to its original state before the call is dropped. However, if the caller grants permission to change the preference file and then exits from the applet before an event occurs, the preference may not be returned to its original state.

- Allow peg counting to CMS through a proxy—prior to ICC release 4.1, reporting call-related peg counts to CMS was conducted through the CentreVu CMS Peg Count URL. If you cannot report call-related peg counts to CMS through the CentreVu CMS Peg Count URL, then you can report peg counts by administering the *PegCountProxyURL* parameter in the *icmparms.txt* file.



What is the CentreVu Internet Solution?

Introduction The *CentreVu* Internet Solution extends the *DEFINITY*® ECS call center to the Internet. This allows consumers to contact your call center using an Internet application (for example, a Web browser or email client).

Internet communication sessions are established through the following media access types:

- Public Switched Telephone Network (PSTN) Callback—agent and consumer communicate (real-time communications) verbally using a regular telephone line
- Text chat—agent and consumer communicate (real-time communications) through text chat over the Internet
- Internet voice—agent and consumer communicate (real-time communications) verbally over the Internet
- Email and fax—agent and consumer communicate (messaging) through email and fax over the Internet

The *CentreVu* Internet Solution enables you to choose one or any combination of the media access types for your call center.

In addition to providing a number of media access types, the *CentreVu* Internet Solution funnels voice, data, and message (email and fax) calls through the *DEFINITY* ECS using its call distribution capabilities such as skill-based routing, load balancing, priority algorithms, and performance measurement capabilities.

Benefits of the CentreVu Internet Solution

Some of the benefits your call center realizes by using existing call center capabilities in conjunction with the *CentreVu* Internet Solution are:

- Additional interface (Internet) for doing business
- Quicker and more accurate response to email and fax
- Better management of email and fax
- More effective collaboration with consumers
- Additional media access types through which your consumers can contact your call center

Messaging versus real-time calls

Internet voice and chat, chat-only, request for callback, and callback and collaborate calls are referred to as *real-time* and email and fax calls are referred to as *message calls*.

CentreVu Internet Solution capacities

The *CentreVu* Internet Solution enables you to choose one or any combination of the following media access types. The number of simultaneous calls for each media access type can be ordered in increments of one.

- Public Switched Telephony Network (PSTN) callback
- Text chat
- Internet voice
- Email and fax

A license enables you to use the number of calls you purchased for each media access type.

Additional ICC capacity

Additional capacity can be acquired with the following:

- E1 channels—with sufficient E1 channels available, up to 60 simultaneous calls (mixture of voice and chat) are available per ITG.
- Adjunct/Switch Application Interface (ASAI) Phantom Calls—enabling the use of ASAI phantom calls for text chat calls (available with *DEFINITY* ECS 6.3 or greater) will avoid using Primary Rate Interface (PRI) resources in the ITG (that is, Internet voice and phantom calls do not compete for PRI resources).

Phantom calls are treated by the Automatic Call Distribution (ACD) like ordinary voice calls in that they are routed and have call statistics recorded about them without the use of a PRI trunk. The ASAI phantom call feature increases the number of calls that the *CentreVu* Internet Solution can handle.

- Multiple ITGs—with the multi-ITG capability, your ICC can increase the capacity of additional simultaneous calls and enhance the reliability of your system. The multiple ITGs are controlled by a common ICM server.
- Multisite—multiple ICC systems can be controlled by a common Centralized Internet Routing Service (CIRS).

With the ISDN–PRI channels available in four ITGs, up to 240 calls (voice and chat) are available with E1 and up to 188 calls are available (voice and chat) with T1.

Additional Message Care capacities

The following table lists the current capacities of the *Message Care* software:

Capacity	Maximum Supported
Busy hour message rate	2400 messages retrieved from mailboxes and delivered to agents per busy hour
5-GB database for current messages	<p>Text messages —assuming a 1K text message, 1.25 million messages can be stored in a 5-GB database. (If you received 10,000 text messages a day, it would take 125 days to fill up a 5-GB database.)</p> <p>Fax messages—assuming a 46K fax message (approximately 3 pages of text), 95,000 fax messages can be stored in a 5-GB database.</p>
Mailboxes	150
Message retrieved per polling cycle	A maximum of 200 message retrieved per mailbox in a polling cycle
File Attachments	20 per inbound message



What are the features of the *CentreVu* Internet Solution?

Introduction The *CentreVu* Internet Solution provides many significant functional features for your call center. The information in this section describes each of these features.

What is covered

The following features are described:

- [Consumer contact features \(1-7\)](#)
- [Agent and caller features \(1-9\)](#)
- [Reporting features \(1-10\)](#)
- [Use of another CTI application feature \(1-10\)](#)
- [Multisite feature \(1-11\)](#)
- [User-to-User Information \(UII\) feature \(1-11\)](#)
- [Localization feature \(1-11\)](#)
- [HTTP tunneling feature \(1-11\)](#)
- [Sample Web pages feature \(1-11\)](#)
- [Encryption feature \(1-12\)](#)
- [Email message detection feature \(1-12\)](#)
- [Auto-acknowledgment feature \(1-12\)](#)
- [Message storage feature \(1-12\)](#)
- [Virtual Conference feature \(1-12\)](#)
- [Service Observing feature \(1-12\)](#)
- [Direct Agent Dialing feature \(1-12\)](#)

Consumer contact features The Internet Call Center software provides the following methods for consumers to contact agents:

- Text chat enables agent and caller to type and send text messages to each other's desktops by means of the downloaded Agent and Caller Control Windows (Sun Microsystems, Inc. *Java*TM servlets). This feature is useful when the caller is not equipped to handle Internet telephony calls (that is, they do not have Microsoft Corp. *Microsoft NetMeeting*[®] or multimedia components).
 - Internet telephony enables callers to talk with agents through an existing Internet connection using the multimedia capabilities of their computers and only one phone line.
-

- Caller-requested Public Switched Telephony Network (PSTN) callback enables callers whose computers are not equipped for Internet telephony, or who are located behind firewalls that block Internet voice traffic, to request that an agent call them on a regular telephone line.
- Agent-initiated PSTN callback is useful if voice quality degrades during a real-time call. The ICC agent can initiate a callback without prompting the caller for a phone number (if the agent already knows the caller's phone number) or, prompt the caller to provide a telephone number and then initiate the callback. With a second caller phone line, text chat and escorted browsing continue to be available.
- Caller-initiated PSTN callback with collaboration enables callers who have two phone lines (one for the Internet session and one for the PSTN callback) to verbally communicate over the telephone while simultaneously communicating through the Internet (text chat and escorted browsing).

The *Message Care* software provides the following methods for consumers to contact agents:

- Message calls enable callers to contact agents through email (form-based and free-formatted).
 - Message calls enable callers to contact agents through a fax.
 - Agent-initiated PSTN callback is also useful for a *Message Care* agent needing to contact a consumer regarding an email message. The *Message Care* agent must know the consumer's telephone number because there will not be a caller on the line to prompt for a number to callback.
-

- Agent and caller features** The *CentreVu* Internet Solution provides the following features for the agent and caller:
- During a real-time call, agent and caller can use their browsers to navigate to other Web pages or sites.
 - For real-time calls, the escorted browsing feature provides the following two ways in which the parties can share Web pages:
 - Either party can use the Send Page button to synchronize the other's browser to the Web page they are currently viewing.
 - Either party can type (or copy and paste) a Uniform Resource Locator (URL) into the text chat window and send that message to update the other parties' browsers with the contents of that URL. Note that a URL that is normally inaccessible to one party (for example, behind a firewall) remains inaccessible during escorted browsing.
 - Both agent and caller have the ability to end a real-time call.
 - Agents can transfer real-time calls and message calls to other agents.
 - ICC only agents can conference other agents on a real-time call.
 - ICC agents can share HTML forms with their caller. HTML forms sharing extends the capabilities of the escorted browsing feature by allowing not only sharing of Web pages but also allowing a caller and an agent to interactively complete HTML forms. For more information about HTML forms sharing, see [HTML forms sharing \(7-19\)](#).
 - The *Message Care* software provides specific functionality that you can use to process email and fax messages. This functionality is accessible through *Message Care* Web pages.
 - Agents can answer both *CentreVu* Internet Solution calls (real-time calls [Internet] and message calls [email and fax]), and conventional (audio-only) telephone calls. Conventional telephone calls, as well as *CentreVu* Internet Solution calls, are delivered to the agent's voice terminal, so the agent answers all calls using a single headset or handset.
 - For a real-time, the PagePop feature provides Web-based information throughout call setup. This Web-based information can be provided for the caller and the agent depending on the media access method the consumer uses.
-

For example, during the setup of an Internet voice call, text chat call, or PSTN callback call, the caller may browse the Internet while awaiting connection with an agent. PagePop can return the browser to an administered Web page when the agent is connected.

The content of the Web page presented to an agent when a real-time call is connected is administrable by the call center. This may include the Web page that the caller called from or information that was entered by the caller prior to the call, and/or information extracted from a database based on some caller identification.

For a message call, PagePop automatically displays Web pages based on call events (for example, when a message call is answered by an agent, the agent's browser will display the New Message Display Web page).

Reporting features The *CentreVu* Internet Solution can collect data on calls of all media access types. For detailed information about *CentreVu* Internet Solution reporting capabilities, see [Chapter 9, Reports](#).

CentreVu reporting

The following methods for collecting *Message Care* data are available:

- Real-time and historical data for message calls (email and fax) are collected through the *Message Care* software.
- The *CentreVu* Call Management System (CMS) can collect standard call statistics for message calls.

Internet Call Center reporting

The following methods for collecting real-time communications data are available:

- Real-time and historical data for real-time initiated calls (Internet voice and text chat) can be collected through *CentreVu* CMS and Supervisor.
- Historical and Snapshot (*CentreVu* Supervisor Internet Real-Time reports) data for real-time initiated calls (Internet voice and text chat) can be collected through *CentreVu* Supervisor.

Use of another CTI application feature With the *CentreVu* Internet Solution, the use of another Computer Telephony Integration (CTI) application to log in to the *DEFINITY*ECS is supported. Refer to [Appendix B, Using another CTI application](#) for additional information.

Multisite feature The multisite feature enables your call center to route real-time calls to an ICM before the calls enter the *DEFINITY* ECS. With this capability, real-time calls can be routed to the best ACD based on the resources available on the local ICM or based on agents logged in to the local ICM. By using resource routing, a real-time call is routed to the most available ICM for the call type. Resource routing is accomplished through a CIRS. The *Message Care* software does not support a multisite environment. For more information on the multisite feature, see [Appendix A, Multisite Configuration](#).

User-to-User Information (UUI) feature In addition to passing customer information to Web-based applications, the Internet Call Center also provides the support to pass information to telephony applications through the UUI data field. This information can be used as input to a downstream telephony application.

Localization feature The *CentreVu* Internet Solution supports localization, or translations for multiple languages, and provides the resource files needed to support those languages.

Message Care can run in either J-Mode (Japanese operational mode) or R-Mode (English, German, French, Colombian Spanish, Brazilian Portuguese, or Italian operational mode). When operating in J-Mode, agents and supervisors may work in either English or Japanese.

Other languages can be supported by the Internet Call Center by providing additional resource files.

HTTP tunneling feature The ICC solution provides HTTP Tunneling to allow callers behind a firewall to contact your call center. This extends the reach of an Internet Call Center by allowing business-to-business interactions to occur between corporate firewalls regardless of locations or number. To administer the HTTP Tunneling feature, contact the Lucent Helpline number: 1-800-242-2121.

Sample Web pages feature The ICC solution provides a number of sample Web pages that you can customize to fit your call center needs. For example, the ICC solution provides a sample Web page that includes Canned Phrases (enables the agent to quickly send text without having to type) and Agent Scripting (allows you to put links on agent Web pages).

To see the sample Web pages, enter the following URL: *http://<icm_server_name>/icc/icc_samples.html*

- Encryption feature** The following ICC messages to and from the applets are encrypted:
- Text chat
 - URLs sent during escorted browsing
 - Displayed messages
 - Other application control message not visible to the agent or caller
- Internet telephony (voice) is not encrypted.
- Email message detection feature** The *Message Care* solution provides email message detection in the mailboxes of your choice (must be Post Office Protocol [POP3]-compliant).
- Auto-acknowledgment feature** The *Message Care* solution provides auto-acknowledgment for incoming email messages. See [Considerations for specifying auto-acknowledgment text \(2-54\)](#) for more information about auto-acknowledgments.
- Message storage feature** Message storage in an Open Database Connectivity (ODBC)-compliant database (Microsoft Corp. *Microsoft SQL-Server 7*).
- Virtual Conference feature** The Virtual Conference feature allows Web-based callers to join a conference that is hosted by a presenter. With such a conference, a presenter pushes Web pages to all the caller's browsers participating on the conference. Features such as text chat are also available.
- Service Observing feature** The Service Observing feature allows a supervisor to observe a real-time call much like a supervisor would observe a PSTN call. To observe a real-time call, the supervisor must log in to the ICM using the same skills as the agent. The supervisor (service observer) appears as a conferee on the real-time call and can observe all chat, Web pushes, and so forth.
- Direct Agent Dialing feature** The Direct Agent Dialing feature allows a caller to specify that their real-time call be directed to a specific agent. There are many instances where a caller may want to speak to a specific agent. One such instance may be for a caller to continue communicating with the same agent concerning an ongoing problem.
- To use the Direct Agent Dialing feature, a caller must know the ID of the agent. On the “Call Us” Web page, the caller enters the agent's ID and the real-time call is directed to the agent associated with the ID. For information on how to implement the Direct Agent Dialing feature, contact the MACS.



What do you need to make the *CentreVu* Internet Solution work?

Overview The *CentreVu* Internet Solution provides several media access types to connect your call center with the Internet. The media access type(s) you purchased for your *CentreVu* Internet Solution determine the *CentreVu* Internet Solution hardware and software required. The information in this section is based on the *CentreVu* Internet Solution standard configuration. For information about the standard configuration, see [Standard configuration illustration \(2-3\)](#).

Complete details for each hardware and software component required for the *CentreVu* Internet Solution can be found later in this section.

The following table displays the different media access types and the Lucent Technologies-provided hardware and software required to use each type of media.

Media Type	Software Required				Hardware Required	
	ICM/CTI	<i>CentreVu</i> Computer Telephony	I C C	M C	<i>DEFINITY</i> ECS	I T G
IP voice and chat	X	X	X	–	X	X
*Chat only	X	X	X	–	X	X
PSTN call-back	X	X	X	–	X	–
Email and fax	X	X	–	X	X	–

Note: ICC=Internet Call Center software and MC= *Message Care* software.

*Chat-only calls using the *DEFINITY* ECS Phantom Call feature does not require an ITG.

What versions of Lucent-provided software and hardware do you need?

The following list summarizes the versions of Lucent Technologies-provided hardware and software required to realize a *CentreVu* Internet Solution that exercises all media access types. However, your configuration will determine exactly what hardware and software components you need. See the table in “[What do you need to make the CentreVu Internet Solution work? \(1-13\)](#)” section to determine what you need from Lucent Technologies.

- Internet Telephony Gateway (ITG)—Release 4.1
- *DEFINITY* ECS—Generic 3 Release 6.3 and R7.1. If you do not install the *Message Care* software and have an ITG, then G3V5 can be used.
- Internet Call Manager (ICM) software and the Computer Telephony Integration (CTI) software—Release 4.1
- *CentreVu* Computer-Telephony for Microsoft Corp. *Windows NT*® software (*CentreVu* CT)—Release 3.10 Version 3.0 or greater
- *Message Care* software—Release 4.1
- *CentreVu* Call Management System (CMS) and *CentreVu* Supervisor—*CentreVu* CMS Release 3 Version 5ai.f or greater and *CentreVu* Supervisor BJ EDI load or greater
CentreVu Call Management System (CMS) and *CentreVu* Supervisor are required for Internet Call Center (ICC) reports.
- Internet Call Center software—Release 4.1
- For remote diagnostic access, Symantec Corporation *pcANYWHERE*®

What other software and hardware do you need?

The following list summarizes the versions of additional hardware and software that is required but not provided by Lucent Technologies. However, your configuration will determine exactly what hardware and software components you need.

- Microsoft Corp. *Microsoft SQL-Server* 7.0 with Service Pack 1 (for *Message Care*)
 - JRun Pro 2.3 from LiveSoftware—JRun runs on the ICM and provides the servlet engine.
 - Agent desktop requirements
-

- The following components are needed:
 - An operating system—see [Agent requirements \(1-29\)](#) for information about the supported operating systems.
 - An Internet browser—see [Agent requirements \(1-29\)](#) for information about the supported Internet browsers.
 - Caller desktop requirements (for real-time calls only)
 - The following components are required:
 - An operating system—see [Caller requirements \(1-30\)](#) for information about the supported operating systems.
 - An Internet browser—see [Caller requirements \(1-30\)](#) for information about the supported Internet browsers.
 - Microsoft Corp. *Microsoft NetMeeting* 2.0 or greater to provide Internet telephony capability
 - A single telephone line for Internet voice, text chat, and non-collaborative callback. A second phone line is required to support collaborative PSTN callback (callback and collaborate).
 - Access to the Internet—see [Caller requirements \(1-30\)](#) for information about Internet access.
 - Mail Server (for the *Message Care* software)—Post Office Protocol 3 (POP3)-compliant over a Transmission Control Protocol (TCP/IP) stack. To handle outgoing messages, the server must also be Simple Mail Transfer Protocol (SMTP)-compliant.
 - NT server for the ICM/CTI software and the ICC software—300 MHz Intel Corporation *Pentium*® II-based PC with at least 128MB of RAM, a CD-ROM drive, and a Network Interface Card. The NT server should be running the Microsoft Corp. *Microsoft Windows NT* 4.0 operating system (with NTFS file system) with service pack 4 or greater and Microsoft Corp. *Microsoft Internet Information Services* (IIS) Version 4 or greater.
 - NT server for the *CentreVu* Computer-Telephony software and the *Message Care* software—450 MHz Intel Corporation *Pentium* II-based PC with at least 256MB of RAM, a 10-GB hard-disk drive, a CD-ROM drive, and two Network Interface Cards. The NT server should be running the Microsoft Corp. *Microsoft Windows NT* 4.0 operating system (with NTFS file system) with service pack 4 or greater and Microsoft Corp. *Microsoft Internet Information Services* (IIS) Version 4 or greater.
-

Important! *Message Care* can reside on the same server as the ICM, CTI, and/or *CentreVu CT*.

Do not install Active Desktop on your NT server in which *Message Care* will reside.



Internet Telephony Gateway (ITG)

Description The ITG is an industrial grade, Intel Corporation *Pentium*-based PC running Lynx Real-Time Systems, Inc. *LynxOS* (a X/Open Company Limited *UNIX*® -compatible real time operating system). The ITG receives caller requests and launches calls into the call center over an Integrated Services Digital Network-Primary Rate Interface (ISDN-PRI) channel to the *DEFINITY* ECS.

The ITG is required for the Internet voice media access type and is supplied by Lucent Technologies. It contains one or more voice processing boards to convert between packetized Internet voice and circuit-switched voice used by the *DEFINITY* ECS.

The ITG may also be used to carry text and PSTN callback calls on earlier versions (prior to 6.3) of *DEFINITY* ECS.

See the *Internet Telephony Gateway Technical Reference Issue 2*(555-027-212) document for details.



DEFINITY ECS

Overview The *DEFINITY* ECS is a digital switch that processes and routes voice communications. It also houses sophisticated Automatic Call Distribution (ACD) software that allows any voice terminal (telephone) on the *DEFINITY* ECS to act as a call center agent terminal.

The *CentreVu* Internet Solution utilizes the *DEFINITY* ECS's advanced ACD features to process and route Internet and message calls to the appropriate endpoints. The *CentreVu* Internet Solution uses the Adjunct/Switch Applications Interface (ASAI) feature on the *DEFINITY* ECS by way of a Java Telephony Application Programming Interface (JTAPI) to integrate the data networking portions of the *CentreVu* Internet Solution with the *DEFINITY* ECS CTI. This interface provides capabilities such as call progress monitoring, third party call control, and agent state changes (log in, log out, AUX mode, and so on).

There are *CentreVu* Internet Solution administration requirements for the *DEFINITY* ECS. For administration requirements, see [Chapter 5. Administration](#).

How the *DEFINITY* ECS works with the *CentreVu* Internet Solution

- 1 Agent login—the functionality of the *DEFINITY* ECS can be described in the context of agent operations during *CentreVu* Internet Solution calls. To staff a *CentreVu* Internet Solution agent position, an agent uses a browser to access a login Web page, then enters the Expert Agent Selection (EAS) agent ID and the physical extension where the agent will take calls. The agent submits the completed form to the ICM server. The ICM server sends a login request containing the agent's ID and extension to the *CentreVu* Computer Telephony server, which uses the ASAI to log the agent in. This lets the *DEFINITY* ECS know about the agent.
-

-
- 2** ICM receives call—when the ICM server receives a call request from the Internet, it launches the call to the *DEFINITY ECS* using the Vector Directory Number (VDN) extension specified. The *DEFINITY ECS* uses vectoring to process the call and uses EAS skills to deliver the call to an agent's voice terminal.

 - 3** Reporting progress—throughout this process the *DEFINITY ECS* is reporting the progress of the call to the *CentreVu* Computer-Telephony server. When the agent answers the call, the agent's phone extension is sent to the ICM server by way of the *CentreVu* Computer-Telephony server so that the ICM server knows which agent to connect to the Caller Control Window.

 - 4** Disconnecting the call—once a call is connected, the agent can disconnect the call using different methods. The following list explains what happens during each disconnect method:

 - If the agent hangs up using the voice terminal, the *DEFINITY ECS* notifies the ICM server by way of the *CentreVu* Computer-Telephony server that the call has been dropped.
 - If the agent drops the call through the Agent Control Window or the Close or Suspend button (for message calls), the ICM server notifies the *DEFINITY ECS* by way of the *CentreVu* Computer-Telephony server that the call has been dropped.

 - 5** Log out—the agent can log out using different methods. The following list explains what happens during each logout method:

 - When the agent logs out by way of the browser, the ICM server notifies the *DEFINITY ECS* through the *CentreVu* Computer-Telephony server by issuing a logout request.
 - If the agent logs out by way of the *DEFINITY ECS* using the voice terminal, the ICM server is notified through the *CentreVu* Computer-Telephony server.
-

DEFINITY ECS requirements for real-time communications

Real-time communications (ICC) requires the following *DEFINITY* components:

- *DEFINITY* ECS G3V5 or greater (if ASAI Phantom calls are used, then *DEFINITY* ECS R6.3 is needed)
- Expert Agent Selection (EAS)
- ASAI software enabled (to support the *CentreVu* Computer Telephony server)
- Primary Rate Interface (PRI) hardware and software (if the *DEFINITY* ECS connects to an ITG)
- LAN Gateway or the MAPD board with LAN Gateway software

Enabling the use of ASAI phantom calls for text chat and callbacks will avoid using PRI resources. This is because the calls are launched using ASAI, and are kept completely internal to the *DEFINITY* ECS. Voice calls still require the use of PRI B channels because there is an audio component which must come from the ITG over the *DEFINITY* PRI trunks.

DEFINITY ECS requirements for messaging

Messaging (*Message Care*) requires *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 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 or MAPD for the ASAI link to the *CentreVu* Computer-Telephony software.
-

Dial plan

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 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*.

Message handling vectors

CTI Interactions are possible; for more information, please see [Vectors \(2-42\)](#).

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 [Vectors \(2-42\)](#).

It is important to include traffic and CTI 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 messaging 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 [Design considerations for Message Care \(2-32\)](#).



Mail server

Description 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. Most leading mail servers provide both of these protocols. However, if necessary they can be on two separate mail servers.

An excellent example of such a server is the *Intuity AUDIX* server with Internet Messaging.



Internet Call Manager (ICM) and Computer-Telephony Integration (CTI) process

Description The ICM and CTI are software components which reside on an NT server. The ICM and the CTI exchange information about agent sessions (login, logout, agent idle, and so forth) and call (real-time and message) requests. For example, the ICM updates the Agent Control Window based on agent login status received from the CTI process. If an agent logs in to the *DEFINITY* ECS successfully, the CTI process informs the ICM and the ICM then updates the Agent Control Window with a “Login was successful” message.

Function of the ICM software

In general, the ICM provides the following functions:

- Maintains and monitors agent sessions
- Downloads the Agent and Caller Control Windows and maintains their connections
- Updates the Agent Control Window based on agent login status
- Updates Agent and Caller Web pages based on call events
- Provides *CentreVu* Internet Solution capabilities such as escorted browsing once the caller and agent are connected

Function of the CTI software

In general, the CTI process provides the following functions:

- Logs agents in to the *DEFINITY* ECS
- Launches Internet and message calls
- Monitors Internet and message calls and reports events such as agent answer, drop call, and transfer back to the ICM



CentreVu Computer-Telephony for Windows NT

Description *CentreVu* Computer-Telephony (Release 3.10 Version 3.0 or greater) is a software application that runs on a server to track and associate various elements of calls between callers and agents. *CentreVu* Computer-Telephony (*CentreVu* CT) has an open architecture, based on the European Computer Manufacturers Association (ECMA) Computer Supported Telephony Application (CSTA) international standard, which allows customers to employ the communications system and Computer-Telephony Integration software that best meets their needs. *CentreVu* CT enhances the functionality of existing communications and computer equipment.

The CTI process interfaces with the *CentreVu* CT server to monitor call progress information within the call center domain (and then passes this information to the ICM) and to launch calls through the call center.

Important! *CentreVu* CT can reside on the same server as the ICM, CTI, and/or *Message Care*.

Major components of *CentreVu* CT

Major components of *CentreVu* CT include the following:

- The *CentreVu* CT server—the *CentreVu* CT server acts as a conduit between individual client/server applications and the *DEFINITY* ECS. It routes return messages from the *DEFINITY* ECS to the client/server that expects them. It also ensures that agents log in using a valid login ID and password and that they have the required permissions to perform whatever action they are requesting.
 - The Security Database (SDB)—this *CentreVu* CT database stores information about the devices it controls. Telephony Services uses this information for validation. Administrators can control access to *CentreVu* CT by placing restrictions on the types of requests. Telephony Services Release 2.32 uses Btrieve for the Security Database engine (the underlying software that controls data).
-

- Telephony Services Library (TSLIB)—the TSLIB is a set of functions that act as an interface between client or server applications and the *CentreVu* CT server.
- The Private Branch eXchange (PBX) driver resides on the *CentreVu* CT server. It receives TSAPI messages from the *CentreVu* CT server and routes them to the PBX over CTI links, performing any necessary conversions in the process. It receives messages from the *DEFINITY* ECS, reformats them, and sends them back to the *CentreVu* CT server. The PBX driver is supplied by a PBX vendor.

Direct connections between other *CentreVu* Internet Solution components and the *CentreVu* CT server include:

- TCP/IP to the CTI process
- TCP/IP to the *DEFINITY* ECS



Message Care software

Description The *Message Care* software (Release 4.1) builds upon the existing functions of a call center to include receipt, distribution, tracking, and reports of email and fax messages (as attachments to email).

The *Message Care* software, includes the following:

- Support for Microsoft Corp. *Microsoft SQL-Server 7.0*
- A Maintenance Monitor to monitor critical system resources
- 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. These Web pages and scripts support seven languages.
- 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 control engine
- Sun Microsystems, Inc. *Java* applet that downloads to the agent's desktop for login and PagePop
- The *Message Care* server and its associated CTI process that can be shared with the ICC application

Important! *Message Care* can reside on the same server as the ICM, CTI, and/or *CentreVu CT*.

For remote diagnostic access, Symantec Corporation *pcANYWHERE* Release 8 or greater and a 28.8 KiloBytes per second or faster modem and analog line is required.



Internet Call Center (ICC) software

Description The ICC software contains the following:

- Sample Web pages such as Agent Idle page, Welcome page, and so forth
- ICC administration Web pages
- Translations for all sample Web pages in the seven supported languages
- Web guidelines documentation

The ICC software should be installed in the same folder as the ICM.



CentreVu Call Management System (CMS) and Supervisor

Description The Internet Call Center (ICC) offer optionally supports the *CentreVu* Call Management System for the Internet (ICMS) software. ICMS collects ICC-specific data such as Web page hits, call requests when there are no ISDN-PRI trunks available, call requests when calls are terminated by vector processing, voice call requests when there are no resources available, and text chat and callback requests when there are no ASAI phantom extensions (if enabled).

ICMS must be installed on a *CentreVu* CMS R3V5 (with load r3v5ai.f or later), R3V5u (with load r3v5ud.a or later), or R3V6. *CentreVu* CMS for ICC must be on a Sun Microsystems, Inc. *Sun SPARCserver*[™] or Ultra SPARC server running Sun Microsystems, Inc. *Solaris* which is LAN-connected. *CentreVu* Supervisor R3V5 or R3V5u with load bj.02 or R3V6 with a load greater than bj.02, and CMS provide a call center with a series of reports on Internet-initiated call activity.

CentreVu Supervisor with the Report Designer option is required for *Message Care* CMS custom reports.



Agent requirements

What is needed? The agent's environment consists of the following:

- A desktop on the LAN with one of the following operating systems: Microsoft Corp. *Microsoft Windows 95*, Microsoft Corp. *Microsoft Windows 98*, or Microsoft Corp. *Windows NT 4.0* with Service Pack 4. ICC also supports the following operating systems: Apple Computer, Inc. *Mac OS 7.1* or above, Sun Microsystems, Inc. *Solaris*, OS/2, or Sun Microsystems, Inc. *SunOS*.
- Microsoft Corp. *Microsoft Internet Explorer 4.x* or greater or Netscape Communications, Inc. *Netscape Navigator 4.06* or greater, with Sun Microsystems, Inc. *Java* and JavaScript enabled.

Note that Microsoft Corp. *Microsoft Internet Explorer 4.x* and above and Netscape Communications, Inc. *Netscape Navigator 4.x* and above currently support all ICC functionality except the Send Page button. You can circumvent this problem by implementing one or more of five methods. To learn about the different methods, go to [Appendix C, Overcoming feature limitations due to browser security restrictions](#).

For messaging, agent browsers must be administered 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. To ensure that each Web page displayed contains current information, browsers for the *Message Care* agent should turn caching off.

- A telephone associated with the *DEFINITY* ECS call center. PC speakers and microphones are not required for Internet voice calls because voice is carried through the telephone.
- For messaging, a virus checker is required to check incoming file attachments for viruses.
- For messaging, a fax viewer is required to view faxes.



Caller requirements

What is needed? For real-time calls, the caller's environment must have the following:

- A desktop with one of the following operating systems: Microsoft Corp. *Microsoft Windows 95*, Microsoft Corp. *Microsoft Windows 98*, Microsoft Corp. *Windows NT 4.0*, Apple Computer, Inc. *Mac OS 7.1* or above, Sun Microsystems, Inc. *Solaris, OS/2*, or Sun Microsystems, Inc. *SunOS*.

Systems running Apple Computer, Inc. *Mac OS 7.1* or above, Sun Microsystems, Inc. *Solaris, OS/2*, and Sun Microsystems, Inc. *SunOS* currently support text chat, escorted browsing and PSTN callback but not Internet telephony (because Microsoft Corporation *NetMeeting* is not available on those platforms).

- A Sun Microsystems, Inc. *Java*-enabled Web browser, such as Microsoft Corp. *Microsoft Internet Explorer 3.02* or greater, or Netscape Communications, Inc. *Netscape Navigator 3.0* or greater (Sun Microsystems, Inc. *Java* and JavaScript must be enabled).

Note that Microsoft Corp. *Microsoft Internet Explorer 3.02* and above and Netscape Communications, Inc. *Netscape Navigator 3.03* and above currently support all features except the Send Page button. You can remedy this problem by implementing one or more of five methods. To learn about the different methods, go to [Appendix C. Overcoming feature limitations due to browser security restrictions](#).

- Multimedia components (a sound card, headset or speakers, and a microphone) to enable Internet voice.
- A single telephone line for Internet voice, text chat, and non-collaborative callback. A second phone line is required to support collaborative PSTN callback (callback and collaborate).
- Access to the Internet through a modem or other network connection. Internet voice sessions require a connection speed of 28.8kbps; text chat sessions require 14.4kbps.
- Microsoft Corp. *Microsoft NetMeeting 2.0* or greater software to provide Internet telephony capability.

The Microsoft Corp. *Microsoft NetMeeting* software is available free of charge on the following Microsoft Corp. *Microsoft* web site:
<http://www.microsoft.com/netmeeting>.



How does the CentreVu Internet Solution work for real-time calls?

Typical scenario for a real-time call

- 1** Agent login—in a typical ICC facility, agents log in to the call center by way of a Web page, using a Sun Microsystems, Inc. *Java*-enabled Web browser on a desktop. A Sun Microsystems, Inc. *Java*-based Agent Control Window is launched on the agent's desktop to complete the login process and, later, to provide an interface for text chat, escorted browsing, and HTML forms sharing during calls. After the agent logs in, an association is made by the ICM between the agent's phone, the Web browser, and the Agent Control Window.

See [Chapter 7. How to process Internet calls](#) for details on how ICC works from an agent's point of view.

- 2** Consumer calls the call center—a typical call starts with a person surfing the Web who discovers a need to contact the call center and selects a Call Us button on a Web page.

The caller selects a type of call to request:

- Voice and chat—an Internet telephony call with text chat,
 - Chat only—a text chat call with no voice,
 - Call back only—to have an agent call back using a regular telephone line (escorted browsing is not available with this option), or
 - Callback and collaborate—to establish an escorted browsing session and at the same time, have an agent call the caller back using a regular telephone line (this type of request requires that the caller has an available phone line that is not being used). This option is useful for callers that are not equipped to handle Internet telephony calls (that is, they do not have Microsoft Corp. *Microsoft NetMeeting 2.0* or greater software, or multimedia components, or the firewall does not allow Internet Telephony). The caller's desktop must meet certain requirements in order to place an Internet telephony or text chat call successfully; see [Caller requirements \(1-30\)](#) for more information.
-

-
- 3** If the caller requests a call type other than call back only, a Caller Control Window is downloaded to the caller's desktop. The Caller Control Window provides call progress status, enables the text chat, escorted browsing and HTML forms sharing functions, and allows the caller to end the call.
-
- 4** Agent receives call—the ICM initiates the call launch to the *DEFINITY* ECS (for a chat only call), where the call is queued, awaiting an available agent with ICC skills. If the real-time call is an Internet voice call, then the ITG launches the call to the *DEFINITY* ECS.

When an agent becomes available, the call is delivered to the agent's phone (for example, a *CALLMASTER* voice terminal). When the agent answers the phone, the *CentreVu* Computer- Telephony server sends a "call answered" message to the ICM server. The ICM server delivers a URL to the agent's browser by way of a PagePop, which displays information related to the call such as information entered by the caller. If administered, the ICM can also deliver a URL to the caller.

-
- 5** Communication between the Agent and the consumer begins—after the call is answered, the caller and agent communicate through the text chat box in their respective Control Windows and may share Web pages by means of the Escorted Browsing feature. If the call is an Internet telephony call, they may also talk to each other, the agent using a phone and the caller using a headset or microphone and speakers connected to the desktop. With the callback and collaborate option, both the agent and the consumer are able to talk through their phones and share Web pages (escorted browsing). If only a callback is requested, a window opens on the agent's desktop displaying the phone number for the callback. The agent has the opportunity to screen and edit this number (for example, prefixing the number with a "1" for toll dialing), then click a button to launch a voice call over the PSTN to the caller.
-

6 Call statistics—during a session, statistics for ICC calls are collected using *CentreVu* CMS. In addition, page hits on ICC Web pages and other ICC-related statistics are collected on the *CentreVu* CMS server.

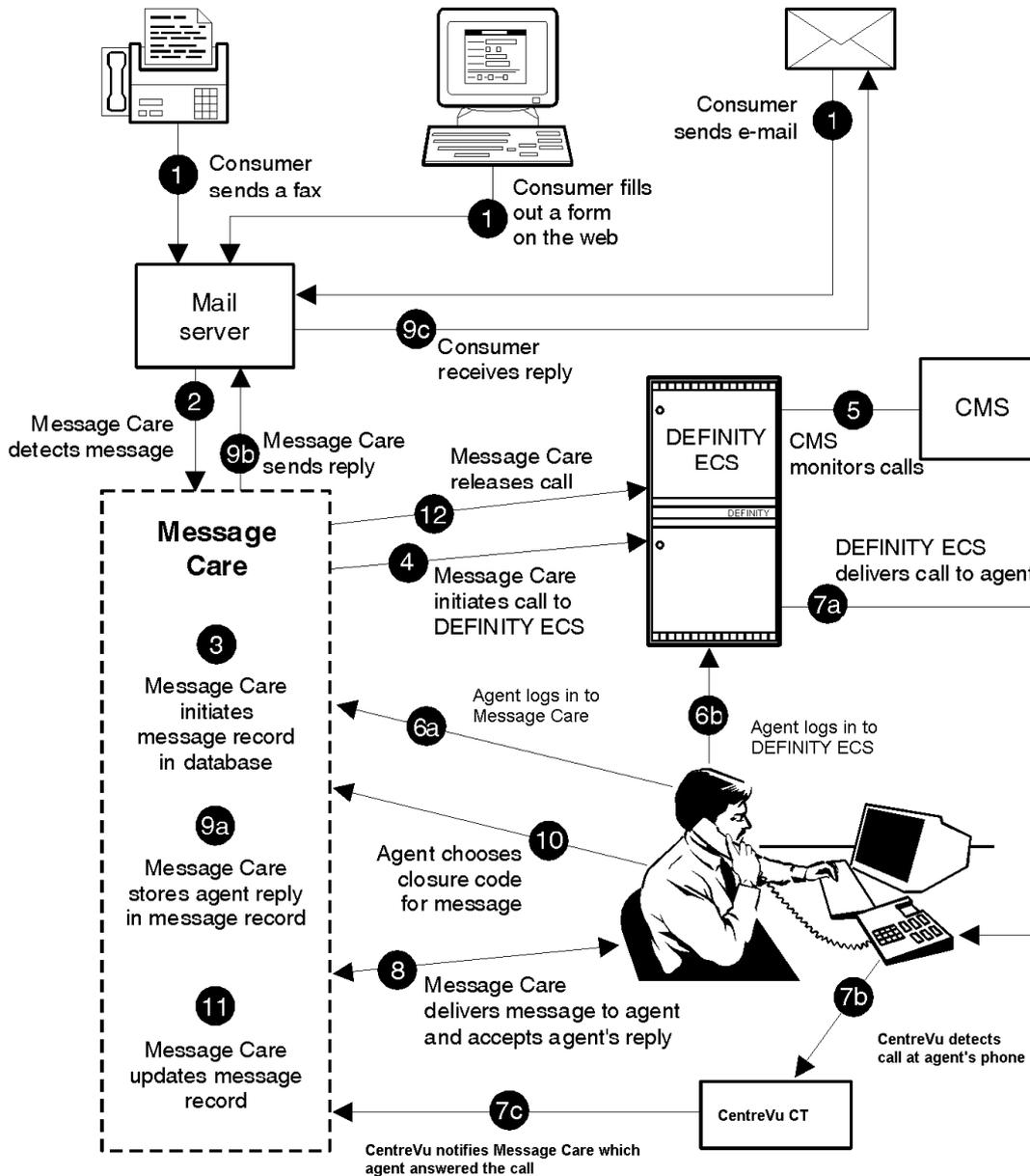
7 End session—either party has the capability to end the session.



How does the CentreVu Internet Solution work for messaging?

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

Process diagram The following diagram illustrates the message handling flow process:



Typical scenario for messaging

-
- 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 free-form 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 acknowledgment to the consumer, indicating that the message has arrived and provides the acknowledgment with a tracking number.

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.

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

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.

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 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, *CentreVu* CT 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 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:
- The *Message Care* software supplies the agent's browser with the 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. The Web page also presents the tools necessary to compose a response.
 - 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. 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.
 - The agent handles the message, using the controls supplied on the Web page that appears.
-
- 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.
-

10 According to customer supplied closure codes, the agent selects a closure code for the message. 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 updates the message call.

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



What is localized?

Overview The *CentreVu* Internet Solution supports the following languages:

- US English (en-US)
- German (de)
- French (fr)
- Colombian Spanish (es-CO)
- Brazilian Portuguese (pt-BT)
- Italian (it)
- Japanese (ja)

To support Japanese in ICC, you must ensure the following:

- The ICM server must be running the Japanese version of Microsoft Corp. *Windows NT* to support Japanese fonts.
- Agents and callers wanting to use Japanese must run the 4.0 Japanese versions of Netscape Communications, Inc. *Netscape Navigator* or Microsoft Corp. *Microsoft* Internet Explorer because earlier versions of Netscape Communications, Inc. *Netscape Navigator* or Microsoft Corp. *Microsoft* Internet Explorer do not support Sun Microsystems, Inc. *Java* code that correctly handles Japanese characters.
- The agent's workstation and the caller's workstation must have a Japanese operating system.
- Non-Japanese callers can communicate with a Japanese *CentreVu* Internet Solution even though the caller's workstations cannot display Japanese characters. In this situation, communication takes place in another language.

ICC provides sample Web pages and scripts translated into the supported language. You can locate these files in the */itg/icc/language-code* folders on the ICM server.

To support Japanese in *Message Care*, you must ensure the following:

- The *Message Care* server must be running the Japanese version of Microsoft Corp. *Windows NT* to support Japanese fonts.
- Agents wanting to use Japanese must run the 4.0 or 5.0 Japanese versions of Microsoft Corp. *Microsoft* Internet Explorer or the 4.06 or 4.60 Japanese versions of Netscape Communications, Inc. *Netscape Navigator*.
- The agent's workstation can be a Japanese or an English operating system. If the agent uses an English work station while *Message Care* is in J-mode, then the agent's workstation must have Japanese fonts.

What is translated? The following list provides the information that is translated:

- All buttons and labels on the Agent Control Window and Caller Control Window
 - Most user-visible messages between the ICM Server and Control Windows
 - *CentreVu* Supervisor ICC reports
 - ICC sample Web pages
 - *Message Care* Web page elements
 - The following *Message Care* Web page elements are translated:
 - Labels and help pages (for example, icon and button labels)
 - Message state (for example, Overflowed and Launched)
 - Message events in the message's history (for example, auto-acknowledgments sent and failed and original reply sent)
 - The selections in the “Attach message file(s) from” field located on the Reply and Forward Web pages.
 - Timestamp information (for example, dates). *Message Care* displays dates numerically in either a *month/day/year* or *day/month/year* format. In addition, a 24 hour clock notation is used for all displayed times.
 - *Message Care* Agent Web page error messages
 - *Message Care* report selection options (for example, report names and time parameters)
-

- *Message Care* supports displaying the text component of a received email message in one of the supported languages or in an ISO-8859-1 language. For example, *Message Care* will display a French received message as French assuming the agent's PC can support the French font set.
- Field entries on the Administration Web pages support languages.

What is not translated? The following list provides the information that is not translated:

- ITG error messages
- *Message Care* administration error messages
- *CentreVu* Computer-Telephony server error messages
- ITG setup and administration screens
- Text-based *CentreVu* CMS ICC reports
- Text displayed in the Text Chat box on the Agent Control Window and Caller Control Window. This text is displayed in the same language in which it is typed.
- Text displayed in an email message. The language in which a message is created by a customer is the language for which the agent will see the message.
- Message labels such as "TRK #," "RE," and "FWD."
- *Message Care* administration Web pages
- The *Message Care* software supports spell checking for US English only.



Where can I get *CentreVu* Internet Solution assistance?

Offer assistance The Helpline phone number for all Lucent Technologies products is 1-800-242-2121. Call this number for help with *CentreVu* Internet Solutions. Be prepared to identify the offer you are calling about (for example, 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 13, Troubleshooting](#) information before you call. Many issues that can arise are easy to handle if you follow the instructions provided in the troubleshooting section.

CentreVu Internet Solution training considerations The following two methods of training are available for the *CentreVu* Internet Solution:

- Training job aids
- Onsite instructor-led training

Training job aids

Job aids are intended to be used for self-paced training. The job aid training package consists of ten agent job aids and one administration job aid. The agent job aid provides step-by-step instructions on how to process Internet calls and message calls. The administration job aid provides step-by-step instructions on how to administer the *CentreVu* Internet Solution.

Onsite instructor-led training

Onsite instructor-led training includes administration and agent instruction tailored toward meeting the needs of your call center. You can purchase and schedule onsite instructor-led training as part of the *CentreVu* Internet Solution installation process.

Other training available Training in a classroom, on a CD-ROM, or in a video format is available from Lucent Technologies for all other aspects of call center operations. The *CentreVu* Internet Solution is included as part of standard call center training.

For more information about training, contact Lucent Technologies on 1-800-255-8988.

Optional professional services Lucent Technologies provides various professional services offerings to assist with the *CentreVu* Internet Solution. Lucent Technologies has highly trained and experienced resources ready to work for you. If you are interested in the offers below, or want to inquire about other services, contact 1-800-4NetCare for details. These offers include the following:

Network Integration Services

This offer provides engineering assistance in planning, provisioning, and upgrading the *CentreVu* Internet Solution.

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

This offer provides the Lucent Technologies Network Consulting Group that 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

This offer provides the Lucent Technologies Advanced Data Networking Group that can engineer and provision industry-leading solutions from Lucent Technologies and other industry-leading data equipment providers. 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.



2 Prepare your call center for the *CentreVu*® Internet Solution

Overview

Purpose This section explains how to prepare your call center so that you can integrate the *CentreVu* Internet Solution quickly and effectively.

Audience This section is intended for installers, system administrators, or any other persons involved in connecting or installing hardware or software for the *CentreVu* Internet Solution. This includes Lucent Technologies' Technical Support organizations.

Contents The following information is described:

- [Standard configuration \(2-2\)](#)
- [How components are connected \(2-4\)](#)
- [Security \(2-15\)](#)
- [Firewall guidelines \(2-22\)](#)
- [Design considerations for Message Care \(2-32\)](#)

References The following documentation contains information relevant to the connectivity of the *CentreVu* Internet Solution:

- *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)*
- *DEFINITY*® ECS documentation
- *CentreVu* Computer-Telephony documentation



Standard configuration

Overview

Purpose The purpose of this section is to provide the recommended configuration for the *CentreVu* Internet Solution.

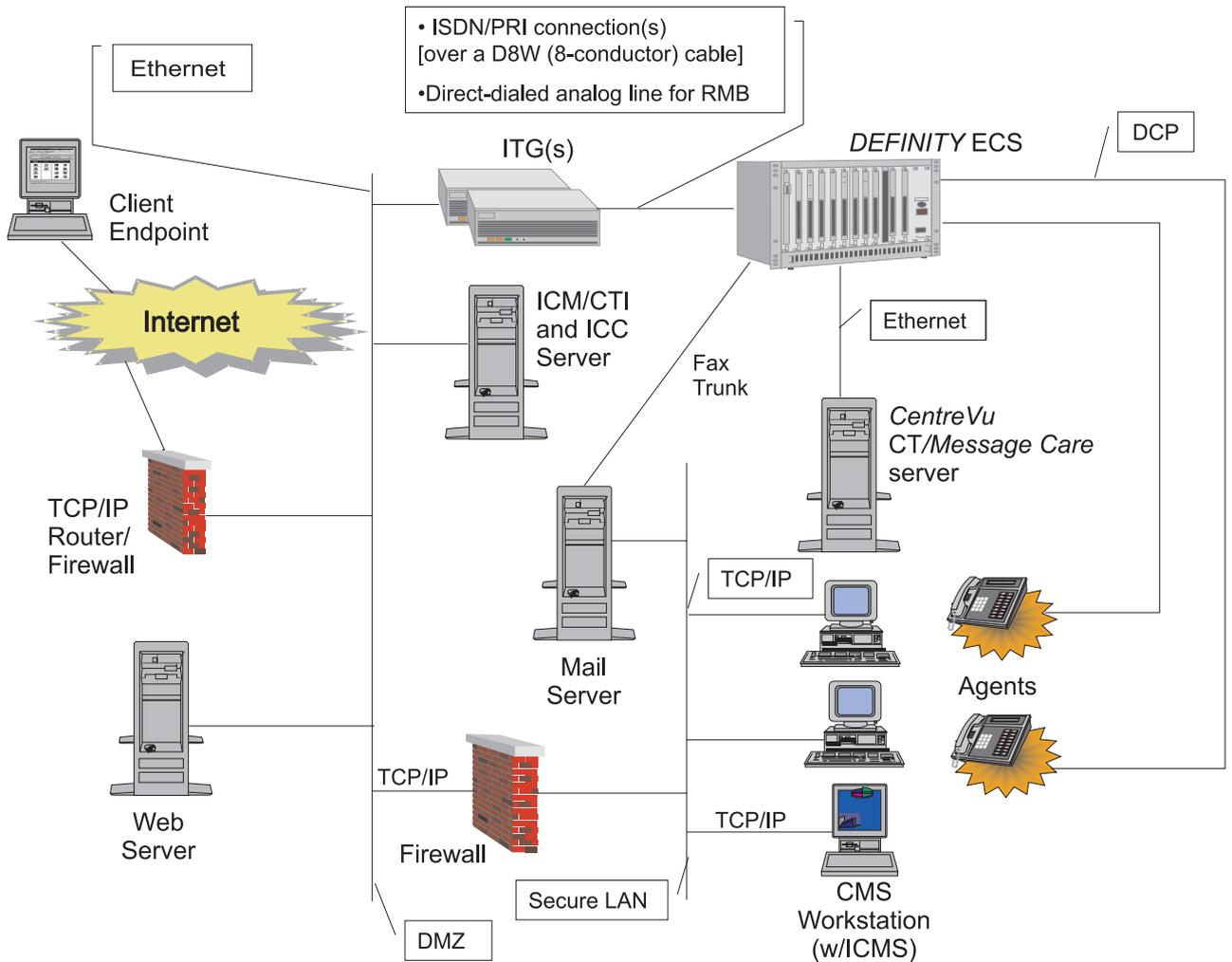
Contents The following information is presented:

- [Standard configuration illustration \(2-3\)](#)



Standard configuration illustration

Illustration The illustration that follows represents a typical *CentreVu* Internet Solution topology. Disregard any hardware or software that you did not purchase for your particular *CentreVu* Internet Solution.



How components are connected

Overview

Purpose The purpose of this section is to describe how to connect each *CentreVu* Internet Solution component.

Contents The following components are discussed:

- [DEFINITY ECS connectivity \(2-5\)](#)
- [Internet Telephony Gateway \(ITG\) connectivity \(2-6\)](#)
- [CentreVu Computer-Telephony for Windows NT® /Message Care server connectivity \(2-8\)](#)
- [Internet Call Manager \(ICM\) and Computer-Telephony Integration \(CTI\) process connectivity \(2-9\)](#)
- [Mail server \(1-22\)](#)
- [CentreVu Call Management System for the Internet \(ICMS\) connectivity \(2-11\)](#)
- [Ancillary CentreVu Internet Solution components connectivity \(2-12\)](#)



DEFINITY ECS connectivity

DEFINITY ECS connectivity The *DEFINITY* ECS connects to the *CentreVu* Computer-Telephony/*Message Care* server by way of a *DEFINITY* LAN Gateway card or a MAPD TN800 board with LAN Gateway software. This *DEFINITY* LAN Gateway card and the MAPD TN800 board provide a 10BASE-T connection to the *CentreVu* Computer-Telephony/*Message Care*™ server. If you are using the LAN Gateway card, you will need five available contiguous slots. These slots cannot be in carrier C of a multi-carrier cabinet, or in a carrier already containing a LAN Gateway or *DEFINITY AUDIX*® system. If you are using a MAPD TN800 board, three slots are required instead of five.

The *DEFINITY* LAN Gateway or MAPD board should not be connected to the *CentreVu* Internet Solution subnet or any other network. The Ethernet connection between the *DEFINITY* ECS and the *CentreVu* Computer-Telephony/*Message Care* server carries the *DEFINITY* ECS Adjunct/Switch Applications Interface (ASAI) message set, which should remain local and private to these two devices. The *CentreVu* Computer-Telephony/*Message Care* server terminates this message set and provides the standard JAVA Telephony Services Application Programming Interface (JTAPI) to the *CentreVu* Internet Solution subnet.

See the *DEFINITY Enterprise Communications Server, Installation, Administration, and Maintenance of CallVisor ASAI over the DEFINITY LAN Gateway (555-230-223)* document for complete details.

Planning a configuration An existing LAN Gateway card (or MAPD board) and/or an existing *CentreVu* Computer-Telephony/*Message Care* server may be used. However, discussions regarding security and interoperability of this design must take place prior to implementation. Such designs should be configured and technically assured by a Lucent Technologies Account team through normal channels for *CentreVu* Computer-Telephony/*Message Care* server support.



Internet Telephony Gateway (ITG) connectivity

ITG connectivity to the CentreVu Internet Solution

The ITG is connected to the *CentreVu* Internet Solution subnet through 10BASE-T or 100BASE-T Ethernet. This connection allows the ITG to communicate with the ICM server, the *CentreVu* Computer-Telephony/*Message Care* server, and the caller's PC (for Internet Voice calls).

ITG connectivity to the DEFINITY ECS

Through one or two ISDN-PRI connections (depending on the ITG configuration purchased), the ITG provides "PSTN-like" connectivity to the *DEFINITY* ECS call center. The ISDN-PRI connections are generally cabled from the *DEFINITY* ECS DS1 card (through a 356A adapter) directly to the ITG using a D8W (8-conductor) cable. If the distance exceeds the supported range, Channel Service Units (CSUs) may be required.

Requirements for this type of connection include the following:

- One ISDN-PRI DS1 circuit pack per ISDN-PRI (TN464 or TN767, depending on system type and configuration). If you are using an E1 line, then the *DEFINITY* ECS requires a TN464 circuit pack and the hardware switch on the circuit pack must be set to 32.
- One 356A adapter per ISDN-PRI (if the ITG and *DEFINITY* ECS are co-located within direct cabling distance). See the *DEFINITY Communications System Implementation(555-230-655)* document for details. Otherwise, Channel Service Units (CSUs) must be used on both the *DEFINITY* ECS side and the ITG side, along with appropriate cabling for the *DEFINITY* ECS-to-CSU connection and the ITG-to-CSU connection.
- ISDN-PRI must be enabled on the *DEFINITY* ECS.

ITG and the Remote Maintenance Board (RMB) connectivity

The ITG also requires a direct-dialed analog line from the *DEFINITY* ECS for the Remote Maintenance Board (RMB). This line can be provided from the *DEFINITY* ECS or through a dedicated line from the local exchange carrier. This connection allows off-site engineers to provision, upgrade, and troubleshoot the ITG.

Planning an ITG server configuration

The ITG is equipped with Voice Processor Cards, an ISDN-PRI interface card (supporting one or two T-1 or E1 network connections), an Ethernet 10/100 Network Interface Card (NIC), and an RMB. Environmental requirements and technical specifications are available in the *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)* document. You may increase the call-handling capacity of the ITG (up to system limits) by purchasing the appropriate hardware and software.

ITG server requirements are as follows:

- The location of the ITG server should allow a half-duplex Ethernet 10BaseT or 100BaseT connection to your TCP/IP LAN. The ITG Server must be able to communicate with the ICM server and *CentreVu* Computer-Telephony/*Message Care* server.
- There must be access to the Internet (probably through your corporate firewall) from the ITG server. Lucent Technologies can help you plan your firewall configuration to maintain your secured corporate network.
- A CD-ROM drive must be accessible to the ITG and ICM server.
- A direct-dialed analog line is required for the RMB in order for Lucent Technologies to provide remote maintenance support.
- The *DEFINITY* ECS must support ISDN-PRI and have DS-1 card(s) available to connect to the ITG Server.
- Each ITG is configured to support ICC offer-based configurations supporting up to 60 Internet voice calls.

Refer to the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for detailed information about ordering, configuration and installing the ITG. Your Lucent Technologies Account team helps you design, order, and configure the ITG server in accordance with your business' unique needs and requirements. This team works closely with the Lucent Technologies MultiMedia Applications Customer Support (MACS) team who approves all ITG configurations before an order is placed.



CentreVu Computer-Telephony for Windows NT® /Message Care server connectivity

Connectivity The *CentreVu* Computer-Telephony for Microsoft Corp. *Windows NT/Message Care* server has two network interface cards (NICs) to enhance security between the *DEFINITY* ECS and the data network. The NIC used to connect the *CentreVu* Computer-Telephony/*Message Care* server to the *DEFINITY* LAN Gateway card must be a 10BASE-T NIC. The other NIC may be either a 100BASE-T or 10BASE-T card. It provides the standard Telephony Services Application Programming Interface (TSAPI) to the *CentreVu* Internet Solution subnet.



Internet Call Manager (ICM) and Computer-Telephony Integration (CTI) process connectivity

Connectivity The ICM/CTI server communicates using TCP/IP over a socket on the LAN. The ICM/CTI server needs an Ethernet NIC and wiring to the LAN. The CTI process may reside on the same server as the *CentreVu* Computer-Telephony and *Message Care* software.

The CTI process provides an interface between the Internet domain and telephony functions of the switching domain of the call center. The CTI process interfaces with the ICM to pass incoming Internet requests to the call center and to pass call center status and responses back to the ICM. The CTI process interfaces with the *CentreVu* Computer-Telephony/*Message Care* server to monitor call progress information within the call center domain and launch calls through the call center.



Mail Server connectivity

Connectivity The mail server and *Message Care* server are connected and communicate via the LAN. To receive faxes on the mail server, a hardware connection is needed to answer the incoming fax call and collect an electronic image format of the fax. If *Intuity*® *AUDIX*® is the fax server, incoming trunk lines from the PSTN connect to the *DEFINITY* ECS. The fax server and *DEFINITY* ECS connect using analog line ports and a signaling link. Other fax servers sometimes support direct connectivity between the PSTN and modem boards in the fax server. In this configuration, the *DEFINITY* ECS is bypassed and the *Message Care* server connects to the mail server via the LAN (as always).



CentreVu Call Management System for the Internet (ICMS) connectivity

Connectivity *CentreVu* Call Management System (CMS) is software that resides on a Sun Microsystems, Inc. *Sun*® workstation running the Sun Microsystems, Inc. *Solaris*® operating system. The CMS workstation is equipped with a LAN NIC to provide LAN-based supervisory terminals and/or connectivity to ICC components for the collection of statistics. The CMS collects call data from the *DEFINITY* ECS and creates management reports.

ICMS software is an add-on package to the CMS that collects Internet Call Center data such as Web page hits, call requests when there are no ISDN-PRI trunks available, call requests when vector processing disconnects or returns forced busy, and voice call requests when there are no resources available to perform the Internet Voice-to-PSTN Voice transcoding. □

Ancillary CentreVu Internet Solution components connectivity

Overview The components discussed below are considered ancillary. They play an important role in providing transport and protection of real-time and message calls but do not contribute directly to feature functionality of the CentreVu Internet Solution.

LAN connectivity The LAN, composed of hubs, routers, and possibly switches, is used to connect CentreVu Internet Solution components, including agent PCs. CentreVu Internet Solution components, (apart from the *DEFINITY* ECS connection to the CentreVu Computer-Telephony/*Message Care* server, the CMS, and the ITG connection to the LAN) can be of any type. The *DEFINITY* ECS connection to the CentreVu Computer-Telephony/*Message Care* server is 10BASE-T only Ethernet and the ITG connection to the LAN is either 10 or 100 Base-T half duplex Ethernet. The LAN must provide dependable transport between agent PCs, the Internet, the Web server, and CentreVu Internet Solution components. CentreVu Internet Solution communications between the agent and the ICM server use TCP connections that must remain up for the duration of an agent's logged-in time.

Lucent Technologies' Advanced Data Networking specialists or NetCare Services can assist in provisioning and tuning data networks. Contact your Lucent Technologies Account team for information and assistance.

WAN connectivity The WAN, composed of routers and possibly switches, is used to connect the Internet to CentreVu Internet Solution components. It may also be used to connect agents to the ICM server if the agents are on remote *DEFINITY* ECS expansion port networks (EPNs). The WAN must provide dependable transport of Internet and message calls between agent PCs, the ICM server, and any servers (including those on the Internet) the agent uses to service real-time and message calls.

As with the LAN, communications between the agent and the ICM server use TCP connections that must remain up for the duration of an agent's logged-in time. In addition, the Internet connection, perhaps once an educational tool or even a luxury, is now a mission-critical business application. Internet callers must be able to reach agents, and agents must be able to pull up Web pages to share with callers. This requires a robust Internet connection that reflects the availability required of a business application.

Support from Lucent Technologies

Lucent Technologies' Advanced Data Networking specialists can assist in provisioning and tuning data networks. Contact your Lucent Technologies Account team for information and assistance.

Web server connectivity

A Web server may be on site behind a firewall, in a minimally firewalled subnet, on the Internet and not firewalled, or even across the country, hosted and managed by another organization. A Web server contains the Web pages that make up a call center's Web site. One of these pages may be the login page for agents. The login page should not be known outside the organization or may be housed on a separate Web server.

The Web server is the first point of contact for any *CentreVu* Internet Solution activity. When agents log in, they generally access the login page from this Web server. When callers place real-time calls, they invariably do so from a page on this Web server. For this reason, the Web server and services surrounding it must be as robust as any of the other *CentreVu* Internet Solution components. Just as the LAN and WAN must provide reliable transport, the Web server must provide reliable services.

Domain Name Server (DNS)

Domain Name Servers (DNSs) are used to reconcile machine names to IP addresses. Since names are almost always used in URLs, the failure of a DNS can prevent connectivity to these Web servers. This can cause problems with logins, Web page access, and caller communications. The reliability of DNSs can affect the overall ability of the call center to service the Internet.

Firewall

One of the most important components of a call center's Internet connection is the firewall. The firewall protects a call center's internal assets from the general public on the Internet. It also helps to protect against malicious damage to internal networks.

CentreVu Internet Solution components are generally placed on their own subnet. This placement keeps *CentreVu* Internet Solution traffic off the call center's network and allows the firewall to pass messages through the ports necessary for *CentreVu* Internet Solution functionality without significantly disrupting existing firewall rules for internal networks. The firewall ports to the *CentreVu* Internet Solution subnet allow *CentreVu* Internet Solution-required TCP and User Datagram Protocol (UDP) traffic, while firewall ports to internal secure LANs drop such traffic. See [ICC-specific ports and protocols \(2-25\)](#) for further information on ports and protocols.

Support from Lucent Technologies

Lucent Technologies' Network Consulting group can provide an enterprise firewall. This group can also test firewalls for security, lock down Intranets, and provide ongoing, periodic security checks. Call (972) 419-3803 or email security@lucentncg.com for details on these and other offers.



Security

Overview

Purpose The following section provides a high-level overview of security recommendations for *CentreVu* Internet Solutions.

Contents Security information for the following areas is described:

- [Message privacy \(2-16\)](#)
- [Message Care Reports \(2-17\)](#)
- [Administration Web page security \(2-18\)](#)
- [ITG security \(2-19\)](#)
- [ICM and CentreVu Computer-Telephony server security \(2-20\)](#)
- [Message Care server security \(2-21\)](#)



Message privacy

Purpose To ensure message privacy, you must secure the following:

- Message database
- Mailboxes
- Agent Web pages

Securing the message database Messages in the message storage system are accessible only through Web pages or direct access to the Microsoft Corp. *Microsoft*® SQL-Server database which stores message information. Only agents currently logged in to 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.

Securing mailboxes 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.

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



Message Care Reports

What needs to be secured?

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

If you want to restrict access to the *Message Care* database and *Message Care* Web pages, you must ensure the following on the *Message Care* server:

- Password protect the following default directory:
C:\Program Files\Message Care\www\Reports
- Follow the directions located in the [Administration Web page security \(2-18\)](#) section that follows.



Administration Web page security

What needs to be secured?

You can restrict access to the 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 *CentreVu* Internet Solution administration Web pages, you must ensure the following:

- All *CentreVu* Internet Solution directories must be installed on an NT File System (NTFS).
- The following default directory on the *Message Care* server is password protected: *Message Care* administration—*C:\Program Files\Message Care\www\admin*
- The *C:\itg\admin* directory on the ICM server is password protected
- The IIS software must be configured to handle authentication. The following are two methods of authentication:
 - Basic (Clear Text). This method of authentication sends the client's Microsoft Corp. *Windows NT*® user name and password over the networks unencrypted.
 - 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 Corp. *Microsoft*® Internet Explorer 2.0 or greater.

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



ITG security

What needs to be secured?

The ITG requires a direct-dialed analog line for the Remote Maintenance Board (RMB). This connection allows the ITG to place alarm calls to the Lucent Technologies Technical Services Organization if maintenance routines detect an alarm, and allows remote engineers to provision, upgrade, and troubleshoot the ITG.

We recommend that this dial-in port be protected using a Lucent Technologies Remote Port Security Device (RPSD) lock. The RPSD lock provides strong protection against unauthorized access to any dial-up port. Using security algorithms based on the Data Encryption Standard (DES), the RPSD lock helps ensure that this access point is secured while allowing the ITG to “call for help” and provide authorized callers with unhampered access.



ICM and CentreVu Computer-Telephony server security

What needs to be secured?

The ICM server and CentreVu Computer-Telephony Server require direct-dialed analog lines. The Symantec Corporation *pcANYWHERE*® software and a modem are used to provide remote maintenance, diagnostics, and support for the ICM server and the CentreVu Computer-Telephony Server. This software is very important for the maintenance and support of these servers. It does, however, offer an access point to your server and, possibly, to your network. Therefore, we also recommended that the Symantec Corporation *pcANYWHERE* software be, at a minimum, password protected. Please consult the Symantec Corporation *pcANYWHERE* documentation for additional security recommendations.

We recommend that you turn off or disconnect the dial-in modem, and stop the Symantec Corporation *pcANYWHERE* services when you do not require remote access.



Message Care server security

What needs to be secured?

The *Message Care* server requires direct-dialed analog lines for remote diagnostic and maintenance support. This remote support is used for all components of the *Message Care* software. Symantec Corporation *pcANYWHERE* software and a modem are used to provide remote maintenance, diagnostics, and support for *Message Care*. 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.

We recommend that you turn off or disconnect the dial-in modem, and stop the Symantec Corporation *pcANYWHERE* services when you do not require remote access.

We also recommend that a virus checker such as *McAfee VirusScan* be installed on the *Message Care* mail server to perform virus checking.

Firewall guidelines

Overview

Purpose The purpose of this section is to discuss firewall guidelines for your *CentreVu* Internet Solution.

Contents The following information is described:

- [Firewall security for Message Care \(2-23\)](#)
- [Firewall security for the Internet Call Center \(2-24\)](#)
- [ICC-specific ports and protocols \(2-25\)](#)
- [Data communication detail \(2-28\)](#)



Firewall security for *Message Care*

About The main line of defense for your data networks is your firewall. By properly configuring the firewall, you can prevent data 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.



Firewall security for the Internet Call Center

Firewall administration Firewall administration for an ICC varies from customer to customer. You must understand the ports and protocols that are used by the various ICC components in order to properly configure your own firewall rules.

Firewall configuration

A firewall must be configured with an appropriate length of timeout on Transmission Control Protocol (TCP) connections. Many firewalls have a parameter that sets the maximum amount of time a TCP connection can remain idle before the firewall drops the session. ICC agents who have gone on break or stepped away from their desks can incur significant idle time and may lose their connection to the ICM server. If the firewall causes the TCP connection between the agent and the ICM server to be lost, the next call to the agent will be lost and the agent will be placed in the Auxiliary (AUX) work mode.

“Keep-alive” packet option

The ICC offers the option of providing “keep-alive” packets between the agent PC and the ICM server. These may be required to avoid firewall timeouts. This option is enabled by Lucent Technologies support personnel as necessary. If you have a problem with timeouts, contact the Lucent Technologies Technical Services Organization at 1-800-242-2121 to open a trouble ticket.



ICC-specific ports and protocols

Purpose This section provides the ports and protocols used to administer minimum firewall requirements for the ICC solution.

The following table lists ICC ports and protocols:

Source	Destination	Protocol	Purpose
>1023 Agent PC	80 ICM server	TCP (HTTP)	Download of Call Control Window
80 ICM server	>1023 Agent PC	TCP (HTTP)	Download of Call Control Window
>1023 Agent PC	8101 ICM Server	TCP	Agent login & communication
8101 ICM Server	>1023 Agent PC	TCP	Response to above
>1023 Internet	80 ICM Server	TCP (HTTP)	Download of Call Control Window
80 ICM Server	>1023 Internet	TCP (HTTP)	Download of Call Control Window
>1023 Internet	8102 ICM Server	TCP	Caller interactions
8102 ICM Server	>1023 Internet	TCP	Response to above
>1023 ICM server	8103 ITG	TCP	ICM/ITG communication
8103 ITG	>1023 ICM server	TCP	ICM/ITG communication
>1023 ICM server	8103 CTI	TCP	CTI process communication

Source	Destination	Protocol	Purpose
8103 CTI	>1023 ICM server	TCP	CTI process communication
>1023 CTI	450 T-server	TCP	CTI communication
450 T-server	>1023 CTI	TCP	CTI communication
>1023 CTI	>1023 T-server	TCP	CTI communication
>1023 T-server	>1023 CTI	TCP	CTI communication
>1023 Internet	1720 ITG	TCP	NetMeeting H.323 Call Setup
1720 ITG	>1023 Internet	TCP	Response to above
>1023 Internet	>1023 ITG	TCP	NetMeeting H.323 Call Setup
>1023 ITG	>1023 Internet	TCP	Response to above
>1023 Internet	1731 ITG	TCP	NetMeeting H.323 Call Setup
1731 ITG	>1023 Internet	TCP	Response to above
>1023 Internet	>60000 ITG	UDP	G.723.1 voice
>60000 ITG	>1023 Internet	UDP	G.723.1 voice
>1023 Internet	8001 CMS	TCP	Page hit counts CMS
8001 CMS	>1023 Internet	TCP	Response to browser from CMS

Source	Destination	Protocol	Purpose
>1023 ICM server	8106 CIRS server	TCP	CIRS Communication
8106 CIRS server	>1023 ICM server	TCP	CIRS Communication
>1023 ICM server	80 CMS	TCP	ICC event data
80 CMS	>1023 ICM server	TCP	Response to above
Note: >1023 ports are dynamically assigned.			

□

Data communication detail

Purpose The following section details the communications between ICC components. This information is targeted at data communications personnel who have an in-depth knowledge of Transmission Control Protocol/Internet Protocol (TCP/IP). This is a more detailed reference than the matrix on the previous page and should be helpful when developing firewall rules.

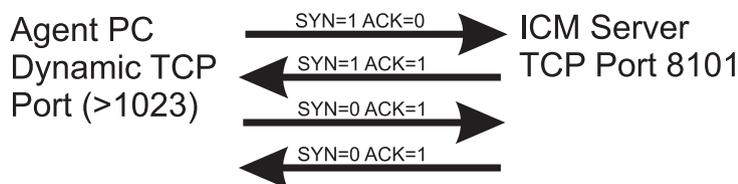
Agent PC to ICM server data communications

Agent PCs need to communicate with only the ICM server and whatever Web servers the agent uses in the course of a call (at a minimum, the Web server the agent uses to log in). The agent logs in by accessing a Web page, populating a form with agent ID and phone extension information (and any other information requested), and then submitting the form to the ICM process running on the ICM server (TCP port 80) by way of Hypertext Transfer Protocol (HTTP). The agent then communicates with the ICM server using a dynamic TCP port from the agent PC to TCP port 8101 on the ICM server.

The agent PC conducts all ICC communications with the ICM process on the ICM server, not directly with the caller's PC. As mentioned above, if the firewall or a network error causes the TCP connection between an agent's PC and the ICM process to be lost, then the next call to that agent causes the agent to be placed in the Auxiliary (AUX) work mode and the call to be lost.

TCP port 8101 must be blocked from unauthorized sources (for example, the Internet) so that hackers cannot log in to the *DEFINITY* Enterprise Communications Server (ECS). HTTP sessions (TCP port 80) and TCP sessions to port 8101 on the ICM server must be allowed from agent PCs.

The following diagram illustrates agent PC-to-ICM server communications. It illustrates all data communications necessary for an agent to log in, conduct text chat and escorted browsing activities, initiate a callback, and so on. The only other data communication taking place from the agent's PC during an ICC session is Internet browsing.



Caller communications When a caller initiates a call to an Internet call center, the ICC system downloads a Caller Control Window to the caller's desktop from the ICM server using World Wide Web HTTP, and then the Agent Control Window establishes a TCP connection to port 8102 on the ICM server. All text chat and escorted browsing functionality is done through this connection. The caller communicates with the ICM server (and the ITG if voice is used), never directly with the agent computer. Once an agent is connected to the caller, both can send and receive Text Chat and Escorted Browsing data using their respective TCP connections (the agent to TCP port 8101 on the ICM server, and the caller to TCP port 8102 on the ICM server).

Requests to the CentreVu Call Management System (CMS)

The caller is also the source of a request made to *CentreVu* Call Management System (CMS) that records page hit statistics. Coding on the Web page includes a request for an image (a 1x1 transparent pixel) from the CMS on TCP port 8001 when the caller accesses that web page. (A page hit to the CMS is triggered when the page is accessed by the caller, not when the caller selects the "Call Us" button.) *CentreVu* CMS runs Web page software that listens only on port 8001 and is programmed to provide only this pixel on this port (for security). Any request to port 8001 other than for this image results in an error. The request for the image is recorded as a page hit to increment *CentreVu* CMS data.

Real-time voice calls

Real-time Internet voice calls use Microsoft Corp. *Microsoft NetMeeting*® on the caller's desktop to set up a conference with the Internet Telephony Gateway (ITG). Microsoft Corporation *NetMeeting* requires dynamic TCP ports for call setup and control, and dynamic User Datagram Protocol (UDP) ports to carry the voice. The caller must be able to get TCP and UDP traffic to the ITG for real-time Internet voice calls. Real-time Internet voice is carried from the ITG starting at UDP port 60000 (administrable) and continuing upward.

The ITG must be able to respond to the caller's dynamic TCP ports for Microsoft Corporation *NetMeeting* setup and to the caller's dynamic UDP port for voice.

Summary

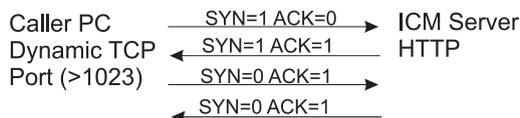
The firewall must allow Internet sources to reach the ICM server on TCP port 8102, and the ICM server must be able to respond to that dynamic (>1023) TCP port. The firewall must allow Internet sources to reach the ITG on dynamic (>1023) TCP ports and on UDP ports 60000 or higher (or whatever is administered in the ITG if the default is not used), and the ITG must be able to respond. Internet sources must be able to access the CMS on port 8001 to get page hit statistics. The CMS must be able to respond to the dynamic TCP port that initiated the request.

The following illustrates TCP traffic to and from a caller's PC during an ICC call:

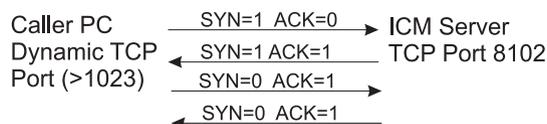
Web Page Directs Caller to CMS Graphic



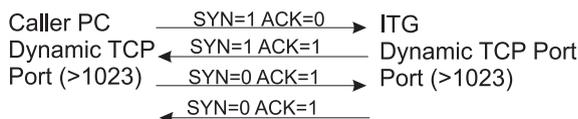
Caller Submits Call-Ups Page



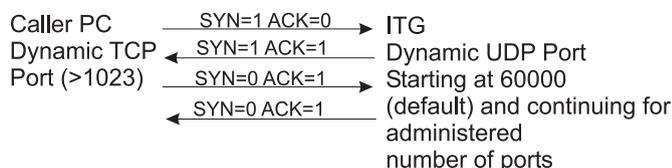
Caller Connects to ICM Server



NetMeeting Initiation and Call Control of Audio Conference



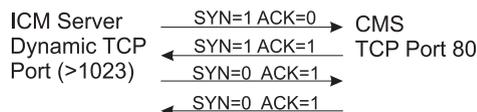
Audio Between Caller's PC and ITG



Server-to-server communication

The following illustrates server-to-server communication:

ICM Server to CMS



If you are going to include Agent Web page hits in Internet CMS reports (along with caller hits), then the agent computer must be able to communicate with port 8001 on the CMS. If the agent and CMS are on opposite sides of a firewall, this port must be opened to allow this functionality. If there is no firewall between the agents and the CMS, then agent page hits are recorded.

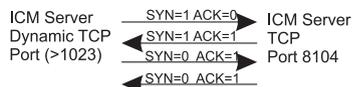
The following communications would not normally cross the firewall, but are included for your information.

ITG Communications with the ICM Server (During Boot/Operation)

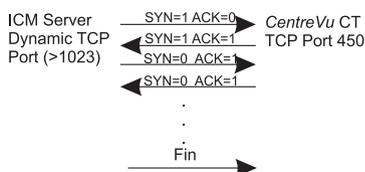


CentreVu Internet Solution CTI process Communications with the ICM Server

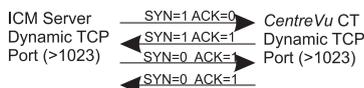
(During Administrative Update)



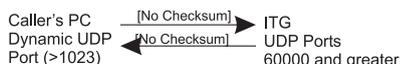
CentreVu Internet Solution CTI process Communications with the CentreVu Computer Telephony server



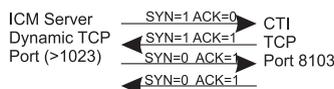
CentreVu Internet Solution CTI process Communications with the CentreVu Computer Telephony server



Audio Between Caller's PC and ITG



CTI Communications with the ICM Server



Design considerations for *Message Care*

Overview

Purpose The purpose of this section is to help you design your *Message Care* offer. Knowledge of *DEFINITY* ECS station administration and vector design would be helpful to fully understand the following sections:

- [What needs to be defined? \(2-33\)](#)
- [Sorting messages \(2-34\)](#)
- [Where do you want the messages to go? \(2-40\)](#)
- [In what forms are the messages arriving? \(2-36\)](#)
- [Vectors \(2-42\)](#)
- [Sample vector for basic message call delivery \(2-46\)](#)
- [Sample vectors for retrieve and suspend \(2-48\)](#)
- [What mailboxes do you need? \(2-53\)](#)
- [Considerations for specifying auto-acknowledgment text \(2-54\)](#)
- [Bookmark agent and supervisor URLs \(2-55\)](#)



What needs to be defined?

Introduction 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. The mailbox for which a message arrives determines the VDN that the *Message Care* software uses to deliver 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.
- Mail Server—if you are going to use blind copies, ensure that your Simple Mail Transfer Protocol (SMTP) server supports blind copies. If your mail server is *Intuity AUDIX*, then the return address must be a valid mailbox address; otherwise, the message will not be delivered.
- Auto-acknowledgments—the mailbox that receives a message determines what acknowledgment (if any) automatically goes out as soon as the *Message Care* software receives the message.
- Globalization—the languages agents will be using to process messages.

To develop your *Message Care* design, consider the flow of the messages you expect to receive (consider the language of the consumer and agent), from their point of origin to the point where the consumer's request is satisfied. If you are unfamiliar with this flow, review it in [How does the CentreVu Internet Solution work for messaging? \(1-34\)](#). Start by considering the consumer who sends the message.



Sorting messages

Introduction The design of your *Message Care* software depends on the types of messages you expect, your service expectations for handling each type, and the agent skills required to handle them. This means that you want to sort messages according to a number of different factors.

Factors in determining how to sort messages

Consider the following factors when you are determining how you will sort messages:

- Queue limits

Vector programming in *DEFINITY ECS* can restrict the number of message calls that may be queued for a specific agent skill set. This ensures that a single mailbox cannot use all purchased resources and restrict delivery from other mailboxes.
 - 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 for which the consumer wants information
 - Whether the consumer already has the product or is considering purchasing the product
 - Whether the consumer's question is technical or general
 - The urgency of the consumer's question
 - Auto-acknowledgment

The auto-acknowledgment can reassure a consumer and thus reduce future inquiries about the progress of email queries.

The following factors should influence your decision about whether to have the *Message Care* software send an auto-acknowledgment to the consumer before launching a message call: How promptly do you want the consumer to hear back from you? Do you want to assure the consumer that the message did not get lost in the Internet?

If you decide to use an auto-acknowledgment for a specific mailbox, consider the language of the consumer for which you will be delivering the auto-acknowledgment.
-

Example using sorting factors

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 that when a message call is active at an agent, this threshold does not 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 3 and 4, 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 applies only to calls queued. Once a call is active at an agent, the queue slot is available for another call.

□

In what forms are the messages arriving?

Introduction The messages you can route and track include the following:

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

The only requirement is that the messages you want to route and track comply with Internet messaging protocols. The following sections provide planning information for each type of message.

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 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.

Planning your forms-based email

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*.

For messages sent from a form, the return address for the message originator should be designed to be the consumer, not the mail server.

Routing your forms-based email

In some cases, you may choose to route these messages first to system software on your Web server, before they ever reach 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.

How *Message Care* routes forms-based email

Once the message arrives in a *Message Care* mailbox, the *Message Care* software retrieves it and then delivers it to an appropriate agent. 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.

Examples of key information for a form

Key information that the form should gather includes the following:

- 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

Support from Lucent Technologies

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.

Free-form email

Consumers can send a free-form 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.

Processing free-form email

Normally, free-form 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.

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.

Important! We recommend that a virus checker be installed on the agent's desktop 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.

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.

How *Message Care* works with faxes

The *Message Care* software works with the mail server to accept messages that include fax images and delivers 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.

Important! Faxes normally have a callback number but not an email return address. Without such a return address, the *Message Care* software cannot send an auto-acknowledgment 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-acknowledgment.

Note that the *Message Care* software does not provide tools for responding to faxes.



Where do you want the messages to go?

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

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

Direct correspondence with agents Direct correspondence with agents occurs in the following cases:

- When new work requests are directed to a specific agent
- When messages are received from SMEs
- When the agent suspends a message. When an agent suspends a message, the message is 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.

In the first and second case above, a special mailbox is not required.

Direct correspondence with agents using vectors

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 and consider coverage criteria (see [Sample vector for basic message call delivery \(2-46\)](#)). Vector programming can ensure that work is handled when agents are sick or on vacation. For more information on vectoring, please see [Vectors \(2-42\)](#).

**Messages that should
not go through the
Message Care software**

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.

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 *Message Care* agent positions, agents use a browser to access a login Web page and input their Expert Agent Selection (EAS) agent ID and the physical extension where they will take message calls. The agents submit the completed form to the ICM server. The ICM server sends login requests containing agent IDs and extensions to the *CentreVu* Computer-Telephony server, which uses ASAI to log in agents. This lets the *DEFINITY ECS* know about the agents. Refer to the *DEFINITY ECS Release 6 Call EAS Issue 2 Guide(555-230-521)* document for details on EAS.



Vectors

Introduction For each message coming into a *Message Care* mailbox, the *Message Care* software tells the *DEFINITY* ECS to launch a message call using the vector directory number (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 to select an agent qualified to process the message.

Expanding the routing possibilities

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, it uses the default VDN for the mailbox. Keyword sorting is limited to the message subject only, not the message body.

Vectors and reports

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

To route messages to the correct agents, and to track the management information you require, it is crucial for you to define your VDNs and vectors carefully.

Issues that affect how you define your VDNs

The following issues affect how you define your VDNs:

- 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 6 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 have 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 message calls and regular voice calls (however, the two types of calls should come from separate VDNs to ensure accurate reporting)
- How do you want to track messages?

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 free-form email versus an email form from 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
- CTI Interactions

Queue/hold time

Due to the potential rollover of statistical values in *DEFINITY ECS*, vectors designed to support message calls should ensure that a message call not be queued within a single vector for more than 8 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 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 monitors 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 redirected to the other VDNs. In some of the sample vectors (see [Sample vector for basic message call delivery \(2-46\)](#)), 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.

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 8 hours.
- Other CTI applications should monitor only 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 disconnects.
- 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 require coverage only 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.
- *Message Care* limits the time a message call can be active (default-240 minutes or 4 hours) and limits the time of a launched message call (default-450 minutes or 7.5 hours). When designing vectors, consider that *Message Care* will drop active and launched calls after the specified time period.

□

Sample vector for basic message call delivery

Introduction The following is a sample vector (sample 1) for basic message call delivery that you can use to provide different coverage for supporting message calls.

About vector sample 1 Vector sample 1 is for a call center that has scheduled business hours (hours of operation: 8 a.m.–5 p.m. Monday through Friday). Vector sample 1 consists of one vector: Vector 1 (VDN 1000).

The following items provide information about sample vector 1 and also provide the following design tips:

- Vector design should limit message call queuing to 8 hours. When the queue time approaches 8 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.
 - 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.
 - Vectors are limited to 32 steps.
 - 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 mailboxes 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.
 - If the vector drops the call, the dropped call will be reported in CMS as a “Vector Disconnect.” If *Message Care* drops the call (for example, if the call exceeds the 7.5 hour queue limit), the dropped call will be reported as an “abandoned” call.
-

Vector 1 (VDN 1000)

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

1. Go to step 6 if time of day is all 17:00 to all 8:00 (check if outside normal business hours)
2. Go to step 6 if time of day is Friday 17:00 to Monday 8:00 (check if outside normal business hours)
3. Go to step 6 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. Disconnect after announcement none (automatically disconnects message call if outside business hours or if queue limit reached)
7. Stop

Repeat as needed.



Sample vectors for retrieve and suspend

Introduction 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.

Suspended message calls

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.

Retrieved message calls

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 a retrieved message to the agent who used the Retrieve option. A message can be retrieved if it is either in the launched, suspended, blocked, and failed status states, but cannot be retrieved in the closed or active states.

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 the agent retrieving the message or the agent ID of the agent who suspended the message.

Important! 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.

Things to know about retrieved and suspended messages

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 of that 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 the 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 message calls are queued for them (indicated through lamps on the voice terminal).

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

One example of the above would be when it is necessary to deliver the suspended message and the agent who suspended a message is out sick or on vacation. To insure that the message is delivered, the coverage criteria for your agents should route such suspended message calls to a backup skills group. The 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.
 - You can implement different coverage treatment to live callers using a combination of the sample coverage vectors provided 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—set to No
 - Busy—set to Yes
 - No Answer—set to Yes with a specified number of rings
 - Coverage Path—one of the sample coverage vectors listed

With these coverage settings, internal DAC calls such as *Message Care* calls will immediately go to coverage if the agent is not logged in to the system (busy=Y). If the agent is logged in, an internal call will remain queued for the direct agent for the number of rings specified. If the call exceeds the number of rings specified, then the call will go to the coverage path for the agent. This allows retrieved and suspended calls to wait for a short while until the agent is available.

Sample vectors The following sample vectors are provided:

- [Sample 1—suspend/retrieve vector \(2-51\)](#)
- [Sample 2—agent coverage \(2-51\)](#)
- [Sample 3—VDN using vector coverage routing table \(2-52\)](#)

Based on your business needs, you may also want to provide one coverage path for message calls and a different coverage path for live callers (voice mail). 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 route the call following the agent's assigned coverage path. In sample 1, *Message Care* launches the message call to VDN 2000 which directs message calls to Vector 200. *Message Care* is monitoring VDN 2000.

Step 3 of vector 200 consists of link extension 9999. Link extension 9999 is the extension of the ASAI link for which the *CentreVu* Computer-Telephony server is located. You must set the COR on the adjunct link (in vector 2000, this is link 9999) and phantom extension to enable direct agent calling.

Vector 200 (VDN 2000)

Vector 200 begins:

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)

Vector 201 (VDN 2001)

VDN 2001/Vector 201 provides coverage treatment for the message call. Vector 201 would queue the message call to one of the *Message Care* skills. It would look similar to the sample vector provided in [Vector 1 \(VDN 1000\) \(2-47\)](#).

Sample 2—agent coverage

In this vector, vector processing diverts traditional calls to coverage appropriate for live calls, such as voice mail, and queues 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, 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.

Vector 300 (VDN 3000)

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 digit 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. Sample 3 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.

1. Go to step 3 if ANI in table 1 (determines whether the call is a 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)



What mailboxes do you need?

About mailboxes A single mailbox can route messages to a maximum of 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.

Planning your *Message Care* mailboxes

In planning your mailboxes, consider the following:

- The messages that you want to group into a mailbox based on agent skills and the type of reports you want to generate
- The keywords that you want to use to send each message to the appropriate VDN
- The auto-acknowledgment message that you want to send as soon as the *Message Care* software detects a message. For each mailbox, you can specify a different text file as the body of the auto-acknowledgment. You can also administer a mailbox to not send auto-acknowledgments at all.
- Mailboxes that receive faxes should not have an auto-acknowledgment file, since they do not provide an email return address that can reach the sender. For other mailboxes, consider:
 - Whether you want to send auto-acknowledgments
 - What text you want in the auto-acknowledgments you choose to send
 - The language of the auto-acknowledgment text. If a mailbox with auto-acknowledgments enabled receives messages in multiple languages, then you must consider the language for the auto-acknowledgment text.
- The language of the labels you administer for each mailbox.

To support agents in various languages, you will need to administer the mailbox labels (that the agent will see) in the same language that the agent will select upon logging in to the system. For example, if your call center uses mailbox A for French messages and French agents, then you will have to administer mailbox A using French labels that will be presented to the agent. This will ensure that a French speaking agent will see French suspension codes, closure codes, SMEs, and so forth when processing messages from mailbox A.



Considerations for specifying auto-acknowledgment text

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

Because a consumer may reply to an agent's response, you must properly administer the return email address. We recommend 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.



Bookmark agent and supervisor URLs

Overview To expedite access to agent Web pages and supervisor report Web pages, create bookmarks for agent Web page URLs and supervisor report URLs. To bookmark an agent Web page and a supervisor Web page in a language other than US English, replace **en-US** with the correct language code. See [What is localized? \(1-39\)](#) for a list of language codes.

Agent Web page URLs are listed below:

- Agent login Web page— *http://<MC_server_domain>/mcscript/en-US/mc_agent.asp*
- Agent search Web page— *http://<MC_server_domain>/mcscript/en-US/searchpage.asp*

The Supervisor report Web page URL is:

http://<MC_server_domain>/mcscript/en-US/reports.asp



Encoding used to store message information when operating in J-Mode

About When operating in J-Mode, *Message Care* stores message information in the Microsoft Corp. *Microsoft* SQL database in different character sets depending on where the information is obtained.

Encoding format used when storing received messages in J-Mode

The following information explains how received messages are stored and where received messages are stored when running in J-Mode.

Component Type	Where is information stored?	How is information stored?
From Address— Email handle	Messages Table— SendersAddress	The email handle (for example, services@company.com) is stored in ASCII.
From Address— Name	Messages Table— SendersName	The friendly name (for example, Joe Smith) is stored as it is received (most likely in JIS).
Subject	Messages table—Subject	The subject will most likely be received in JIS but <i>Message Care</i> will convert the subject to JIS.
Headers	Messages table— Headers	<i>Message Care</i> will store the headers in ASCII.
Body	Messages table—Body	<i>Message Care</i> will store the body as it is received (either ASCII, JIS, or shift-JIS).
Message Date	Messages table— Message Date	<i>Message Care</i> will store the message date in ASCII.
Message Header ID	Messages table— MessageHeaderID	<i>Message Care</i> will store the message header ID in ASCII.
To Address	Messages table— ToAddress	<i>Message Care</i> will store the to address in ASCII.
MIME type	Attachments table— MimeType	<i>Message Care</i> will store the to address in JIS.

Encoding format used when storing outbound messages in J-Mode

The following information explains how outbound messages are stored and where outbound messages are stored when running in J-Mode.

Component Type	Where is information stored?	How is information stored?
Body	Outbound Table—Body	<i>Message Care</i> stores the outbound body in JIS.
Destination address	Outbound Table—ToAddress	<i>Message Care</i> stores the destination address in ASCII.
Copy To List	Outbound table—CCList	<i>Message Care</i> stores the outbound copy to list in ASCII.
Subject	Outbound table—Subject	<i>Message Care</i> will store the headers in JIS.
Attachment file name	Outbound table—AttachmentName	<i>Message Care</i> stores the outbound attachment file name in JIS.
From Address	Outbound table—FromAddress	<i>Message Care</i> will store the outbound from address in ASCII.





3 Install and uninstall ICC software

Overview

Purpose The purpose of this information is to describe, at a high-level, the procedures for installing and uninstalling ICC software.

The following ICC software is installed by Lucent Technologies personnel:

- Internet Telephony Gateway software. For installation procedures, see the *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)* document.
- Internet Call Manager and Computer Telephony Integration (ICM/CTI) software
- Internet Call Center software.
- Centralized Internet Routing Service software. For installation procedures, see [Appendix A, Multisite Configuration](#).

The following software must also be installed but is not part of the CentreVu® Internet Solution installation:

- CentreVu Computer-Telephony software
- Call Management System for the Internet (ICMS) software

Audience This information is intended for installers, system administrators, or any other persons involved in installing software for ICC. This includes Lucent Technologies' Technical Support Organizations.

Contents This section contains the following:

- [Install JRun \(3-3\)](#)
 - [Install the ICM/CTI software \(3-4\)](#)
 - [Install the ICC software \(3-6\)](#)
 - [Install the ICMS software \(3-7\)](#)
 - [Uninstall the ICM/CTI software \(3-13\)](#)
 - [Uninstall the ICC software \(3-14\)](#)
-

References In addition to the installation procedures that follow, you should read the *readme.txt* file that is delivered with the software. The *readme.txt* file includes late-breaking changes to and news about the software. The *readme.txt* file for the Internet Call Center (ICC) software is located in the top folder of the ICM/CTI installation disk, and is installed in the *\itg* directory on the ICM server.



Install JRun

Before you begin Before you begin The information contained in the install instructions describes only those procedures that require you to input information or make choices.

Installation instructions To install the JRun software, do the following:

- 1 Stop the IIS Web service.
- 2 Purchase and download the JRun servlet engine from Live Software. You can find the Live Software Web site at: <http://www.allaire.com/products/jrun>
- 3 The Setup program prompts you through the installation process. Follow the instructions on the screen.

You will need to select the following options:

- Destination location—select the default location. (This will make the ICM/CTI installation easier because the ICM/CTI setup uses the same default location.)
- Configure software—in this step, you are configuring JRun to work with the Web server. For the majority of questions asked during the configuration, you will select the defaults.
- The following are exceptions to selecting defaults:
 - Select connector to install—click on IIS/PWS 3.0/4.0
 - IIS Scripts directory—browse to, and then select the *InetPubs/scripts* where IIS is installed.
 - Select Finish—do not perform another configuration.
- 4 Reboot—you can reboot the system at this point or you can reboot your system after you have installed all ICC software.

END OF STEPS



Install the ICM/CTI software

Before you begin Before you begin The information contained in the install instructions describes only those procedures that require you to input information or make choices.

Important! Before you begin the ICM/CTI install, do the following:

- Stop the IIS Web service.
- Stop *Message Care*[™] if it is installed. See [Perform a graceful shutdown \(12-23\)](#) for instructions on shutting down *Message Care*.
- Make sure JRun is installed and then stop the JRun service.
- Uninstall any prior versions of ICM/CTI. See [Uninstall the ICM/CTI software \(3-13\)](#).

Installation instructions To install the ICM/CTI software, do the following:

1 Insert the ICM/CTI R4.1 CD-ROM.

2 From the ICM/CTI folder, select *setup.exe*.

The Setup program prompts you through the installation process. Follow the instructions on the screen.

You will need to select the following options:

- Setup Type—you are given two options: Custom and Typical. Custom enables you to install ICM and CTI separately (for example, if you wanted to install the ICM software on a different server than the CTI software then you would choose Custom). Typical installs both the ICM and CTI software on one server.
 - Destination location—select location.
 - Select Program Folder—you can select the default or create a new program folder.
 - Previous Install—if you are upgrading the ICM/CTI software, provide the location of your previous install. If you provide an incorrect location, you will have to re-administer your software.
-

- Configure JRun—select Yes if you have installed JRun version 2.3 or, select No if you have installed a version other than 2.3. In this step, you are configuring the ICM to work with JRun.
 - Destination Location of JRun—provide the folder where JRun is installed.
 - Install JRE—select Yes. (You need to install JRE for a new install and for an upgrade.) Also, select I18N if you are using multiple languages for the *CentreVu* Internet Solution.
 - Reboot—you can reboot the system at this point or you can reboot your system after you have installed all ICC software.
-

- 3 Copy the *license.dat* file to the ICM installation directory. The *license.dat* file is created by Lucent Technologies and installed on the ICM server.

If you are going to install the *Message Care* software on a different server than the ICM/CTI software, then you must copy the *license.dat* file to the same directory on both servers.

- 4 When you are finished installing the ICM/CTI software, specific parameters must be administered. See [Administer the CTI \(5-22\)](#) and [Administer common parameters \(5-24\)](#).

END OF STEPS



Install the ICC software

Before you begin Before you begin The information contained in the install instructions describes only those procedures that require you to input information or make choices.

Important! Uninstall any prior versions of ICC. See [Uninstall the ICC software \(3-14\)](#).

Installation instructions To install the ICC software, do the following:

1 Insert the ICC R4.1 CD-ROM.

2 From the ICC folder, select *setup.exe*.

The Setup program prompts you through the installation process. Follow the instructions on the screen. Install the ICC software in the same folder as the ICM.

NOTE: The Select Components dialog box provides an option for installing Web Page Guidelines documentation. If you choose to install the Web Page Guidelines documentation, you can view it by selecting Lucent ICC Web Guidelines from the Start button.

3 When you are finished installing the ICC software, specific parameters must be administered. See [Administer Internet Call Center parameters \(5-27\)](#).

END OF STEPS



Install the ICMS software

Before you begin Software prerequisites

Statistical reporting for the real-time communication data is provided through an add-on package to standard *CentreVu* CMS. This add-on package software is delivered on a separate CD-ROM and uses standard `pkgadd/pkgrm` commands. For more information about the reporting features of ICMS, refer to [CentreVu CMS for the Internet \(ICMS\) software \(9-6\)](#).

CentreVu CMS and Supervisor each have to meet certain software requirements before you can use them with ICC.

If you have *CentreVu* CMS Software ...

Any of the following configurations can be used:

- R3V5 (with load r3v5ai.f or later). This load is required on the *CentreVu* CMS server if the customer wishes to run or create ICC reports. Although the R3V5 load is required, it can be received as a maintenance patch for the G3V4 CMS load.
- 3V5u (with load r3v5ud.a or later)
- R3V6

If you have *CentreVu* Supervisor Software ...

Any of the following configurations can be used for viewing ICC reports:

- R3V5 or R3V5u (with load bj.02)
- R3V6 (with a load greater than bj.02).

Adding or deleting ACDs

The ideal situation for adding or removing ACDs is to do so before installing the ICMS package. However, if you need to add or delete ACDs after installing the ICMS package, the ICMS software must be removed before adding or deleting the ACD and then restored afterwards. For procedures on how to add or delete ACDs after ICMS has been installed, see [Adding or deleting ACDs after the installation of ICMS \(3-11\)](#).

Install ICMS software

Important! Allow about 30 minutes of CMS downtime when installing ICC-specific software.

To install ICC-specific software, do the following:

- 1 Log in to the CMS server as root.
- 2 The ICMS base directory, */webcms*, may not be located on the root file system; therefore, you must either make the directory a separate file system or make it a symbolic link to a directory on a non-root file system. To do this, use the following commands:

```
# mkdir /cms/webcms
# ln -s /cms/webcms /webcms
```

- 3 If not already installed, install either the *CentreVu* CMS R3V5 (with load *r3v5ai.f* or later), R3V5u (with load *r3v5ud.a* or later), or R3V6.

Also, if not already installed, install either the *CentreVu* Supervisor R3V5 or R3V5u (with load *bj.02*) or *CentreVu* Supervisor R3V6 (with a load greater than *bj.02*). See the *CentreVu* CMS and *CentreVu* Supervisor installation documents for details.

- 4 You must turn off CMS before beginning the ICMS installation. To do this, select option number 3 from the **cmssvc** menu.
- 5 Insert the CD-ROM with the ICMS package into the CD-ROM drive.
- 6 At the UNIX prompt, enter the following command:

```
$ mount
```

Result: The system lists all the mounted drives including */cdrom*.

-
- 7** Verify that the ICMS package is available on the CD-ROM by entering the following command at the UNIX prompt:

```
$ ls -F /cdrom/cdrom0/
```

Result: This command displays the presence of an icms directory

- 8** Add the software package by entering the following command at the UNIX prompt:

```
$ pkgadd -d /cdrom/cdrom0 icms
```

Result: Release numbers and the names of the files in the package are displayed.

Important! The ICMS can be installed for a single ACD only.

- 9** If you are using more than one ACD, the system prompts you for information about which ACD is collecting the ICMS data.
-

- 10** Select option number 3 from the cmssvc menu to turn CMS on and verify that processes are running.

Result: The *****CMS is now up***** message displays.

- 11** Verify that the Web server is running on *CentreVu* CMS by entering the following command at the UNIX prompt:

```
$ ps -ef | grep http
```

Result: One or more lines of process information displays for the Web server. If process information does not display, you must reboot your machine and repeat step 10.

-
- 12** Verify that you can reach the *CentreVu* CMS machine from the ICM server. To do this, enter the following URL into a Web browser on the ICM server:

```
http://<cmshost>/cgi-bin/uncgi/inc_data?  
vdn=<xxxx>&page_url=<yyy>&<parameter>=<zzz>
```

Where:

- <cmshost> = The CMS server.
- <xxxx> = A VDN value.
- <yyy> = A URL value.
- <parameter> = The <parameter> can be icalls_offered, pri_limit, phantom_limit, vector_discon, vector_busy, or invoice_limit.
- <zzz> = The amount you want to increment this parameter.

-
- 13** Verify that at least port 8001 is accessible from external sites if the Web page counter is to be used. To do this, enter the following URL into your Web browser from a connection outside of the firewall:

```
http://<cmshost>:8001/cgi-bin/uncgi/  
pgcnt?callUsSrcPage=<"pageid">
```

Where:

- <cmshost> = The CMS server.
- <"pageid"> = A URL value.

Every time you send this URL (or select Reload) you get a blank screen. If errors are present, check [Firewall guidelines \(2-22\)](#) for details. The installation is now complete.

-
- 14** Eject the CD-ROM using the following command:

```
$ eject -d
```

If you are using *CentreVu* Supervisor V6, you will also need to run the installation script for *CentreVu* Supervisor found on the ICMS CD-ROM. Run this script on your Microsoft Corp. *Windows*® -based system in the same manner that you ran the original installation of *CentreVu* Supervisor. The installation of the ICMS software is complete.

END OF STEPS

Adding or deleting ACDs after the installation of ICMS

Important! Adding ACDs after your ICMS software has been installed on the CMS server requires that you remove the ICMS software package, add the new ACD(s), and then reinstall the ICMS software package.

To add or delete an ACD after the installation of ICMS, do the following:

- 1 At the UNIX prompt, enter the following command: `# pkgrm icms`
Result: A number of files and peripheral database items are removed.
- 2 When you are asked the question, “Do you want to preserve Internet CMS data”?, enter Y.
Result: The Internet CMS data is preserved.
- 3 When you are asked the question. “Are you sure this is correct”?, enter Y.
- 4 At the UNIX prompt, enter the following command: `# cmssvc` (add or delete ACD)
- 5 Reinstall ICMS.

END OF STEPS



Install the *CentreVu* Computer Telephony for *Windows NT* software

Introduction For information on installing the *CentreVu* Computer Telephony for Microsoft Corp. *Windows NT* software, see the *CentreVu* Computer-Telephony documentation you received with the software.



Uninstall the ICM/CTI software

Procedure To uninstall the ICM/CTI, do the following:

-
- 1** Before you uninstall the ICM/CTI software, you must stop the Lucent Internet Call Manager service and the Lucent Internet CTI Manager service.

To stop the ICM and CTI services, do the following:

1. From the Control Panel, select Services.
 2. Click on the Lucent Internet Call Manager service, and then click on Stop.
 3. Click on the Lucent Internet CTI Manager service, and then click on Stop.
-

- 2** From the Control Panel, select Add/Remove Programs.
-

- 3** Select Lucent ICM_CTII program (default name), and then select the Add/Remove... button.
-

- 4** You may be asked if you want to remove shared files. Say Yes to all.

END OF STEPS



Uninstall the ICC software

Procedure To uninstall the ICC, do the following:

-
1 From the Control Panel, select Add/Remove Programs.
.....
- 2** Select Lucent ICC program (default name), and then select the Add/Remove... button.
.....
- 3** You may be asked if you want to remove shared files. Say Yes to all.

.....
E N D O F S T E P S
.....



4 Install and uninstall the *Message Care*® software

Overview

Purpose The purpose of this information is to describe the procedures for installing and uninstalling the *Message Care*™ system. It will address prerequisites, software that needs to be installed, installation procedures, and upgrade procedures.

Contents This section contains the following information:

- [Microsoft SQL Server 7.0 recommendations and installation instructions \(4-3\)](#)
- [Install the ICM/CTI software \(4-29\)](#)
- [Message Care installation procedures \(4-30\)](#)
- [Uninstall Message Care 4.1 \(4-46\)](#)
- [Message Care upgrade procedures \(pre version 4.0\) \(4-51\)](#)

Important! The above information is presented in order of the recommended installation procedures for *Message Care* 4.1 system. To ensure that the *Message Care* 4.1 system operates properly, follow the installation procedures in the order presented in this document.

Audience This information is intended for installers, system administrators, or any other persons involved in installing software for the *Message Care* system. This includes Lucent Technologies' Technical Support Organizations.

References In addition to the installation procedures that follow, you should read the *readme.txt* file that is delivered with the software. The *readme.txt* file includes late-breaking changes to and news about the software. The *readme.txt* file for the *Message Care* software is located in the top folder of the *Message Care* installation CD-ROM.

Prerequisites

Important! Ensure that Active Desktop was not installed on the NT server in which you will install *Message Care*.

Make sure your system meets the following hardware and software prerequisites before installing Microsoft Corp. *Microsoft*® SQL server 7.0 or *Message Care* 4.1:

- 450 MHz or better Intel Corporation *Pentium*® II-based PC
- 256 MB of RAM
- 10 GB hard-disk drive (for the *Message Care* software and *Message Care* databases)
- CD-ROM drive
- Microsoft Corp. *Windows NT*® 4.0 operating system with Service Pack 4 with Y2K patch or SP5 and Microsoft Corp. *Microsoft* Internet Information Services (IIS) Version 4.0 (with Option Pack 4)
- Internet Call Manager (ICM) and Computer Telephony Integration (CTI) software. Refer to [Install the ICM/CTI software \(3-4\)](#) for installation information.



Microsoft SQL Server 7.0 recommendations and installation instructions

Overview

Purpose This section provides the recommendations and installation instructions for the Microsoft Corp. *Microsoft SQL-Server 7.0* software when used with *Message Care* Release 4.1.

Contents The following information is presented in the order in which it should be addressed to ensure later success when installing the *Message Care* 4.1 software.

- [Microsoft SQL Server 7.0 supported versions and licensing \(4-4\)](#)
- [Microsoft SQL Server 7.0 prerequisites \(4-5\)](#)
- [Install Microsoft SQL Server 7.0 \(4-6\)](#)
- [Verify the installation of Microsoft SQL Server 7.0 \(4-10\)](#)
- [Create Message Care databases \(4-13\)](#)
- [Create an SQL Server login ID and password \(4-21\)](#)
- [Create ODBC data sources \(4-23\)](#)

Audience The following information is for those who will be installing and setting up the Microsoft Corp. *Microsoft SQL-Server 7.0* software for use with the *Message Care* system.



Microsoft SQL Server 7.0 supported versions and licensing

Versions supported *Message Care* supports either of the following editions of Microsoft Corp. *Microsoft SQL-Server 7.0*:

- SQL Server 7.0 Standard Edition
- SQL Server 7.0 Enterprise Edition

Licensing environments supported *Message Care* requires five Client Access Licenses (CALs). You will also need licenses for supervisors and agents who will be accessing the system simultaneously. The CALs can be deployed in a "per seat" or "per server" mode.

Per seat

With a per seat licensing environment, each workstation or other device that connects to a licensed SQL server must have a CAL.

Per server

With a per server licensing environment, you predetermine the number of devices that will be connected to a licensed SQL server at a given time.



Microsoft SQL Server 7.0 prerequisites

About *Message Care* 4.1 requires Microsoft Corp. *Microsoft SQL Server 7.0* with Service Pack 1. The Microsoft Corp. *Microsoft SQL Server* software will reside on the same NT server as the *Message Care* software. See [Prerequisites \(4-2\)](#) before installing Microsoft Corp. *Microsoft SQL Server 7.0*.

Installation prerequisites Ensure that you have met the following installation prerequisites:

- Disable caching I/O controllers unless you have an on-board battery backup.
- You must choose a valid server name. The server name must not have spaces and must begin with an alphabetical letter or an underscore.
- For the SQL Server to recognize network drives, ensure that your Domain User Account has read/write access to the network drives.



Install *Microsoft* SQL Server 7.0

Installation instructions

Important! Before installing the SQL Server 7.0 software, ensure that you have met the system and installation prerequisites (See [Microsoft SQL Server 7.0 prerequisites \(4-5\)](#)).

To install Microsoft Corp. *Microsoft* SQL Server 7.0, do the following:

- 1 Insert the Microsoft Corp. *Microsoft* SQL Server 7.0 CD-ROM.

Result: The SQL Server installation automatically begins and you are presented with the SQL Server window. If the installation does not automatically begin, select the *Autorun.exe* file from the SQL Server folder.

- 2 From the SQL Server 7.0 window, select ***Install SQL Server 7.0 Components***.

Result: The Install SQL Server 7.0 Components window appears.

- 3 From the Install SQL Server 7.0 Components window, select ***Database Server - Standard Edition***.

Result: The Select Install Method dialog box appears.

- 4 From the Select Install Method dialog box, check the ***Local Install - Install to the Local Machine*** option, and then select the Next button.

Result: Welcome screen appears.

- 5 From the Welcome screen, select the Next button.

Result: The Software License Agreement dialog box appears. Read the text, and then select Yes to accept it. The User Information dialog box appears.

-
- 6** From the User Information dialog box, type your name and company (optional), and then select the Next button.

Result: The Setup dialog box appears.

- 7** From the Setup dialog box, type your CD Key and then select the Next button.

Result: The Setup Type dialog box appears.

- 8** From the Setup Type dialog box, select the *Typical* option and the desired destination folders. If you want to install the Program Files in a different location than the Data Files, *Message Care* recommends the following capacities:

- Program Files - select a drive that has at least 200 MB of capacity.
- Data Files - select a drive that has at least 10 GB of capacity.

Select the Next button.

Result: The Select Components dialog box appears.

- 9** From the Services Accounts dialog box, do the following:
- Select the *Use the same account for each service Auto start SQL Server Service* option.
 - In the Service Settings group, select the *Use a Domain User account* option, and then enter a Username, Password, and Domain in the respective text boxes.
 - Select the Next button.

Result: The Start Copying Files dialog box appears.

- 10** Select the Next button.

Result: The Choose Licensing Mode dialog box appears.

-
- 11** From the Choose Licensing Mode dialog box, do the following:
- Select the default *Per Server for* option if you do not have a preference on the licensing mode.
 - Enter the number of licenses you require in the Per Server for text box. You will need licenses for *Message Care* (five licenses required) and licenses for administrators, supervisors, and agents who will be accessing the system simultaneously.
 - Select the Add Licenses button, and then select the Continue button.

Result: The installation finishes.

- 12** Start the SQL Server Service if it is not already running. To start the SQL Server Service, do the following:
- From the Start button, select Programs->Microsoft SQL Server 7.0->Service Manager. The SQL Server Service Manager window appears.
 - Select the Server from the Server drop-down list box.
 - Select the *MSSQLServer service* from the Services drop-down list box, and then select the Start/Continue button and the *Auto-start services when OS starts* check box.
 - Select the *MSDTC service* from the Services drop-down list box, and then select the Start/Continue button and the *Auto-start services when OS starts* check box.
 - Select the *SQLServerAgent* service from the Services drop-down list box, and then select the Start/Continue button and the *Auto-start services when OS starts* check box.
 - Close the SQL Server Service Manager window.

Result: All the SQL services are running and will automatically start upon starting the OS.

- 13** Reboot the server.

END OF STEPS



Install the *Microsoft* SQL service pack

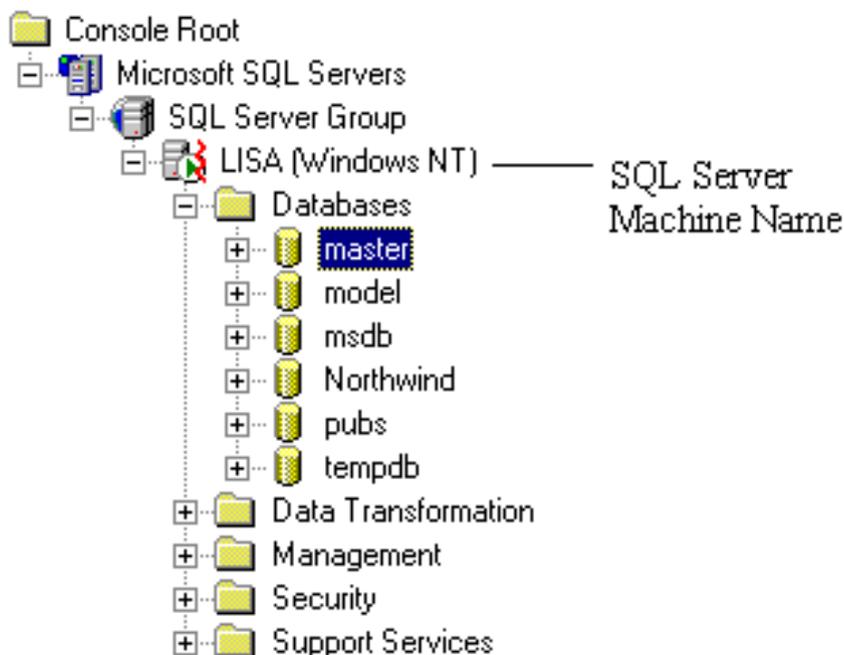
Installation instructions Follow the installation instructions provided in the Install wizard.



Verify the installation of *Microsoft SQL Server 7.0*

Instructions to verify installation To verify the correct installation of Microsoft Corp. *Microsoft SQL Server 7.0*, do the following:

- 1 Ensure that all SQL Server services are running. If they are not, follow Step 15 in the "Install SQL Server 7.0" section.
- 2 Connect to the SQL Server by doing the following:
 1. From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.
 2. Expand the Microsoft SQLServer->SQL Server Group, and then locate and expand your SQL Server machine name.
 3. Expand the Databases folder and verify that the following databases are present:
 - master
 - model
 - msdb
 - tempdb



3 Query the SQL Server by doing the following:

1. From the Start button, select Programs->Microsoft SQL Server 7.0->Query Analyzer

Result: The Connect to SQL Server dialog box appears.

2. From the Connect to SQL Server dialog box, do the following:

- Select the server (for a local server, select either “.” or select “local”) from the SQL Server drop-down list box. If there are no selections in the SQL Server drop-down list box, select the button to the right of the list box.
- After you have selected the server, select the *Use SQL Server authentication* option.
- Enter the Login Name and Password. If this is the first time you have installed SQL Server, then enter “sa ” as the Login Name and leave the Password field blank.
- Click the OK button.

Result: The Query window appears.

3. Enter each of the following queries in the Query window, and then select the Execute Query button.

- `select @@servername 'Server Name'`
- `select @@version 'version'`
- `exec sp_helpsort`

Result: The Query window splits. The upper portion of the window provides the commands originally executed and the bottom portion of the window provides the results of the queries.

Verify that the query produced the following results:

- The correct Server Name (for example, msgcare)
 - The correct SQL Server version (Microsoft Corp. *Microsoft SQL Server 7.0*) and Service Pack 1
 - The correct version of the operating system (Standard Edition on Windows NT 4.0 with Service Pack 4])
-

- The correct unicode data sorting (case-insensitive, kana-type insensitive, and width-insensitive).
- Verify the correct character set (ISO 8859-1, Case-insensitive dictionary sort order). Code page 1252 (ISO character set) is the default character set for non-Japanese servers and Code page 932 is the the default character set for Japanese servers. It is also known as the ISO 8859-1, Latin1, or ANSI character set. It is compatible with the ANSI characters used by the Microsoft Corp. *Microsoft NT* and *Microsoft Windows* operating systems. Code page 1252 might be appropriate if you intend to use clients running Microsoft Corp. *Windows*.

-
- 4** Look for error conditions in the following log files if any of the verification steps fail. The log files are text files that you can open in a text editor such as NotePad.
- *sqlstp.log* (located in the Windows directory)
 - *cnfgsvr.out* (located in the MsSql7\install directory)
 - *Errorlog* (located in the MsSql7\Log directory or where your database is installed)

END OF STEPS



Create *Message Care* databases

Overview In addition to the procedures that follow, you should read the *Message Care readme.txt* file that is delivered with the software. The *readme.txt* file includes late-breaking changes to and news about the software.

This section provides instructions on how to create *Message Care*-related databases. *Message Care* requires the following three databases:

- MCAdmin
- MCMessages
- MCArchive

The MCAdmin database is typically quite small in size; however, the MCMessages and the MCArchive databases can grow quite large over time. We recommend that you choose a large logical hard drive exclusively for carrying the *Message Care* databases. The sum of all the database capacities (as specified by the maximum file size parameter you will enter during the database creation process) should not exceed the size of the logical drive minus any space already taken.

Before you begin Before you create the *Message Care* databases, determine the appropriate sizes for each database, particularly the MCMessages database (holds all email messages).

Database size is restricted by the following:

- The size of the hard drive partition in which the databases will reside
- The disk space already used on the disk partition in which the databases will reside

Create MCAdmin database To create the MCAdmin database, do the following:

-
- 1 From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.
-
- 2 Expand the Microsoft SQLServer->SQL Server Group, and then locate and expand the SQL Server machine name. Right click on the Databases folder, and then select the New Database item to bring up the Database Properties dialog box.
-

-
- 3 From the General tab, enter the name of the new database you want to create in the **Name** text box. In this case, the database name is MCAdmin.

 - 4 Take note of the default location of the database in the Location field. Change this to the desired location.

 - 5 In the Database files group, type 1 in the Initial size (MB) field.

 - 6 In the File properties group, do the following:
 - Leave the **Automatically grow file** box checked.
 - In the File growth-> **By Percent** option, accept the default 10 percent.
 - Select the Maximum file size-> **Restrict filegrowth (MB)** option, and then type 200 for the file size.

 - 7 Select the Transaction Log tab.

 - 8 Take note of the default location of the transaction log file for this database in the Location field. Change this to the desired location.

 - 9 In the Transaction log files group, type 1 in the **Initial size (MB)** field.

 - 10 In the File properties group, do the following:
 - Leave the **Automatically grow file** box checked.
 - In the File growth-> **By Percent** option, accept the default 10 percent.
 - Select the Maximum file size-> **Restrict filegrowth (MB)** option, and then type 20 for the file size.
 - Select the OK button.
-

- 11 Expand the Databases folder and locate the newly created MCAdmin database.
- 12 Right-click the MCAdmin database, and then select the Properties item. This will bring up the MCAdmin Properties dialog box.
- 13 Select the Options tab.
- 14 From the Settings group, select the **Auto shrink** check box and leave the defaults (**Auto create statistics** and **Auto update statistics**) checked.
- 15 Select the OK button.

END OF STEPS

Create MCMessages database

To create the MCMessages database, do the following:

- 1 From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.
 - 2 Expand the Microsoft SQL Server->SQL Server Group, and then locate and expand your SQL Server machine name. Right-click the Databases folder, and then select the New Databases item to bring up the Database Properties dialog box.
 - 3 From the General tab, enter the name of the new database you want to create in the Name text box. In this case, the database name is MCMessages.
-

-
- 4** If the default location of the database in the Location field is not correct, then change this field to the desired location.
-
- 5** In the Database files group, type **100** in the **Initial size (MB)** field.
-
- 6** In the File properties group, do the following:
- Leave the **Automatically grow file** box checked.
 - In the File growth-> **In megabytes** option, type an appropriate incremental number of MB for which you want your database to grow. Ensure that the incremental File growth value is an integral multiple factor of the Restrict filegrowth value plus the Initial size value and that the value for the database capacity in *msgcare.ini* file is also an integral multiple factor of the Restrict filegrowth value plus the Initial size.

For example, if the Initial size value is 100 MB, the Restrict filegrowth value is 2000 MB, and the database capacity in *msgcare.ini* file is 1800 (90% of 2000), then 50MB could be used as the incremental growth size. That is the database can grow by increments of 50MB to eventually meet the 2000 MB limit.
 - For example, $(38 \times 50) + 100 = 2000$
 - 2000 = the Restrict filegrowth value
 - 100 = the Initial size of the database
 - 50 = the incremental growth size
 - 38 = integral multiple factor
 - For example, $(34 \times 50) + 100 = 1800$
 - 1800 = the maximum database size specified in *msgcare.ini* file
 - 100 = the Initial size of the database
 - 50 = the incremental growth size
 - 34 = integral multiple factor
-

If however, you use an incremental growth size that is not an integral multiple factor of the Restrict filegrowth value plus the Initial size (for example, 400), the MCMMessage database would eventually grow to 1700 (100->500->900->1300->1700) and then SQL would stop growing the database because the next increment would be 2100 (greater than the Maximum file size). *Message Care* on the other hand would continue to poll and process new message calls after the database grew to 1700 because you set a value of 1800 in the *msgcare.ini* file.

- Select the Maximum file size-> **Restrict filegrowth (MB)** option, and then type the number of MB for which you want to restrict the file growth.

7 Select the Transaction Log tab.

8 Take note of the default location of the transaction log file for this database in the Location field. Change this to the desired location.

9 In the Transaction log files group, enter **10** in the **Initial size (MB)** field.

10 In the File properties group, do the following:

- Leave the **Automatically grow file** box checked.
- In the File growth-> **In megabytes** option, enter **10**.
- Select the Maximum file size-> **Restrict filegrowth (MB)** option, and then type **300** for the file size.
- Click the OK button.

11 Expand the Databases folder and locate the newly created MCMessages database.

12 Right-click the MCMessages database, and then select the Properties item. This will bring up the MCMessages Properties dialog box.

-
- 13 Select the Options tab.

 - 14 From the Settings group, select the **Auto shrink** check box and leave the defaults (**Auto create statistics** and **Auto update statistics**) checked.

 - 15 Select the OK button

END OF STEPS

Create MCArchive database

To create the MCArchive database, do the following:

-
- 1 From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.

 - 2 Expand the Microsoft SQLServer->SQL Server Group and then locate and expand your SQL Server machine name. Right click on the Databases folder, and then select the New Databases item to bring up the Database Properties dialog box.

 - 3 From the General tab, enter the name of the new database you want to create in the Name text box. In this case, the database name is MCArchive.

 - 4 Take note of the default location of the database in the Location field. Change this field to the desired location.

 - 5 In the Database files group, type 5 in the **Initial size (MB)** field.

 - 6 Accept the defaults in the File properties group.
-

- 7 Select the Transaction Log tab.
- 8 Take note of the default location of the transaction log file for this database in the Location field. Change this field to the desired location.
- 9 Accept the defaults in the File properties group. Select the OK button.
- 10 Expand the Databases folder and locate the newly created MCArchive database.
- 11 Right-click the MCArchive database, and then select the Properties item to bring up the MCArchive Properties dialog box.
- 12 Select the Options tab.
- 13 From the Settings group, select the **Auto shrink** check box and leave the defaults (**Auto create statistics** and **Auto update statistics**) checked.
- 14 Select the OK button.

END OF STEPS

Modify the MCMessages capacity

Important! The *Message Care* software is designed to handle database capacity conditions. As the capacity of the database is reaching its maximum, *Message Care* will generate alarms. *Message Care* generates alarms at 80%, 90%, and 95% of the database's capacity.

After you have created the *Message Care* databases, you need to modify the MCMessages database capacity in the *msgcare.ini* file located in the Message Care server **winnt** directory. *Message Care* uses the value in the Maximum Database Size (MB) parameter to issue warning messages when the MCMessages database grows close to this limit and stops processing any new incoming message calls when this limit is reached. Some additional space (10% or so) should be left in the actual database allocation to allow for additional database operations.

To modify the capacity of the MCMessages database, do the following:

- 1 From the *Winnt* directory of the *Message Care* server, locate the *msgcare.ini* file.
- 2 Locate the **Maximum Database Size (MB)** parameter.
- 3 Set the value for the **Maximum Database Size (MB)** parameter to 90% of the maximum file size you administered in SQL for the MCMessages database.

Specifically, 90% of the value you entered in the Select the Maximum file size-> **Restrict filegrowth (MB)** option in the General tab.

For example, if you entered 2000 in the Restrict filegrowth option, then 1800 (90% of 2000) should be the value you specify in the **Maximum Database Size (MB)** parameter.

END OF STEPS



Create an SQL Server login ID and password

Create a login ID and password

This section provides instructions on creating an SQL Server login ID and password for the *Message Care* software.

- 1 From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.

- 2 Expand the Microsoft SQLServer->SQL Server Group and then locate and expand your SQL Server machine name.

- 3 Expand the Security folder, and then double-click the Logins icon.

- 4 Click on the New Login icon in the toolbar.
Result: The SQL Server Login Properties - New Login dialog box appears.

- 5 From the General tab, type *msgcare* in the *User* text box.

- 6 Select the *SQL Server authentication* option.

- 7 Type a password in the *Password* text box.

- 8 Select the Database Access tab.

- 9 Select the *Permit* check box for the MCAdmin database.

- 10 Select the *public* check box and the *db_owner* check box in the Permit in database role selection list.

-
- 11** Repeat Steps 8-9 for the MCArchive database and the MCMessages database.

Important! Use the same user name and password for each database.

- 12** Click the OK button.

Result: The Confirm Password dialog box appears.

- 13** Enter the new password in the *Confirm Password* text box, and then click the OK button.

END OF STEPS



Create ODBC data sources

General information The following procedures explain how to create an ODBC data source for each of the *Message Care* databases.

Create ODBC data source for MCAdmin database To create an ODBC data source for the MCAdmin database, do the following:

1 From the Start button, select Settings->Control Panel.

2 Double-click the ODBC Data Sources icon.

Result: The ODBC Data Source Administrator dialog box appears.

3 From the ODBC Data Source Administrator dialog box, select the System DSN tab, and then select the Add button (for the MCAdmin database).

Result: The Create New Data Source dialog box appears.

4 From the Create New Data Source dialog box, select the driver for SQL Server, and then select the Finish button.

Result: The Create a New Data Source to SQL Server dialog box appears.

5 Enter **Message Care SQL Admin** in the **Name** text box.

6 Enter **Message Care Admin database under SQL 7.0** in the **Description** text box.

7 Select **(local)** from the Server drop-down list, or type the name of the Server in the text box.

-
- 8** Select the Next button.
-
- 9** Select the *With SQL Server authentication using a Login ID and password entered by the user* option.
-
- 10** Type the user name (msgcare) in the *Login ID* text box and the password in the *Password* text box. Use the user name and password that you created in Step 4 and 6 of the [Create an SQL Server login ID and password \(4-21\)](#).
-
- 11** Select the Next button.
-
- 12** Select the *Change the default database to* check box, and then select MCAdmin from the drop-down list box (leave the default “Perform Translation for character data” checked).
-
- 13** Select the Next button. When the new dialog box appears, keep the defaults, and then select the Finish button.
-
- 14** Select the Test Data Source button. You should see a “TESTS COMPLETED SUCCESSFULLY” message. Click the OK button. Otherwise, check for errors in the data source name (DSN) definition by going through the steps again.

END OF STEPS

Create ODBC data source for MCMessages database

To create an ODBC data source for the MCMessages database, do the following:

- 1 From the Start button, select Settings->Control Panel.
.....
- 2 Double-click the *ODBC Data Sources* icon.
Result: The ODBC Data Source Administrator dialog box appears.
.....
- 3 From the ODBC Data Source Administrator dialog box, select the System DSN tab, and then select the Add button (for the MCMessages database).
Result: The Create New Data Source dialog box appears.
.....
- 4 From the Create New Data Source dialog box, select the driver for SQL Server, and then select the Finish button.
Result: The Create a New Data Source to SQL Server dialog box appears.
.....
- 5 Type **Message Care SQL Messages** in the *Name* text box.
.....
- 6 Type **Message Care Messages database** under **SQL 7.0** in the *Description* text box.
.....
- 7 Select **(local)** from the Server drop-down list or enter the name of the Server in the text box.
.....
- 8 Select the Next button.
.....
- 9 Select the *With SQL Server authentication using a login ID and password entered by the user* option.
.....

- 10 Type the username in the Login ID text box and the password in the Password text box. Use the user name and password that you created in Step 4 and 6 of the [Create an SQL Server login ID and password \(4-21\)](#).
- 11 Select the Next button.
- 12 Select the **Change the default database to** check box, and then select MCMessages from the drop-down list box (leave the defaults checked).
- 13 Select the Next button. When a new dialog box appears, keep the defaults and then select the Finish button.
- 14 Select the Test Data Source button. You should see a “TESTS COMPLETED SUCCESSFULLY” message. Click the OK button. Otherwise, check for errors in the DSN definition by going through the steps again.

END OF STEPS

Create ODBC data source for the MCArchive database

To create an ODBC data source for the MCArchive database, do the following:

- 1 From the Start button, select Settings->Control Panel.
- 2 Double-click the **ODBC Data Sources** icon.

Result: The ODBC Data Source Administrator dialog box appears.

-
- 3** From the ODBC Data Source Administrator dialog box, select the System DSN tab, and then select the Add button (for the MCArchive database).

Result: The Create New Data Source dialog box appears.

- 4** From the Create New Data Source dialog box, select the driver for SQL Server, and then select the Finish button.

Result: The Create a New Data Source to SQL Server dialog box appears.

- 5** Type **Message Care SQL Archive** in the *Name* text box.
-

- 6** Type **Message Care Archive database under SQL 7.0** in the *Description* text box.
-

- 7** Select (local) from the Server drop-down list or enter the name of the Server in the text box.
-

- 8** Select the Next button.
-

- 9** Select the *With SQL Server authentication using a login ID and password entered by the user* option.
-

- 10** Type the user name in the Login ID text box and the password in the Password text box. Use the user name and password that you created in Step 4 and 6 of the [Create an SQL Server login ID and password \(4-21\)](#).
-

- 11** Select the Next button.
-

-
- 12** Select the ***Change the default database to*** check box, and then select MCArchive from the drop-down list box (keep the defaults checked).
-
- 13** Select the Next button. When the new dialog box appears, keep the defaults, and then select the Finish button.
-
- 14** Select the Test Data Source button. You should see a “TESTS COMPLETED SUCCESSFULLY” message. Click the OK button. Otherwise, check for errors in the DSN definition by going through the steps again.

END OF STEPS



Install the ICM/CTI software

Installation instructions See [Install the ICM/CTI software \(3-4\)](#) to install the ICM/CTI software.



Message Care installation procedures

Overview

Purpose This section contains information on how to install the *Message Care* 4.1 software package. Before installing *Message Care*, ensure that you have met the hardware and software prerequisites (see [Prerequisites \(4-2\)](#)).

You must have Microsoft Corp. *Microsoft* SQL Server 7.0 with Service Pack 1 installed before you can install *Message Care*.

Contents This section contains the following information:

- [Install Message Care 4.1 software \(4-33\)](#)
- [Run the Data Transformation Scripts \(DTS\) for empty databases \(4-37\)](#)
- [Run the post-installation procedures \(4-40\)](#)
- [Essential URLs \(4-45\)](#)

Required Installation Information The following table lists the information that you are required to know before you install the *Message Care* 4.1 software.

Item	Default Value	Value to use in the install
<i>Message Care</i> Installation Directory—this is the directory that contains the executable files and web pages.	C:\Program Files\MessageCare	
<i>Message Care</i> Log File Directory—this is the directory that contains all of the <i>Message Care</i> and Maintenance Monitor log files.	C:\Program Files\MessageCare\ logs	
SQL database user name and password—this user name and password will be used in setting up the ODBC System DSNs and the SQL database access security.	None	Customer supplied

Item	Default Value	Value to use in the install
ICM directory—this is the directory where the Lucent Technologies ICM/CTI software was installed.	C:\itg	
Distinct License Key Extension Number—this value is supplied with the <i>Message Care</i> software and documentation.	None	
Distinct License Key Extension Key—this value is supplied with the <i>Message Care</i> software and documentation.	None	

Performance recommendations Recommendations for the *Message Care* software are listed below:

- Virtual memory—The virtual memory setting on your *Message Care* server should be set to physical memory plus 10MB. Therefore, the virtual memory setting would be 266 MB for 256MB of physical RAM. In addition, we recommend that virtual memory on the same drive running the *Message Care* application be set to 2-4 MB, with the remaining bulk of the virtual memory on a different drive.

The virtual memory does not have to be on the same disk as the database. If the server has two physical drives, we suggest that the virtual memory and the database be placed on two different physical drives.
- NT Application Performance Boost—to insure that sufficient system resources are available for the *Message Care* software processes, set the *NT Application Performance Boost* to None.
- To set the the *NT Application Performance Boost* to None, do the following:
 1. From the NT server desktop, right click on the *My Computer* icon, and then select the Properties item.
 2. From the System Properties dialog box, select the Performance tab.
 3. Adjust the Application Performance Boost to None.
- SQL Memory Usage—to insure sufficient memory for SQL, set the SQL Memory Allocation to 128MB.

- To set the SQL Memory Allocation to 128MB, do the following:
 4. Open the Microsoft Corp. *Microsoft* SQL Enterprise Manager.
 5. Right click on the Message Care server icon.
 6. Select the Memory tab, and then set the maximum memory usage to 128MB.
- IIS Logs—if you enable logging on the IIS server, you should not store them on a drive used by *Message Care* since they can grow quite large.
- To see if logging is enabled, do the following:
 7. Open the Internet Service Manager, and then open the Message Care server.
 8. Right click on the default Web Site, and then select the Properties item.
 9. The Web site tab shows if logging is enabled and allows you to choose the location in which you want to store the log files.
- The server must have an NTFile System (NTFS).
- To see what type of file system your server is using, do the following:
 10. Right-click the C: drive (on which Winnt is running), select Properties, and then select the General tab.
 11. If the file system type is FAT, you can change it to NTFS by using the convert utility if your PC is an x86 (not RISC) NT system. To change to an NTFS, use the MS-DOS command window.
- The ICM software must be installed on the *Message Care* server even if the ICM will run from a different server. This is because *Message Care* utilizes ICM library files. If this is the case, the ICM service must be stopped on the *Message Care* server, and the Startup Type of the ICM service must be changed from Automatic to Manual.



Install *Message Care* 4.1 software

Before you begin Before you install the *Message Care* software, stop the IIS service.

Installation procedures To install the *Message Care* 4.1 software, do the following:

- 1 Place the *Message Care* CD-ROM into the CD-ROM drive on the *Message Care* Server. Start Windows NT explorer and double click on the CD-ROM drive.

Result: The Explorer file pane will display a list of installation files.

- 2 To start the *Message Care* installation, double-click the file called *setup.exe*.

Result: This will start the install program.

You can cancel the installation at any time by selecting the cancel button. If you cancel the installation, the install program will remove any changes that have been made to your system.

- 3 Please read the information in the Installshield Welcome dialog box carefully and follow all of the instructions. Once you have read all of the instructions, select the Next button to continue.

Result: The Software License Agreement dialog box appears.

- 4 From the Software License Agreement dialog box, read the license agreement and select **Yes** if you agree to the terms in the license agreement. Select **No** if you do not agree and want to abort the installation of *Message Care*.

Result: If you select the Yes button, the Install Message Care dialog box appears.

5 The Install Message Care dialog box allows you to choose the directory where *Message Care* will be installed. The following information describes each of the items in the dialog box:

- **Browse button**—this button displays a dialog box that will allow you to change the Destination Folder of the *Message Care* software if you do not want to use the default.
- **Disk Space Button**—this button changes only the disk drive (for example, C: or D:) of the Destination Folder. This value is the drive where you installed *Message Care*.

6 When you have selected the install location and the component values, select the Next button.

Result: The Message Care Log File Location dialog box appears.

7 From the Message Care Log File Location dialog box, use the Browse button to enter the directory that you listed in the [Required Installation Information \(4-30\)](#) table for the **Log File Directory** field. Once you have the correct value in the Destination Folder, select the Next button.

Result: The ITG Location dialog box appears.

8 From the ITG Location dialog box, use the Browse button to enter the directory that you listed in the [Required Installation Information \(4-30\)](#) table for the **ICM directory** field. Once you have the correct value in the Destination Folder, select the Next button.

Result: The Select Program Folder dialog box appears.

9 The Select Program Folder dialog box is used to change the name of the program folder that is installed on the Start button. Change the name of the program folder or use the default, and then select the Next button.

Result: The Distinct License Keys dialog box appears.

-
- 10** From the Distinct License Keys dialog box, enter the Distinct license keys that came with your software. The Number field should contain the value in the Required Installation Information table for the Extension Number field. The Key field should contain the value in the Required Installation Information table for the Extension Key field. Select the Next button.

Result: A question dialog box appears prompting you to install the Lucent Technology RMM. The RMM is the Remote Maintenance Monitor.

- 11** Select the **yes** button to install RMM.

Result: The Welcome (to the RMM Setup program) dialog box appears.

- 12** Select the Next button to continue with the RMM installation.

Result: The Choose Destination Location dialog box appears.

- 13** From the Choose Destination Location dialog box, use the Browse button to select another directory to install the Maintenance Monitor. Select the Next button to continue.

Result: The Select Program Folder dialog box appears.

- 14** From the Select Program Folder dialog box, choose or rename the default name of the folder for the Maintenance Monitor as it will appear in the Start button. Select the Next button to continue.

Result: The setup program copies the files to the destination directory and enters the registry entries for the Maintenance Monitor. This process takes a few moments before the Choose Destination Location (for Perl) dialog box appears.

- 15** Enter the directory where Perl will be installed or accept the default. Select the Next button.

Result: A question dialog box appears.

-
- 16** The question dialog box gives you the option to install a shortcut icon on the desktop for easy access to *Message Care*.

Result: After you make your selection, the Setup Complete dialog box appears.

- 17** From the Setup Complete dialog box, select the **View README file** check box if you want to read the README file before the install completes. Otherwise, select the Finish button to complete the installation.

Result: A question dialog box appears.

- 18** The question dialog box notifies you that the setup is almost complete and prompts you to install JRE. Select the **No** button to skip this.

Result: After you make your selection, another question dialog box appears and prompts you to install Perl and /or PerlScript.

- 19** Select the **Yes** button to install Perl.

Result: The latest version of Perl is installed which is now called ActivePerl.

Selecting No is appropriate if this is an upgrade and Activeperl is current.

END OF STEPS



Run the Data Transformation Scripts (DTS) for empty databases

How to run the DTS for empty databases

Important! Execute the DTS only after an installation of Microsoft Corp. *Microsoft* SQL Server 7.0 software and *Message Care* 4.1 software. If you must run the DTS after you have been using *Message Care*, do so with extreme caution. Running the DTS will result in a loss of data.

To create database tables for a new installation, do the following:

-
- 1** From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager. Expand the Microsoft SQLServer->SQL Server Group and then locate and expand your SQL Server machine name.

 - 2** Run the DTS to initialize the MCAdmin Database by doing the following:
 - Right-click the Data Transformation Services.
 - Select all tasks, and then select Open Package.
 - From the MessageCare directory, select SQLTools->Install->CreateEmptyAdmin.dts.
 - Select the Package menu, and then click Execute.
 - Click Done.

 - 3** Run the DTS to initialize the MCArchive Database by doing the following:
 - Right-click on the Data Transformation Services.
 - Select all tasks, and then select Open Package.
 - From the MessageCare directory, select SQLTools->Install->CreateEmptyArchive.dts.
 - Select the Package menu, and then click Execute.
 - Click Done.
-

-
- 4** Run the DTS to initialize the MCMessages Database by doing the following:
 - Right-click on the Data Transformation Services.
 - Select all tasks, and then select Open Package.
 - From the MessageCare directory, select SQLTools->Install->CreateEmptyMessages.dts.
 - Select the Package menu, and then click Execute.
 - Click Done.

 - 5** From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.

 - 6** From your server, go to Databases->MCmessages->Tables. Right-click on Tables, and then select *Design Table*.

 - 7** Save changes to the table.

 - 8** Repeat Steps 5–8 for the Outbound and Workbench tables located in the MCmessage->Tables path.

END OF STEPS



Apply indexes

Instructions See [Applying the indexes \(4-54\)](#) for instructions on how to apply indexes.



Run the post-installation procedures

Overview The following is a summary of the post installation procedures:

1. Administer IIS.
2. Administer the *Message Care* database access username and password.
3. Configure *Message Care*
4. Administer *Message Care*.
5. Restart the system.

Administer IIS

- 1 Open the IIS 4.0 console from the Start button, select Programs->Windows NT 4.0 Option Pack->Microsoft Internet Information Server->Internet Service Manager.
-

- 2 Right-click on the *Default Web Site* and select *Start*.

The following new virtual directories that were just created appear:

- mcscrip
 - mcadmin
 - msgcare
-

- 3 Edit the properties for the virtual directories. Start with *mcscrip* by right-clicking the mcscrip virtual directory. Select Properties from the menu display.

Result: The mcscrip Properties dialog box appears.

- 4 In the Application Settings frame, click the *Create to define an application starting point* option.

Result: The Applications Settings frame changes to allow you to enter text in the Name text box. The Create button is now Remove, and the Configuration button can now be selected.

-
- 5 Enter **mcscript** in the Name text box. Select the Apply button.
-
- 6 Repeat Steps 1–3 for the **mcadmin** and **mcreport** virtual directories.

END OF STEPS

Administer the *Message Care* database access username and password

The user name and password should be identical to the one used to create the SQL databases.

-
- 1 Open the URL *http://<MC_server_name>/msgcare/mcsetlogin.asp* to administer this.
-
- 2 Enter the user name and password and select Submit.

END OF STEPS

Configure *Message Care*

To configure the *Message Care* software, do the following:

-
- 1 If the ICM is not installed on the same server as *Message Care*, change the **WorkFlowMan.ICMAddr** parameter of the *parms.txt* file (located in the install directory) to the IP address of the ICM server. *Message Care* services must be restarted after changing this parameter value.
-
- 2 Set your browser's caching options to refresh each time you visit a page. If your browser caches pages, a view of a page may not reflect the most recent updates.
-

3 To use the *CentreVu* Internet Solution administration Web pages, you must perform one of the following configuration tasks:

- If *Message Care* and ICM/CTI are co-resident (running on the same server), then follow the steps below.
- If *Message Care* and ICM/CTI are not co-resident (running on different servers), then go to Step 5.

If *Message Care* and ICM/CTI are co-resident (running on the same server), then do the following:

1. Under the directory where ICM is installed (typically - *C:\itg\admin*) create a new folder called *msgcare*.
2. Move the
<install_directory>\MessageCare\temp\MCAAdministration.htm file to the folder you just created (*C:\itg\admin\msgcare*). Go to Step 6.

4 If *Message Care* and ICM/CTI are not co-resident (not running on the same server), do the following:

1. In the *C:\itg\admin* folder on the ICM server, create a folder called *msgcare*.
2. From the *Message Care* server, copy the
<install_directory>\MessageCare\temp\MCAAdministration.htm file to the *C:\itg\admin\msgcare* folder you just created on the ICM server.
3. Edit the *C:\itg\admin\msgcare\MCAAdministration.htm* file on the ICM server to link to the *Message Care* Server.

Edit the second line of the file— <form name="formal" action="/mcaadmin/MsgCareAdmin.asp" method="post"> with the following line— <form name="formal" action="http://<your_Message_Care_server_domain>/mcaadmin/MsgCareAdmin.asp" method="post">

4. Edit the *C:\Program Files\MessageCare\www\scripts\mc_agent.asp* file located on the *Message Care* server.

Edit the following line: `<form name= "LOGIN" action="/servlet/agentsu/" method="post" TARGET="_top" OnSubmit="Welcome();" >` with the following new line— `<form name= "LOGIN" action="http://<ICM_server_domain>/servletWT/agentsu/" method="post" TARGET="_top" OnSubmit="Welcome();" >`

Edit the following line: `document.LOGIN.browseWinURL.value = "/mcscript/mc_welcome.asp?language="+document.LOGIN.language.Options[document.LOGIN.language.selectedIndex].value;` with the following new line:

```
document.LOGIN.browseWinURL.value = "http://
<MC_server_domain>/mcscript/
mc_welcome.asp?language="+document.LOGIN.language.
Options[document.LOGIN.language.selectedIndex].val
ue;
```

5. Edit the `<install_directory>\MessageCare\www\admin\MsgCareAdmin.asp` file located on the *Message Care* server.

Edit the link to the System Administration page— `System Administration Menu ` to the following line— `<A HREF="http://<ICM_server_domain>/admin">System Administration Menu `

- 5 Set up the Spell Checker by editing the following file: `<install_directory>\MessageCare\www\scripts\spell.inc`

Edit the SpellServer entries and the SpellPort entries.

The SpellServer entry identifies the IP address of the Spell Checker server software. The SpellPort entry identifies the listening port of the spell server. This port must correspond to the port used in

`<install_directory>\MessageCare\bin\SpellServer\spellserver.bat` entries.

END OF STEPS

Administer *Message Care*

- 1 To administer *Message Care*, refer to [Administer the Message Care software \(5-6\)](#).

END OF STEPS

Restart the system After you have performed all post-installation procedures, restart the *Message Care* system.



Essential URLs

URL for the Administration Page

http://<MC_server_name/mcadmin/MsgCareAdmin.asp

Localized URLs for Agent Login page

Refer to [Agent login Web pages \(6-2\)](#) for a listing of localized URLs for the Agent Login Web pages.

Localized URLs for Supervisor Reports Page

Refer to [Access Message Care reports \(9-11\)](#) for a listing of localized URLs for the Report Web pages.



Uninstall *Message Care* 4.1

Overview

Purpose The purpose of this section is to explain how to uninstall *Message Care* 4.1 software. Before uninstalling *Message Care* you will need to stop the Microsoft Corp. *Microsoft* Internet Information Services (IIS) and perform a graceful shutdown of *Message Care*.

Contents The following information is included in this section:

- [Stop Microsoft Internet Information Server \(IIS\) \(4-47\)](#)
- [Perform a Graceful Shutdown of Message Care \(4-48\)](#)
- [Uninstall the Message Care software \(4-49\)](#)
- [Uninstall the Maintenance Monitor \(4-50\)](#)



Stop *Microsoft* Internet Information Server (IIS)

Stopping the IIS To stop Microsoft Corp. *Microsoft* IIS, do the following:

- 1 Open the IIS 4.0 console from the Start button, by selecting Programs->Windows NT 4.0 Option Pack->Microsoft Internet Information Server->Internet Service Manager.

Result: The Microsoft Management Console dialog box appears.

- 2 From the Microsoft Management Console, select Internet Information Server-><your machine name>->Default Web Site, and then Stop the service

- 3 Stop the World Wide Web Publishing service from the Services dialog box.

From the Start button, select Settings->Control Panel, and then double-click the Services icon. Click on the World Wide Web Publishing service, and then select Stop.

END OF STEPS



Perform a Graceful Shutdown of *Message Care*

How to shutdown *Message Care*

To perform a graceful shut down of *Message Care*, refer to [Perform a graceful shutdown \(12-23\)](#).



Uninstall the *Message Care* software

Uninstall *Message Care* procedure To uninstall the *Message Care* software, do the following:

- 1 From the Control Panel, double click on the Add/Remove Programs icon.
- 2 Click on the Lucent Message Care program (default name), and then select the Add/Remove... button.
- 3 You may be asked if you want to remove shared files. Say Yes to all.

END OF STEPS



Uninstall the Maintenance Monitor

Uninstall Maintenance Monitor procedure

To uninstall the Maintenance Monitor, do the following:

- 1 From the Control Panel, double click on the Add/Remove Programs icon.
- 2 Click on the Lucent Maintenance Monitor program, and then select the Add/Remove... button.
- 3 You may be asked if you want to remove shared files. Say Yes to all.

END OF STEPS

Reboot your system

After you have uninstalled the *Message Care* software, reboot your system.



Message Care upgrade procedures (pre version 4.0)

Overview

Purpose The purpose of this section is to explain how to upgrade the *Message Care* software.

Summary of upgrade procedures A summary of the upgrade procedures follows. To upgrade *Message Care*, you will perform some of the procedures documented in this chapter or in other chapters within this user guide. Please refer to the corresponding information as instructed in the following text.

1. Shut down the old *Message Care* services. See [Perform a graceful shutdown \(12-23\)](#).
2. Back up *Message Care* files. See [Back up Message Care files \(12-27\)](#).
3. Uninstall *Message Care*. See [Uninstall the Message Care software \(4-49\)](#).
4. Uninstall ICM/CTI. See [Uninstall the ICM/CTI software \(3-13\)](#).
5. Restart NT.
6. Upgrade NT, IIS and ICM/CTI. See [Upgrade NT and ICM/CTI \(4-52\)](#).
7. Install SQL 7.0. See [Install Microsoft SQL Server 7.0 \(4-6\)](#).
8. Create the SQL databases. See [Create Message Care databases \(4-13\)](#).
9. Create an SQL Server login ID and password. See [Create an SQL Server login ID and password \(4-21\)](#).
10. Define the ODBC data sources (DSNs). See [Create ODBC data sources \(4-23\)](#).
11. Install *Message Care*. See [Install Message Care 4.1 software \(4-33\)](#).
12. Run the DTS scripts for migrating the Access databases. See [Run the DTS for migrating the Microsoft Access databases \(4-53\)](#).
13. Run the Post-Install steps. See [Run the post-installation procedures \(4-40\)](#).
14. Restart the system.



Upgrade NT and ICM/CTI

Overview This section contains the following information:

- [How to upgrade NT \(4-52\)](#)
- [How to upgrade ICM/CTI \(4-52\)](#)

How to upgrade NT

- 1 Start the Windows Explorer by selecting Programs->Windows NT Explorer from the Start button.
-

- 2 From the Help menu, select the About Windows NT menu item.

Result: The About Windows NT dialog box appears.

- 3 From the About Windows NT dialog box, you can view the version of Microsoft Corp. *Windows NT* and the version of the service pack that is running on the computer.

You are interested in the Microsoft Corp. *Windows NT* version number and the Service Pack number. Confirm that your computer is running the required version and service pack. Service packs for Microsoft Corp. *Windows NT* can be downloaded from the Microsoft Corp. *Microsoft Website* <http://www.microsoft.com>.

END OF STEPS

How to upgrade ICM/CTI

- 1 Open the ICM window from Start\Lucent ICM_CTI\Lucent Internet Call Manager.
-

- 2 Select the Help menu item and choose Version.
-

- 3 Upgrade ICM/CTI if it is not the right version.

END OF STEPS



Run the DTS for migrating the *Microsoft Access* databases

Important! The “Upgrade from Access to SQL Server” procedure is essential to run the *Message Care* software. If you do not perform this procedure, you will not be able to run *Message Care*.

Upgrade from Access to SQL Server

To migrate the old Access databases to SQL 7.0, do the following:

1. Ensure that all of the old *Message Care* (pre 4.0) databases are in the location, *C:\Program Files\MessageCare\database*. If this directory does not exist (if *Message Care* is installed on another drive), create this directory and copy the databases to the new location.
 2. From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.
 3. Run the DTS to migrate the *MsgCareAdmin.mdb* database by doing the following:
 1. Right-click Data Transformation Services.
 2. Select All tasks and then select Open Package.
 3. From the MessageCare directory, select SQLTools->Install->MigrateAdmin.dts.
 4. Select the Package menu, and then click Execute.
 4. Repeat Step 3 to migrate the *MessageCare.mdb* database using the *MigrateMessages.dts* file.
 5. Repeat Step 3 to migrate the *ArchiveMessageCare.mdb* database using the *MigrateArchive.dts* file.
 6. Run the index scripts to improve database access. Refer to the [Applying the indexes \(4-54\)](#).
-

- 7 Verify that the databases are properly migrated by running a few searches and reports using the Current and Archive databases.
- 8 From the Start button, select Programs->Microsoft SQL Server 7.0->Enterprise Manager.
- 9 From your server, go to Databases->MCmessages->Tables. Right-click on Tables, and then select *Design Table*.
- 10 Change the Length of Subject Column Name from 128 to 512.
- 11 Save changes to the table.
- 12 Repeat Steps 8–11 for the Outbound and Workbench tables located in the MCmessage->Tables path.

END OF STEPS

Applying the indexes

- 1 From the Tools menu in SQL 7.0 Enterprise Manager, select the SQL Server Query Analyzer.
- 2 In the Query window, click the second icon from the top left (Load SQL Script).
- 3 In the Open Query File dialog box, go to the directory where *Message Care* is installed.

-
- 4** Under *MessageCare/SQLTools/Install*, select the file *MessageCareIndexes.SQL*, and then press the Enter key to open it.

-
- 5** Press the F5 key or select the Execute button.

END OF STEPS



Append your Access database archives

About If you have multiple Microsoft Corp. *Microsoft* Access database archives for which you want to migrate to Microsoft Corp. *Microsoft* SQL, then you will need to run the *MArchive.bat* utility.

The *MArchive.bat* utility appends your Access based *Message Care* archived databases (Pre *Message Care* Release 4.0) to the MCArchive Database in Microsoft Corp. *Microsoft* SQL Server 7.0 (*Message Care* Release 4.0 and greater).

Location of *Message Care* Access databases

The *MArchive.bat* utility assumes that your *Message Care* Access databases are located in the *C:\Program Files\MessageCare\database* folder. If your *Message Care* Access databases are not located in the *C:\Program Files\MessageCare\database* folder, move them to that folder before running the *MArchive.bat* utility.

Before you begin

Your *Message Care* Access databases cannot contain the same message record IDs (tracking numbers) that are contained in the MCArchive database. If the *MArchive.bat* utility identifies duplicate message record IDs, then the migration will fail.

If you are aware of duplicate message record IDs or suspect that you may have duplicate message record IDs, then run the archive scripts (see [Multiple archives \(12-31\)](#)) to rename and move your current MCArchive database and to create a new (empty) MCArchive database to which you can append your Access databases.

Append your *Message Care* Access databases to the *Microsoft* SQL MCArchive database

To append your Access databases to the MCArchive database, do the following:

-
- 1 Open the MS-DOS Command Prompt window.

 - 2 Navigate to the *\Install* directory under *Program Files->MessageCare->SQL Tools->*.
-

-
- 3** Type the following command: **MArchive <database_name>**
- <database_name> = the name of your *Message Care* Access database
- For example, **c:\Program Files\MessageCare\SQL
Tools>MArchive MCArchive1.mdb**
-
- 4** Repeat Step 3 for each *Message Care* Access database that you want to append to the MCArchive database in SQL.

END OF STEPS





5 Administration

Overview

Purpose The purpose of this section is to inform you of the administration required for the *CentreVu*® Internet Solution. After you have installed and connected all necessary components, you must administer your *CentreVu* Internet Solution so that you can use all of its features and functions.

Audience This section is intended for system administrators, support personnel, and anyone who wants an overview of administering the *CentreVu* Internet Solution.

Contents The following information is contained in this chapter:

- [Administering the CentreVu Internet Solution software \(5-2\)](#)
- [Administering the DEFINITY ECS \(5-31\)](#)
- [Administering the CentreVu Computer-Telephony for Windows NT software \(5-42\)](#)

References See the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for more information about the ITG server.



Administering the *CentreVu* Internet Solution software

Overview

Purpose This section explains what must be administered for the *CentreVu* Internet Solutions software.

Audience This section is intended for system administrators and support personnel.

Contents The following administration items are provided:

- [Administration prerequisites \(5-3\)](#)
- [Administer the Message Care software \(5-6\)](#)
- [Administer the CTI \(5-22\)](#)
- [Administer common parameters \(5-24\)](#)
- [Administer Internet Call Center parameters \(5-27\)](#)



Administration prerequisites

What are the prerequisites?

Before you begin administration for the *CentreVu* Internet Solution, ensure the following:

- The ITG server (if you purchased the IP voice media access type), ICM server and *CentreVu* Computer-Telephony server must be installed, connected, and functioning on the LAN.
- The ICM application must be running on the ICM server.
- A console or terminal connection must be available on the ITG.
- A Web browser must be available for administrative access.
- IP addresses for the ITG server, ICM server and *CentreVu* Computer-Telephony server must be known.

Where do I administer my *CentreVu* Internet Solution software?

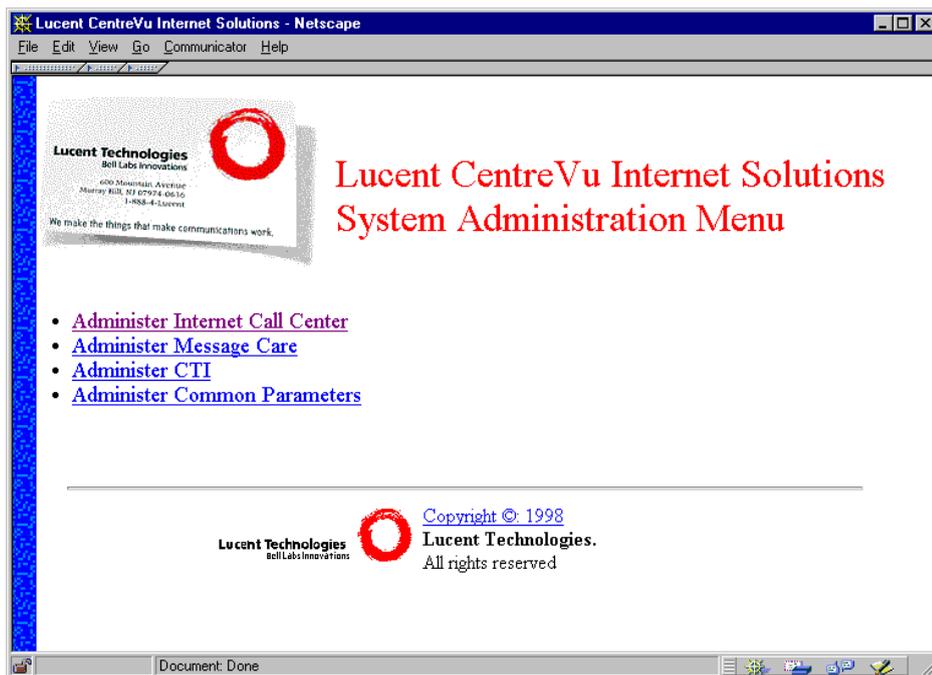
All *CentreVu* Internet Solution software is administered through a main administration Web page.

To access the main administration Web page, enter the page location in the browser window as follows:

http://<ICM_server_name>/admin

The main administration Web page appears.

Illustration The following is the Lucent CentreVu Internet Solution System Administration Menu.



The illustration above shows the available administration categories. Each category links to another page for administration and is described in the following sections. Click on the text link of a category to begin the administration.

If you do not have the Internet Call Center software installed, then the *Administer Internet Call Center* link will not be available. If you do not have the *Message Care*[™] software installed, then the *Administer Message Care* link will not be available.

Characteristics of the administration Web pages

Most of the administration Web pages have similar characteristics. These characteristics are as follows:

- You can confirm that a URL in the Internet Call Center Administration Web page and the Common Administration Web page is correct and accessible by clicking on the Verify link. For example, clicking on the Verify link to the right of the URL should bring up the associated Web page in a separate browser window.
- Each Web page provides a Help, Refresh, and Save button.
- The buttons and their associated actions are as follows:
 - Refresh—redispays the current page with any updated values. Be sure to refresh the page after using the Save button to ensure that the values are correct.
 - Help—links to Help contents associated with the page.

All Help selections open a separate browser window so that Help can be viewed simultaneously with the page being administered. Help browser windows can be closed at any time without affecting the administration process.

All administration Web pages provide Help information. To access help information about a particular field, click on the underlined field description. To access general Help for each administration Web page, click on the Help button.
- You can edit fields by doing the following:
 1. Highlight the portion of the field you want to change.
 2. Enter the new information.
 3. Select the Save button to store the new values.
 - Save—activates the new administration changes made on this screen. Each specific section identifies the action or necessary steps taken to ensure that the administrative changes are in effect.



Administer the *Message Care* software

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

- Define the set of mailboxes to be monitored.
- Define the call routing number (VDN) or rules to associate a number (subject-based call routing) 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. For example, each mailbox can have different values for canned reponses, closure codes, SMEs, suspension codes, and so forth. In addition, these values can be set in one of the *Message Care* supported languages.
- Administer the set of canned message responses used by agents in any one of the *Message Care* supported languages.

Message Care administration Web pages

Message Care provides the following administration Web pages to help you administer the *Message Care* software:

- [Message Care Administration Web page \(5-9\)](#)
- [Message Care System Options Web page \(5-11\)](#)
- [Mailbox Administration Web page \(5-14\)](#)

You will administer *Message Care* using the following administration Web pages:

- Message Care System Options Web page
- Mailbox Administration Web page

Localization

Even though the *Message Care* administration Web pages are in US English, *Message Care* allows the entry of administration information in the supported languages. The ability to enter administration information in any of the supported *Message Care* languages provides agents with tools in the proper language. For example, you can administer label strings such as closure codes in the language appropriate for the mail received in a particular mailbox.

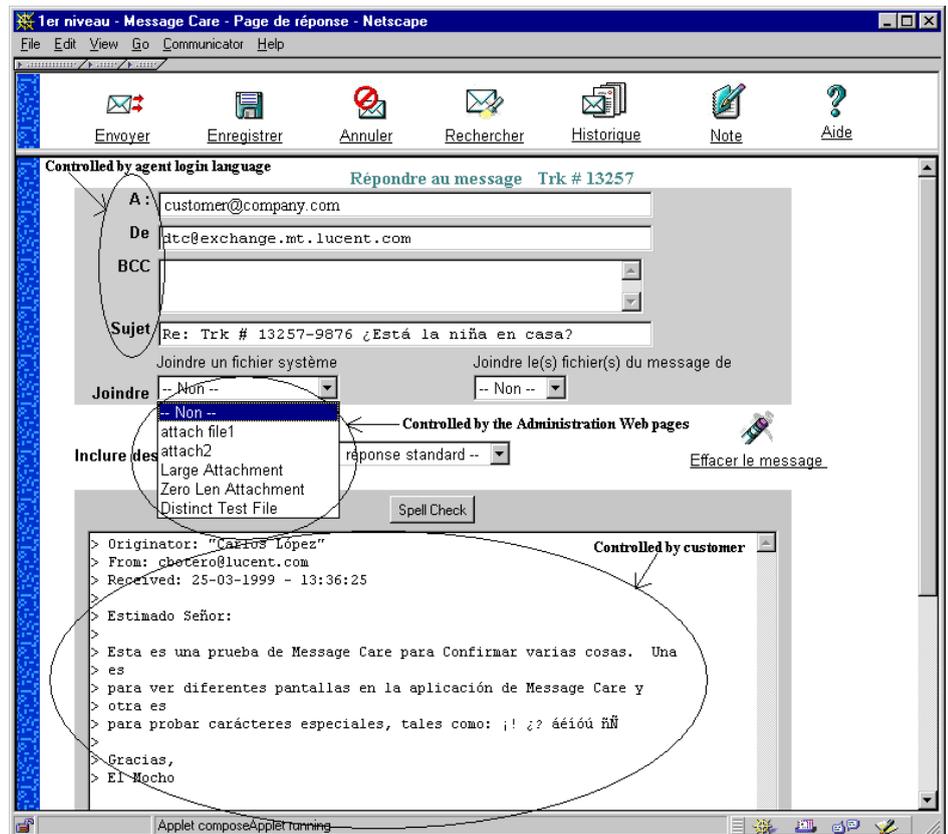
NOTE: When *Message Care* is running in a Japanese operating environment (J-mode), then certain administration data must be entered using ASCII characters. Administration fields that require the input of ASCII characters (instead of Japanese) are identified in the Parameter description tables for each administration Web page.

Understanding how localization works

To begin the explanation of how localization works, we will assume that mailbox A will receive only French messages.

Because mailbox A receives only French messages, it will be administered with French labels and the VDN will route the messages to a skill group that can read French messages. The agents that are in the French skill group will select French as their preferred language when logging in to the *Message Care* system. When agents in the French skill group receive a message from mailbox A, processing Web pages, labels (canned phrases, closure codes, suspension codes, and so forth), and the consumer's message will all be in French.

The following graphic illustrates how language affects the agent Web pages. For example, *Message Care* controls the language of the Web page labels through the agent language selection during login. The language of each File attachment selection is administered through the Mailbox Administration Web page. And, the language of the message context is determined by the language the customer uses to compose and send a message.



When logging in to the *Message Care* system, agents do not have to select the same language for which they will be receiving messages. For example, an agent could be receiving messages from the French mailbox but the agent's preferred language is German. In this case, the agent would see message content and labels in French and the processing Web pages in German.

Localization considerations when administering mailboxes

To optimize the use of different languages, consider the following before you begin administering mailboxes:

- The primary language preference for your *Message Care*-monitored mailboxes and the primary language of your agents.

Mailbox language—if you can anticipate the primary language of each of your *Message Care*-monitored mailboxes, you can then enter values (for example, closure codes, SMEs, and so forth) in that language. When the agent receives a message from that mailbox, the agent will be presented with values in the language of the mailbox.

Agent language—when an agent logs in to the *Message Care* system, the agent selects a preferred language. The preferred language the agent selects determines the language used to present processing Web pages (idle page, search page, and so forth). Fields (Subject, Originator, and so forth) within the processing Web pages display in the language the agent selected.

- The auto-acknowledgment file—if you choose to administer auto-acknowledgments for a mailbox, then you must anticipate the language of that mailbox and then use an auto-acknowledgment text file in that same language. For example, if the primary language of mailbox Z is Italian (that is, you expect Italian messages to come through mailbox Z), then you want your auto-acknowledgments to also be in Italian.
- Closure codes—when administering closure codes for a mailbox, you have the flexibility of defining a set of closure code values in one language while specifying the stored values in another language. This is useful when you want to report on the same closure code that is in many different languages. When presenting reports, *Message Care* displays the Stored Value, not the Display Label presented to the agents.

For example, let us assume that you have two technical support mailboxes (one in German and one in French) and you want to compare response times between the two mailboxes.

- In this case, you would do the following:
 - In the German mailbox, enter the Display Label for the closure code in German and then enter the Stored Value for the same closure code in English (a common language for all supervisors).
 - In the French mailbox, enter the Display Label for the same closure code in French and then enter the Stored Value for the same closure code in English.

When you generate a Closure Code report for the German and French mailbox, the closure code will be displayed in English.

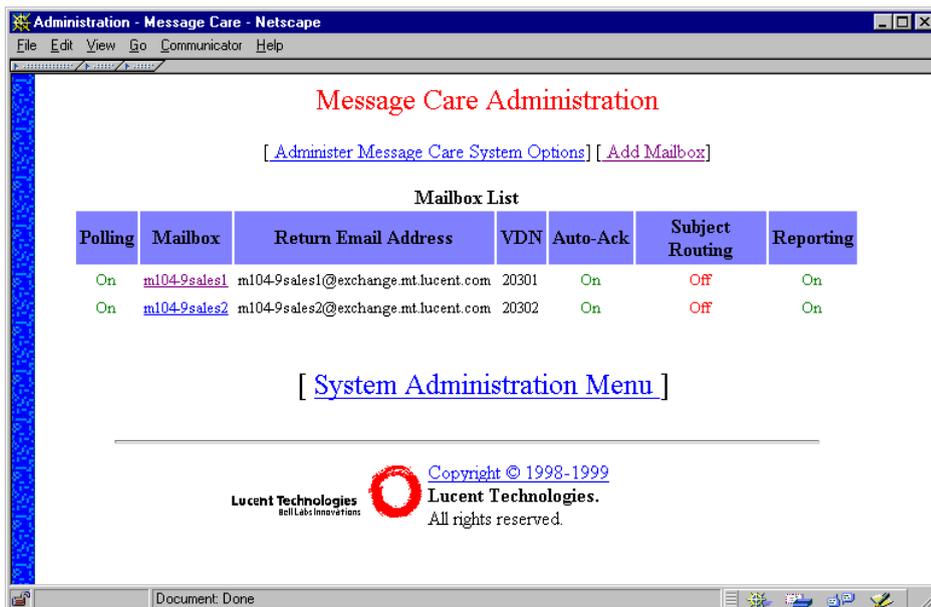
- Administering file path names—when administering file path names (for example, the location of an auto-acknowledgment file), you must enter the path in the language preference of the *Message Care* server and the agent.
- Administering the Default VDN Number—if the mailbox you are administering will receive messages for a specific language, then you will want to administer the Default VDN Number to a skill group that can read messages in that language.

Message Care Administration Web page

The Administer Message Care link (from the Lucent CentreVu Internet Solutions System Administration Menu) jumps to the Message Care Administration Web page which allows you to administer parameters specific to the *Message Care* software. From the Message Care Administration Web page, you can administer system options and add mailboxes. The Message Care Administration Web page also provides you with a list of mailboxes already administered.

Illustration

An illustration of the Message Care Administration Web page follows:



Column description for 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:

Column	Description
Polling	Indicates whether the mailbox has been enabled for polling.
Mailbox	Indicates the specific name of the mailbox as shown in the Report selection options.
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 (VDN) called when a message is received in this mailbox.
Auto-Ack	Indicates whether you have enabled the mailbox to send auto-acknowledgments.
Subject Routing	Indicates whether you have enabled the mailbox for subject-based routing.
Reporting	Indicates whether you have disabled the mailbox for reporting purposes.

Message Care System Options Web page

The Message Care System Options administration Web page allows you to add or modify system-wide administration options. For example, Site Identifier, SMTP server, and so forth.

Illustration

An illustration of the Message Care System Options Web page follows:

The screenshot shows a Netscape browser window titled "Administration - Message Care System Options - Netscape". The browser's address bar is empty. The page content includes a navigation bar with buttons for "Save", "Back to Mailbox List", and "Help". The main heading is "Message Care System Options" in red. Below the heading, a legend states "* Indicates required field". The form contains the following fields:

- Site Identifier: 3333 *
- Max Simultaneous Message Calls: 100 *
- SMTP Server: exchange.mt.lucent.com *
- Retrieve VDN Number: 20300 *
- Alarm Email Address From: pani@lucent.com *
- Alarm Email Address To: jrohn@lucent.com *
- Date Format: US European

A red warning message follows: **WARNING: To ensure required field changes take effect (except for the Retrieve VDN Number field), you must restart your Windows NT server. To ensure a Date Format change takes effect, the agent must close and then reopen the browser.**

Below the warning, a section titled "Enter value between 20 and 50 for the following items:" contains five input fields:

- No. Of Suspension Codes per Mailbox: 49
- No. Of Closure Codes per Mailbox: 25
- No. Of SMEs per Mailbox: 50
- No. Of Canned Responses per Mailbox: 20
- No. Of File Attachments per Mailbox: 20

The browser's status bar at the bottom shows "Document: Done".

Interactions between the system options and mailbox administration

It is important to state the interactions between the following system option parameters and mailbox administration:

- No. of Suspension Codes
- No. of Closure Codes
- No. of SMEs
- No. of Canned Responses
- No. of File Attachments

When you set the number for the system options parameters (previously listed), you are establishing the number allowed for each parameter during mailbox administration. For example, if you enter the maximum value of 50 in the No. of Suspension Codes field, you will be able to administer up to 50 Suspension Codes for each mailbox.

If you reduce the number of Suspension Codes from the *Message Care* System Options Web page to 30, then you will also have to remove the extra 20 Suspension Codes from each mailbox. If you do not remove the extra Suspension Codes from each mailbox, the agent will continue to see a selection of 50 Suspension Codes from the agent Web pages.

Parameter description for the Message Care System Options Web page

You can administer the following parameters on the Message Care System Options page. You can identify the administration data that must be entered in ASCII characters by the following statement: “J-Mode: must use ASCII character set”.

Parameter	Description
Site Identifier (required field)	A number tag (numeric suffix) that you assign to be included in all assigned message tracking numbers. Site identifiers are used to distinguish messages processed at different centers using the <i>Message Care</i> software. This suffix is fixed at four digits. The default suffix is 1000. Even though this release of the <i>Message Care</i> software supports only a single site, you may forward messages between sites using your email networks. J-Mode: must use ASCII character set
Max Simultaneous Message Calls (required field)	Indicates the maximum number of message calls that you want in the <i>DEFINITY</i> ® ECS at any one time. You can set this value to a number less than what you purchased but not to a number greater than what you purchased.
SMTP Server (required field)	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. <i>Message Care</i> requires that the Simple Mail Transfer Protocol (SMTP) server listen on port 25. J-Mode: must use ASCII character set

Parameter	Description
Retrieve VDN Number (required field)	<p>The VDN called when an agent retrieves a message. When an agent retrieves a message, the <i>Message Care</i> software supports a vector route request step identifying the agent who requested the message.</p> <p>You need to ensure that the VDN that you administer in <i>Message Care</i> has also been administered on the <i>CentreVu</i> Computer-Telephony server. To synchronize the <i>CentreVu</i> Computer-Telephony server software and the <i>Message Care</i> software, they both must be restarted.</p> <p>J-Mode: must use ASCII character set</p>
Alarm Email Address (required field)	<p>The specified email address to which an email alarm will be sent through the SMTP server in response to a <i>Message Care</i> alarm condition; <i>Message Care</i> recommends that this be a group mailing list of your support team.</p>
No. Of Suspension Codes	<p>Indicates the number of suspension codes that you can administer for a mailbox. The number of suspension codes cannot exceed 50.</p>
No. Of Closure Codes	<p>Indicates the number of closure codes that you can administer for a mailbox. The number of closure codes cannot exceed 50.</p> <p>J-Mode: must use ASCII character set</p>
No. Of SMEs	<p>Indicates the number of SMEs that you can administer for a mailbox. The number of SMEs cannot exceed 50.</p> <p>J-Mode: must use ASCII character set</p>
No. Of Canned Responses	<p>Indicates the number of canned responses that you can administer for a mailbox. The number of canned responses cannot exceed 50.</p> <p>J-Mode: must use ASCII character set</p>
No. Of File Attachments	<p>Indicates the number of file attachments that you can administer for a mailbox. The number of file attachments cannot exceed 50.</p> <p>J-Mode: must use ASCII character set</p>
Date Format	<p>An option that you can set to either the European or US date format. The European format is <i>day/month/year</i> and the US format is <i>month/day/year</i>.</p>

Parameter	Description
Junk Mail Screening	<p>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 <i>Message Care</i> software marks the message status as blocked. Blocked messages will not receive an auto-acknowledgment nor will <i>Message Care</i> deliver them to agents. <i>Message Care</i> supports wild cards.</p> <p>The Junk Mail Screening option must either be turned on or off for each mailbox. To turn this option on or off for each mailbox, go to the Mailbox Administration Web page.</p> <p>J-Mode: must use ASCII character set</p>
Subject Screening to Block Auto Acknowledgment	<p>You can enter up to ten text strings that <i>Message Care</i> will 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.</p>

Mailbox Administration Web page

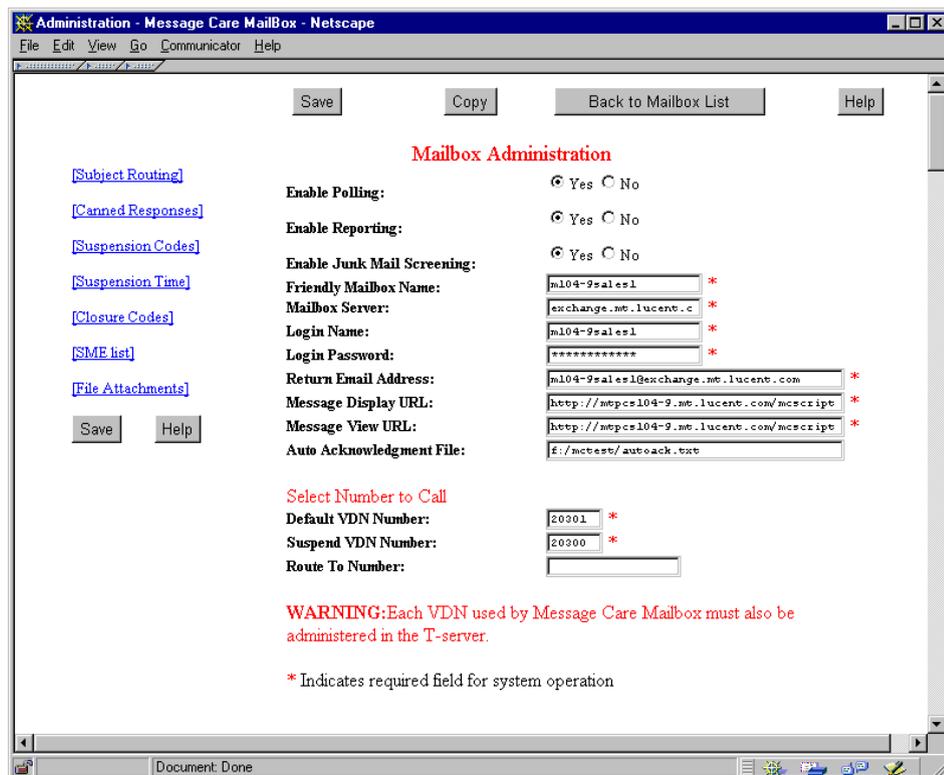
Important! *Do not* change the Friendly Name of a mailbox after the mailbox has been administered and in use.

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.

For more information about setting options for a mailbox that receives MIME type *application/ms-tnef* messages, see [Attachment is lost or cannot be opened \(13-22\)](#).

Illustration

An illustration of the Mailbox Administration Web page follows:



Parameter description for the Mailbox Administration Web page

Changes to mailbox specific fields (for example, Enable Polling, Login Password, Default ASAI Digit Number, and so forth) take effect during the polling cycle following your change to the field(s). Changes to the agent specific parameters (for example, Canned Responses, Closure Codes, File Attachments, and so forth) take effect when an agent Web page appears in the browser window.

The following parameters can be administered on the Mailbox Administration Web page. You can identify the administration data that must be entered in ASCII characters by the following statement: "J-Mode: must use ASCII character set".

Parameter	Description
Enable Polling	An option which you can set to Yes or No to allow or prevent the mailbox from being polled. This allows you to pre-administer a mailbox in anticipation of a new campaign. NOTE: You cannot enable polling if Reporting is disabled.

Parameter	Description
Enable Reporting	<p>An option which you can set to Yes or No to enable or disable reporting. When you set this option to Yes, <i>Message Care</i> displays the mailbox in the report criteria pages, thus allowing you to create a report based on the mailbox. When you set this option to No, <i>Message Care</i> will not display the mailbox in the report criteria pages, thus not allowing you to create a report based on the mailbox. The default is Yes.</p> <p>You cannot enable reporting if polling is disabled.</p> <p>Note that the Reporting option does not delete a mailbox. If you set the option to Yes, you can still conduct a search on the mailbox.</p>
Friendly Mailbox Name (required field)	<p>The label of a mailbox used by the <i>Message Care</i> software for report and search operations. Each mailbox name must be unique.</p> <p>Do not change the Friendly Name of a mailbox after you have administered the mailbox and after it is in use.</p>
Mailbox Server (required field)	<p>The IP address or host name of the mail server where the mailbox resides.</p> <p>J-Mode: must use ASCII character set</p>
Login Name (required field)	<p>The login ID of the mailbox that <i>Message Care</i> monitors.</p> <p>J-Mode: must use ASCII character set</p>
Login Password (required field)	<p>The login password of the mailbox that the <i>Message Care</i> software monitors.</p> <p>If your system automatically requires new passwords, you must update the value used by the <i>Message Care</i> software.</p> <p>J-Mode: must use ASCII character set</p>
Return Email Address (required field)	<p>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).</p> <p>J-Mode: must use ASCII character set</p>

Parameter	Description
Message Display URL (required field)	<p>The URL used to deliver the message contents to an agent in order to view a message and compose a reply. A default value is provided for the Message Display URL in which you can modify to include your <i>Message Care</i> server name.</p> <p>J-Mode: must use ASCII character set</p>
Message View URL (required field)	<p>The URL used to allow an agent to view a message without being able to make any changes.</p> <p><i>Message Care</i> provides a default value for the Message View URL in which you can modify to include your <i>Message Care</i> server name.</p> <p>J-Mode: must use ASCII character set</p>
Suspend VDN (required field)	<p>The VDN called when the suspension timer expires or a related message is received while the message is suspended (the <i>Message Care</i> software is designed to support an adjunct route step in this VDN). The <i>Message Care</i> software detects the expiration of a suspended timer within minutes of expiration.</p> <p>You need to ensure that the VDN you administer in <i>Message Care</i> has also been administered on the <i>CentreVu</i> Computer-Telephony server. To synchronize the <i>CentreVu</i> Computer-Telephony server software and the <i>Message Care</i> software, they both must be restarted.</p> <p>It is important to consider how to cover a call when an agent is not logged in; please refer to Vectors (2-42).</p> <p>J-Mode: must use ASCII character set</p>
Auto Acknowledgment File	<p>The full path name of the file used for the ASCII file containing the text of the acknowledgment. If you do not administer an auto-acknowledgment file location, <i>Message Care</i> will not send auto-acknowledgments from this mailbox.</p>
Enable Junk Mail Screening	<p>An option which you can set to Yes or No to block certain incoming messages based on the originating address. If you set the option to Yes, <i>Message Care</i> will block messages administered in the System Options “Junk Mail Screening” field.</p>

Parameter	Description
Default VDN Number (required field)	<p>This is the VDN called when <i>Message Care</i> launches a message from this mailbox. This is the value that tracks the Call Management System (CMS) statistics and should identify the required skill set of the agents processing the messages received in this mailbox. If used, <i>Message Care</i> overrides this value by matching values in the Subject Based Call Routing administration.</p> <p>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.</p> <p>J-Mode: must use ASCII character set</p>
Route To Number	<p>A fixed value to pass to the <i>DEFINITY</i> ECS as a route to step during vector processing; you can use this to specify a specific agent.</p> <p>J-Mode: must use ASCII character set</p>
Rank	<p><i>Message Care</i> uses the Rank field 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 ensure that the values in this field are unique and ordered (for example, for ten entries, they must have the values 1 through 10).</p> <p>J-Mode: must use ASCII character set</p>

Parameter	Description
Subject Based Call Routing	<p>Up to ten text strings (case sensitive) to search for in the message subject. If a match is found, the corresponding VDN is used when placing the call in the <i>DEFINITY</i> 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.</p> <p>To route a message, the <i>Message Care</i> software initiates the call routing processes on the <i>DEFINITY</i> ECS by launching a message call to a VDN. The <i>DEFINITY</i> ECS performs the real call routing processing, looking at the available pool of agents and workload at the center.</p> <p>Each <i>Message Care</i> 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 <i>Message Care</i> software select a number based on the contents of the message subject field by administering subject-based call routing.</p> <p>J-Mode: you must enter the route to number in ASCII. You can enter the string to match upon in Japanese characters.</p>

Parameter	Description
Canned Responses	<p>A list of any ASCII files (“canned answers” to frequently-asked questions) that agents can use in replying to the consumer. For each file, you must include its location and the label that the agent uses to select it.</p> <p>If you incorrectly administer a canned response file, that is, the file cannot be found when an agent selects it, <i>Message Care</i> presents an error message to the agent.</p> <p>Canned response files must be located in the compose applet directory (the default is, <i>C:\Program Files\MessageCare\www\applets\compose</i>). You may also create a subdirectory of the compose applet directory for storing canned responses.</p> <p>J-Mode: you must enter the canned response path name, including the canned response file name, in ASCII. You can enter the labels presented to the agents in Japanese.</p>
Suspension Codes (required field)	<p>A list of reason codes for agents to assign when suspending a message.</p> <p>If you do not administer at least one Suspension Code, then the agent will not be able to suspend a message.</p>
Suspension Time (required field)	<p>A set of minutes for which an agent can keep a message suspended. Agents can choose from these values when suspending a call from this mailbox.</p> <p>If you do not administer Suspension Times, then the agent will not be able to suspend a message.</p> <p>J-Mode: must use ASCII character set</p>
Closure Codes (required field)	<p>A list of reason codes for agents to assign when closing a message; <i>Message Care</i> uses the set of administered closure codes to generate reports.</p> <p>If you do not administer at least one Closure Code, then the agent will not be able to close a message.</p>

Parameter	Description
SME List	<p>A list of the Subject Matter Experts (SMEs) and their email addresses. Ensure that this list contains the email addresses of members of your company who can receive email from agents requesting assistance in the processing of messages.</p> <p>J-Mode: you must enter the email address of the SME using the ASCII character set. You can enter the labels of the SMEs (that are presented to the agents) in Japanese.</p>
File Attachments	<p>A list (name and location) of the call center's file attachments that agents may use when replying to a consumer. File types must be administered on the <i>Message Care</i> server 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.</p>

Mailbox Administration 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 one mailbox's fields and paste it to another mailbox's fields. When you select the copy command, *Message Care* copies all information except the mailbox ID, password, and Friendly Mailbox Name into the mailbox. This function is useful 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).
- **Back to Mailbox List**—returns you to the Message Care Administration Web page.
- **Help**—opens help pages containing information on administering *Message Care*.

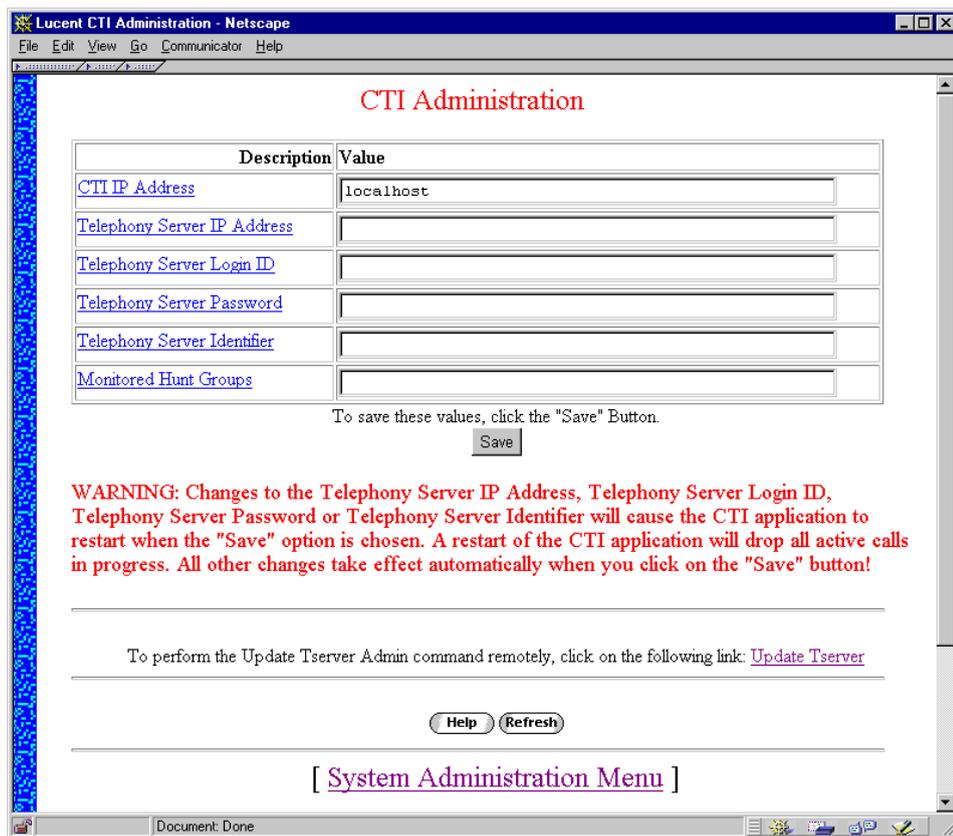


Administer the CTI

Overview The CTI Administration Web page allows administration of the telephony server IP address, login ID, password, and identifier. In addition, it allows the identification of hunt groups (or skill set extensions in an EAS environment) that the *CentreVu* Computer-Telephony Server monitors.

Illustration

An illustration of the CTI Administration Web page follows:



Parameter description for the CTI Administration Web page

For more information about a specific CTI Administration parameter, click on the parameter's blue-underlined text in the Description column.

The following parameters can be administered on the CTI Administration Web page:

Parameter	Description
CTI IP Address (required field)	This field must contain the IP address or the network name of the server where CTI is installed.
Telephony Server IP Address (required field)	This field must contain the IP address or the network name of the <i>CentreVu</i> Computer-Telephony server. If you change this field, you will have to restart the <i>CentreVu</i> Computer-Telephony server.
Telephony Server Login ID (required field)	This field must contain a valid <i>CentreVu</i> Computer-Telephony server login-ID that the CTI process uses. If you change this field, you must restart the <i>CentreVu</i> Computer-Telephony server.
Telephony Server Password (required field)	This field must contain a valid <i>CentreVu</i> Computer-Telephony server password (associated with the login-ID) that the CTI process uses. If you change this field, you must restart the <i>CentreVu</i> Computer-Telephony server.
Telephony Server Identifier (required field)	This field must contain the link type description and <i>CentreVu</i> Computer-Telephony server identification name that the CTI process uses. This field must exactly match the administered <i>Tlink Name</i> on the <i>CentreVu</i> Computer-Telephony server. If you change this field, you must restart the <i>CentreVu</i> Computer-Telephony server.
Monitored Hunt Groups (required field)	This field must contain the set of hunt groups (or Skill Set extensions in an EAS environment) that the <i>CentreVu</i> Computer-Telephony server monitors.

Update Tserver link The *Update Tserver* link sends the **update tserverAdmin** command to the CTI. (See [Commands on the Internet CTI Control Window \(12-13\)](#) for a description of the command.)

For information about updating devices, see [Updating devices in the CentreVu Computer-Telephony server \(12-15\)](#).

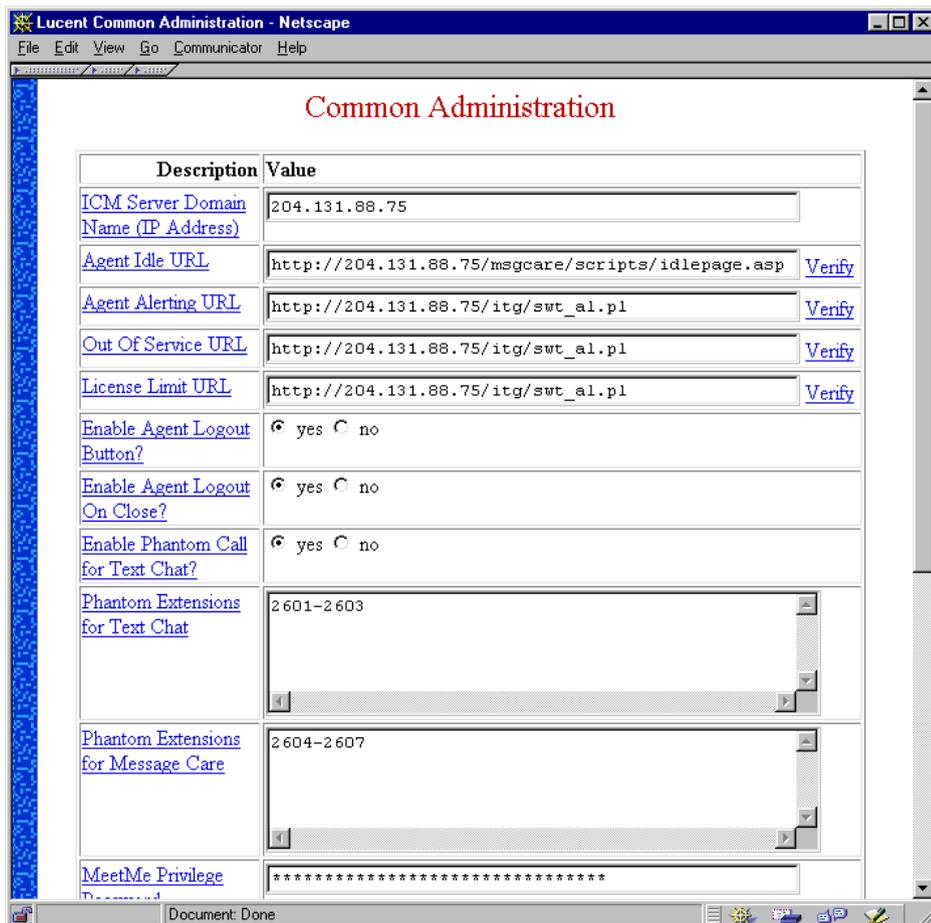


Administer common parameters

Overview The Common Administration Web page allows administration that is common to both the ICC and *Message Care* software. Regardless of the offer(s) you purchased, you must still administer parameters in the Common Administration Web page.

Illustration

An illustration of the Common Administration Web page follows:



For information about a specific Common Administration parameter, click on the parameter's blue-underlined text in the Description column.

Parameter description for the Common Administration Web page

The following parameters can be administered on the Common Administration Web page:

Parameter	Description
ICM Server Domain Name (required field)	This field must contain the full domain name or IP address of the server where the ICM application is executing.
Agent Idle URL (required field)	This field must contain the URL of the Web page displayed to an agent who is logged in but not currently active on a call. If you have installed <i>Message Care</i> only or <i>Message Care</i> and the Internet Call Center, then you must use the agent idle URL (<i>idlepage.asp</i>) provided by <i>Message Care</i> .
Agent Alerting URL	This field contains the URL of the Web page displayed to an agent when the agent is alerted of a new call. If you have installed <i>Message Care</i> only or <i>Message Care</i> and the Internet Call Center, then you must use the agent alerting URL (<i>mc_agentalert.asp</i>) provided by <i>Message Care</i> .
Out Of Service URL (required field)	This field must contain the URL of the page displayed when you take the ICM out of service. If you have installed <i>Message Care</i> only or <i>Message Care</i> and the Internet Call Center, then you must use the out-of-service URL (<i>mc_isoff.asp</i>) provided by <i>Message Care</i> .
License Limit URL (required field)	This field must contain the URL of the page displayed to the caller when the call attempt exceeds the number of simultaneous sessions for the requested call type.
Enable Agent Logout Button?	Enable/Disable the Logout button on the Agent control Window. The default is Yes.
Enable Agent Logout On Close?	Enable/Disable automatic agent logout from the call center if the agent connection to the ICM application on the ICM server is lost or dropped. The default is Yes.
Enable Phantom Call for Text Chat?	Enable/Disable the ASAI Phantom call feature. If you disable this feature, <i>Message Care</i> launches real-time calls using PRI trunks through the Internet Telephony Gateway. The default is Yes.

Parameter	Description
Phantom Extensions for Text Chat	A list of the extensions or hunt groups used if you enable the Enable Phantom Call for Text Chat feature. These must be extensions of stations administered without hardware (AWOH).
Phantom Extensions for Message Calls (required field)	A list of the extensions or hunt groups used if you have installed <i>Message Care</i> . These must be extensions of stations administered without hardware (AWOH).
MeetMePrivilege Password (optional field)	This field contains the privileged password which allows presenters to set up a Virtual conference.

Important information about the Agent Idle URL parameter

The Agent Idle URL parameter contains the URL of the Web page displayed to an agent who is logged in but not currently active on a call.

If you do not use the *Message Care* idle page

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

If you do not set the cookie, 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.

You must also add the **language** parameter to set the language of the Agent Control Window. The valid parameter values are:

- US English (default)—en-US
- Columbian Spanish—es-CO
- French—fr
- German—de
- Italian—it
- Brazilian Portuguese—pt-BR
- Japanese—ja

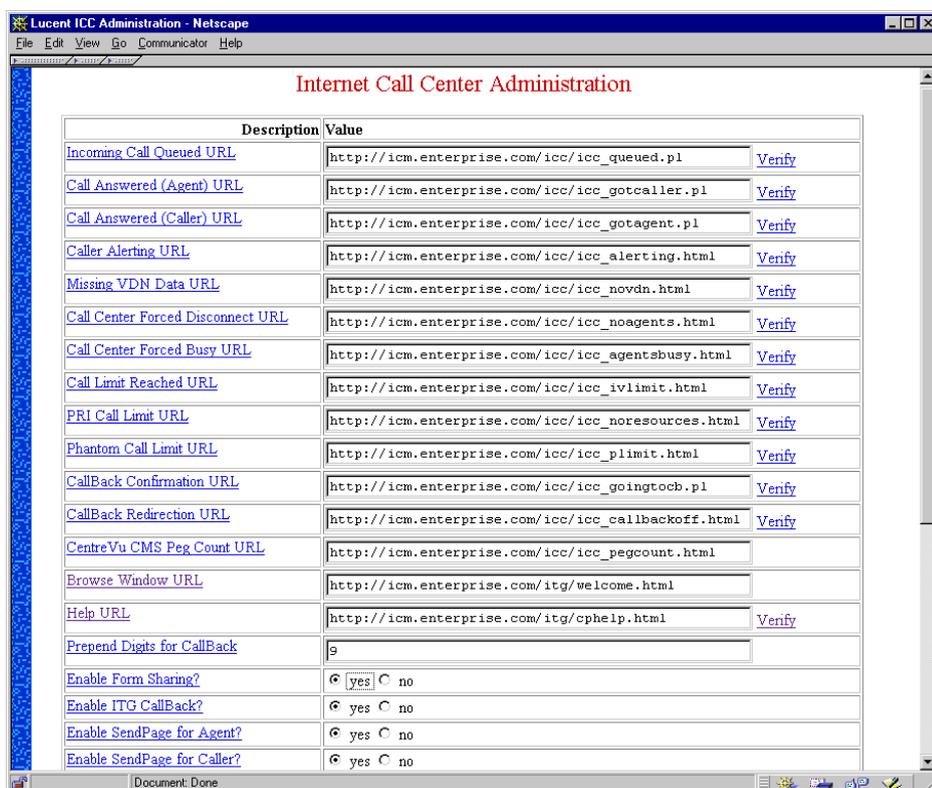


Administer Internet Call Center parameters

Overview The Internet Call Center Administration page allows administration of the URLs associated with call progress or failure events. These are the Web pages or scripts used whenever a specific event occurs. In addition, the Internet Call Center Administration page allows administration of features and other operation functions.

Illustration

An illustration of the Internet Call Center Administration Web page follows:



For information about a specific Internet Call Center Administration parameter, click on that parameter's blue-underlined text in the Description column. To validate that a URL is correct, click on the Verify link for that particular URL.

**Parameter description
for the Internet Call
Center Administration
Web page**

The following parameters can be administered on the Internet Call Center Administration Web page:

Parameter	Description
Incoming Call Queued URL (required field)	This field must contain the URL of the Web page displayed to callers when they are placed in queue for the next available agent.
Call Answered (Agent) URL (required field)	This field must contain the URL of the Web page displayed to agents when they receive an incoming Internet call.
Call Answered (Caller) URL (required field)	This field must contain the URL of the Web page displayed to the caller whose call is received by an agent.
Caller Alerting URL	This field must contain the URL of the Web page displayed to a caller when the caller is alerted of a new call.
Missing VDN Data URL (required field)	This field must contain the URL of the Web page displayed to the caller when a call request is submitted but the VDN extension information is missing.
Call Center Forced Disconnect URL (required field)	This field must contain the URL of the Web page displayed to the caller in the event that vector processing returns a forced disconnect.
Call Center Forced Busy URL	This field contains the URL of the page to be displayed to a caller in the event that vector processing returns a forced busy.
Call Limit Reached URL (required field)	This field must contain the URL of the Web page displayed to the caller when the ITG is currently processing the maximum number of Internet voice calls, as defined by the purchased system limits.
PRI Call Limit URL (required field)	This field must contain the URL of the Web page displayed to callers when their Internet call cannot be placed into the call center due to insufficient PRI resources.
Phantom Call Limit URL (required field)	This field must contain the URL of the Web page displayed to the caller when an ASAI Phantom call cannot be placed due to a lack of resources (for example, all extensions or extensions in the hunt group are in use).

Parameter	Description
CallBack Confirmation URL (required field)	This field must contain the URL of the Web page displayed to the caller to confirm a request for callback.
CallBack Redirection URL (required field)	This field must contain the URL of the Web page displayed to callers when they request a callback call but the feature has been turned off.
CentreVu CMS Peg Count URL	<p>This field contains the URL of the script for reporting call-related peg counts to CMS. If you do not enter a value in this field, CMS peg counting will not be performed.</p> <p>If you cannot report peg counts to CMS using the CentreVu CMS Peg Count URL, then you can report peg counts through a proxy by administering the PegCountProxyURL in the <i>icmparms</i> file. For example:</p> <p>PegCountProxyURL=co.proxy.company.com:8000</p>
Browse Window URL (required field)	This field must contain the URL of the Web page displayed to a caller while the Caller Control Window downloads and opens. You can set this field as a parameter (browseWinURL) in the “call us” web page.
Help URL (required field)	This field must contain the URL of the Web page displayed to the caller when the caller selects the Help button on the Caller Control Window applet. You can set this field as a parameter (helpURL) in the “call us” web page.
Prepend Digits for CallBack	This field contains the digit(s) that must be prepended to any requested callback number in order to place an outgoing call from the call center. An empty field indicates that no digits are to be prepended. The dial string may contain any telephone keypad digit (0-9,*,#).
Enable Form Sharing?	This field controls the ability for Agents and Callers to collaboratively share the data entered into forms on a Web page. The default is Yes.
Enable ITG CallBack?	This field controls the ability for callers to request an outgoing call from the call center to a specified number. The default is Yes.

Parameter	Description
Enable SendPage for Agent?	This field controls the ability for Agents to use the SendPage button. The default is Yes.
Enable SendPage for Caller?	This field controls the ability for Callers to use the SendPage button. The default is Yes.
Is the ICM Server using SSL?	This field identifies if the ICM server is using SSL. The default is No.



Administering the *DEFINITY* ECS

Overview

Purpose This section describes the administration tasks that must be performed on the *DEFINITY* ECS.

Audience This chapter is intended for *DEFINITY* ECS system administrators or persons responsible for translating the *DEFINITY* ECS for *CentreVu* Internet Solution functions. This includes Lucent Technologies' Technical Support Organizations.

References The following list represents documents that contain information relevant to the *CentreVu* Internet Solution. For detailed instructions on administering the *DEFINITY* ECS, see the appropriate documentation or documentation set.

- *DEFINITY* ECS documentation set
- *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)*
- *BCS Product Security Handbook(555-027-212)*



DEFINITY ECS Administration

Overview Because the *CentreVu* Internet Solution uses ACD functionality, you must perform specific *DEFINITY* ECS administration for the *CentreVu* Internet Solution.

The following is a list of *DEFINITY* ECS administration tasks:

- [Direct Agent Calling \(DAC\) \(required\) \(5-32\)](#)
- [ACD translations \(required\) \(5-33\)](#)
- [Dial Plan \(required\) \(5-37\)](#)
- [Stroke Counts \(5-37\)](#)
- [ISDN-PRI trunk group \(required\) \(5-37\)](#)
- [Phantom Extension \(required\) \(5-39\)](#)
- [Service Observing \(5-39\)](#)
- [Ongoing operations \(5-41\)](#)

Direct Agent Calling (DAC) (required)

DAC definition—Direct Agent Calling allows a call to a specific ACD agent to be treated as an ACD call. If that agent is logged in but not available, the call will queue for that agent. If the agent is not logged in, the call will follow the agent's coverage path.

How ICC uses Direct Agent Calling

The ICC software uses DAC to allow callers to select a specific agent when calling the call center.

For more information about the Direct Agent Calling feature, contact Lucent Technologies MultiMedia Applications Customer Support (MACS).

How *Message Care* uses Direct Agent Calling

The *Message Care* software uses DACs for delivering retrieved or suspended messages to specific agents.

Things to know about Direct Agent Calling

The following list provides important information about DACs:

- Retrieved and returning suspended calls will utilize queue slots and affect CMS reports
- DACs should remain queued at the agent's terminal long enough to allow the agent to complete the processing of the current message call. A DAC will not abandon due to an impatient caller and should not be routed to *AUDIX*® .
- Real-time calls may be administered to cover to a voice mail box, while message calls should never be sent to voice mail. Please refer to the [Vectors \(2-42\)](#) for sample vectors that you can use to provide different coverage for an agent for real-time calls versus message calls.
- 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.

Defining the Class of Restriction (COR)

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. See the recommendations for coverage criteria in the [Sample vectors for retrieve and suspend \(2-48\)](#) section.

ACD translations (required)

The Multimedia Applications Customer Support (MACS) group inputs standard *DEFINITY ECS* ACD translations as part of the *CentreVu Internet Solution* installation.

NOTE: When adding your own VDNs, ensure that they do not exceed seven digits.

Real-time communications (ICC) ACD translations

The *DEFINITY ECS* ACD standard translations for real-time communications are as follows:

- Three standard, measured VDNs. See the *DEFINITY Enterprise Communications Server Release 6 Call Vectoring/Expert Agent Selection (EAS) Issue 2 Guide(555-230-521)* for a complete description. The first VDN is for Internet text chat, the second is for Internet voice calls (if you purchased Internet voice), and the third is for callback. A MACS engineer obtains necessary extensions from the customer.
- Two standard vectors. The first vector is for Internet voice (if you purchased Internet voice). This vector queues the call to the Internet skill and optionally plays a delay announcement. The second is for Internet text chat and callback requests. This is a single-step vector that contains a queue to the main skill command. Both vectors queue an Internet-initiated call to a customer-assigned skill. A MACS engineer obtains these vector numbers from the customer.

The customer is responsible for translating Internet skills, Expert Agent IDs, and agent telephones. Lucent Technologies personnel can provide this design work, as well as enhanced vector designs, as part of the Call Center Application Integration NetCare Services offer. Call your account executive or Professional Services on 1-800-4NetCare for details.

Some general guidelines to consider when translating skills and agents include the following:

- The implementation of stroke counts can be used to help track conditions such as bad voice quality, no one on the other end of a call, collaboration did not work, and so forth.
- The Multiple Call Handling feature is not supported by the ICC solution.

Some general guidelines to consider when translating VDNs and vectors for real-time communications include the following:

- Do not use the “wait with music” vector step. It would add unnecessary processor usage to the caller's PC and traffic to the Internet circuit.
 - Do not use the “converse” vector step. It is incompatible with ICC functionality.
-

- Do not use digit collection in real-time communication vectors. There is currently no good way to pass Dual Tone Multi Frequency (DTMF) tones (touchtones) across the Internet; therefore, there are no digits to collect.
- VDN of Origin Announcements (VOAs) are strongly recommended. When an agent receives a text chat call, there is no audio. With VOA, the agent hears an identifying message (such as “voice call” or “text chat call”) and knows whether to answer audibly or through text chat. Without VOA, the only way the agent has to identify a call type is to note the VDN name on the terminal display. Agents' class of service must be set to receive VOAs.
- We recommend that you use a different vector for text chat and callback calls than for Internet voice calls. The voice call vector can provide in-queue announcements, which are unnecessary for text chat and callback calls. In addition, the initial setup delay for Microsoft Corp. *Microsoft NetMeeting*®, used for Internet voice, requires a unique strategy to be used in the voice call vector (see [Voice call vector strategy \(5-35\)](#)); that strategy is not needed for text chat or callback calls. Finally, voice calls can be routed to a voice mail box, whereas text chat and callback calls cannot.

Voice call vector strategy

To provide the best experience to the caller, write vectors to answer each Internet voice call with an announcement that does not exceed 5 seconds. (This is a “null” announcement in a way, since it is not heard by anyone.) Such a setup serves to establish an audio connection so that any follow-up announcements should be heard in full and, more importantly, as soon as the agent answers the call, the agent can begin speaking with the caller.

The vector could look like the following:

1. Announcement 2000 (a normal delay announcement that is less than 5 seconds in length)
2. queue to main skill 10 priority m
3. wait time 10 seconds hearing silence
4. announcement 2000
5. goto step 3 if unconditional

Note that the announcement in steps 1 and 4 can be the same if it is less than 5 seconds in length.

When an Internet voice call is requested, the audio connection is not set up until answer supervision is returned from the *DEFINITY ECS*. As a result, the following may occur:

- There is a lag of approximately five seconds (on a dial-up connection) between the time the agent answers the call and the time when the agent can be heard by the caller.
- If a time-in-queue announcement is used, the caller does not hear the first 5 seconds of the announcement.

Messaging ACD translations

A MACS engineer inputs standard *DEFINITY ECS* ACD translations as part of the *Message Care* software installation.

These include:

- Ten VDNs
- Ten vectors
- Ten skills
- Ten mailboxes

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.

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

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”). The COR on agent IDs must be set in the *DEFINITY ECS* to hear VDN of Origin Announcement (if used).

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 [Vectors \(2-42\)](#).

When translating additional VDNs, be sure to assign them the same COR as initially established for *Message Care*. Otherwise, the *DEFINITY ECS* will reject call attempts from the ICM to the new extensions.

Dial Plan (required) A dial plan must be administered for *CentreVu* Internet Solution VDNs on the *DEFINITY ECS*.

Although ASAI message calls do not use any port resources, you need a dial plan on your *DEFINITY ECS* large enough to support the number of message calls you want to queue simultaneously.

In addition, the *CentreVu* Computer-Telephony 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.

Stroke Counts Stroke counts represent an event that you want to measure. For example, a Stroke Count may be used to keep track of the number of inquiries about a specific item. Each time you receive an inquiry on a specific item, you can enter the Stroke Count (one through nine) assigned to that item.

To help collect data on subject factors or on factors that cannot be detected by the system, *Message Care* recommends that you implement stroke counts on the agent's phone.

ISDN-PRI trunk group (required) If you purchased an ITG for Internet voice, then the *DEFINITY ECS* connects to the ITG by way of an ISDN-PRI trunk group. The ISDN-PRI trunk group connecting the *DEFINITY ECS* and the ITG is translated as an **isdn-pri** trunk type, with a service type of **tie** and a direction of **incoming**. See the *DEFINITY Communications System Implementation(555-230-655)* document for details.

ISDN-PRI security

You must address ISDN-PRI trunk group security. Because the extension number used to launch a real-time call is actually submitted by a browser, there is the risk that a hacker may attempt to submit a false dial string in order to compromise call center security. Therefore, the ISDN-PRI trunks must be restricted from placing outbound calls. Unless so restricted, the `vdn_ext` parameter submitted by a consumer's browser could be changed to dial a long distance number through the *DEFINITY ECS*. Additionally, to limit other malicious activities, the ISDN-PRI trunks should be restricted from destinations in the *DEFINITY ECS* that are not intended for real-time Internet calls (such as individual agent stations, non-Internet VDNs, and so on).

Methods to secure the ISDN-PRI trunk group

There are two ways by which an ICC ISDN-PRI trunk group can be secured.

- The first is within the ITG itself, denying fraudulent calls before they are placed to the *DEFINITY ECS*.
- The second is within the *DEFINITY ECS*, denying calls to locations other than those specified as valid endpoints. This provides a two-tiered security plan.

How to secure the ISDN-PRI trunk group

The *DEFINITY ECS* is secured using Classes of Restriction (CORs) to restrict destinations from the ITG trunk group. The COR for this trunk group specifies, among other things, what calls the trunk group is able to complete. In this way, you can restrict the ISDN-PRI trunk group from making any outbound (off the *DEFINITY ECS*) calls and you can restrict the ISDN-PRI trunk group to call only a resource with a COR that is used uniquely for Internet destinations.

Example

As an example, the ISDN-PRI trunk group to the ITG could be assigned a COR of 49, which is outward restricted, and limited to only calling COR 48 (assuming both 48 and 49 are previously unused CORs). COR 48 is then used for any VDN extension expected to receive Internet traffic. If a call comes across the ISDN-PRI trunk group destined for any other extension, that call is denied by the *DEFINITY ECS* (assuming that the destination extension is assigned a COR other than 48). The permissions assigned to this COR (COR 48) should reflect the security that the call center would normally assign to VDNs.

Naturally, as Internet calls are "blended" with Public Switched Telephone Network (PSTN) calls, the CORs discussed above may need to be modified to reflect all the requirements of the call center. When establishing CORs, you should thoroughly review Class of Restriction instructions and guidelines found in the *DEFINITY Communications System Generic 3 Feature Description document*(555-230-204), the *DEFINITY Communications System Implementation manual*(555-230-655), and the *BCS Product Security Handbook*(555-025-600).

**Phantom Extension
(required)**

Phantom extensions are primarily used by applications that need to originate a call without the use of a physical device and without tying up unnecessary resources. Real-time communications can use this feature to eliminate the need for a Primary Rate Interface (PRI) channel for text chat and consumer-initiated callback calls thus increasing call capacity while using fewer PRI channels. Message calls are originated to the *DEFINITY* ECS using phantom calls. Phantom calls are distributed the same as voice calls; however, since there is no audio component to the call there is no need to use an Integrated Services Digital Network (ISDN)-PRI trunk.

When administering phantom extensions on the *DEFINITY* ECS, we recommend that you separate phantom extensions for chat calls and phantom extensions for message calls. For example, phantom extensions for chat calls=1100–1199 and phantom extensions for message calls=1200–1299.

Phantom extensions and the ITG

If you purchased an ITG, Phantom extensions should be given the same COR as the ITG trunk group, with same precautions.

Service Observing

Service Observing allows a specified user, such as a supervisor, to observe agent and caller transactions (such as text chat, escorted browsing, and Internet voice).

DEFINITY ECS Administration

You must administer your *DEFINITY* ECS to allow the use of the Service Observing feature. The following forms must be administered on the *DEFINITY* ECS:

- System-Parameters Customer-Options—set both the “Service Observing (Basic)” field and the “Service Observing (Remote/By FAC)” field to yes.
 - Class of Restriction (COR)—if you want to allow the extension to be observed, enter y in the “Can be Serviced Observed” field. If you want to allow the extension to be a service observer, enter y in the “Can be Service Observer” field.
-

- **Feature-Related System Parameters**—if you want warning tones to be given to the agent and caller whenever their call is being monitored, then set the “Service Observing Warning Tones” field to *y*.
- **Feature Access Codes**—enter the code that must be dialed to allow a station with Service Observing permission (COR) to observe agent and caller transactions without being heard on the real-time call or, enter the code that must be dialed to allow a station with Service Observing permission (COR) to observe and be heard during agent and caller transactions.

How to use Service Observing with ICC

Important! The *DEFINITY* ECS must be administered to support Service Observing before you can use the Service Observing feature.

To observe an agent and caller transaction, do the following:

1. Log in to ICC.
2. From your voice terminal, open a new line and enter the Service Observing Feature Access Code (FAC) followed by the agent extension that you want to observe. You will hear a confirmation tone (three short bursts) to indicate that the Service Observing feature is activated. At this point, you can observe all agent and caller transactions (text chat, escorted browsing, and Internet voice).

Text chat transactions are preceded with either **caller:** for a caller entered text chat message or **agent1:** for an agent entered text chat message.

Agent-initiated callback and Service Observing

If the agent initiates a callback, the observer will not see the Callback window and will temporarily be dropped from the call. The observer will be connected back to the call when the agent-initiated callback connects.

Ongoing operations Once you have administered the *DEFINITY ECS* for the *CentreVu* Internet Solution, it requires very little ongoing administration.

Call capacity may be increased up to system limits at any point by adding additional ITGs and ISDN-PRI trunks to handle more Internet calls. ISDN-PRI administration is described earlier in this section. Additional voice call capacity requires the purchase of additional software and may require additional hardware. Contact your Lucent Technologies Account team for configuration assistance.

When translating additional VDNs, be sure to assign them the same COR as initially established for *CentreVu* Internet Solution destinations.

Otherwise, the *DEFINITY ECS* will reject call attempts from the ICM to the new extensions. When adding VDNs, also remember to add the new extension numbers to the dial plan in the ITG.

VDNs should be established for each entry point (Call Us button) the customer wishes to measure. This may be one VDN per Web page, or one VDN for each logical grouping (such as women's slacks, disk drive problems, NYSE inquiries, and so on). Different VDNs can also be used to track call type (such as text chat or Internet voice or callback).



Administering the *CentreVu* Computer-Telephony for *Windows NT* software

Overview

- Purpose** The following section explains what needs to be administered for the *CentreVu* Computer-Telephony software (*CentreVu* CT).
- Audience** This chapter is intended for system administrators and anyone involved in connecting, installing, administering, and integrating hardware or software at the system level for the *CentreVu* Internet Solution.
- References** Complete documentation containing information on *CentreVu* Computer-Telephony software is provided to customers in *.pdf* format on the CD-ROM that accompanies the software.



Required administration

- Telephony Services Database (SDB)** The Telephony Services Database (SDB) is the *CentreVu* CT security database that stores information about users and the devices they control. The *CentreVu* CT 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 *CentreVu* CT server database must be set up with a list of valid VDNs.
- See the *CentreVu* Computer-Telephony documentation.
- What must be administered** When you install the *CentreVu* CT server, some administration is required to integrate it with the *CentreVu* Internet Solution.
- The following list describes what must be done in the Security Database during *CentreVu* Internet Solution installation:
- Add the *CentreVu* Internet Solution phone devices and Automatic Call Distribution (ACD) devices (VDNs and lead extensions of the ACD group extensions).
 - Add a device group(s) and add all phone devices to the group.
 - Add the *CentreVu* Internet Solution User (TMAN), and administer the Classes of Service for the *CentreVu* Internet Solution device group.
 - Administer the *DEFINITY* ECS switch setting.
 - Administer the Alarm parameters.
 - Administer the Message trace parameters.
 - Administer the Error log parameters.
- You must also administer the *CentreVu* Internet Solution user in the NT User Domain Manager. No additional administration is required specifically for the *CentreVu* Internet Solution. Refer to the installation documentation on the CD-ROM provided with the software for details. On-site training is conducted for persons who will maintain the *CentreVu* Computer-Telephony Server after installation.
- Updating devices** For information about updating CTI devices in the *CentreVu* Computer-Telephony server, see [Updating devices in the CentreVu Computer-Telephony server \(12-15\)](#).





6 Agent login and logout

Overview

Purpose The following section describes how an agent logs in and logs out of the *CentreVu*® Internet Solution.

Audience

This information is intended for anyone needing to log in to and out of the *CentreVu* Internet Solution and for anyone needing to determine which Agent login page to use.

Contents The following information is contained in this section:

- [Agent login Web pages \(6-2\)](#)
- [Agent login \(6-4\)](#)
- [Agent logout \(6-7\)](#)



Agent login Web pages

Background The media access types you purchased determine the sample Agent Login Web page(s) that you will receive (see [What is the CentreVu Internet Solution? \(1-4\)](#) for information about media access types).

The following table displays the sample Agent Login Web page(s) you will receive with your purchase:

	Sample ICC Agent Login Web page	Sample <i>Message Care</i> TM Agent Login Web page
<i>CentreVu</i> Internet Solution (both ICC and <i>Message Care</i>)	X	X
ICC only	X	
<i>Message Care</i> only		X

Which Agent Login Web page should you use?

The *CentreVu* Internet Solution provides sample login Web pages. You can use one of these sample Web pages or you can create your own using the samples as a starting point.

After the agent logs in, the administered agent idle page appears. For information about administering an agent idle page, see [Important information about the Agent Idle URL parameter \(5-26\)](#). The *Message Care* agent idle page (*Message Care* Home Page) is the agent idle page that ensures full *Message Care* functionality. The *Message Care*-supplied agent login page is located in: `http://<message_care_server>/mcscript/mc_agent.html`

Preferred language of agent

CentreVu Internet Solutions provides agent login pages for the languages it supports. This allows the agent to select a preferred language when logging in to the system. *Message Care* login Web pages are located at the following URLs:

- US English http://MC_server_domain/mcscript/en-US/mc_agent.asp
- German http://MC_server_domain/mcscript/de/mc_agent.asp
- French http://MC_server_domain/mcscript/fr/mc_agent.asp
- Colombian Spanish http://MC_server_domain/mcscript/es-CO/mc_agent.asp
- Brazilian Portuguese http://MC_server_domain/mcscript/pt-BR/mc_agent.asp
- Italian http://MC_server_domain/mcscript/it/mc_agent.asp
- Japanese http://MC_server_domain/mcscript/ja/mc_agent.asp



Agent login

Before you begin>About agent login

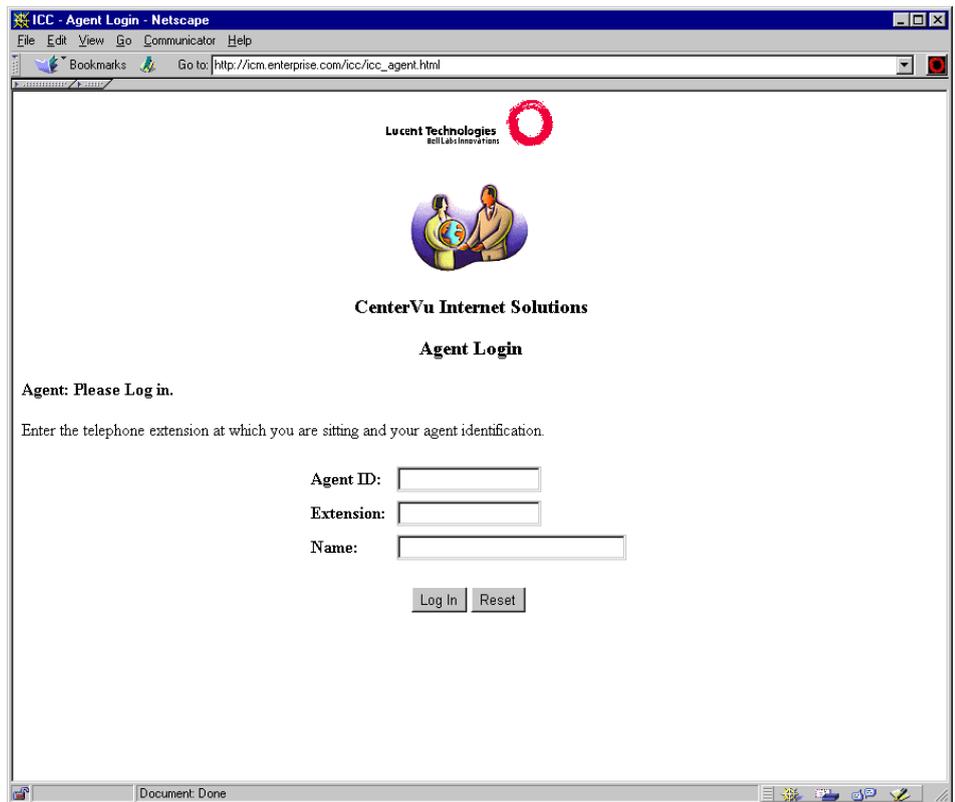
Agents logging in to the ICM can take real-time calls and message calls. A single agent can handle both real-time Internet voice and message calls providing that the station is administered on the *DEFINITY*® ECS for both skills.

Log in procedures

To take *CentreVu* Internet Solution calls, an agent must first log in to the *CentreVu* Internet Solution software as follows:

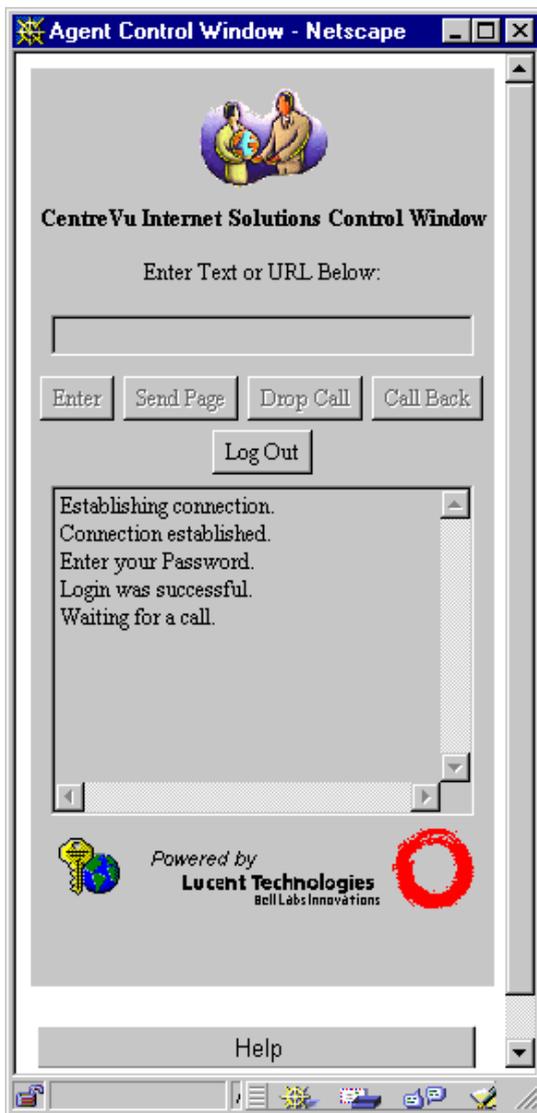
- 1 In the location or address field of your Web browser, enter the Uniform Resource Locator (URL) for the Agent Login screen.

Result: The Agent Login Web page appears. The following illustration is an example of an Agent Login Web page:



- 2 Enter your agent ID, extension, your name, preferred language, and any additional items requested.

Result: The Agent Control Window appears as follows:



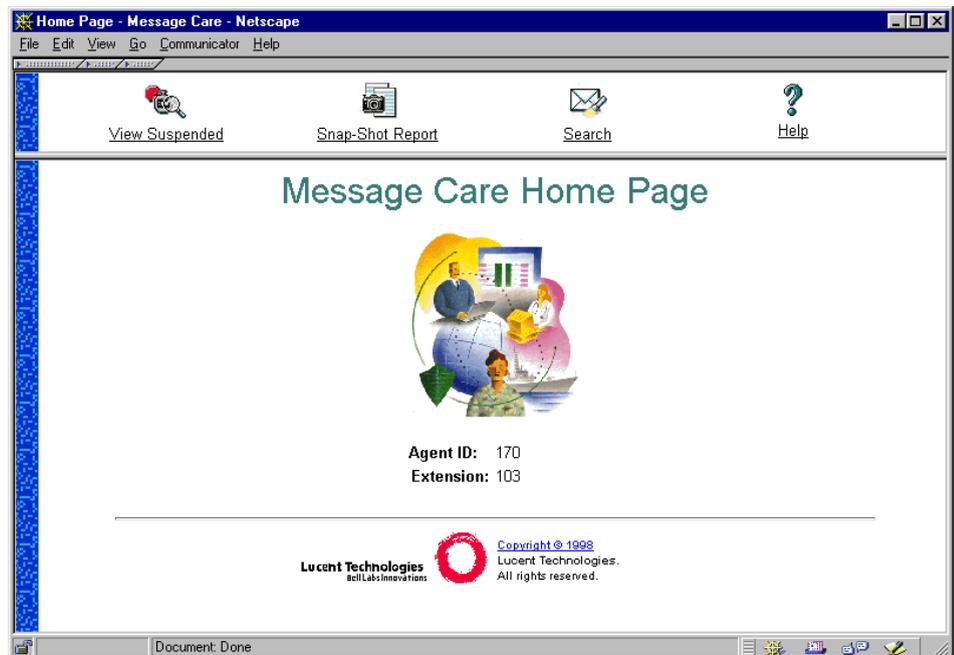
The Agent Control Window provides control buttons to perform specific tasks. When you are active on a call, the Enter, Send Page, Drop Call, and Call Back buttons are enabled and the Log Out button is disabled. The opposite is true when you are not active on a call. When control buttons are disabled, you will not be able to use them. Note that the Send Page button is ICC specific, and although it is enabled when you are active on a call, it will not work unless you have the ICC software installed and are connected to an Internet call.

- 3 Enter your *DEFINITY* ECS password, if any, into the text entry field labeled Enter Text Here, and then select either Enter on the keyboard or the Enter button on the Agent Control Window.

Connection status messages are displayed in the Agent Control Window. If the login process fails, an error message is displayed and you are prompted to try again. If the login succeeds, the last status message you see is “Waiting for a call.” The browser also indicates that you are in the “Agent Idle” state. At this point, you can either accept calls or log out.

Important! If you are going to handle message calls, then you must wait until the Message Care Home Page (or your own agent idle page) fully loads prior to making yourself available to receive ACD calls. If you receive a call prior to the idle page loading, the system will not be able to associate message processing with your agent ID. To recover, you must release the call, wait until the idle page fully loads, and then make yourself available to receive a call.

Result: The administered agent idle URL appears. The following illustration is an example of the Message Care agent idle Web page (Message Care Home Page):



END OF STEPS



Agent logout

Methods used to logout There are two methods you can use to log out of the *CentreVu* Internet Solution software:

- Using the Log Out button (when enabled) from the Agent Control Window. Enabling or disabling the Log Out button is an administrative option on the Internet Call Manager (ICM). See [Administer common parameters \(5-24\)](#) for details.
- Using your voice terminal or CTI application. This logout procedure is always available and logs you out of the *DEFINITY* ECS. If reason codes are administered and desired, you 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).





7 How to process Internet calls

Overview

- Purpose** The following information details how an Internet Call Center (ICC) agent handles various types of incoming calls. The call-handling information covers Call Control Windows, PagePop, and Enhanced Collaboration (text chat, escorted browsing, and HTML forms sharing).
- Audience** This information is intended as an overview for anyone who needs to know how various types of incoming calls are handled by the ICC system and how they appear to the consumer and to the agent.
- Contents** This section contains information about the following:
- [Agent and Caller Control Windows \(7-2\)](#)
 - [Real-time calls \(7-7\)](#)
 - [Drop real-time calls \(7-21\)](#)



Agent and Caller Control Windows

Overview

Purpose After you log in to the ICC through a Web page, the ICM launches the Agent Control Window on your desktop. After a consumer (caller) requests a call type (other than callback only), the Caller Control Window is downloaded to the caller's desktop. Both the Agent and Caller Control Windows provide call progress status, enable text chat and escorted browsing, and allow the agent or caller to drop the call.



Agent and Caller Control Windows

Illustration of the Agent Control Window

The following is an illustration of the Agent Control Window:

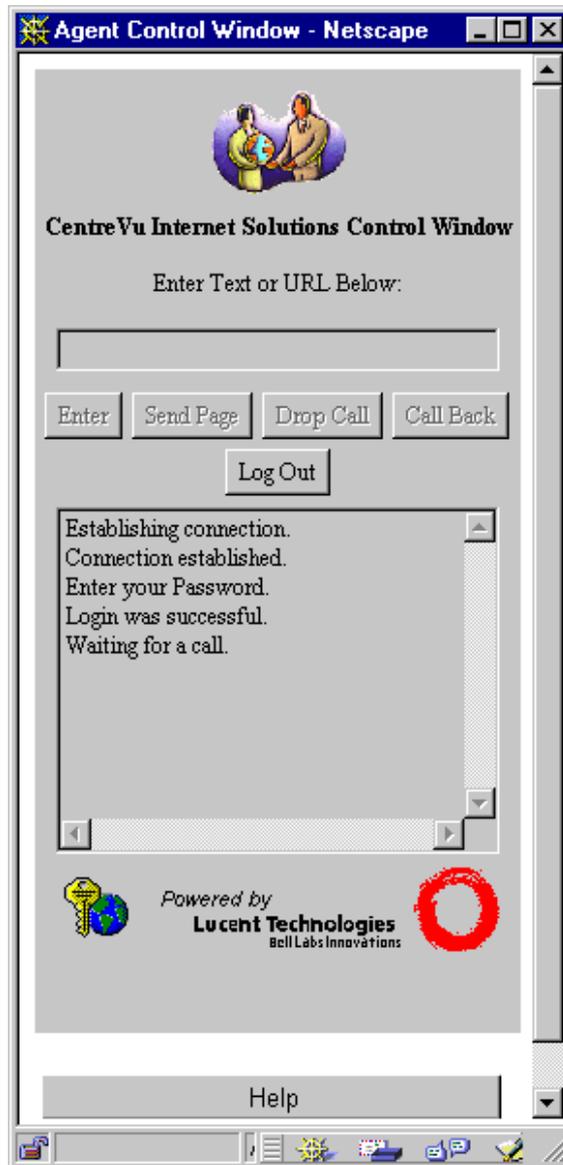
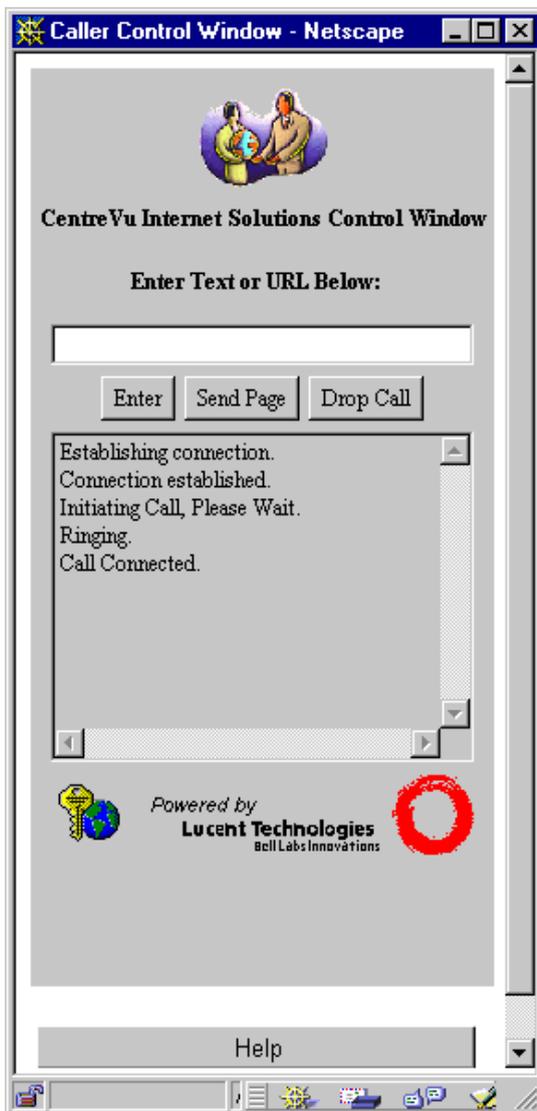


Illustration of the Caller Control Window

The following is an illustration of the Caller Control Window:



Field and button description The Agent and Caller Control Windows provide the following fields and buttons:

Field or Button	Description
Text Entry field	Assuming default browser colors, the text entry field is white when it is active, indicating that you can enter text, and appears grey when it is inactive. Information that you can enter into the text entry field includes: your password (during agent login); text to be sent to the Caller or Agent Control Windows (for text chat); and a URL to display the specified Web page in the other parties' browser window. The text entry field supports copy-and-paste entries. The text entry field is active only when you are logging in or on a call. When you are finished typing in text, either click the Enter button with the mouse, or press the Enter key on the keyboard. The text is then sent to the ICM server for processing.
Enter button	Use the Enter button to submit information from the text entry field to the ICM server for processing.
Send Page button	Use the Send Page button for Escorted Browsing. When a Web page of interest is displayed in the Web browser window, pressing this button sends the URL of that Web page to the other parties' Web browser, which attempts to load the URL. The Agent Control Window displays the status message "Sending URL to caller" and the Caller Control Window displays the status message "Loading URL in browser window." This button is enabled only when you are involved in an active call. Alternatively, you can enter URLs in the text entry field and send them like a message to support escorted browsing. After entering the URL, press the Enter button or the Enter key on your keyboard. Note that the URL must contain the Internet protocol (for example, <i>http://</i> or <i>ftp://</i>).
Drop Call button	Use the Drop Call button to drop a call (see Drop real-time calls (7-21)).
Call Back button (Agent only)	Use the Call Back button to initiate a Public Switched Telephone Network (PSTN) callback to the caller. It is active when you are on a call and not already involved in a callback.

Field or Button	Description
Log Out button (Agent only)	Use the Log Out button to log out of the ACD and to disconnect you from the ICM server (so that you can no longer receive real-time calls). This button is enabled only when you are logged in but not active on a real-time call.
Help button	Use the Help button to display help information in a separate browser window.



Real-time calls

Overview

Purpose The purpose of the following information is to explain the different types of real-time calls and how each type of real-time call is processed.

Contents The following topics are discussed:

- [Receiving real-time calls \(7-8\)](#)
- [Voice and chat calls \(7-9\)](#)
- [Chat-only calls \(7-11\)](#)
- [Request for callback \(7-12\)](#)
- [Caller-initiated callback process \(7-13\)](#)
- [Agent-initiated callback \(7-15\)](#)
- [Callback and collaborate \(7-18\)](#)
- [HTML forms sharing \(7-19\)](#)



Receiving real-time calls

Types of real-time calls received

There are four types of real-time calls you can receive:

- Internet voice and chat
- Chat-only
- Request for callback (caller-initiated and agent-initiated)
- Callback and collaborate

In all cases, when you receive a real-time call, your voice terminal alerts you of an incoming call and is active for the call whether or not voice is used (for example, voice is not used during a chat-only call).

If your administrator has administered the Vector Directory Number (VDN) of Origin Announcement (VOA) feature for that ACD, you hear a brief announcement to indicate the type of call that is coming in (for example, “voice” or “chat”). The Agent Control Window displays the “call connected” message and the your browser updates with a PagePop.

Voice and chat calls

Stages of a voice and chat call

Here is how a voice and chat call works:

- 1 A caller requests a call that involves both Internet voice and chat.

- 2 The Caller Control Window is downloaded to the caller's desktop.

- 3 Microsoft Corporation *NetMeeting*® is launched on the caller's desktop.

Since current Netscape Communications, Inc. *Netscape*® browsers do not know how to launch Microsoft Corporation *NetMeeting* for a real-time call, Microsoft Corporation *NetMeeting* must be registered with Netscape Communications, Inc. *Netscape* (this needs to be done only once). If the caller is using Netscape Communications, Inc. *Netscape*, then the caller must register Microsoft Corporation *NetMeeting* with the browser as follows:

1. When the "unknown file type" pop-up window appears, the caller selects the Pick App button.
2. Spaces and capitalization are important when entering the following command. Under "configure external viewers," the caller enters **rundll32.exe msconf.dll,OpenConfLink**
3. The caller selects OK.

Microsoft Corporation *NetMeeting* will launch after a delay. If Microsoft Corporation *NetMeeting* does not launch, see [Caller is unable to launch NetMeeting \(13-30\)](#).

- 4 The call may be queued, with appropriate status message and Web pages being delivered to the caller's desktop.

 - 5 The call is delivered to you.
-

-
- 6** Call control functions on the Agent Control Window are enabled once you answer the phone.
-
- 7** Your browser and the caller's browser update to the “call answered” URL if administered.
-
- 8** You communicate with the caller by voice over the Internet by way of the voice terminal. The caller communicates with you through the PC's microphone and speakers (or headset).

If you cannot hear the caller during an Internet voice call, see [Agent cannot hear caller during an Internet voice call \(13-20\)](#).

-
- 9** The text chat, escorted browsing, and HTML forms-sharing features work as described in [Chapter 1, About the CentreVu® Internet Solution](#).



Chat-only calls

Stages of a chat-only call Here is how a chat-only call works:

- 1 A caller requests a chat-only call.

- 2 The Caller Control Window is downloaded to the caller's desktop.

- 3 The call is queued and then delivered to you.

- 4 Call control functions on the Agent Control Window are enabled once you answer the phone.

- 5 Both you browser and the caller's browser update to the Call Answered URL if administered.

- 6 You and the caller can communicate through text chat by typing text into the text entry field and selecting either the Enter key or the Enter button.

- 7 Escorted browsing and HTML forms sharing becomes available.

Escorted browsing is supported in one of two ways:

- Clicking on the Send Page button in the Control Window. Microsoft Corp. *Microsoft* Internet Explorer 3.02 and above and Netscape Communications, Inc. *Netscape Navigator* 3.03 and above do not support the Send Page button. However, you can remedy this problem by implementing one or more of five methods. To learn about the different methods, see [Appendix C, Overcoming feature limitations due to browser security restrictions](#).
- Typing a URL (including the *http://designation*) in the text entry field in the Control Window and then pressing either the Enter button or the Send Page button.

Either of these methods results in the display of the same Web page to the other party.



Request for callback

Overview There are three types of callbacks:

- Caller-initiated—with a caller-initiated callback, a caller can request a callback from you. In such a case, the caller wants to receive a call from you over the PSTN (regular telephone line).
- Agent-initiated—with an agent-initiated callback, an Internet session is already established. However, you can request the caller on an existing real-time call to submit a phone number where you can reach the caller by way of the PSTN. The caller must have a second phone line (one for the Internet session and one for the PSTN callback).
- Callback and collaborate—with a caller-initiated callback and collaborate call, the caller is requesting that you call back on the telephone (PSTN callback) while at the same time, communicating through text chat and escorted browsing. The caller can request a callback and collaborate session if they have two phone lines (one for the Internet session and one for the PSTN callback).

Callback calls are restricted in the *DEFINITY* ECS based on the Class of Restrictions (CORs) assigned to the CTI extension. This extension is used to place the callback calls so it must have adequate calling permissions to place callback calls. Refer to the *DEFINITY Communications System Generic 3 Feature Description manual (555-230-204)* and the *BCS Product Security Handbook(555-025-600)* for information on securing *DEFINITY* ECS stations.



Caller-initiated callback process

Introduction to the caller-initiated callback process

A caller can request a callback by you. In such a case, the caller wants to receive a call from you over the PSTN.

When a caller requests a callback from the “Call Us” Web page, no Caller Control Window is downloaded to the caller's desktop; therefore, the text chat, escorted browsing, and HTML forms-sharing features are not available. Enhanced collaboration is available with callback if the caller selects the callback and collaborate option.

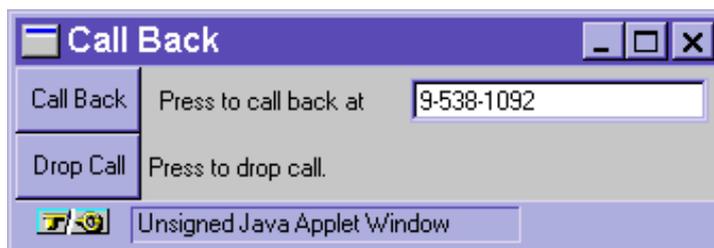
Caller-initiated callback process

Here is how caller-initiated callback works:

- 1 The caller enters a telephone number and requests a callback from the “Call Us” Web page.

- 2 Once the caller has submitted a request for callback and is awaiting a response from you, the caller sees a PagePop page with a message, such as “We will be calling you back shortly.” If the caller has a single telephone line, then the caller should immediately disconnect from the Internet to make that line available for the callback.

- 3 You are selected in the call center, and the callback request is delivered to you in the form of a window displaying the requested callback number, as follows:



4 You have two options:

- Proceed with the callback. You select the Call Back button to call the number displayed or edit the number and then select the Call Back button.

You have the option of editing the callback number provided by the caller. With this capability, you can add or remove digits from the callback number. For example, if the callback number is not a local number, you can add a “1” and/or a country code in front of the callback number so that long distance dialing can occur.

- Cancel the callback. Selecting the Drop Call button results in termination of the call. There is no indication to the caller that the callback is not being processed.

5 If you proceed with the callback, a conference between the Internet and PSTN call is established.

6 The caller receives the PSTN call by telephone, and you and the caller conduct voice communication.

Agent-initiated callback

Introduction to the agent-initiated callback process

Sometimes Internet telephony voice quality deteriorates during a call, or for some other reason you and caller want to talk on a regular telephone line. The caller can request a callback in such instances; however, only you can initiate a callback during a call.

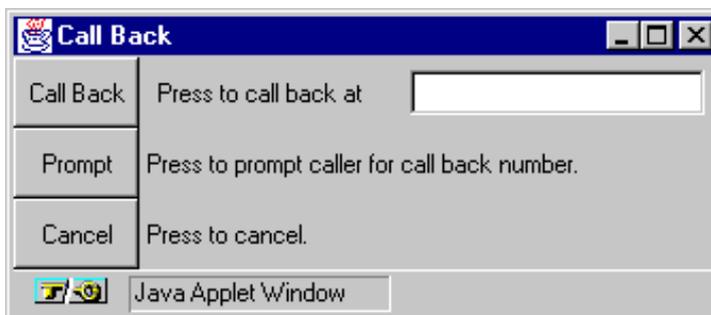
During Internet voice and chat calls or chat-only calls, the Call Back button in the Agent Control Window is enabled. By pressing this button, you can request the caller to submit a phone number where you can reach the caller by way of the PSTN.

Agent-initiated callback process

Here is how the agent-initiated callback works:

- 1 You click the Call Back button in the Agent Control Window.
-

- 2 You are presented with the following Callback dialog box:



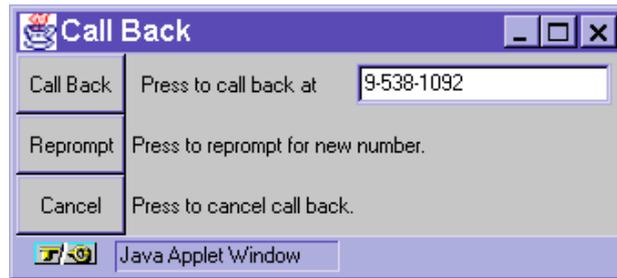
- 3 You have the following three options:
 - Initiate a callback without prompting the caller for a number. You enter the caller's number in the text box and then select the Call Back button to call back the caller.
 - Prompt the caller for a callback number. You select the Prompt button and the caller is presented with a Call Back Phone Number dialog box.
 - Cancel. You select the Cancel button to disregard the callback attempt.
-

-
- 4** If you prompt the caller to submit a phone number, the caller receives the following Call Back Phone Number dialog box:



-
- 5** The caller enters a phone number and clicks on the Enter button.

-
- 6** You receive a pop-up window that displays the submitted phone number, as follows:



7 You have three options:

- Proceed with the callback. To proceed with the callback, select the Call Back button or edit the number and then select the Call Back button.

You have the option of editing the callback number provided by the caller. With this capability, you can add or remove digits from the callback number. For example, if the callback number is not a local number, the agent can add a “1” in front of the callback number so that long distance dialing can occur.

- Request the caller to resubmit a callback number. This request begins the agent-initiated callback process again. To ask the caller for another number, select the Reprompt button.
- Cancel the callback. Selecting the Cancel button results in termination of the real-time call. There is no indication to the caller that the callback is not being processed. However, since the real-time call is still active, you can communicate the reason for cancelling the callback.

8 The original real-time call and the outbound call (PSTN) to the displayed number on your voice terminal is conferenced.

9 The caller receives the PSTN call, and you and the caller conduct voice communications. Depending on whether the caller has one or more phone lines, the following can take place:

- If the caller has more than one phone line, the caller can maintain an Internet connection and participate in enhanced collaboration features with you while talking on the telephone.
- If the caller has one telephone line, the caller must disconnect from the Internet to receive the callback, thereby losing enhanced collaboration features.



Callback and collaborate

Introduction to callback and collaborate process

A request for a callback and collaborate call can be made by the caller if the caller has two phone lines (one for the Internet session and one for the PSTN callback). When a caller requests a call that involves both a PSTN callback and collaboration, the following occurs.

Callback and collaborate process

Here is how the callback and collaborate process works:

- 1** The Caller Control Window is downloaded to the caller's desktop.

- 2** The call is queued and then delivered to you.

- 3** Call Control functions on the Agent Control Window are enabled once you answer the phone.

- 4** Both your browser and the caller's browser update to the Call Answered URL if administered.

- 5** The callback request is delivered to you in the form of a window displaying the requested callback number. At this point, you can proceed with the callback in a manner identical to the agent-initiated callback.

- 6** You and the caller can now communicate through the following methods:
 - Text chat by typing text into the text entry field and selecting either the Enter key or the Enter button
 - Escorted browsing
 - HTML forms sharing
 - Voice communication over the caller's second phone line



HTML forms sharing

What is HTML forms sharing?

HTML forms sharing extends the capabilities of the escorted browsing feature by allowing not only sharing of Web pages but also allowing you and a caller to interactively complete HTML forms.

What is an HTML form?

HTML forms allow you to do things such as conduct surveys, take orders for products, gather feedback, and so forth. In fact, an HTML form can do anything that a paper form can do. An HTML form can contain a variety of elements to get input from the user.

These elements include:

- Text field—for entering numbers, words, and other small pieces of text.
- Text area—for free-form, multiple-line text entries.
- Radio button—for picking one item from a list.
- Checkboxes—for picking one or more items from a list.
- Selection list—for selecting one or more items from a drop-down list.

For security reasons, certain elements like Password cannot be accessed and thus cannot be shared.

Why use HTML forms sharing?

HTML forms allow you to help customers fill in forms and answer questions. Forms sharing provides yet another way for you to collaborate with the consumer.

For example, a consumer is asked to fill out an HTML form at a Web site to order a desktop computer. The consumer is unsure about the information required in some of the fields. You offer to help the caller fill out the form, by using forms sharing, to ensure that the order is completed correctly.

How HTML forms sharing works

To begin HTML forms sharing, the person who first loaded the form on their browser should ensure that all parties on the call have the same form loaded on their browser by selecting the Send Page button. Once all parties on the call have the same form loaded on their browser, HTML forms sharing can begin for that form.

Send form data

Once you enter the data on the form, ICC automatically sends that new data to the other participant(s).

Note that if more than one participant inputs data in the same field at the same time, the form may get out of sync. Use the Send Page button to make sure that the forms are in sync.

During HTML forms sharing, the data in the form is shared only between you and the caller. To complete the transaction (submit the form), the caller must use a Submit (or similar) button on the Web page containing the form.

Browser security considerations

Due to security considerations on the Internet, newer browsers have set security restrictions on the capabilities of downloaded applets and scripts. Browsers have set security restrictions to protect you from damage to your data and to protect your privacy. If your Internet Call Center shares Web pages with consumers, then your call center will encounter browser security restrictions. For more information on browser security, see [Appendix C, Overcoming feature limitations due to browser security restrictions.](#)



Drop real-time calls

Overview

Purpose The following information describes the methods used to drop real-time calls. There are several ways to drop real-time calls for both you and the caller. Different methods of dropping a real-time call may impact what part of a real-time call is dropped.

Contents The following information is described:

- [Methods for dropping real-time calls \(7-21\)](#)
- [Methods for dropping callback calls \(7-22\)](#)

Methods for dropping real-time calls Voice and chat and text chat-only calls may be dropped using one of the following methods:

- Either you or the caller can drop the real-time call by clicking the Drop Call button on the Control Window. In this case, the entire real-time call is dropped and you are returned to the Agent Idle state.
- If either you or the caller exits the Web browser during a real-time call, the entire real-time call is dropped.
- You can drop the entire real-time call by hanging up the voice terminal or by pressing the Release button (providing your voice terminal is administered with a Release button).

When a real-time call is dropped with any of the above methods, a JavaScript alert dialog box will appear with the following message: **Press OK to Quit.**

Although it is not recommended, if you or the caller closes the Control Window during a real-time call, the entire real-time call is dropped.



Methods for dropping callback calls

Caller-initiated callbacks During a caller-initiated callback, the caller can drop the entire real-time call by hanging up the telephone. (There is no caller applet; therefore, there is no text chat or escorted browsing to disable.) Likewise, you can drop the entire real-time call by hanging up the voice terminal.

If you click the Drop Call button in the Agent Control Window, the entire real-time call is dropped and you return to the Agent Idle state.

If for some reason a caller-initiated callback does not go through (such as a busy signal), you can press the Drop Call button.

Agent-initiated callbacks During an agent-initiated callback, the following drop call scenarios are handled as indicated:

- Caller hangs up the phone—only the PSTN portion of the real-time call is dropped. The original Internet session is not terminated and Internet voice, text chat, escorted browsing, and HTML forms sharing are unaffected and thus still available.
 - Caller closes the Caller Control Window or clicks on the Drop Call button—the entire real-time call is dropped and you are returned to the Agent Idle state.
 - Caller exits the Web browser—the entire real-time call is dropped and you are returned to the Agent Idle state.
 - You release the real-time call from the voice terminal—the PSTN portion of the call is dropped (because there are actually two active lines). Internet voice (if applicable), text chat, escorted browsing, and HTML forms sharing are still available. You must again release the call to end the entire call.
 - You click the Drop Call button in the Agent Control Window.
 - The following options are offered:
 - Drop Entire Call—to drop the entire call and return to the Agent Idle state
 - Drop Call Back—to drop only the PSTN portion of the call and resume the Internet voice (if applicable), text chat and escorted browsing features.
-

- Drop IP Voice—to drop only the Internet voice portion of the call and resume the PSTN call.

The Drop IP Voice option is useful when you are on an Internet voice call and an agent-initiated callback call and you are hearing an echo due to the two connected calls.

- Cancel—to cancel the drop call request

If for some reason an agent-initiated callback does not go through (such as a busy signal), you can press the Drop Call button.

Pressing the Drop Call button provides the following options:

- Cancel—to cancel the drop call request
- Drop Call—to drop the entire call and return to the Agent Idle state
- Drop Callback—to drop only the PSTN portion of the call and resume using the Internet voice (if applicable), text chat and escorted browsing features.

Callback and collaborate

Either you or the consumer can drop the call by doing the following:

- Clicking the Drop Call button on the Control Window. In this case, the entire call is dropped (both PSTN and Internet) and you are returned to the Agent Idle state.
- If either you or the caller exits the Web browser during a call, the entire call is dropped.

Either you or the consumer can drop the PSTN call by hanging up the telephone that is providing the PSTN call.





8 How to process message calls

Overview

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

This information 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* pages or scripts will void any warranty or maintenance support of the product.

Audience The following information is intended for agents or anyone else needing to know how to process messages.

Contents The following elements of message processing are described in detail:

- [Message processing background information \(8-2\)](#)
- [Message Care message processing Web pages \(8-16\)](#)
- [Handling undeliverable messages and notifications \(8-68\)](#)



Message processing background information

Overview

Purpose *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 20 attachments with each inbound message. If an inbound message contains more than 20 attachments, the *Message Care* software truncates the message (that is, attachment 21 and beyond will be discarded).

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*® *AUDIX*® with Internet Messaging). The fax server interface treats the fax image as an attachment to 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.

The following table provides the operational differences between a fax and an email message:

Fax Message	Email Message
<p>The operations of a fax message are as follows:</p> <ol style="list-style-type: none"> 1. After answering the message call, a PagePop associated with the fax message is delivered to you. 2. The message will contain a file attachment which contains the fax image. 3. You must click on the file attachment to view the fax message. 4. Reply—A third-party tool, provided by your facility, 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. 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. 	<p>The operations of an email message are as follows:</p> <ol style="list-style-type: none"> 1. After answering the message call, a PagePop associated with the email message is delivered to you. 2. The message display will contain a Consumer's Return Email Address, Subject, Text Body File, and Attachment (possibly). 3. You do not have to take any action to view the email message (the email message is in the text body). 4. Reply—Use the <i>Message Care</i> software tools to compose a reply. 5. An email message must be marked as closed (with a reason code) to complete the process.



Message processing cycle

Overview 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 [Message states \(8-10\)](#) for more information about message states). Your part in the message processing cycle begins when you answer a 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. 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

Important! All processing of a message should take place through your Web browser and the *Message Care* tools.

- 1** 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*.
 - 2** 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 it from your voice terminal. When you answer the message call, the *Message Care* software displays the New Message Web page on your browser. The New Message Web page provides information about the message as well as all of the tools required to process the message.
-

-
- 3** 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 for processing a message (depending on how you choose to process the message, more than one processing option may be needed):

- 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** Message processing—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.

[

Message facts

Things to know about messages

The following subjects provide important information about messages. Read the following information about messages before you begin accepting message calls.

When is a message delivered?

A message is delivered to a browser upon answering a message call on your voice terminal.

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).

Do I have to wait until *Message Care* Web pages are fully loaded before selecting an option?

For best results, you should wait until your browser fully loads the *Message Care* Web page before selecting an option on that Web page.

Can there be more than one active agent for a single message call?

A message can be active with only one agent at a time.

Other agents may view a message when the message is active; however, only an active agent can modify the message.

Do I need to close a 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. See the [Close Message Web page \(8-66\)](#) for details on how to close a message.

What if I receive a message with no content or file attachment?

It is possible to receive a message with no content or file attachment. If you should receive such a message, simply close the message.

How do I ensure the correct tracking of a message?

To ensure the correct tracking of a message, you should drop the message call using only *Message Care* functionality (that is, use 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 possibly to another agent.

Can I print a message?

You can print 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 only the frame containing the toolbar will print.

NOTE: You cannot print from the Forward and Reply Web pages.

Can I transfer a message?

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.

Can I conference a message?

To conference a call while active on a message, use regular voice terminal conference procedures. The *Message Care* software, however, will not automatically pop 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.

Is there a limit on the size of a message that I can display?

Netscape Communications, Inc. *Netscape*® browsers cannot display a received text message greater than 30K bytes (approximately 7500 words) in the *Message Care* applet. If you are using a Netscape Communications, Inc. *Netscape* browser and a received text message is greater than 30K bytes, then you must use the view capability accessible through the History function to see the complete message.

This limitation of 30K bytes also applies to outgoing messages created through the Reply and Forward options.

What is the default name of a saved file attachment?

Message Care uses the same name it receives when you detach a file attachment using your browser's Save function.

Does the main Message Care Web page have to remain open?

If you have more than one *Message Care* Web page open at the same time, ensure that you do not inadvertently close the Main Message Care Web page.

If you inadvertently close the Main Message Care Web page, you should log out from the Agent Control Window, close the browser, and then log back in to *Message Care*. You may have to put yourself in an unavailable ACD state to disable call delivery until you are logged in to *Message Care*.

Can I surf the Web using the browser window that displays a Message Care Web page?

For best results and so that you do not inadvertently close the main *Message Care* Web page, use a new browser window to surf the Web.

To open a new browser window, do the following:

1. From the File menu, select the New menu item.
2. From the New menu item, select the Window item for Microsoft Corp. *Microsoft* Internet Explorer or the Navigator Window item for Netscape Communications, Inc. *Netscape Navigator*.

What if I get a message call but my Web page does not fully load?

If you get a message call but your Web page does not fully load, drop the message call and *Message Care* will redeliver the message call.



Message states

Introduction Each message at any point in the process cycle has a state. States describe each message's standing in the message handling process. You can view the 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 states that a message has gone through during its process cycle.

The following table provides descriptions for the different message states available in the *Message Care* software:

Option	Description
Blocked	<p>The <i>Message Care</i> software places a message in the Blocked state if the the following conditions are true:</p> <ul style="list-style-type: none">• The <i>Junk Mail Screening</i> parameter is administered and activated on the monitored mailbox• A match has been made between the originator of the mail message and the administration entry on the Junk Mail Screening form. <p>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.</p>

Option	Description
Overflowed	The <i>Message Care</i> software places a message in the Overflowed state while it is awaiting resources to place the message call. Messages will be placed in the Overflowed state if the maximum number of allowed simultaneous message calls between the <i>Message Care</i> server and the <i>DEFINITY</i> ECS (as administered in Message Care) is reached. Overflowed calls must wait for a message call(s) to drop (hence resources become available) before being able to launch the message call.
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 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 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 fail. 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 processing options

Introduction The *Message Care* software provides a number of message processing options. These options are presented on the toolbar of the *Message Care* Web pages. Some of the processing options can be administered to better meet your call center needs.

The following table lists the processing options provided by the *Message Care* software:

Option	Application
Reply	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 Message Care Reply Web page (8-21) to learn how to reply to a consumer's request.
Forward	Use the Forward option when you need help from another person (for example, a subject 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 Message Care Forward Web page (8-31) to learn how to forward a message.

Option	Application
Suspend	<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 Suspend Message Web page (8-28) to suspend an active message.</p>
History	<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 Message History Web page (8-46) to learn more about the History Web page.</p>
Search	<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 Message Search Web page (8-39) to learn how to search for a message.</p>
Note	<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 Message Care Note Web page (8-50) to learn how to create a note while you are active on a message.</p>

Option	Application
Send	<p>Use the Send option when you are ready to send a reply to a consumer or when you want to forward a 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 Send Acknowledgment Web page (8-60) to learn more about this option.</p>
Cancel	<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 page, or when you want to quit the creation of a note.</p>
Save	<p>Use the Save option when you want to save your reply or save your forwarded 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 Message Care 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 Message Care Forward Web page with the saved data. <i>Message Care</i> will present all data saved for a message.</p> <p>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>

Option	Application
Close	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 Close Message Web page (8-66) to learn how to close an active message.
Retrieve	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, Overflowed, 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 Retrieve Acknowledgment Web page (8-58) to learn how to retrieve a message.
Resend	Use the Resend option to resend a reply or forward message. See Handling undeliverable messages and notifications (8-68) for more uses of the Resend option.
Message Display	Use the Message Display option to display the original message. Once the message is displayed, you can send your reply or forwarded message to another recipient or use one of the other processing options available on the Web page.
Reset	Use the Reset option to clear any text entered in to the Web page fields.
View Suspended	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.
Snap-Shot Report	Use the Snap-shot Report option to generate a real-time report. See Real Time Snap-Shot Report Web page (8-62) for more information about Message Care reports.



Message Care message processing Web pages

Overview

Purpose The *Message Care* software provides Web pages to handle all facets of email message processing. All 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 [Message processing options \(8-12\)](#) for detailed information about each processing option.

Contents The following information describes what is contained in each Web page as well as how to use each Web page:

- [Message Care Home Page \(agent idle page\) \(8-17\)](#)
- [New Message Web page \(8-18\)](#)
- [Message Care Reply Web page \(8-21\)](#)
- [Suspend Message Web page \(8-28\)](#)
- [Message Care Forward Web page \(8-31\)](#)
- [Message Search Web page \(8-39\)](#)
- [Message History Web page \(8-46\)](#)
- [Message Care Note Web page \(8-50\)](#)
- [Message View Web page \(8-52\)](#)
- [Retrieve Acknowledgment Web page \(8-58\)](#)
- [Send Acknowledgment Web page \(8-60\)](#)
- [Resent Acknowledgment Web page \(8-61\)](#)
- [Real Time Snap-Shot Report Web page \(8-62\)](#)
- [Close Message Web page \(8-66\)](#)



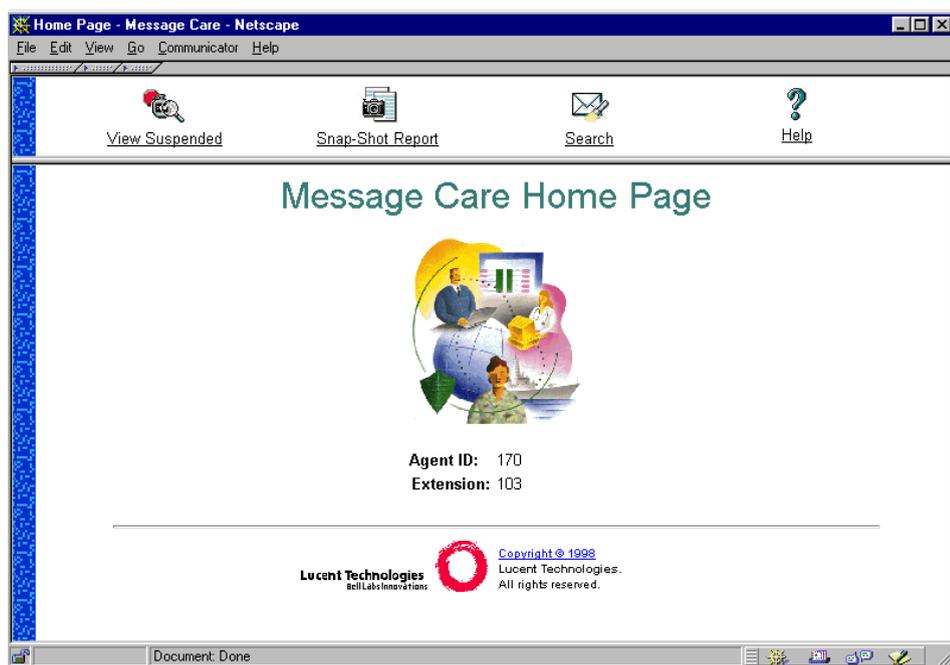
Message Care Home Page (agent idle page)

About 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 agent 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

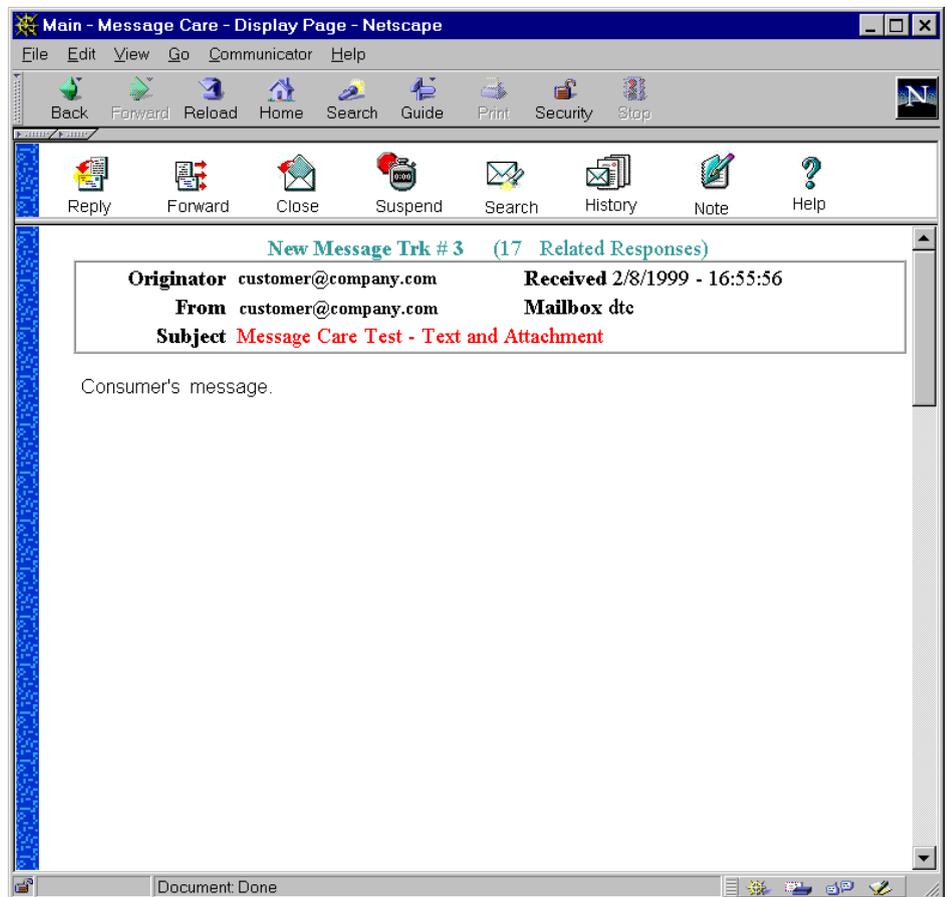
Illustration The following illustration is an example of the *Message Care* agent idle page:



New Message Web page

About 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.

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



New Message Web page fields The following table provides descriptions of the fields contained in the New Message Web page

Field	Description
TRK# (Tracking Number)	A numeric value (up to 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.
Attachments	<p>This field represents the links that identify file attachments contained in the message. Based on your browser's functionality, you will either be prompted to open or save the attachment when you click on its link. 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>

Field	Description
Related Responses	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. If the message does not have any responses, then the Related Responses field will not appear.
Text Body	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.

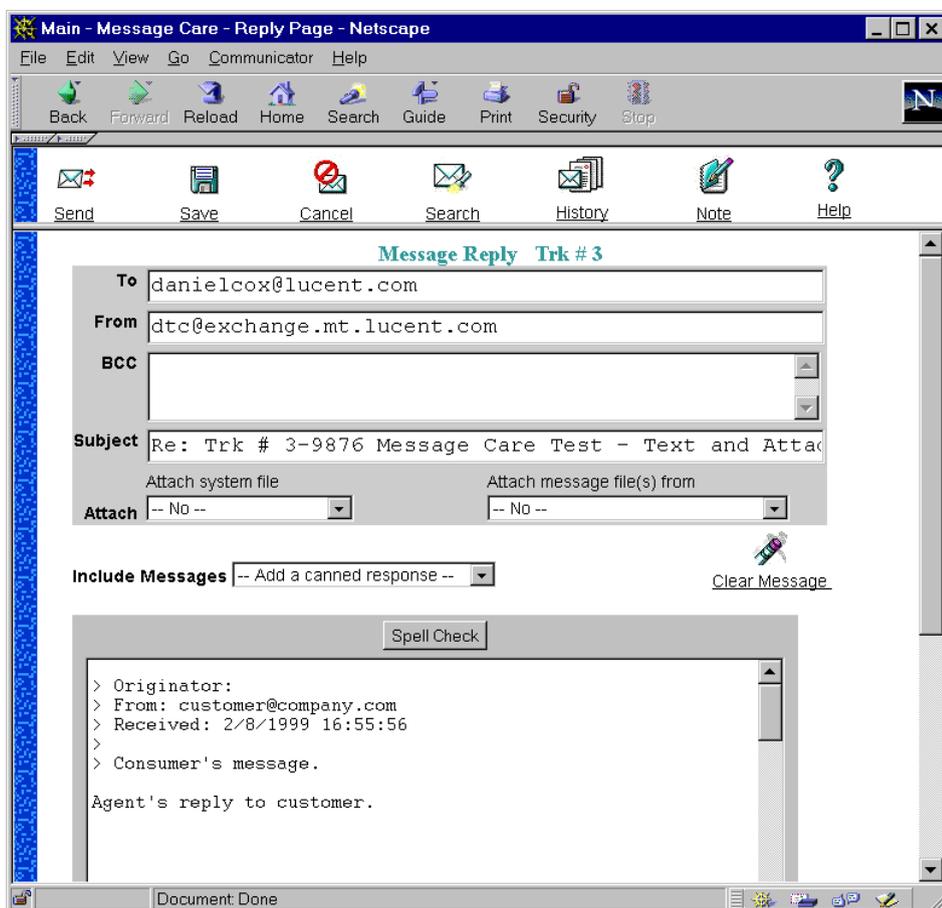
New message processing From the New Message Web page, determine how you want to process the message. For example, you may know exactly how to reply to the consumer; therefore, you can use the Reply option to compose a reply and send it to the consumer; or, you may want to search the history database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



Message Care Reply Web page

Introduction 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 about 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 the 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.

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



Message Care Reply fields and buttons The following table provides descriptions of the fields and buttons contained in the Message Care Reply Web page.

Field/Button	Description
To	<p>This field identifies the email address where <i>Message Care</i> will send your reply. This field is automatically populated with the “From” information associated with the original message. You can edit this field.</p> <p>NOTE: If <i>Message Care</i> is running J-Mode, then you must use the ASCII character set to enter the To address (<i>customer@company.com</i>).</p>
From	<p>This field identifies the return email address set by your administrator for the mailbox to which the message was delivered. You can edit this field.</p>
BCC	<p>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 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.</p>
Subject	<p>This field contains the prefix Re: (indicates a reply message), the original message call's Trk #, and subject text. The Subject field is limited to 128 characters.</p> <p>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>
Attach system file	<p>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 include in your reply. If there is no file attachment drop-down list box, then your administrator did not administer file attachments for that mailbox. The default is No.</p>

Field/Button	Description
Attach message file(s) from	This field is a drop-down list box providing message files that you can include in your reply message. The type of message files that you can attach are: customer's original message or a SMEs attachment. SME attachments are listed as email addresses. To see an attachment from a particular email address, use the History Web page. You can include only one message file. The default is No (attach no file).
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. If you encounter an error message when you try to include a canned response, contact your system administrator.
Clear Message	This button clears all the text from the reply text box when clicked on and then confirmed. If you inadvertently clear original text, you can add it back by selecting the <i>Include Original Message</i> item from the Include Message drop-down list.

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 to the dictionary. The spell check dictionary is shared by all <i>Message Care</i> agents.</p> <p>NOTE: <i>Message Care</i> supports spell check in US English only. If you log in to the system in a language other than US English, <i>Message Care</i> disables the Spell Check button.</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 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.</p>

Things to know about replying to a message

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

- [How do I distinguish between original message text and added text? \(8-25\)](#)
- [Can I use copy and paste commands? \(8-25\)](#)
- [Do I get a return receipt when I send a reply? \(8-25\)](#)
- [What type of information is stored when I reply to a message? \(8-25\)](#)
- [What type of information is required when I reply to a message? \(8-25\)](#)
- [What if my reply submission fails? \(8-26\)](#)
- [What happens if I close the original message before I reply to the customer? \(8-26\)](#)
- [How does the Save option work when replying to a message? \(8-26\)](#)

How do I distinguish between original message text and added text?

By default, the original message text received from the consumer is included in the 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 text box, not the original message text.

Can I use copy and paste commands?

You can use Copy (**Ctrl C**) and Paste (**Ctrl V**) commands to add text into your reply. When you use these commands, formatting style is lost.

Note that you cannot use your browser's Paste and Copy menu items to add text into your reply.

Do I get a return receipt when I send a reply?

When you send a reply, the *Message Care* software will not request a return receipt from the SMTP server.

What type of information is stored when I reply to a message?

The *Message Care* software will store the following information for each reply submitted:

- Message reply text
- List of file attachments
- Message reply subject
- Who sent the message
- Time the reply was submitted

The *Message Care* history database will record when a reply was sent to the SMTP server as well as who sent it.

What type of information is required when I reply to a message?

To submit a reply for delivery to the consumer, the reply must contain the following information:

- Return address
 - Destination address
 - Either a message subject, file attachment, or text component.
-

What if my reply submission fails?

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.

What happens if I close the original message before I reply to the customer?

If you close the original message that you are replying to before sending your reply, the reply will be lost.

How does the Save option work when replying to a message?

You can save only one reply per original message. Subsequent save commands on a reply will overwrite the reply.

Reply to an original message

To reply to an original message, do the following:

-
- 1 If you have not already done so, click on the Reply button.

Result: The Message Care Reply Web page appears populated with information about the original message. You can add a note anytime throughout the Reply process.

- 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 Your administrator set the From field email address 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. Note that you can enter multiple email addresses by separating each address with a comma.
-

-
- 5** By default, the original message content or the content of a previously saved reply will appear in the text box. Refer to the following list for instructions on how to perform the tasks associated with the text box:
- To clear text from the text box—click on the Clear Message button. If you inadvertently clear original text, you can add it back by selecting the *Include Original Message* item from the Include Message drop-down list.
 - To add a canned response—click in the text box area, and then click on the Include Message drop-down list and select a reply.
 - To add your own text to the reply—click in the area where you want to add text, and then begin entering your text.
 - To spell check the text in the text box—click on the Spell Check button.
-
- 6** If you want to include a file attachment with your reply, select the file from the Attach System File drop-down list.
-
- 7** 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.
-
- 8** To send your reply, click on the Send button. The Send Acknowledgment Web page appears stating that your message was sent. See [Send Acknowledgment Web page \(8-60\)](#) for more information.
-
- 9** At this point, you can do the following:
- Close the message
 - Suspend the message
 - Display the message

END OF STEPS



Suspend Message Web page

Introduction 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 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 the 15 minutes expires, *Message Care* launches the suspended message call so that you can continue with the processing of that message.

What happens when I suspend a message?

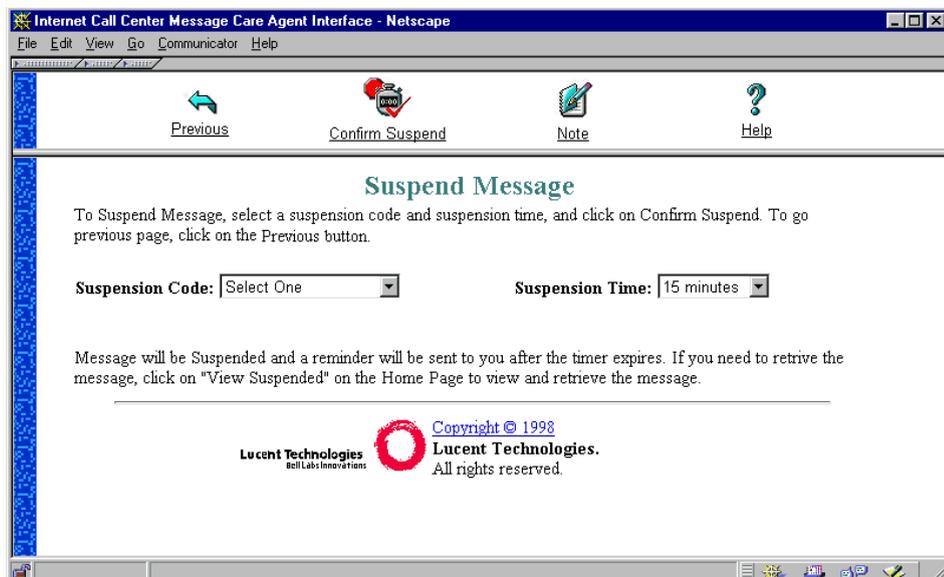
When you suspend a message, *Message Care* drops the message call associated with that message. The ACD work state that you are placed in when a message call is dropped depends on *DEFINITY* ECS station administration.

When you suspend a message, *Message Care* does the following with the message:

- Changes the state from Active to Suspended
 - Records the suspension reason code
 - Records the suspending agent (agent ID) and the administered return destination. In addition, *Message Care* continues to associate you (the suspending agent) with the original message.
-

- Checks for any message response that was received while you were processing the message. If a response was received, *Message Care* informs you of the response and allows you to cancel the suspension of the message.
- When the suspension time has elapsed, *Message Care* launches 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 VDN number specified by your administrator.

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



Things to know about suspending messages

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

- You must save and close notes that you are composing before suspending the associated message.
- Specific events can relaunch a suspended message. 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)

Suspend a message call To suspend a message, do the following:

-
- 1 If you have not already done so, click on the Suspend button.

Result: 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.

Result: *Message Care* releases the message call and the Message Care Home Page (or the administered idle page) appears. You are now available to take new message calls.

.....

END OF STEPS

.....



Message Care Forward Web page

Introduction 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.

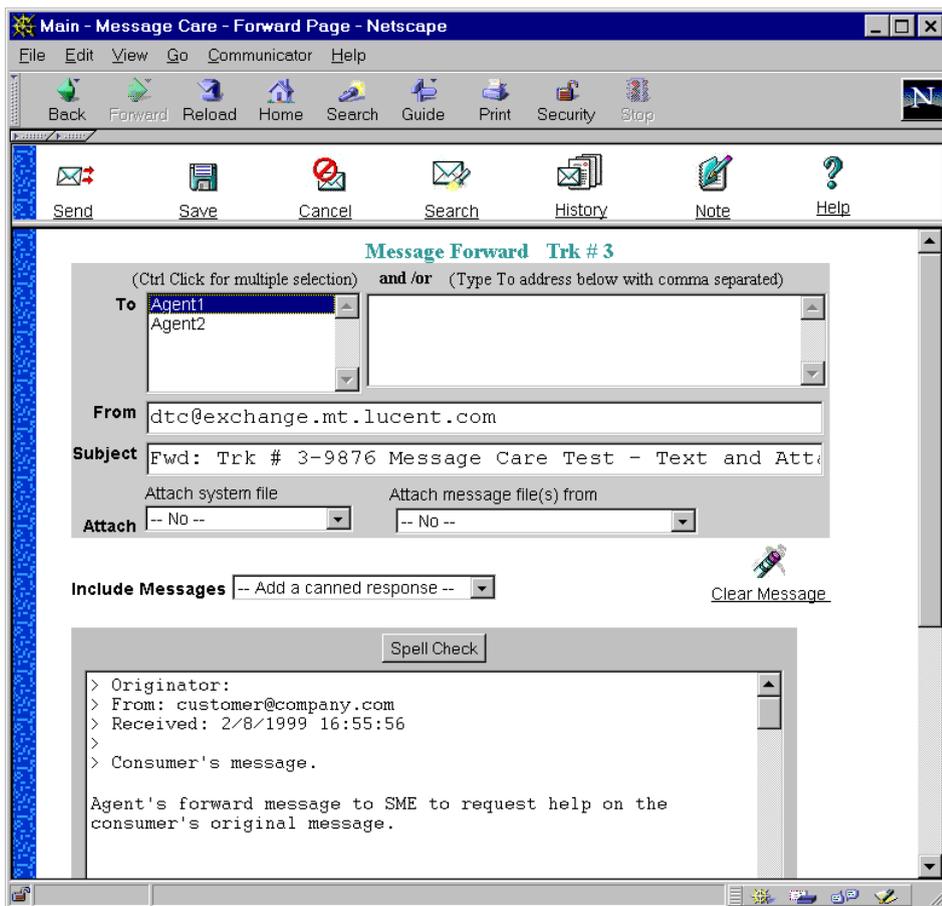
Why forward a message?

You may want to forward a copy of the consumer's original message to a Subject Matter Expert (SME), another agent, or to another call center to request information about or help with 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. For example, forwarding a message is unlike transferring a message. When you transfer a message, you are relinquishing ownership of the original message. When you forward a message, you are retaining ownership of the message.

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



Message Care Forward fields and icons The following table provides descriptions of the fields and buttons contained in the Message Care Forward Web page:

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, <i>Message Care</i> does not support email addresses containing commas.</p> <p>You can edit this field.</p> <p>NOTE: If <i>Message Care</i> is running J-Mode, then you must use the ASCII character set to enter the To address (<i>customer@company.com</i>).</p>
Subject	<p>This field contains the prefix Fwd: (indicates a forwarded message), the original message call's Trk #, and original subject text.</p> <p>You can edit this field; however, if you modify or remove the subject (especially the Trk #), <i>Message Care</i> will not be able to link a consumer response with the original message. <i>Message Care</i> searches the subject lines of email messages to see whether 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>
Attach system file	<p>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 include in your forward message. If there is no file attachment drop-down list box, then your administrator did not administer file attachments for that mailbox. The default is No.</p>

Field/Button	Description
Attach Message file(s) from	This field is a drop-down list box providing message files that you can include in your forward message. The type of message files that you can attach are: customer's original message or a SMEs attachment. The SME attachments are listed as email addresses. To see an attachment from a particular email address, use the History Web page. You can include only one message file. The default is No (attach no file).
From	This field is a return email address set by your administrator for the mailbox to which the message was delivered. The From field allows the SME to reply back to you. You can edit this field if you want the SME's reply to go elsewhere. Follow your call center's established procedures.
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. If you inadvertently clear original text, you can add it back by selecting the <i>Include Original Message</i> item from the Include Message drop-down list.

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 to the dictionary. The spell check dictionary is shared by all <i>Message Care</i> agents.</p> <p>NOTE: <i>Message Care</i> supports spell check in US English only. If you log in to the system in a language other than US English, <i>Message Care</i> disables the Spell Check button.</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 forwarded message to the consumer. By default, the text box is populated with the original message. However, if you or someone else saved a forwarded message, the text box will be populated with the forwarded text instead of the original message text.</p>

Things to know about forwarding a message

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

- [Is my return address used when I forward a message? \(8-35\)](#)
- [Can the recipient of my forward message reply to the consumer? \(8-36\)](#)
- [How do I distinguish between original text and added text? \(8-36\)](#)
- [Can I use copy and paste commands? \(8-36\)](#)
- [What forward information is stored by Message Care? \(8-36\)](#)
- [What information is required to forward a message? \(8-37\)](#)
- [How do I know if I forwarded my message successfully? \(8-37\)](#)
- [What happens if I close the original message before forwarding it? \(8-37\)](#)
- [How does the Save option work when forwarding a message? \(8-37\)](#)
- [Can I save more than one forward message per original message? \(8-37\)](#)

Is my return address used when I forward a message?

The return address of a forwarded message is the same address to which the original message was sent. You can edit the return address.

Can the recipient of my forward message reply to the consumer?

When you forward a message, the consumer's email address is contained in the text body of the forwarded message. The recipient of the forwarded message can reply to the consumer by using the address contained in the text body.

How do I distinguish between original text and added text?

By default, the original message text received from the consumer is included in the 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 forwarded message and then retrieve that forwarded message at a later time, the saved forward message will populate the text box, not the original message text.

Can I use copy and paste commands?

You can use Copy (**Ctrl C**) and Paste (**Ctrl V**) commands to add text into your forward message. When you use these commands, formatting style is lost.

Important! You cannot use your browser's Paste and Copy menu items to add text into your forward message.

What forward information is stored by *Message Care*?

Message Care stores the following information for each forwarded message:

- Message forward text
- List of file attachments
- Message forward subject
- Who forwarded the message
- Time the forward was submitted

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.

What information is required to forward a message?

The following information is required when forwarding a message:

- Return address
- Destination address
- Either a message subject, file attachment, or text

How do I know if I forwarded my message successfully?

The *Message Care* software will inform you when your forwarded message failed. In this case you may want to save your forwarded message, and then follow procedures established by your call center. For information about handling undeliverable messages, see [Handling undeliverable messages and notifications \(8-68\)](#).

What happens if I close the original message before forwarding it?

If you close the original message before sending your forward message, the forward message will be lost.

How does the Save option work when forwarding a message?

The Save option will save all information on the Forward Web page.

Can I save more than one forward message per original message?

You can save only one forward message per original message. Subsequent save commands on a forward message will overwrite the forward message.

Forward 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.

Result: The Message Care Forward Web page appears populated with information about the original message.

You can add a note anytime throughout the Forward process.

.....

- 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** By default, the original message content or the content of a previous forward will appear in the text box. Refer to the following list for instructions on how to perform the tasks associated with the text box:
- To clear text from the text box, click on the Clear Message button. If you inadvertently clear original text, you can add it back by selecting the *Include Original Message* item from the Include Message drop-down list.
 - To add a canned response, click in the text box area, and then click on the Include messages drop-down list and select a reply.
 - To add your own text to the forward message, click in the area where you want to add text, and then begin entering your text.
 - To spell check the text in the text box, click on the Spell Check button.
-
- 4** If you want to include a file attachment with your forward message, select the file from the Attach system file drop-down list.
-
- 5** From the Attach Original Message File(s) option buttons, select Yes to include all of the original message's file attachments with your forwarded message. If you do not want to include the original message's file attachments with your forwarded message, select No.
-
- 6** To send your forward message, click on the Send toolbar button.
- Result:** The Send Acknowledgment Web page appears stating that your forward message was sent to the email address of the recipient. See [Send Acknowledgment Web page \(8-60\)](#) for more information.
-
- 7** At this time, you can do one of the following:
- Close the message
 - Suspend the message
 - Display the message

END OF STEPS



Message Search Web page

Introduction A new browser window (Message Search Web page) appears when you click on the Search button. If you do not see the Message Search Web page, it may be minimized. Look on your Taskbar to see if the Message Search Web page is minimized and if so, maximize the window.

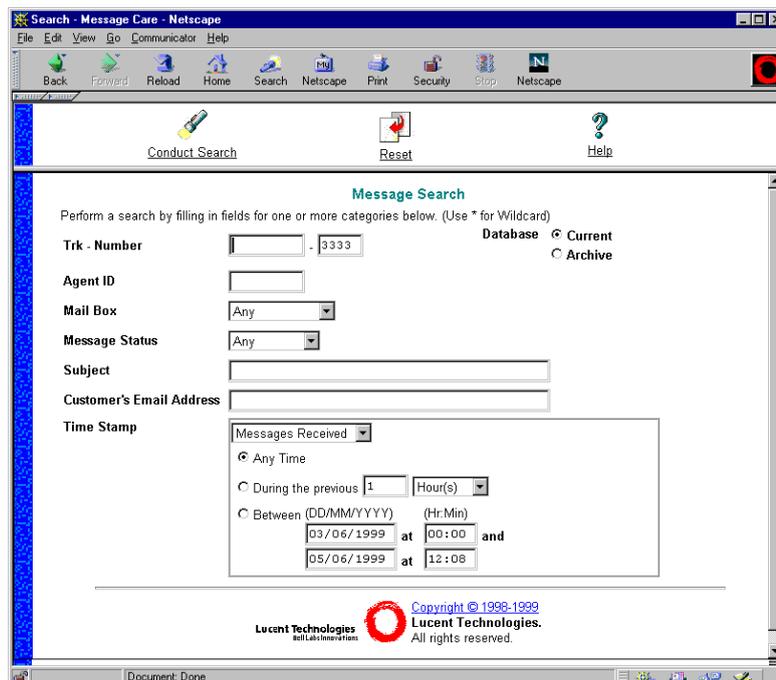
The Search function allows you to search for messages using specific search criteria. *Message Care* presents the messages matching your search criteria through the Search Results Web page. You can view any message presented in the Search Results Web page; however, you can retrieve only those messages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

Why conduct a message 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

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



Message Search fields The following table provides descriptions of the fields contained in the Message Search Web page:

Field	Description
Tracking Number	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.
Database	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. As the Current database reaches its size limit, your system administrator will move closed messages to the Archive database.
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. 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.

Field	Description
Subject	Use this search category when you want to search for messages containing specific text in the subject field. 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 with a specific email address. 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.
Time Stamp	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 06/01/1999 at 11:00 am and 06/05/1999 at 04:00 pm. Or, you may want to search on all messages that were received between 06/01/1999 at 11:00 am and 06/05/1999 at 04:00 pm.

Things to know about searching for a message

The following subjects provide important information about the *Message Care* Search function:

- [What are the search criteria rules? \(8-42\)](#)
- [Should I conduct a search on all messages in the database? \(8-43\)](#)
- [Can I use copy and paste commands? \(8-43\)](#)

What are the search criteria rules?

The following list provides search criteria rules:

- Multiple search criteria can be used to find a specific message.
- 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 which allows you to select from a list of category items. These categories are as follows:
 - Mailbox—choose from a list of administered mailboxes
 - Message Status—choose from a list of states
 - Time Stamp—choose either Received or Closed
 - Time Stamp:During the Previous—choose either Hour(s), Day(s), or Week(s)
- *Message Care* sorts the search results by the tracking number.
- You can choose a combination of criteria for which you want to conduct a search. However, when selecting criteria, verify that they do not contradict each other. For example, you cannot select Active in the Message Status category and then select Closed Time in the Message Time category. If you attempt to use criteria that contradict each other as in the example above, *Message Care* provides the Message Care Error Web page.
- The search function supports wild card characters. The supported wild card character is an asterisk (*).

The following table provides examples of using a wild card in your search criteria:

If the agent ID is...	Then <i>Message Care</i> 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

Should I conduct a search on all messages in the database?

Because searches are conducted on the same server that contains the Message Care Web pages, performance problems may 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, *Message Care* will alert you. When *Message Care* 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.

Can I use copy and paste commands?

You can use Copy (Ctrl C) and Paste (Ctrl V) commands to enter text in all of the category search fields consisting of a text box.

Important! Note that you cannot use your browser's Paste and Copy menu items to add text into fields.

Example of how to use the search capabilities

The best method for explaining how to use the search capability of *Message Care* is to provide an example that makes use of almost all of the search categories. For example, we want to find all automobile loan messages that were closed during the previous 8 hours by agents whose IDs end 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 (*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
-

How to conduct a search on the sample criteria

To find all messages meeting the criteria in the example above, 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:

The screenshot shows a Netscape browser window titled "Search Message Care - Netscape". The browser's address bar shows "http://www.lucent.com/". The page content includes a navigation bar with "Conduct Search", "Reset", and "Help" buttons. Below this is the "Message Search" form. The form instructions state: "Perform a search by filling in fields for one or more categories below. (Use * for Wildcard)". The form fields are: "Tracking Number" (input: *, output: 1002), "Agent ID" (input: *45), "Mail Box" (dropdown: 601), "Message Status" (dropdown: Closed), "Subject" (input: *Automobile*), and "Customer's Email Address" (empty). The "Time Stamp" section has a dropdown menu set to "Messages Closed" and three radio button options: "Any Time", "During the previous" (selected, with input: 8, dropdown: Hour(s)), and "Between (MM/DD/YYYY) (HR:MIN)". The "Between" option is further detailed with two rows: "05/22/1998 at 11:00" and "03/13/1998 at 4:00", separated by "and". The footer contains the Lucent Technologies logo and "Copyright © 1998 Lucent Technologies. All rights reserved." The browser's status bar at the bottom shows "Document: Done".

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

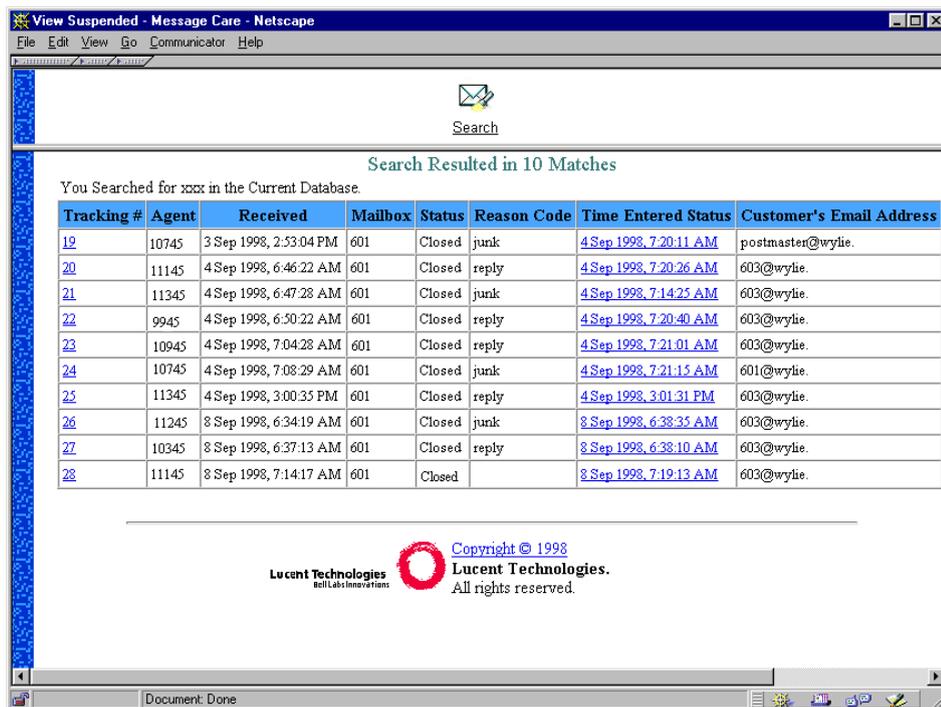
During the previous 8 Hour(s)

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

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

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



View Suspended - Message Care - Netscape

File Edit View Go Communicator Help

Search

Search Resulted in 10 Matches

You Searched for xxxx 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@wylie.
20	11145	4 Sep 1998, 6:46:22 AM	601	Closed	reply	4 Sep 1998, 7:20:26 AM	603@wylie.
21	11345	4 Sep 1998, 6:47:28 AM	601	Closed	junk	4 Sep 1998, 7:14:25 AM	603@wylie.
22	9945	4 Sep 1998, 6:50:22 AM	601	Closed	reply	4 Sep 1998, 7:20:40 AM	603@wylie.
23	10945	4 Sep 1998, 7:04:28 AM	601	Closed	reply	4 Sep 1998, 7:21:01 AM	603@wylie.
24	10745	4 Sep 1998, 7:08:29 AM	601	Closed	junk	4 Sep 1998, 7:21:15 AM	601@wylie.
25	11345	4 Sep 1998, 3:00:35 PM	601	Closed	reply	4 Sep 1998, 3:01:31 PM	603@wylie.
26	11245	8 Sep 1998, 6:34:19 AM	601	Closed	junk	8 Sep 1998, 6:38:35 AM	603@wylie.
27	10345	8 Sep 1998, 6:37:13 AM	601	Closed	reply	8 Sep 1998, 6:38:10 AM	603@wylie.
28	11145	8 Sep 1998, 7:14:17 AM	601	Closed		8 Sep 1998, 7:19:13 AM	603@wylie.

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Document: Done

- 4 Click on the Tracking# link, the Time Entered in Status link, or the Subject 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.
- 5 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 [Message View Web page \(8-52\)](#) for more information about viewing a message.

END OF STEPS



Message History Web page

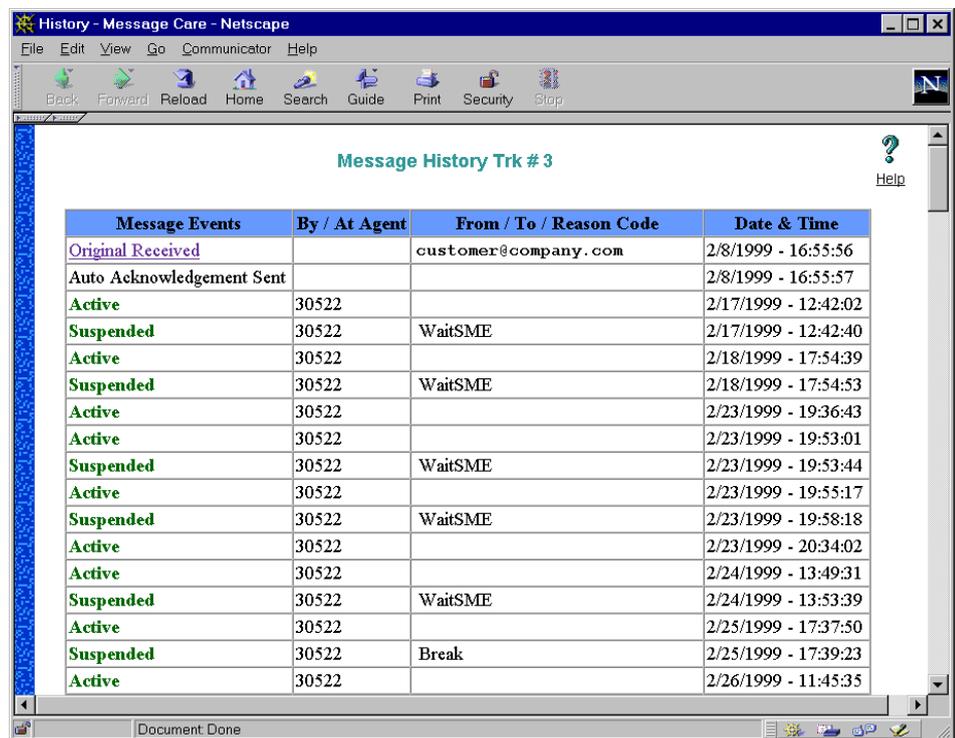
Introduction The Message History Web page appears when you click on the History button. The Message History Web page allows you to view a chronological record of message processing details. A message's history log displays the state and event changes a message has undergone along with the agent active 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.

The following table provides the history information that may be recorded for each message:

Message Event	Link to View Event	Information Recorded
Original Received	Yes	Received From: email address 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 From: email address 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 Received From: email

Message Event	Link to View 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 (cannot edit)

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



Things to know about the Message History Web page

The following subjects provide important information about the History Web page:

- [Can I view the history of a message while processing a message? \(8-48\)](#)
- [What messages can I send from the History Web page? \(8-48\)](#)
- [What tells me that a message was transferred? \(8-48\)](#)
- [Do I have to close the History window? \(8-48\)](#)

Can I view the history of a message while processing a 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.

What messages can I send from 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

What tells me that a message was transferred?

In the History log of a message, an Active event followed immediately by another Active event indicates that *Message Care* transferred the message.

Do I have to close the History window?

No, the Message History Web page remains open until you close it.

View 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.

Result: The Message History Web page appears populated with information about the message you are currently processing.

- 2 To resend a reply 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.

END OF STEPS

View 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.

Result: The appropriate View Web page appears.

- 2 From the View Web page, you can do the following:
 - Go back to the History page by clicking on the Prev button.
 - Resend either the Replied or Forwarded message by clicking on the Resend button.

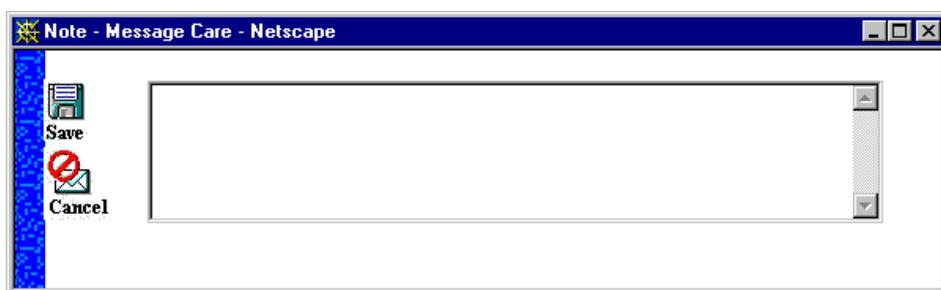
END OF STEPS



Message Care Note Web page

Introduction 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.

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



Things to know about agent notes The following subjects provide important information about Note Web page:

- [Can I cancel the composition of my note? \(8-50\)](#)
- [Do I have to manually save my note? \(8-50\)](#)
- [Do I have to manually close the Note Web page when I am done composing my note? \(8-51\)](#)
- [Do I have to enter carriage returns when composing my note? \(8-51\)](#)
- [How much text can I have in my note? \(8-51\)](#)

Can I cancel the composition of my note?

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 OK will close the Message Care Agent Note Web page without saving your note.

Do I have to manually save my note?

Message Care does not automatically save your notes. You must save your note prior to closing the Message Care Agent Notes Web page.

Do I have to manually close the Note Web page when I am done composing my note?

You must ensure that you close the Message Care Agent Note Web page whenever you are finished composing your note or whenever you close the message for which you are writing an note. *Message Care* will not automatically close the note Web page.

Do I have to enter carriage returns when composing my note?

No.

How much text can I have in my note?

A note can reach approximately 30 Kilobytes (KB) of data.

Create an agent note To create an agent note, do the following:

-
- 1** If you have not already done so, click on the Note button.

Result: 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.

.....

END OF STEPS

.....



Message View Web page

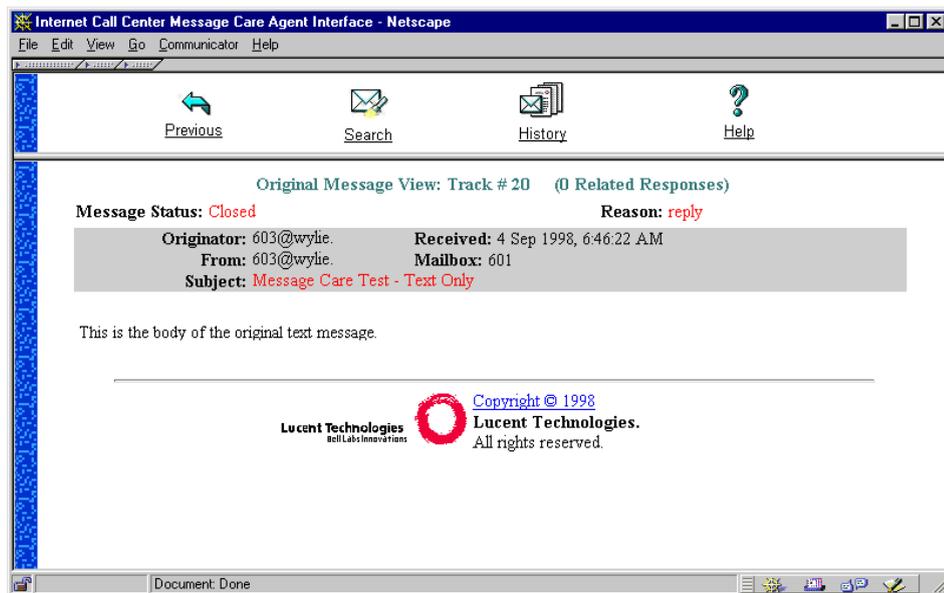
Introduction The Message View Web page is used to view a message from the Search Result Web page and Real Time Snap-Shot Reports Results Web page. The viewing capability allows you to view a message without being active on a message.

Why view a message?

Viewing a message is useful for the following:

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

Illustration The following illustration is an example of a View Web page arrived at through the Search Results Web page:

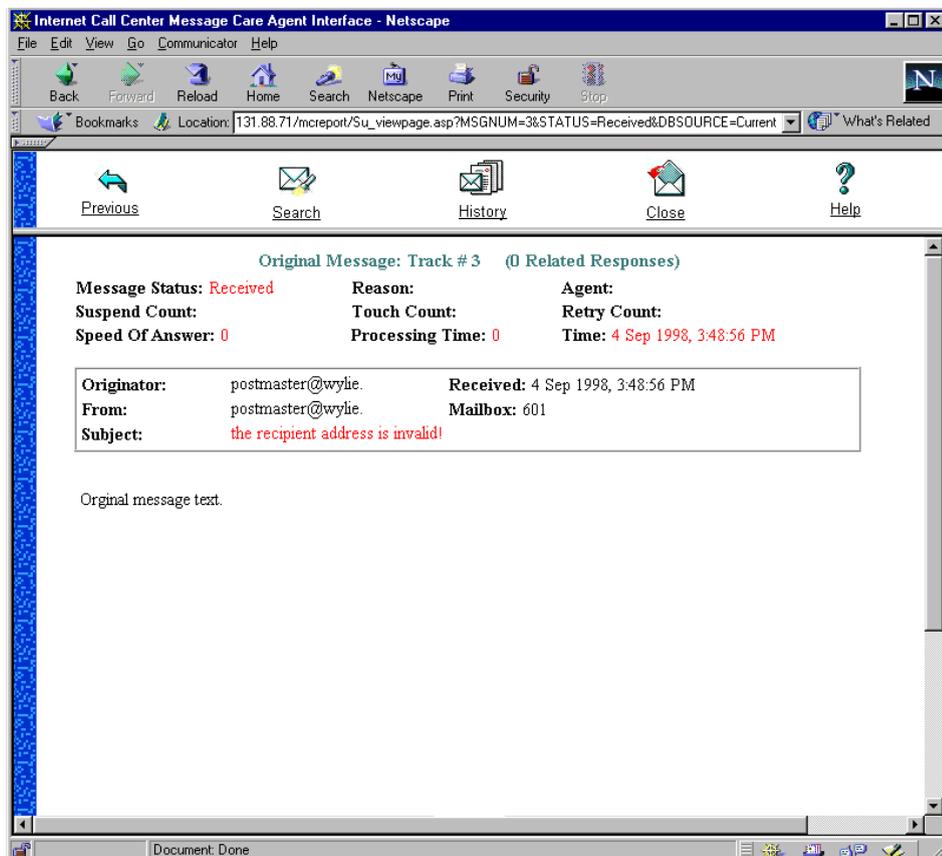


Search Results View The following table describes the fields found on the Search Results View
Web page fields Web page:

Fields	Description
Status	This field provides the status of the message (Blocked, Launched, Active, Suspended, Overflowed, 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 who worked on the message last.
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.
Attachments	<p>This field represents the links that identify file attachments contained in the message. Based on your browser's functionality, you are either prompted to open or save the attachment when you click on its link. 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	This field provides the time and date the message was retrieved by <i>Message Care</i> .

Fields	Description
Related Responses	This field identifies the number of related responses. Related responses include messages forwarded to other people (for example, an SME or an agent), and reply messages sent by the consumer. Use the History option to view related responses.
Mailbox	This field identifies the “friendly name,” as administered in <i>Message Care</i> , for the mailbox that received the message.
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.

Illustration The following illustration is an example of a View Web page arrived at through the Real Time Snap-Shot Report Results Web page:



Snapshot Report Results The following table provides a description of the fields found on the
View Web page fields Snapshot Report Results View Web page:

Fields	Description
Track #	This field provides the tracking # of original message.
Status	This field provides the status of the message (Blocked, Launched, Active, Suspended, Overflowed, 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 who worked on the message last.
Reason	This field provides the reason chosen when the message was suspended or closed.
Speed of Answer	This field provides the interval between the time when the message was received to the time when the message was answered by an agent.
Processing Time	This field provides the total time the message was active while the message was being processed. For example, if two agents worked on the same message, then the processing time reflects the total processing time of both agents.
Suspend Code	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> .
From	This field identifies the email address of the originator. <i>Message Care</i> uses this email address to populate the To field in a reply message.

Fields	Description
Mailbox	This field identifies the “friendly name,” as administered in <i>Message Care</i> , for the mailbox that received the message.
Subject	This field provides the subject of the message.
Attachments	This field represents the links that identify file attachments contained in the message. Based on your browser's functionality, you will either be prompted to open or save the attachment when you click on the link. 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. If the message does not have any attachments, then the Attachments field will not appear.
Related Responses	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.
Text Body area	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).

Things to know about viewing a message

The following subjects provide background information about the viewing capability in the *Message Care* software:

- [When can I view a message? \(8-56\)](#)
- [Can I modify a message while I am viewing it? \(8-57\)](#)
- [Does CMS gather statistics on a message that I am viewing? \(8-57\)](#)
- [Can I receive a new message while viewing an existing message? \(8-57\)](#)

When can I view a message?

You can view a message regardless of the message's current state. And, you do not have to be the active agent on that message to view it.

Can I modify a message while I am viewing it?

Viewing a message is a read-only operation. 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.

Does CMS gather statistics on a message that I am viewing?

When you view a message, Call Management System (CMS) statistics are not gathered on the time spent viewing the message.

Can I receive a new message while viewing an existing 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 Auxiliary work (AUX) or After Call Work (ACW) mode.

View 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:
 - Retrieve the message by clicking on the Retrieve button if available.
 - View the history of the message by clicking on the History button.
 - Go back to the Search Results Web page by clicking on the Back button.
 - Conduct a new search by clicking on the Search button.

END OF STEPS



Retrieve Acknowledgment Web page

Introduction You can retrieve a message in the Launched, Suspended, Blocked, Overflowed, 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.

Retrieved message calls appear as direct-agent message calls. To ensure that you receive your retrieved message, place yourself in the AUX work mode. To make good use of facilities, retrieve one message at a time, process the message to completion, and then retrieve another message.

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 subjects provides important information about retrieving a message:

- [What happens when I retrieve a suspended message? \(8-58\)](#)
- [Can I retrieve a message while on a live ACD call? \(8-58\)](#)
- [How can I ensure that a message I retrieve comes directly to me? \(8-59\)](#)

What happens when I retrieve a suspended message?

Retrieving a message in the suspended state cancels the suspension timer.

Can I retrieve a message while on a live ACD call?

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.

How can I ensure that a message I retrieve comes directly to me?

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 assuming *Message Care* has facilities to launch the call.

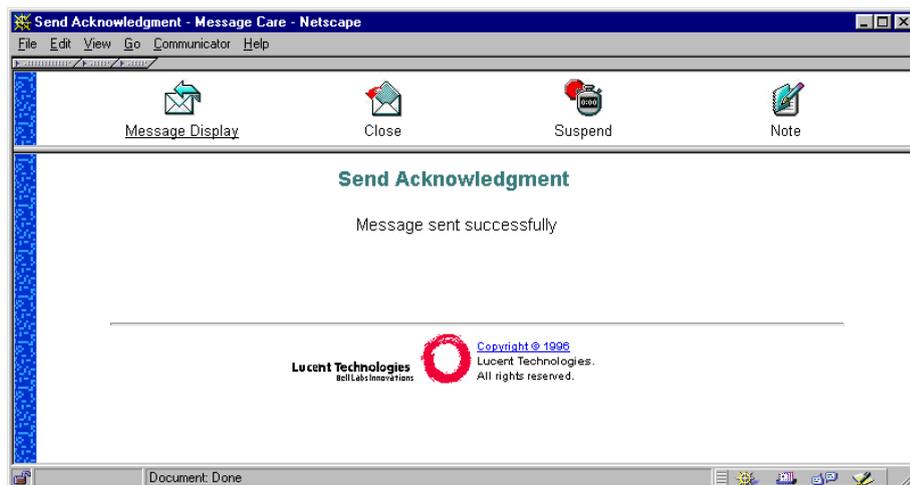
If you do not receive the message within 30 seconds, assume that *Message Care* did not have the facilities to launch the call. At this point, you should resume processing other email messages.



Send Acknowledgment Web page

Introduction 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.

Illustration The following illustration is an example of the Send Acknowledgment Web page:



Resent Acknowledgment Web page

Introduction 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 *Message Care* to resend a message.



Real Time Snap-Shot Report Web page

Introduction The Real Time Snap-Shot Report displays current open (that is, any message that does not have a status of Closed) message activity. This includes messages in the Overflowed 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 Report 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 subjects provides important information about Real Time Snap-Shot Reports:

- [Can I get information about closed messages? \(8-62\)](#)
- [How current is the data in a Snap-shot report? \(8-63\)](#)
- [Can I retrieve or view messages identified though a Snap-shot report? \(8-63\)](#)
- [Can I select multiple mailboxes as my criteria for a Snap-shot report? \(8-63\)](#)
- [Can I print a Snap-shot report? \(8-63\)](#)
- [Can I save a Snap-shot report? \(8-63\)](#)
- [Is there an unfavorable time to generate a Snap-shot report? \(8-63\)](#)

Can I get information about closed messages?

Since the Snap-Shot report is a view of current open message activity, it will not report on any closed messages.

How current is the data in a Snap-shot report?

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 (Overflowed, 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 Overflowed to Launched or from Active to Suspended.

Can I retrieve or view messages identified through a Snap-shot report?

You can retrieve or view messages identified through a Real Time Snap-Shot Report.

Can I select multiple mailboxes as my criteria for a Snap-shot report?

When requesting a Real Time Snap-Shot Report, you must select either one, all, or multiple mailboxes as your criteria.

Can I print a 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.

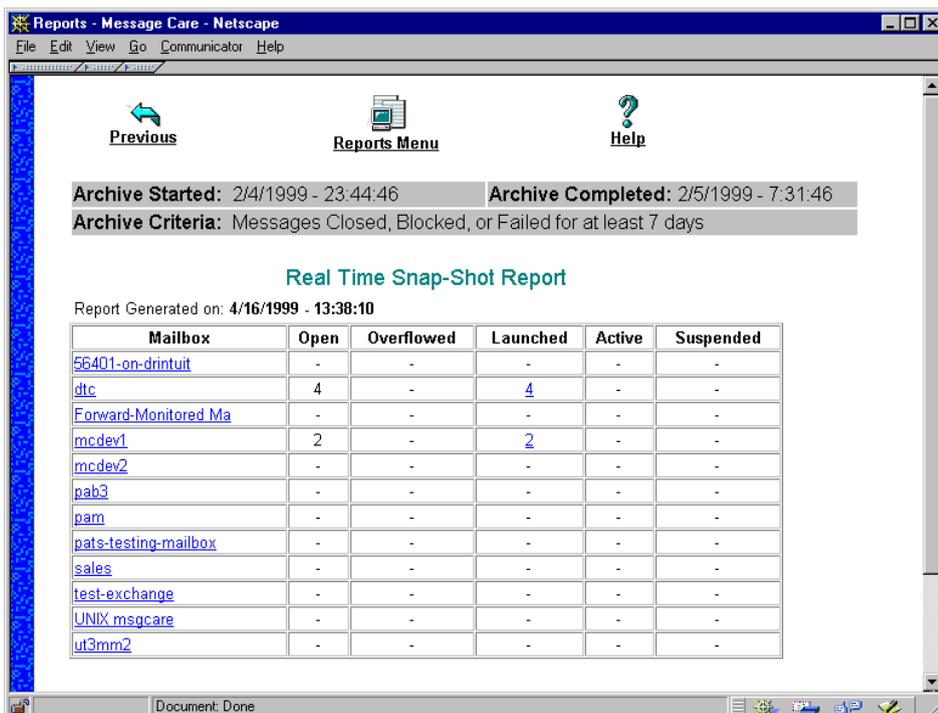
Can I save a Snap-shot report?

You can save the Real Time Snap-Shot Report in an HTML file by using your browser's Save function.

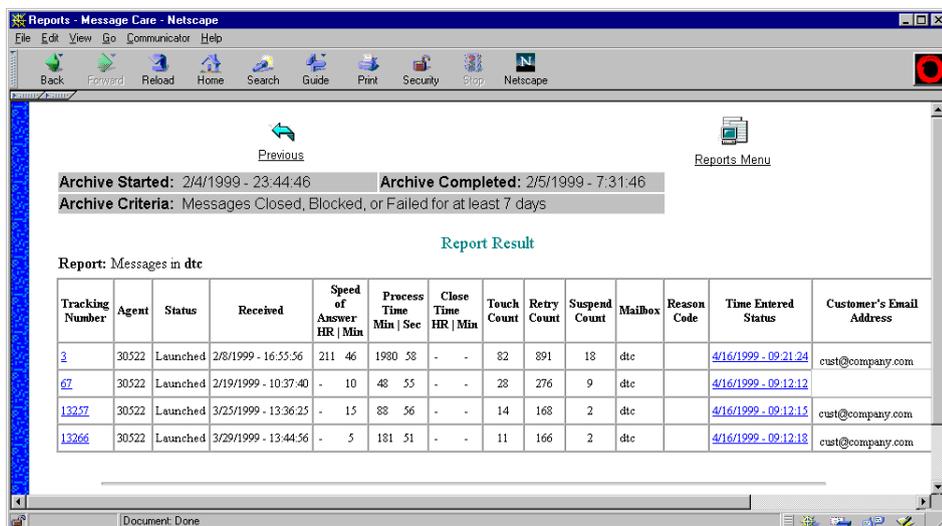
Is there an unfavorable time to generate a Snap-shot report?

Because Real Time Snap-Shot Reports are generated on the same server that contains the *Message Care* Web pages, performance problems could occur if you attempt to generate a snap-shot report during heavy message call traffic.

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



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):



Generate 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.
Result: 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.
Result: 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.
Result: 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.
Result: 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

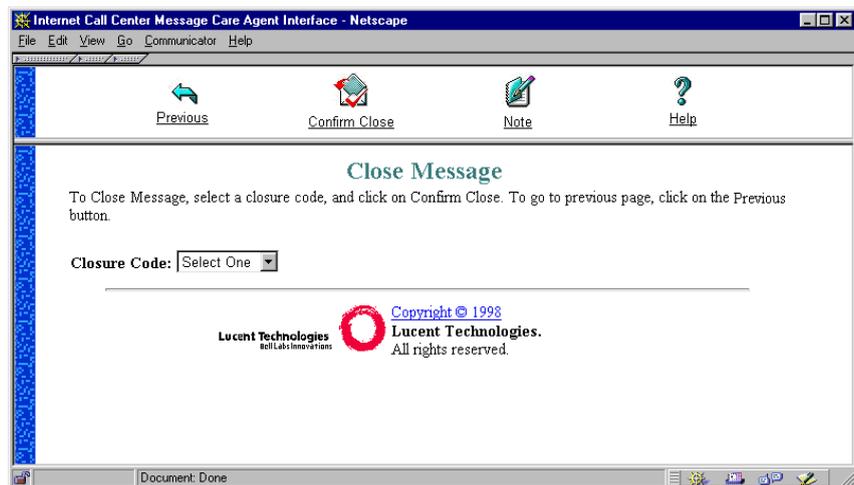
END OF STEPS



Close Message Web page

Introduction 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 call 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.

Illustration 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.

What happens when I close a message?

The following takes place when you close a message:

- When *Message Care* 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, *Message Care* informs you of the response and allows you to cancel the message closure.
 - When you close a message, *Message Care* sets the status to Closed, records the time you closed the message, records your agent ID, and records the reason code.
 - When you close a message, *Message Care* drops the message call associated with the active message and all CMS tracking for that message call ends.
 - Once a message is closed, you cannot reopen it.
-

Close 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.

Result: *Message Care* 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.

END OF STEPS



Handling undeliverable messages and notifications

Overview

Purpose 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.

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.

Contents The following section contains information about processing undeliverable messages and notifications.



Undeliverable messages

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:

- Uses the Resend option
- Corrects the Destination Address

Use the 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, Agent 123 will have to 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 one of the following:

- Processes the undeliverable notification that was caused by the recipient's mail server being down
- Processes the undeliverable notification that was caused by the recipient's address being incorrect

Recipient's mail server was not operational

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).

Recipient's address was incorrect

If the reply (message B) was not delivered because the recipient's address was incorrect, specific tasks Agent 123 must perform specific tasks.

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 one of the following:

- Uses the Resend option
- Processes the undeliverable notification that was caused by the recipient's address being incorrect

Use the 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, Agent 123 will have to perform specific tasks.

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.

Recipient's address was incorrect

If the reply (message B) was not delivered because the recipient's address was incorrect, Agent 123 must perform the following tasks:

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.



9 Reports

Overview

Purpose The purpose of this section is to discuss the reporting capabilities of the *CentreVu*® Internet Solution.

Audience This information is intended for installers, system administrators, call center supervisors, or anyone else involved in connecting, installing, administering hardware or software, setting up reports, or maintaining database items for the *CentreVu* Internet Solution. This information also describes the *CentreVu* CMS and *CentreVu* Supervisor ICC enhancements.

Contents The following items are discussed:

- [Background information \(9-2\)](#)
- [Message Care reports \(9-9\)](#)
- [Internet Call Center Reports \(9-34\)](#)

References The following documents include additional information about *CentreVu* CMS or Supervisor:

- *CentreVu* Supervisor documentation
- *CentreVu* Call Management Systems documentation
- *CentreVu Report Designer Version 6 User Guide (585-215-859)*
- *CentreVuCMS R3V5 Real-Time and Historical Reports(585-215-821)*
- *CentreVu CMS Version 6 Reports(585-215-851)*



Background information

Overview

Purpose The purpose of the background information is to provide you with information about the reporting capabilities of the *CentreVu* Internet Solution as well as the reporting capabilities of *CentreVu* CMS and Supervisor.

Contents The following areas are discussed:

- [Reporting software \(9-3\)](#)
- [Message Care software \(9-4\)](#)
- [CentreVu CMS for the Internet \(ICMS\) software \(9-6\)](#)
- [Terminology differences \(9-8\)](#)



Reporting software

Introduction Reports for the *CentreVu* Internet Solution are produced through the following:

- *Message Care*[™] software—gathers statistics regarding the specifics of end-to-end message (email and fax) processing.
- *CentreVu* CMS for the Internet software—gathers statistics regarding the specifics of voice and data calls over the Internet.
- *CentreVu* CMS and Supervisor—gathers statistics regarding call-traffic data.



Message Care software

Overview The *Message Care* software provides several reports that focus specifically on end-to-end information about messages routed through *Message Care*. These reports draw their information from the database that logs and stores all information recorded during each step in processing a message.

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:

- Overflowed
- Launched
- Active
- Suspended
- Closed
- Failed
- Blocked

Message processing statistic—CMS versus *Message Care*

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.
- If vectors have been designed to limit the calls queued per skill, then CMS reports 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 message call enters the *DEFINITY*® ECS queue. Thus there is no CMS information on the time that messages spend in the Overflowed state.
- CMS stops tracking when the message 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*.
- *Message Care* may initiate multiple message calls in the handling of a message. For example, once a message call is suspended, *Message Care* launches a new message call each time it goes into the queue again. *Message Care* statistics tie all of these message calls together and report on them under the same original email message. Thus the CMS count of message calls can differ from the number of messages actually handled.



CentreVu CMS for the Internet (ICMS) software

Introduction ICMS is a special software package used to collect more specific real-time Internet call data. CMS is a software product used by customers who have Lucent Technologies telecommunication switches and receive telephone calls that are processed through the Automatic Call Distribution (ACD) feature of the switch. *CentreVu* CMS collects call-traffic data, formats management reports, and provides an administrative interface to the ACD feature in the switch.

To collect more specific real-time Internet call data, the following enhancements were incorporated into *CentreVu* CMS:

- New real-time data items—CMS collects the real-time Internet calls offered, page hits for ICC-enabled Web pages, and statistics for situations where a call could not be launched to the ACD.
- New real-time Internet reports—new reports for *CentreVu* CMS and Supervisor which relate to the ICC are provided. To access the new ICC reports, use the same mechanisms that are already in place for *CentreVu* CMS. *CentreVu* Supervisor reports appear as Purchased Reports in the Designer category.
- Standard collection of call-related statistics—Regular call statistics (for example, speed of answer, talk time, and so on) are collected for Internet calls.

ICMS works in conjunction with *CentreVu* CMS and Supervisor software and provides features designed specifically for the real-time Internet calls.

The ICMS software package allows you to do the following:

- Gather real-time Internet call statistics (voice and data)
- Correlate the number of page hits with the real-time calls that are launched for the corresponding Web pages
- Determine staffing needs for Internet voice and data calls
- Determine capacity needs

The ICMS package runs on top of the standard CMS package. *CentreVu* CMS R3V5 (with load r3v5ai.f or later), R3V5u (with load r3v5ud.a or later), or R3V6 is required to support Internet voice and data features. Also, if *CentreVu* Supervisor is used, then R3V5 or R3V5u with load bj.02 or R3V6 with a load greater than bj.02 is the minimum required load. See [Install the ICMS software \(3-7\)](#) for software installation procedure.

BCMS and BCMS Vu

BCMS and *BCMS Vu* are not supported for real-time Internet statistics. However, normal call statistics (for example, speed of answer, talk time, and so on) can still be collected using unmodified versions of *CentreVu* CMS, BCMS, or *BCMS Vu*. Only Internet-specific data items require the special *CentreVu* CMS software.



Terminology differences

CentreVu CMS and Message Care terminology overlap The following table documents cases where the terminology used by CMS and *Message Care* overlap.

Terminology	When used by CMS	When used by <i>Message Care</i>
ASA – average speed of answer	Refers to the time from when a message call was launched and when it was answered by an agent. CMS also tracks the ASA for retrieved, response and returning suspended messages. <i>Message Care</i> will not.	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 of less than eight hours.
Reason Codes	Values entered by agents when completing a call. Multiple calls may be required to service a message and, therefore, CMS may track multiple reason codes for a single message.	Values entered by agents when closing or suspending a message.



Message Care reports

Overview

Purpose The purpose of this section is to provide information about *Message Care* reports.

Contents The following areas provide information about *Message Care* reports:

- [Introduction to Message Care reports \(9-10\)](#)
- [Objective Report \(9-13\)](#)
- [Closure Code Report \(9-16\)](#)
- [Mailbox Report \(9-19\)](#)
- [Messages Arrived Monthly Report \(9-24\)](#)
- [Agents Correspondence Report \(9-26\)](#)
- [Real Time Snap-Shot Report \(9-28\)](#)
- [Supervisory search \(9-30\)](#)

Audience This information is intended for system administrators, call center supervisors, or anyone involved in setting up reports or maintaining database items.



Introduction to *Message Care* reports

Types of 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 (non-real time that may also include open messages).

Available reports The *Message Care* reports are as follows:

- 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 *Message Care* 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 down to single message You can drill down 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 [Real Time Snap-Shot Report Web page \(8-62\)](#).

Report options The following options appear on every report you generate:

- Previous
 - Reports Menu
 - Help.
-

Notification of archive *Message Care* report criteria pages and report result pages contain the following information as a notification that an archive has taken place or is in progress:

- The time the last archive started (for example, Archive Started: 2/4/1999 – 23:44:46)
- The time the last archive completed (for example, Archive Completed: 2/5/1999 – 7:31:46)
- What criteria was used when creating the archive (for example, Archive Criteria: Message Closed, Blocked, or Failed for at least 7 days).

While an archive is in progress, the last completion time is blank. If an archive process fails unexpectedly, such as in the event of a power hit, the time the last archive completed value is never set. A supervisor can then inform the system administrator to rerun the archive utility to complete the archive.

If the database has never been archived, the archive information will be blank.

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

Following are the Localized URLs for the Supervisors Reports Page:

- US English http://<MC_server_domain/mcreport/en-US/Reports.asp
 - German http://<MC_server_domain/mcreport/de/Reports.asp
 - French http://<MC_server_domain/mcreport/fr/Reports.asp
 - Colombian Spanish http://<MC_server_domain/mcreport/es-CO/Reports.asp
 - Brazilian Portuguese http://<MC_server_domain/mcreport/pt-BR/Reports.asp
 - Italian http://<MC_server_domain/mcreport/it/Reports.asp
 - Japanese
http://<MC_server_domain/mcreport/ja/Reports.asp
-

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



Save reports to a file You can save any *Message Care*-provided report to a file. This capability may be provided by using functionality provided in your browser.

Print reports You can print a *Message Care*-provided report. When setting your print options, your print orientation should always be set to landscape. This capability may be provided by using functionality provided in your browser.

Things to know about generating reports The following list provides useful information about generating reports:

- When generating a report, you cannot choose ALL mailboxes and then specify specific mailboxes. You must either select ALL mailboxes or a set of specific mailboxes.
- When generating the mailbox report, counts of messages in the Blocked or Failed state for a particular mailbox are shown only if there is at least one Closed message for the mailbox.



Objective Report

Description 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.

Goals of the Objective 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.

Objectives you can specify 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.

Illustration The following displays an example of an Objectives Report:

The screenshot shows a Netscape browser window titled "Reports - Message Care - Netscape". The address bar contains "http://www.cvu.com/". The page has a blue border and contains the following information:

Navigation links: [Previous](#), [Reports Menu](#), [Help](#)

Archive Started: 2/4/1999 - 23:44:46 Archive Completed: 2/5/1999 - 7:31:46

Archive Criteria: Messages Closed, Blocked, or Failed for at least 7 days

Objective Report

Report Generated on: 4/16/1999 - 13:20:44
For Message Closed Between 2/16/1999 - 00:00:00 and 4/16/1999 - 13:19:00

Mailbox	Closed	ASA HR Min	Obj HR Min	Percent > Obj	Touch Count > 1
56401-on-drintuit	-	- -	- -	-	-
dte	107	70 32	1 0	57	81
Forward-Monitored Ma	-	- -	- -	-	-
mcdev1	6	107 45	1 0	67	2
mcdev2	-	- -	- -	-	-
pab3	-	- -	- -	-	-
pam	-	- -	- -	-	-
pats-testing-mailbox	-	- -	- -	-	-
sales	-	- -	- -	-	-
test-exchange	-	- -	- -	-	-
UNIX msgcare	-	- -	- -	-	-
ut3mm2	-	- -	- -	-	-

Document: Done

Generate 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) 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 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
- 4 Click on the Generate Report button to view the report. For all reports, on each Select Criteria page, the Generate Report button appears at the top.

END OF STEPS

Objective Report options

The following options are available after you click on the Generate Report button:

- Previous
- Reports Menu
- Help.

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

Result categories on the Objective 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 are received either from consumers or as replies to messages forwarded by agents.
- Closed—a status which indicates that no additional processing by an agent is required.
- ASA (average 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.
- Touch Count >1—the number of original messages whose touch count was greater than one. A touch count is the number of times a message call was active at an agent. The touch count is incremented when a message call is retrieved from the suspended state or when messages calls are transferred between agents.



Closure Code Report

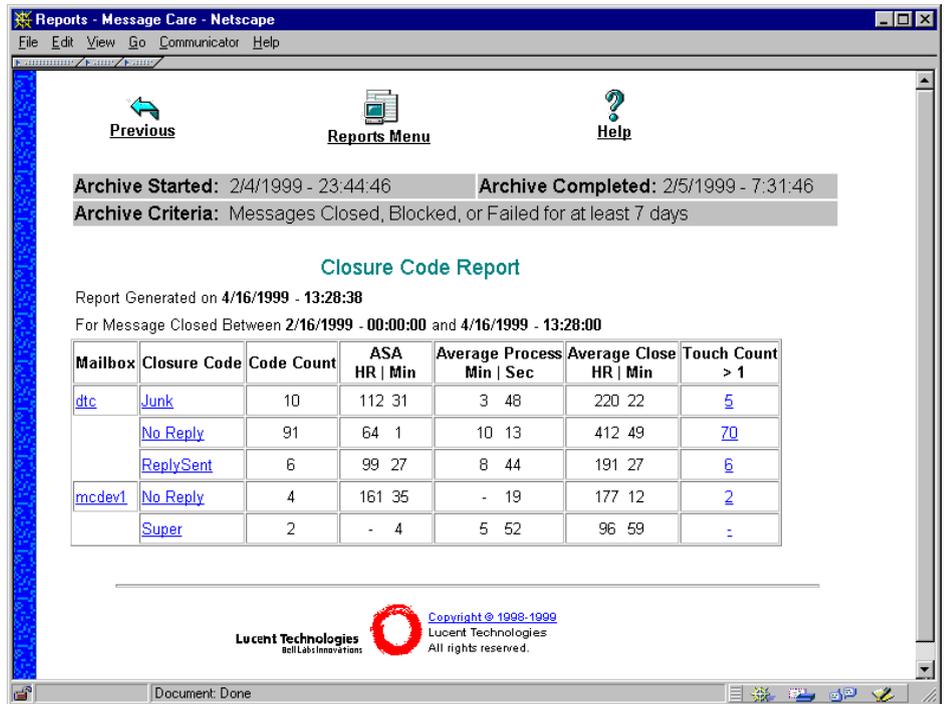
Description Closure codes apply only to the closed message state. When agents close a message, they select a reason for doing so., The Closure Code Report shows how often each reason code gets used, for the mailbox(es) and the time period you request.

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.

Goals of the 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.

Illustration The following illustration displays a sample Closure Code Report:



Generate 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 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
- 4 Click on the Generate Report button to view the report.

END OF STEPS

Result categories on the Closure Code Report

The following report result categories appear on the Closure Code Report:

- 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 from a consumer or replies to inquiries from SMEs within the call center. Any messages arriving in a mailbox are delivered to the agent through a DAC, thus collecting CMS statistics.
- Closure Code—customer-defined, reason codes entered by an agent when closing a message.
- Code Count—the number of times messages were marked closed for a given 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 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 from the mail server and marked closed by an agent.
- Touch Count >1—the number of original messages whose touch count was greater than one. A touch count is the number of times a message call was active at an agent. The touch count is incremented when a message call is retrieved from the suspended state or when messages calls are transferred between agents.

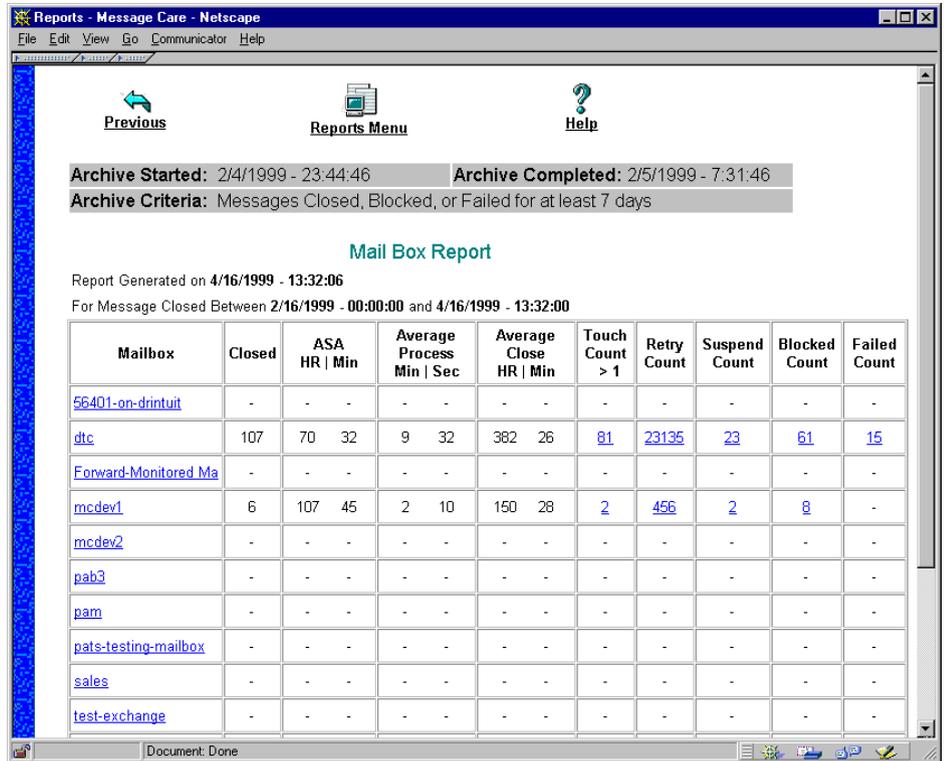


Mailbox Report

Description 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 Overflowed 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.

Illustration The following illustration displays a sample Mailbox Report:



Generate 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 period (between two dates and times) in which the messages were closed.
- 3 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
- 4 Click on the Generate Report button to view the report.

END OF STEPS

Result categories on the Mailbox Report

The following report result categories appear on the Mailbox Report:

- 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 from a consumer or replies to inquiries from SMEs within the call center. Messages arriving in a mailbox are delivered to the agent through a DAC, 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 from the mail server and marked closed by an agent.
- Touch Count >1—the number of original messages whose touch count was greater than one. A touch count is the number of times a message call was active at an agent. The touch count is incremented when a message call is retrieved from the suspended state or when messages calls are transferred between agents.
- 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 Retry Count 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 messages in the blocked state.
- Failed Count—the number of messages in the failed state.

Tips 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.

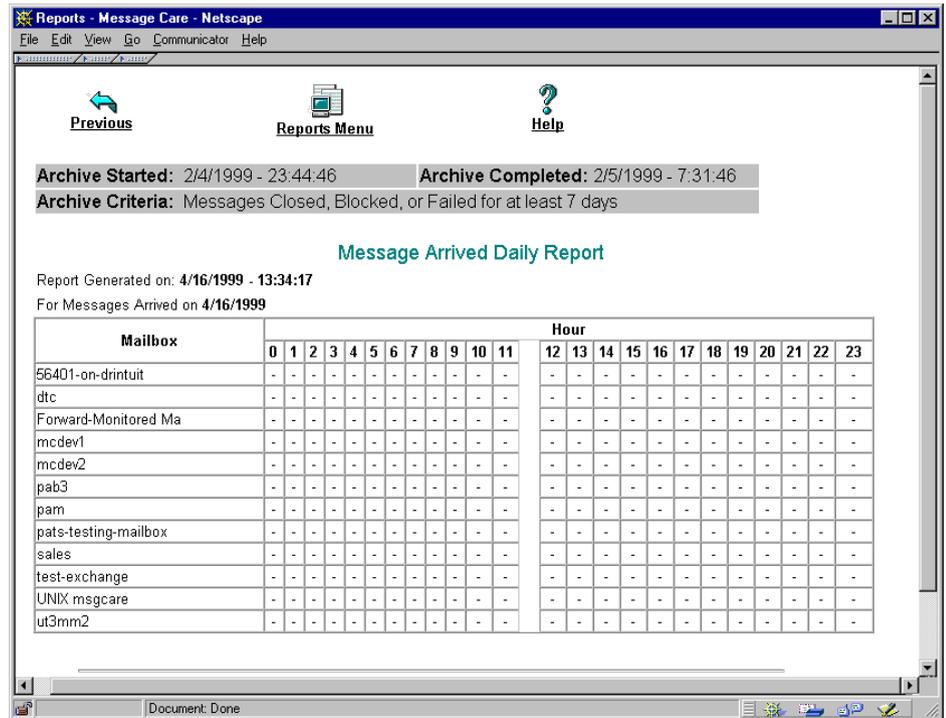
- If the Retry Count is large, you should look at why calls are being dropped. Possible causes include vectors limiting the number of calls queued for a certain agent skill or a lack of resources to launch the call.
- The difference in the value of closed messages and those messages with a Touch Count > 1, is the number of messages closed by the agent who first received the work. A large value in Touch Count > 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 Suspend Count indicates that agents either have to suspend message processing to await a response from an SME or are suspending message processing to perform other work, for example, to service real-time calls.



Messages Arrived Daily Report

Description 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; 1–12 AM and 1–12 PM.

Illustration The following illustration displays a sample Messages Arrived Daily Report:



Generate a Messages Arrived Daily Report To obtain a Messages Arrived Daily Report, do the following:

- 1 From the Message Care Report and Search page, click the Messages Arrived Daily Report link. This brings up the Select Criteria for Messages Arrived Daily Report page.
 - 2 Select specific mailboxes or all mail boxes and specify a date in which the messages arrived (day, month, and year).
-

-
- 3 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
-
- 4 Click on the Generate Report button to view the report.

END OF STEPS

**Result categories on the
Messages Arrived Daily
Report**

The following report result categories appear on the Messages Arrived Daily Report:

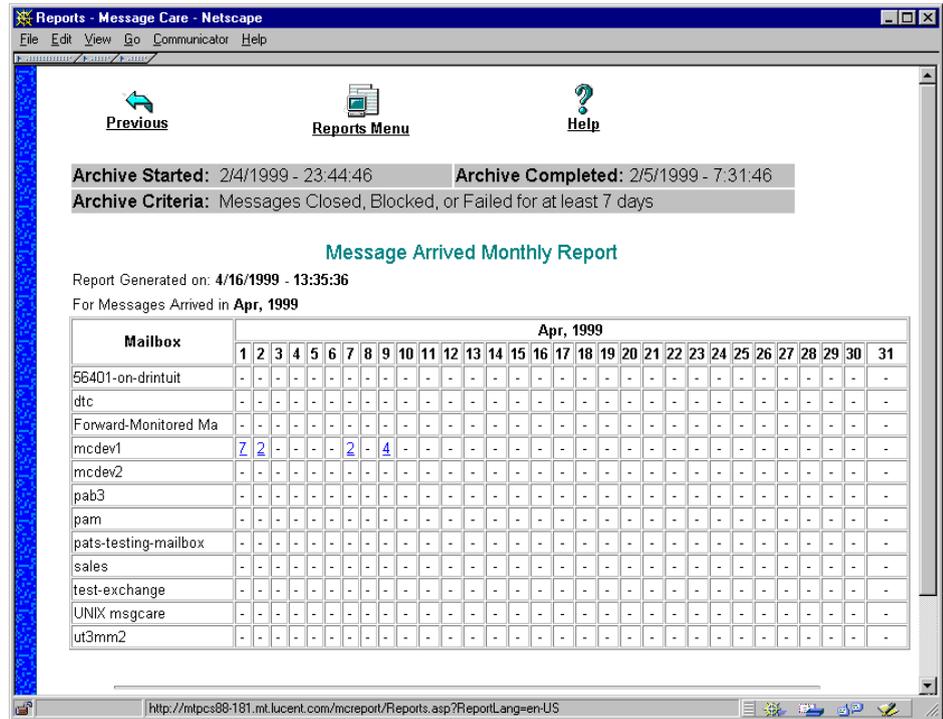
- Mailbox—a mailbox monitored by *Message Care* used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a consumer or replies to inquiries from SMEs within the call center.
- Hours



Messages Arrived Monthly Report

Description 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.

Illustration The following illustration displays a sample Messages Arrived Monthly Report:



Generate a Messages Arrived Monthly Report

To obtain a Messages 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 Monthly Report page.
- 2 Select specific mailboxes or all mail boxes, and specify a month and year in which the messages arrived.

-
- 3 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
-

- 4 Click on the Generate Report button to view the report.

END OF STEPS

**Result categories on the
Messages Arrived
Monthly Report**

The following report result categories appear on the Messages Arrived Monthly Report:

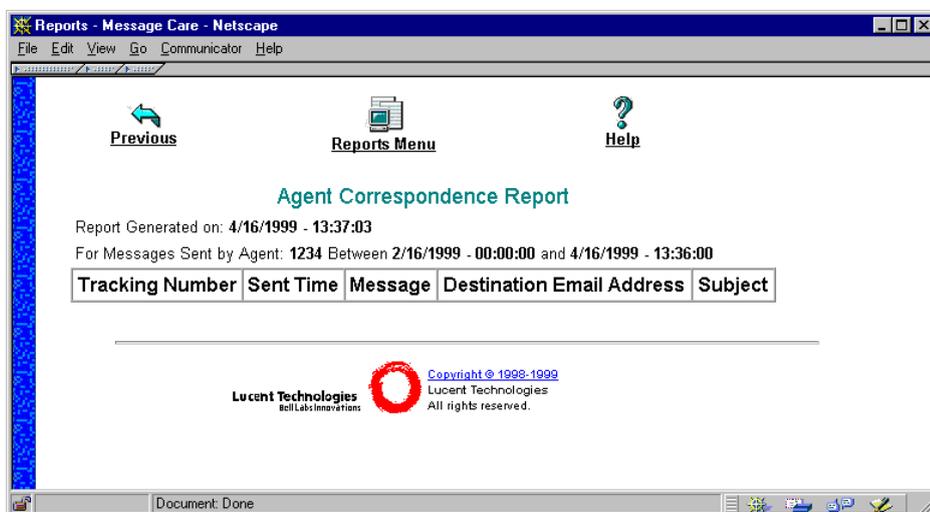
- Mailbox—a mailbox monitored by *Message Care* used to collect messages which need to be serviced by an agent. Messages in this mailbox originate from either direct correspondence from a consumer or replies to inquiries from SMEs within the call center.
- Day.



Agents Correspondence Report

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

Illustration The following illustration displays a sample Agents Correspondence Report:



Generate an Agents Correspondence Report

To obtain a Agents 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 period (between two dates and times) in which the messages were sent.

-
- 3 Select the database (Current or Archive) from which you want to produce the report. If your call center has multiple archives, then you can specify the archive for which you want to report (from the Archive pull-down list).
-

- 4 Click on the Generate Report button to view the report.

END OF STEPS

**Result categories on the
Agents Correspondence
Report**

The following report result categories appear on the Agent Correspondence Report:

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



Real Time Snap-Shot Report

Description The Real Time Snap-Shot Report displays current open 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.

The Real Time Snap-Shot Report is useful to agents when allocating resources to non-message call activities (for example, real-time calls, breaks, or administrative work).

For detailed information about the Real Time Snap-Shot Report, see [Real Time Snap-Shot Report Web page \(8-62\)](#).

Illustration—Real Time Snap-Shot Report

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

Previous Reports Menu Help

Archive Started: 2/4/1999 - 23:44:46 Archive Completed: 2/5/1999 - 7:31:46
 Archive Criteria: Messages Closed, Blocked, or Failed for at least 7 days

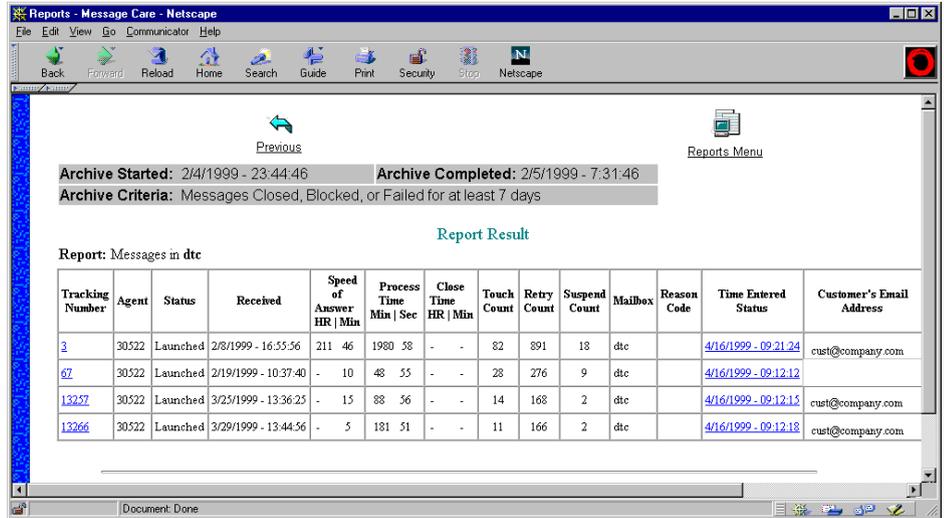
Real Time Snap-Shot Report
 Report Generated on: 4/16/1999 - 13:38:10

Mailbox	Open	Overflowed	Launched	Active	Suspended
56401-on-drintuit	-	-	-	-	-
dtc	4	-	4	-	-
Forward-Monitored Ma	-	-	-	-	-
mcdev1	2	-	2	-	-
mcdev2	-	-	-	-	-
pab3	-	-	-	-	-
pam	-	-	-	-	-
pats-testing-mailbox	-	-	-	-	-
sales	-	-	-	-	-
test-exchange	-	-	-	-	-
UNIX msgcare	-	-	-	-	-
ut3mm2	-	-	-	-	-

Document: Done

Illustration—Real Time Snap-Shot Report for a specific mailbox

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):



Supervisory search

Introduction You can conduct a message search through the Message Care Report and Search Web page.

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



Supervisory search options The following table provides descriptions of the search options contained in the Message Search Web page for a search:

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 the Current or Archive option. The default is Current.</p> <p>As the Current database reaches its size limit, your system administrator will move closed messages to the Archive database.</p>
Agent ID	<p>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.</p>
Mail Box	<p>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.</p>
Message Status	<p>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.</p>

Field	Description
Subject	<p>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.</p>
Customer's Email Address	<p>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 <i>customer@company.com</i>. 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.</p>
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 2/16/1999 at 00:00 and 4/6/1999 at 13:44.</p> <p>You can use wildcards in 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>

Conduct a supervisory search

To conduct 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: tracking number, database (current or archive), Agent ID, Mail Box, Message Status, Subject, Customer's Email Address, and/or Message Time. Wildcards are supported.

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.

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

END OF STEPS



Internet Call Center Reports

Overview

Purpose The following information provides a description of the standard reports to be provided for the Internet Call Center on *CentreVu* CMS.

Contents The following reports are described in the following information:

- [Internet Call Center report summary \(9-35\)](#)
- [ICMS database items \(9-37\)](#)
- [CMS Internet Real-Time Reports \(9-39\)](#)
- [CMS Internet Historical Reports \(9-43\)](#)
- [CentreVu Supervisor Internet reports \(9-47\)](#)

Audience This information is intended for system administrators, Call Center supervisors, or anyone involved in setting up reports or maintaining database items.



Internet Call Center report summary

Introduction Reports that support the ICC are available in *CentreVu* CMS and Supervisor. Details about these reports can be found in the sections that follow. In addition, customers can create their own custom and designer ICC reports.

Note that Real-Time and Historical reports can be created for *CentreVu* CMS, but only Historical or Snapshot reports can be created for *CentreVu* Supervisor. (All Supervisor report descriptions appear in the Historical tabbed folder.)

The following table summarizes the standard ICC reports available for *CentreVu* CMS and *CentreVu* Supervisor:

Report Name	Type	Page Hit Information
CMS Reports		
VDN Call Attempts	Real-Time	No
Web Page Call Attempts	Real-Time	Yes
Call Attempts	Real-Time	Yes
VDN Call Attempts	Historical	No
VDN and URL	Historical	Yes
Page Hits	Historical	Yes
Supervisor Reports		
Graphical Internet VDN Call Attempts (Snapshot)	Snapshot	No
Internet Web Page Call Attempts (Snapshot)	Snapshot	Yes
Internet Call Attempts (Snapshot)	Snapshot	Yes
Graphical Internet VDN Call Attempts	Historical	No
Internet VDN and URL	Historical	Yes
Internet Page Hits	Historical	Yes
Graphical Internet VDN Calls Summary	Historical	No

The “Type” column refers to the type of report: Real-Time, Historical, or Snapshot. (Snapshot reports display a snapshot of the Real-Time data but do not automatically refresh.)

The “Page Hit Information” column indicates whether page hit information is displayed in the report. If page hit data is not collected, the content of the reports may be affected.

Things to know about ICC Reports

The following list provides important information about ICC reports:

- For the ICC, a set of standard reports is available to present and correlate data from Internet calls. If the standard reports do not meet your needs, then you can create custom reports.
- An Internet category is available from the Reports menu within the Real-Time and Historical submenus.
- For standard *CentreVu* CMS report information and details about input windows, see the *CentreVu Supervisor Version 6 Reports(585-215-851)* document.



ICMS database items

Description The following are new database items specifically for Internet data. See [Overview \(10-15\)](#) for more information about ICMS database items.

- ***calls_offered***—refers to the number of Internet Calls that are offered by the ITG. This data item is associated with the VDN and URL sent with the message.
- ***invoice_limit***—refers to the number of Internet voice calls that could not be serviced because the administered limit for simultaneous Internet Voice calls was reached. This data item is associated with the VDN and URL sent with the message. Text Chat only and PSTN Callback calls shall not affect this database item.
- ***page_hits***—refers to the number of times ICC-enabled pages were accessed.

Data is collected for this item only if access to the CMS server is allowed through the firewall and proper changes are made to the Web page. See [Firewall guidelines \(2-22\)](#) or [Chapter 11, Web page guidelines](#) for details.

- ***pri_limit***—refers to the number of calls that could not be serviced because there were insufficient PRI channels available. This data item is associated with the VDN and URL sent with the message.
 - ***page_url***—refers to a unique identifier for the ICC-enabled Web page (this may be the Web page's URL).
 - ***phantom_limit***—refers to the number of text chat or PSTN callback calls turned away due to insufficient administered ASAI phantom extensions for the table row's vdn/page_url pair. If phantom calls are not used, this database item will be zero.
 - ***vector_discon***—refers to the number of Internet calls that were “force disconnected” from vector processing.
 - ***vector_busy***—refers to the number of Internet calls that received busy treatment from vector processing.
-

The following are existing database items and calculations used for Internet data:

- ***vdn***—the number or name of the VDN for which the report shows data (selected in the report input window).
- ***ROW_DATE***—the date for the report.
- ***ACD***—the ACD name or number for which the data was collected.
- ***STARTTIME, STARTTIME+INTRVL***—intervals to which the data applies.



CMS Internet Real-Time Reports

Introduction The following CMS Internet Real-Time Reports are available:

- [Real-Time Internet VDN Call Attempts Report \(9-39\)](#)
- [Real-Time Internet Web Page Call Attempts Report \(9-40\)](#)
- [Real-Time Internet Call Attempts Report \(9-41\)](#)

Real-Time Internet VDN Call Attempts Report

This report provides a real-time summary of calls offered by the ICM for each of the specified Internet VDNs during the current interval. The report includes the number of calls offered by the ICM along with the number of calls that had to be turned away due to PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and IVoice Limit conditions.

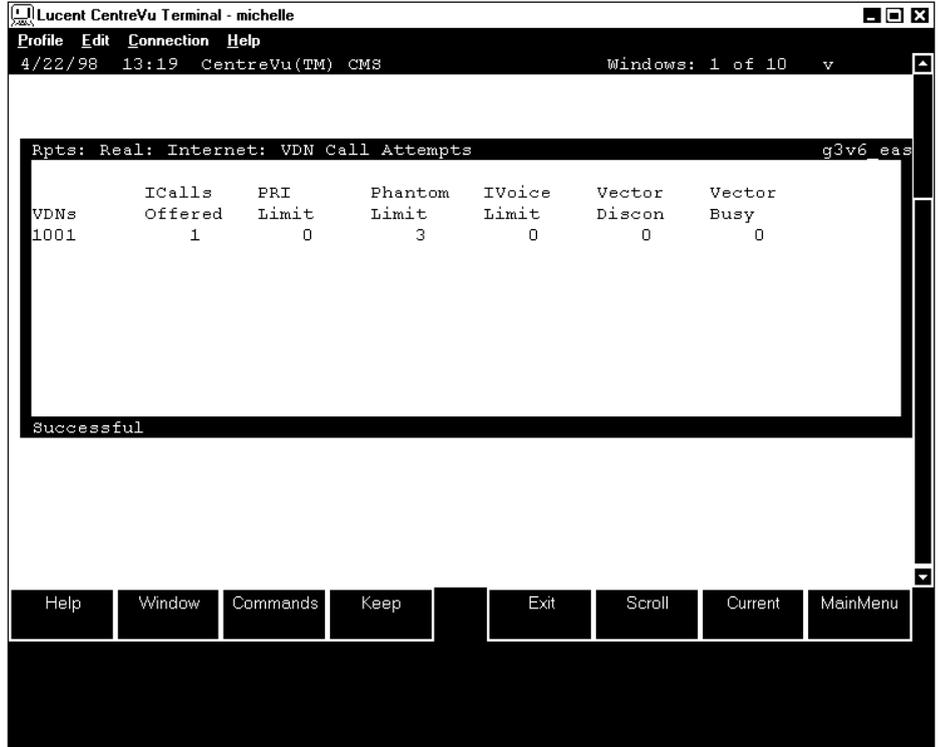
Things to know about the Real-Time Internet VDN Call Attempts Report

The following list provides important information about the Real-Time Internet VDN Call Attempts Report:

- Sorts data by VDN extension
- Uses stored database items in the r_vdnsum view.
- Requires Administrators to specify inputs:
 - One or more VDNs
 - Refresh rate.

Illustration—Real-Time Internet VDN Call Attempts Report example

The following illustration displays a sample of the Real-Time Internet VDN Call Attempts Report:



Real-Time Internet Web Page Call Attempts Report

This report provides real-time Internet call information for all of the ICC-enabled Web pages during the current interval. The report includes the number of calls offered by the ICM, the number of page hits, and the number of calls that had to be turned away due to PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and IVoice Limit conditions.

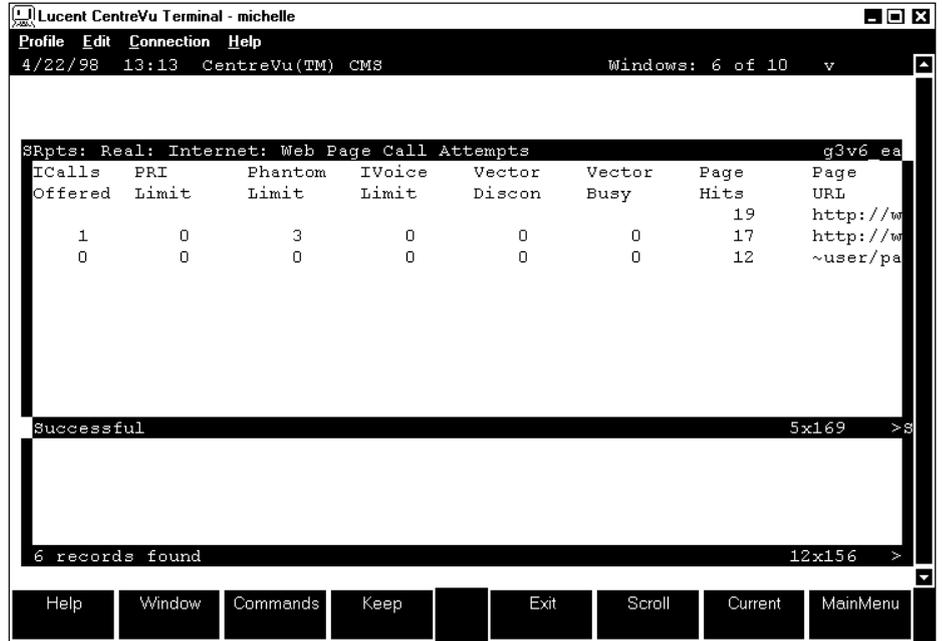
Things to know about the Real-Time Internet Web Page Call Attempts Report

The following list provides important information about the Real-Time Internet Web Page Call Attempts Report:

- Sorts data alphabetically by URL
- Displays data only for URLs which are visited during the interval (in other words, URLs which are not accessed during the interval are not displayed)
- Uses stored database items in the r_pagesum view
- Requires one input field—Refresh rate
- Displays no data when page hit information is not available (for example, if the firewall prevents external access to CMS).

Illustration—Real-Time Internet Web Page Call Attempts Report example

The following illustration displays a sample of the Real-Time Internet Web Page Call Attempts Report:



Real-Time Internet Call Attempts Report

This real-time report provides real-time Internet call information for the specified VDN(s) along with page hit and URL information during the current interval. The report includes the number of calls offered by the ITG along with the number of calls that had to be turned away due to PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and IVoice Limit conditions.

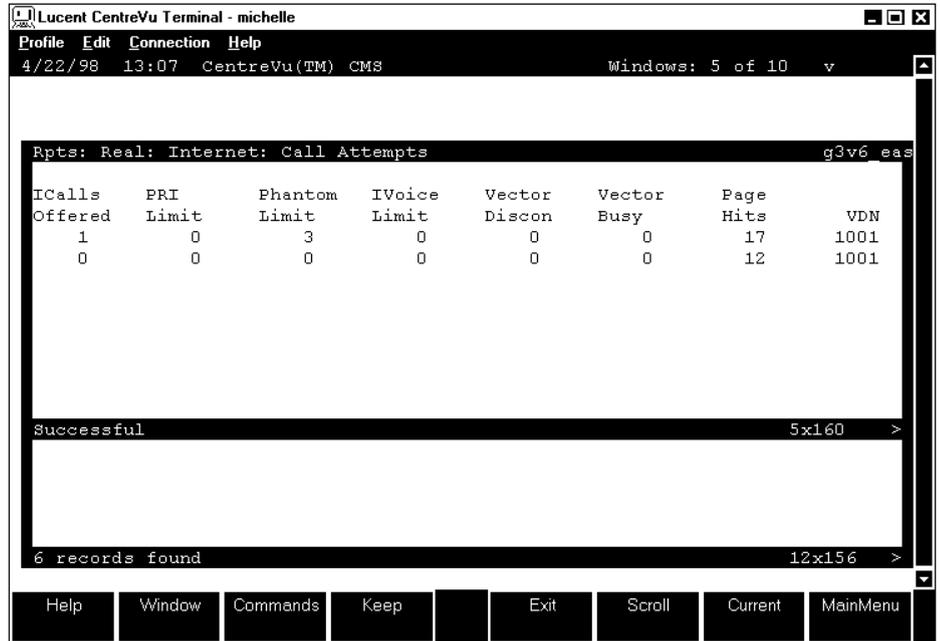
Things to know about the Real-Time Internet Call Attempts Report

The following list provides important information about the Real-Time Internet Call Attempts Report:

- First sorts data alphabetically by URL, then numerically by VDN
- Uses stored database items in the r_pagevdn view
- Displays "Page URLs" multiple times with the "Page Hits" data being the same for each entry. This is because multiple VDNs can be assigned to the same page.
- Requires the following inputs:
 - One or more VDNs
 - Refresh rate.

Illustration—Real-Time Internet Call Attempts Report example

The following illustration displays a sample of the Real-Time Internet Call Attempts Report:



□

CMS Internet Historical Reports

Introduction The following CMS Internet Reports are available:

- [Historical Internet VDN Call Attempts Report \(9-43\)](#)
- [Historical Internet VDN and URL Report \(9-44\)](#)
- [Historical Internet Page Hits Report \(9-45\)](#)

Historical Internet VDN Call Attempts Report

This historical report displays the sum of the Internet calls offered and PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and IVoice Limit situations for the specified VDN during each recorded interval.

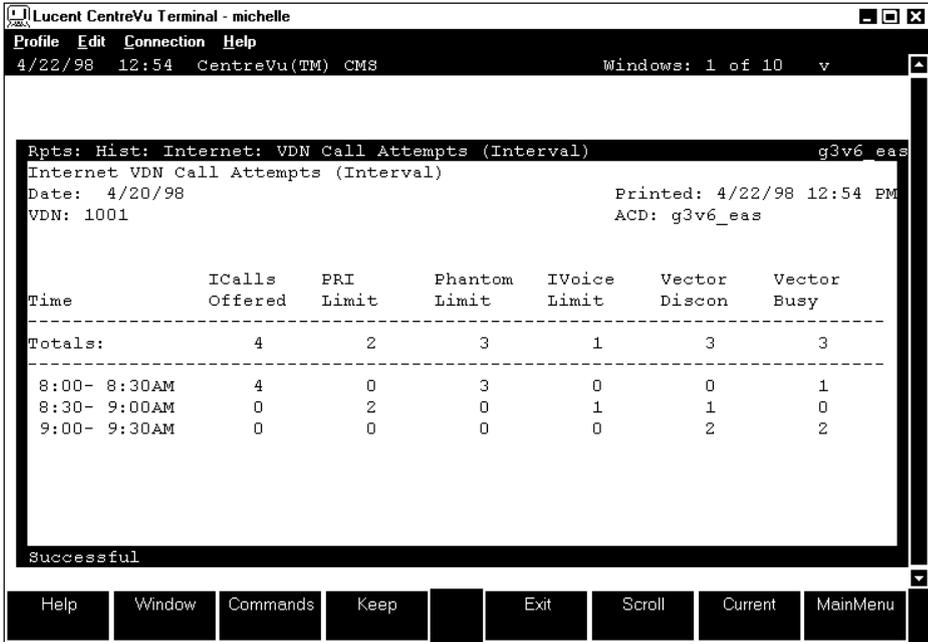
Things to know about the Historical Internet VDN Call Attempts Report

The following list provides important information about the Historical Internet VDN Call Attempts Report:

- Provides interval, daily, weekly, and monthly report formats
 - Uses stored database items in the h_vdnsum (interval), d_vdnsum (daily), w_vdnsum (weekly), or m_vdnsum (monthly) views
 - Requires the following inputs:
 - A single VDN
 - Time range and date for Interval report
 - Date range for daily, weekly, and monthly reports.
-

Illustration—Historical Internet VDN Call Attempts Report example

The following illustration displays a sample of the Historical Internet VDN Call Attempts Report:



Historical Internet VDN and URL Report

This historical report displays the number of the Internet Calls Offered, PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and IVoice Limit situations, page hits and page URLs for Web pages associated with the specified VDN during each recorded interval.

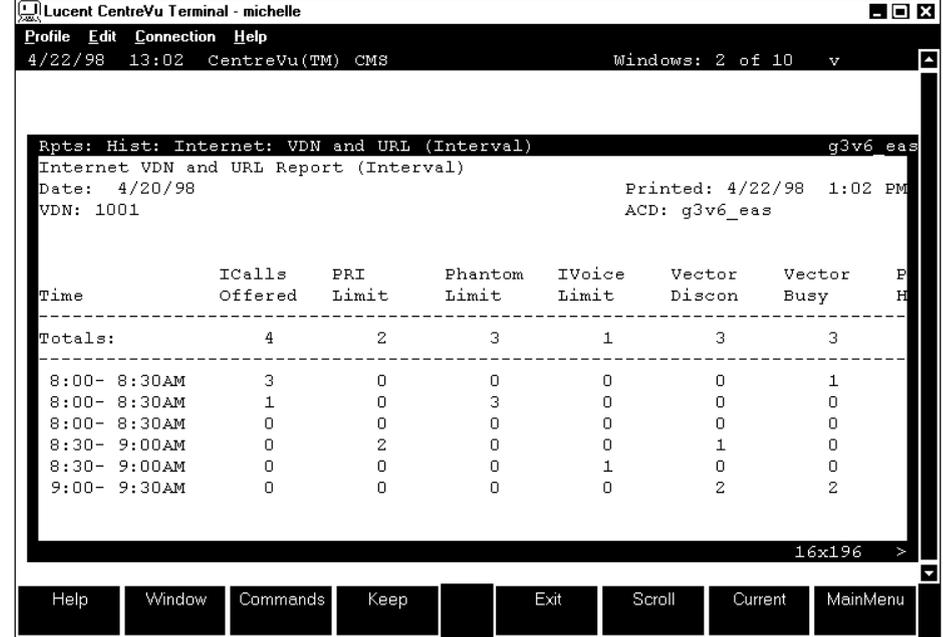
Things to know about the Historical Internet VDN and URL Report

The following list provides important information about the Historical Internet VDN and URL Report:

- Provides interval, daily, weekly, and monthly report formats
- Uses stored database items in the h_pagevdn (interval), d_pagevdn (daily), w_pagevdn (weekly), or m_pagevdn (monthly) views
- Differs from the Historical Internet VDN Call Attempts report in that it also provides URL information for the associated VDN (multiple URLs may map to the same VDN)
- Determines which pages result in the most calls.
- Requires the following inputs:
 - A single VDN
 - Time range and date for Interval report
 - Date range for daily, weekly, and monthly reports

Illustration—Historical Internet VDN and URL Report example

The following illustration displays a sample of the Historical Internet VDN and URL Report:



Historical Internet Page Hits Report

This historical report displays the number of page hits for each ICC enabled URL and the number of calls launched from that page.

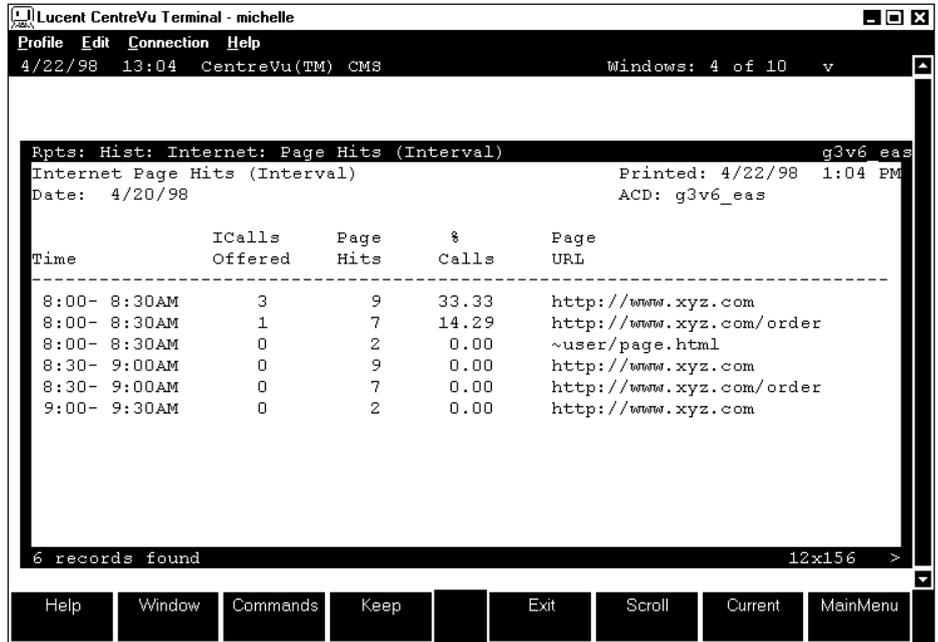
Things to know about the Historical Internet Page Hits Report

The following list provides important information about the Historical Internet Page Hits Report:

- Provides interval, daily, weekly, and monthly report formats
- Displays the number of ACD calls, the number of page hits, and the ratio of calls to page hits for each ICC-enabled URL. Data for the URL displays only if the page was loaded by a consumer.
- Uses stored database items in the h_pagesum (interval), d_pagesum (daily), w_pagesum (weekly), or m_pagesum (monthly) views
- Displays no data in the event that page hit information is not available (for example, if a firewall prevents external access to CMS)
- Requires the following inputs:
 - Time range and date for Interval report
 - Date range for daily, weekly, and monthly reports

Illustration—Historical Internet Page Hits Report example

The following illustration displays a sample of the Historical Internet Page Hits Report:



CentreVu Supervisor Internet reports

Things to know about CentreVu Supervisor Internet reports

The following list provides important information about *CentreVu* Supervisor Internet reports:

- *CentreVu* Supervisor does not support Internet real-time reports. However snapshots of information can be displayed. These ICC-specific Supervisor reports are called “Snapshot” reports. These reports do not refresh automatically. It is therefore up to the administrator to restart the report manually to get a current snapshot.
- For information on how to use standard *CentreVu* Supervisor report information, and for details about input windows, see the *CentreVu Call Management System Release 3 Version 6 Administration(585-215-850)* document.
- All Supervisor Internet reports are available from the Designer Category in the Historical tab for *CentreVu* Supervisor V5 and from the Internet Category in the Historical tab for *CentreVu* Supervisor V6.
- Only historical or snapshot designer reports can be created using *CentreVu* Supervisor's Report Designer.
- *CentreVu* CMS reports are also available in *CentreVu* Supervisor, but with differences.

The following table maps the CMS report names to the Supervisor report names:

CMS Report Name	Supervisor Report Name
Real-Time Web Page Call Attempts	Internet Web Page Call Attempts (Snapshot)
Real-Time Call Attempts	Internet Call Attempts (Snapshot)
Historical VDN and URL	Internet VDN and URL
Historical Page Hits	Internet Page Hits

Available reports The following *CentreVu* Supervisor Internet Reports are available:

- [Graphical Internet VDN Call Attempts \(Snapshot\) Report \(9-48\)](#)
 - [Graphical Internet VDN Call Attempts Report \(9-49\)](#)
 - [Graphical Internet VDN Calls Summary Report \(9-50\)](#)
-

Graphical Internet VDN Call Attempts (Snapshot) Report

This historical report graphically displays data regarding the number of Internet calls offered and the number of calls that had to be turned away for one or more VDNs during the current interval.

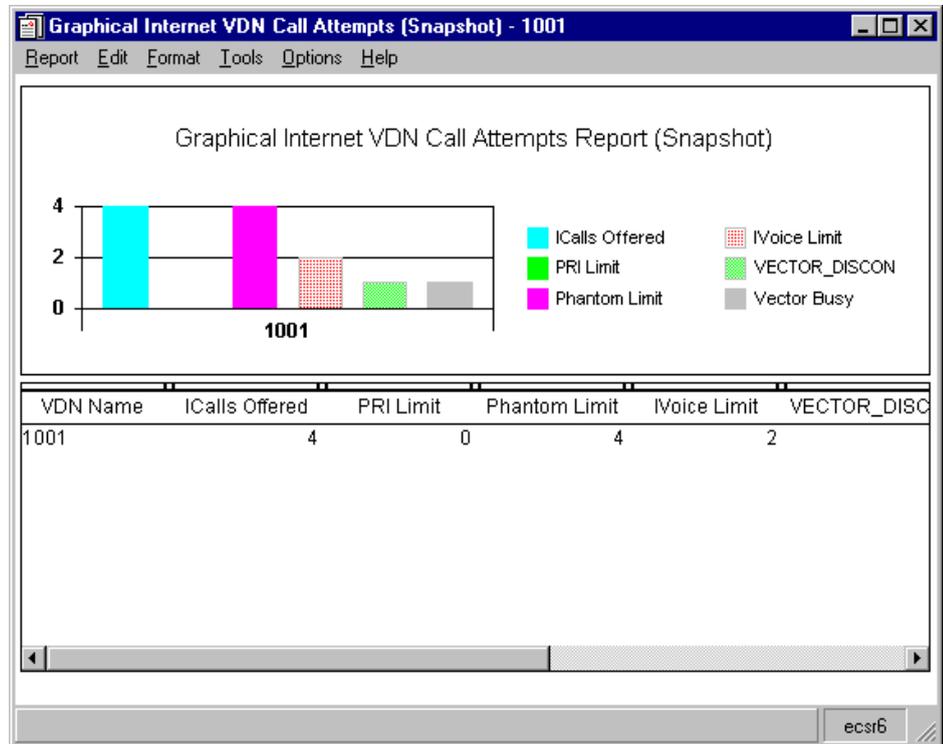
Things to know about the Graphical Internet VDN Call Attempts (Snapshot) Report

The following list provides important information about the Graphical Internet VDN Call Attempts (Snapshot) Report:

- Displays a graphical version of the *CentreVu* CMS Real-Time VDN Call Attempts report
- Displays a snapshot of the data for the current interval and does not automatically refresh
- Uses stored database items in the r_vdnsum table
- Requires input for one or more VDNs

Illustration—Graphical Internet VDN Call Attempts (Snapshot) Report example

The following illustration displays a sample of the Graphical Internet VDN Call Attempts (Snapshot) Report:



Graphical Internet VDN Call Attempts Report

This historical report graphically displays the number of calls offered by the ITG and the number of calls turned away for a particular VDN over the specified interval.

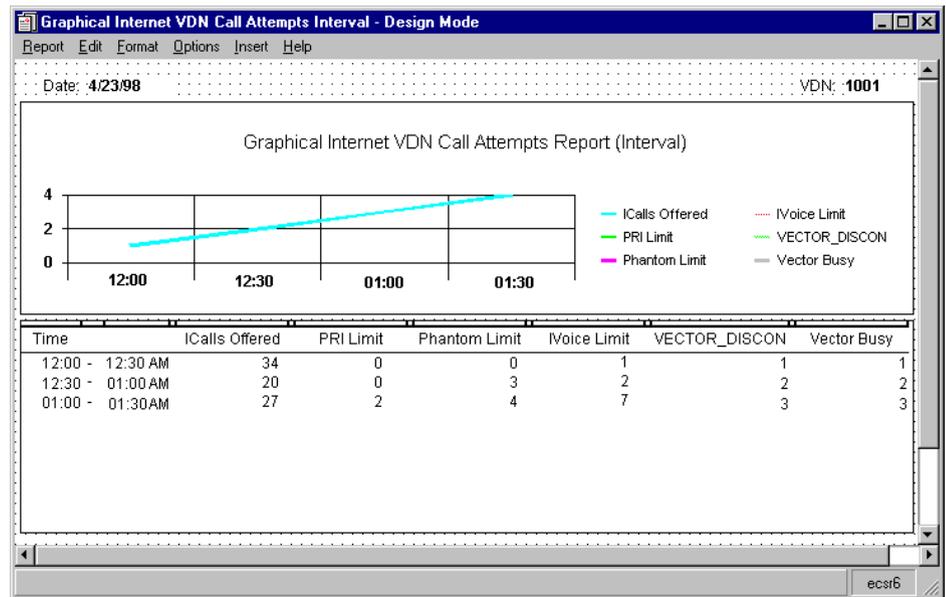
Things to know about the Graphical Internet VDN Call Attempts Report

The following list provides important information about the Graphical Internet VDN Call Attempts Report:

- Displays a graphical version of the *CentreVu* CMS VDN Call Attempts report
- Provides interval or daily report formats
- Uses stored database items in the h_vdnsum (interval), d_vdnsum (daily) tables
- Displays the number of calls offered by the ITG and the number of calls turned away due to PRI Limit, Phantom Limit, Vector Disconnect, Vector Busy, and Ivoice Limit situations for the specified VDN
- Requires the following inputs:
 - A single VDN
 - Time range and date for Interval report
 - Date range for daily reports

Illustration—Graphical Internet VDN Call Attempts Report example

The following illustration displays a sample of the Graphical Internet VDN Call Attempts Report:



**Graphical Internet VDN
Calls Summary Report**

This historical report shows a graphical summary of the number of Internet calls offered and the number of calls that had to be turned away for a particular VDN during the specified interval. This statistical information for a specified Internet VDN is displayed in a pie chart.

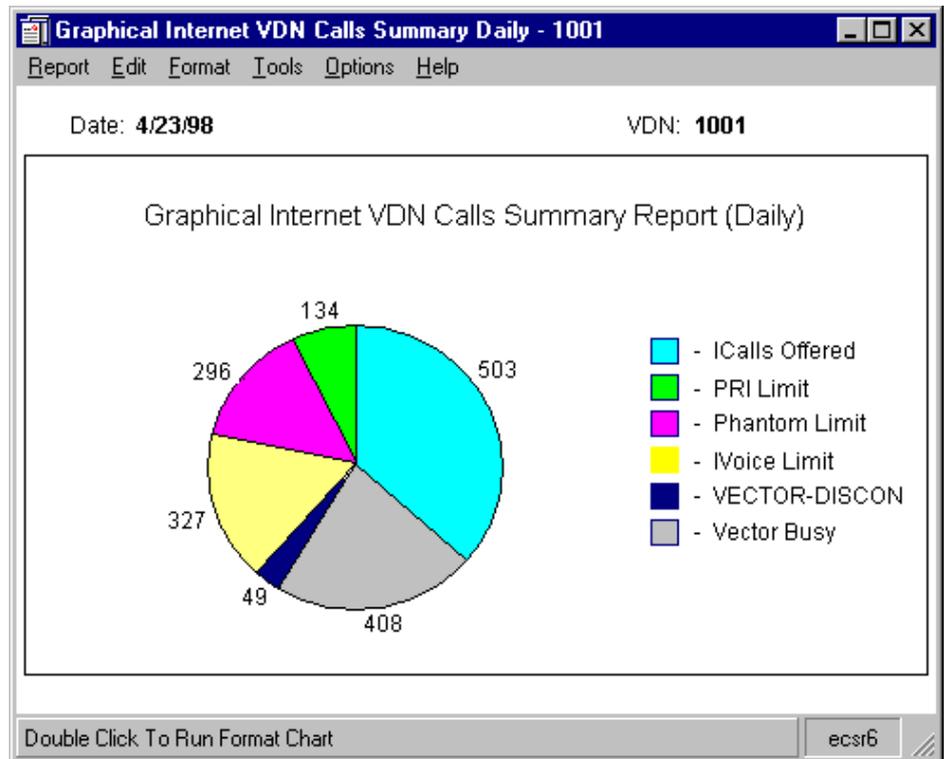
Things to know about the Graphical Internet VDN Calls Summary Report

The following list provides important information about the Graphical Internet VDN Calls Summary Report:

- Provides interval or daily report formats
- Uses stored database items in the h_vdnsum (interval) and d_vdnsum (daily) tables
- Graphs a pie chart of Internet Call statistics for a specified Internet VDN, in particular, the number of calls offered by the ITG, the number of calls turned away due to a lack of PRI facilities, the number of calls turned away due to lack of phantom extensions, the number of calls turned away due to Vector Disconnect, the number of calls turned away due to Vector Busy, and the number of calls turned away due to the Internet Voice limit being reached.
- Does not displays a chart if data is not found for the specified VDN.
- Requires the following inputs:
 - A single VDN
 - A single date according to interval and daily data

Illustration—Graphical Internet VDN Calls Summary Report example

The following illustration displays a sample of the Graphical Internet VDN Calls Summary Report:



□



10 CentreVu® Internet Solution Databases

Overview

Purpose *CentreVu® Internet Solution Databases* describes databases used by the *CentreVu* Internet Solution.

Audience This information is intended for installers, system administrators, call center supervisors, or anyone else involved in connecting, installing, administering hardware or software, setting up reports, or maintaining database items for the *CentreVu* Internet Solution.

Contents The following items are discussed:

- [Message Care™ Archive database \(10-2\)](#)
- [The ICMS database \(10-15\)](#)



Message Care™ Archive database

Overview

Purpose This section presents information about the *Message Care* archive database.

About *Message Care* databases The *Message Care* database system logs and stores all information recorded during each step in processing a message. Separate databases are maintained for active messages and archived messages.

Active messages include those currently being processed, plus those which have entered closed, blocked or failed status, but have not yet been archived. Archived messages consist of those which have entered closed, blocked or failed status and subsequently been moved to an archive database and deleted from the active database.

Reports may be generated on both databases, but report views can not be created to merge data from both the active and archive databases. 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.

Contents The following topics are discussed in this section:

- [Message Care Archive database schema \(10-3\)](#)
- [Customizing the Message Care archive database \(10-13\)](#)

Audience This information is intended for system administrators, call center supervisors, or anyone involved in setting up report formats or maintaining database items.



Message Care Archive database schema

Types of data stored in the database

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 saved by the agent.

Structure of the *Message Care* Archive database

The *Message Care* Archive database has the ODBC Data Source name “Message Care SQL Archive.” Within the *Message Care* Database, message data is organized in the following tables:

- [Messages Table \(10-4\)](#)
 - [Attachments Table \(10-9\)](#)
 - [Outbound Table \(10-9\)](#)
 - [Notes Table \(10-10\)](#)
 - [Events Table \(10-11\)](#)
 - [Workbench Table \(10-12\)](#)
-

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 assigns unique message tracking numbers to each message and inserts them in the subject line of any subsequent reply or forward messages. In this manner, all messages generated in response to the original message inherit the original tracking number (assuming the subject line is not manually modified by the sender). Provided the tracking number remains intact in the subject line, both the original message and all ensuing reply and forward messages will be linked on the basis of their shared tracking number.

Responses are distinguished from original messages by the fact that the Original Message flag is set to “No” for responses. In addition, other fields (for example, State) are not set for response messages, but are set in the corresponding Original Message.

The following table describes each database item found in the Messages Table:

Name	Type/Size	Purpose
MsgID#	Integer (long)	Counter (unique value for this table) (Primary Key)
MailboxName	Text 20	Identifies mailbox (Friendly Name) that received this message
MailboxID	Integer (long)	Matches a Mailbox ID in the Mailboxes table. Used by Web screens for per-mailbox options (for example, Closure Codes) (Foreign Key).
Mime Type	Text 255	Message mime type
CharSet	Text 32	Stores the message Character Set (for example, ISO-8859-1)

Name	Type/Size	Purpose
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 SiteID is a component of the tracking number, ensuring uniqueness amongst a network of <i>Message Care</i> nodes
DetectionTime	Date/Time	When the entry was put in the database
OriginalMsgID#	Long	The OriginalMsgID# is 0 if this is the first message with this TrackingNumber; otherwise, it is the MsgID# of the Original message.
SendersAddress	Text 255	The Sender of Message (“From” line from the Message, excluding name if included)
SenderName	Text 128	The Name of the Sender of Message (if included in “From” line)
Subject	Text 128	Subject in message
Headers	Memo	The complete list of Headers from Message
Body	Memo	The body of Message
MessageDate	Text 50	The date in the message header, usually the date/time the message was sent

Name	Type/Size	Purpose
MessageHeaderID	Text 128	Most SMTP servers put a unique ID in the message header. Using this field will help determine whether <i>Message Care</i> already read a message from the mailbox and added it to the database but for some reason had not deleted it and is now attempting to read it again.
ToAddress	Text 255	The address this message was sent to (needed for reply)
AttachCount	Integer	Indicates the number of attachments
AgentID	Text 32	Switch Agent Login ID number of agent last active on the call. For the <i>DEFINITY</i> ® ECS, the maximum size of an AgentID is the same as the maximum size of an extension (five digits).
StateTime	Date/Time	The time the current state was entered
StatusState	Text 10	The call state of message, for example, queued, active, suspended
StatusStateNumber	Integer (small)	The number associated with the various call states
ReasonCode	Text 20	Secondary information about the state (for example, how the message was completed)
NewMsgArrived	Yes/No	Indicates if a related message arrived while an agent was processing the message
Attach Overflow	Yes/No	Indicates if the number of attachments is greater than 20

Name	Type/Size	Purpose
RevivalTime	Date/Time	The time it took to unsuspend the call
Destination	Text 32	The VDN number the call was directed to. For suspended messages, the VDN number to call when it is revived.
ASAI Digits	Text 16	The ASAI digits to be provided with the call. Applies to original calls and revived calls.
UUIData	Text 34	Provides capabilities to pass data (for example, account number or phone number) to a downstream CTI application
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	The value for customer to add (for example, Account Number)
The following fields are primarily for reporting purposes.		
RetryCount%	Integer (short)	The number of times <i>Message Care</i> tried to make a call for this message
SuspendCount%	Integer (short)	How often this message was suspended

Name	Type/Size	Purpose
TouchCount%	Integer (short)	How many times this message was made active by an agent
FirstAnswerTime%	Date/Time	The time an agent first answered a call (should not be overwritten by subsequent answers)
SpeedOfAnswer%	Integer (long)	The DetectionTime to FirstAnswerTime (in seconds)
TimeToProcess%	Integer (long)	The sum of all active times by agents (from Answer to Suspend, Close or Transfer)
CloseTime	Date/Time	The time an original message was marked closed by an agent.
TimeToClose%	Integer (long)	The DetectionTime to CloseTime (in seconds)
ReserveInt1	Integer	Reserved field, currently not used
ReserveInt2	Integer	Reserved field, currently not used
ReserveText1	Text 16	Reserved field, currently not used
ReserveText2	Text 16	Reserved field, currently not used

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 serves to “flag” the existence of attachments.

The following table describes each database item found in the Attachments Table:

Name	Type/Size	Purpose
ID#	Integer (long)	The counter (unique value for this table) (Primary Key)
MsgID#	Integer (long)	Matches a MsgID in the Messages table (Foreign Key)
MimeType	Text 50	The mime type of the attachment (for example, application/msword)
FileName	Text 512	The name of the attachment
File	OLE Object	Image attachment; can consist of an arbitrarily large binary file

Outbound Table

The Outbound Table stores outbound data (forwards or replies created by agents).

The following table describes each database item found in the Outbound Table:

Name	Type/Size	Purpose
ID#	Integer (long)	The counter (unique value for this table) (Primary Key)
MsgID#	Integer (long)	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID) (Foreign Key)
OriginalAttachmentID	Integer (long)	ID of the message that has attachments included for reply/forward
AgentID	Text 32	The agent who sent the reply or forward

Name	Type/Size	Purpose
Timestamp	Date/Time	The time this reply was sent
MessageType	Text 10	Can be either "Forwarded," "Replied," or "Resent"
CharSet	Text 32	Stores the Character Set of the message (for example, ISO-8859-1)
Body	Memo	Can hold an arbitrarily large text file
ToAddress	Text 255	To whom the message was sent (can be null value)
CCList	Text 255	To whom the message was copied
Subject	Text 128	The subject sent with the message
AttachmentName	Text 512	Name of attachment sent with the message
OriginalAttachments	Yes/No	Indicates whether 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.

The following table describes each database item found in the Notes Table:

Name	Type/Size	Purpose
ID#	Integer (long)	The counter (unique value for this table) (Primary Key)
MsgID#	Integer (long)	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID) (Foreign Key)

Name	Type/Size	Purpose
AgentID	Text 32	Agent who created the note
Timestamp	Date/Time	The time 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.

The following table describes each database item found in the Events Table:

Name	Type/Size	Purpose
ID#	Integer (long)	The counter (unique value for this table) (Primary Key)
MsgID#	Integer (long)	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID) (Foreign Key)
RelatedID	Integer (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 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)

Name	Type/Size	Purpose
AgentID	Text 32	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).

The following table describes each database item found in the Workbench Table

Name	Type/Size	Purpose
ID#	Integer (long)	The counter (unique value for this table) (Primary Key)
MsgID#	Integer (long)	Matches a MsgID in the Messages table (will always match an OriginalMessage MsgID) (Foreign Key)
OriginalAttachmentID	Integer (long)	The Message ID of the message whose attachments have been included for reply/forward
MessageType	Text 8	Can be either “Forward” or “Reply”
CharSet	Text 32	Stores the Character Set of the message (for example, ISO-8859-1)

Name	Type/Size	Purpose
Body	Memo	Can hold an arbitrarily large text file
ToAddress	Text 255	To whom the message was sent
CCList	Text 255	To whom the message was copied
Subject	Text 128	The subject sent with the message
AttachmentName	Text 128	The name of attachment sent with the message
OriginalAttachments	Yes/No	Indicates whether the original message attachments were sent with this message

Customizing the Message Care archive database

Important! Information about database customization refers only to the *Message Care* archive database. Under no circumstances should you attempt to edit the *Message Care* active messages database.

Message Care supports the individual retrieval of each stored message. By using the [Message Care Archive database schema \(10-3\)](#), you can retrieve specific pieces of correspondence associated with a message record (for example, you may wish to retrieve only responses from the consumer). These consumer responses can then be extracted for storage into an internal consumer contact database.

Schema information for the archive database can also be used to develop any data management tools you may need for extracting archived information for customized reports or porting it to an internal database.

Things to know about managing the Message Care archive database

Message Care gives you the flexibility to move archived messages to the storage location you specify. With sufficient planning and evaluation of your data storage requirements, you should be able to avoid the necessity of moving archived databases due to space limitations.

However, should it become necessary to move or copy *Message Care* databases, these activities should only be undertaken by personnel who possess appropriate training and knowledge of the Microsoft Corp. *Microsoft*® SQL-Server database management system.

Searching multiple archives

The search capabilities provided by the *Message Care* Web pages will search only 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, see [Archive message records \(12-28\)](#).



The ICMS database

Overview

Purpose This section contains the tables and items that support the *CentreVu* CMS enhancements for the Internet Call Center (ICC).

Note that database tables and items that are standard to *CentreVu* CMS and *CentreVu* Supervisor are described in the standard *CentreVu* CMS and *CentreVu* Supervisor documentation.

Audience This section is intended for system administrators, call center supervisors, or anyone involved in setting up reports or maintaining database items.

Contents The following ICMS database tables are described:

- [page table \(10-16\)](#)
- [ivdn table \(10-17\)](#)
- [pagesum view \(10-18\)](#)
- [vdsnsum view \(10-19\)](#)
- [pagevdn view \(10-20\)](#)



page table

About the page table The "page" table stores URL and page hit information. This information, based on data embedded in the ICC-enabled Web pages, is sent to *CentreVu* CMS any time the page is loaded for viewing.

The following five table names are associated with the page table and identify the real-time, interval, daily, weekly, and monthly tables respectively:

- r_page: real time
- c_h_page: interval
- c_d_page: daily
- c_w_page: weekly
- c_m_page: monthly

Database items in the page table

The following database items are contained in the page table:

- page_url
- page_hits
- row_date
- starttime



ivdn table

About the ivdn table The "ivdn" table stores information associated with a VDN/URL pair such as the number of calls offered by the ITG and the number of calls turned away for various reasons. This information is sent to *CentreVu* CMS by the ITG.

The table names are as follows:

- r_ivdn: real time
- c_h_ivdn: interval
- c_d_ivdn: daily
- c_w_ivdn: weekly
- c_m_ivdn: monthly

Database items in the ivdn table

The following database items are contained in the ivdn table:

- page_url
- vdn
- icalls_offered
- pri_limit
- phantom_limit
- vector-discon
- vector_busy
- ivoice_limit
- acd
- row_date
- starttime



pagesum view

About the pagesum view The "pagesum" view is generated from the data in the page and ivdn tables. This view sums the number of calls for each URL.

The table names are as follows:

- r_pagesum: real time
- h_pagesum: interval
- d_pagesum: daily
- w_pagesum: weekly
- m_pagesum: monthly

Database items in the pagesum view

The following database items are contained in the pagesum view:

- page_url
- icalls_offered
- page_hits
- pri_limit
- phantom_limit
- vector-discon
- vector_busy
- ivoice_limit
- acd
- row_date
- starttime



vdsnsum view

About the vdsnsum view The "vdsnsum" view is generated from the data in the page and ivdn tables. This view sums the number of calls that were processed and denied for each VDN.

The table names areas follows:

- r_vdsnsum: real time
- h_vdsnsum: interval
- d_vdsnsum: daily
- w_vdsnsum: weekly
- m_vdsnsum: monthly

Database items in the vdsnsum view

The following database items are contained in the vdsnsum view:

- vdn
- icalls_offered
- pri_limit
- phantom_limit
- vector-discon
- vector_busy
- invoice_limit
- acd
- row_date
- starttime



pagevdn view

About the pagevdn view The "pagevdn" view is generated from the data in the page and ivdn tables.

The table names are as follows:

- r_pagevdn: real time
- h_pagevdn: interval
- d_pagevdn: daily
- w_pagevdn: weekly
- m_pagevdn: monthly

Database items in the pagevdn view

The following database items are contained in the pagevdn view:

- vdn
- icalls_offered
- pri_limit
- phantom_limit
- vector-discon
- vector_busy
- ivoice_limit
- page_hits
- acd
- row_date
- starttime



11 Web page guidelines

Overview

Purpose The purpose of the Web page guidelines is to discuss the enhancements you can make to your *CentreVu*® Internet Solution Web pages.

Audience This chapter is intended for supervisors, system administrators, and persons responsible for designing and implementing Web pages for an Internet Call Center (ICC).

Contents The following information is presented in this chapter:

- [About Web page guidelines \(11-2\)](#)



About Web page guidelines

Overview The documentation for Web page guidelines is Web-based; therefore, you can view it from an Internet browser such as Microsoft Corp. *Microsoft*® Internet Explorer or Netscape Communications, Inc. *Netscape*® *Navigator*. The Web-based documentation provides guidelines and working examples for designing, creating, modifying, or enhancing Web pages to work in conjunction with the *CentreVu* Internet Solution.

Where can I find documentation for Web page design? The documentation for Web page guidelines is located on the ICC R4.0 CD-ROM. During the ICC installation, you will be given the opportunity to install the documentation. If you do not wish to install the documentation during the install, you can refer to it directly from the ICC R4.0 CD-ROM at a later time.

Contents of Web page design documentation The Web page design documentation provides the following information:

- “Setting up your Web site” section
- This section provides the following information:
 - Parameters that are required to set up your agent login Web page (some optional, but very useful, parameters are also included)
 - Parameters that are required to set up your consumer Web page (some optional, but very useful, parameters are also included)
 - Browser diagnostics—which include procedures to implement an automatic mechanism that detects whether JavaScript and Sun Microsystems, Inc. *Java*™ are enabled on your browser
 - How to display other Web pages or execute CGI scripts for various event and error conditions (for example: Incoming Call Queued, Call Answered, Call Limit Reached, and so on).
- “Enhancements to Web pages” section
- This section provides the following information:
 - An overview on how the ICC launches Web pages with the correct attributes and language
 - Information on how to view Web page and frame source
 - How to customize the appearance of the agent and caller applets to meet your call center needs
 - How to add languages other than the languages the ICC solution provides

- How to implement Agent guides—agent guides are customizable scripts that an agent can follow for a given call situation
- How to implement canned phrases (for text chat)—a canned phrase is a shortcut to a text chat message that an agent can use while conversing with a customer via text chat
- How to enable file transfer—file transfer enables a caller to download a file from your call center's File Transfer Protocol (FTP) server
- How to implement side-by-side comparison—side-by-side comparison enables your customers to examine the differences or similarities between two sets of data by looking at a single Web page
- How to implement Web-based “infomercials” using the existing PagePop feature—infomercials provide information to callers while they are waiting to be connected to an agent
- How to implement arenas—arenas are based on the assumption that a call center may be a service provider for other companies' Web sites, or that a single call center may process calls for several families of products or services
- How to use the Virtual Conference feature—Virtual Conference is a real-time communication feature that enables you to perform presentations over the Internet in a flexible "slide show" format while maintaining an interactive dialogue with your participants.





12 Monitor and maintain the *CentreVu*® Internet Solution

Overview

Purpose The purpose of the following information is to cover basic monitoring and maintenance tasks.

Audience This information is intended for system administrators, support personnel, and anyone who wants an overview of monitoring and maintaining the *CentreVu* Internet Solution.

Contents This section contains information about the following:

- [Monitoring and maintaining the ITG, ICM and CTI \(12-2\)](#)
- [Maintain the Message Care system \(12-16\)](#)



Monitoring and maintaining the ITG, ICM and CTI

Overview

Purpose The purpose of this section is to provide information about supporting the following:

- [Supporting the ITG \(12-3\)](#)
- [Supporting the ICM server \(12-5\)](#)
- [Supporting the CTI process \(12-12\)](#)



Supporting the ITG

Methods used to access the ITG

There are multiple access methods available to the ITG server. These methods are listed below and described when appropriate.

Call center and Lucent support personnel should determine which access methods they use from the following:

- Console connected to the serial port on the Central Processing Unit (CPU) card (a special cable shipped with the ITG is required for this method)
- Terminal connected over a Local Area Network (LAN)
- Remote terminal connected through the Remote Maintenance Board (RMB)

Log files on the ITG

The ITG has one main log file where all system processes log information about call progress or system status. The log file name is *logfile0* and it is located in the */mmcs/log* directory on the ITG. This file can hold 10MB of data. At greater than 10MB, logging continues in *logfile1*. When *logfile1* reaches its maximum capacity, *logfile0* is cleared and again used for logging.

The log file is not intended to be readable, easily understood, or for general consumption. It is a software development log that provides cryptic descriptions of what is occurring, and it is useful for software developers to determine the cause of a problem. Logging levels can be turned up and down for specific processes during operation. Turning logging levels up is *not recommended*, but it may be needed when troubleshooting a problem.

The following command allows the MIP process to log all of its information: `reset level=mask loc=MIP`. The following command turns the MIP logging level down to its default logging level: `reset level=mask loc=MIP type=DEBUG_LVL2:DEBUG_LVL3 enable=off`.

Status on the ITG

Numerous commands exist on the ITG for obtaining status information. Some useful commands for an ICC environment are shown below:

- ***showstatus***—shows the current status of processes running on the ITG, and overall system status (for example, IS=In Service, OOS=Out of Service, OOS-FLT=Out of Service due to a fault).
- ***showalarm***—lists any alarms on the server. This command can also give information about repair actions for the alarm.
- ***showdp***—shows the current dial plan administration.
- ***showpri***—displays the current PRI interface administration and status.
- ***showptg***—displays current PRI trunk group administration, channel status and usage.

Refer to the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for detailed information and additional commands.



Supporting the ICM server

Access to the ICM server The following are access methods to the ICM server. The support capabilities differ depending on the access method.

- ICM server
- Telnet session
- Remote access through Symantec Corporation *pcANYWHERE*®

ICM server

The most complete support access is available from the console terminal and keyboard on the ICM server. This displays the Internet Call Manager Control Window. This control panel displays the ICM log file, controls the logging level of this file, and allows an administrator to enter commands to obtain status information.

To access the Internet Call Manager Control Window from the ICM server, do the following:

1. Click on the Microsoft Corp. *Windows*® Start button, and then click on the Lucent ICM_CTI menu entry.
2. From the Lucent ICM_CTI menu entry, click on the Lucent Internet Call Manager entry.

The Internet Call Manager Control Window appears.

Telnet session

Another support access method is a telnet session from another server with LAN access into the maintenance and administration ICM Utility Connection port 8104 supported by the ICM application on the ICM server. In a manner similar to the control panel, the ICM log is actively displayed and commands can be entered.

An example of access to the ICM server over port 8104 is as follows:

1. On ITG server, enter:

```
telnet <address of ICM server> 8104
id mtce ext none
```
2. After no response or a prompt, enter:

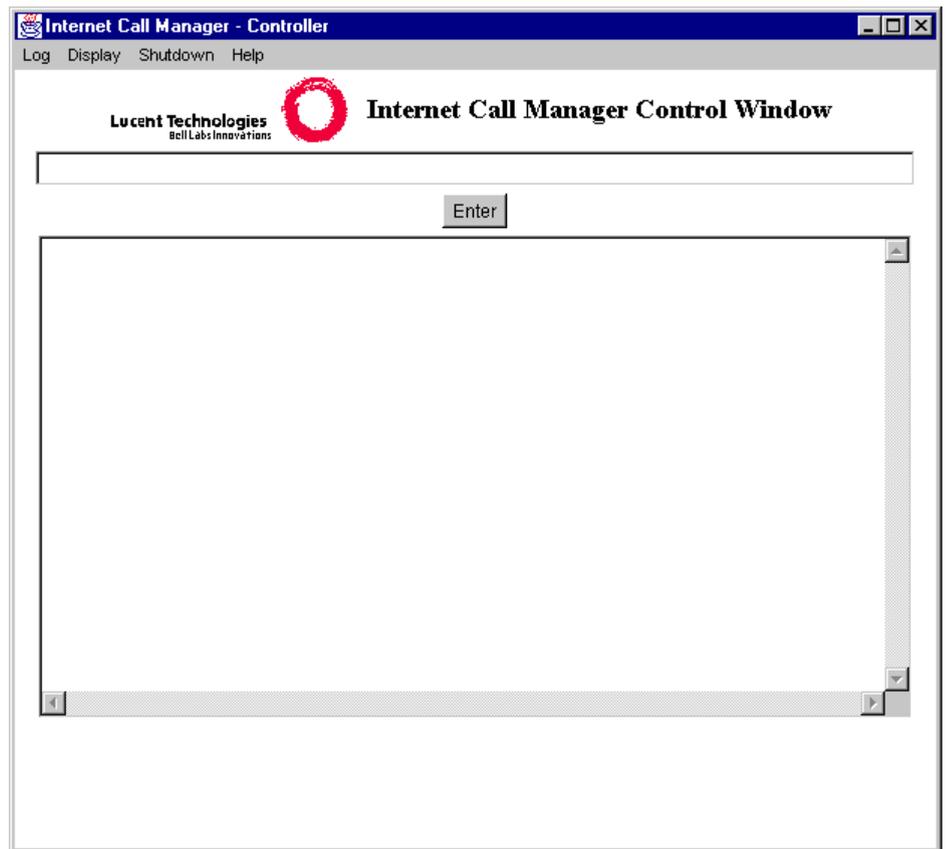
```
patchmein
```

The ICM log file begins to display as the information is logged. Commands can be entered at any time (see [Commands on the ICM server \(12-9\)](#)). The session can be ended by normal telnet termination (press the tilde “~” followed by a period “.”) or by using the status command.

Symantec Corporation *pcANYWHERE*

The Symantec Corporation *pcANYWHERE* package (and modem) allows full access to the ICM server functions and all ICM commands. The Symantec Corporation *pcANYWHERE* package is required for full-remote support of the ICM server.

Illustration The following illustration provides an example of the Internet Call Manager Control Window:



Log files on the ICM server

The log file available on the ICM server is the *icmlog.txt* which is maintained in the *c:\itg* (default) directory. Once this log file reaches 3MB, it is copied to the *icmlog.bak* file and logging continues in the *icmlog.txt* file.

The log file contains all events that occur for agent login, caller access, and agent/caller interactions. The log file also contains the results of any status commands executed.

Information contained in the log file is not intended for general consumption. It is useful for experienced support personnel to obtain status information and call events from the server. Information logging levels can be controlled from the drop-down menu on the Internet Call Manager Control Window menu bar (see [Status on the ICM server \(12-7\)](#)) or from a remote command over the telnet (patchmein) session from the ITG(see [Commands on the ICM server \(12-9\)](#)). The normal logging level displays errors and connection events as agents, callers, or calls interact with the ICM application. The debugging logging level displays all the events that occur for an agent , calleror call.

Status on the ICM server

Status information available on the ICM server consists of the current agent , callerand call connections maintained by the ICM application.

Log menu

The following table describes each menu item in the Log menu:

Menu Item	Description
Normal	Changes the ICM logging level to less detail.
Debug	Changes the ICM logging level to more detail.
Chat	Displays text chat dialogs. ICC writes the chat dialogs to the ICMlog (icmlog.txt).

Display menu The following table describes each menu item in the Display menu:

Menu Item	Description
Agents	Displays information about the agents that are logged in to the <i>CentreVu</i> Internet Solution.
Calls	Displays the current calls that are known to the ICM application. Also displays the connection ID of the parties on the call.
Connections	Displays all the available agents and callers that are known to the ICM application. A connection ID is given for each and may be useful for following all the events for that ID or for subsequent commands.
Licenses	Displays the license configuration along with the total number of active calls for each license type.
Parameters	Displays the administration parameters.

Shutdown menu The following table describes the Incoming Calls menu item in the Shutdown menu:

Menu Item	Description
Incoming Calls	Enables you to gracefully shut down the ICM. By checking the <i>Incoming Calls</i> menu item, the ICM will not allow any type of real-time call to be processed.

Help menu The following table describes each menu item in the Help menu:

Menu Item	Description
Version	Displays the version information of the ICM process.
Commands	Displays a list of valid commands that you can enter over a telnet session.

Commands on the ICM server

You can enter commands over a telnet session to the maintenance and administration port of the ICM application. These commands are intended for use by experienced support personnel to help monitor and troubleshoot the ICM application on the ICM server.

ICM server commands are identified in the following table:

Command	Description
<i>close <connection ID></i>	Clears (drops) the identified connection.
<i>debug <on/off></i>	Changes the ICM logging level for more/less detail.
<i>display calls</i>	Displays the current calls that are known to the ICM application. Also displays the connection ID of the parties on the call.
<i>display connections</i>	Displays all the available agents and callers that are known to the ICM application. A connection ID is given for each and may be useful for following all the events for that ID or for subsequent commands.
<i>display licenses</i>	Displays the license configuration along with the total number of active calls for each license type.
<i>sendagents <text></i>	Broadcasts text to all active agents' control windows.
<i>sendto cti logout <agent extension> <group extension> <agent id></i>	Forces the logout of the indicated agent in the call center through the CTI process. The <group extension> is typically "none."
<i>display agents</i>	Displays information about the agents that are logged in to the CentreVu Internet Solution.
<i>display counts</i>	Displays information on the current number of calls.

Command	Description
<i>display gateways (for ICC only)</i>	<p>Displays the service state of each ITG.</p> <p>The service states are:</p> <ul style="list-style-type: none"> • INSERT—ITG is in service and accepting calls • OOS—ITG is out of service and is safe to shut down. • FOOS—ITG is not connected to the ICM • MANOOS—ITG is out of service, but still processing an active call(s).
<p>The following commands are used for remote connections only. Do not use these commands in the ICM server text box.</p>	
<i>if <description> <type> <parameter></i>	<p>Identifies the incoming connection over the administration and maintenance port. Use only: id mtce ext none.</p>
<i>patchmein</i>	<p>Directs ICM log file output to the administration and maintenance port and recognizes commands over this port</p>

The Help menu contains two menu items: Version and Commands. The Version menu item displays ICM version information and the Commands menu items lists all the available ICM commands.

The Shutdown menu is used to gracefully shut down the ICM (and/or to shut down individual ITGs [in a multi-ITG environment] that are controlled by the ICM). The Shutdown menu consists of two or more menu items:

- Incoming Calls—to shut down the ICM, check the Incoming Calls menu item. When the Incoming Calls menu item is checked, the ICM will not allow any type of Internet call to be processed. For example, when a call comes in from the Internet, the “outofservice” web page will appear on the caller's browser along with an “out of service” message on the Caller Control Window and the connection will be terminated.

To inform all agents that you are going to shut down the ICM, use the **sendagents** command. To ensure that there are no active calls prior to shutting down the ICM, use the **display gateways** command.

- Itg #x through Itg #x (where x equals the number for the administered ITG)—to shut down an individual ITG, select the appropriate ITG from the list of ITGs. When a specific ITG is shut down, all calls are then routed to the other administered ITGs. If you shut down all ITGs, the ICM will operate as if it has run out of voice capacities. However, Text Chat calls will still work providing the ASAI Phantom Call feature is available.

To check the status of the ITGs, use the **display gateways** command.

To put an ITG back in service, uncheck the appropriate ITG from the list of ITGs.

Refer to the *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)* document for information and additional commands.



Supporting the CTI process

Overview Various commands and log files are available for monitoring and maintaining the CTI process for the *CentreVu* Internet Solution. Monitoring and maintaining the CTI process is conducted through the Internet CTI Manager Control Window. This section describes how to monitor and maintain the CTI process and also references commands and log files. Refer to the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for more information.

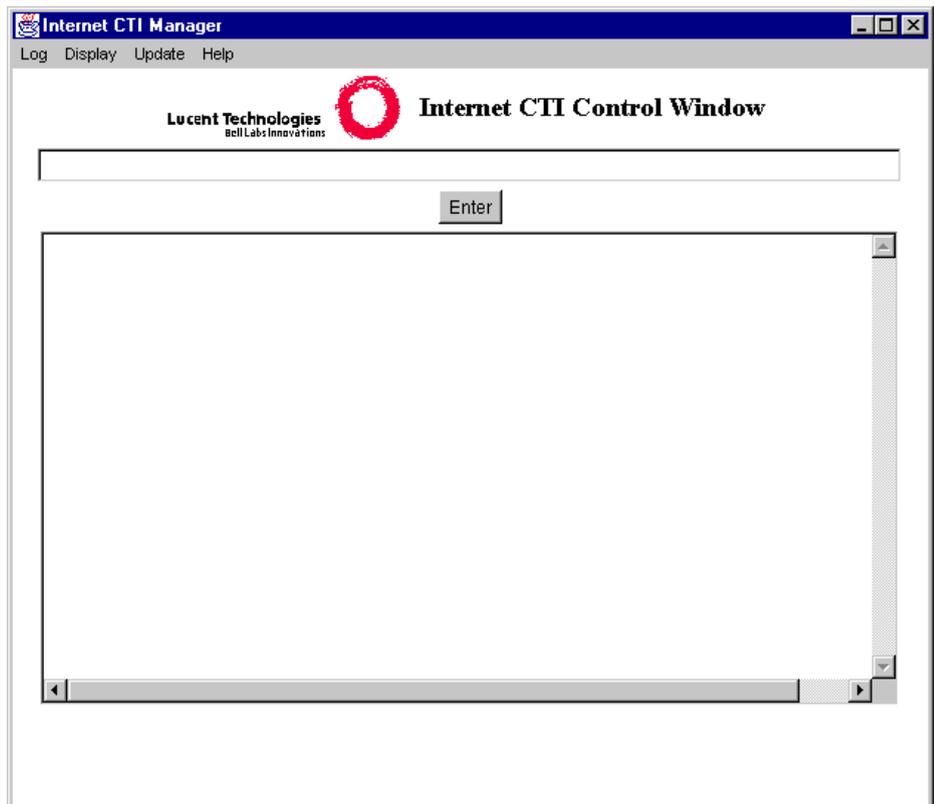
Access to the Internet CTI Control Window

To access the Internet CTI Control Window, do the following:

1. Click on the Microsoft Corp. *Windows* Start button, and then click on the Lucent ICM_CTI menu entry.
2. From the Lucent ICM_CTI menu entry, click on the Lucent Internet CTI Manager entry.

The Internet CTI Control Window appears.

Illustration The following illustration provides an example of the Internet CTI Control Window:



Log files on the CTI process

The log file available on the ICM server for the CTI process is the *ctilog.txt* which is maintained in the *c:\itg* directory (default). Once this log file reaches 2MB, it is copied to the *citlog.bak* file and logging continues in the *ctilog.txt* file.

The log file contains all events that occur for agent login, caller access, and agent/caller interactions. The log file also contains the results of any status commands executed.

Information contained in the log file is not intended for general consumption. It is useful for experienced support personnel to obtain status information and call events from the server. Information logging levels can be controlled from the drop-down menu on the Internet CTI Manager Control Window.

Commands on the Internet CTI Control Window

Commands are available on the CTI process through the Internet CTI Control Window. These commands are intended for use by experienced support personnel to help monitor and troubleshoot the CTI application.

The Internet CTI Control Window commands are identified in the following table:

Command	Description
display acds	Displays the list of ACDs that are being monitored for agent state changes (Monitored ACD Extensions) and a list of ACDs being monitored for call state changes (Called ACD Extensions).
display administration	Displays the administration parameters the CTI process uses for establishing a connection to the Telephony Server and displays the version of the JTAPI client.
display calls	Displays the calls currently being tracked by the CTI process. Calls in the CTI process are stored by both the JTAPI CALL object (ICM Calls In Call Hash Table) and by the ICM call ID (ICM Calls In ICMCallID Hash Table).

Command	Description
display connections	Displays the status of the ports on which the CTI process listens for connections. The CTI process listens on a port for the ICM process and listens on another maintenance port which is used to control the CTI process when it is run as an NT service.
display phantomExts	Displays the list of phantom extensions the CTI process uses to launch calls. The "Message Type Phantom Extensions" are for <i>Message Care</i> ™ calls and the "Chatter Type Phantom Extensions" are used for ICC chat calls.
update monitorAcds	Causes the CTI process to reload the list of "Monitored ACD Extensions" from the ctiparms.txt file.
update tserverAdmin	Causes the CTI process to resynchronize the set of valid devices with the <i>CentreVu</i> CT server. This must be done if the <i>CentreVu</i> CT server administration is changed after updating the CTI process administration for phantom extensions or monitored ACD devices. This command drops active calls.
version	Displays the version information for the CTI process.
commands	Displays the list of valid commands.
quit	Causes the CTI process to stop.
stop	Causes the CTI process to stop.
Reset	Causes the CTI process to reset.
SendICM[message]	Sends the ICM process the indicated "message" string.



Updating devices in the *CentreVu* Computer-Telephony server

Preferred method The preferred method for updating devices (for example, phantom extensions and monitored hunt groups) is to update the *CentreVu* Computer-Telephony server and then update the CentreVu Internet Solution Administration Web pages.

What happens when you do not update devices using the preferred method?

If you do not follow the preferred method and attempt to update devices using the Administration Web pages, the CTI process will be informed of the update; however, the *CentreVu* Computer-Telephony server will not be informed of the update.

To ensure the *CentreVu* Computer-Telephony server is aware of the update, you will have to do the following:

1. After you have updated devices using the Administration web pages, update the *CentreVu* Computer-Telephony server.
2. Initiate the **update tserverAdmin** command.
3. You can initiate this command using one of the following methods:
 - Open the CTI Manager. From the Update menu, select the tserverAdmin menu item. Selecting the tserverAdmin menu item updates the *CentreVu* Computer-Telephony server with the correct information.
 - From the CTI Administration Web page, select the *Update Tserver* link.



Maintain the *Message Care* system

Overview

Purpose The following information explains how to manage the *Message Care* system software. The information includes recommended scheduled maintenance information.

Contents The following items are covered:

- [Introduction to the Remote Maintenance Monitor \(12-17\)](#)
- [Introduction to the Work Flow Manager \(WFM\) \(12-19\)](#)
- [Perform a graceful shutdown \(12-23\)](#)
- [Recommended scheduled maintenance \(12-25\)](#)
- [Back up Message Care files \(12-27\)](#)
- [Archive message records \(12-28\)](#)
- [Managing and updating the dictionary \(12-32\)](#)
- [Prevent overflowed messages \(12-33\)](#)
- [Clean up the temp directory \(12-36\)](#)
- [Clean up the winnt\system32\Logfiles directory \(12-37\)](#)
- [Check the performance characteristics of your system \(12-38\)](#)
- [Check NT server performance \(12-39\)](#)



Introduction to the Remote Maintenance Monitor

About the Remote Maintenance Monitor

The Remote Maintenance Monitor is an NT service that starts when the NT server boots. The Remote Maintenance Monitor checks processes and critical system resources for the Work Flow Manager and the Mail Manager to ensure the system is working properly. The Remote Maintenance Monitor monitors virtual and physical memory and all local hard drives by using threshold limits.

The following table provides threshold limits for virtual and physical memory and local hard drives:

System Resource	Minor Alarm Threshold	Major Alarm Threshold
Virtual Memory	10 Megabytes of space left	5 Megabytes of space left
Physical Memory	5 Megabytes of space left	2.5 Megabytes of space left
Hard Drives	10 Megabytes of space left	5 Megabytes of space left

Fault notification

If serious failures occur that may lead to *Message Care*'s inability to perform its function, *Message Care* will provide a fault notification in the form of an email. The Remote Maintenance Monitor sends email alarms to the email address administered in the **Alarm Email Address** field located on the Message Care System Options Web page. Each email alarm will state the problem and point you to the *maintenance-alarms.txt* file for corrective action.

Message Care will send fault notification messages for the following conditions:

- When virtual and physical memory fall below the threshold
 - When local hard drives using threshold limits fall below the threshold
 - When a monitored process does not start upon system restart within five minutes of the Remote Maintenance Monitor restart
 - When any reported error condition clears
 - When Work Flow Manager and Mail Manager processes stop.
-

Logging errors *Message Care* will record an entry in the Remote Maintenance Monitor error log for the following conditions:

- If a destination email address or message originator are not administered
- When *Message Care* processes start and stop

The Remote Maintenance Monitor retains error logs for up to seven days. After seven days, the Remote Maintenance Monitor discards the error logs.

Remote Maintenance Monitor error log files

The Remote Maintenance Monitor has the following error log files:

- *mmMMDD.txt*—for the maintenance monitor service. The *mmMMDD.txt* file provides a listing of alarms and a corrective action for each alarm that is reported by the Remote Maintenance Monitor.
- *wfm_feMMDD.txt* —for the Work Flow Manager
- *mmg_feMMDD.txt* —for the Mail Manager



Introduction to the Work Flow Manager (WFM)

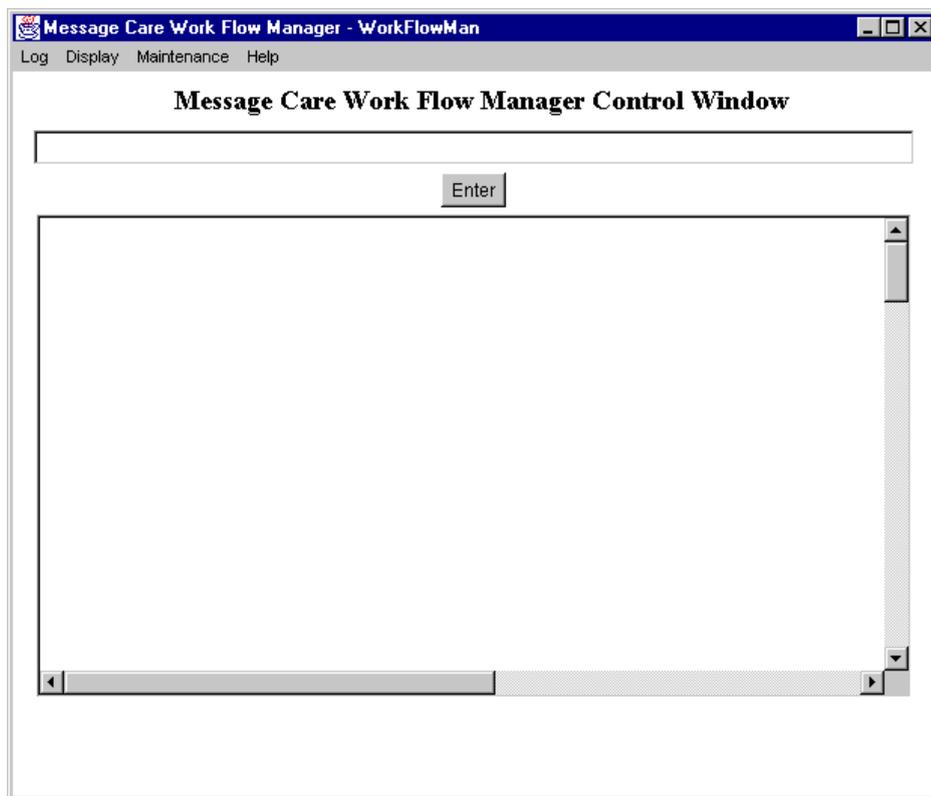
About the WFM Control Window

Important! Review the *readme.txt* file located in the *Message Care* installation directory. The *readme.txt* file includes late-breaking changes to and news about the Work Flow Manager.

The WFM Control Window contains several menu items to help you maintain your *Message Care* system.

Illustration

The following is an illustration of the Work Flow Manager Control Window:



Log files for the *Message Care* system

The error log file where *Message Care* application errors are logged is as follows: *\mcerrorlog.txt* file (where the default installation directory is: *c:\Program Files\MessageCare*)

For more information about the *Message Care* error log, see [Message Care™ error logs \(14-2\)](#).

Log menu The following table describes each menu item in the Log menu:

Menu Item	Description
Normal (Default=Normal)	Changes the WFM logging level to less detail.
Debug	Changes the WFM logging level to more detail.

Display menu The following table describes each menu item in the Display menu:

Menu Item	Description
Queues	Displays the Hash, Retrieval, WaitLaunch, and Suspended queues.
Hash	Displays information about all messages known to the WFM.
Retrieval	Displays messages on the retrieval queue. The Retrieval queue contains messages that agents have requested for retrieval that are waiting to be launched.
Wait Launch	Displays other messages (non- retrieval messages) that are waiting to be launched.
Suspended	Displays messages that are suspended.

Menu Item	Description
Call	<p>Lists all message calls placed by <i>Message Care</i> to the <i>DEFINITY</i>® . This includes both message calls in the launched state and active state.</p> <p>The Call menu item also displays the current license values and administered limits.</p>
Callinfo	<p>Prints the following:</p> <ul style="list-style-type: none"> • Max Simultaneous Calls—the number of calls the WFM will allow to be active. The WFM uses the number you have administered in the Max <i>Simultaneous Message Calls</i> field on the System Options Web page and the license limit you have purchased to determine this number. • Current Simultaneous Calls—current number of active calls • License Call Limit—number of calls allowed by the license • Administered Call Limit—number of calls you administered

Maintenance menu The following table describes each menu item in the Maintenance menu:

Menu Item	Description
Stop Mail Manager Service	Stops the Mail Manager service. This service can be restarted from the Microsoft Corp. <i>Windows NT</i> ® services menu.
Stop Mailbox Polling	Stops the polling of mailboxes.
Start Mailbox Polling	Starts the polling of mailboxes
Stop Workflow Manager	Stops the WFM. Note, that this stops the WFM process not the WFM service in the Microsoft Corp. <i>Windows NT</i> services menu. This service can be restarted from the Microsoft Corp. <i>Windows NT</i> services menu.

Menu Item	Description
Stop Call Launch	Drops the current launched calls and stops the launching of new calls.
Start Call Launch	Starts launching of new calls.

Help menu The following table describes each menu item in the Help menu:

Menu Item	Description
Version	Displays the version information for the WFM.
Commands	Displays the list of valid WFM commands.



Perform a graceful shutdown

Shut down the *Message Care* system To gracefully shut down the *Message Care* system, do the following:

- 1 Use the WFM Control Window to do the following. See [Introduction to the Work Flow Manager \(WFM\) \(12-19\)](#) for information about the WFM.
 - Stop Mailbox Polling —this menu item from the Maintenance menu stops polling.
 - Stop Mail Manager Service—this menu item from the Maintenance menu stops Mail Manager service.
 - Stop Call Launch—this menu item drops message calls currently in the Launched state and will prevent new message calls from being launched. The Stop Call Launch menu item does not affect message calls that are active.

- 2 From the Display menu in the WFM Control Window, monitor agent progress using the CallInfo menu item. The number listed for Current Simultaneous Calls provides the number of message calls currently active.

- 3 When the number of active message calls reaches zero, stop the WFM. To stop the WFM, select the Stop Workflow Manager menu item from the Maintenance menu in the WFM Control Window.

- 4 Stop the Lucent Work Flow Manager services by doing the following:
 - From the Control Panel, select Services.
 - Click on the Lucent Work Flow Manager, and then click Stop.

-
- 5** Stop the Maintenance Monitor service by doing the following:
- From the Control Panel, select Services.
 - Click on the Lucent Maintenance Monitor, and then click Stop.
-

- 6** Stop the IIS Web service.
-

END OF STEPS



Recommended scheduled maintenance

Introduction To ensure optimum system performance, we suggest that you adhere to the recommended scheduled maintenance.

The following table provides the recommended scheduled maintenance:

Maintenance	Schedule
<p>Backup <i>Message Care</i> files. Perform the following two levels of backups:</p> <ul style="list-style-type: none">• After installing <i>Message Care</i>, backup all <i>Message Care</i> files. See Back up Message Care files (12-27) for a list of files to backup.• Ongoing backups—message storage system and the SpellServer/dict.txt file. <p>Use the Microsoft Corp. <i>Microsoft</i>® SQL server utilities to back up your message storage system.</p>	<p>Ongoing backups—as needed.</p>

Maintenance	Schedule
Archive the <i>Message Care</i> database	<p>How often you archive your <i>Message Care</i> database depends on the size of your database and the size of your messages. When you receive a database is full alarm, you should consider archiving your database especially if the alarm is a 90% full alarm. Run the archive when your system load is low.</p> <p>Below are some figures to help you determine when to archive your MCMessages database:</p> <ul style="list-style-type: none"> • Archiving 30,000 records (database size 600 MB) on a server where only the archive software is active (that is no <i>Message Care</i> related services are running) takes approximately 4 hours. • Archiving 30,000 records (database size 600 MB) while <i>Message Care</i> is active with eight agents processing about 400 messages per hour takes approximately 8 hours. <p>Based on the above information, the MCMessages and MCArchive databases should grow no larger than 30,000 records.</p>
Manage and update the dictionary	As needed.
Managing the overflow queue	When overflow queue exceeds 5,000 messages.
Clean up temp directory	Remove files that are over a week old.
Clean up <i>winnt\system32\Logfiles</i>	Either disable logging or clean up files on a daily basis.
Check performance characteristics of your system	At least once a month or more frequently as needed. For example, if you are experiencing an increase in mail volume then you may want to check system performance more than once a month.
Backup log files	As needed.



Back up Message Care files

Why backup Message Care files?

Backing up your data is an important aspect of maintaining your system and data. Regular backups provide a way to recover data that would otherwise be lost or damaged. A backup copies the data stored on your hard disk to a tape. The tape can then be used to restore your data if the need arises.

How do I back up Message Care files?

A backup is achieved by copying files to a specified location. You can backup your files located on your hard disk to tape through an application such as Microsoft Corp. *Microsoft Windows NT Backup* found in the *Microsoft Windows Explorer*.

The following files should be backed up after you install *Message Care*:

- *msgcare.ini*—this file is located in the Microsoft Corp. *Windows NT* directory
- *itg\itgparms.txt*, *Message Care\parms.txt* and *itg\icmparms.txt* files
- *license.dat*
- *itg\admin\msgcare\MCAAdministration.htm*
- *SpellServer\dict.txt*
- *Message Care\www\scripts\mc_agent.asp* and *Message Care\www\scripts\mc_admin.asp*

How do I back up the message storage system?

Microsoft Corp. *Microsoft SQL-Server* provides special utilities for database backup. You can learn more about these utilities by referring to your SQL-Server hard copy documentation or using the *Books Online* documentation included with the database software.

To access the *Books Online* documentation:

- click the Start button on the Microsoft Corp. *Microsoft Windows NT* desktop, select Microsoft SQL-Server 7.0
- then select Books Online

After you have opened Books Online, you can search for general information about backing up databases by entering the keywords “backing up” in the index search window. To obtain information about setting up automated backups on a regular schedule, use the keywords “Database Maintenance Plan Wizard”.



Archive message records

Why archive message records? The size of the active message database is eventually limited by the available storage capacity of the system, and excessively large databases can have a harmful impact on system performance. Because of these factors, you should monitor the size of your database and periodically create an archive of message records.

Planning Planning the timing of your archive is important because the *Message Care* archiving process can slow performance of the *Message Care* system. You must also keep in mind the capacity constraints of the *Message Care* database. As the capacity of the database is reaching its maximum, *Message Care* will generate alarms. *Message Care* generates alarms at 80%, 90%, and then 95% of the database's capacity. When the maximum capacity of the database is reached, *Message Care* will stop polling for messages. More information about capacity constraints can be found in [CentreVu Internet Solution capacities \(1-5\)](#).

Before performing an archive, verify that there is sufficient free disk space for the archive database in the location you select for storage. The exact amount of space required depends on the number and size of messages that will be archived. The maximum required archive database space will not exceed the size of the active message database.

Archiving options *Message Care* provides you with two archiving methods:

- Archive from the graphical user interface (GUI). See [Perform an archive from the Archive Utility window \(12-29\)](#) for procedures on running an archive through the GUI.
- Archive from the command line interface. You can use this method to schedule an archive. (See [Run an archive using the command line \(12-29\)](#) file for procedures on running archives from the command line interface.)

Perform an archive from the Archive Utility window

You can perform an archive operation at any time by using the simple graphical user interface provided by *Message Care* for this purpose.

- 1 From the Microsoft Corp. *Windows NT* desktop, click on the Start button and select Lucent Message Care.

- 2 Select *MCArchive.exe*.

Result: The Message Care R4 — Archive Utility window appears.

- 3 Enter your archiving criteria (number of days messages have been closed, blocked, and failed), and then click on the Archive button to start the archiving process.

The archive utility will display the number of messages that have been successfully archived while the archive is in progress.

END OF STEPS

Run an archive using the command line

To perform an archive using the command line, do the following:

- 1 Open the MS-DOS Command Prompt window.

- 2 Navigate to the `\bin` directory under *Program Files\MessageCare*.

- 3 Type the following command: `mcarchive /i <# of days>`

If you do not enter the `/i` variable, then the Archive Utility window appears.

of days = the number of days for which you are archiving closed, blocked, and failed messages.

For example, `c:\>Program`

`Files\MessageCare\bin>mcarchive /i 7`

END OF STEPS

Canceling the archiving process when using the Archive Utility window

You can cancel an archive procedure at any time after it has been initiated by clicking on the Cancel button. However, if you decide to terminate the process before all of the messages have been archived, be aware that the sequence in which messages are archived depends only on their storage location on the disk drive used for the active messages database. Therefore, cancelling an archiving procedure after only a portion of the messages have been stored in the archive database does not mean that those messages archived before cancelling comprise the oldest records.

Important! If you are using the command line interface and end the archive process through the Task Manager, then successful archive completion is not guaranteed.



Multiple archives

Overview To efficiently maintain your archived records, *Message Care* Release 4.1 enables you to run multiple archives. For example, instead of continuously appending records to your current MCArchive database, you can rename and move your MCArchive database, and then archive additional records to a new MCArchive database. You can run archives as often as you feel necessary.

After you have run your first archive, you must prepare your environment to run additional archives. You do this by running the *Message Care* archive scripts. The MCArchive scripts help you set up your archive environment so that you can create more than one archive instead of appending records to a single archive database.

Each script automatically performs or asks you to perform a specific function. These functions are described below:

- Function 1 (script name: *DetachMCArchiveStep1.sql*)—this script locates your current MCArchive database files, changes the MCArchive databases into single user mode, and then detaches the MCArchive database from the SQL server.
- Function 2 (script name: *MoveAndRenameToMCArchiveMMDDYYStep2.sql*)—this script explains how to move and rename the *MCArchive_data.mdf* and *MCArchive_log.ldf* files associated with the detached database.
- Function 3 (script name: *AttachMCArchiveMMDDYYStep3.sql*)—this script attaches the renamed MCArchive database files to a new archive database.
- Function 4 (script name: *NewMCArchiveStep4.sql*)—this script explains the functions you must perform to create a new MCArchive database so that you can run another archive.

Location of archive scripts

You can find the archive scripts in the following folder: *Program Files->Message Care->SQL Tools->Utils->Multiple Archives*

How to run the archive scripts

For instructions on how to run the archive scripts, see the *readme.txt* file located in *Program Files->Message Care->SQL Tools->Utils->Multiple Archives*.

The archive scripts also contain detailed information and instructions.



Managing and updating the dictionary

About *Message Care* provides controls to create a text message response to the consumer with 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.

How to manage and update the dictionary file

To edit the dictionary file, do the following:

1. Stop the spell server (through the NT services control panel)
2. From the Message Care directory, edit `\bin\SpellServer\dict.txt`
3. From the Message Care directory, remove or rename `\bin\SpellServer\sndspell.jdp`
4. Restart the spell server.



Prevent overflowed messages

What is an overflowed queue? An overflowed queue is a message 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 Overflowed state.

Overflowed messages cause distortion in CMS statistics, since CMS can track messages starting only at the *DEFINITY* ECS.

Why manage the overflowed queue? If the queue size becomes too large (for example, several thousand messages), operational efficiency is compromised because the queue management begins to utilize extensive CPU resources.

How *Message Care* helps you manage the overflowed queue *Message Care* provides a queue management structure that is based on four overflow queue transition levels.

The following table describes the four overflow queue transition levels:

Level	Value	Description
Green	3000	The system is within acceptable overflow queue levels.
Yellow	4000	The system has entered a potential problem queue level.
Red	6000	The system has entered a problem queue level and <i>Message Care</i> disables polling for new message calls on all POP3 mailboxes.
Resume	5000	The system reaches a value between the yellow value and the red value. Polling automatically begins when queue levels reach this value.

Transition alarms

Message Care generates transition email alarms and records entries in the error log in the following situations:

- Each time the overflowed queue exceeds a threshold value
- When the overflowed queue falls below the Resume threshold value and polling resumes
- When messages continue to be submitted five minutes after *Message Care* disables polling on all POP3 mailboxes.

If this situation occurs, you should stop the Mail Manager Service to investigate the problem and to prevent a system crash due to an unmanageable amount of messages.

- When the *Message Care* system restarts and resumes polling (*Message Care* will resume mailbox polling only when the number of messages in the overflowed queue is below the red threshold value)

Message Care sends the transition email alarm to the email address administered in the Alarm Email Address parameter on the Message Care System Options administration Web page.

The transition email alarm notifies you that the queue has transitioned from one level to another level. When you receive a transition email alarm from green to yellow you should investigate why so many of your messages are queuing (see [Overflowed process \(12-34\)](#) for information on why messages may be queuing). The goal is to reduce the queue size before it reaches the red level and polling stops.

Overflowed process 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

If the number of incoming messages exceeds the resources available to launch message calls, the *Message Care* software queues the overflowed messages internally, in a First In-First Out (FIFO) queue. Then, as resources for launching message calls become available, the *Message Care* software launches them in the order received.

The number of incoming message calls can exceed the available total resources 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 agent desktops).
- The total reaches a threshold you have administered on the Message Care System Options administration Web page (Max Simultaneous Message Calls).

The *Message Care* software retries overflowed calls every 15 minutes. If an overflowed call was already tried in the last 15 minutes, the *Message Care* software skips it and goes to the next. Even if *DEFINITY* ECS rejects an overflowed call because the queue for that skill (mailbox) is full, the *Message Care* software tries the next overflowed call anyway, in case it goes to a different skill/queue.

Determine queue size The queue size can be determined by generating a snap-shot report or by searching for messages with an overflowed status. The search result will report on the total number of messages in the overflowed state.

Reduce the queue size If the number of overflowed messages exceeds 4,000, you should stop the flow of new messages into the system, and allow your agents to work on messages already in the system to reduce the queue size.

To stop the flow of new messages into the system, disable polling of selected mailboxes.

When there is no longer an overflowed situation that is compromising operational efficiencies, then resume message polling by enabling polling or starting the Mail Manager service.



Clean up the *temp* directory

Important! When cleaning up the *temp* directory, *do not* remove the following files:

- *Mungeerror.txt*
- *MIMEdllerror.log*

How to clean up the *temp* directory

Cleaning up the *temp* directory while *Message Care* is taken down for archiving will make better use of *Message Care* downtime.

To free up disk space, periodically delete the files located in the following default directory: *C:\Program Files\Message Care\temp*. Delete files that are over a week old.



Clean up the *winnt\system32\Logfiles* directory

About Log files are generated if IIS Logging is enabled. It is recommended that logging be disabled or the log files be cleaned up at least on a daily basis.



Check the performance characteristics of your system

Why check system performance?

You can achieve performance gains by monitoring the system's performance and identifying bottlenecks. With the recommended minimum configuration for *Message Care*, performance issues may arise depending on the number of agents and number of messages that flow through the *Message Care* system.

What you should check

If performance degradation is perceived, consider the following areas as likely candidates for future upgrades:

- Memory—increase
- Network—load balancing software for multiple network interface cards (NICs)
- CPU—increase



Check NT server performance

Introduction If you are experiencing performance problems (for example, agents are experiencing delays or polling intervals are not being met), run the Performance Monitor (located in the Administrative Tools menu) in the logging mode (as opposed to charting) with all counters selected. Set logging for every 120 seconds and save the configuration.

To obtain a sample of the server workload, run monitoring for a full working day. To study the log files, monitoring should be stopped and switched to view chart mode. Load the data that was collected by selecting the Data From menu item from the Options menu.

The critical objects are:

- Processor—% Processor Time (for each processor instance): should not stay above 70% most of the time.
- System—ProcessorQueueLength: the sustained value for this should be no larger than 2. A value higher than 2 indicates a bottleneck in the system.
- Memory—Pages/sec: if Pages/sec is greater than 10, then memory is constrained. Your system is seriously degrading if Pages/sec is greater than 20.
- Memory—PageFaults/sec and CacheFaults/sec: if CacheFaults/sec is greater than PageFaults/sec, then there is too much paging. You should increase your system's memory.
- Paging File—should typically be set for twice the physical memory and preferably distributed among the physical disks in the system separate from the Windows NT system files.
- Disks—by default, disk counters are disabled. To enable disk counters, enter `diskperf -y`.
- You should try to attain the following values:
 - PhysDisk: %DiskTime (<85 to 90%)
 - PhysDisk: CurrentDiskQueueLength (<2)
 - PhysDisk: AvgDiskSec/Transfer (<0.3)
 - PhysDisk: AvgDiskBytes/Transfer (>20K)
- Network Interface Card—BytesTotal/sec: a 10Mbit Ethernet segment has a maximum throughput of 1.2Mbit.





13 Troubleshooting

Overview

Purpose This information provides troubleshooting guidelines for the *CentreVu*® Internet Solution. Information in this chapter represents a compilation of known problems and suggested solutions, based on actual installations and operation of the software. Check the troubleshooting items in this chapter before calling the Lucent Technologies National Customer Care Center on 1-800-242-2121.

Audience This document is intended for installers, administrators, agents, and anyone who uses the *CentreVu* Internet Solution.

Contents The following troubleshooting categories are covered:

- [Troubleshoot administration problems \(13-2\)](#)
- [Troubleshoot login and logout problems \(13-6\)](#)
- [Troubleshoot real-time call and message processing problems \(13-13\)](#)
- [Troubleshoot real-time call and message delivery problems \(13-26\)](#)
- [Troubleshoot report problems \(13-39\)](#)
- [Troubleshoot system interaction problems \(13-45\)](#)
- [Troubleshoot alarm and system message problems \(13-59\)](#)
- [Troubleshoot installation problems \(13-67\)](#)

References In addition to the above troubleshooting topics, you should read the *readme.txt* file that is delivered with the software. The *readme.txt* file includes late-breaking changes to and news about the software.

Use the following references to help troubleshoot problems:

- *DEFINITY*® ECS documentation
- *CentreVu* Computer-Telephony documentation
- *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)*



Troubleshoot administration problems

Overview

Purpose The administration troubleshooting section provides tips for problems regarding the administration of the *CentreVu* Internet Solution.

Contents The following administration troubleshooting topics are covered:

- [Cannot access Administration Web pages \(13-3\)](#)
- [Mailbox administration changes did not take effect \(13-4\)](#)
- [Agents are receiving multiple simultaneous message calls \(13-5\)](#)



Cannot access Administration Web pages

Description An attempt to access the *CentreVu* Internet Solution Web-based administration at *http://<icm_server<name>/admin* produces an error or no Web page appears.

Action

- 1** From the Microsoft Corp. *Microsoft*® Internet Information Server (IIS) Manager, verify that the WWW service is running on the ICM 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 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** Verify that the JRun service is started, using Control Panel->Services.

- 5** If there is a connectivity problem between the current browser and the ICM server, troubleshoot LAN connectivity. Verify that the ICM server is accessible on the LAN and from the computer running the browser.

END OF STEPS



Mailbox administration changes did not take effect

Description Occasionally, due to caching issues relative to the IIS server, mailbox administration changes are not always picked up at the next polling cycle. If your administration changes are not being used, stop and restart the Lucent Mail Manager.



Agents are receiving multiple simultaneous message calls

Description An agent can receive a new message call while already active on a message call if *DEFINITY* DAC administration is not correct for message calls.

Message Care uses DACs for delivering retrieved or suspended message calls to specific agents. If a *Message Care* DAC is not correctly administered for *Message Care*, then you may encounter problems such as the one mentioned here.

Action The Class of Restrictions (COR) on the switch should set the Direct Agent Calling field to “y” to treat these message calls as ACD calls. See [Direct Agent Calling \(DAC\) \(required\) \(5-32\)](#) for more information.



Troubleshoot login and logout problems

Overview

Purpose The login and logout troubleshooting section provides tips for problems that arise while logging in to and logging out of the *CentreVu* Internet Solution.

Contents The following login and logout troubleshooting topics are covered:

- [Agent cannot log in \(13-7\)](#)
- [Agent Control Window fails to launch properly \(13-11\)](#)
- [The Agent or Caller Control Window does not use specified language \(13-12\)](#)



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 ICM server is up and the Internet Call Manager (ICM) application is running.

 - 2 Check that the firewall is administered to allow TCP connections from a dynamic TCP port (>1023) on the agent's PC to the ICM server, TCP port 8101.

 - 3 If Agent Control Window activity stops after the establishing connection 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 connection.
 - Confirm that the ITG (if an ITG is installed), the *CentreVu* Computer-Telephony, and the ICM server are communicating.

 - 4 If a

Login failed
-

-
- 5** error 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 by way of a voice terminal rather than through the Web login page. Use the *DEFINITY* ECS `list agent-id` command to determine whether the agent ID or the extension is in use. Log off from the voice terminal and log in again through the Web login page.
 - **Requested_AgentID_Ext_Mismatch** means that the specified agent ID has been logged in to the *DEFINITY* ECS at the specified extension rather than through the Web login page.
 - **Agt_Not_Split_Member_Or_Bad_Passwd** means that an incorrect password was entered.
 - **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 *CentreVu* Internet Solution 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 by way of 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 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.
-

- 6** If a pop-up window appears stating

You are already logged in at Extension xxx. What would you like to do?

-
- 7** Perform the following:
- 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. The ICM Control Window shows that the specified agent ID is logged in at the indicated extension.
 - 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 enter list agent-id xxxx on a *DEFINITY* ECS console. If it shows as “unstaffed,” then there may be an ICM server or *CentreVu* Computer Telephony problem.

Important! Shut down any software packages running on the *CentreVu* Computer Telephony (except for CTI). Do not run any other applications on the server until the problem is resolved.

-
- 8** Check the *CentreVu* Computer Telephony hardware to make sure that it is fully in service and does not have any status windows showing a problem. Verify that the agent's physical phone extension is administered as a device in the *CentreVu* Computer Telephony's Security Database.
-

-
- 9** Check the status of the ICM server:
- Verify that the ICM application is running by clicking on the Services icon in the Control Panel. The Internet Call Manager 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. Determine if the ICM thinks that 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 passageway_group agent-id**. (The **passageway_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 that the phone extension and skill group in the *CentreVu* Computer Telephony server.

END OF STEPS



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.

Action

- 1 Verify that the agent's Web browser is Sun Microsystems, Inc. *Java*TM and JavaScript enabled:
 - From the Edit menu on Netscape Communications, Inc. *Netscape*[®] *Navigator* 4.x, select the Preferences item, and then select Advanced to display its contents. Both the Enable Java and Enable JavaScript items should be checked.
 - From the View menu on Internet Explorer 4.x, select the Internet Options menu item, and then select Advanced. The Java JIT compiler Enabled under Java VM item should be checked.

- 2 Check for error messages on the browser window. Also open the Sun Microsystems, Inc. *Java* Console window and look for errors:
 - On Netscape Communications, Inc. *Netscape Navigator*, select 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.

- 3 Check whether network settings have been changed. The browser may need to be changed to reflect "no proxy" settings for the *CentreVu* Internet Solution components on the network.

- 4 Connect a PC to the same LAN segment as the ICM server and verify that the agent can log in. If so, then examine the administration of the firewall and other intermediate equipment.

END OF STEPS



The Agent or Caller Control Window does not use specified language

Description The Agent or Caller Control Window used the US English resource file (strings and error messages) for its labels and text instead of the resource file for the language specified on the Agent Login Web page or Call Us page.

When the resource file for a specified language cannot be opened, the US English resource file is used instead. When the US English resource file cannot be opened or the resource file does not contain the correct Key=String pairs, then an error message is displayed in place of a string. See the [Erroneous label on a control window button or text area \(13-49\)](#) problem.

Action

- 1 Verify that the language value specified in your Web page is correct. For example:

```
<SELECT Name="language">  
<OPTION VALUE="de" SELECTED>German <input type="hidden  
name="language" value="de">
```

- 2 Go to the *itg/resources* folder located on the ICM server.

- 3 In the *itg/resources* folder, verify that the resource folder and associated *resource.txt* file for the language parameter value specified in your Web page is present. For example, if you entered "de" as the language parameter value, then there must be a *resources.txt* language resource file in the *itg/resources/de* folder. If there is not, you must create one with the strings translated appropriately. See [What is localized? \(1-39\)](#) for information on creating additional language resource files.

- 4 Verify that the resource file contains Key=String pairs as described in Step 3.

END OF STEPS



Troubleshoot real-time call and message processing problems

Overview

Purpose The real-time call and message processing troubleshooting section provides tips for problems that arise during the processing of real-time calls and messages.

Contents The following real-time call and message processing troubleshooting topics are covered:

- [Control Window closes during a call \(13-14\)](#)
- [Agent gets voice call but no audio connection \(13-15\)](#)
- [Escorted Browsing does not work \(13-16\)](#)
- [Agent hears an echo \(13-17\)](#)
- [Internet voice quality is poor \(13-18\)](#)
- [A Web page overwrites an ICC applet \(13-19\)](#)
- [Agent cannot hear caller during an Internet voice call \(13-20\)](#)
- [The New Message Display page appears but there is no message content \(13-21\)](#)
- [Attachment is lost or cannot be opened \(13-22\)](#)
- [New message call already active \(13-24\)](#)
- [Agent cannot work on message \(13-25\)](#)



Control Window closes during a call

Description In general, if the Caller Control Window closes during a call, the call is dropped. For an Internet call, this can happen, for instance, if the caller explicitly closes the window or uses the Back button on Internet Explorer 3.x to back up past the page that launched the call. (A PSTN Callback voice call, however, stays connected.) For a message call, 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 Internet call.

Message Care will redeliver a message call because it was not specifically closed by an agent.



Agent gets voice call but no audio connection

Description If an agent is getting calls from the Voice VDN (as indicated by the phone display and/or the VDN of Origin announcement) without any audio connection to the caller, use these suggestions to identify the problem.

Action

- 1** Check the caller Web page to verify that type=voice for the radio button used to select a voice call. See [Chapter 11, Web page guidelines](#) for information about the type parameter.

- 2** Use text chat to ask the caller if *NetMeeting*® launched successfully and indicates that a voice connection was made. If not, see [Caller is unable to launch NetMeeting \(13-30\)](#).

- 3** Verify that the Telephony Application URL references a script that correctly launches the Microsoft Corporation *NetMeeting* application. The default URL is `http://<icm_server_name>/servlet/WT/nmit`.

- 4** Verify whether the firewall is passing User Datagram Protocol (UDP) packets to the ITG. See [Firewall guidelines \(2-22\)](#) for details. If the caller's firewall is not passing UDP packets, the Callback feature may be useful.

END OF STEPS



Escorted Browsing does not work

Description The caller (or agent) attempts to send a URL using the Send Page button on their Control Window but the other party does not receive the page.

Action

- 1** If the receiver gets a Web page with an error such as “**Access Denied**,” verify whether the person has permission to access a particular URL (for example, if it is behind a firewall).

- 2** Determine which version of the Web browser is being used. The 4.0 and greater versions of Netscape Communications, Inc. *Netscape Navigator* and Internet Explorer have blocked the feature that supports the Send Page operation. However, escorted browsing can still be accomplished in a 4.x browser environment by entering the URL to be shared in the text chat entry box on the Control Window (by typing or by cutting and pasting) and sending it like a regular text message. See [Appendix C. Overcoming feature limitations due to browser security restrictions](#) for more information about the Send Page feature.

END OF STEPS



Agent hears an echo

Description An agent hears an echo of the agent's own voice when talking with a caller.

Action

- 1** Determine whether the caller is using an external microphone and speakers. If so, it is likely that the echo is caused by the caller's microphone picking up sound from the speakers. Ask the caller to change the location of the microphone to minimize the echo. For the best sound quality in Internet telephony connections, callers should use a headset.
.....
- 2** The echo may be coming from the caller's sound card due to a crosstalk problem.

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Internet voice quality is poor

Description Internet telephony voice quality or audio delay during a call starts out poor or becomes poor during a call.

Action

- 1** Determine whether the caller's PC is equipped with a half-duplex, rather than full-duplex, sound card. The half-duplex card does not support two-way voice very well.
.....
- 2** Verify that the caller has a Intel Corporation *Pentium*® PC and at least 16MB of RAM. CPU-intensive activity can reduce voice quality. Such activities include downloading large files or graphic-rich Web pages, playing music on the PC, or running another application on the PC. Have the caller shut down other applications that may be occupying the CPU.
.....
- 3** Verify that the caller has at least a 28.8kbps connection to the Internet. A low-speed Internet connection, heavy Internet traffic, or other disruptions from the Internet Service Provider can cause voice quality to be poor or deteriorate. It can also produce long audio delays.

The agent may wish to use only text chat or to initiate a PSTN callback for better voice quality.

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E N D O F S T E P S
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A Web page overwrites an ICC applet

Description If you are running your ICC on a Apple Computer, Inc. *Mac* OS, then whenever you have a browser window (Web page) open and an ICC applet is active and then try to download a Web page, the Web page will overwrite the ICC applet. The call remains active; however, text chat and collaborative browsing will not function.

Action To correct this problem, the agent must close the applet. Closing the applet will disconnect the call and log the agent out of the ICM. The agent may also have to manually log off of the *DEFINITY* ECS.

To keep this problem from occurring, you must verify that your ICC applet is not active when you download a Web page.



Agent cannot hear caller during an Internet voice call

Description The agent cannot hear the caller during an Internet voice call; however, the caller can hear the agent. This could be occurring due to incorrect settings for the caller's microphone.

Action

- 1 Click on the Volume icon in the Status area of your Microsoft Corp. *Windows*® taskbar.

Result: The Speaker Volume for Videum dialog box appears.

- 2 From the Options menu, select the Properties menu item.
-

- 3 In the "Adjust Volume for" frame, click on the Recording option button and then select OK.

Result: The Wave Input dialog box appears.

- 4 Click in the Select box for Mic Input Balance and then close the window.

END OF STEPS



The New Message Display page appears but there is no message content

Description The New Message Display page appears but there is no message content. The Message Display URL parameter located in the Mailbox Administration Web page could have been administered incorrectly.

Action If you receive the New Message Display page with no message content, do the following:

-
- 1 From the Mailbox Administration Web page, ensure that the Message Display URL is administered correctly .

Result: All new messages will be correctly displayed to the agent.

- 2 From the Messages Table in the Microsoft Corp. *Microsoft Access* database, ensure that the DeliveryURL database item is the same as the Message Display URL parameter administered in the Mailbox Administration Web page.

Result: All previously received messages will be correctly displayed to the agent.

END OF STEPS



Attachment is lost or cannot be opened

Description If a consumer composes a text only message using Microsoft Corp. *Microsoft* Outlook 98 in an RTF format, then *Message Care* displays the text in the body of the message and also claims that there is an attachment.

If a consumer composes a text message and attaches a file (attachment) using Microsoft Corp. *Microsoft* Outlook 98 in an RTF format, then *Message Care* displays the text in the body of the message and claims that there is *no* attachment.

Both of these issues are related. When a consumer sends a message in an RTF format using Microsoft Corp. *Microsoft* Outlook 98, the message is bundled in the MIME type *application/ms-tnef*. *Message Care* does not understand the *application/ms-tnef* MIME type, thus the incorrect behavior occurs.

To determine if a message is bundled in the MIME type *application/ms-tnef*, look in the *Message Care* database.

Action **Important!** The following action will work only if your POP3 mail server, on which *Message Care* mail is received, is Microsoft Corp. *Microsoft* Exchange Server 4.5 or greater.

- 1 On the Microsoft Corp. *Microsoft* Exchange POP3 server, do the following:
 1. Go to the mailbox in which you receive MIME type *application/ms-tnef* messages.
 2. Double-click on the mailbox name to open the properties.
 3. Select the Protocol tab.
 4. Select POP3 (Mail), and then click on the Settings button.

Result: The Protocol Details window appears.

-
- 2** From Protocol Details window, do the following:
1. Select Enable POP3 for this recipient.
 2. Deselect Use protocol defaults.
 3. In the Message Encoding box, select MIME radio button and select the option Provide message body as plain text.
 4. Select Use Microsoft Corp. *Microsoft* Exchange rich-text format.
 5. Select the OK button to accept the Protocol Details window changes.
 6. Select the OK button again to accept changes to the Mailbox.

Result: The mailbox is now ready to receive messages with the MIME type of application/ms-tnef.

END OF STEPS

New message call already active

Description An agent's phone alerts the agent of an incoming message call. As the agent answers the message call, *Message Care* delivers a message stating that the message call is already active at that agent's station.

Action In the Common Administration Web page, enter the following value in the Agent Alerting URL parameter: *http://<server_name>mcscript/mc_agentalert.asp*

This problem can also occur if the Message Display URL is in a different domain than the Agent Idle URL—both URLs must be in the same domain.



Agent cannot work on message

Description The agent receives a message call with the following error: **You cannot work on this message as it is currently at agent xxxx.**

Action This problem most likely occurred because the Agent Idle URL and the Agent Alerting URL were identical. That is, the same *.asp* file was used in the URL (*idlepage.asp* or *mc_agentalert.asp*). Remove the Agent Alerting URL or use the correct **.asp** file.

This problem can also occur if the Message Display URL is in a different domain than the Agent Idle URL—both URLs must be in the same domain



Troubleshoot real-time call and message delivery problems

Overview

Purpose The real-time call and message delivery troubleshooting section provides tips for problems that arise during the delivery of real-time calls and messages.

Contents The following real-time call and message delivery troubleshooting topics are covered:

- [Agent cannot receive calls \(13-27\)](#)
- [No calls arrive at a new VDN \(13-29\)](#)
- [Caller is unable to launch NetMeeting \(13-30\)](#)
- [Caller is unable to connect to an agent \(13-32\)](#)
- [The agent is not receiving messages from a specific mailbox \(13-33\)](#)
- [Retrieved messages are not going to expected agent \(13-35\)](#)
- [The retry count is higher for specific messages going to the same VDN \(13-36\)](#)
- [Agent cannot retrieve message \(13-37\)](#)
- [Delay in message calls after Message Care starts \(13-38\)](#)



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 correct 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 has 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 ICM 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 Internet VDN. Check vector steps for the correct call flow.
-

6 Verify that the following items are administered correctly on the *CentreVu* Computer-Telephony server device administration and the *DEFINITY* ECS:

- Agent extensions
- Phantom extensions
- VDNs to launch message calls
- Hunt group extensions for agent skills

Also, verify that the phantom extensions are administered correctly on the ICC/Message Care Common Administration Web page.

Verify that the Monitored Hunt Groups are correctly administered on the CTI Administration Web page.

Verify that the VDNs are correctly administered on the *Message Care* Mailbox Administration Web page.

7 If you have an ITG, verify that the trunks between the *DEFINITY* ECS and the ITG are in service. On the ITG console, use the **showptg** and **showpri** commands. On the *DEFINITY* ECS console issue the command **test trunk-group xx long**. Troubleshoot any trunk problems using ITG or *DEFINITY* ECS documentation.

8 Verify that the caller Web page has the correct URL reference with the correct VDNs and call types. See [Chapter 11, Web page guidelines](#) for details.

For *Message Care*, verify that the correct VDN is administered for the mailbox.

9 For Internet calls, place a call from a browser inside the firewall. If the call completes, there may be a firewall issue. See [Firewall guidelines \(2-22\)](#) for further information.

10 For message calls, send a test message.

END OF STEPS



No calls arrive at a new VDN

Description A new VDN is added to the system (for example, for a new call type or to direct calls for a specific product), but no calls arrive at that VDN.

Action

- 1 Verify by way of the *DEFINITY* ECS administration that the new VDN has been assigned the same Class of Restriction (COR) as other Internet VDNs.
.....
- 2 Verify that the VDN has been administered in the *CentreVu* Computer Telephony Security Database. See *CentreVu* Computer Telephony documentation for details.
.....
- 3 Use the **showdp** command on the ITG console to verify that the new VDN has been added to the ITG dial plan. See the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document for details on how to add a VDN to the dial plan.
.....
- 4 For Internet calls, examine the caller Web page to confirm that the new VDN is specified appropriately as the **vdn_ext**.

For message calls, verify that the mailbox is administered with the correct VDN. Using the Snapshot Report, you can determine if messages have been retrieved from that mailbox.

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Caller is unable to launch *NetMeeting*

Description A caller must have Microsoft Corporation *NetMeeting* 2.0 or greater to launch an Internet telephony call to an Internet Call Center. The Microsoft Corporation *NetMeeting* application is launched on the caller's machine as a helper application associated with the browser.

If the caller is using Internet Explorer, then the helper application is launched automatically. If the caller is using Netscape Communications, Inc. *Netscape Navigator*, then the caller must identify the helper application to the browser the first time an ICC call is launched.

Action

- 1 Identify which browser the caller is using.

 - 2 Verify that the caller has installed Microsoft Corporation *NetMeeting* 2.x. It can be downloaded at no charge from <http://www.microsoft.com>.

 - 3 If the caller's browser is Netscape Communications, Inc. *Netscape Navigator*, the caller must identify the helper application to the browser when the "Unknown File Type" dialog box appears:
 - Select the Pick App button.
 - Under Configure External Viewer, enter **rundll32.exe msconf.dll,OpenConfLink**. The entry field is case-sensitive, so the entry must be typed exactly as shown.
 - Select OK.
-

-
- 4** Verify that the Telephony Application URL references a script that correctly launches the Microsoft Corporation *NetMeeting* application. The default URL is *http://<icm_server_name>/servlet/WT/nmit*.

If you are still unable to launch Microsoft Corporation *NetMeeting*, verify that it is associated with Netscape Communications, Inc. *Netscape* by doing the following:

1. From Netscape Communications, Inc. *Netscape*'s Preferences dialog box, select the Navigator Category if you have Netscape Communications, Inc. *Netscape* 4.x or the Helpers tab if you have Netscape Communications, Inc. *Netscape* 3.x.
2. Click Microsoft Corporation *NetMeeting* from the list of helper applications, and then select the Edit button.
3. Select the Application radio button.
4. Click the Browse button to select the location of the Microsoft Corporation *NetMeeting* application.
5. Select OK.

END OF STEPS



Caller is unable to connect to an agent

Description If a caller launches a call but is not connected with an agent, this may be due to a firewall restriction on the caller side. If the caller is behind a firewall, the firewall may block the messaging needed to establish an Internet call session.

Action

- 1 Verify that the call center's firewall is not the problem by placing an Internet call from outside the firewall.

- 2 If the caller's firewall is the problem, the call center can enable the HTTP tunneling feature. See [HTTP tunneling feature \(1-11\)](#). The caller can still request a PSTN Callback. See the [Agent cannot receive calls \(13-27\)](#) section for more suggestions.

END OF STEPS



The agent is not receiving messages from a specific mailbox

Description A specific *Message Care*-administered mailbox is not receiving messages. Not receiving messages from a specific mailbox could be a result of an incorrectly administered mailbox or incorrect vector programming.

Action If you are not receiving messages from a specific mailbox, do the following:

-
- 1 Confirm that *Message Care* is polling the mailbox for which you are not receiving messages.

You can check polling through one or both of the following methods:

- Examine the Mail Manager error log (*mungerror.log*). At the start of each polling cycle, the Mail Manager creates an entry for each mailbox polled and the number of messages found.

For example, *1/7 7:25:33 - Polling mailbox EXCHANGE-UT3MM2* and *1/7 7:25:33 - Found 57 messages in mailbox EXCHANGE-UT3MM2*. If there is a polling entry for the mailbox in which you are not receiving messages, then *Message Care* is polling the mailbox.

- Ensure polling for the mailbox was administered to enable polling. Go to the Mailbox Administration Web page for the mailbox and make sure that the Enable Polling field is set to Yes.

If mailbox administration looks correct (that is polling is enabled), but the Mail Manager error log doesn't indicate polling, go to Step 2.

-
- 2 Stop and then restart the Mail Manager through the Work Flow Manager interface to ensure the database is picking up the correct administration data.

If you are still experiencing the problem after stopping and starting the Mail Manager, go to Step 3.

-
- 3** Ensure that *Message Care* is adding the received messages to the database. To do this, view the Mail Manager error log (*mungerror.log*) for an entry that indicates messages are being added to the database. For example, **1/7 7:25:34 - Message added as ID 6700**.

If *Message Care* is adding messages to the database, then go to Step 4.

-
- 4** If *Message Care* is polling the mailbox and adding messages from that mailbox to the database, then messages are most likely not being delivered to the agent(s).

From the Mailbox Administration Web page, identify the VDN that is administered for the mailbox in which you are having trouble.

Create a snap-shot report for the mailbox. If there are many calls in queue but agents are idle, check your vector programming. Go to Step 5.

-
- 5** To check your *DEFINITY* ECS vector programming, manually place a call to a VDN associated with the mailbox. If *Message Care* does not deliver your manually placed call to an agent, then there is most likely a problem with your vector. For more information about *Message Care* vectors, refer to [Vectors \(2-42\)](#).

END OF STEPS



Retrieved messages are not going to expected agent

Description Retrieved message calls appear as direct-agent message calls. If an agent is logged in but not available, the call will queue for that agent. If the agent is not logged in, the call will follow the agent's coverage path. The above is only true if the retrieve vector is administered as recommended in [Vectors \(2-42\)](#).

Action

If an agent is not receiving retrieved message calls, check the coverage path and criteria for that agent.



The retry count is higher for specific messages going to the same VDN

Description In some instances, your reports will show that some message calls have a higher retry count than others even though the message calls are all going to the same VDN. This occurs when message calls going to the same VDN have digits (agent IDs) that are different. In this case, *Message Care* will treat the message calls differently.

Scenario

To demonstrate a situation where one message call has a higher retry count than another message call, we will assume the following scenario:

1. Two message calls (A and B) arrive in a mailbox targeted to VDN 4321 respectively (message call A arrives at 10:00 and message call B arrives at 11:00—both on the same day).
2. Message call A has ASAI digits 5678 and message call B has ASAI digits 9999.
3. *Message Care* attempts to launch message call A and it fails. *Message Care* will not attempt to try message call B until message call A launches successfully.
4. *Message Care* continues to retry to launch message call A; therefore, the retry count for message call A increases.
5. After 5 attempts to launch message call A, *Message Care* is successful.
6. *Message Care* now attempts to launch message call B and is successful upon the first try. Message call B's retry count is 0 and message call A's retry count is 5.



Agent cannot retrieve message

Description When an agent uses the Retrieve button to retrieve a message call, *Message Care* does not deliver the retrieved message to the agent.

Action This scenario can occur if the Message Display URL, Agent Idle URL, and View URL are on different domains.

Also, because the cookie is set in the Agent Idle Web page, the Agent Idle Web page must be in the same domain as the Message Display Web page.



Delay in message calls after *Message Care* starts

Description Upon starting *Message Care*, the WFM process queries the database for all open message calls (that is, message calls in the received, active, launched, or suspended state). *Message Care* will not deliver message calls until the WFM reviews the complete set of message calls awaiting delivery and sorts this work queue into the appropriate delivery order. (The delivery order is based on message receipt time and expiration of suspension timers.) If the set of open messages exceeds several thousand, then there can be a noticeable delay.



Troubleshoot report problems

Overview

Purpose The report troubleshooting section provides tips for problems that arise during the generation of *CentreVu* Internet Solution reports.

Contents The following report troubleshooting topics are covered:

- [No CMS pegs from the Web \(13-40\)](#)
- [No CMS reports for call attempts/failures \(13-42\)](#)
- [VDN is not pegging call data from the DEFINITY ECS to CMS \(13-43\)](#)
- [CMS reports abandoned message calls or calls dropped at agent \(13-44\)](#)



No CMS pegs from the Web

Description Whenever the ICC solution is working but no data is being recorded in CMS regarding Web page hits, use these suggestions to help identify the problem.

Action **Important!** At any time during the following steps, you can restart the page counter with the logging option. To do this, stop the page counter, and restart it with the following logging option:

```
$ ps -ef | grep pgcounter
```

```
$ kill process_id_from_ps_command
```

```
$ nohup /webcms/rdonly/bin/pgcounter -l &
```

Reload the page from the browser (or manually generate a page hit) then check the following log file:

```
/webcms/db/log.pgcounter
```

1 Access the Web page to verify that it is up and in service. If you cannot access the page, notify the System Administrator.

2 If you can access the Web page, look for a “broken image” icon. If one appears, notify the System Administrator.

3 Test whether the counter script on the CMS server is accessible from the browser from inside the firewall. Enter the URL below into the browser:

```
http://<cms_address>:8001/cgi-bin/uncgi/  
pgcnt?callUsSrcPage=<pageid>
```

where **<pageid>** is the URL of the Web page that is being counted.

4 Check the HTTP address of the CMS server and the parameters on the Web page to be sure they are correct.

-
- 5** Check that the reference to the CMS host uses port 8001. If not, notify the System Administrator.
-
- 6** Verify that the firewall allows the CMS TCP port to be passed. Test this by repeating Step 3 from outside the firewall.

END OF STEPS



No CMS reports for call attempts/failures

Description If the ICC solution is working but no data is being recorded in CMS for call attempts, voice call attempts when no resources are available, or call attempts when no trunks are available, then use these suggestions to help identify the problem.

Action

- 1** Verify network connectivity by sending a ping from the ICM server to CMS. (This test may fail if there is an intervening firewall or filtering router.)

- 2** Verify that the firewall is administered to allow HTTP requests from the ICM server to Port 80 on the CMS.

- 3** Verify, from the Internet Call Center Administration Web page, that the ICM is administered with the correct *CentreVu* CMS Peg Count URL.

- 4** Verify that the Web pages have the correct page count script. Refer to the [Chapter 11, Web page guidelines](#) for more details.

- 5** Verify that call data messages are coming in correctly. See log file / *webcms/db/apache/logs/access_log* on the CMS.

END OF STEPS



VDN is not pegging call data from the *DEFINITY* ECS to CMS

Description If the ICC solution is working but no call data is being recorded in CMS from the *DEFINITY* ECS, use these suggestions to help identify the problem.

Action

- 1** Check *DEFINITY* ECS administration to verify that the VDN is measured. The “measured” field on the VDN should be set to “both” or “external.”

- 2** Verify that CMS is in service.

- 3** Confirm that the maximum number of VDNs measured on the CMS has not been exceeded.

- 4** Verify that the X.25 link is up between CMS and the *DEFINITY* ECS.

END OF STEPS



CMS reports abandoned message calls or calls dropped at agent

Description *Message Care* has an internal audit to drop message calls in the launched or active state when a specific threshold value is met. These values are controlled by parameters in the *parms.txt* file. The default values are: 7.5 hours for launched calls and 4 hours for active calls.

Action If CMS reports are abandoning message calls or calls are being dropped at the agent, do the following:

-
- 1 To confirm that *Message Care* is dropping the call, examine the *Message Care* error log (*mcerror.log*) file. *Message Care* records when a call is dropped by this audit.

Important! The following parameters should only be changed with support from Lucent services personnel.

-
- 2 In the *Message Care parms.txt* file, check the values of the following parameters:

WorkFlowMan.AuditTimeLaunched

WorkFlowMan.AuditTimeActive

END OF STEPS



Troubleshoot system interaction problems

Overview

Purpose The system interaction troubleshooting section provides tips for problems that arise when system features are interacting.

Contents The following system interaction troubleshooting topics are covered:

- [Message Care agent gets a call but no PagePop \(13-46\)](#)
- [ICC agent gets a call but no PagePop \(13-48\)](#)
- [Erroneous label on a control window button or text area \(13-49\)](#)
- [CTI cannot connect to the CentreVu Computer-Telephony server \(13-50\)](#)
- [ITG cannot connect to the ICM server \(13-51\)](#)
- [ICM server cannot connect to the ITG \(13-52\)](#)
- [Message delivery is out of order or delayed \(13-54\)](#)
- [Control Window does not download completely \(13-55\)](#)
- [The Message Care server locks up after installing Message Care \(13-56\)](#)
- [pcANYWHERE answers but will not connect \(13-57\)](#)
- [Work Flow Manager unable to connect to SQL database \(13-58\)](#)



Message Care 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 in to 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 *Message Care* 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 has 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 ICM 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 VDN. Check vector steps for the correct call flow.
-

6 Verify that the following are administered correctly on the *CentreVu* Computer-Telephony server device administration and the *DEFINITY* ECS:

- Agent extensions
- Phantom extensions
- VDNs to launch message calls
- Hunt group extensions for agent skills

Also, verify that the phantom extensions are administered correctly on the ICC/Message Care Common Administration Web page.

Verify that the Monitored Hunt Groups are correctly administered on the CTI Administration Web page.

Verify that the VDNs are correctly administered on the *Message Care* Mailbox Administration Web page.

7 Confirm that the mailbox has the correct VDN administered. See [Administer common parameters \(5-24\)](#) for details.

8 To redeliver the message call, drop the call. This will result in *Message Care* redelivering the message call.

END OF STEPS



ICC agent gets a call but no PagePop

Description As part of the process of connecting with an incoming Internet-initiated call, the browser should display a PagePop (the page the caller initiated the call from, or some other page as defined by the call center). If no PagePop occurs when a call comes in, use the following steps to identify the problem.

Action

- 1** Verify that the call was a Web-initiated call.
.....
- 2** Confirm that the caller Web page is programmed correctly. See [Chapter 11. Web page guidelines](#) for details.
.....
- 3** Confirm that the ICC administration (especially the URL administration) on the ICM is correct. See [Chapter 5. Administration](#) for details.

.....
E N D O F S T E P S
.....



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 ICM server.

- 3** In the *itg/resources* folder, locate the resource file for the language that is causing the label to appear incorrectly (for example, *it/sources.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. Your entry would then look like this: **load resource it**.

END OF STEPS



CTI cannot connect to the *CentreVu* Computer-Telephony server

Description The CTI process log (*ctilog.txt*) on the *c:\itg* directory displays alarms when it is unable to connect with the *CentreVu* Computer Telephony 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.

Action Refer to the repair action for the CTI alarm in the *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)* document.



ITG cannot connect to the ICM server

Description When the Internet Call Manager (ICM) process is not running or the ICM server is not available on the LAN, the ITG cannot connect to the ICM server.

Action Refer to the repair action for the CTI alarm in the *Internet Telephony Gateway Technical Reference Issue 2 (555-027-212)* document.



ICM server cannot connect to the ITG

Description If the ICM process on the ICM server is not able to connect to the ITG, it displays the message **Connection failed, will try again in 10 seconds** in the Internet Call Manager window. Callers are not able to place calls unless the phantom call feature is used for text chat.

This connection may fail due to administration or LAN problems, or because the ITG is not in service. The ICM process periodically attempts to re-establish the connection.

Action

- 1 If there have been administration changes to the ITG or ICM server, then first verify that the administration information is correct:
 - Refer to the *Internet Telephony Gateway Technical Reference Issue 2(555-027-212)*.
 - Examine the “CTI Administration” Web page at http://<icm_server_name>/admin and verify that all the IP Address fields have valid entries.
 - Verify that the components can communicate across the network. Any firewalls or routers must be administered to allow these components to communicate through the administered port number. Refer to specific router or firewall documentation to verify this functionality.
 - Verify that the ITGPort, GW#, and GWIS ITG#= “yes” parameters have the correct number suffix (that is, ITGPort1, GW1, and GWIS ITG1= “yes” for a single ITG server environment). In a multi-ITG server environment, there must be one ITGPort, GW#, and GWIS ITG#= “yes” parameter combination for each ITG server. For example:
 - ITGPort1, GW1, and GWIS ITG1= “yes”—for the first ITG server
 - ITGPort2, GW2, and GWIS ITG2= “yes”— for the second ITG server
 - ITGPort3, GW3, and GWIS ITG3= “yes”—for the third ITG server.
-

-
- 2** If the connection has been working but has recently gone down, then do the following:
- 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.

END OF STEPS



Message delivery is out of order or delayed

Description *Message Care* works toward launching message calls in the order they are received in the mailbox. However, there are instances when *Message Care* cannot maintain message order.

Scenario

To demonstrate a situation where *Message Care* cannot maintain the order of message calls, we will assume the following scenario:

1. Three message calls (A, B, and C) arrive in a mailbox targeted to VDN 1234 respectively.
2. *Message Care* attempts to launch message calls A, B, and C to the *DEFINITY* ECS respectively.
3. *DEFINITY* ECS rejects message calls A and B due to queue limits.
4. Just as *Message Care* attempts to launch message call C, an agent releases a call therefore opening a queue slot.
5. Message call C gets put in the queue and arrives at an agent before message call A and B.



Control Window does not download completely

Description Users of Microsoft Corp. *Microsoft* Internet Explorer 4.x (IE4) and 5.x (IE5) may experience instances where the Control Window does not completely download or does not connect to the ICM server.

For the Agent Control Window, the download process stops after the “Establishing connection” message appears. For the Caller Control Window, the window opens but the applet does not download and the Internet Explorer Script Error window appears.

Action To correct this problem, do the following:

- 1 From the View menu in IE4 or the Tools menu in IE5, select the Internet Options menu item, and then select the Advanced tab.
- 2 From the Advanced tab, deselect the JIT compiler option.
- 3 If you are using IE5, restart your browser. If you are using IE4, reboot your PC.

END OF STEPS



The *Message Care* server locks up after installing *Message Care*

Description The *Message Care* server can lock up if you attempt to change Microsoft Corp. *Microsoft* Internet Explorer options while the Maintenance Monitor is running.

Another instance where the *Message Care* server can lock up is if you have Microsoft Corp. *Microsoft* Internet Explorer Active Desktop installed on the server.

Action If your server locked up due to changing an option, stop Microsoft Corp. *Microsoft* Internet Explorer from the Microsoft Corp. *Windows NT* Task Manager.

If your server locked up because you have Active Desktop installed on the server, uninstall Active Desktop.



pcANYWHERE answers but will not connect

Description If you have Remote Access Service (RAS) installed, then RAS will answer the call not Symantec Corporation *pcANYWHERE*.

Action Ensure that RAS is disabled in the Services dialog box.



Work Flow Manager unable to connect to SQL database

Description If upon system start-up, the WFM is unable to successfully log in to the SQL database, *Message Care* displays a pop-up dialog box on the *Message Care* NT server. The WFM repeatedly attempts to connect to the SQL database. The Mail Manager process will not begin mailbox polling until both the WFM and Mail Manager processes can successfully log in to the SQL databases.

Action Create the SQL login and password (see [Create an SQL Server login ID and password \(4-21\)](#) for instructions). If you restart the PC without creating the SQL login and password, the WFM will use most of the CPU and the PC will appear unresponsive.



Troubleshoot alarm and system message problems

Overview

Purpose The alarms and system messages troubleshooting section provides tips for handling alarm and system messages.

Contents The following alarms and system messages troubleshooting topics are covered:

- [Status message for callers \(13-60\)](#)
- [Permission denied error message when using MS Internet Explorer 4.x \(13-61\)](#)
- [All Phantom Extensions Busy alarm \(13-62\)](#)
- [Connection lost message appears on the Agent Control Window \(13-64\)](#)
- [Agent gets "Document contains no data" message when answering a message call \(13-65\)](#)
- [Agent gets a "Non Internet Agent" message \(13-66\)](#)



Status message for callers

- Description** Sometimes a caller cannot connect with an agent due to various reasons within the call center. In those cases, the caller sees one of the following status messages:
- **No facilities are currently available.** This is displayed when there are no PRI lines available to complete the call.
 - **Internet telephony capacity exceeded.** This is displayed when the limit of Internet voice calls has been reached.
 - **We are sorry, all lines are busy.** This is displayed when the limit of ASAI phantom calls has been reached.
 - **Call disconnected by call center.** This is displayed when the Internet call was “force disconnected” from vector processing.
 - **Call center returned busy signal.** This is displayed when an Internet call receives a busy treatment from vector processing.
- Action** Any of these conditions prevents a caller from being connected on the type of call requested. It is advisable to incorporate additional information and options for the caller on the Web page (such as hours of operation, an 800 number, an email address, and so on), and to consider adding extra capacity, more agents and/or longer staffed hours of operation.



Permission denied error message when using MS Internet Explorer 4.x

Description If you are using Microsoft Corp. *Microsoft* Internet Explorer 4.x and you get a **Permission Denied** message when you try to send a Web page using the Send Page button it is because you are trying to send a page that is not on your Web server.

Action

- 1** Choose Yes to the question “Do you want to continue running scripts on this page?”

- 2** Enter the URL in the Agent Control Window's text box.

- 3** Select the Enter button on the Agent Control Window or the Enter key on your keyboard to send the Web page.

END OF STEPS



All Phantom Extensions Busy alarm

Description The Work Flow Manager (WFM) generates an alarm when all phantom extensions are busy. The WFM reduces the maximum number of simultaneous calls by one to prevent the WFM from repeatedly attempting invalid call attempts.

The All Phantom Extensions Busy alarm generates an entry in the error log. For the "ALL PHANTOM EXTENSIONS BUSY" alarm, the error log indicates the new value of the maximum number of simultaneous calls. If the problem worsens, the error log shows the maximum number of simultaneous calls gradually dropping down to zero.

Action If you receive the "ALL PHANTOM EXTENSIONS BUSY" alarm, do the following:

- 1 Ensure that the Maximum Simultaneous Message Calls option (Message Care System Options Web page) matches the number of Phantom Extension administered for *Message Care* (this parameter is located in the ICC/Message Care Common Administration Web page).
 - 2 Ensure that all Phantom Extensions administered on the CTI process are also administered on the *CentreVu* CT server.
 - 3 If the above administration options are correct, then there may have been an event that caused the CTI process to go out of sync with the *CentreVu* CT server or the WFM. To correct this condition, continue with the following steps.
-

-
- 4** Reset the maximum number of simultaneous calls to its original value. To do this, enter the command **Maxcall x** (X=new value of the maximum number of launched calls) in the WFM text box. X must be a value less than the purchased *Message Care* capacity.
-
- 5** If you continue to receive the "ALL PHANTOM EXTENSIONS BUSY" alarm, restart the WFM and CTI processes. To gracefully shut down the WFM, see Steps 1–4 in the section called [Perform a graceful shutdown \(12-23\)](#).

END OF STEPS



Connection lost message appears on the Agent Control Window

Description A **Connection Lost** message appears in the text box 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 ICM server has been dropped, so the agent has no communication channel to *CentreVu* Internet Solution.

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 ICM server is up and the ICM application is running.

- 3** Check the firewall administration for a rule that causes TCP connections to time out after a certain interval of inactivity. Consider increasing this timeout parameter. If increasing the timeout on the firewall is not feasible, contact the Lucent Technologies Technical Services Organization (TSO) to see about using "keep-alive" packets between the ICM server and the agent computer.

- 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, contact your Account Executive.

END OF STEPS



Agent gets “Document contains no data” message when answering a message call

Description A **Document contains no data** message appears when the agent answers a message call. This scenario can occur if the Message Display URL has a different domain name than the Agent Idle URL.

Action Ensure that the Agent Idle URL uses the same domain as the Message Display URL.



Agent gets a “Non Internet Agent” message

Description An agent can receive this message if the following is true:

- The agent is logged in to the *DEFINITY* ECS but not in to the *CentreVu* Internet Solution
- The agent is associated with an Internet VDN/skill

In this situation the *CentreVu* Internet Solution could route a real-time Internet call and the agent would get the “Non Internet Agent” message. The agent can still take the call and have a voice conversation with the caller; however, Internet functions such as collaborative browsing and text chat will not be available to the agent.

Action To avoid getting these messages, do one of the following:

- Log out of the *DEFINITY* ECS and log in to the *CentreVu* Internet Solution.
- Do not assign Internet VDN/skills to voice only agents.



Troubleshoot installation problems

Overview

Purpose The installation troubleshooting section provides tips for problems regarding the installation of the *CentreVu* Internet Solution.

Contents The following installation troubleshooting topics are covered:

- [Receive an ODBC error when accessing the Message Care administration Web pages \(13-68\)](#)
- [Cannot start Mail Manager after installing Message Care \(13-69\)](#)
- [Mail Manager locks up while trying to poll a mailbox \(13-70\)](#)



Receive an ODBC error when accessing the *Message Care* administration Web pages

Description You can get an ODBC error when accessing the *Message Care* administration Web pages if you have not created an SQL server login ID and password.

Action See [Create an SQL Server login ID and password \(4-21\)](#) for instructions on how to create an SQL server login ID and password.



Cannot start Mail Manager after installing *Message Care*

Description If you inadvertently configure ODBC User DSNs instead of ODBC system DSNs, while creating ODBC data sources for the MCAdmin, MCArchive, and MCMessages databases, the following problems could occur:

- The Mail Manager will not be able to start (runtime error: **abnormal program termination**)
- You will not be able to access the *Message Care* administration Web pages.

Action Remove the User DSN entries for each database (MCAdmin, MCArchive, and MCMessages), and then reboot the server.



Mail Manager locks up while trying to poll a mailbox

Description If you enter incorrect Distinct License Keys during the installation of *Message Care*, then the Mail Manager can lock up while it polls mailboxes.

Action

1 Run *regedit*.

.....

2 Go to the
HKEY_LOCAL_MACHINE\SOFTWARE\Distinct\SerialNumber
key and enter the correct information in the *ExtensionKey* and
ExtensionNumber value strings.

.....
E N D O F S T E P S
.....



14 Errors and Error logs

Overview

Purpose The purpose of the following information is to discuss *CentreVu*® Internet Solution errors and error logs.

Audience This information is intended for installers, administrators, agents, and anyone who uses the *CentreVu* Internet Solution.

Contents The following information is covered in this section:

- [Message Care™ error logs \(14-2\)](#)
- [Message handling flow process errors \(14-7\)](#)
- [Log files on the ITG \(14-13\)](#)
- [Log files on the ICM server \(14-14\)](#)
- [Log file for the CTI process \(14-15\)](#)



Message Care™ error logs

Overview An error is a problem condition that occurs that may lead to service problems. Some errors are stored for informational purposes only. To provide a record of events related to the processing of messages and the operation of the system, the *Message Care* software logs errors and other events. 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 ICM server or the POP3-compliant mail 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 server appears in the *CentreVu* Computer Telephony reporting system.

Errors can occur during the message handling flow process. In some cases when an error condition occurs, the *Message Care* software delivers an alarm email message to report the problem. The administrator can then take the necessary action to correct the problem.

Log and error files

Message Care stores all log and error files (except the archive log) in the default-installation directory *C:\Program Files\Message Care\logfiles*.

Message Care has the following error logs:

- *Message Care* error log (*mcerror.log*)
 - Work Flow Manager error log (*wfmlog.txt*)
 - Mail Manager error log (*mungeerror.log*)
 - MIME DLL log (*MimeDllError.log*)
 - Maintenance Monitor error log (*mmMMDD.txt*)
 - Administration log (*AdminLog.txt*)
 - Archive log (*archive.log*)
-

Message Care alarms

In specific situations, *Message Care* will deliver alarms. The following list provides the alarms that the *Message Care* software delivers:

- Database full alarm
- Database 95% full alarm
- Database 90% full alarm
- Database 80% full alarm
- Unable to connect to POP3 host—invalid host name or password
- Unable to connect to POP3 host—unknown host
- POP3 server not responding
- Work Flow Manager lost connection to Mail Manager
- All Phantom Extensions Busy

Error log files The error log file where *Message Care* application errors are logged is as follows: `\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: `\temp\mungeerror.log`
- MsgCareDLL Process: `\temp\MimeDllError.log`
- Work Flow Manager Process: `\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 full
- 2002 Messages database 95% full
- 2003 Messages database 90% full
- 2004 Messages database 80% full
- 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

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 (SMTP) may be included in error messages 1002, 1012, and 1015.

These include the following, which are taken from RFC 821 (SMTP):

- 421, 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

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

Whenever there is a recoverable delivery failure, *Message Care* will try to redeliver the message until it succeeds. Whenever there is a non-recoverable delivery failure, *Message Care* will record an error log entry for non-recoverable delivery failures but will not attempt to redeliver the message. The log will record the *DEFINITY* ECS extension where the call was delivered, the agent ID if available, the called number, any Adjunct/Switch Applications Interface (ASAI) digits associated with the call, and any error conditions received from *DEFINITY* ECS, including any J-TAPI provider proprietary data.

Recoverable delivery failures

Your vectors may disconnect message calls due to designed queue limits. 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 a 15-minute delay. When retrying a message call, the *Message Care* software launches the call using the same call setup parameters, dialed number, and any ASAI-provided digits. A retried message will be placed in the overflowed queue based on its retrieval time.

The following are the known recoverable message call delivery errors that will result in *Message Care* launching message calls repeatedly until success:

- No available resources to initiate message calls
- *DEFINITY* ECS returns busy condition
- *DEFINITY* ECS vector processing drops call
- Message call dropped by a *Message Care*-enabled agent without a reason code.

Non-recoverable delivery failures

—Other conditions, such as the call being routed off-switch repeatedly, have a limited number of retries.

The *Message Care* software stops trying to deliver a message call after the message call has received three non-recoverable call delivery errors that are encountered in consecutive call attempts. For example, if you incorrectly administered the number to call and the message call repeatedly failed to be delivered by the *DEFINITY* ECS, *Message Care* will stop launching this message call after three tries.

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

Introduction Errors can occur during the message handling flow process.

The following three cases are when an alarm occurs:

- When the database is reaching its capacity
- When there is a loss of Mail Manager functionality
- When the maximum number of message calls are reduced due to lack of available resources

For a detailed description of the message handling flow process, see [Chapter 8. How to process message calls](#).

Error handling process The following steps describe the errors that can occur in the message handling process:

1 A consumer sends a message to the call center.

2 Consumer messages arrive in the monitored mailboxes at the call center.

2100Invalid 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 arrived message by polling an administered list of mailboxes at the specified intervals (every 5 minutes is the default).

Polling Interval error: *Message Care* polls each mailbox at specified intervals. This means that there is a minimum of the specified interval from the start of one polling cycle to the start of the next polling cycle. If the polling cycle takes longer than the specified interval (for example, too many messages to process), 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 the specified interval even if polling failures occur. An error is recorded each time a polling failure occurs.

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 (if Auto Acknowledgment is administered) 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. 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 continues 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.

-
- 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 system resources to launch message calls, the *Message Care* software holds the messages in Overflowed state and initiates calls for them as resources become available.

Message Call Routed Off the DEFINITY error: A message's status is set to failed if three consecutive message calls relative to the same message are routed to an invalid VDN (either not administered or off the *DEFINITY* ECS serviced by the *CentreVu* Computer Telephony server).

Any time a message call is routed to an invalid VDN, the *Message Care* software will release the message 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. After three unsuccessful retries, the *Message Care* software will register the message as a failed message.

Calls may be routed off the *DEFINITY* ECS either when the call attempt is first made or when an agent decides to transfer the message call.

The error log will record the called number and any ASAI-provided digits associated with the call.

-
- 7** *CentreVu* CMS begins tracking the message when the *DEFINITY* ECS launches the phantom call, using its assigned VDN.
-

-
- 8** 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 *CentreVu* CT sends a call-answered notification to the *Message Care* software.

Dialed Number Not Valid error: This is a non-recoverable delivery failure.

Call Answered and Dropped by an Agent Not Logged In error: If an agent is logged in to the *DEFINITY* ECS but not logged in to the *Message Care* software, a message call will be delivered to the agent, but no PagePop 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 place the message in the overflow message state.

When a message call is answered by an agent not logged into the *Message Care* software, the history log will record the extension, and agent ID if available.

-
- 9** When the *Message Care* software receives the call-answered notification, it delivers the message to the agent through a PagePop:
1. The *Message Care* software supplies the agent's browser with the Uniform Resource Locator (URL) associated with the received 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 should probably drop the message call through the voice terminal or the Agent Control Window. 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.

2. 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.
3. 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 attachments.

The customer must provide the appropriate helper applications for each agent, based on the types of messages that agents are expected to receive. For instance, agents who process faxes must have a helper application for viewing and handling faxes.

4. 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. The customer 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, the customer need not rely on the agent to remember to retrieve the suspended message; the *Message Care* software handles it automatically. See [Sample vectors for retrieve and suspend \(2-48\)](#).

-
- 10** 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 administered, and *Message Care* releases the call.

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.

-
- 11** The following two errors can occur when the agent attempts to retrieve a message

- **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.

□

Log files on the ITG

Location of log files on the ITG

The ITG log files (*logfile0* and *logfile1*) are located in the */mmcs/log* directory on the ITG.

For more information about the log files on the ITG, see [Supporting the ITG \(12-3\)](#). Refer to the section, “Log files on the ITG.”



Log files on the ICM server

Location of log files on the ICM server

The ICM log file (*icmlog.txt*) is located in the *c:/itg* directory.

For more information about the ICM server log file, see [Supporting the ICM server \(12-5\)](#). Refer to the section, “Log files on the ICM server.”



Log file for the CTI process

**Location of CTI process
log file**

The log file (*ctilog.txt*) is located in the *c:/itg* directory.

For more information about the CTI process log file, see [Supporting the CTI process \(12-12\)](#). Refer to the section, “Log files on the CTI process.”





Appendix A: Multisite Configuration

Overview

Purpose The purpose of this information is to discuss the following about the multisite feature:

- [What is the multisite feature? \(A-2\)](#)
- [How do I install the CIRS software? \(A-5\)](#)
- [How do I administer the CIRS software? \(A-6\)](#)
- [How does the multisite feature work? \(A-9\)](#)
- [How do I monitor my multisite environment? \(A-11\)](#)
- [How can I customize interactions with the CIRS? \(A-13\)](#)

Audience This information is intended for system administrators, supervisors, support personnel, and anyone who wants to know more about the multisite feature.



What is the multisite feature?

Important! The *Message Care*[™] offer does not support a multisite configuration.

Introduction The multisite feature enables your call center to route *CentreVu*[®] Internet Solution calls to an ICM before the calls enter the *DEFINITY*[®] ECS. With this capability, *CentreVu* Internet Solution calls can be routed to the best ACD based on the resources available on the local ICM or based on agents logged in to the local ICM. By using resource routing, a call is routed to the most available ICM for the call type. Resource routing is accomplished through a Centralized Internet Routing Service (CIRS).

Things to know about the multisite feature

The following list provides important information about the multisite feature:

- *CentreVu* Internet Solution reporting capabilities are for single site reporting and not multisite reporting.
 - The multisite feature assumes that all ICM sites are alike. This means that all ICMs must be equally capable of servicing a call request. For example, if there is a VDN that handles shoe requests, all ICMs must have a VDN that handles shoe requests.
 - In some instances you may want to combine call types and skills. For example, if you want a different VDN for voice type shoes and a different VDN for chat type shoes, then you would have to create separate skills (for example, vshoes for voice type and cshoes for chat type).
 - Having a multisite environment does not mean that you are bound to routing all your calls through the Centralized Internet Routing Service (CIRS). You can continue to have specific calls route to an ICM that is not connected to the CIRS.
-

Multisite software The multisite feature introduces new software to your *CentreVu* Internet Solution call center. This new software component is called the Centralized Internet Routing Service (CIRS) and must run on a Microsoft Corp. *Microsoft Windows NT*® 4.0 server platform. The CIRS is responsible for routing calls to the best ACD based on resources (call type and agent).

The CIRS successfully performs resource routing by doing the following:

- Keeping track of resource information. Each call that comes into your *CentreVu* Internet Solution maps to a resource type (see [Call types and resource types \(A-3\)](#)). Resource information is passed to the CIRS from each ICM connected to the CIRS.
- Maintaining a count of agents logged in to each ICM. The CIRS receives agent login information from each ICM connected to the CIRS.
- Identifying the VDN to use for the call and passing the VDN to the selected ICM. The ICM then launches the call to that VDN on the *DEFINITY* ECS.

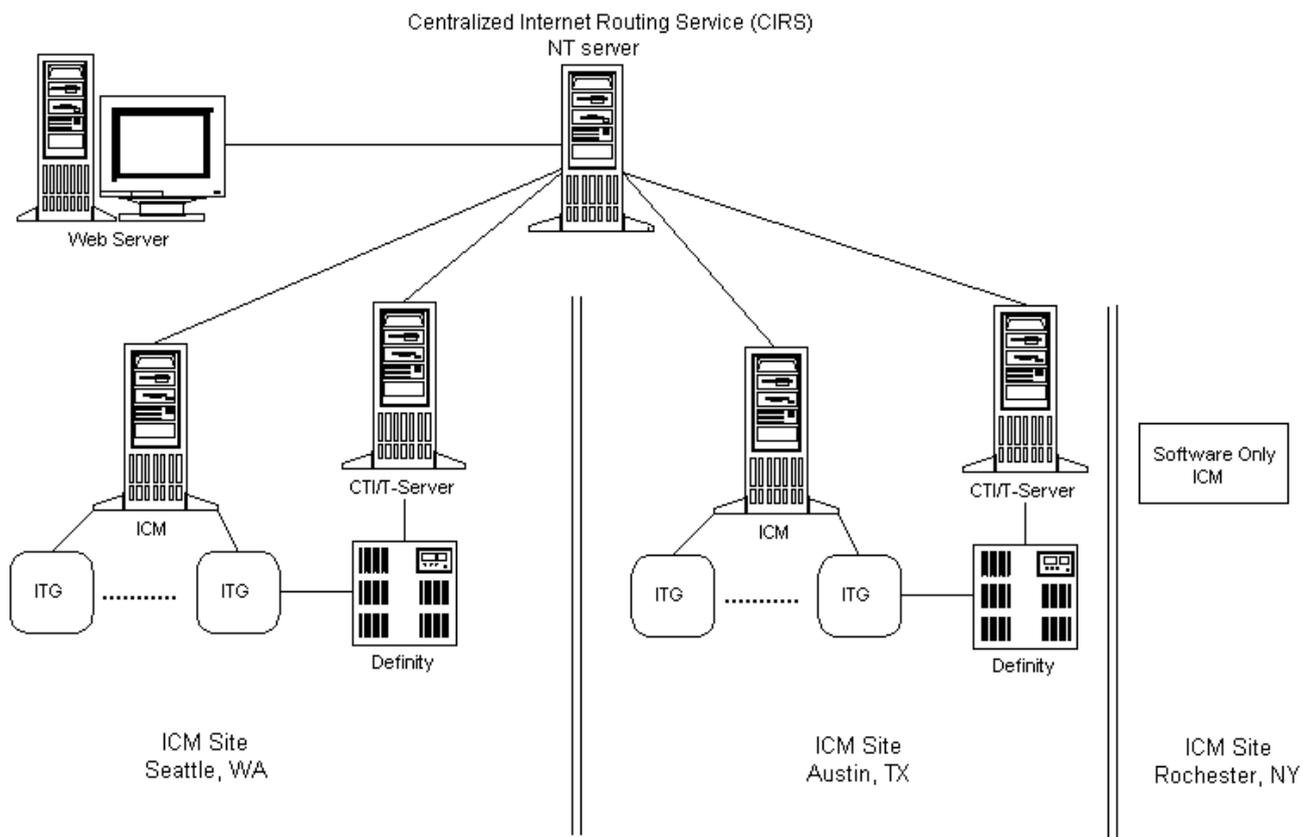
If an ICM is not connected to the CIRS or is not sending information to the CIRS, the CIRS does not consider the ICM available to take calls.

Call types and resource types

The following table provides call type and resource type mapping:

Call Type	Resource Type
Voice	Voice
Chat	Chat
Callback	Chat
Callback and Collaborate	Chat

Multisite configuration The following figure illustrates a high-level architecture view of the multisite feature:



How do I install the CIRS software?

Before you begin Before you begin The information contained in the install instructions describes only those procedures that require you to input information or make choices.

Important! Before you begin the CIRS install, do the following:

- Stop the Microsoft Corp. *Microsoft*® Internet Information Services (IIS).
- Make sure JRun is already installed. For procedures on how to install JRun, see [Install JRun \(3-3\)](#).

Install instructions

1 Insert the ICM/CTI R4.1 CD-ROM.

2 From the CIRS folder, select *setup.exe*.

Result: The Setup program prompts you through the installation process. Follow the instructions on the screen.

You will need to select the following options:

- Destination location—select the location. If you are installing the CIRS on the server in which the ICM software is installed, then install CIRS in the same directory as the ICM. The same is true if you are installing the CIRS on the server in which the CTI software is installed.
- Select Program Folder—you can select the default or create a new program folder.
- Configure JRun—select Yes. In this step, you are configuring the CIRS to work with JRun.
- Destination Location of JRun—provide folder where JRun is installed.
- Install JRE—select Yes. (You need to install JRE for a new install and for an upgrade.) Also, select I18N if you are using multiple languages.
- Reboot—you can reboot the system at this point or you can reboot your system after you have installed all *CentreVu* Internet Solution software.

END OF STEPS



How do I administer the CIRS software?

Introduction After you have installed the CIRS software, you must administer the following:

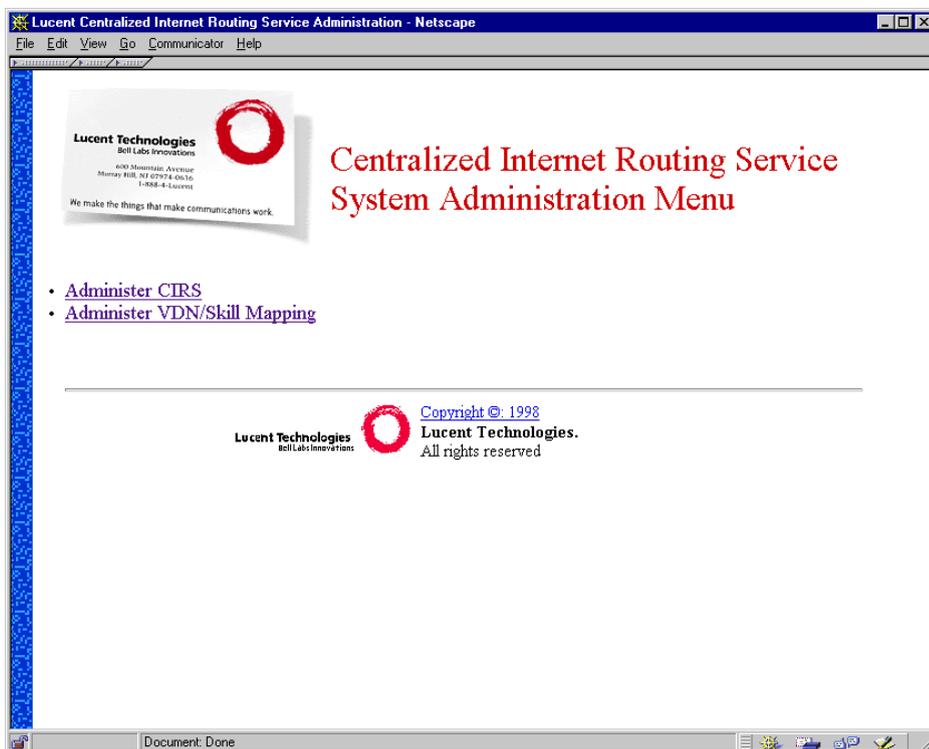
- Skill and VDN mapping for each ICM that is part of the multisite configuration
- “No ICMs Available URL” parameter for the Web page that appears in the caller's browser when their call cannot be placed into the call center.

To administer the above parameters, access the Centralized Internet Routing Service System Administration Menu Web page by entering the following page location in the browser window:

http://<CIRS_server_name>/admin/cirs

Illustration

An illustration of the Centralized Internet Routing Service System Administration Menu Web page follows:

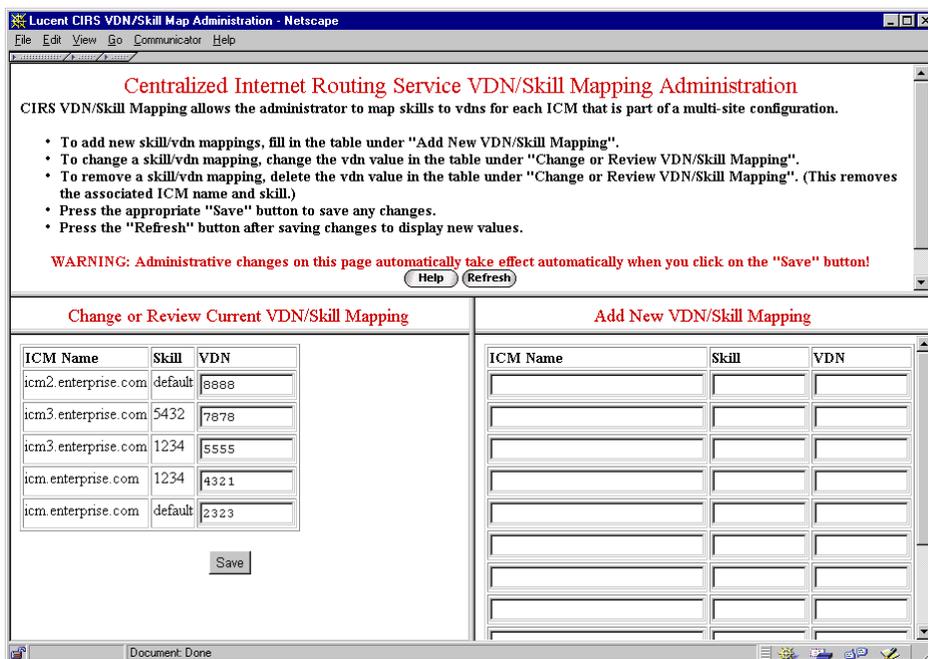


Administer skill and VDN mappings

This administration Web page enables you to administer skill and VDN mappings for each ICM. The CIRS uses this administration to ultimately determine the correct VDN for the call request.

Illustration

An illustration of the Centralized Internet Routing Service Skill/VDN Mapping Administration Web page follows:



Default VDN

You must administer a default VDN for each ICM connected to the CIRS.

The CIRS uses the default VDN in the following cases:

- A skill parameter is not passed to the CIRS when the consumer selects the Call Us button.
- A skill parameter is passed to the CIRS, but the skill cannot be found in the skill/VDN mapping for the selected ICM.

Administer URL and Router Class file

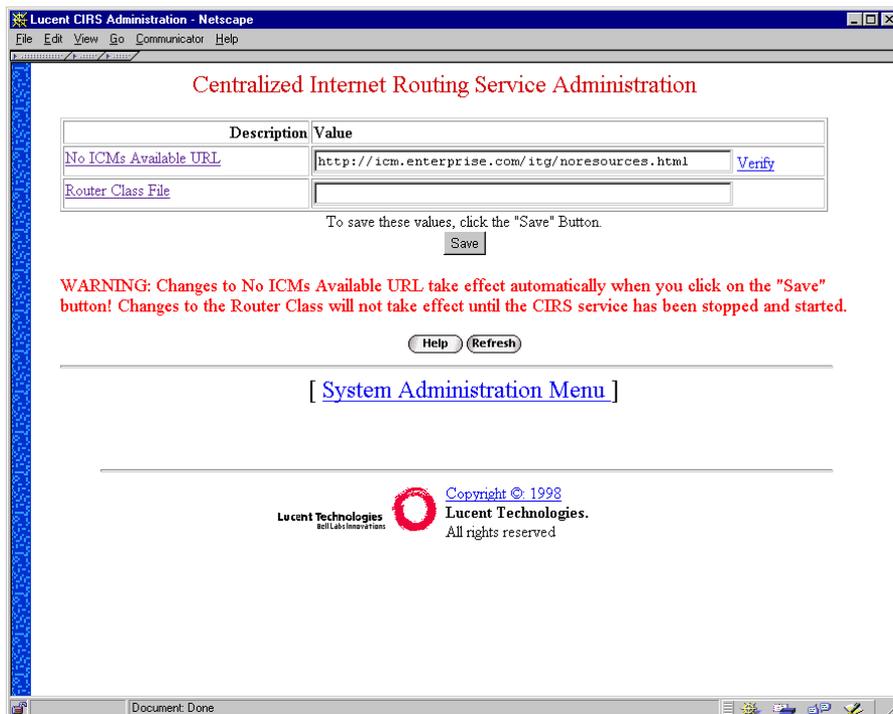
The CIRS Administration Web page contains the following two fields:

- **No ICMs Available URL**—this field contains the URL of the page that is displayed to the caller when the caller's Internet call cannot be placed to the ICM because no ICMs are available.
- **Router Class File**—this field allows you to use your own router. If you choose to replace the Lucent CIRS Router with your own router, then you will need to provide the router class name in this field.

If you leave the Router Class File field blank, then the CIRS will use the Lucent-provided router class. In addition, if you enter an incorrect router class file name or if you have not tested your router, the CIRS will not work. See [How can I customize interactions with the CIRS? \(A-13\)](#) for more information about customizing interactions with the CIRS and/or controlling the routing of calls through the CIRS.

Illustration

An illustration of the Centralized Internet Routing Service Administration Web page follows:



The Centralized Internet Routing Service Administration Web page provides more information about the No ICMs Available URL and the Router Class File parameters. For more information about these two fields, click on the description (blue underlined) of the field for which you want information.



How does the multisite feature work?

Introduction To describe how the multisite feature works, this section provides an explanation of what happens when a voice call (voice call one) with a skill of *shoes* enters the CIRS. Then, this scenario will be built upon by introducing a second voice call (voice call two) into the CIRS. For each initiation of a voice call, the Web page in which the caller selects the Call Us button contains the */servlet/CIRS* string, and the call with its associated *skill* parameter is passed to the CIRS.

Voice call one enters the CIRS For voice call one, the following table is used for demonstration purposes:

	Total Active Calls	Voice Limit	Active Voice Calls	Chat Limit	Active Chat Calls	Total Agents
ICM 1	0	20	0	20	0	1
ICM 2	0	20	0	20	0	2

The following steps describe how the CIRS determines the ICM for which voice call one is routed:

1. The CIRS chooses all ICMs with available voice resources for the call type.

Using the table above, both ICM1 and ICM2 have available voice resources.

2. The CIRS routes the call to the ICM with the most available agents. The most available agents means that there are more agents logged in to the ICM than there are active calls on that ICM. Therefore, it is more likely that an agent will be available at the ICM.

Using the table above, ICM2 has more agents (2) logged into the ICM than there are voice calls (0). Therefore, the CIRS will route voice call one to ICM2.

3. The CIRS checks the skill and VDN mapping administered for the selected ICM. For example, if the skill passed from the Call Us Web page is *shoes*, then the CIRS will check the skill/VDN mapping to see which VDN is mapped to skill *shoes*.

If no skill is passed to the CIRS, then the CIRS will automatically use the default VDN that is mapped for the selected ICM.

The CIRS passes the VDN to the selected ICM. The ICM then launches the call to the correct VDN on the *DEFINITY ECS*.

Voice call two enters the CIRS

With voice call two, the available resources change to the following:

	Total Active Calls	Voice Limit	Active Voice Calls	Chat Limit	Active Chat Calls	Total Agents
ICM 1	0	20	0	20	0	1
ICM 2	1	20	1	20	0	2

The following steps describe how the CIRS determines the ICM for which voice call two is routed:

1. The CIRS chooses all ICMs with available voice resources for the call type.
Using the above table, both ICM1 and ICM2 have available voice resources.
2. The CIRS then routes the call to the ICM with the most available agents.
Using the above table, both ICMs have the same number of available agents (1). Therefore, the CIRS uses the third criterion to determine the ICM for which voice call two should be routed.
3. The CIRS identifies which ICM has the most call type and agent resources available.
Using the above table, ICM1 has the most call and agent resources available; therefore, the CIRS routes voice call two to ICM1.
4. See Step 3 in [Voice call one enters the CIRS \(A-9\)](#) for the remainder of the process.

When no ICMs are connected or active

When there are no ICMs connected to the CIRS or active with the CIRS, the administered “No ICMs Available URL” is returned to the caller's browser.

When ICMs have no available resources

When the ICMs connected to and active with the CIRS do not have any resources, the following takes place:

1. The CIRS still routes the call to an ICM.
2. Because there are no resources on the ICM for which the CIRS routed the call, a resource problem is presented on the ICM and in the Call Management System for the Internet (ICMS).

□

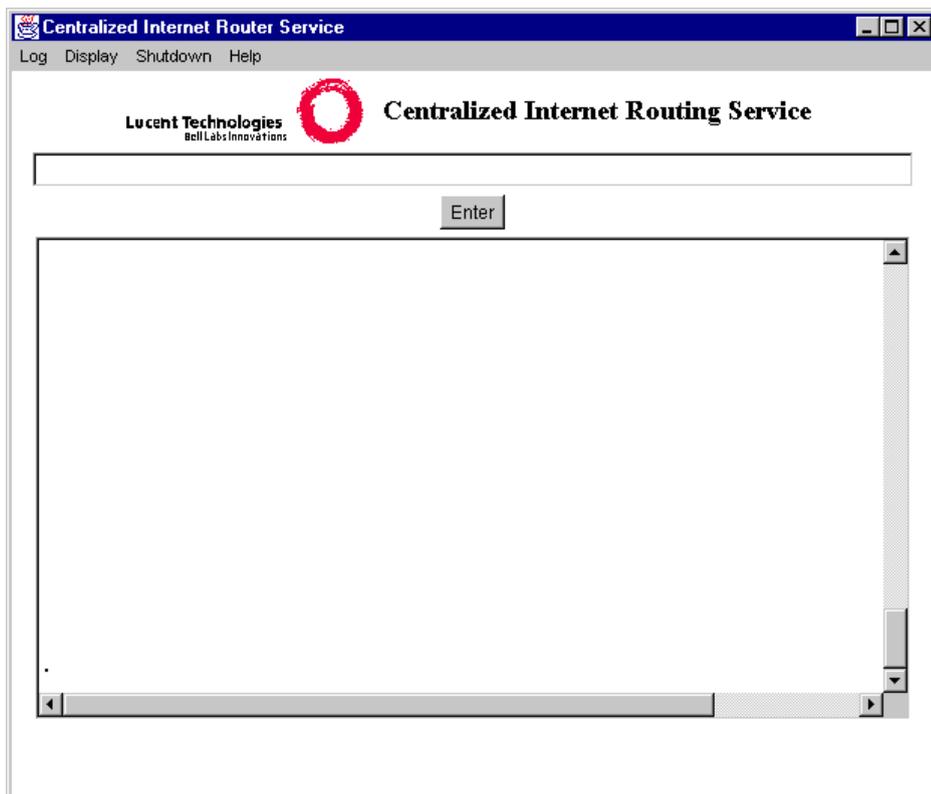
How do I monitor my multisite environment?

The CIRS window Use the CIRS window to monitor your multisite environment.

To access the Centralized Internet Routing Service window, click on the Windows Start button, and then click on the Lucent CIRS menu entry.

Illustration

The following illustration provides an example of the CIRS Control Window:



CIRS window menus The following table describes each CIRS menu item:

Menu Name	Menu Item	Description
Log	Normal	Changes the CIRS logging level to less detail.
	Debug	Changes the CIRS logging level to more detail.

Menu Name	Menu Item	Description
Display	Resources	Displays available resources for each ICM.
	Nextroute	Informs you of the next ICM the CIRS will select for each type of call.
	Agents	Lists the agents logged in to each ICM in the multisite environment.
	Connections	Lists all the connections to the CIRS.
	Parameters	Displays all CIRS parameters.
Shutdown	Name of ICM	Displays the ICM name for each ICM connected to the CIRS. To prevent the CIRS from routing calls to a specific ICM, select the ICM name from the list. For an alternate method for shutting down ICMs connected to the CIRS see Remotely shut down ICMs connected to the CIRS (A-12) .
Help	Version	Displays the version information for the CIRS.
	Commands	Displays the list of valid CIRS commands.

Remotely shut down ICMs connected to the CIRS

To remotely shut down ICMs that are connected to the CIRS, do the following:

1. Telnet to CIRS port 8108.
2. To shut down an ICM, type the following at the prompt: **set icmstate "ICM's domain name" false**
3. To restart an ICM, type the following at the prompt: **set icmstate "ICM's domain name" true**



How can I customize interactions with the CIRS?

Important! This information is intended for developers with a knowledge of Sun Microsystems, Inc. *Java*[™] programming. For detailed information about the following information, enter the following location in the browser window:

http://<cirs_server_name>/itg/docs

Introduction The multisite feature provides a Router Application Program Interface (API) that allows you to interact with the CIRS and/or control the routing of calls through the CIRS.

The Router API provides three capabilities for interaction and control of routing calls through the CIRS into a *CentreVu* Internet Solution environment. These three capabilities are as follows:

- Override default route selection algorithm—this capability provides a default route selection algorithm for distributing calls to ICM servers. You can replace this algorithm with a custom developed algorithm to make call route decisions based on your own criteria.
- Create an application that launches calls—instead of using a Web page that interfaces directly with the CIRS through a servlet to launch *CentreVu* Internet Solution calls, you can develop a separate application (Sun Microsystems, Inc. *Java* applet or program) that launches *CentreVu* Internet Solution calls. The application you create uses the Router API to place a call route request to the CIRS. The CIRS then identifies the ICM to use and the application uses the ITG API Specification for placing and controlling calls to that ICM.
- Use a different centralized tool for routing calls—the Router API provides the information obtained by CIRS for interpretation and use by a Sun Microsystems, Inc. *Java* application that interfaces with another centralized tool.



How can I customize interactions with the CIRS?



Appendix B: Using another CTI application

Overview

Purpose Internet Call Center (ICC) supports the use of another Computer Telephony Integration (CTI) application to log in to the *DEFINITY*® ECS. However, to register with the *CentreVu*® Internet Solution, agents are still required to log in to the *CentreVu* Internet Solution using the Agent Login window. □

Administration of ITG and ICM server

Utilizing *CentreVu* Internet Solution CTI enhancements

To utilize the CTI enhancements available in the *CentreVu* Internet Solution, the following administrative tasks must be performed. These tasks are performed through the main administration Web page. For procedures on how to access the Lucent *CentreVu* Internet Solutions System Administration Menu, see [Where do I administer my CentreVu Internet Solution software? \(5-3\)](#).

- The preferred method for an agent logout is to use the logout button on the Agent Control Window. This logs the agent out of the *CentreVu* Internet Solution as well as the *DEFINITY* ECS. Other CTI applications should be monitoring at least one of the agent's skills and should detect the logout, thereby logging the agent out of the CTI application. Or, you may elect to Disable the "Agent Logout on Close" option located on the ICC/Message Care Common Administration web page.

When disabled, this option places the agent in the AUX work state if the connection to the ICM application on the ICM server is lost or dropped (for example, the connection to the ICM application on the ICM server can be lost or dropped if the agent closes the Agent Control Window); thus, the agent will only be required to log back in to the *CentreVu* Internet Solution by way of the Agent Login window.

When enabled, this option will log the agent out of the *DEFINITY* ECS if the connection to the ICM application on the ICM server is lost or dropped; thus, the agent will have to log back in to the *DEFINITY* ECS by way of the CTI application and log back in to the *CentreVu* Internet Solution by way of the Agent Login window.

- Disable CTI monitoring of ICC or *Message Care*TM skill in your CTI application.

The *CentreVu* Internet Solution must be notified when an agent logs out of the skill. If another CTI application is monitoring the ICC or *Message Care* skill, logout events may not get sent to the *CentreVu* Internet Solution.

If you desire to have your CTI application monitor the ICC or *Message Care* skill, then you will have to add a "substitute" skill (one that does not appear in a vector and is not CTI enabled) to the

agents skill set, and then add it to the list of Monitored Hunt Groups. The *CentreVu* Internet Solution will monitor the “substitute” skill to keep track of when agents log in and log out of the *DEFINITY* ECS. To add a skill to the list of Monitored Hunt Groups, use the Telephony Server Administration web page.

- Ensure that agents are not automatically put into an available ACD state (manual-in or auto-in) before logging in to the ICC.

If agents are automatically placed in an available ACD state prior to logging in to the *CentreVu* Internet Solution, they may receive calls that they are unable to handle (for example, if a text-chat call is delivered, the agent will have no method of handling this call without the *CentreVu* Internet Solution interface).

- Optional—disable the “Agent Logout” option located on the ICC/ Message Care Common Administration web page.

When disabled, this option does not allow you to log out of the *DEFINITY* ECS by way of the Agent Control Window. When you use another CTI application to log in to the *DEFINITY* ECS, you should log out of the *DEFINITY* ECS by way of the same CTI application.

If you choose to enable this option, the agent will be able to log out of the *DEFINITY* ECS by way of the Agent Control Window. If you are using another CTI application to monitor the agent, then this CTI application must be able to detect that the agent logged out to monitor the agent appropriately.

If you do not use another CTI application to log in to the *DEFINITY* ECS, do the following:

- Enable the “Agent Logout on Close” option located on the ICC/ Message Care Common Administration web page.
- Enable or disable “Agent Logout” option depending on whether agents should log out from the Agent Control Window or from the voice terminal.



Helpful tips

—Introduction This section provides information that may be helpful when using another CTI application.

Incorrect agent login information entered in ICC agent login Web page

Problems could arise if the agent uses incorrect login information to log in to the Agent Login web page after logging in to the *DEFINITY* ECS by way of another CTI application.

For example, the agent logs into the *DEFINITY* ECS by way of another CTI application and then logs in to the *CentreVu* Internet Solution (through the Login web page) but in doing so, enters someone else's Agent ID or extension. Since the agent is already logged in, there is no validation through the *DEFINITY* ECS, and the login appears successful. However, internet data may be delivered to the wrong agent (or may not be delivered at all) since different login information was used for logging in to the *DEFINITY* ECS and the *CentreVu* Internet Solution.

The following table lists some things that you can do (or Lucent Technologies Professional Services can do for you) that will ensure that the correct login information is used upon each login.

Solution	Disadvantage(s)
<p><i>Solution 1:</i></p> <p>For each agent, create a Login Web page that contains the agent's ID, extension, and password (if required).</p> <p>If storing agent IDs or passwords in the web page is a security issue for your call center, then you may want to use Solution 2.</p>	<p>Agent may not have the same extension each day.</p> <p>HTML source is easily viewable; therefore, passwords and agent IDs can be copied.</p>

Solution	Disadvantage(s)
<p><i>Solution 2:</i></p> <p>Modify the CTI application so that it automatically generates and launches a Web page containing the same login information that was entered in the CTI application. This Web page will automatically submit the login information for logging into the <i>CentreVu</i> Internet Solution, and then be deleted for password security.</p> <p>You can use the <i>autofrm.html</i> file located in the samples directory on the ICM server as an example of a self-submitting login Web page.</p>	<p>The CTI application must support the generation and launching of the login Web page.</p>
<p><i>Solution 3:</i></p> <p>Have the CTI application launch the browser and in the command line, add the URL for <i>http://<icm_server_name>/servlet/WT/agentsu</i> followed by the required parameters.</p> <p>Example of command line:</p> <pre>"C:\netscape" http://http:// <icm_server_name>/servlet/WT/ agentsu?agentId=1234 &agentExt=8265& agentName=Bob&agentPassword=1234...</pre> <p>For information on the parameters that must be passed to <i>http://<icm_server_name>/servlet/WT/agentsu</i>, see Chapter 11, Web page guidelines.</p>	<p>The CTI application must support the generation and launching of the login Web page.</p>

Solutions 2 and 3 automate the login process.

The remainder of this section describes the situations that could occur if Web administration and login procedures for using another CTI application are not followed as stated in this document.

Logging in to the *CentreVu* Internet Solution before the other CTI application

When the agent logs in to the *CentreVu* Internet Solution first, the *CentreVu* Internet Solution will automatically log the agent in to the *DEFINITY* ECS. Then, when the agent attempts to log in to the *DEFINITY* ECS by way of another CTI application, the CTI application denies login because the agent is already logged in to the *DEFINITY* ECS.

To rectify this situation, the agent will have to do the following:

- Log out of the *CentreVu* Internet Solution (thus logging out of the *DEFINITY* ECS).
- Log back in to the *DEFINITY* ECS by way of the other CTI application.
- Log back in to the *CentreVu* Internet Solution.

Manual-in or auto-in modes activated upon logging in to the *DEFINITY* ECS via a CTI application

When you administer the agent to begin receiving calls immediately upon login, internet calls may be directed to the agent, but the agent will not have the tools necessary to service the call because the agent has not logged in to the *CentreVu* Internet Solution. *CentreVu* Internet Solution features such as Web pop, escorted browsing, text chat, and agent-initiated PSTN callback will not be available. Therefore, it may be necessary to modify your CTI application to ensure the agent is placed in the AUX work mode upon login.

Lost connection logs agent out of *DEFINITY* ECS

If you have enabled “Agent Logout on Close,” and the agent is logged out of both the *CentreVu* Internet Solution and the *DEFINITY* ECS, then the agent will have to perform the following:

- Log back in to the *DEFINITY* ECS by way of your CTI application.
 - Log back in to the *CentreVu* Internet Solution.
-

Another CTI application is monitoring the CentreVu Internet Solution skill

The *CentreVu* Internet Solution must monitor the ICC or *Message Care* skill to keep track of when agents log in and log out of the *DEFINITY* ECS.

If a CTI application other than the *CentreVu* Internet Solution is monitoring the skill, then the *CentreVu* Internet Solution will not receive necessary status messages. This will result in inconsistent states between the ICC *CentreVu* Internet Solution and the *DEFINITY* ECS, thus causing the *CentreVu* Internet Solution not to function as designed.

For example, if another CTI application is monitoring the skill and an agent logs out of the *DEFINITY* ECS, the *CentreVu* Internet Solution will not be made aware of the logout and the connection between the *CentreVu* Internet Solution and the Sun Microsystems, Inc. *Java*TM applet will not be relinquished.





Appendix C: Overcoming feature limitations due to browser security restrictions

Overview

Purpose The purpose of this section is to describe how to work with browser security restrictions regarding the HTML forms-sharing feature and the Send Page button.

The degree to which HTML forms sharing and the Send Page button work is dependent upon several factors. These factors include the following:

- The version of the Web browser being used
- Whether the Web page being shared is loaded from the local Web domain (same domain from which the applet was downloaded) or a remote domain
- Whether the applet is regarded as being digitally “signed”

Audience This information is for system administrators and support personnel.



Browser security restrictions

About Because of security considerations on the Internet, newer browsers (Microsoft Corp. *Microsoft*® Internet Explorer 4.x and Netscape Communications, Inc. *Netscape*® *Navigator* 3.03) have set security restrictions on the capabilities of downloaded applets and scripts. Browsers have set security restrictions to protect you from damage to your data and to protect your privacy. If your Internet Call Center shares Web pages with consumers, then your call center will most likely encounter browser security restrictions.

Why do browser security restrictions affect the Send Page button and HTML forms sharing?

The Internet Call Center applet must be able to read the current URL from the browser window for the Send Page button to work, and it must be able to read form data from a Web page in the browser window in order to provide form sharing. The security restrictions in the browser limit access to such data unless additional privileges are granted.

The ICC and browser security

Full privileges are still granted to the applet when the browser currently contains a Web page that was downloaded from the same domain as the applet. Conversely, restrictions will apply when the Web page did not come from the same domain as your applet.

For example, if the applet was downloaded from *www.lucent.com*, then the applet could access Web pages from *www.lucent.com* without any restrictions. If the applet was downloaded from *www.lucent.com* and tries to access Web pages on *bell-labs.lucent.com*, then it would not be considered the same domain, and restrictions would apply.

What can be done to overcome browser security restrictions?

To overcome browser security restrictions that affect HTML forms sharing and the Send Page button, you can do one or more of the following:

- Install the ICM software on your Web server (this solution requires that you have only one Web server)—this solution works for the HTML forms-sharing feature and the Send Page button.
- If the ICM software is not installed on your Web server, then link your Web server to the ICM server by using a CGI script—this solution works for the HTML forms-sharing feature and the Send Page button.
- Embed Javascript in each Web page—this solution works for the HTML forms-sharing feature and the Send Page button.
- Use digitally-signed scripts and applets to request privileges (Netscape Communications, Inc. *Netscape Navigator* 4.x only)—this solution works for the HTML forms-sharing feature and the Send Page button.
- Remove the Send Page button—this solution works for the Send Page button.

Use a CGI script to link your ICM server and Web server

The Internet Call Center (ICC) provides the following two types of CGI scripts that you can use to link your ICM server and Web server. Both scripts are located in the installation directory on the ICM server.

- *domainlinker.class*— Sun Microsystems, Inc. *Java*TM Servlet
- *domainlinker.pl*—Perl script

We recommend that you use the Sun Microsystems, Inc. *Java* Servlet *domainlinker.class*. If your Web site cannot run Sun Microsystems, Inc. *Java* Servlets, then use the *domainlinker.pl* script.

Implementing the domainlinker script

To implement the domainlinker script, do the following:

1. Locate the domainlinker script (*domainlinkder.class* or *domainlinker.pl*) on the ICM installation directory and install it on your Web server(s). You can install the script at any location on your Web server(s) that you choose.
2. Test the domainlinker script using the domainlinker URL (for example, *http://<Web_server.domain_name.com>/servlet/domainlinker* or *http://<Web_server.domain_name.com>/servlet/domainlinker.pl*). From your browser, enter the URL. If you installed the script successfully, a Web page appears indicating success.
3. Inform ICC of the new script.
4. You can inform ICC of the new script using one of the following methods:
 - If you are linking to only one Web server domain, then you can set the domainlinker parameter to the domainlinker URL through the *icmparms.txt* file. For example,

```
domainlinker=http://  
<Web_server.domain_name.com>/servlet/  
domainlinker
```
5. If you are linking to more than one Web server domain, then you must set your domainlinker parameter in the caller Web page and the agent login Web page for each Web server domain. For example, the agent login Web page and caller Web page located on Web server domain A must refer to the domainlinker script on Web server domain A and the agent login Web page and caller Web page located on Web server domain B must refer to the domainlinker script on Web server domain B. See the Web guidelines documentation located on your ICC R4.0 CD-ROM for more information about parameters for the agent and caller Web pages.

Digitally-signed scripts to request privileges

This solution only works for Netscape Communications, Inc. *Netscape Navigator* 4.0 and greater.

Netscape Communications, Inc. *Netscape Navigator* 4.0 and greater supports a security model that allows digitally-signed scripts to request privileges. Alternatively, if a script or an applet is downloaded over a Secure Socket Layer (SSL) channel, Netscape Communications, Inc. *Netscape Navigator* 4.x treats the script or applet as if it were signed, thus allowing privileges to be granted.

To download the applet or script over an SSL channel, you must enable the option that allows access over the SSL channel where your applets and scripts reside.

What does this mean?

This means that users running Netscape Communications, Inc. *Netscape Navigator* 4.0 will be asked to grant privileges before restricted operations will be permitted. For example, when the ICC applet is downloaded to the browser, that script can make a request to the user to grant certain privileges such as reading data from a browser. Note that you cannot deny privileges. If you do not want to grant privileges, then you must drop the call.

This security model provides access to any Web page on the Internet, thus offering unrestricted use of the Send Page button and HTML forms sharing.

Remove the Send Page button

Important! Consider the following before implementing this solution:

- If you disable the Send Page button through the Internet Call Center Administration Web page, it will not be available to any agent in your call center even if you have a browser that supports it.
- Escorted browsing is always available by typing or pasting URLs in the Enter Text Here field located on the Agent and Caller Control Windows.

Removing the Send Page button is the best method if you require the use of multiple web servers and you do not want agents or consumers to use a feature that may or may not work (for example, the call center cannot guarantee the browser used by their customers). This method can be independently set for the Agent Control Window and the Caller Control Window.

To remove the Send Page button, do the following:

1. From your browser, go to the Internet Call Center Administration web page and select the Administer Internet Call Center link.
 2. If removing the Send Page button from the Agent Control Window, set the *Enable the SendPage for Agent?* parameter to **No**.
If removing the Send Page button from the Caller Control Window, set the *Enable the SendPage for Caller?* parameter to **No**.
-

Embed a URL parameter

Important! Consider the following before implementing this solution:

- Consider Web pages that have frames. See the Web guidelines documentation on your ICC R4.0 CD-ROM.
- If the agent or caller surfs to a Web page that does not have scripting information and tries to use the Send Page button, it may not work.

The concept behind this method is to provide the URL that is to be displayed when the Send Page button is selected. This is accomplished by embedding a URL parameter in each Web page through the following Javascripting information:

```
<script language="Javascript"> var syncToLoc =  
location.href; </script>
```

The *syncToLoc* variable is set to the current URL by using the *location.href* environment variable in the browser. The applet sends that URL to the other parties' browser when the Send Page button is clicked.



Glossary

A **ACD**

Automatic Call Distribution—a switch feature that distributes incoming calls to available agents.

Active Agent

A call center employee who is processing a call.

Agent

A call center employee who services calls from the call center's customers.

Agent Control Window

The Internet Call Center (ICC) Control Window that is downloaded to the agent's browser.

Agent Mailbox

A *Message Care*TM 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 inquiries 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.

API

Application Program Interface—a language and message format used by an application program to communicate with the operating system or other system program. APIs are implemented by writing function calls in the program, which provide the linkage to a specific subroutine for execution.

Applet

A small application that is downloaded from the Internet and executed in a browser on a desktop.

Archive Database

A database that contains only messages that are no longer active (closed, blocked, or failed). 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 Computer Telephony Integration (CTI) offering or recommendation for interfacing data adjuncts and communications systems. ASAI supports activities such as event notification and call control.

ASAI Phantom Call

A call that is placed through ASAI as a `third_party make_call`. A phantom call is originated from a non-physical device and may be placed anywhere. In all other ways, a phantom call is treated like a voice call.

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.

Auto-acknowledgments

An email message that is automatically sent to the consumer upon receipt of the consumer's message into the call center.

AWOH

Administered Without Hardware—a station from which a *DEFINITY*® ECS can send a call, even though there is no physical telephone.

B BCMS

Basic Call Management System—a *DEFINITY* ECS feature that provides a variety of measurements that may be used to monitor the ACD.

C 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.

Caller

A call center's customer; the person requesting contact with an agent.

Caller Control Window

The Internet Call Center Control Window that is downloaded to the caller's browser.

CentreVu® Computer-Telephony

Software that interprets proprietary CTI signaling and converts it into an industry-standard TSAPI and/or JTAPI interface to the LAN.

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, and returns the results from the gateway program to the HTTP server to the requesting client.

CGI Script

A program that is run on a Web server, triggered by a request from a browser.

CMS

CentreVu 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.

CODEC

COder/DECoder—an electronic circuit that converts audio or video into digital code, and vice versa. An example of a codec is an analog/digital and digital/analog converter. A codec can also be software that converts packets or streams from one protocol to another.

Collaborative Browsing

A feature of the ICC solution that includes PagePop, escorted browsing, and HTML forms sharing.

Consumer

A call center's customer; the person requesting contact with an agent.

CSTA

Computer Supported Telephony Application—an international standard interface between a network server and a telephone switch established by the European Computer Manufacturers Association (ECMA).

CSU

Channel Service Unit—a device residing between the customer and Central Office equipment that serves to terminate and recondition the digital signal on a circuit. CSU generally refers to equipment terminating a DS1 circuit.

CTI

Computer-Telephony Integration—the integration of services provided by a computer and a telephone (data adjuncts and communication systems).

Current Database

A database that 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*).

D DCP

Digital communications protocol—a protocol that accepts and processes data that has been converted into binary numbers. The line that connects the *CALLMASTER*® VI voice terminal to the *DEFINITY* Generic 2 ECS is a 2-wire DCP line interface.

Designer Reports

CentreVu Supervisor reports that are developed by Lucent associates and generally sold to customers.

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.

DS1

Digital Signal, level 1—a 1.544Mbps digital circuit, generally split into 24 64Kbps channels (trunks), with 8Kbps reserved for signaling.

DSP

Digital Signal Processor—a high-speed chip (specialized microprocessor) that is customized for specific applications such as voice/video encoding/decoding.

E 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.

ECMA

European Computer Manufacturers Association—an organization devoted to international standards for the computer manufacturing industry.

ECS

Enterprise Communications Server—a *DEFINITY* switch providing features and capabilities specially designed to enhance call center operations.

Email

In the *Message Care* 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.

Enhanced Collaboration

Methods in which agent and caller can collaborate over the Internet. Examples of enhanced collaboration include text chat, escorted browsing, and HTML forms sharing.

EPN

Expansion Port Network—a *DEFINITY* ECS cabinet that holds *DEFINITY* ECS circuit packs. This cabinet may be attached to the Processor Port Network (PPN). The cabinet that houses the switch processing element by way of fiber or DS1.

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).

Escorted Browsing

The ability for one party's Internet browser session to cause another's browser session to display the same information that is currently being viewed (also known as "URL sharing").

Ethernet

An industry standard, high-speed data network protocol commonly used in a LAN environment.

F Firewall

A network node set up as a boundary to prevent traffic on one segment from crossing over to another segment based on a set of administered rules. Firewalls are used to improve network traffic as well as for security purposes. A firewall may be implemented in a router or it may be a device specialized for such purposes.

Forward Message

A message that is forwarded by an agent to another person (for example, a subject 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

Messages generated by consumers using their email client. The format of such messages cannot be predicted and may include file attachments.

H 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. Addresses of Web sites begin with an *http://* prefix.

Hunt Group

A group of trunks/agents selected to work together to provide specific routing of special purpose calls.

I ICC

Internet Call Center—an offer that provides a caller with the ability to communicate with an agent over the Internet in real time. Real-time communications can take place by way of Text Chat, Internet telephony, PSTN Callback, and/or by collaboratively browsing the Web.

ICM Server

A platform from which the ICC Sun Microsystems, Inc. *Java*[™] applets are served and where the Sun Microsystems, Inc. *Java* call control code executes. The ICM server also proxies data between the Agent and Caller Control Windows.

ICMS

Call Management System for Internet—the software added to CMS to support the gathering and reporting of ICC-specific statistics

IIS

Internet Information Services—a Microsoft Corp. *Microsoft*® software package that runs on a Microsoft Corp. *Microsoft NT* server and allows the server to perform Web server functionality, among other services.

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 *Message Care*. Typically, these messages will originate from the consumer, but they may also originate from another associate within the call center (for example, an SME or an agent).

Internet Telephony

The capability to communicate verbally across the Internet. Also known as Voice On the Net (VON) and Voice Over Internet Protocol (VOIP).

IP

Internet Protocol—The underlying protocol used to pass data from one Internet host to another.

ISDN

Integrated Services Digital Network—the International telecommunications standard for transmitting voice, video, and data over a digital communications line.

ISO

International Standards Organization—an organization that sets international standards.

ISP

Internet Service Provider—a business that members subscribe to in order to gain access to the Internet (examples include AT&T WorldNet, America On-Line, NetCom, and CompuServ).

ITG

Internet Telephony Gateway—the server providing the connection between the *DEFINITY* ECS and the Internet for the purpose of converting packetized voice to circuit-switched voice and vice versa.

J Java

A cross-platform programming language developed by *Sun* Microsystems.

JTAPI

JAVA Telephony Application Programming Interface.

J-Mode

A term used to refer to *Message Care* running in a Japanese operating system for support of Japanese agents and supervisors.

L LAN

Local Area Network—a short-range data communication network linking computers and peripherals, such as printers. Ethernet is a common LAN protocol.

Launched

The status of a message, once a call has been launched to *DEFINITY ECS* and is waiting to be answered by an agent.

M MACS

Multimedia Applications Customer Support—a group of engineers within Lucent Technologies who perform pre-sale, installation, and post-sale escalated support for the ICC and MultiMedia Communications eXchange (MMCX).

MAPD

Multi-Application Platform—an open platform which allows direct integration of applications into the *DEFINITY ECS* product line and which also provides integrated connectivity to 10BaseT legacy LANs.

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.

Message Call

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* refers to messaging (non-real time communications).

Message Care Administration

Customer-defined options administered through browser-based administration Web pages.

Message Care-Enabled Agent

An agent that has successfully logged into the *Message Care* application. A *Message Care*-enabled agent can be identified by agent ID and IP address.

Message History

The message history generated by *Message Care* which 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.

N NCG

Network Consulting Group—a Professional Services group within Lucent Technologies composed of data engineers who provide data networking consulting services, including firewall provisioning, configuration, and maintenance.

NIC

Network Interface Card—a circuit board inserted into a computer to allow communication with other systems on a network or access to a network.

O ODBC

Open Database Connectivity—a Microsoft Corp. *Microsoft*-defined Open Interface for accessing most commercial databases.

Original Message

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 consumers with either the answer to their question (see *Reply*) or a status update. Outbound messages to SMEs are requests for information.

Overflowed

A message status state. Messages in the Overflowed 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 Overflowed state.

P Packet-Switched Network

A network that divides messages into smaller packets, each with its own identifying and routing information. Packets travel to their destinations by a variety of routes. For data transmissions, a packet-switched network does not dedicate a channel for the duration of a call like a circuit-switched network. Instead, it queues packets and sends them on a standby-basis as channel capacity becomes available. The Internet is an example of a packet-switched network.

PagePop

A feature that automatically displays Web pages to the caller and/or agent based on call events (for example, call queued, call answered, and so on).

PBX

Private Branch eXchange—a customer premises telephone-switching system that interconnects telephone extensions to each other as well as to the outside telephone network.

Ping

A software command that can test data connectivity to a remote system.

PRI

Primary Rate Interface—an ISDN standard interface which specifies B and D channels for T1 and E1 trunks.

PSTN

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. *CentreVu* Internet Solution designer reports have been specially tagged to appear and run even though the Report Designer feature has not been purchased.

R 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.

R-Mode

A term used to refer to *Message Care* supporting the Romance languages (English, German, French, Colombian Spanish, Brazilian Portuguese, and Italian).

RONA

Redirection on No Answer—if an agent does not answer the message call, RONA redirects it to other coverage.

RTDBM

Real-Time Database Manager—the real-time data manager for *CentreVu* CMS.

S 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 *Message Care* monitored mailbox used to collect messages which are to be serviced by any member of that skills group. *Message Care* 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. *Message Care* 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 functionality available to a supervisor (contrast with *Supervisor*).

T TCP

Transmission Control Protocol—a protocol that enables different computer hardware and operating systems (such as PCs, Apple computers, X/Open Company Limited *UNIX*® workstations, and mainframes) to communicate.

Telephony Server

CentreVu Computer-Telephony. This software interprets proprietary CTI signaling and converts it into an industry-standard TSAPI and/or JTAPI interface to the LAN.

TSAPI

Telephony Services Application Programming Interface—a telephony programming interface based on the international CSTA standard. TSAPI is designed to interface a PBX with a server to provide interoperability between PCs and telephone equipment.

U UDP

User Datagram Protocol—a TCP/IP protocol used to transmit data on data networks; commonly used to transmit Internet telephony voice packets.

URL

Uniform Resource Locator—an address used to locate information on the World Wide Web.

UUencode

A X/Open Company Limited *UNIX* 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.

V 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.

VOA

VDN of Origin Announcement—an identifying message sent by *DEFINITY* Generic 2 ECS to an agent about the source of an incoming call so that the agent knows how to answer the call.

Voice Terminal

Another term for a telephone.

W WAN

Wide Area Network—a network usually connecting Local Area Networks (LANs).

Web

A shortened term for the World Wide Web; the body of information available on the Internet. Also called WWW.

Web Page

A display created with HTML (HyperText Markup Language), the standard language for displaying information on the World Wide Web.

Work Mode

One of several different states an agent can be in while logged into a call center. Work modes include Auto-In, Manual-In, Auxiliary, 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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